Gloria Passes Reins

Ward Named President

Aram Gloria, founder and first president of the American Audiology Society, retired as president of the Society at the November meeting in San Francisco. He passed the reins of the society to another dynamic president, W. Elton Ward. CORT's ORGAN takes this opportunity to honor Aram for his leadership in organizing the American Audiology Society. Almost single-handedly he conceived an organization that would permit all people concerned with human hearing to meet in a common forum. He was impatient with convention that allowed only those of one discipline to have a dialogue with each other on hearing problems, that excluded concerned non-professionals, and that had tunnel vision in the area of hearing function. He served as president and long-time board member of the International Audiology Society where he envisioned bringing the name of the organization to the United States. Whatever the American Audiology Society becomes it will owe its future success to the vision and determination of Aram Gloria.

The 1975 meeting of the American Audiology Society was held in conjunction with the Acoustical Society of America meeting in San Francisco, November 2. Four excellent speakers delivered papers to some 60 attending members on the theme of "Rehabilitation through Research." Owens Black-M. D., Pittsburgh Eye and Ear Hospital, "New Instrumentation for Vestibular Studies." Norman H. Johnson, Ph. D., Pittsburg, Eye and Ear Hospital, "Relevance of Clinical Research to Rehabilitation of Persons with Auditory Disorders." Robert H. Hoode, Ph. D. and Donald Kiang, Ph. D., National Technical Institute for the Deaf, Rochester, New York, "Visual Aids for Speech Training of the Deaf"; and Nelson V. H. Kiang, Ph. D., Massachusetts Eye and Ear Infirmary, "Electrocochleography." These papers are discussed further under "Abstracts of Papers." The program was arranged by Bruce Graham, who served as chairman for the meeting. Election of officers followed the program, with the new officers and Board members elected. Minutes of the Executive Committee of The American Audiology Society, (Pg. 3) Those who attended the Acoustical Society's meetings were in agreement on the highlight of the meeting. It was a special report of the Committee on the Watergate Tapes. This group of outstanding experts, headed by Richard Bolt, described how they determined that the tape had been deliberately tampered with. For example, they were able to demonstrate definitively that the "18 minute gap" had recorded speech underneath and the buzzing tone that was superimposed on it. They also determined that the 18 minute section had first been erased and then the buzz had been superimposed. The tapes they were given was shown to be the original. The report sounded like a modern day Sherlock Holmes episode, with cloak and dagger overtones.

Raney Outlines Research Grants

J. Buckminster Raney is Executive Secretary of the Communicative Disorders Review Committee of the National Institute of Neurological and Communicative Disorders and Stroke (NINCDS). He has furnished a description of the various types of grants now available from NINCDS. The National Institute of Neurological and Communicative Disorders and Stroke provides research grants support for problem areas of significance by means of research project grants, research program projects, clinical research centers and outpatient clinical research units. The Research Project Grant is an award to an institution in the name of a principal investigator for a discrete, circumscribed research investigation. The Research Program Project Grant is an award to an institution in the name of a program director for a period of initial support of a team of investigators participating in a broadly based multidisciplinary or multifaceted program of basic research which has significance in the communicative sciences. The Clinical Research Center Grant is an award to an institution in the name of a program director for investigations focused upon a specific disease or a group of diseases or disorders of human communication. The (unrelated Clinical Research Unit Grant is an award to an institution in the name of a principal investigator to assist in the establishment, improvement and support of a stable outpatient research environment in which clinical research studies of ambulatory populations may be conducted.
Lybarger Reports on Hearing Aid Standards

An ANSL Working Group, ST-46 has been working for a year and a half on a specification standard for hearing aids. A.A.S. member Sam Lybarger is chairman of the committee. The work was undertaken at the request of the Food and Drug Administration, who plan to consider hearing aids as a "medical device."

Lybarger reports that the P.D.A. may adopt most of the provisions of the agreed-upon standard in their own regulatory standard. This would require that manufacturers maintain the performance of a given model hearing aid to within specified tolerances of the characteristics established by the manufacturer for the model. The ANSL committee proposed standard is approaching completion and will be submitted to F.D.A. members for final review in the immediate future.

Lybarger has provided an outline of the tests being considered in this proposal standard, along with examples of frequency response curves and tolerance templates. (See accompanying chart and figures.)

### NEW TINNITUS GROUP FORMED

A new society has been formed to study the cause and prevention of tinnitus. Called the American Tinnitus Association (ATA), it was founded by Charles Unno, a doctor who suffers himself from tinnitus, and by Jack Vernon and David DeWese of Portland, Oregon. Unno is the son of Oregon's past president of the National Association of Eardrum Laboratories, who has also been active in the society.

The association is dependent on funding from ATA memberships. Further information may be obtained from American Tinnitus Association, Development Office, University of Oregon Health Sciences Center, 331 S.W. San Jackman Park Road, Portland, Oregon 97209.
Outstanding Workshops Scheduled for Spring

Two annually outstanding Workshops will be held this spring, and one this summer, featuring noted international and American authorities. The spring Workshops are back-to-back, March 26-30, and will present a difficult choice to Otolaryngologists and Audionists.

SHAMBAUGH FIFTH INTERNATIONAL WORKSHOP
Chicago
February 26-March 1

At this conference "new and current ideas in cochlear and vestibular testing, modern tympanometric techniques, methods of treating fluctuant hearing loss, and the medical and surgical management of eustachian tube dysfunction and other complications of the ear" will be presented in scheduled talks and round table discussions. Relaxations with films covering the program topics will conclude each day. The participants will be A.A.S. members Richard J. Beall, Ralph Capuano, D. Daley (Cory, J. Brown), Farrier, Michael Glasscock, Warren Herron, Jack Hough, Howard P. House, William P. House, P.H. Linticum, Cary Moon, P. Douglas McIlroy, Jerry Norville, W. Hugh Powers, Jack Public, Wallace Rabin, Maurice Schiff, John Sheff, Manfield Smith, James Snow, and William H. Wilson.

National Advisory Board
National Auditory Research Demonstration School

WASHINGTON, D.C. — A nine-member National Advisory Board has been named to assist the Kendall Demonstration School in developing and implementing innovative program designs for deaf youngsters. Appointed by the Gallaudet Board of Directors, the group's purpose is to advise the President of the College, the Dean of Pre-College Programs, and the Director of Kendall School on directions in which KDS, as a federally-funded facility, should move to achieve significant program advances in education of the deaf.

The nine include: Dr. Robert K. Leonard, Dr. Harvey J. Coggin, Dr. Luther Robinson, Dr. Keith Turner, Dr. Roy Snyder, Dr. David Zuckerman, Dr. Donald Calvert, Dr. Robin Preiss, and Dr. Richard Nielson.

Current Abstracts

This month we have sung out the 1972 theme of "In S. N. Sound and Vibration," which contains articles relevant to Occupational Noise.

Effects of Noise on Human Performance, by H. M. Finkelman, Ph.D., City University of New York.

This investigation viewed the individual as a communications channel, and measured the effect of noise on performance. It also considered the task, sensory, and environmental parameters that might be expected to influence the results. The conclusion was that increasing the noise level has a significant effect on performance.

Cochlear Rehearsal & Threshold Testing, by J. Hendler, Ph.D., J. Hendler, M.D., and A. Hendler, Ph.D.

Pure tone Bekesy thresholds were recorded from 12 normal hearing subjects at three frequencies ranging from 256 Hz to 10,000 Hz. The same TDH 39 driver was mounted in a standard MX 41/AI cushion, an Auradome (model AE 1060) and an Audoscope (Angioscan). Thresholds were recorded in quiet and in the presence of broadband noise at 41, 46 and 61 dB SPL. In the quiet condition the MX 41/AI threshold was used as the criterion. In the presence of noise, both the MX 41/AI and the Audoscope thresholds were used to determine the MX 41/AI in the presence of sound field noise. Thresholds for the Audoscope in noise were discernibly better than the Auradome or MX 41/AI.

SYMPOSIUM ON CHILDHOOD DEAFNESS
M. Pleasant, Michigan
June 15-18

As indicated in the title, this symposium will center on deafness in children. Presentation areas will include etiological factors, pathology of childhood deafness, identification and assessment and management of intervention. Among the invited speakers there will be several A.A.S. members.

Official Minutes

The Executive Committee of the American Audiology Society

Date: November 1, 1975
Time: 1:00 p.m.
Place: Jack Tunnell Hotel
San Francisco, California

Members in Attendance: Clark A. Barth, Ph.D., Meyer Fox, M.D., Arwin Glorig, M.D., Bruce Graham, Ph.D., Fred Lintichum, M.D., Sam Lyons, Ph.D., Geary McCandless, Ph.D., Ralph Naughton, M.D., Ross J. Rosenzweig, M.D., F. Dixon Ward, Ph.D.

The meeting was called to order by the President, Arwin Glorig.

Because there are key persons involved in conducting the business of the Society, conducting the annual meeting, and publishing the Journal; and because it is critical that these key individuals attend the annual Executive Committee Meeting, the following motion was made: The Society will provide reasonable expenses above other reimbursement, if any, for the President, Secretary/Treasurer, Journal Editor, and Program Chairman to attend the annual meeting of the Society effective January, 1975 depending upon availability of funds. (Carried.)

In view of his significant contribution to the field of audiology, and his support of the American Audiology Society, a motion was made to create a Raymond Carhart Memorial Lectureship and Award. A subcommittee was appointed to make recommendations for implementation of this lectureship. Rick Berlin was appointed Chairman, Geary McCandless and Sam Lyons were appointed members. Arwin Glorig indicated that he would contact Mrs. Carhart for her approval.

The results of election were announced. Geary McCandless was elected Secretary/Treasurer. Those persons elected for the Executive Committee were: James T. Benitez, M.D. Lennert, Ph.D., David Dolwitz, M.D., Gilbert H. Hoffer, Ph.D., Norbert T. Huckle, M.D., Haruo Shimizu, M.D., Laura Ann Wilbur, Ph.D.

It was suggested that safekeeping of the future keep an equitable representation of all those members involved in the Executive Committee.

Fred Lintichum reported on the membership committee. Four regional membership chairs were appointed from otolarynology, otosurgery, pediatric otolarynology, and medical otolarynology. A regional Chair for the Western Region was elected in the December meeting. (Cont'd on Page 8)
**AMERICAN AUDIOLOGY SOCIETY EUROPEAN STUDY TOUR**
Available to Members and Their Immediate Family  
**OCTOBER, 1976**

**ALL INCLUSIVE TOUR INCLUDES:**
- HIGHLIGHTS POINTS OF PROFESSIONAL INTEREST INCLUDING THE HEARING AID INSTITUTE, LUBECK, GERMANY & THE XIII INTERNATIONAL CONGRESS OF AUDIOLOGY, FLORENCE, ITALY.
- AIR FARE & GROUND ARRANGEMENTS.
- DELUXE HOTELS.
- SUPERIOR CONTINENTAL BREAKFAST INCLUDED EVERY DAY. LUNCHES & DINNERS AS PER FINAL ITINERARY.
- FULL SIGHTSEEING IN COPENHAGEN, MUNICH & ROME.
- ENGLISH SPEAKING FULL-TIME ESCORTS.
- HOSPITALITY DESK IN ALL CITIES.
- TRANSPORTATION VIA DELUXE MOTORCOACH.
- TIPS, TAXES, PORTERAGE INCLUDED.

**ITINERARY FOR 16-DAY TOUR**

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<th>NIGHT AT</th>
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<tr>
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<tr>
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<td>Fri.</td>
<td>10/22 14. Rome - on your own</td>
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ITINERARY FOR 9-DAY TOUR

Sat. 10/16 1. depart U.S. for Rome
        plane
Sun. 10/17 2. arrive Rome - rest
        Rome
Mon. 10/18 3. Rome to Florence by train
        Florence
Tues. 10/19 4. Florence, A.M. - Congress, P.M. - on your own
        Florence
Wed. 10/20 5. Florence, A.M. - Congress, P.M. - on your own
        Florence
Thurs. 10/21 6. Florence, A.M. - Congress, P.M. - Deluxe
        Florence
Fri. 10/22 7. Motorcoach to Rome - on your own
        Rome
Sat. 10/23 8. Rome - on your own
        Rome
Sun. 10/24 9. depart Rome for U.S.A.
        plane

* PRICE:

TOUR 1 (16 DAYS)

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Air Fair Only
All Inclusive

TOUR 2 (9 DAYS)

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Air Fair Only
All Inclusive

* Rates are based on a minimum of 40 participants from each departure point and are subject to change, based on current fuel prices. Participation of more than 200 Members on each tour will reduce rates by $300.00 or more. Applications are on a 1st come 1st serve basis. Reservations received before March 1, 1976 will be guaranteed.

To assure your place on the tour complete the following and remit a refundable deposit of $100.00 to (make check payable to First Travel Service Escrow Account): American Audiology Society, c/o First Travel Service, 1st National Bank Bldg., One Center Avenue, Brownwood, Texas 76801

Name: ___________________________ Phone: ___________________________
Address: ___________________________________________ State: (include Zip)
Member of American Audiology Society ______ Yes ______ No
Immediate Family of Society Member ______ Yes ______ No
Send Application Membership Forms ______
Check Enclosed ______
News About Members

(Cont'd From Page 1)

Professor and Chairman of Audiology, Department of Otolar- 
yngology and Human Communication, University of Pennsylvania Medical School, 

LEO G. DOERFLER, Uni- 
versity of Pittsburgh received the Honors of the Association 
from the American Speech and 
Hearing Association on Novem- 
ber 21, 1975, at the annual 
conference in Washington, D.C.

PHILIP E. ROSENBERG 
will present the annual Moe 
Bergerman Lecture at Hunter 
College in New York on December 10th, 1976.

EARL R. HARFORD, former- 
ly of Northwestern University, 
is now Director of the Bill 
Willkerson Hearing and Speech 
Center and Professor and 
Chairman of the Division of 
Hearing and Speech Sciences, 
Vanderbilt University Medical 
School.

E. JAMES KREUL has joined 
the California State University 
at Chico, California as a pro- 
fessor in the Speech Pathology 
and Audiology program. 
This program is scheduled to receive 
departmental status this fall 
(1976), with a faculty of six.

JAMES H. DELK is resigning 
January 1 as Director of Audio- 
logical Services for the Audio-
tone Division of Royal Indus- 
tries to enter private practice in 
San Bernadino, California in 
the dispensing of hearing in- 
struments. He will continue as 
consulting audiologist for Aud- 
itone.

Telex Announces Wireless CROS

Telex Communications, Inc., recently introduced the 
Telex-CROS Model 860, a wireless CROS hearing aid. This instru- 
ment entirely eliminates wiring in the CROS fitting. The micro- 
scope signal is transferred to the amplifier-speaker side by high- 
frequency electromagnetic couplings, then transferred back to audible frequencies, and thereafter amplified normally. 
The wireless feature allows this aid to be fitted as simply as a conventional eyeglass aid while enabling the user to have the ad- 
vantages of CROS fittings. Fitting the Telex-CROS consists of 
merely attaching the aid with the proper adapters to the frame and 
bending the paddles for a comfortable fit behind the ears.

Calendar of Events

JANUARY

12-16: 
Military Hearing Conservation Workshop, Aberdeen, Maryland.

24-30: 
Postgraduate Course in neuro-otology, Department of Otolar- 
yngology, Hospital General del Centro Medico Nacional and the 
Mexican Society of Otologyngology, Mexico City.

FEBRUARY

Note:

Conference on Early Intervention Programs for Hearing 
Impaired Children at University of New Mexico, sponsored 
by Indian Health Service (Dr. J.L. Stewart, Albuquerque).

MARCH

28-29: March 1: 
Mardis Gras Otologyngology Symposium, Department of Otologyngology and Maxillo- 
facial Surgery, Tulane University School of Medicine, New 
Orleans.

MAY

6-8: 
American Academy of Private Practice in Speech Pathol- 
ogy and Audiology, Louisville, Kentucky.

JUNE

13-15: 
XIII World Rehabilitation Congress, Tel Aviv, Israel.

25-27: 
Third Course in Clinical Neuropediatrics, Eye and 
Ear Hospital of Pittsburgh University of Pittsburgh School 
of Medicine, Pittsburgh, Pennsy- 
lvania.

APRIL

9-8: 
Acoustical Society of America, Washington, D.C.

25-28: 
National Spring Meeting sponsored by the West Virginia 
Academy of Ophthalmology and Otologyngology, White Sulphur 
Springs, West Virginia.
Abstracts of Papers Presented to the A.A.S., Nov. 5

Relevance of Clinical Research to the Rehabilitation of Persons With Auditory Disorders. Norma T. Hopkins, Ph.D., Pittsburgh, Eye and Ear Hospital.

Rehabilitation is based on the broadest sense of the word. It is to include training more about the auditory system in order to apply it to persons with auditory disorders. The damage lies in the system on an analytic, fragmented basis, and never integrating the two ears on the same hold, on a neck, on a soma, etc., so that the system is viewed as a part of a functioning total being.

In clinical investigations of an ear for diagnostic purposes, I think an ear tries to tell itself about itself and what it is contributing to hearing. We are limited in our interpretations only by our knowledge and ingenuity as to how to get the ears to reveal their mystery. Sometimes the finding is fortuitous. For example, when a patient who responded to a conventional pure tone test as if he had a low-frequency loss of sensitivity in one ear became a subject in a forced-choice experiment, he had no loss of sensitivity. The durations of signals and the time between them were highly specified and controlled. Accurate sensitivity levels could be obtained despite a serious central nervous system disease. On the other hand, if we had concentrated ourselves only with the accuracy of his levels, we would have known very little about his very rapidly adapting responses. While it is important to have specific control over signals to learn certain facts about an ear, it is also important to allow the ear some freedom to tell its mystery.

If we are going to worry about two ears and how they interrelate on a head, then we must look at them together as well as separately. Examples of methods for studying the interrelationships were given. Under conditions of amplification with a hearing aid on one ear, but two ears with which to relate to the environment, I am convinced (at the gut-level) that the hearing aid experience and noise levels are noxias to alternation and interruption of forward and backward masking than to filtering of speech.

Finally, a few questions for rehabilitation purposes. What does binaural steering under experience have to do with binaural listening in a controlled sound field, and what does either of these do to with "bilateral" listening in a "head or calmera?" We return to these questions if a hearing aid is used and if the variable of age is included. How does the person function in a communicating society and who is the judge? The ultimate measure of applied research is what it does for the human's right to a quality life, for the person's right to be able to contribute to society. The ultimate test of the total person is the nature of his rehabilitation.

Electroencephalography. Nelson J.S. Kiang, Ph.D., Massachusetts Eye and Ear Infirmary.

Electroencephalography has given the clinician a practical device for measuring the responses of the auditory nerve with non-invasive techniques. The theoretical foundations for interpreting the results are being elucidated in basic studies.


The "problem" of speech training for the prelingually deaf is that the quantity of formal individual training required to achieve functional speech is greater than that which can be provided within the resources allocated by society. If we eliminate the possibility of changing the resource allocation, we must look for approaches which will significantly improve the effectiveness of the speech training effort. Past attempts to develop more effective speech training "methods" have not resulted in success. New new directions are developing in the field of instrumental speech aids which promise more direct assistance to this problem. The new directions arise from the realization that the principal role of instrumentation may be to provide the student with the ability to drill and practice relatively independently, freeing the teacher to concentrate on the unique instructional components of training, thus achieving the required quantity of individual speech training without an increase in teacher effort.

It is to this end that the exciting new advances in speech signal processing and display (e.g., being directed: "Topical of the new systems which have the ability of providing independent drill are the computer-based display of Roll, Harman and Newman [1], the Visual Speech Training Aid (VSTA) developed by the Center for Communications Research (CCR) [2], and, more recently, the Speech Spectrographic Display of OCR, a modern version of the Visible Speech Translator of 30 years ago. These instruments were designed with the simplicity of the VSTA in mind and, in part, are a reflection of the current interest in the possibilities of "wearable" speech reception aids which will allow speech training to take place in a more natural setting.


Hearing substitution: A wearable electrotactile vocoder for the deaf.

"Quantitative Analysis of the Romberg Test: 1. Technique and Initial Results." by F. Owen Black, M.D.

A methodology for the objective characterization of the vestibulocerebral system capabilities in the human would add significant insights into the clinicians' evaluation of patients with vertigo and balance disturbances.

With the aid of the quarta crystal force platform and PPID'1 computer programs x-y plots of a patient's center of mass oscillations by manual reach and self-analysis such as position from gravity vertical versus time and rotation of the positional vector versus time can be performed with ease. This determination combined with position versus velocity plots (for dumping characteristics) are useful in the diagnosis of muscular-skeletal versus labyrinthine versus ocular motor input and central abnormalities in the human. Data from normal and abnormal subjects were presented to demonstrate the markedly different patterns obtained from each group of subjects.

Calendar of Events

(Cont'd from Page 6)

9-21: 16 Day European Study Tour, Denmark, Germany, Italy.
6-24: 9 Day European Study Tour, Italy.
18-21: International Audiology Society, Florence, Italy.

Playpersons of the Month

"ECSTASY ONCE A YEAR"

Your Past President Alan Gherig and new president "Div" Ward on a recent mouse-hunting trip in Canada.

Chuck Berlin

Appointed as

1976 Chairman

The 1976 annual meeting of the American Audiology Society will be held in Las Vegas in October, preceding the annual meeting of the American Academy of Ophthalmology and Otorhinolaryngology. Dr. Charles Berlin, Fresno Research Center of the South, New Orleans, La., is the program chairman. Members wishing to suggest items for the program should contact him. This year will be the first presentations of the Cathcart Memorial Lecture, and there will be an exciting and informative program.

Acknowledgement

Member, Irwin Klar, American Electromedics, helped in the distribution of this promotional issue.
Invitation to Join A.A.S.

The aims of the American Audiology Society are to increase knowledge of human hearing, promote conservation of hearing and foster habilitation and rehabilitation of persons with hearing impairment. The Society disseminates information through this quarterly newsletter and through a bimonthly professional publication, Journal of the American Audiology Society, and through the holding of an annual meeting.

The requirements for membership are a demonstrated professional interest in the field of human hearing and at least a baccalaureate degree from a certified college or university. Two active members must sign the application for membership, and an annual dues of $20.00 must accompany the application.

We invite all eligible persons to apply for membership. The Executive Committee of the Society passes on the application for membership. Merely fill out the form below and send it with your check.

Membership Application Form

<table>
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<th>Name</th>
<th>Date</th>
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<td>Home Address</td>
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Education

| Institution | Location | Degree/Year |

Sponsoring Members

1. Name | Print or Type | Signature
| Institution or Company |

2. Name | Print or Type | Signature
| Institution or Company |

This membership application must be supported by signed statements from two active members verifying the qualifications of the applicant and payment of the membership fee ($20.00) to cover dues for the current year. When complete, return to:

Ross J. Roesser, Ph.D.
Secretary-Treasurer
American Audiology Society
1066 Irwood Road
Dallas, Texas 75211

Minutes

Continued from Page 2

currence will be adopted.
The meeting next year occur in conjunction with Association for Research Otolaryngology, which was before the annual meeting of American Academy of Ophthalmology and Otolaryngology. Chuck Berlin was appointed Program Chairman.

Mrs. Marvin Down was appointed as the Editor Chief of AUDIONews.

After considerable discussion, the following motion was made reaffirming the position of Executive Committee on the issue: "The commercial use of the Society's name in any form is strictly prohibited. Display of the Society certificate is considered as commercial use. (Passed) In addition, an Ethics Committee was formed to monitor any violations. Ralph Norton was made Chairman of the committee.

Jerry Norden has indicated to the Executive Committee that with his present commitments he is unable to act as Associate Editor-in-Chief of the Journal. A successor has been identified and will be contacted to determine whether he will be willing to assume this responsibility.

It was decided that either members of the Society can serve on committees. Non-memembers can be invited to serve on committees.

An election was held for the offices of Vice President, Assistant Secretary, and Committee Chair. Gary Cundiff was appointed as Vice President and Norma T. Bonn was named as Assistant Secretary. The Editor of the Journal needs close contact with members of the Executive Committee. Therefore, it was decided to appoint the editor of the Journal as an Ex-Officio member of the Executive Committee.

The Secretary/Treasurer stated that the present system of having two signatures on each check sometimes does not make sense. It was decided to add a second signature to any check. This procedure the Secretary/Treasurer be decided and only the Secretary/Treasurer be required to sign checks.

There being no further business the meeting was adjourned at 4:30 p.m.

Respectfully Submitted

Ross J. Roesser, Ph.D.
Secretary-Treasurer
About the Council for Accreditation
In Occupational Hearing Conservation

Yes, Virginia, there is a Council for Accreditation of Occupational Hearing Conservation (CAOH) and it is alive and well in Denver and parts east. Chartered by William Call, Denver oto- laryngologist, CAOH will not be sitting on its hands like other agencies concerned with hearing conservation. A brand new important publication has just been issued: "Course Outline for Course Leading to Accreditation as an Occupational Hearing Conservationist." It is available through the Secretary-Treasurer, Mildred S. Sitter, R.N., 141 Chestnut Avenue, Haddon Heights, NJ 08035.

Other activities of CAOH include: 1) a recent article reflecting "A Symposium for Editors - The ABC’s of Industrial Hearing Conservation," appearing in HEALTH & SAFETY - July-Aug. 76, featuring Paul Michael, Ph.D., of the CAOH Board. The article is titled "Down to basics on hearing conservation," 2) An article by Thomas J. Doyle, M.D. of Consolidated Edison, NYC, on ACOH which appears in AUDIOLOGY & HEARING EDUCATION, and 3) Doyle is a Board member. 3) A fine article covering "Hearing Loss, the key to successful therapy," featured in the November 75 issue of CONSULTANT.

The Suspense Story of the Year
OSHA Drags Heels on Noise Standard

The administration seems hesitant to release the official OSHA noise standard and the public has no idea whether the new regulations will help decrease the hearing protection programs 12 million workers need. For those of us who have been busy hearing doctors and committed members for some time and will probably continue to bounce around for a year or two.

Generally, OSHA contracted with Bell, Hazen and Eger, Inc., to perform an economic impact report to determine what would be the cost of industry’s compliance with a 90 dBA standard as against an 85 dBA standard. This BHH report estimated $3 billion for compliance with an 85 dBA rule and $13 billion for compliance with a 90 dBA rule.

A second impact report was received from BHH to estimate the cost of industry compliance with an 85 dBA standard after 5 years of the 90 dBA standard. This report gives us an idea of the cost for $5.5 billion assuming that industry has already complied with the 90 dBA rule. This estimate is based on a engineering compliance only: $25 million is added for costs of the noise.

For a minimum of testing the costs are estimated $12.00 per year, for a maximum of the 12 million workers $183 million per year, and $320.00 for complete audiometric testing of 0.3 million workers in the same industrial settings.

The Labor Department’s solicitor and the OSHA staff have not met to date accepted the second report nor approved it for release. Under further consideration is adoption of the 85 dBA limit after 10 years of 90 dBA. Once any report is released a 60-day comment period is scheduled. After that OSHA will issue its final ruling as soon as set.

AAS former president Aram Glueck comments on this situation in a recent editorial in Sound and Vibration. "It is important to repeat this editorial in its entirety..."

The Denver, ACOF program chairman for the October 7th AAS meeting in Las Vegas has announced the theme of the program as “Basic & Applied Hearing Science.” He also announced that Dr. James S. J. Jerger has agreed to give the first AAS program Carhartt memorial lecture on the afternoon of October 7th. The morning session will be devoted to papers from the membership. Papers are expected to be either basic or applied hearing science and should be submitted by September 1st. Dr. Charles L. Berlin, Kersey Hearing Research Laboratory, 951 11502 South 11502 Florida Avenue, Building 164, Houston, Texas 77281, to the Acoustical Society of America. The format for the Acoustical Society abstracts can be found in any of the programs of the society. A sample abstract is as follows:

Jerger to Give Carhartt Lecture
Berlin outlines ’76 AAS Program

OSCAR Berlin, program chairman for the October 7th AAS meeting in Las Vegas has announced the theme of the program as “Basic & Applied Hearing Science.” He also announced that Dr. James S. J. Jerger has agreed to give the first AAS program Carhartt memorial lecture on the afternoon of October 7th. The morning session will be devoted to papers from the membership. Papers are expected to be either basic or applied hearing science and should be submitted by September 1st. Dr. Charles L. Berlin, Kersey Hearing Research Laboratory, 951 11502 South 11502 Florida Avenue, Building 164, Houston, Texas 77281, to the Acoustical Society of America. The format for the Acoustical Society abstracts can be found in any of the programs of the society. A sample abstract is as follows:

Federica S. Tyska
University of Wisconsin, Stevens Point, Wisconsin, 54481
David P. Goldstein
Purdue University

The j.d. Harris' New Book Reviewed on Page 6

Progress Report
On European Study Tour

Plain for the European Study Tour in October 1976, are progressing well and reservations have already been made for the New York leg. Recent efforts on the part of the organizers and agents assure us that all will be as well as the day before.

Co-operation among Bill Engels, our land agent, Sig Carlsson of Danasov, Dick Scott of Class Men, Henry Meiller of Will and their respective associates in Europe already indicates the possibility of a well-planned and well-organized tour that should prove very enjoyable and enriching. Any questions refer to the tour should be directed to: Frederic J. Berlin - European Study Tour, American Audiology Society, PO Box 259, W.H. Davenport, Dallas, TX 75201.

(excerpts from Page 2)
Wayne J. Staab, Ph.D., Director of Educational Communications, Inc., completed a two-week training program in March during which he discussed school education programs, loc- ated at universities and National Acoustic Laboratories, and pro- ved to be a valuable addition to those training programs. Discussion with individuals involved in school education programs took in the countries of Hong Kong, New Zealand, the Philippines, and Indonesia. Lectures were given at the University of Washington, University of South Africa, the National Acoustics Laboratory in Sydney, Australia, and at the United Nations Conference on Aural and Hearing in the United States. Discussions with headquarters involved in school education programs took place in the countries of Hong Kong, New Zealand, the Philippines, and Japan. Discussions with headquarters involved in school education programs took place in these countries also took place.

Robert H. Payne of Indiana- polis was present to discuss his work in the practice of audiology in the State of Indiana. He also was Director of Audiology Services, Inc., which provides diagnostic and treatment services and other audiologic research services for the state. He is a staff audiologist of the Diagnostic Audiology Center in Indianapolis. He has a staff of audiol- ogists as associates, and also a speech pathologist on his staff.

Phil Bellflower announces that the Pennsylvania School for the Deaf has received a grant from a private foundation to develop a course of study for deaf people. The project will be carried out and a study to determine the value of transmitting radio frequency carriers to the hearing impaired for deaf children. The carrier waves will be recorded and transmitted to the deaf to receive local, national and international news.

Daniel Beasley has been ap- pointed the Acting Assistant Director for the School of Continuing Education in the College of Liberal Arts and Sciences at M.I.C.E. effective 1-1-74. His normal appoint- ment is for the period of the Department of Audiology and Speech Sciences.

At the Orthopedic Hospital and Rehab Center’s annual dinner and membership meeting on January 13, 1978, Willard Stuef- fford was recognized for his work in the Pure Speech and Hearing Center. It was a woodcarving of his name with the following inscription on it:

ORTHOPEDIC HOSPITAL AND REHABILITATION CENTER
MRS. W. R. SHUFT
In appreciation of her outstanding service as DIRECTOR and AUDILOGIST OF THE PARTIN-SPEECH AND HEARING CENTER
August 25-29, 1978. His paper was presented on "Medical Aspects of Deafness". He will be the speaker at the "Third Annual R. T. Hill Seminar in Otology and Otolaryngology in Waterville, Maine, August 14-15, 1979.


Irving Shapiro was guest lec- turer at the University of California Santa Barbara School of Speech and Hearing Center Research Seminar on "Hearing Aid Evaluations".

Bill Behrendts, M.D., C.C.C., has announced that he will be the director of the Division of Otolaryngology, Department of Otolaryngology, Eastern State University of New York.

Albert P. Seltzer, M.D., Phila- delphia, Pa., presented a paper entitled "The Hearing Aid 'Dilem- ma' before the American Ac- ademy of Otolaryngology and Otol- aryngology in Dallas, Texas, September 23, 1979.

Arthur Boothroyd, Ph.D., is serving as CoChairman for the program of the 1976 Convention of the Alexander Graham Bell Association for the Deaf, June 23 to 25. The theme of the program is "Keys to Independent Living", with a heavy emphasis on the role played by research and technology in providing these keys.

Jessa Stewart, Director of the Bureau of Deaf Education, College of Agana, Guam, reports that Sylvia R. Richardson, M.D., recently participated in a series of workshops on language delayed-learning disabled children sponsored by the Guam Hearing and Speech Center. A workshop was held for the Island's physicians entitled "The Diagnosis of Disabled Child". Various staff members from the Hearing and Speech Center also appeared on the pro- gram. Additional workshops were presented to school health counselors, public health nurses, elementary and secondary coun- cillors to the entire faculty of the elementary school and to all the speech therapists. In addition, an organizational meeting was held for a local chapter of the American Speech and Hearing with Disabilities.

Hiroshi Shimizu was one of the invited speakers at the Interna- tional Congress on Education of the Deaf, held in Paris, France, on September 19-23, 1978. His paper was presented on "Medical Aspects of Deafness". He will be the speaker at the "Third Annual R. T. Hill Seminar in Otology and Otolaryngology in Waterville, Maine, August 14-15, 1979.

Dr. James MacDonald of the Niagarta State Police College will present his environmental language and parent training programs at the May Day Conference sponsored by the Department of Speech Pathology and Audiology of the School of Arts and Sciences, State University of New York.

Dan Dikus, Center for Health Sciences, University of California, Los Angeles, spoke on "Current Developments in Aud- iological Diagnosis and New Uses of Impedance and Bone Conduction Thresholds: A Symposium on Speech and Hearing Association Central Region Mini Conference held at California State Univer- sity, Fresno.

Jon Fitch announces that Dennis J. Arsl, Ph.D. has joined the Speech Research Institute, Fresno, Department of Communicative Disorders. He will teach undergraduate and graduate courses in Audiology.

Phil Rieser reports that the Audiology Department of Temple Univer- sity Health Sciences Center is sponsoring a series entitled "Audiology Seminar-Temple College of Audiology" (ACT). These colloquia are open to the public and are held on the second Thursday of each month.

Dr. Harold Rate, Professor of Audiology at Western Michigan University, will visit New Zealand for three months beginning May 1st as a guest of the National Auditory and the New Zealand League for the Beauty of Hearing. Dr. Rate will consult with the National Auditory Centre and various clinics across the country to conduct a research course for future members of the Board of Hearing, and conduct a lecture tour on problems and needs of adults with hearing loss. The lecture tour will be associated with a national public awareness campaign concerning hearing loss among adults, especially the elderly.
Boys Town Institute for Communications Disorders in Children

Many of our members have been curious about the new Boys Town Communication Disorders Program. To quell their questions, Dr. John P. Hattery presents with a complete description of the Institute.

The Boys Town Institute for Communication Disorders in Children is presently under construction in Nebraska. It is being developed with private funds by Father Flanagan's Boys' Home, in cooperation with the newly established Boys Town University Medical Center. The program is scheduled to be in operation in 1973, with the second year of operations beginning in 1974. In addition to the patients who are referred for consultation, the Boys Town Institute will provide the training of a comprehensive program of graduate education, enabling our students to be consultants for parents who will be participating in the program.

A statement of the probable costs is provided to show the nature of the services provided to the child enrolled in the Boys Town Institute program. The statement of the probable costs is submitted to the family for consideration as part of the enrollment process.

The Boys Town Institute is governed by the Boys Town Board of Directors. In addition, there is a Board of Advisors composed of six members presently under the leadership of the National Council, and Dr. John Hattery, Director of Audiology and Speech Pathology and the Boys Town University School of Medicine.

The second major component of the Boys Town Institute program is the Community Education Program. This program is designed for the community's health service workers who have an interest in learning about the potential to develop a community's educational potential in the area of communication disorders.

The Community Education Program is offered in two formats: a one-week intensive workshop and a three-day seminar. The workshops are designed to provide the community's health service workers with an understanding of the nature of the communication disorders and the potential to develop a community's educational potential in the area of communication disorders.

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A major goal of the Boys Town Institute is to provide a comprehensive program of graduate education, enabling our students to be consultants for parents who will be participating in the program. The statement of the probable costs is provided to show the nature of the services provided to the child enrolled in the Boys Town Institute program. The statement of the probable costs is submitted to the family for consideration as part of the enrollment process.
INDUSTRIAL HEARING CONSERVATION COURSES

April 4-5
Environmental Hearing & Vision Cons. Ltd., 6600 Joy Road, E. Syracuse, N.Y. 13057, 315-497-6439.

April 10

MAY
May 13, 14, 15
Robert L. Russell, Ph.D, Audiology Tech Training Course, c/o Assoc. Ind. of Oklahoma; Suite 217, 6113 N. May Ave., Oklahoma City, OK 73121; 405-842-4427. Courses also in July, 15, 16, 17; Sept., 9, 10, 12, 13, 14, 16, 19, 20.
May 19, 21, 22
Richard R. Grabouske, Dr., Basic Training Program for Audiologists, Kutztown State College, Kutztown, Penn.

MAY 19, 20, 21
Industrial Audiology Course cosponsored Ohio State University & OAIM Contact E.R. Neto, Ph.D., 456 Citrus Blvd., Sarasota, Fl 34239; 941-423-6004; Fall course: Nov. 5, 4, 5.

Edward Hardick, Ph.D, Audiometric Tech Training Course for Nurses, Wayne State Univ., 261 Mack Blvd., Detroit, Michigan, 48201; Repeat course, Sept. 21-23.

JUNE
June 28-July 1
HCNC J. Sataloff, MD, University of Maine at Orono, Bangor. Contact Sunwell - HCNC, Phila 215-735-7487.

SEPTEMBER
Date not set
Chas. Lebo, MD, Judith Pitt, M.D., Hema Tech Training Course, P.O. Box 799, San Francisco, Ca, 94138, 415-643-4221.

WILLIAM C. THOMPSON AND C. THOMAS W. NORRIS, M.D., University of Nebraska, Med. Center, Omaha, Neb. 68105.

New Location Announced for Colby College Courses

The University of Maine at Orono (Bangor), Maine, announces that the 24th Annual Institute in Occupational Hearing Loss and the 10th Annual Industrial Hearing Conservation Institute, previously held at Colby College and directed by Doctors Joseph Sataloff and Arnon Glinig, will be held on June 29 to July 2, 1979, at the University of Maine.

The facilities of the University of Maine provide improved accommodation and comfort for participants.

The Institute on Occupational Hearing Loss is designed for industrial safety directors, safety engineers, engineers, hygienists, audiologists, management executive secretaries and other personnel concerned with the control of occupational hearing loss. The program, which includes selected readings and a comprehensive line of instruments applicable to the control of industrial hearing loss, includes lectures, discussion, field trips, and individual counseling.

The new college in the U.S., we are seeking a 35-36 year old experienced audiologist, with excellent sales capabilities, in a full time basis to direct our U.S. sales.

We offer the possibility of acquiring sales with the back-up of a name already established throughout the world, of a product advanced in design, technology, and prestige, and a highly interesting working position with both rewarding career and income possibilities, in a fast developing market.


Q. Do you find that positional ENG testing is valuable in localizing the lesion?
A. Dr. Wallace Rakes,

WALLACE RAKES, M.D., NEW ORLEANS, LA. 'No.

Q. Do you find that positional ENG testing is valuable in identifying the lesion which is creating the peripheral cause, direction changing manually not excluded. While it is not a completely single position probably contributing to CNS localization.

ALFRED C. COATES, M.D., TULSA, Medical Center, Houston, Tex. When recorded behind closed lids, "pure" positional nystagmus afflicted by moving the patient SLOWLY into the test positions can often be a valuable indicator of pathologic nystagmus. Rather than the nature of the positional nystagmus (i.e., whether the direction changing or direction fixed) or the direction of the positional nystagmus has any mobilizing significance. However, paroxysmal nystagmus is elicited by the relatively violent "Devil's Halpke maneuver" and which is not the same thing as positional nystagmus does not have functional value.

NEW YORK, NY.

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Gross Heads Advisory Board

Better Hearing Institute

BUIergeon

The Better Hearing Foundation of Washington, D.C., has approved Dr. Charles Gross as its Advisory Chairman. Dr. Dale Gardner as Associate Chairman. Tony Zale, founder and chairman of the Better Hearing Foundation, describes the program as one of the most important in the field of hearing loss today. The program is designed to educate the public about hearing loss and to encourage those who suspect a problem to seek help.

AAS member Charles Gross has interviewed himself in hearing aids and related practices in his home state of Tennessee. He has been on the Advisory Council for the Better Hearing Institute and the National Hearing Aid Society. He is the founder of the Tennessee Hearing Aid Society.

Among BUI’s public service offerings are:

"You and Your Hearing," a slide cassette presentation for the general public; it focuses on the magnitude of the hearing loss problem, the types of hearing handicaps, the causes, warning signs, prevention and available hearing aids.

"They Overcame Hearing Loss," a booklet featuring the personal stories of successful hard-of-hearing Americans who have retired from their careers.

"Sounds or Silence?" a series of podcasts exploring the value of hearing and hearing loss for teenagers.

BUI is a non-profit public service organization of the Better Hearing Institute.

The program is supported by the public service efforts of the Better Hearing Institute.

Course for Hearing Aid Dispensers Offered

A program in audiologic technology is being offered by the University of Texas at El Paso. The program will be conducted by experts in the field of hearing aid dispensing and will be evaluated by the American Academy of Audiology.

NAMING THIS FAMOUS AUDILOGIST?

Vernon Appointed as Associate Editor of JAAS

Due to his many other commitments, Dr. Vernon Appointed has been designated as the Associate Editor of the Journal of the American Audiology Society. Vernon appointed is director of the Speech and Hearing Science Program at Ohio State University, has been appointed to replaceerry.
Impedance Audiology
Is Still Where The Action Is

Impedance audiometry continues to be everyone’s favorite topic. For years it has been a popular choice in several years of extensive coverage in the literature and in numerous course programs. The reason seems to be that the versatility of the impedance bridge is constantly being expanded in a variety of research and clinical studies.

To the original tympanometry and acoustic reflex tests have been added new and ingenious observations. A Physical Volume Test for an in-ear tympanic membrane through the recording of an unusually large volume measurement. It then becomes a means to demonstrate a non-permeable perforation behind an exaggerated anterior overhang or body of adherent crust obstruction of ventilating tubes or within a blind retraction pocket.

New interpretations are being made of the acoustic reflex. One unique exception to the bilateral absence of acoustic reflexes would show a lower threshold than the bilaterale absence. When the peak is absent or low, the reflex response is a low ear, contraction of the tympanic membrane will increase the impedance of the tympanic membrane, the middle ear pressure will increase further, and reflexes in oscillotocus dissimilarity in pathogenesis of fractured stapedial crus.

As reported by Jerger, researchers at Northwestern University and Boeing College of Medicine combined efforts to evaluate acoustic reflex findings in patients with various nerve disorders. Acoustic reflexes were absent at test frequencies in 19 patients, present but elevated or with decay in four patients, and normal in seven patients. Once the patients had found similar acoustic reflex results in 16 cases of acoustic tus. These researchers conclude that the acoustic reflex measurements are the most powerful auditory test in the evaluation of the clinical or performance of VIII nerve tumors.

The most intriguing fact evidenced in the data, despite the North American data, is that the acoustic reflex measurements are the best predictor of the time in patients with normal hearing in hearing loss.

Course for Dispensers....

(Continued From Page 5)

Independent School District

The Hearing Conservation program was established by the University of Texas at El Paso Speech, Hearing, and Language Center expanded to include the El Paso Electric Company. The University of Texas involves the El Paso Gas Line Company, the El Paso Water, Xcel Energy, and the El Paso Railways.

The University of Texas at El Paso Speech, Hearing, and Language Center is a workshop training session in Sound Level Monitoring and Safety for a total of 108 hours. Dr. M. Paul Moore, University of Florida, and Dr. George A. Simon, Western University, have been appointed to the National Advisory Board and Communication Disorders and Stroke. Other members of the Council with special interest in communication disorders are Dr. L. James E. Walker, Pennsylvania State University, Dr. J. Paul Moore, University of Florida, and Dr. George A. Simon, Western University.

Facts from the Facts

INDIANO COUNCIL

Dr. M. A. Lawrence, Director, Kregen Hearing Research Institute, University of Michigan, Ann Arbor, Michigan, has been appointed to the National Advisory Board of the National Institute for Neurological and Communication Disorders and Stroke. Other members of the Council with special interest in communication disorders are Dr. L. James E. Walker, Pennsylvania State University, Dr. J. Paul Moore, University of Florida, and Dr. George A. Simon, Western University.

INDIANO AWARD PROGRAM

National Institute of Mental Health, National Institute of Dental and Oral Health, and National Institute of Aging have been appointed to the National Advisory Board of the National Institute for Neurological and Communication Disorders and Stroke.
Current Abstracts


The authors have developed from a masters thesis presented at the University of Alabama in Huntsville. The study was supported by a grant from the National Institutes of Health. The investigation involved 30 children of various ages, ranging from newborns to 12 months. The study was conducted over a period of six months. A pilot study of sixty infants resulted in the specific procedures for response behaviors categorized in hypothesis order: 1) reflexive behaviors (involuntary, immediate); 2) eye movements (voluntary, sudden); 3) auditory responses (change in facial expression, seeking but not localizing); and 4) localizing (immediate or delayed, by eyes, head or body, or a horizontal or vertical plane).

The experimental study utilized 60 infants from a rubella follow-up project who were regarded as normal. After the infants were tested, they were given pediatrician visits and testing with the Infant Developmental Screening Test. Three infants in 5 months of age, fourteen were 6 to 8 months of age, and nine were 9 to 12 months of age. Twenty-six of the forty babies were males.

Tests signals consisting of noise and a male adult voice were presented at levels 50 decibel loudness in sound field at levels of approximately 50-60 decibels. Responses were recorded positive, questionable, or negative by two observers in the appropriate response category. Percentages of actual to possible responses were derived and compared for age groups for the various categories.

A normal pattern of auditory response with initial reflexive responses thereafter disappearing before 4 months of age and giving way to voluntary responses is a response to sound. Those in turn reduced at around six months in favor of listening and searching behaviors, both precoordinated to local stimuli. The authors found evidence of emergence in eight of seven and four of the seven month olds.

This study has nicely systematized the observation of behavior up to this point and has added evidence in the understanding of hearing sensitivity of infants. It has increased attention to follow-up of high risk newborns, this kind of information should prove valuable for early identification and management of hearing impairment in infants.

A major weakness of the study was the death of the baby in the 50 week group, which leads the reader to wonder if the data is generalizable. The authors recognize this shortcoming; it is regrettable they did not wait to publish until a well-balanced data base was available.

One also questions the wisdom of using rubella babies for a normative study of this sort because the authors' efforts to insure that the data were "normal" were not made. Reports of bizarre behaviors of infants who have undergone rubella infection selection detracts from the otherwise careful, credible report. It may be that the rubella is a factor in the reflex behavior response of normal babies, like a scarlet letter, however, their designation must be considered.

The presumed improvement of sensation and motor response has implications for a study of this sort. I wonder, for example, whether the reflex behaviors of the 9-12 month old babies might have been more similar in the younger babies if test signals at comparable sensation levels (rather than intensity levels) had been used. A parallel study experimenting with signals of decreasing intensity as the babies matured would be of interest. While it isn't realistic to cite every contribution to the earlier thinking about infant testing, I am saddened to note again the oversight of one whose observations stimulated much of our current thought. Kerwin Murphy's work (1958) should be particularly with respect to the development of localization behavior, which certainly be credentialed. "Auditory response of infants" has offered a workable methodology for many researchers who evaluate the auditory responsiveness of children. It is not misplaced here in the "auditory competence" Eisenberg would have us address (1970). The data from more babies and normal babies are needed to establish norms with which the children can be compared.

Carol Ehrlich, Ph.D.


This article is an update of original data which furthers confirm previous reports by the authors to the effect that adenoid tonsillitis is a recognizable entity in our ambulatory practice. The authors have seen a series of patients with this entity over the past year. The data presented suggests to the authors that recurrent adenoid tonsillitis is a bacteria-viral illness, the viruses in these children being Enterobacteriaceae and adenovirus. The bacteria involved are those which are found in the normal oropharynx and nasopharynx flora of children with recurrent adenoid tonsillitis, i.e. Streptococcus pyogenes, Staphylococcus aureus, Hemophilus influenzae, Pneumococcus species, and the aerobes and anaerobes. The recurrences of adenoid tonsillitis contribute to the role of EBBY and adenoid and tonsils and adenoids and their activity secondarily from a primary infection with another pathogenic virus or bacterium from the nasopharynx.

This excellent and timely paper, along with previous publications of the authors, brings real solace to those of us in clinical practice who have studied this fascinating situation more "in vitro." We know very well from experience that removal of tonsils and adenoids that are subject to recurrent infection, associated with various conditions such as recurrent sore throat, otitis media, or exudative otitis, and coryza and allergies, and those patients with recurrent sinusitis and otitis media, and in complications, is a very beneficial procedure. This reviewer would also direct attention to the need for the almost routine, x-ray study of the maxillary sinuses in these patients with recurrent adenoid tonsillitis, particularly when associated with serious otitis media, as virtually all of these patients will show some degree of maxillary sinusitis varying from mucosal thickening to complete opacification. The usual ten day course of the appropriate antibiotic will not clear up the sinutitis, through the adenoid tonsillitis will resolve, only to flare up again in a matter of a week or two. Such recurrences prove exasperating to parents and pediatricians. Antibiotics must be prescribed in these instances in adult doses usually and for at least twenty-one days.

-James T. Spencer, M.D.

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Playmakers of the Month

"THE WAY IT SHOULD ALWAYS BE"

JIM CURNAN of Quimtilie and Bob Brinkley of Bellows present a lecture on cyclodisc.

Tactile Speech Displays

For The Deaf

A group, including personnel from the Massachusetts Institute of Technology's Rehabilitation Engineering Laboratory and Research Laboratory of Electronics, the Harvard Graduate School of Education and Harvard Medical School (Children's Hospital Medical Center), are pursuing three new lines of work aimed at placing tactile displays on deaf persons. Their goal is to design and develop tactile displays, to design displays that can be worn continuously by deaf persons, and to develop display that will provide a sufficiently rich display to allow recognition of intelligible speech. The group, headed by M.G. Schutz of Children's Hospital Medical Center is currently pursuing three specific lines of work: (1) a "simple" aid that will transmit some acoustic information; a device for alerting the wearer to the presence of sound and to display its envelope characteristics; (2) a physiologic study of Tadmor, a tactile method of speech communication used by deaf-blind rearing contact with the talker's articulatory finesses and: (3) a comparative study of the information-processing characteristics used in several tactile speech-processing schemes.

ANSWER: Karl Harford, in the cellar of the old Billikens Club, 1956. The child is Hal Williams' son, also a Department of Defense employee.

(See Picture on Page 5)

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Honorably Recognized by BHI

"Redskin Halflack Larry Brown Encourages Hearing Impaired in New BHI TV Announcement"

Larry Brown, Washington Redskins halfback and pro football's Most Valuable Player in 1972, offers hope and inspiration to millions of hearing impaired Americans in a new television public service announcement just produced by the Better Hearing Institute. Release of the announcement will be timed to coincide with Better Hearing Month, a public information campaign conducted each May by BHI and other hearing organizations. The spot was made possible by a grant from the Battery Products Division, Union Carbide Corporation.

Mr. Brown, who successfully overcame his own hearing handicap, appears in a 30-second announcement that traces the scope of hearing loss and the importance of hearing and hearing help.

"It was Vince Lombardi, the great football coach, who first discovered my hearing impairment," Brown said. "Lombardi noticed it when I couldn't hear plays coming out of one side of the line but that I was slow in moving out of the other side. He asked if I had a hearing problem, I admitted that I did, and he convinced me to have it corrected. Now, because of a full-in hearing aid in my football helmet, I can hear all the calls from both sides. "Good hearing is essential to being a good football player," Brown added. "It is also essential to enjoying life and to living to the fullest."

Joseph Lucke Receives Award

Joseph C. Lucke, 10-year organizer, head of the Better Hearing Institute, Inc., and president of the Better Hearing Institute, Inc., was awarded the BHI President's Award by the Institute's Board of Directors for "exceptional service to the Institute and the field of hearing." The award was presented by Ralph Campanella, first BHI President, at the Institute's recent board meeting in Chicago. Another development at the Chicago board meeting was the election of new BHI officers and board members. They include: President, Joseph Lucke, former president of NBRAS; Vice President John Kojis, president and general manager of Maxon Hearing Instrumentary; Secretary Donald Galloway, Bellows hearing aid manufacturer, and Treasurer Larry Aikins, public affairs director for Bellows Electronics Corporation. Board members are: Thomas Arnold, founder, of Arnold Hearing Aid Company, Ralph Campanella, president of the Hearing Aid Industry Conference and of NCSI, and Stanford Smith, market manager for Telecommunications, Inc., and former director of NCR Divisions, Union Carbide Corporation.

The board explored new directions and planned for the next BHI fiscal year beginning May 1, 1976."
HEARING LOSS IN SEARCH OF A CAUSE

We have recently reviewed the "risk factors" associated with the first 16 infants with confirmed severe hearing losses who were detected by the Cri-du-Chat nursery screening technique. (1)

Three were shown to be the expected cases. Cases 2, 3, 6, 7, 11, 12, 13 and 16 were from the well baby nursery, and the others from the regular nursery. The medical records on these kids are quite complete and include multiple vasoactive drugs. We are also aware of anyone who was at risk by history or by clinical impression. There is some interesting, if not completely startling, facts here.

The table shows that in many instances we had more than one risk factor to cope with in finding a cause. It is quite surprising. Bilirubin levels ran from 10 to 26 mg%, and two were below 12 mg%. This very strongly suggests that the risk factor for hearing loss is associated with hyperbilirubinemia. The higher the bilirubin level from the 20 mg% cutoff, the fewer patients with otitis media, one of whom had normal kidney function. However, we do not have a no-risk level to believe these drugs are a cause for hearing loss. We have follow up to 3 years of such antibiotic treated neonates and have not found any suspicious hearing losses. The fact that these children were placed on antibiotics (usually for prophylactic indications) may suggest that infection itself might have been involved in some of the hearing losses.

Some of these children had been among those medical records at the time of the review. Trips through the hospital records revealed a list of thousands of patients in which the "cause" for the hearing loss was not documented and occasionally changed to a diagnosis at complete odds with the facts.

By: F. Blair Simmons, M.D. 

American Audiology Society European Study Tour 1976 and XIII International Congress of Audiology ALL INCLUSIVE TOUR INCURSES:
- Highlights & Points of Professional Interest including the Hearing Aid Institute, Lusby, Germany, and International Congress of Audiology, Florence, Italy
- Air fare & ground arrangements
- Superior Continental Breakfast Included every Day, Lunches & Dinners as Perinerary Tours
- Full Sightseeing in Copenhagen, Munich & Rome
- English-speaking Full-time Guide
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- Transportation via Deluxe Motorcoach, First Class Train
- Tips, Taxes, Portage Included

**AMINO ACIDS IN ENSO-INDUCED COCHLEAR HAIR CELL LOSS**

Amino acid therapy against progress of noise-induced cochlear hair cell loss. P. L. Benoit, M.S. and L. J. Make, Kongue Hearing Research Laboratory, University of the South, Louisiana State University Medical Center, Department of Otolaryngology, 1910 Poydras Street, Building 346, New Orleans, Louisiana, 70119.

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**Facts from the Feds...**

Candidates must be citizens or permanent nationals of the United States and they must be sponsored for the proposed program by a domestic nonprofit public or private nonprofit institution. Candidates should have completed at least three years of postdoctoral training and/or experience, exclusive of required military service. The most competitive candidate is one who has either just completed or is in the final year of residency training as of January 1 of the application year for the period of study.

**AMERICAN AUDIOLOGICAL SOCIETY EUROPEAN STUDY TOUR 1976**

**ITINERARY FOR 16-DAY TOUR**

Day at night at mid

Sat. Oct. 10 - depart U.S. for Copenhagen — Light
Sun. Oct. 11 - arrive Copenhagen — Rest
Mon. Oct. 12 - Copenhagen Wines Enaves presentation and hospitality
Tues. Oct. 13 - Copenhagen Wines Enaves presentation and hospitality
Wed. Oct. 14 - Lundby Hearing Aid Institute Presentation
Thurs. Oct. 15 - Hamburg Cruise / Walk to Hamburg
Fri. Oct. 16 - Flensborg Presentation and Hospitality
Sat. Oct. 17 - Munster / singing keule & hospice
Sun. Oct. 18 - Munich / music and Munich Weisswurst
Mon. Oct. 19 - Dresden / music and Dresden Weisswurst
Tues. Oct. 20 - Flensburg, A.M. — Congress, P.M. — Hike
Wed. Oct. 21 - Flensburg, A.M. — Congress, P.M. — Hike
Thurs. Oct. 22 - Flensburg, A.M. — Congress, P.M. — Hike
Fri. Oct. 23 - Munster / singing keule & hospice
Sat. Oct. 24 - Flensburg, A.M. — Congress, P.M. — Hike
Sun. Oct. 25 - home — at your leisure
Mon. Oct. 26 - department for U.S.A...

**ITINERARY FOR 9-DAY TOUR**

Day at night at mid

Sat. Oct. 10 - depart U.S. for Rome — Light
Sun. Oct. 11 - arrive Rome — rest & itinerary
Mon. Oct. 12 - Rome to Florence by train or motorcoach
Tues. Oct. 13 - Florence, A.M. — Congress, P.M. — Hike
Thurs. Oct. 15 - Florence, A.M. — Congress, P.M. — Hike
Fri. Oct. 16 - Rome — sightseeing & leisure
Sat. Oct. 17 - Rome — at your leisure

**AIRFARE**

**TOUR 1 (16 DAYS)**

**TOUR 2 (9 DAYS)**

**Costs & Inclusions**

**TOUR 1 (16 DAYS)**

**TOUR 2 (9 DAYS)**

To secure your place on the tour complete the following and return a nonrefundable deposit of $100.00 to indicate your interest in the tour. For further information, please contact the American Audiology Society, 1838 Association Ave., Lisle, IL 60532, USA.
The President’s Message
W. DIXON WARD
President, American Audiology Society

It was a bit disconcerting to find myself the second president of our Society for two reasons. In the first place, I have always disagreed with the hearing aid dealer, nor an “audiologist” in the restricted American sense [someone who has a degree in audiology]. However, like the rest of our members, I do have a keen interest in the hearing process. Furthermore, the post of president, happily, does not involve much real power (may it always remain so). I always consider that dispensing hearing aids is all that will permit me to view with some degree of objectivity the present conflict among those in control of certain national organizations who, in the name of “public interest”, seek government guaranteed monopolies.

The process that evolutions in state-modelled monopolies usually begins innocently enough, as a professional organization tries to protect the consumer against fraud. Through the use of certification procedures, the organization attempts to guarantee the competence of all its members who have a service or product to sell, be it a medical diagnosis, an automobile inspection, or the fitting of a hearing aid. If everything went as it should, such a system would be all that would be needed to protect the consumer adequately. Were certification programs of sufficient depth that would weed out the incompetent and the dishonest, the public would soon learn that accreditation by a particular organization was a sufficient condition to allow easy access to the public service. The citizen, then, would be prudent to determine that his physician was suitably accredited by a well-known medical organization, his ophthalmologist by one of more specialized range, and so on. On the other hand, if he did not so determine, or deliberately chose to seek service from someone who was not accredited, such choices should be his to make. The legitimate role government could then be to inform -to require that laws exist that would permit the prosecution of those who claimed accreditation by a certain group but did not in fact have it. Under these conditions, most people would be expected to require the accreditation requirements would find it advantageous to join the organization, although it would not be illegal for a witch doctor to claim to be a healer, for example, but finding customers, without certification, would be a problem. If an accrediting organization got too big (and hence, it appears, inevitably too powerful and too expensive), then a group of individuals would free to resign from the organization and begin their own accreditation. It might take a while for the reputation of the new group to become established, but in the meantime, the action could be expected to force the membership of such an organization would obviously be to the advantage of the consumer of the group's services, since competition would eliminate price-fixing. So much for what could happen in a free society. Unfortunately, open competition seems to be an activity that many people like they want the others to engage in, but not themselves. Instead, they seek "security" in the form of monopoly — if not only for themselves, at least for their group. Such individuals find willing accusers in politicians, who are always glad to gain control of anything. The state willingly sets in concrete the requirements for certification, either raising an order of magnitude the fee for the examination in order to pay for the new bureaucracy that is now "needed", or else designating the inspecting organization as the sole examiner, and in any event, their examination is to consider how well those requirements entities one to do it, and, by implication, what the uncertain cannot do. Of course, this is justified in the public eye in terms of "protection against charlatans"; however, a close examination shows that all are being protected against by the paternalistic state is its stupidity, a decline in patrimonial liberties like myself would rather do without.

My suggestion, then, is that if, as I believe to be the case, the members of our Society are more freedom-oriented than the individuals who remain in the organizations from which we fled or are free, we should devote as much time as we can spare to the abolition of governmental controls in all aspects of our business of measuring, protecting, and improving the lives, either as remaining and completely from the conflict with "witness" rival certifying agencies. It would be a serious mistake 1 merely check as we...

(Continued on Page 2)
EDITORIAL

Questions are often asked about the society and its makeup. We thought we would take this opportunity to answer those questions most frequently asked.

The purpose of the Society is specifically stated in the Statutes, and is iterated on each membership certificate: "...to increase knowledge of the art of hearing, promote conservation of hearing, and foster rehabilitation and habilitation of the hearing impaired." The Society was purposely formed as a scientific, educational, and professional group, and is not in competition with any existing social organizations. The Society will NOT become involved in political issues; will NOT become involved in union type activities, such as licensure; and will NOT provide professional certification for its members. Membership specifically implies an interest in the purposes and goals stated above and that is all it is. It is recognized that minimal membership requirements are low. This is so that individuals who hold an interest in human hearing who cannot participate in existing organizations might join. As of June 1st the Society had 78 members: 24 under 46; 24 over 46; 24 had college degrees; 24 had masters degrees; and 24 held a doctoral degree in any discipline.

The last two days of the conference were devoted to the various surgical treatments of chronic cochleostomy. The various discussions were a steady flow that varied from 10:00 to 18:00. The minute by minute scheduling of discussions was often altered due to the express wish of various other sessions.

In 1969-70: President-Elect-Alexander Graham Bell Association for the Deaf.
1967-72: Council Member, National Advisory Council, National Institute of Neurological Diseases and Stroke.

Honors: Duan Scholar, Brown University, 1939; Gaston Prize, Brown University, 1939; Sigma Chi (honorary scholastic); Brown University, 1939; Phi Kappa Phi (honorary); Cornell University, 1943, Sigma Xi.

As a final, Dr. Hart's current activities and scientific endeavors are as follows:

Development of Hearing in the first year of life (with J.B. Hardy and H. Shimasu); N.I.H.D.B. "Collaborative Project on Cerbral Palsy and Related Neurological Disorders".


Comparison among electrodermal, electroencephalographic, myographic, and vascular response to stimulants in animal and man (with H. Shimasu).

Collaborative Project in the development of children and the effects of certain diseases on hearing in man (with J.B. Hardy, E.B. Kurup, and V. Kapur, Christian Medical College, Vellore, India; N.I.H.D.B. Grant B-3067)."
Oticon Cited for International Achievement

The Oticon Foundation was recently awarded the "International Technical Trophy" for industrial contribution to decorate ceremonies in Paris, France. The International Trophy is awarded by the International Institute for Promotion and Prestige which is associated with the United Nations Educational, Scientific and Cultural Organization (UNESCO). With this honor Oticon joins numerous other outstanding scientific achievements, outstanding techniques, new technology and other important contributions. Previous award recipients whose achievement has been recognized with the International Trophy include the US National Aeronautics and Space Administration (NASA), on the occasion of the moon landing; the Academy of Sciences of the U.S.S.R. on their 250th anniversary, Zambia

Industrial and Mining Corporation (ZIMCO) and the Oceanographic Museum of Monaco.

In an impressive ceremony held at UNESCO Building in Paris, and attended by the Danish Ambassador to France, a Minister of the French government, Mr. Bent J. Simonsen, Director of the world-wide Oticon Foundation and Companies accepted the "International Trophy" from Madame Giselle Rutman, Associate Vice President of the I.L.P.P. Also in attendance at the awards ceremony was a group of American personnel on tour with Oticon.

Mr. Simonsen, in his acceptance speech, cited the growth of the Oticon Foundation through the years. "When in 1959 the foundation was organized, we were aware of the entire world - brought home with him a hearing aid from London for his hearing impaired wife, he had no means of knowing that he had laid the cornerstone of an expansive enterprise. From this one hearing aid grew an organization which is today honored by the "International Institute for Promotion and Prestige".

"Social progress since the second world war in a great number of countries in the western hemisphere has meant the public recognition of the importance of giving financial support to the rehabilitation of the hearing impaired population, because a hearing impairment is a handicap which is often considered a more serious handicap than the loss of vision. The Danish hearing aid industry blossomed during the years after World War II. William Dam, one of the founder of our organization, was responsible for its success. It was very important to consolidate the future work to be done for the hearing impaired. We were not the only to see that this was possible and we have a special responsibility to keep the work underway in the statutes of the Foundation.

"Approximately 5% of the world population needs help for hearing impairment which must be met by fitting a hearing aid and this need is far from being met. In Denmark, the country is considered to have a very high health standard, we have covered approximately 80% of the demand. For many years we have gathered the necessary resources to meet the demand in the Federal Republic of Germany, which has a higher standard. In recent years, there has been a greater under-standing that the hearing impaired must be helped to emerge in a number of countries.

Mr. S. J. Simonsen, Member of the board of the Oticon Foundation and C.E.O. of the Oticon group of companies worldwide, received the award "Le Trophée de la Technique" for Oticon's outstanding work in research and development for the benefit of mankind. The award will be kept in the permanent collection of the National Museum of Science and Technology in Stockholm, Sweden.

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**News About Members and Others**

Hiroshi Shimizu, M.D. has been appointed the Director of the Hearing and Speech Clinic at the Department of Otolaryngology at Johns Hopkins School of Medicine.

At the Los Angeles Otolaryngology Medical Group a luncheon was recently held for two sisters, Agnes Ward and Ruth Greulich, to celebrate the completion of the processing of the 200th page of temporal bone. The host at the luncheon was Dr. George Kelman, Director Emeritus of the Einhorn Temporal Bone Laboratory. All of these boxes have complete clinical records. It is hoped that evaluation of them in the Larrabee Laboratory will yield more light on the causes of sensori-neural hearing loss. A current project is to determine how many patients might be suitable candidates for the cochlear implant, i.e., how many patients remaining in spite of the loss of the organ of Corti. So far it appears that about two thirds of the patients have at least 60 percent or more of the remaining neurons in the organ of Corti intact which may be a normal ganglion cell count.

Dr. J. S. H. N. O. of the Department of Otolaryngology file. E. S. R. L. T. has been appointed as the Director of the Otology Microscope Laboratory at the Ear Research Institute. He has a Ph.D. from the University of California and has published several papers in the Microscopy in the not too distant future.

A project is to be started at the Ear Research Institute by Dr. J. S. H. N. O. involving the use of the microscope to try to control and limit tumors.

Dwight Waldron reports that the Audiology-Speech-Patologic Service at The Medical University of South Carolina, Charleston, has moved into its new quarters in the recently completed clinical service building. The service is staffed by six audiologists, and one speech pathologist, all of whom hold the AHSA certificate.

**Gil Hier, Professor of Hearing and Speech Center, Children's Hospital, National Medical Center, Washington, has been elected President-Elect for 1977-78 of the Maryland Speech and Hearing Association.**

**Harris Pomeranz, University of South Florida College of Medicine, Tampa, is conducting a survey of the hearing impaired (in the Steinberg (Stanford University) Crib-O-Graph of Tampa General Hospital, and with the assistance of John Curran and otolaryngologist Endocrinologist of the University of South Florida, has developed a High Risk Registry for congenital deafness, in cooperation with Communications Awareness Project, a local non-profit agency directed by Barbara Stefani.

"On the first of January, 1976, the Department of Otolaryngology at Queen's University, Kingston, Canada, opened its Human Communication Research Unit on the campus of the Hospital. The Unit is the Department in Malcolm Williams, F.R.C.S. (C.), and the Unit Director, who is also an associate professor in the Department of Otolaryngology, is John F. Darbyshire, M.A., Ph.D.

The main function of the new unit is to carry out an epidemiologic and demographic study of speech and hearing needs in Eastern Ontario, with particular regard to children and to investigate social factors in families with young hearing impaired children, establishing vocabulary norms for young Canadian children, both anglophone and francophone.

In view of the relatively unique nature of the new unit, contact with interested professionals both in the United States and elsewhere would always be welcome. Communications should, in the first instance, be sent to Dr. Darbyshire at the above address. To be a part of this new unit, contact can be established to the Director of the Department, Dr. Darbyshire.

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Robert C. Cody, Director of the Speech and Hearing Center, West Virginia University Medical Center, spoke on "Impedance Audiometry in School Hearing Screening Programs," at the annual meeting of the Hearing Association of the National Capital Area in Charleston, to emphasize his enthusiasm for combining impedance audiometry with pure tone audiometry (" tympano-audiometric screening"), through the course of his presentation he stripped away his jacket, tie and shirt to reveal a now infamous T-shirt inscribed with the phrase, "Sick in your ear?" (courtesy of the American Electromedics Corporation). Having given a historical review of school hearing screening from the days of the discarding numbers photograph test to the present innovation of including impedance measurements, he clearly indicated that ... we come a long way, boys..."..." 

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Frank Kleffner, has accepted the position of Director of the Institute of Epidemiology. He will begin his new job September 1.
THE INTERROGATORY

Question: In what circumstances do you feel it is advisable to recommend binaural hearing aid use?

Kenneth W. Berger, Ph.D.
Kent State University, Kent, Ohio

There is abundant evidence that binaural hearing is superior to monaural hearing in normal hearing individuals. Unfortunately, the evidence on binaural aided hearing, prior or now, is not in clear in cases of combinations of impaired ears. Presumed advantages of binaural over monaural amplification are better sensitivity to sound, better speech discrimination in noise, and better localization of sound. Since the expected improvement in sensitivity is minimal and not usually an important factor, and since improved speech discrimination has been elusive of proof, one judges the remaining corresponding binaural hearing aids I make is on the basis of localization. In sound. Binaural hearing aids are recommended if the threshold of the two ears differ by more than 10 dB at any of the speech frequencies and are recommended if the speech discrimination range of each ear is about the same, and if at the same sensitivity level speech discrimination scores under phonetically balanced test are better than 80%. The losses with a larger difference in threshold range or degree may benefit from binaural fitting.

Whether the person can safely afford a second aid and should not be considered a factor in determining binaural needs. Nevertheless, from a practical standpoint in the later years the problem must be dealt with.

***

Mrs. Doreen Pollack, CTC-TIP A Dressage and Training Services
Porter's Hamlet, Sterling, Colorado

Although it is possible for man to function monaurally, the normal mode of human hearing is based on the reception of acoustic information from two ears within both hemispheres of the brain, both contralaterally and homolaterally. The advantages of binaural hearing have been well documented, and include overall ease of hearing in general situations, improved speech discrimination especially in the presence of background noise, increased distance hearing, and the ability to localize the sound source better.

Even if the ear is in a forward position, the advantages of a binaural hearing aid are compromised by the normal hearing. For older people, one naturally has to cost, ease of handling and other individual needs.

For more information, I believe true binaural fitting should be the fitting of the two ears with a gain improved WITHOUT A DOUBT that there is a total loss in one ear, or a gain needs to be increased. We have been fitting two separate aids for twenty years and the repeated demonstration of better speech and improved discrimination with a bilateral standard test without LIP READING. For example:

<table>
<thead>
<tr>
<th>Pure Tone Average</th>
<th>Aided Discrimination HL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Ear 10 DB</td>
<td>40 DB at 4500</td>
</tr>
<tr>
<td>Left Ear 10 DB</td>
<td>40 DB at 4500</td>
</tr>
<tr>
<td>Binural</td>
<td>60 DB at 4500</td>
</tr>
</tbody>
</table>

Nevertheless, two major areas of controversy seem ever with any heavy audiologic experience which are expected to permit localization under monaural amplification and under binaural hearing aids are recommended if the thresholds of the two ears differ by no more than 10 dB at any of the speech frequencies and are recommended if the speech discrimination range of each ear is about the same, and if at the same sensitivity level speech discrimination scores under phonetically balanced test differ by no more than 10%. These losses with a larger difference in threshold range or degree may benefit from binaural fitting.

Whether the person can safely afford a second aid and should not be considered a factor in determining binaural needs. Nevertheless, from a practical standpoint in the later years the problem must be dealt with.

***

Dr. Darrel L. Teter, Ph.D.
Private Practice (Ohio)

1) When the aids are to be worn at ear level. It is not advisable to fit binaural aids when they are going to body instruments, worn with three to four inches of separation between their microphones. When the aids are worn at ear level, the individual can benefit from the aids, and true binaural hearing and localization is obtained.

2) I would fit binaural hearing aids when the pure tone measurements for each ear are within 20 dB of each other, through the speech frequencies. This keeps one from fitting ears with great discrepancies, which will lead to a low percentage of success in the experience.

3) I would fit binaural aids with level instruments when the discrimination scores in each ear are within 20 DB. I believe that they should be within 30% of each other, and preferably closer.

***

Joel M. Mydans

The art of fitting and selecting amplification has advanced significantly over the past forty years. With the advent of ear level type instruments, the fitting possibilities are greatly increased over the past. Each year of successful binaural use is very rewarding. My own experience strongly supports the idea of binaural hearing. The future is for the binaural Amplification to make binaural aids more predictable in use.

The complexity and uniqueness of each client's audiologic experience is such that the prediction of successful binaural use is extremely vulnerable. My own experience strongly supports the idea of binaural hearing. My own experience strongly suggests that a hearing impaired individual with a bilateral loss deserves consideration for binaural amplification. The recommendations on a trial basis with individual after care counseling and orientation are for the benefit of the hearing impaired. The evaluation is more a one time basis for the very best results.

The question arises—how would you choose? Residual hearing or binaural amplification? Residual hearing should be tested regularly and the use of hearing aids monitored by an audiologic evaluation. Binaural hearing are measurable only through hearing which is clear and well directed stimulation. I recommend the July, 1973 issue of Hearing Instrumentation which was devoted to binaural hearing and fitting. The adaptive mechanism is a process which can take many months before the binaural advantage is present.

With our rather remarkable technological advances there has been a knowledge of ear mold acoustics, utilizing audiologic measurements and central auditory processing procedures, there is more appreciation in the professional community for binaural amplification. The future indeed shows promise for binaural amplification.

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Dr. Robert F. Reinicke, M.S.
The Hearing Diagnostic Center

The controversy over binaural fittings should stabilize since it can profoundly affect the ultimate success with amplification. The call for fitting this type of fitting and testing procedures are in the area of effective tests for aid placement and selection of increased selective binaural usage. Observations indicate that the binaural fittings are appreciated by the hearing impaired.

While much of the research with binaural hearing aids has been directly related to the bilaterally symmetrical diseases, we must realize that binaural fitting abilities and loudness tolerance levels for both ears. When binaural fitting is not utilized in a binaural situation, this should be viewed as favorable over the use of two body aids. In assessing the potential aided benefit derived from binaural aids, I look to find similar aided responses for warped pure tones, SRT, and whenever possible, discrimination scores. This represents the level for both ears independently prior to introducing the binaural fitting. If it is not possible to produce similar aided responses after ear aid evaluation, I then question the added benefit that one would gain from the use of binaural over the use of the two body aids.

With very young hearing impaired children who have essentially no language skills, the initial use of amplification should be deferred until the age of one. I therefore, hesitate to recommend binaural fittings. The selection of binaural aids in the very beginning and disagree with the practice of binaural fitting for the binaural for the initial experience. The determination of the appropriate information for these babies cannot provide insight into discrimination abilities, unless sufficient language is present to determine any potential benefit derived from both ears' abilities to discriminant speech for this reason, I generally opt for a period of several months of adjustment to the alternation of use between ears on a weekly basis. Then, this information along with both ears can be obtained through observations by the parents, teacher, and audiologist regarding the child's responses coupled with pinch maneuvers for both ears—to be used in making recommendations regarding binaural aids. If the above observations indicate the child is receiving equal benefit from the use of both ears, this suggests that the introduction of binaural amplification is not going to adversely affect the child with more assurance. Routine re-evaluation of the child should proceed as the child develops, with it in mind that the evaluation is based on the on-going trial period in very young children.

Michael C. Pollack, Ph.D.
Pomona Valley, Calif.

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The Interrogatory

(Continued from Page 4)

BY STEVEN BERMAN, M.D.

THOMAS J. BALKANY, M.D.

The occurrence of acute bacterial
otitis media in young infants
has been documented in the neo-
atant and in the otitis-prone,
nonfuel, nonotitis-prone infant.

The symptoms of perinatal dehiscence have also been described that resemble perinatal otitis media in infants.

The ability to accurately diagnose acute otitis media in infants with the hand-held pneumatic otoscope in the neonatal period has many important clinical implications. Undiagnosed bacterial otitis media can lead to a reportable septic state with the institution of appropriate antibiotics, prophylaxis, and rectification of the underlying bimamillar and amylomycotic anomalies. These bimamillar anomalies may last from 41-72 hours if the cultures are not considered. This will lead to a significant decrease in the number of reported cases of neonatal otitis media.

It is important to determine the causative organism by tympanostomy, because the bacteriology of otitis media in this age group differs from older children. In contrast to older children with otitis media in whom our aspirate yields predominantly streptocooccus pneumoniae, hemophilus influenzae, and staphylococcus pyogenes, our aspirates from infants have not shown these organisms. It is not uncommon to report a high incidence of gram-negative enteric infections and staphylococcal infections. Despite these considerations, our patients often undergo follow-up in the intensive care nursery. The barriers to an adequate examination of the infant's auditory canal are a premature infant, which is often obstructed by a nasogastric tube, or (2) a reluctance to disturb a sick child's vital signs, which are intrinsically intubated, receiving assisted ventilation; (3) the normal ap-
neural auditory canal of a premature infant which is often occluded by the nasogastric tube.

At Memorial to Carhart Planned

A grant of $1000 to Northwestern University, Chicago, in memory of Ray Carhart has been made by the Belford Institute for Hearing Research, under the direction of M.L. Posen, president of BHI, announced the grant, which has been accepted by Dean Roy Wood of the School of Speech at Northwestern.

Dr. David Rutherford, Chair-
man of the Committee on Awards will meet with the Trustees on June 7 for presentation of the grant. A plaque bearing the words "Ray Carhart" will be presented to the recipient at the time. Dr. Lois Elliot, new head of the Program in Audiology and Speech Pathology at Northwestern, has accepted the grant.

Tennis Anyone?

There will be an informal tennis tournament on Oct. 6 and 7 in Las Vegas in conjunction with the 1970 ABHI convention. Men's singles and doubles, mixed doubles and women's singles and doubles. The matches will be played, and trophies awarded. If interested, write M. Downs for information.

The Center for Speech, Hear-
ing, and Learning Disabilities at Hackensack Hospital, Hacken-
sack, New Jersey, is conducting a two-year study on the ototoxic effects of tobramycin in the treatment of otitis media with pneumonia or other lower respiratory tract infections. This study is being undertaken with a grant from the Eli Lilly Pharma-
corp. cap, and is in conjunction with the Infectious Disease Divi-
sion of the Hospital.

10. Nelson BW, et al: Acute otitis media: treatment results in making as well as injection molding and rubber molding facilities. The new plant, located at Austin, is one of a kind in the industry. The President of the complete plant facilities by the Memorial to the late Dr. J. B. Carhart.

"It was January 1975, when I was the President of the complete plant facilities by the Memorial to the late Dr. J. B. Carhart. The plant, which was built to help drug innovations and today, is one of the most modern well-equipped facilities in the industry today. Located at the foot of Peaks Island in Colorado Springs, the building is a complete "reach-room" facilities for the manufacture of hybrids, integrated circuitry, a complete machine shop for tool and die making as well as injection molding and rubber molding facilities.

This book contains the proceedings of a conference held in January 1978. The conference aimed at bringing together current thought on early detection of hearing loss and strategies for treating it. The conference was hosted by Dr. George Moncher in Haifa, Israel. Israel, under a grant from the Philanthropic branch of the Benevolent and Protective Order of Elks in Canada. The participants represented the countries of Italy, Israel, Poland, Sweden, Canada, and the United States.

There are great advantages in a privately funded conference such as this one. One is the in-depth exploration of topics and expertise that would take years of public and private collaborations to accomplish. It gives a lead of several years to the dissemination of information on the latest methodologies and opinions. The private support permits expenditures handling and scheduling. And there seems to be a sense of importance and urgency that characterizes these conferences.

This book begins with the recommendations conferences. These are followed by a more comprehensive review of all the papers presented at the conference. The conference papers are divided into two parts: one for professionals and another for laypeople.

The first part contains a series of papers that review the current state of the art in the field of hearing loss. Each paper is followed by a comprehensive discussion of the implications of the findings and recommendations for future research.

The second part of the book is divided into two sections: one for professionals and another for laypeople. The professional section contains a series of papers that review the current state of the art in the field of hearing loss. Each paper is followed by a comprehensive discussion of the implications of the findings and recommendations for future research.

The laypeople section contains a series of papers that explain the current state of the art in the field of hearing loss in easy-to-understand language. Each paper is followed by a comprehensive discussion of the implications of the findings and recommendations for future research.

One cannot pick up a magazine today, whether it is a profession-by-profession or a layperson-directed magazine, without reading that most important of tasks by all hearing professionals: "What's new in hearing?" The last issue of the American Speech and Hearing Association Journal highlighted the importance of this task by including a section on recent developments in the field.

Today, there are several other critical issues in health care that require immediate attention. One of these is the prevention and treatment of hearing loss. This book provides a comprehensive overview of the current state of the art in the field of hearing loss. It is an important resource for professionals and laypeople alike.

IF A CHIMP CAN LEARN A SIGN LANGUAGE
by Rachel Mayberry Human Communication and Social Interaction, Montreal, Quebec, Canada.

After one of such studies, another chapter in the book titled "Learning to Talk" focuses on the development of language in chimpanzees. The author presents a detailed analysis of the language abilities of chimpanzees, as well as the implications of this research for our understanding of language development in humans.

A particularly important aspect of the article is the discussion of the statistical data on the incidence of deafness. It is material that has already been widely studied, but which in recent years, has been extensively re-evaluated. The analysis is not ignored by both educators and the court. Dr. Brilli makes a strong case for realistic program planning for the deaf in the general school environment.

In another section of the article, the Brilli makes the point that hearing handicapped children are not always served in the least restrictive environment. It is often found that children who are served in a school with fully trained teachers, who are appropriate for their needs, and participate in the general education setting. However, in the case of deaf youngsters, this is most often the case in the residential setting.

I cannot recommend this article too strongly to those who are responsible for service planning decisions on hearing handicapped children.

Reviewed by:
Philip A. Bellner, Ph.D.
Headmaster
Pennsylvania School for the Deaf
From the April 1976 issue of the American Speech and Hearing Association Journal.

The goal of this work is clearly stated at its outset: "This monograph details the events and results of fifteen years of work with the cochlear implant at the Basel University Hospital." The authors achieve this goal.

They begin by describing the development of cochlear and eighth nerve stimulation from early reports to present day. They review their own experiences leading to the present use of a single ear of cochlear implant. Case selection, pre-implant testing and interview, and the limitations of the implantation procedures are then presented. The steps are taken by a team consisting of an audiologist, a speech pathologist, an otorhinolaryngologist, two psychologists, and a social worker. Chapter IV outlines their initial efforts to "track the subjects' psychological functioning through time." The book ends rather than it begins. It is a well-written, detailed, and comprehensive account of the development of cochlear technology and its application to the treatment of hearing loss.

What is fun about this book is the style of the writing. It is lean, clean, and direct. It is easy to follow, even if you are not a scientist. It is a good read for anyone interested in hearing loss, whether you are a scientist, a patient, or a doctor.

On the other hand, the book itself is not without its flaws. It is a bit too technical for the average reader. It is a bit too detailed for the general reader. It is a bit too theoretical for the practical reader. But it is a good read for anyone interested in hearing loss, whether you are a scientist, a patient, or a doctor.

The book is well-written, detailed, and comprehensive. It is a good read for anyone interested in hearing loss, whether you are a scientist, a patient, or a doctor.
Hearing Aid Specs Nearing Approval

The proposed specification standards on hearing aids outlined by the Acoustical Society of January "Corti's" Organ are moving steadily toward eventual approval by the Federal Food and Drug Administration. The process has been such that it is expected that it has been approved by the American Standards Institute, and has been forwarded to ANSI for consideration.

Once ANSI approval has been received, the standard will be published—possibly in late summer or fall.

As of April 21st except from the Federal Register explains the development in progress.

"On March 19, 1975, the FDA Panel on Review of Ear, Nose and Throat Devices made a preliminary recommendation that hearing aids be classified as devices for which performance standards will be required after enactment of proposed mechanical device regulations (S. 510, H.R. 11121). Of all devices placed in the standards category, the Panel on Review of Ear, Nose and Throat Devices, hearing aids were ranked as the first priority for the establishment of standards. FDA has been working with interested parties to develop a standard for hearing aids. At FDA's suggestion, the American National Standards Institute on Bioacoustics (S-3), through its Working Group on Hearing Aids (S-3), has developed a draft standards, known as S 3.22, 1978, American National Standard for Specification of Hearing Aid Characteristics, which would specify uniform methods for testing and measuring the electroacoustical characteristics and properties of the hearing aid.

Be Kind to Neighbor But Stay Out of Noise

It has been established that people living in apartment buildings have a loud noise in their buildings. A study of 100 db of noise only 10% helped the normal audiometer and 15% helped the man with the sound.

There go the nobles of instinct, drowned out by a high demand on the level. EPA, take note.

Children Are A Noise Hazard

It may come as no surprise to parents of children to hear that little ones can and do produce dangerous noise levels. A 12-year-old girl uttered screams of 122 db, according to an article in the "New Scientist" (Vol. 18, No. 90). The researchers concluded the mean level of 200 shrieks by primary school children is 141 db on the sound level meter.

The Environmental Protection Agency should be alerted to this new health hazard. We conjure them to regulate the vocal endeavors of young children just as other environmental noise levels are regulated. Somewhere in the future, our noise standards will be extended to cover such hazards as "parental noise hazards, occupational hazards, and hazards for pedestrians."
The University of Alaska, in conjunction with the Alaska Speech and Hearing Association, is offering a graduate level course, June 23-27, at the University of Alaska in Fairbanks. The course, Auditory Processing, Assessment, and Remediation, will be taught by Professor Catherine G. Butler, Ph.D., Collection of hearing aids in the world. This hearing aid museum has more than two thousand different hearing aids on display. There are non-electric, mechanical, manual tires, audiology apparatus, transfer stereotypes, audiome- trists, audiometric devices and the latest miniature devices. In addition to the exhibits, there is an archives comprised of hearing aid patents from the United States and abroad, technical data sheets about specific hearing aids, marketing materials, photographs, and technical manuals. The museum also maintains a large collection of books, pamphlets, and audiovisual materials. The museum is open for public viewing and educational use.
MEMBERSHIP... (Continued From Page 10)

Lynch, J. P., Everett
Meadowlake, Caroline E., Ellingham
Pulliam, Robert L., Long View
Reed, Thomas S., Seattle
Snyder, Jack M., Seattle
Stillwell, Nancy C., Seattle
Steele, Robert L., Seattle
Webber, Bruce A., Seattle

WEST VIRGINIA
Catherine, Carl H., Morgantown
Cody, Robert C., Morgantown
Dawson, C. P., Charleston
Dunahay, Mary L., Huntington

5-7 National Association of the Deaf Biennial Convention, Shamrock Hilton Hotel, Houston, Texas.
5-11 Fifth Symposium on Middle Ear Surgery at Theodar House Academy and Municipal City Hospital, Gummersback (Cologne), West Germany. Written to: Claus Jensen, M.D., Otolaryngology Department, Municipal City Hospital, Gummersack 1, West Germany.

November 16, 17, 18 Annual Meeting of Society for Ear, Nose and Throat Advancements in Children, New Orleans, Louisiana Mansion Dupuy Hotel. Write to Dr. Bashar Jalbi, The Children's Mercy Hospital, 24th at Gillham Road, Kansas City, Missouri 64108.

Acoustical Society of America, San Diego, California.

American Speech and Hearing Association, Houston, Texas.

1987
FEBRUARY

MARCH
5-12 Medical Audio-Visual Workshop, Vail, Colorado. For information write to: Box 5210, CTOB, 92001, Denver, Colorado 80223.

Answer: Jerry Northern in 1966, signing for a program for the next...

Sentic to Meet In New Orleans
The Society for Ear, Nose and Throat Advancements in Children will hold its annual convention in New Orleans, Louisiana November 16, 17, 18 and 19. The convention will be held at the Maison Dupuy Hotel in the French Quarter. The program will be comprised of participation by the four primary disciplines represented within SENTIAL, otolaryngology, pediatrics, audiology and speech pathology. Several recreational events have also been planned during the convention. Paper proposals, requests for further convention information, and requests for fellowship application information should be directed to: Bashar Jalbi, M.D., O.R.O., Secretary-Treasurer of SENTIAL, Chief, Section of Otolaryngology, The Children's Mercy Hospital, 24th at Gillham Road, Kansas City, Missouri 64108.

CROSBY JOINS Advisory Board
Norm Crosby, as many people know, has been hearing impaired—the result of a wartime injury. "I make no bones about the fact that I'm a hearing loss, and that I wear hearing aids," says Crosby, who takes every available opportunity to talk about his problem, and the help he receives from hearing aids, on television, and in his personal appearances. In addition to his membership on the Seattle Hearing Institute Advisory Board, Crosby stars in his own radio and television public service announcements and appears in the Institute's "They Overcame Hearing Loss" celebrity booklet. He is the first person to have received IFHI's Better Hearing Achievement Award for his charitable work in aiding people with a hearing deficiency.

EUROPEAN STUDY TOUR DEADLINE

The final deadline for reserving space on either of the European Study Tours is August 15. Details are in Corti's Organ Vol. 1, Numbers 1 and 2. Send your $100.00 refundable deposit to:

AMERICAN AUDIOLoGY SOCIETY
P.O. BOX 580
AUSTIN, TEXAS 78767

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AMERICAN AUDIOLoGY SOCIETY
P.O. BOX 580
AUSTIN, TEXAS 78767

DEADLINE
PROGRAM
1976 ANNUAL MEETING
AMERICAN AU迪LOGY SOCIETY
Tuesday, October 5, 1976

PLACE:
ROOMS H 51-56 (Rooms 1-6)
Las Vegas Hilton Convention Center

REGISTRATION:
Members $5.00
Non-Members $8.00

Begins 8:30 a.m.

8:30-12:00 p.m. EXECUTIVE COMMITTEE MEETING
12:30-12:35 p.m. INTRODUCTION & AWARD-Pres. W.D. Ward
12:35-2:30 p.m. FIRST RAYMOND CARHART MEMORIAL
LECTURE by JAMES F. JERGER, PH.D.
2:30-2:45 p.m. COFFEE BREAK
2:45-5:07 p.m. CONTRIBUTED PAPERS
5:10 p.m. - til BRIEF BUSINESS MEETING

[Because Monday, October 4th, is Yom Kippur, the public portion of the meeting has been compressed into approximately 5 hours of the afternoon of October 5th. This will, hopefully, allow our colleagues of the Jewish faith to use Tuesday morning as travel time to reach the meetings.]

CONTRIBUTED PAPERS

HEARING AIDS
2:45-2:57 p.m.
Relationship of Performance Characteristics in Hearing Aids to Cavity Volume.
Robert E. Jirsa, Ph.D.
Thomas W. Norris, Ph.D.

2:58-3:10 p.m.
The Effect of In-the-Ear Hearing Aid Canal Length on Frequency Response.
John C. Sinclair, Ph.D.

3:11-3:23 p.m.
Increasing Acoustical Efficiency with In-the-Ear Hearing Aid Fittings.
T.S. Griffing, Ph.D.
D.A. Proves, Ph.D.

PERIPHERAL AUDITORY & VESTIBULAR SYSTEMS
3:24-3:36 p.m.
Estimation of the Stapedius Reflex in Industrial Hearing Loss.
P.W. Alberti, M.B., Ph.D., F.R.C.S.

3:37-3:49 p.m.
The Effect of Ventilation on Middle Ear Volume and Eustachian Tube Function in Secretary Otitis Media.
H. Bryan Noel, III, M.D.
Lawrence W. Keating, Ph.D.
Thomas J. McDonald, M.D.

3:50-4:02 p.m.
Air Calorics: A Technique and Results
Jaime T. Benitez, M.D.
Kenneth R. Bouchard, M.A.
Tong K. Choe, B.A.

4:03-4:15 p.m.
Natural History of Idiopathic Sudden Hearing Loss
F. Blair Simmons, M.D.
Douglas E. Metz

4:16-4:28 p.m.
N1 Latency of the Human Whole-Nerve Response to Filtered Clicks.
Stanley Zerlin, Ph.D.
R.F. Naunton, M.D.

CENTRAL AUDITORY SYSTEM
4:29-4:41 p.m.
Effect of Peripheral Hearing Loss on Central Auditory Tests
Gerald E. Miltenberger, M.A.
Gerald J. Dawson, M.S.
Anthony N. Raci

4:42-4:54 p.m.
Rapidly Alternating Speech Perception: A Test of Brain Stem Dysfunction
George E. Lynn, Ph.D.
John Gilroy, M.D.

4:55-5:07 p.m.
Dichotic Listening Performance in Partial Split-Brain
Martin L. Lenhardt, Ph.D.
AAS Annual Meeting
Airs Scientific Topics

President
W. Dixon Ward
Reports the OSHA
Hearings in His
Message. Page 3

What C.H.E.A.R. Is All About

The charitable activities of an organization by the name of C.H.E.A.R. (Children's Hearing and Education Research, Inc.) has recently been in the news. C.H.E.A.R. was founded in 1969 to do for the hearing impaired what was and is being done on a national level for other diseases such as heart, cancer, and other handicaps.

The problems of deafness and especially Nerve Deafness has received little help, interest or research from organized groups, and no organization has yet become the nation-wide organization that one can turn to for the unbiased, accurate information necessary for the parent, person involved, or even the general public, in the areas of education, scientific research, treatment and therapy.

That is what C.H.E.A.R. is all about—to force this to occur on a national level so that; (1) the urgent, vital medical research and money necessary to find a cure or alleviation of Nerve Deafness is available and done; (2) the persons involved can make an intelligent choice as to education; (3) the general public understands the seriousness of this tragic communicative problem, and what deafness is and what it is not; and (4) people with or without the problem can learn how to help, so that the discrimination against the deaf in the areas of research, education, treatment, and employment can be overcome.

On a purely voluntary basis, with no paid professional employees, we have given contributions that have succeeded in helping other organizations coordinating larger sums for research in the Nerve Deafness area. One example is the Deadman Research Foundation. C.H.E.A.R. has awarded Grants for Deafness Research to the following noted scientists and organizations:

Dr. Robert Huben, Albert Einstein School of Medicine in New York City, for medical research involving cell biology and deafness.

Dr. David Hilding, New Jersey College of Medicine, for an Early Detection Deafness Research Program to determine the best device to use in a maternity hospital to screen newborn babies.

Dr. Howard Haas, Ear Research Institute of Los Angeles, for medical research program involving cochlear research.

Deafness Research Foundation, New York City. In addition to C.H.E.A.R., the D.R.F. also awards scholarship prizes for schools, both public and private, that have educational programs for the hearing impaired and are interested in mainstreaming new students in the deaf or who specifically service hearing-impaired children.

C.H.E.A.R. issues a quarterly newsletter entitled "Hearing Research Developments", which is a digest of the latest information and developments on hearing impairment.

C.H.E.A.R. has available radio tapes which have been used as part of public service announcement programs on the leading radio stations in the United States. The purpose of these radio spot messages is to alert the general public about the problems of hearing impaired and to help us raise money for C.H.E.A.R. by raising research funds or allowing us to give further information about this tragic communicative disease.

C.H.E.A.R. raises funds for its varied activities in many ways.

1. Donations by several Foundations
2. Contributions of various organizations such as the Odd Fellows
3. Individual contributions of friends, and businesses
4. Localized chapter-card parties, theater groups, a city charity fair, a week-end at a resort hotel, week-end journal, fashion show, charity circus, a raffle, a Raceway

[Editor's note: The newsletter of C.H.E.A.R. is entitled "Hearing Research Developments", and is available from C.H.E.A.R., E1 McLean Avenue, Yonkers, New York, 10704. It reports the activities of the organization. One paid advertiser, the Widex Hearing Aid Co., advertises in this newsletter.]
Sept. 8-10
Southern Audiology Society Meetings
The Southern Audiology Society held their annual convention September 8 to 10 at Ft. Walton Beach, Florida. The meeting fulfilled the Society's motto, "Convenience and Exclusiveness." At the convention, 124 Society members participated in scientific meetings as well as the annual business meeting, tennis tournament, deep-sea fishing venture and ikebana beachcomb.

Research Grants Given for Ear Implants
The University of Washington Department of Otolaryngology has been awarded a $1 million grant to study the bioimplantation into the cochlea of monkeys. Dr. Joseph M. Miller will be project director. The grant is for a five-year investigation to determine the efficacy of some devices to improve hearing. The investigator reports that his team will study a face-planting module developed at the University of California, San Francisco School of Medicine. Another study will be made at the University of Oregon Health Science Department. The project is in charge of Dr. A. Wallace of the Otolaryngology Department as Project Director. Under this grant, cats instead of monkeys will be utilized for their electrical implantation is contemplated. The studies are being funded by the National Institute of Deafness and Deafness Research Foundation.

News About Members

Sam Lynderman, president of the Hearing Aid Foundation, announced that the Foundation has issued $12,000 grants to illustrate the hearing impaired. He states that the Howard Hughes Memorial Fund was awarded to HACI.

William A. Vann, Institute for the Advanced Study of Communication Processes, has been elected president of the Florida chapter of the Acoustical Society of America.

Norman Carenza and Frank Frech were among the members of a group investigating the need for an American Audiology Association. The group is planning sessions at the American Speech and Hearing Convention and at the Society of Medical Journalists meetings to determine the need for such a national group, or whether it should be an interest group within a larger organization.

Bob Brinkey was a speaker at the Missouri Association of Licensed Hearing Aid Specialists at the Lake of the Ozarks in Central Missouri.


J. Donald Harris, Ph.D.

Acoustic horrors? The following editorial appeared in the June, 1959 Sound and Vibration, and deserves to be reproduced here.

"If it is difficult to talk about the arguments which rage over..." It has been satisfactorily established that..."

"There are lies, damned lies, and statistics." Mark Twain said it almost 70 years ago. I wonder what he'd say today, particularly after reading some of the current publications and standards discussions.

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Hearing Aids

"Relationship of Performance Characteristics in Hearing Aids for Children with Specific Auditory Language Levels" by Robert E. Jirsa and Thomas W. Novack (University of Nebraska Medical Center, Div. of Audiology & Speech Pathology, 44th and Dewey Ave., Omaha, Nebraska 68141)

Hearing aid performance characteristics were traditionally measured in a 2 cc coupler to simulate the impedance characteristics of the average real ear. Performance data has not been evaluated using an actual sound of acoustic gain. This relationship between threshold improvement and acoustic gain for children has not been established. While it is known that a reduction in ear volume yields a corresponding increase in gain, this will not necessarily improve both speech scores and speech loudness.

Hears, etc.

Acoustic

(Continued from Page 21)

bias, and a host of other imper-}}

How do a bearing aid's performance characteristics affect speech recognition? This question has not been systematically exam-

ined. This present investigation was designed to examine: (1) specific changes in hearing aid performance characteristics resulting from a reduction in coupler volume from 2 cc, and (2) the relations-

A BAKAN

ship between aided threshold improvement and acoustic gain in children and acoustic gain determined in variable volume couplers.

To examine the effect of volume reduction on acoustic performance characteristics, BAKAN et al. performed 24 hearing aids utilizing the traditional 2 cc coupler and ex-

amined for their effect. As expected, reduction in volume was accompanied by greater acoustic gain. This relationship held up even when acoustic gain was determined in other volume settings. However, significant changes were noted in frequency response.

The relationship between threshold improvement and acoustic gain for children was established by the addition of SRT's and ear canal volume measurements were ob-

tained from hearing impaired children. Aided thresholds were established with the hearing aid to comfort level for a speech input of 60 dB SPL. Immediately following the test, the test was re-

peated and a difference was noted in both the 2 cc coupler, and the ex-

perimental coupler most closely approximating the subject's real ear volume. Aided thresholds, in turn, threshold improvement exceeded the traditional 2 cc acoustic gain. When the acoustic gain was determined in a coupler ap-

proximating the real ear volume, a closely related relationship be-

tween acoustic gain and threshold improvement was obtained. The results suggest that subjects who are hearing aid selection is based largely on 2 cc couple but it is now en-

abled that over-amplification does not occur. More accurate measurements of aided real ear volume and acoustic gain determined for variable coupler whose volume approximates that of the real ear.

A The Effect of In-the-Ear Hearing Aid Coupler Length on Frequency Response" by John C. Scholarship (H.C. Elec-

tronic, 242 Camino Ales, Mill-

valley, California 94030)

Summary

This paper experimentally dif-

ferentiates the length parameters which affect the frequency response of hearing aids. Two factors were determined to be related with the volume of the cavity between the tym-

panic membrane and the hear-

ing aids, one of which is known to be heavily contaminated by tem-

porary noise levels. Moreover, very noisy environments such as those found in a recording studio can be so noisy that it is impossible to use any test equipment without using a hearing aid. The only way to test hearing aid performance in such a noisy environment is to use test equipment that is designed to work in a noisy environment. In the case of the hearing aid, the test should be conducted in a quiet environment. In order to test the hearing aid in a quiet environment, it is necessary to use a sound level meter that is designed to work in a noisy environment. In the case of the hearing aid, the test should be conducted in a quiet environment.

Further, this is because it is not known if the test will be conducted in a quiet environment. In the case of the hearing aid, the test should be conducted in a quiet environment. In order to test the hearing aid in a quiet environment, it is necessary to use a sound level meter that is designed to work in a noisy environment. In the case of the hearing aid, the test should be conducted in a quiet environment. In order to test the hearing aid in a quiet environment, it is necessary to use a sound level meter that is designed to work in a noisy environment. In the case of the hearing aid, the test should be conducted in a quiet environment. In order to test the hearing aid in a quiet environment, it is necessary to use a sound level meter that is designed to work in a noisy environment. In the case of the hearing aid, the test should be conducted in a quiet environment.

Furthermore, OSHA has taken the position that all possible hearing protection be used at the workplace. However, OSHA has yet to be taken even if it is known in advan-

ce that these steps still will

(Continued on Page 4)
Abstracts of the 20th Annual Meeting of the Academy of Neurology at the 20th Annual Meeting of the Academy of Neurology

Page 4

Aging and the auditory system. The auditory system is complex and comprises the ear, the auditory nerve, and the brain. The aging process affects the auditory system in various ways, including changes in the outer and middle ear, including the tympanic membrane and the ossicles. The inner ear, including the cochlea and the inner hair cells, also undergoes age-related changes. These changes can lead to hearing loss, tinnitus (ringing in the ears), and other auditory impairments. Understanding the mechanisms underlying these changes is crucial for developing effective interventions to maintain auditory function with age.

Peripheral Auditory & Vestibular Systems


The current epidemic of noise-induced hearing loss is limiting the resources of hearing testing facilities in the Province of Ontario, Canada, with its population of 8 million people. We anticipate in excess of 2,000 new compensation claims in 1975. In order to maximize the use of limited testing facilities, an index of the factors affecting the development of a profile of test results and a single test procedure which would indicate reliable or unreliable audios. This index will help select artefacts requiring 'advisory'. The parameters being investigated are the investigation of the extent of stapedial reflex estimate.

In the past 5 years some 1,500 telephone operators have been tested for a telephone hearing loss. Compensation for premature hearing damage has been found to be insignificant. The telephone operators have had stapedial reflex thresholds to pure tones, and many participants have had pure tone thresholds above normal levels. As a result, auditory thresholds to pure tones have been measured for each participant. The results show that there is a general trend for the auditory thresholds to decrease with age, but the variation between individuals is considerable. The results also suggest that the telephone operators have a higher prevalence of hearing loss compared to the general population. Further studies are needed to determine if this trend is consistent and to explore the underlying causes of the age-related decline in auditory thresholds.

"Air Conduction: A Technique and Results" Jaime T. Bock, Kenneth R. Brown, and Yong R. Cho (William Beaumont Hospital, Rochester, Royal Oak, Michigan 48073).

The bithermal caloric test with water has been proposed as a useful method in the evaluation of vestibular function. Performing the test with the use of water has several advantages over testing with air, including the ability to control for caloric reaction, which may be affected by various factors such as environmental conditions, temperature, and humidity. The bithermal caloric test with water allows for a more standardized and objective measurement of caloric responsiveness. It is felt that this test is a more accurate and reliable method for detecting vestibular dysfunction.

A short film was presented depicting a method that greatly diminishes the amount of noise and improves the quality of the equipment. The equipment is designed to provide adequate vestibular stimulation with minimal noise. It permits easy to keep probe placement consistent from ear to ear, and fit different external canals. The film illustrated techniques that allow accurate and repeatable stimulation with audio recording to provide feedback from the probe position and vestibular orientation and movement during stimulation. Due to the difference in heat capacity between air and water, each point of possible variability is magnified for air. Constant technique is essential. We are able to use a fluid of six liters/min for caloric test in the absence of caloric test of 15% and 50% of the participants. The caloric test of hearing is controlled close to the external canal. The temperatures were determined at 26°C, and at different times of the day. Normal values for vestibular function were determined. The significance of the results will be discussed ...


In previous studies, we designed an acoustic test protocol to determine the characteristics of filtered click-evoked otoacoustic emissions (OAEs). The results were used for diagnostic purposes and for improving the test's sensitivity and specificity. The study aimed to evaluate the performance of the test protocol in adult and pediatric populations. The results showed good sensitivity and specificity for detecting hearing loss, with a high degree of agreement between the test protocol and standard audiometric measures. Further studies are needed to validate the test protocol in a larger sample size and to explore the potential clinical applications of these findings.

"The Effect of Ventilation on Middle Ear Function and Staphylococcus Tubing Function in Secretory Otitis Media" H. Myers, A. J. Keating, and T. F. M. McDermid (Mayo Clinic Foundation, Rochester, Minnesota 55901).

Conductive hearing loss due to secretion stasis in the medium ear function loss is recognized in the air outlet and ventilation. Some patients have been noted to have air and secretion stasis due to a decrease in the tympanic membrane’s mobility. It is felt that this is a major problem in one of the ear’s tympanic.

A short film was presented describing a method that greatly diminishes the above noted difficulties. The equipment provides adequate vestibular stimulation with minimal noise. It permits easy to keep probe placement consistent from ear to ear, and fit different external canals. The film illustrated techniques that allow accurate and repeatable stimulation with audio recording to provide feedback from the probe position and vestibular orientation and movement during stimulation. Due to the difference in heat capacity between air and water, each point of possible variability is magnified for air. Constant technique is essential. We are able to use a fluid of six liters/min for caloric test in the absence of caloric test of 15% and 50% of the participants. The caloric test of hearing is controlled close to the external canal. The temperatures were determined at 26°C, and at different times of the day. Normal values for vestibular function were determined. The significance of the results will be discussed ...

"Circle of Willis: A New Concept" F. M. Slade, M. D. (Mayo Clinic, Rochester, Minnesota 55901).

The circle of Willis is a network of arteries that supplies blood to the brain. It is named after the anatomist Giovanni Battista Morgagni, who first described it in 1761. The circle of Willis is crucial for maintaining adequate blood flow to the brain in the event of an arterial occlusion. Understanding the anatomy and functioning of the circle of Willis is essential for the diagnosis and management of cerebrovascular diseases. Additional studies and research are needed to further elucidate the role of the circle of Willis in maintaining cerebral blood flow and to identify potential therapeutic targets for cerebrovascular diseases.
Question: When do you deem it advisable to initiate a myringotomy with tube placement? Do you recommend a specific age or calendar rate for this policy?

Answer: Raymond P. Wood II
University of Colorado Medical Center

There are two indications for myringotomy and tube placement in children with chronic serous otitis (one must first rule out other lesions such as nasopharyngeal carcinoma, anaplastic carcinoma (cleft palate), and cleft palate). These indications include:

1. First, if there is a history of recurrent or persistent middle ear effusion and the patient is at risk for developing middle ear complications.
2. Second, if the patient has symptoms of meningitis or brain abscess.

In these cases, the patient should undergo tube placement to drain the middle ear effusion and prevent further complications.
The Interrogatory

David F. Austin
Chicago, Illinois

In the treatment of otitis media with effusion, the effectiveness of myringotomy with tube insertion is so widespread as to be considered standard. At the same time, it is well documented that approximately one-third of such patients will recover spontaneously leaving a small group with a more chronic disease picture, despite the use of the prophylactic effectiveness of tube insertion for this group has not yet been fully documented.

It has been demonstrated on the other hand that in bilateral cases, if one ear is untreated and tube insertion carried out on the other, both ears respond identically; clearing in most and a few cured cases. The implication of this finding is that either some other aspect of the surgical procedure through which the tube insertion is therapeutic (the destruction of hydroxy administered, the adenoidectomy) or that the pre- and postoperative care is effective in securing resolution.

My experience is that for such patients is to treat multiple ear and tube insertion, improve the nutritional status, administer vitamin C in generous dosage, and treat with a course of antibiotics (2 grams to adults) to help treat the infection. The Frenzel technic. Non-resolution of the problem after four weeks indicates adenoidectomy. At this time if hearing loss is present, a myringotomy with ventilation tube performed on one ear only. No tube insertion is done. Post-operative care is carried out as defined for the pre-operative period.

Less than one percent of my younger patients have failed to respond to this method of treatment. Only 4 adult patients have had needed tube insertion in the past five years. I feel that the children with chronic uneradiated effusions myringotomy and ventilation tube has been more successful than with multiple tube insertion.***

Michael M. Paparella
University of Minnesota

I would consider myringotomy and ventilation tube placement not only for chronic middle ear effusion, that is, chronic serous otitis media or chronic mucous otitis media. It should not be used in acute or subacute cases since these should be treated conservatively. Usually younger children with concomitant illnesses or other factors which may delay the progress through screening programs in the schools and by the professionals. I would like to think that they have already had longstanding cases of chronic middle ear effusion. These cases are more difficult to treat and tube exercise is still useful. In general, if the fluid has persisted after a month, the ventilation tube management, I would utilize tube placement.

Another indication for tube placement is in children who have had tube exercises for suppurative otitis media. We have seen children who have had them frequently as to occur every two weeks or so. In these instances we treat the child actively with antibiotics, including appropriate antibiotics and when the child is infected, the operation as in the question of infection is possible, then, under sterile condition, a myringotomy incision, then is done. The purpose here is to prevent further attacks of acute suppurative otitis media and in small children it is remarkable how beneficial this can be if utilized properly.

There is a third indication which may not be germane to this particular discussion, namely, the use of ventilation tubes in conjunction with tympanoplasty techniques. The operation under question that leads to chronic otitis media continues to be eustachian tube ventilation dysfunction. As such, wherever possible, a ventilation tube is inserted through the normal tympanic membrane when grafting and reconstruction take place during tympanoplasty in order to assist the eustachian tube in its relief of ventilating the wound area.

Victor Goodhill
Beverly Hills, California

Our indications for myringotomy with tube placement relate to the child who may have had any fluid not retracted to appropriate medical therapy. This includes cases with and without evidence of mastoid destruction on x-rays, and it includes patients who have reaccumulations of fluid in the middle ear. The frequency of which will include all allergic manifestations of concomitant nasal and sinuses disease. In our techniques we emphasize both anterior and posterior interior radial incisions for adequate suction ventilation. Even though one only tube may be placed. My colleagues and I have used many different types of materials for this purpose. This represents the opinion of Victor Goodhill, Seymour J. Brockman, Irwin Harris, Joel Shulman, and David Cooper.

F. R. Leitichsen, Jr.
Los Angeles, California

Myringotomy with tube placement should be done after a complete attempt to control the situation with medical therapy. Most children develop middle ear effusions associated with acute upper respiratory infections, and it is a reasonable consideration that tube insertion may be indicated. However, persistent significant hearing loss, recurrent acute otitis media, or evidence of impending permanent damage to the tympanic membrane, especially if the ears are full, or the patients, for reasons of which I have no knowledge, are indications for tube insertion. In addition, a method of treatment that is as simple and as reliable as is currently available is in isolation of the auditory canal tympanoscopy. This is a method of performing a choleste- tomy and removal of any material that has accumulated in the ear over a period of months. At the time of surgery the ear, for which there has been an endaural, endochleoid tympanoscopy correction.

Then an antibiotic usually in an antibiotic that is adequate to treat an infection is given at least a three-week trial. Should this fail to result in a decrease in fluid, (in fluid in the middle ear continues to increase) as the child is brought to a second routine dehydration of 30 minutes after the administration of 10 grams of hydroxy administered. For the internalization I use the rubber tubes developed by Victor Goodhill and supplied by the Surgical Mechanical Research Company, those that fit on the end of a teardrop-shaped rubber tubing, which can be obtained in many drugstores.

Should conservative treatment fail to produce resolution of the fluid and if there is a significant hearing loss or recurrent acute otitis media due to infection of the middle ear effusion, then myringotomy and ventilation tube placement is indicated. For the first placement of ventilation tubes, in the tympanic- nate tube type placed anterior to the umbilicus, the flap is designed under the tube (Fig. 1). These will usually remain in place up to 12 months. Over the years, the technique has been refined. The tumour, the above-mentioned (oral) tube type, is now placed under the umbilical flap. This will usually remain in place up to a year. Over the years, the technique has been refined. The flap is designed around the tube to allow for the next respiratory infection and again allow for any ventilation techniques to be treated.

Semipermeable tubes are used if there is evidence of closure of the tube. The tympanic membrane or temporary tubes have been previously confirmed. These are called silastic tubes and are similar to the Per-Lite tube. They have the advantage over the temporary tubes that the end of the flange is soft and can be inserted through the myringotomy incision smaller than the diameter of the end of the flange. The flange is placed medial to the external auditory canal (Fig. 2). The tubes are left in place until the child has reached an age that one can be fairly certain that the eustachian tube has matured. This is tested utilizing the vacuum pump of the tympanoscopy equipment. If the patient can release negative pressure within ten swallows, then it is considered safe to remove the tube. In a young child or adolescent, this usually requires a general or local anesthetic for removal.

RATIONALITY

Patience on the part of the doctor and the parents will usually allow one to clear middle ear effusions with conservative medical treatment. However, persistent significant hearing loss, recurrent acute otitis media, or evidence of impending permanent damage to the tympanic membrane, especially if the ears are full, or the patients, for reasons of which I have no knowledge, are indications for tube insertion. In addition, a method of treatment that is as simple and as reliable as is currently available is in isolation of the auditory canal tympanoscopy. This is a method of performing a choleste- tomy and removal of any material that has accumulated in the ear over a period of months. At the time of surgery the ear, for which there has been an endaural, endochleoid tympanoscopy correction.

RESULTS

The results of the audiograms performed before, immediately after, and then in two to three weeks of tube insertion shows that this middle ear ventilation shows the mean improvement in hearing between 15-25 decibels. All patients could hear all frequencies of 20 decibels or less even though the pure tones in the middle and high frequencies often varied. The two week audiogram showed even better hearing than the last audiogram taken two weeks prior.

COMMENTS

Children under four years of age have otitis media much more frequently. In children aged four to nine years who are examined in this study. However, when intermittent may permanently affect a child’s ultimate hearing, the periodic conductive hearing impairment exists among the retarded. One of this retardation may be caused by less than optimal hearing.

Our observations, made that one-month period in a two-month period of general professional and personal practice, leave no doubt that tympanostomy tubes can and should be placed. Our observation that this improvement continues in the child does not create new tympanostomy tubes. Richards, who compared single myringotomy with the insertion tympanostomy tubes. Similar results in the ears receiving grommets have shown that the grommets remained functional and in place.

Middle ear fluid can be best detected by the use of the Impedance Audiometer ("Jean style") but can also be detected by the routine use of the pneumatic otoscope ("horse and buggy style"). This is available to every practicing pediatrician or physician. Primary care physician should be thoroughly informed in these problems. In one office procedure, since recurrent otitis media affects 20 percent of the babies under care.

LaVonne Bergstrom
University of California at Los Angeles

The practice of myringotomy and ventilation tube insertion is not an individualized decision. I would be inclined to do it quite promptly in the left ear if the patient is not likely to be going to resolve spontaneously, or to the last adult or the adult who is not clear related to a recent upper respiratory infection, or a change in atmospheric pressure, I may not treat it at all and just wait to see if it resolves. If an acute episode is particularly bothersome to the individual, it is possible that, at the end of an adult, or the adult who is so much that you were myringotomy to aspirate the fluid but would not place the tube. In the individual situation in which there has been a prolonged problem that does not clear, I may consider that there has been already treated with decongestants. I would approach the situation differently if his adenoids are hypertrophied and seem quite clearly to be contributing to the problem I would do adenoidectomy and perhaps (Continued on Page 5)
The Interrogatory

myoclonus and tube under the same anesthesia. If his adrenals have been removed and repaired and has been adequate and the problem has persisted I would perform a creatinine clearance test and a Gynecomastia. If the patient who develops an idiosyncratic reaction without any apparent cause such as recent upper respiratory infection and diabetes I would make a careful search for a nasopharyngeal tumor. This would also be true of the young boy or adolescent male with a movement disorder of the cranial nerve. In conjunction with obstruction of nasal breathing which he has not previously had. In this instance I would be suspicious of a nasopharyngeal tumor or nasopharyngitis. The treatment in this instance would be directed at the primary cause and not at secondary symptoms.

There is no scientific evidence that decongestants work and therefore it is difficult to rationalize the use of this type of medication on any scientific grounds. The problem of whether to recognize this fact whenever we prescribe these decongestants is not what we have used oral decongestants for acute episodes of nasal obstruction, but rather it is what seems to be symptomatic improvement. The type used for the Eustachian tube is identical to that of the nose, it seems reasonable to assume that this would also work but, to be honest, we have no proof of this. My rationale for doing myoclonus and tubes promptly in the cleft palate child is that probably close to 100% of young cleft palate children have some symptoms of myoclonus and tubes or other manifestation of chronic middle ear problems. Adenoidectomy is often contraindicated in children with overt cleft palates, repaired or unrepaird, and decongestants don’t work in this particular situation. Therefore, one must be on the basis of mechanical malfunction of the ears. There is perhaps some evidence that chronic negative pressure and perhaps chronic secretions effuse in the middle ear may be permanently damaging. There is no question that the hearing loss involved when chronic or frequent may interfere with the child’s learning process. Therefore, in these children I feel there is no place for this treatment. In other instances, I would not perform this procedure, for example, this would be the child who wishes to swim during the summer vacation from school and who has no indication that permanent changes are beginning to occur in the ear such as retraction or monomeric membrane. I would let this child swim with the fluid in the middle ear and then, prior to school, if the condition persists, I would do a myoclonus and insert tubes. I might add that there are occassional reports of chronic middle ear effusion which have a very large perforation there may be indication for doing a myoclonus and insert tubes to close the hole and allow him to have a small opening in the tympanic membrane rather than a large one. Again, I would like to emphasize that there has been no good objective double blind study of the efficacy of any of these modalities and I think that the construction of such a study will prove difficult.

JOBS, JOBS, JOBS

No, we don’t have any available, but we’d like to list you. Need a friendly Otolaryngologist, a medical team, group, or a competent Audiologist in your practice, hospital or clinic? Send in your job requirements and the old ORGAN will try to get you a body.
The authors state that these statistics afford more precise correlations in the 7 month to 5 year old group, than were herebefore reported. However, in the 43 infants under 7 months of age, only the 12 which were associated with middle ear effusion showed an increase in ear effusion and were almost invariably associated with normal hearing acuity within the normal range of air conduction hearing loss. The mother-child interaction is an important factor in the infant's development, and the mother-child relationship is highly correlated with the child's language acquisition and with the social and emotional aspects of the mother's language.

The subjects were thirty children diagnosed as severely or profoundly hearing impaired who had been admitted to the Infant Center of Lexington School prior to their second birthdays. The infant's language age was measured by the Infant Language Assessment Scale. Informational measures were observational assessments of Mother-Infant Communication in six areas: (1) Mealtime Interactions. (2) Environmental Vocalization. (3) Expressive Vocalizations. (4) Receptive Vocalization. (5) Expressive Vocalization.

The results of the analyses were as follows: in all categories, the children admitted prior to 16 months are consistently superior to the later admitted children in all aspects at all ages; further, the significance on all comparisons was p < 0.05, but was largest in expressive language. The Lexington group proposed the initial hypothesis, that the reason for the differences in expressive language is the amount of input the infant is exposed to in a set of very demanding medical scientists who are in touch with the real world of medical reality.

**Mother-Infant Communication and Language Acquisition in Deaf Infants**


At last, an acceptable investigation of the hearing impaired infant was done. The researchers of the team examined the Lexington School for the Deaf's Deaf to see the deaf infant's language acquisition. They found that the deaf infant's language acquisition is highly correlated with the mother-child interaction. They also found that the deaf infant's language acquisition is highly correlated with the mother-child interaction. They found that the deaf infant's language acquisition is highly correlated with the mother-child interaction. They found that the deaf infant's language acquisition is highly correlated with the mother-child interaction.

**Hearing Conservation: New Challenge for the Team, President to Advertise in Hearing Conservation magazine**

The Hearing Conservation Council, 100 E. Madison St., Chicago, IL 60602.

Here are gathered together the top echelon in Industrial Hearing Conservation: Dr. Morton, Corning, New York, for Occupational Safety and Health Administration; Dr. Barkon, Chicago, for Environmental Safety and Health Agency; Dr. Sabo, New York, for the Environmental Protection Agency; Dr. J. Jones, New York, for the Environmental Protection Agency.

**Hearing Conservation: New Challenge for the Team, President to Advertise in Hearing Conservation magazine**

The team proposed that the team needs to work together with the team members to create a new challenge for the team. The team also needs to work together with the team members to create a new challenge for the team. The team also needs to work together with the team members to create a new challenge for the team.

**Hearing Conservation: New Challenge for the Team, President to Advertise in Hearing Conservation magazine**

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Facts From The Feds

NIH Support for Postdoctoral Research Training

On July 2, 1976, the National Institute of Health announced the continuation of the National Institute of Health Research Service Award Program designed to support postdoctoral training in specified areas of biomedical research. Support is provided to individual applicants who compete nationally for awards. Applicants must be citizens or non-citizen nationals of the United States, or have been lawfully admitted to the United States for permanent residence and have in their possession a permanent visa at the time the application is submitted. Applicants must also have completed, at the beginning date of the proposed training, the requirements for a doctoral degree.

Applications must be for support in one of the research disciplines specified by the NIH. In the National Institute of Neurological and Communicative Disorders and Stroke (NINCDS), areas that may be of interest to people seeking postdoctoral research training in communicative disorders are audiology, clinical investigation, neuropsychology, ophthalmology, sensory physiology and biophysics, and speech pathology. Prior to submission, applications must arrange for a visit to the appropriate institution and be accepted by a sponsor who will supervise the training and research experiences. The training institution can be either a domestic or foreign nonprofit or public institution, including the NIH. Applications from individuals wishing to study abroad will be approved only if comparable training and research experiences are not available at a domestic institution.

Annual trainee stipends begin at $10,000 and are increased depending on the number of years of relevant postdoctoral research and/or training experience at the time the application is received. The maximum stipend exceeds $13,200. In addition, the institution where the trainee will be taken receives a $3,000 Institutional Support Fee. The next date for the receipt of applications is February 1, 1977 and those received by that date and assigned to the NINCDS will be evaluated by the National Advisory Neurological and Communicative Disorders and Stroke Council at its meeting in September 1977.

Additional information and applications are available from Dr. Raymond Sumner. Ph.D., Assistant Director for Manpower Programs, National Institute of Neurological and Communicative Disorders and Stroke, Bethesda, Maryland 20892. Telephone 301-496-9283.

The National Institute of Neurological and Communicative Disorders and Stroke (NINCDS) makes fellowship awards. Individual postdoctoral fellowship awards in audiology and speech pathology are available. Applications from Eric M. Barnard, Dr. Henry M. Elsner, Dr. John E. Elsner, Dr. Sandra F. Pickworth, and Dr. Harry A. Whittaker were accepted. An institutional fellowship award was made to the University of California, Los Angeles, with Dr. Victor Horsbord as Program Director. Dr. John R. Horsbord was the Chief, Scientific Evaluation.

The National Institute of Neurological and Communicative Disorders and Stroke

Hearing Aids. Spec Standards Approved

The American National Standards Institute (ANSI) has approved standard specifications for Hearing Aid Characteristics on July 23, 1976, according to Dr. Simon Lybarger, chairman of the ANSI working group. The new standard had already been approved by the Acoustical Society of America.


This standard is available at a single-copy price of $7.00 prepaid (a handling charge of $1.00 will be added if the order is not accompanied by payment). Make checks payable to the ANSI Standards Secretariat. This standard and other standards listed in the ANSI Standards Catalog may be ordered from the following address: Back Numbers Department, Dept. STD, American Institute of Physics, 335 East 45th Street, New York, New York 10017. Telephone (212) 682-1200.

Cort's Organ salts Sam Lybarger his name. The Cort's Organ salts, an ANSI for an expedient job in pulling out some standard in a short such time. Few govern- ment agencies work such dispute with us for the ANSI in the hearing aid of the noise standards.
Third International Impedance Symposium

The III International Symposium on Impedance in Medicine was held in New York City on September 16-18, 1978. Following 2 and 3. In spite of a late change of location for the Symposium from Philadelphia to New York, the program drew 140 registrants as well as 50 invited guests. The American Electromedical Corporation sponsored the Symposium while James Jerger and Jerry Norbert served as Scientific Program Co-chairs.

The featured speakers were truly international coming from Europe and South America. They included Erik Borg, Stockholm, Sweden; Andrea Bosatta, Trieste, Italy; Dennis Brooks, Manchester, England; Glahe Djupelius, Oslo, Norway; James Jerger, Houston, Texas; Wolfhart Melsheimer, Marburg, Germany; M. Maurice Rainville, Paris, France, and Juan Tato (b. from Buceno Aríye, from the University of Chicago.

Workshop panels each afternoon offered program registrants an opportunity to choose attendance at two of three discussions. The following 25 American impedance experts. Discussions centered around Problems, Disadvantages, and Research Impedance: Measurements, Applications, and other Impedance, and Screenings Impedance Impedance, and Evaluation Audiometry, and Pediatric and Screening Applications of Impedance Audiometry. The Workshop panels were chaired respectively by Terry Wiley, from the University of Wisconsin; Robert Keim, from the University of Oklahoma Health Center and George McCandless of the University of Utah Medical Center.

Unique features of the Symposium included an Educational School that included two practice sessions whereby round-table groups of registrants matched selected audiometry results with appropriate sample audiometric patterns to reach diagnostic conclusions. Group table decisions were regarded as the best match of impedance and audiometric patterns provided, the actual answers to each diagnostic problem case. A

Johnson Named President

Of Danavox

The Danavox International Company of Copenhagen has announced that James Johnson, founder and chairman of Danavox Hearing treatment, has been appointed president of Danavox Inc., the U.S. subsidiary in Minneapolis. He will also serve as a member of the Board of Directors.

A. M. A. member, Johnson also holds memberships in the Acoustical Society of America, American Institute of Electrical Engineers, Audio Engineering Society and American Institute of Electrical Engineers in Electrical Engineering from Purdue and his M.B.A. from the University of Chicago.

Computer Management Educational Conservation Program


BHI Is...

(Cord's Organ is happy to print this article on the Better Hearing Institute as a retraction of our statement in the April issue of C.O. that the BHI is "an organization of the hearing aid industry." Their Director of Public Information informs us that it is "a total independent organization, not of the hearing aid industry. We apologize. The error was due to the fact that we observed BHI's Board of Director to be composed entirely of representatives from the hearing aid industry.")

Questions and Answers About The Better Hearing Institute

Q. What is BHI?
A. Better Hearing Institute (BHI) is a nonprofit educational organization dedicated to informing the hearing impaired, their friends and relatives, and the general public about hearing loss and available medical, surgical, and amplification assistance.

Q. Why are BHI programs so vitally needed?
A. Because more than 12 million Americans suffer from uncorrected hearing handicaps. Most of these people could be helped. But first they need to know that nearly everyone with a hearing loss can benefit by medical or amplification assistance. They also need to know more about each type of help and how to get it.

Q. What is BHI's goal?
A. BHI's goal is through its information and education programs, to remove the stigma currently attached to wearing a hearing aid and to help eliminate the fear of wearing a hearing loss as a personal handicap in everyday life. A major BHI objective is to help persons with normal hearing protect themselves against preventable hearing impairments—for example, by alerting them to avoid extended exposure to noise.

Q. How does BHI disseminate information?
A. Primarily through mass communication—public service radio and television announcements, newspaper and feature stories in the nation's broadcast and print media, audiovisual aids, exhibits, and a speaker's program. BHI distributes hearing hearing books, a newsletter, and other literature. In addition, BHI an

[Continued on Page 11]

October 5068


The program included presentations and demonstrations of new and improved hearing instruments for various hearing losses. It also included a panel discussion on the future of hearing instrumentation.

The Symposium was attended by 250 registrants from 25 countries, including 30 exhibitors displaying their latest products.

The organizers expressed their gratitude to the sponsors and participants for their support in making the Symposium a success.
Calendar of Events

OCTOBER 1976

5 Annual Meeting of American Audiology Society, Las Vegas, Nevada.
5 Research Forum of the Association for Research in Otolaryngology, Las Vegas Convention Center, Las Vegas, Nevada.
6-19 1976 Annual Meeting of Oto, Las Vegas, Nevada.
18-21 International Audiological Society, Florence, Italy.
20-21 National Hearing Aid Society Annual Meeting, Palmer House, Chicago.

NOVEMBER 1976

2-5 American Speech and Hearing Association, Houston, Texas.
5-7 Fifth Symposium on Polytomography of the Temporal Bone, Wright Institute of Otology and Community Hospital. For contact: J. William Wright, Jr., M.D. Wright Institute of Otology and Community Hospital, 1004 W. Ritter Avenue, Indianapolis, Indiana 46222.

Q. Could you describe BHI's speakers program in greater detail?
A. A major part of BHI's speakers program is its audiovisual presentations, "You and Your Hearing," the Institute's first regular "cameraphone" class, is a basic, general-purpose presentation developed for broad usage. "Silence is Golden," a new presentation, is targeted to the special needs and interests of senior citizens. In addition to slide shows, BHI distributes sample 10- to 20-minute general information speeches on hearing loss and hearing help.
Q. Who is BHI's Advisory Board and what is its function?
A. The BHI Advisory Board is comprised of distinguished hearing experts, both laymen and medical professionals, celebrities with hearing loss, and others professionally associated with the hearing impaired. Advisory Board members include, among others, BHI's speakers bureau, literature, tapes, radio, and television projects, as well as the speakers bureau and other Institute projects.
Q. Does BHI ever cooperate with other hearing organizations?
A. We refer people to other hearing educational centers for certain types of information and also to direct providers of hearing help services. We distribute literature developed by various hearing organizations. Perhaps the best example, though, is Better Hearing Month--a cooperative effort conducted each May by BHI and hearing organizations across the country to focus public attention on hearing loss and available hearing help. For this program, BHI prepares a comprehensive 100-page kit of ready-to-use communications tools for use by hearing field personnel at the local level. Nationally, BHI issues a barrage of print and broadcast publicity.

Q. How long has BHI been in existence?
A. BHI formally began in April, 1973.
Q. What is the Institute's IRS classification?
A. BHI is a nonprofit educational organization and as such is classified as a 501 (c) (3) exemption # 45-1599445 by the Internal Revenue Service. Tax exempt contributions, Florence, are from all sources are welcome. Help others to hear what they're missing. Send your gift today.

CFRTIS ORGAN WILL ACCEPT ADVERTISEMENTS If interested write to: American Audiology Society 1966 Inwood Road Dallas, Texas 75235
President's Message...

Not reduce noise levels to 90 dBA. Although this posture has recently been successfully challenged by a can-manufacturing industry, the moment the burden of proof remains on industry to show infeasibility, rather than that it has made all that is possible. And that burden remains on the shoulders of OSHA. As any exhibitor knows, that's dirty pool, sir.

Why has the Department of Labor taken such an unsympathetic stand against plugs and muffs? One reason they offer is because some workers don't like to wear them; another, because it is possible to wear them incorrectly—or by accident. Only our factory intimate a hazard and make it possible for the worker to avoid it, say our editors (the politicians and bureaucrats who are busy making everyone else's business because they have none of their own), is to eliminate the hazard no matter the cost. The employer may not have promised the worker a rose garden, but good ole Uncle Sam is going to make sure he supplies it anyway. And if this is not possible, then the employer must act in good faith and make sure that his children are good little boys and girls and wear their ear protection diligently.

Well, those are the main points of contention in the present hearings. Workers and their representatives would like all noises reduced to non-hazardous levels (and a little lower) regardless of cost; they emphasize the shortcomings of ear protection. Industry would like to spend as little as possible, to avoid the inevitable price increases that could put them at a disadvantage in competition with other products and foreign manufacturers. The thrust of their testimony is that hearing conservation programs can eliminate noise-induced hearing loss and that levels below 90 dBA represent a negligible hazard. As a consumer and taxpayer, yet one who often notices hearing loss stamped out (at least that loss caused by actions other than one's own), I hope that a reasonable compromise can be reached, for every worker to avoid noise-induced hearing loss if he chooses to do so.

Noise control experts, not too surprisingly, are solidly behind OSHA, but manufacturers of muffs and plugs oppose the stricture—unreasonably, in their view—against their products. I suppose that audiologists, or at least those engaged in industrial audiology, should also be opposed to the Department of Labor ban-the-muff crusade, and particularly to an 85-dBA regulation. If noise levels were reduced to 85 dBA, there would be no reason to continue monitoring the hearing of industrial workers, as any losses that developed would have to be attributed to presbycusis, otosclerosis, or sociopaths—the influence on hearing of the aging process, disease, or the noise of everyday life, respectively. However, since reduction to 85 dBA or even 90 dBA of all industrial noises is far, far in the future, it is safe to say that we need not worry that our audiologists will soon be gathering dust.

One more of the questions addressed by the proposed regulation (although not directly involved in the OSHA report) is important to our field: the question of a "significant" shift in hearing and what is to be done when it occurs. As published in 1972, the proposed criterion would be an average shift of more than 10 dB at 2, 3, and 4 kHz, relative to the original baseline audiogram, which as far as I can tell, from the meager published literature would not occur due to random variability in serial audiometry more than 10% of the time. However, I have heard rumors that an alternative criterion is being considered. Let us hope that they don't do something stupid like adopting a criterion of a 10-dB shift at any frequency, an event that requires retesting and retraining on the use of ear protection. I suspect that a third or more of all workers would have to be so retrained.

As I say, we probably be no hint of the final form of the OSHA, regulation until after the election. Indeed, if it is necessary to appoint a new Secretary of Labor, he might have to have all another round of hearings. Perish the thought!

W. Dixon Ward
CORTI’S ORGAN
(Audionews)
The Official House Organ of the American Audiology Society
Vol. 2, No. 1
January 1977

Roger M. Angelelli Reports on Successful European Study Tour

The “XIII” International Congress of Audiology was anything but unlucky. From October 16 to 22, 1976, approximately 240 members gathered in the Palazzo dei Congressi in Florence, Italy, to present their scientific papers. Participants represented such countries as Sweden, Belgium, United Kingdom, USA, Italy, France, Norway, W. Germany, Denmark, Japan, The Netherlands, Poland, Finland, Spain, Yugoslavia, Mexico, Austria, Rumania, Greece, Thailand, Egypt, Canada, Switzerland and Holland. The working languages of the Congress were English, French and Italian. Simultaneous translation in these languages were provided by a skilled team of female translators.

The Palazzo dei Congressi was an impressive structure featuring the “old” architecture, where several conference rooms were located, with the new design of the twentieth century. The new structure housed the magnificent oval-shaped auditorium with star-studded light dimmers in the ceiling, and comfortable chairs with sliding armrests, under which werejack plugs for et phones. A closed-circuit television network was in operation to give information regarding the speakers in session in different rooms of the Palazzo. This system was also used to announce bus departures for various tours.


“New Name for AAS?”

Recently a great deal of concern has been expressed over the name of our organization, the American Audiology Society. Opposition to the name comes primarily from member audiologists who feel that the generic name “Audiology” in the name of our organization is inappropriate. They argue that the AAS name is inconsistent with the stated interdisciplinary nature of the society. The concerned audiologists apparently feel a proprietory right to the name of their profession which they are reluctant to share with a multi-disciplinary society. Public confusion can exist when professionals engaged in allied disciplines are interested to be “audiologists” because of their membership in the American Audiology Society. Problems regarding the current name of the Society came to the forefront in recent federal investigations. Representatives from the American Speech and Hearing Association have been involved in deposition and testimony during 1975 and 1976 while which confusion has been apparent to the interrogators about the role of ASHA and the role of AAS. This confusion has been recorded in direct testimony between Kenneth O. Johnson, Executive Secretary of ASHA, and the U.S. Patent office over the petition of ASHA to have NHI’s use the term “Certified Hearing Aid Audiologist” declared illegal. The Federal Trade Commission hearings in Washington, D.C. regarding the proposed trade regulations for the hearing aid industry brought out the fact that hearing aid dealers might represent themselves as “audiologists” because of their membership in AAS.

An audiologist is defined by ASHA, Medicare, Medicaid, and 22 state licensing bodies in terms of specific academic requirements, regulated experience criteria, and successful passing of a nationally standardized comprehensive written examination. The definition of an audiologist does not require membership in ASHA, but ASHA will supply letters of eligibility to applicants who meet the standards by which audiologists are defined. All definitions are related to standard curricula in Departments of Audiology and Speech Pathology.

Historically, the AAS name was established by the Executive Committee in June of 1955. Only three members of the Executive Committee at that time (three audiologists) expressed opposition to the name American Audiology Society. The name was selected so that the AAS could pattern itself after the International Audiology Society. There is now apparently another conflict in this issue since AAS and ASHA have both petitioned the International Society to be admitted as the audiologists representative from the USA.

A Task Force of Audiologists met during the summer of 1976 in Washington, D.C. under ASHA sponsorship to generate resolutions regarding the future direction of the audiology profession. The Task Force, including a number of AAS members,

(Continued on page 6)

Roger M. Angelelli at JFK before departure to Italy.

Second Notice
For 1977
Membership
Dues Pg. 8

THIRD CLASS
A Janus Message

It’s been said that the only thing we learn from history is that we don’t learn from history. In those times when we need to summon all the wisdom of the past as possible, it behoves the interested in the progress of mankind to prove that aphorism false.

Take time and look where have come from! It’s a sad fact of medical life that efforts at “progress” are sometimes mere re- duplication of past achievements—gone unrecognized. Maybe our supposed intellectual evolution is attributable to sophisticated advertising, Madison Avenue magic and journalistic “type,” rather than good fresh ideas.

The Politzer Society offers you a ticket to the past, an opportunity to meet and hear about those who constructed the superstructure of otolaryngology. Remember, you have an appointment with history. Be sure and keep it.

D. Meyers

President, Politzer Society

(For information on membership, write: Dept. of Otolaryngology, University of Colorado Medical Center, 420 E. 9th Avenue, Denver CO 80220)

Gerber is New Prexy for SENTAC

At its fourth annual meeting, the Society for Ear, Nose and Throat Anatomy (SENTAC) has elected an audio- laryngologist to its presidency. The new president of SENTAC is Dr. Sanford E. Gerber who is professor and coordinator of the Speech and Hearing Center at the University of California, Santa Barbara. All of Dr. Gerber’s predecessors in this office have been otolaryngologists; and his election marks the kind of close cooperation and mutual respect which exists between our professions. At the first session of the meeting in New Orleans, the new President-elect, Dr. Michael Sellemak, was elected Vice-President. The continuing secretary-treasurer is Dr. J. B. Jaffe of Kansas City. Also present were several presentations in pediat- rical otolaryngology—audiology—speech pathology.

The convention began with a Mississippi River steamboat dinner at the evening of November 10th. The formal meetings began November 11th with presentations by local New Orleans par- ticipants in the areas of pediatric otolaryngology, pediatric aller- gic problems related to middle ear disease, pediatric voice disorders, and pediatric otolaryngological issues in middle ear measurement. The presenters for that session were George D. Lyons, Ray J. Leventhal, Michael S. Egan, Louis D. William Moran (otolaryngology from Oklahoma City.) SENTAC is a multidisci- plinary society oriented toward the advancement of pediatric-otolaryngology—audiology—speech pathology.

Letters to the Editor

David P. Gellhofer: An issue has recently come to my attention about the A.A.S. At recent FTC hearings, ASIA representatives have had to defend the notion that the term otolaryngologist only applies to persons having completed a particular curriculum. Hearing aid people would like this term to apply to their salaried. In their argument against restricting the term audiologist to those who have completed a particular curriculum, the defendants cited A.A.S. as support for their position that anyone can use the term audiologist. They based their contentions on use of the term audiologist in the title of an organization which accepts people from many disciplines including hearing and dealers who are not trained as audiologists.

While I support the goals of A.A.S. I worry if its title to be used to subvert other related and worthwhile goals. I understand that some of the founding fathers (or perhaps I should say persons) expressed concern over this potential problem. Now that their fears have come to pass I would like to suggest that the Executive Com- mittee change the title of the organization to meet appropri- ate. It would reflect the various disciplines it embodies.

Earl B. Harned: I cannot endorse strongly enough the position to change the name of A.A.S. No way should we allow A.A.S. to be used by the hearing aid salesmen as rationale for hearing aid dealers without cre- dentials using the designation of audiologist. It is obvious that this is the case; consequently we must change the name of A.A.S.
Cort’s Organ has asked the members of the Executive Committee of the Society to consider the following questions:

1. "Do you favor a name change for AAS? Why? If you favor a name change, why would you prefer it?"

James T. Beasley: Please be advised that I do not favor changing the name of our society. Therefore, I would not consider any of the proposed names.

Leo G. Doerfler: My only comment is that any change which will clarify language and its meaning rather than further degrade it would be welcome. If the use of the term Audiology in the name of our Society tends to confuse the public and erode our potential as members, I believe this may be the case, then a change in title is in order.

David A. Dobwis: I feel that the present term "audiology" is unfair to all aspects of the field of audiology and that we do not feel that we need concern ourselves with hearing aid members by any act of legislating, it is more important that we concentrate on seeing good Federal, and State hearing laws.

A. Bruce Graham: The name Audiologist is more than just a profession held by those who are engaged in hearing care.

Norma Hopkinson: Although the name American Auditory Society is not the name we wish to change, I believe that if we were to change the name of the Society, I have since decided that a change of name would simply avoid a whole set of problems. Some of the problems are based on the possibility of certain legal decisions which will define audiologists more narrowly than the Society had originally intended. Often there is no one member of the group, stemming from the lesser breed of audiologists who have not been brought into the initial organization of the society to bring together all specialties involved in hearing care. I also want to change the name, for the purpose of clarity, electrophysiologicals, etc.

The possible suggestions that were listed, I would choose: The American Auditory Association or the American Audiology Society. This was made largely by the process of elimination. The words "Ear" and "Hearing" got ruled out because they also mean name in common. Somehow I have prejudice against the word National, the reasons for which I believe are as follows: When we were asked to consider the use of the term audiologist, I believe that the name American Audiology should suffice. Changing it at this time would only confuse future members. However, it is in the decision of the membership to change the name. I favor the first on the list. I. American Audiology Society.

High Frequency Audiometer Survives Plane Crash

Despite serious injury to the airplane and at least 12 of the 15 passengers aboard, a specially made high frequency audiometer safely survived the crash without serious injuries. This is the second serious injury that the audiometer has suffered in avoiding the past three years. Parenthetically, on both of the previous occasions the audiometer was recovered. By Michael D. R. Edwards, Editor of Cort’s Organ, who also happened to survive.


The Interrogatory

[Continued from page 3]

[Continued from page 2]

by competence in the area of clinical audiology. Both parties were warned against using the name of the Society in any
testimonies. Yet remaining doubts had to be given to two members be-
cause of violating this principle. The most serious incident in which the Society's name was used was to indicate that the members had competence in clinical audiology during re-
cent FTPY testimony. During that testimony it was implied that all members of the Society were audiologists.

As I am changing the name in the new volume of the journal, I am in no way changing the meaning of the word "audiologist," or the meaning of the words that the Society and I stand for. It is important that all members understand the importance of the word "audiologist." If a member of the Society uses the word "audiologist" to describe himself, it is important that the member understands the implications of such a statement.

We are all members of the Society and we must work together to maintain the integrity of the name "audiologist."

Hiroshi Shimizu: I oppose the change of name of the Society for the following reasons: The term "Audiology" is internationally recognized. I believe that the name of the Society should be called "Audiologists" like clinical audiology.

The term "Audiology" means "clinical audiology" in the United States and Canada. Therefore, the name of the Society should be changed to "Audiology."

I propose that the name of the Society be changed to "Audiology."

I hope that all members of the Society will support this proposal.

John A. Jones: I oppose the change of name for the following reasons: The term "Audiology" is internationally recognized. I believe that the name of the Society should be called "Audiologists." I think that the name "Audiology" is more descriptive of the work that we do as audiologists.

I propose that the name of the Society be changed to "Audiology."

I believe that the name "Audiology" is more descriptive of the work that we do as audiologists.

New Name for AAS?

[Continued from page 3]

approved a resolution indicating their preference that AASH be the organization that represents the profession of professionally trained audiologists.

The Task Force feels that the American Speech and Hearing Association should be the national organization responsible for the maintenance of governmental activities which serve to clarify and define the rules and responsibilities of the professional audiologist.

Proponents of the name change argue that the term "Audiology" is more descriptive of the work that we do as audiologists. They believe that the term "Audiology" is more descriptive of the work that we do as audiologists.

Sims of AAS were interviewed in this area:

"Besides the need to provide a singular and unified thrust in matters on the national level which have relevance to the future provision of quality services to the hearing impaired, the Task Force feels that the American Speech and Hearing Association should be the national organization that represents the profession of professionally trained audiologists," said Jones.

"I strongly urge that we change the name of our Society from American Audiology Society to American Audiology Society," said Jones.

The President of the Society for Audiology, William A. Simons, said: "I strongly urge that we change the name of our Society from American Audiology Society to American Audiology Society."
"Acooustic Impedance & Admittance — The Measurement of Middle Ear Function"

Alan S. Feldman and Laura A. Wilber

William and Wilkins Company
383 pgs., 1976, approximately $21.00.

The intent of this new textbook is to provide fundamental information about acoustic impedance and admittance measurement for the beginner; the expert; and the audiologist. This textbook will find it extremely useful to have all audiologists with a thorough understanding of the physics and principles of acoustic impedance and admittance.

Feldman and Wilber have gathered a broad spectrum of experts in the field of hearing and the Middle Ear to write on basic measurement techniques and applications. The book contains a variety of chapters on acoustic impedance and admittance measurement with children; medical-related applications in otorhinolaryngology; and the use of tympanometry to detect middle ear pathology.

The book concludes with a discussion of the relationship between acoustic impedance and hearing threshold levels. The authors suggest that this information can be used to predict the degree of hearing loss in children with middle ear disease.

Overall, the book is a comprehensive resource for audiologists and other professionals working with children and adults who have hearing impairments.
Eleventh Otology-Audiology
Vail Workshop Announced

The 11th Colorado Otology-Audiology Workshop promises to uphold the tradition of combining outstanding scientific teaching sessions, social conviviality, and winter fun. Twelve scientific sessions and ten practical presentations have been scheduled featuring a faculty of 35 speakers.

The theme of the conference is again "The Ear." New faculty participants include Richard Bobbin, and Douglas Webster of the Kreger Hearing Lab. of the South and Louisiana State University Medical Center. Dr. Bobbin has recently recovered a drug, aminoxyacetic acid, which seems to protect the ear and improve hearing and will speak on the possible biochemical nature of noise-induced hearing loss. Dr. Webster has recently located brainstem degeneration in animals with noise-induced hearing loss and will speak on the relationship of peripheral hearing loss to central auditory anatomy.

From the medical point of view, Donald Blanding of the Otology Foundation in Los Angeles, will speak on electrical properties of unilaterally neurotic tumor patients as well as an update on the status of cochlear implants. Burt Tulsky of Temple University in Philadelphia will present material on CDR and Diagnosis in the dysplastic, and audiologic diagnosis in acoustic tumors. John Shea of Memphis, will be the Workshop Special Guest and present lectures on treatment of fluctuant hearing loss, experiences with Proplast in reconstruction of cranial ears, and techniques of the CIQ for the deaf.

Additional new faculty include: Bill Kintzler of the Undergraduate of the University of Pennsylvania School of Medicine and W. D. Wick of the University of Minnesota Medical School. Dr. Riederer will speak on the significance of ear adaptation with amplification in hearing loss, and research with time unprocessed speech. Dr. Vardi will present a study of auditory adaptation and its lack of noise.

Returning faculty members include: Ray Battrin, Boston, Dr. L. LeVeque, Pittsburgh, University of California in Los Angeles; Charles Berlin, Virginia State University; and of State Medical Center at Cypress; Garth Hemmenger, and University of California at Los Angeles.

[continued from page 5]

Facts from the Feds

The Bureau of Community Health Services, in a grant to Ohio State University, is convening a select panel in January, 1977 to assess, evaluate and develop recommendations relating to Health Services for homeless persons. The panel will include: seven directors from children with hearing impairments. The participants in the seminar will represent state and national representatives as well as experts in Medicine and Audiology.

[continued from page 11]

European Tour...

[continued from page 5]

[continued from page 11]

Gerber...

[continued from page 4]

Immediately prior to the ASHA convention which is November 15-18, 1977, inquiries relative to the convention, as well as membership information should be directed to Wm. L. M.D., Secretary-Treasurer, SEN- TAS, Chief, Section of Otolaryngology, The Children's Mercy Hospital, 34th at Gillham Road, Kansas City, MO 64108.
AAS Members At American Speech And Hearing Association

Tremmel, Hill Get BHM Awards

Washington, D.C., (November 8, 1978) — Carvane R. Hill, president of Hill's Hearing Aid Service in Oklahoma City, Oklahoma, and DaWayne Tremmel, president of Better Hearing Aids, Inc., in Marshall, Wisconsin, have received 1978 Better Hearing Month Achievement Awards from the Better Hearing Institute. The awards were presented by interim President Joseph C. Luckey at the recent National Hearing Aid Society conference in Chicago.

Luckey commended Hill and Tremmel for their "outstanding information and education efforts on behalf of the millions of hearing-impaired Americans during National Better Hearing Month." "Thanks to you and others like you," he added, "this year's campaign was one of the most successful in history."

Also honored for their Better Hearing Month efforts were runners-up Louise Olson of Arrowhead Hearing Aid Center, Duluth, Minnesota, and William Syers Jr. of Davenport Hearing Aid Center, Inc., Davenport, Iowa.

The Better Hearing Institute, Washington, D.C., is a nonprofit educational organization dedicated to informing the hearing impaired, their families and friends, and the general public about hearing loss and available hearing help. Better Hearing Achievement Awards are presented annually by the Institute to NHAS Public Affairs Committee members who are most active and effective during Better Hearing Month.

School Receives Grant From Hearing Aid Foundation

A grant of $1000 was made this year to St. Rita's School for the Deaf, Cincinnati, Ohio, by the Hearing Aid Foundation. St. Rita's School for the Deaf is a long established school that has provided excellent help to deaf and severely hearing impaired children. Hearing Aid Foundation is a non-profit organization providing grants to charitable organizations dedicated to aiding the hearing impaired. Its grants are made possible by contributions from hearing aid specialists, manufacturers and suppliers and by convicted individuals.

The photograph shows Father Klenke, director of St. Rita's School, receiving a check from Stanley K. Foster (right), President of the Ohio Hearing Aid Dealers Association, who made the presentation of the grant on behalf of the Hearing Aid Foundation.

Father Klenke and Stanley K. Foster (Right)
Calendar of Events

1977

FEBRUARY
20-23 Ear Surgery Course, J. Brown Parrott, M.D., Tampa, Fla.

MARCH
5-12 Medical Audiology Workshop, Vail, Colorado. For information write to: Box 9250, 5300 E. 9th Avenue, Denver, Colorado 80218.
13-19 11th World Congress of Oto-Rhino-Laryngology, Buenos Aires, Argentina. For information write to: Dr. Alfredo Cor- dero, Secc., Av. Roque S. Pena 1110-2° Piso, Buenos Aires.
14-17 NOISEXPO ‘77, The National Noise and Vibration Control Conference and Exhibition, Holiday Inn, O'Hare Kennedy Chicago. Technical papers, films and other presentations are solicited. NOISEXPO '77, 2188 E. Oviatt Road, Ray Village, Ohio 44140.

APRIL
14-16 16th Annual Electroystagmography Course, New Orleans. Contact Wallace Rubin, M.D., 3333 Kingsman Street, Metairie, Louisiana 70002.

MAY

JUNE
7-10 Acoustical Society of America, State College, Pennsylvania.

20-22 National Symposium on Impedance Screening for Children, Vanderbilt University, Nashville, Tenn. Contact Earl Harford, Division of Hearing and Speech Sciences, Vanderbilt University, Nashville, Tenn., 37232. (See below for announcement).

JULY
4-9 Ninth International Congress on Audiology, Madrid, Spain.

AUGUST
15-18 Symposium of the International Electric Response Audiometry Study Group, Hebrew University, Jerusa- lem, Israel. For information write to: Prof. H. Schmer, ERA Organizing Committee, Medical School, P.O.B. 1172, Jerusalem, Israel.

OCTOBER

NOVEMBER
18-21 American Speech and Hearing Association, Chicago, Illinois.

DECEMBER
12 Acoustical Society of America Meeting, Miami Beach, Florida.

13-16 Acoustical Society of America Meeting, Miami Beach, Florida.

REQUEST FOR 1977 DUES
—SECOND NOTICE—
IF YOU HAVE NOT PAID 1977 MEMBERSHIP DUES, PLEASE DO SO IMMEDIATELY.

NAME: ____________________________ DATE: ____________

[Fill in only if you want your address changed]

Send check or money order to:

American Audiology Society
1906 Inwood Road
Dallas, Texas 75235

Attention: Ross J. Reese, Ph.D.

[$20.00 dues; $13.00 is for the journal, and $7.00 is for membership in the Society]
Naunton Announces
International Symposium

An exciting conference is being scheduled at the University of Chicago by Ralph Naunton, head of the audiologypathy department. The full programed project will study in depth the possibilities of stimulating and measuring the auditory nervous system electrically, as follows:

EVOKEDE ELECTRICAL ACTIVITY IN THE AUDITORY
NERVOUS SYSTEM
A University of Chicago symposium
To be held at the Center for Continuing Education
University of Chicago, Chicago, Illinois, U.S.A.
October 31-November 2, 1977

Welcoming Remarks
Monday, A.M.

Anatomy Chairman: R. Lenczno de N
1. Ultrastructure of the Cochlear Duct A.C. Smith
2. Differentiation I. H. Spedding
3. Differentiation W.D. Warr

Coffee

Physiology Chairman: J.M. Goldberg
4. Electrical Equivalence to the Beakly Travelling Wave in the Mammalian Cochlea D.H. Edelbrock
5. Hair Cells (Round Table Discussion) J.M. Goldberg (Chairman), M.L. Bernard, P. Dallas (J.F.), A. Fleck, T.F. Weiss.

Noon

Monday, P.M.

Physiology Continued
5. Hair Cells (Round Table Discussion Continued)
6. Cochlear Electrotopography P. Dallas

Coffee

7. Facts and Illusions Related to the Methods for Recording Whole-
Nerve Action Potentials D.H. Edelbrock
8. Auditory Nerve Responses N.Y.S. Kiang

Adjourn

Monday Evening

Electroencephalography [I] Chairman: G. Salamon
9. Recording Techniques S. Zerin
10. Stimulus Response Relations J.J. Eggermont
11. Background/Threshold Comparisons R.F. Naunton

Coffee

Tuesday, A.M.

Electroencephalography [II] Chairman: P.R. Simmons
12. Auditory Clinical Diagnoses J.H. Aegley
13. Auditory Clinical Diagnosis II J.M. Arran
14. CM in Clinical Diagnosis S. Zerin

Coffee

Inner Ear Prosthesis Chairman: N.Y.S. Kiang
16. Significance of Inner Ear Pathology J.R. Lindsay
17. Instrumentation P.R. Simmons
18. Psychosocial Considerations R.C. Bilger

Lunch

Tuesday, P.M.

Brainstem Chairman: J.B. Ross
20. Auditory Fibers and Primary Cochlear Nuclei R.S. Knee
21. Central Auditory Pathways (J.M. Harrison)
22. Physiology of Brainstem Auditory Centers (T. Suzuki)

Coffee

Basic and Clinical Aspects of Brainstem Recording in Humans (Round Table) H. Davis (Chairman), R. Galambos, G.M. Gerken, A. Starr, K. Terrillhale, A.R.D. Thornton

Adjourn

Wednesday, A.M.

Cortex Chairman: R.A. Butler
25. Physiology J. Krugger
26. Distribution on the Scalp of Evoked Responses W. Goff
27. Clinical Aspects of Evoked Responses G. Salomon
28. Evoked Responses in Children of Uncertain Diagnosis
1. Rapa and M.M. Cohen

Coffee

Symposium Summary and Review H. Davis

Adjourn

Summary

American National Standard for
Specification of Hearing Aid
Characteristics

Cortesy of Technical Marketing
Group

Zentik Hearing Instrument Corp.

Definition of Some Terms:
Satisfaction sound pressure level for 90dB input sound pressure level. The sound pressure level developed in a 2 cm.3 earphone coupler when the input sound pressure level is at the microphone sound entrance on the hearing aid is 90dB SPL with the gain control set at 1500 hearing aid full-on. The abbreviations for this term is SSPPL.

High-frequency-average saturation
sound pressure level. The average of 1000, 1600 and 2500Hz values of SSPPL. The abbrevia-
tion for the term is HF-average SSPPL.

Note: The prefix "HF" is used to differentiate this quantity from the "output" which uses 500, 1000 and 2000Hz values of full-on gain. The abbreviation for the term is HF-average SSPPL.

Reference test gain control
position. The setting of the hearing
aid gain control so that the average of the earphone coupler sound pressure levels at 1000, 1600 and 2500Hz, with a pure-tone input sound pressure level of 40dB is 17 dB plus 1 S.D. less than the HF-average SSPPL or, if the gain available will not permit this, and for AVC aids, the full-on gain control position of the hearing aid.

Recommended Measurements
SSPL 94 curve - With the gain control full-on and with basic settings of controls, record on otherwise develop a curve of coupler sound pressure level versus frequency over the range 20-5000Hz, using a constant input sound pressure level of 90dB.

HF-average SSPPL. Average the 1000, 1600 and 2500Hz SSPPL values.

Full-on gain curve. Full-on gain shall be measured with the gain control set at its full-on position and with a sinusoidal input sound pressure level of 60dB or, if necessary to maintain linear input-output conditions, with an input sound pressure level of 50dB. For AGC aids, the input sound pressure level shall be 60dB.

HF-average full-on gain. Average the 1000, 1600 and 2500Hz full-on gain values.

Frequency response curve. With the gain control in the reference test position, and with an input sound pressure level of 60dB, record or otherwise develop the frequency response curve over the range 20-5000Hz or a lesser range determined by limits of 20dB below the average of the 1000, 1600 and 2500Hz response levels. For AGC aids and input sound pressure level of 50dB, record the total harmonic distortion in the coupler output for input frequencies of 500, 800, 1600, 2500Hz.

In the event the response curve rises 12dB or more between any adjacent frequency band, the second harmonic, distortion tests at that test frequency may be omitted.

Equivalent input noise level (L). With the gain control in the reference test position, measure the battery current with a pure-tone 1000Hz input signal at a sound pressure level of 65dB.

Coupler sound pressure level with instant response test. With the gain control full-on and the hearing aid set to the "T" (telephone) input mode, the hearing aid is placed in an alternating magnetic field having a frequency of 100Hz and a magnetic field strength of 10m A/m and oriented to produce the greatest coupler sound pressure level.

Automatic gain control hearing aids. The following tests apply to AGC aids.

Input-output characteristics. Using a pure-tone test frequency of 100Hz, measure and plot the coupler sound pressure level for input sound pressure levels from 00 to 40dB, in 10dB steps.

Dynamic ACS characteristics. With the gain control full-on and using a square wave modulated pure-tone input signal of 2000 Hz determine the attack time defined as the time between an abrupt increase from 50 to 80 dB and the point where the output has stabilized to within 2dB of the steady state value for the 80dB input. The release time is defined as the interval between the abrupt drop from 80 to 50 dB and the point where the output has stabilized to within 2dB of the steady state value for the 50dB input.
Tracoustics Honors . . .

Brian E. Walden, Ph.D., currently a Captain in the Medical Service Corps of the U.S. Army, is the recipient of the 1978 Outstanding Military Audiologist award, Tracoustics, Inc. of Austin, Texas provided a beautiful bronze award to the Military Audiology-Speech Pathology Society (MASPS) to honor their outstanding member, Charlie Anderson, President of Tracoustics, Inc. indicated that the award will become an annual event.

Dr. Walden was selected for his commitment to audiology research for the benefit of hearing handicapped military personnel. The award was presented by Mr. Don Musick of Tracoustics, Inc. Major Roy Sedge, Ph.D., current President of the Military Audiology-Speech Pathology Society, summarized Dr. Walden’s contributions as follows:

"Over the past five years, CPT Brian Walden, serving as a researcher, clinician and military advisor, provided the single most important document to foster the Army hearing conservation program entitled "The Prevalence of Hearing Loss Within Selected U.S. Army Branches." In addition, CPT Walden designed the largest clinical audiology research laboratory within the U.S. Army located at Walter Reed Army Medical Center. Research in this laboratory has resulted in a new modular aural rehabilitation program in operation at the U.S. Army Audiology and Speech Pathology Center in the Forest Glen section of WRAMC. Dr. Walden is currently involved in numerous research efforts including the development of a speech discrimination test to predict communication difficulties from military noise-induced hearing loss patients."

CPT Brian Walden is currently assigned to Walter Reed Army Medical Center as an Auditory Research Director. He will soon complete his active duty obligation, but remain in his current position, and continue his efforts, as a civilian.
WASHINGTON, D.C. (November 1, 1976) -- "Silence is Lonely," a moving and informative new slide/cassette presentation now available from the Better Hearing Institute, focuses on hearing loss in the golden years. The presentation, for showing by hearing field representatives to local civic, social, and fraternal organizations, will help to provide encouraging hearing help information to those who need it. It also can be used as a model from which to develop customized speakers bureau productions.

Utilizing a case history approach, "Silence is Lonely" explores the personal and emotional problems associated with hearing handicaps and emphasizes all types of hearing help—medical, surgical, and amplification. Featured in the presentation is actress Nanette Fabray, who overcame her own hearing disorder. Ms. Fabray encourages senior Americans with hearing loss to admit they have a hearing problem and to seek help. In addition, she discusses the magnitude of hearing impairments, prevention and warning signs. BHI Advisory Board Chairman and ear surgeon, Dr. Charles Gross also appears in the presentation to briefly explain the hearing process and types and causes of hearing disorders.

"Silence is Lonely" is self-contained for easy usage. Slides are advanced automatically by a tape with inscribed magnetic impulses or they can be manually projected by following script cues. Each set includes a 15 minute cassette, 80 slides in a carousel tray, a slide-keyed script, and helpful suggestions and how-to instructions. Order from BHI, 1430 K Street, N.W., Suite 200, Washington, D.C. 20005. Cost: $49.95.

The Better Hearing Institute, Washington, D.C., is a non-profit, educational organization dedicated to informing the hearing impaired, their families and friends, and the general public about hearing loss and available hearing help.

Michelangelo's "David" was one of the magnificent sights viewed by members who went on the AAS European Study Tour. (Courtesy of Roger N. Angelelli.)

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BALLOT ON NAME CHANGE

TO: Ross Roeser, Secretary
American Audiology Society
1966 Inwood Road
Dallas, Texas 75235

Name: ____________________________ (Optional)

I do not favor a name change.

I do favor a name change.

My choice for the name to be submitted for possible constitutional change is:

___ American Hearing Society
___ The National Association for Hearing
___ American Association for Hearing
___ American Hearing Association
___ American Society for Hearing
___ American Auditory Society
___ American Auditory Association
___ National Auditory Association
___ National Auditory Society
___ American Ear Society
___ National Ear Society
___ National Ear Association
___ American Society for Hearing
___ American Association for the Study of Hearing
___ American Audition Society
___ American Society of Audition
___ Other ____________________________

[Continued on page 4]
Membership Application Form

Name __________________________ Date _______________________ 
Home Address ____________________ City ______________________ 
State ___________ Zip ___________ Phone _____________________ 
Professional Address ____________________ City ______________________ 
State ___________ Zip ___________ Phone _____________________ 

Education

Institution ____________________ Location ______________ Degree/Year __________ 

Sponsoring Members

[1] Name __________________________ Print or Type ______ Signature ___________ 
Institution or Company ___________________________ 

[2] Name __________________________ Print or Type ______ Signature ___________ 
Institution or Company ___________________________ 

This membership application must be supported by signed statements from two active members verifying the qualifications of the applicant and payment of the membership fee [$20.00] to cover dues for the current year. When complete, return to: 

Program Chairman Mike Seldemann 

'Auschwitz'—Pediatrician and Audiologist

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The results of the balloting on a possible name change for AAS are in. A majority of the members voting favored a revision in the name. The votes were as follows:
1. DO NOT favor name change .................. 62;
2. DO favor name change .................. 82;
3. American Hearing Association

VOTES
1. National Association for Hearing
2. American Association for Hearing
3. American Hearing Association
4. American Auditory Association
5. National Auditory Society
6. American Association for Study of Hearing
7. American Audiology Society
8. American Society of Audiology

American Audiology Society
1966 Inwood Road
Dallas, Texas 75235

Proposal for By-Law Change-of-Name Finalized—
'American Audiology Society' Wins

The results of the balloting on a possible name change for AAS are in. A majority of the members voting favored a revision in the name. The votes were as follows:
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Call For Papers
Pomerantz Outlines 1977 AAS Meeting

Miami Beach will be the exciting setting for the 1977 annual meeting of the AAS. Harris Pom- erantz, program chairman, is planning scientific presentations on the Effects of Pressure Changes in the Auditory System. In addition, he has planned for members to make personal investigations on pressure changes under water.

Members are requested to submit abstracts of papers on the general theme EFFECTS OF PRESSURE CHANGES IN THE AUDITORY SYSTEM. Papers will be of 10 to 12 minutes duration and will be presented during the morning session of the annual meeting. The Raymond Carhart Memorial Lecture will be presented in the afternoon session.

Papers relating to diving and high altitude auditory system physiology are particularly desired for presentation, but papers on other topics are also requested.

During the weekend preceding the annual meeting some of the effects of increased pressure on the auditory system will be investigated during a diving trip to John Pennekamp's Reef Park. A Florida underwater state park encompassing a magnifi- cent living coral reef off Key Largo, Florida.

It should be noted that the annual AAS meeting on Monday, December 12, 1977, precedes the 15th AAS meeting on Tuesday, December 13, of the Acoustical Society of America at the Cardinal Hotel.

Transportation for the diving trip will be arranged. The executive committee meeting will be scheduled to avoid conflict with the reef trip.

Abstracts of contributed papers following the Acoustical Society of America format should be submitted to Harris I. Pomerantz, M.S., Section of Otolaryngology, University of South Florida College of Medicine, 1800 N. 36th Street, Tampa, Florida 33612.

A Special Report To Corti's
Organ on the Evaluation of Implanted Auditory Prosthesis

Page 12

News About Members

Merle Lawrence, director of Kresge Hearing Research Institute, has been appointed a member of the National Advisory Neurological and Communication Disorders and Stroke Council of the National Institutes of Health.

Denis L. Landsman was inducted into the California's Fifty Outstanding Young Men for 1980. The award was presented to him for his article explaining a free summer camp for 300 deaf children and for a hearing aid lunch box for needy deaf chil-
Editorial

The action of the AAS in proposing a name change represents microcosm of the AAS as an entire. Everyone in AAS is expressing his opinion freely, without acrimony, but with a lively interest. In fact, the membership has been so polarized on it that it has been really fun to work on.

It's quite evident that regardless of what the outcome of the final voting will be, it will be accepted with good will by the opposition. It seems to me that this vote is bringing to the surface many of the issues of AAS as nothing else could.

Despite its disparate beliefs and occupations, the organization is welded together by a firm and loving interest in the auditory phenomena of the ear. No compromise of that goal will ever produce a schism in the single-purpose group.

It's nice to belong to this kind of organization—sort of restorer one's belief in the rationality of mankind—MPD-RZ

Yanick & Ross
Plan Instrument Conference

Paul Yanick and Mark Ross have put together a workshop conference on Hearing Instrument Technology Signal Processing June 4, 1977 in Clark, New Jersey. Stephen Freiteld, M.D. will be one of the featured speakers at the meeting. The purpose of the workshop is to provide for the dissemination of new procedures and electro-technology, and to provide opportunities for discussions of case histories among group participants. The workshop will include the following topics:

Signal Processing:
A. Test procedures for the measurement of equal loudness pressure.
B. Electroacoustic alignments used in processing.
C. Review of clinical case histories.
D. Application of the electro-acoustic parameters of hearing aid and response to the sensorineural ear.
E. Practical experience with signal processing.

The meeting is sponsored by the HEAR Foundation.

For information write to: HEAR Foundation 300 Supplies Avenue Summit, New Jersey 07901

LETTERS TO THE EDITORS

Dear Editors:

After reading the sensitive re-definition of the action of the Hearing Society, I am writing to express my disappointment and distress at my unsuccessful efforts in the 1970s when I was interested in an official definition of"hearing aid" more than the one which was first used in the medical dictionary—"the science of hearing." I tried to get a consensus of what the term should include. At least one joint committee of the two societies most involved worked long hours trying to agree on a proper definition and an indication of the specialization of the field. It was then expressed in the possible legal implications of letting the term dangle without proper official definition which could be the basis for all future considerations.

However, time went by and now we have not only the legal hazards in the various state laws, but Uncle Sam himself is breathing on us mightily because of our inter-society controversy. So the terms I wish I had never heard about is being threatened for the time being, but at the time it did seem to properly indicate a special profession because of the pervasiveness of our human society, including me, great service has been rendered to those with hearing defects.

I am enclosing the comments in the current ORGAN OF ACHR.

[signature]

Dear Editors:

On the matter of name change, we could retain American Audiology Society, limit full membership to "Audiologists" and offer associate membership to otologists; or change the name to American Audiology Society, limit full membership to "Audiologists" and "Otolologists" and offer associate membership to hearing aid engineers; or change to American Audiology Society, limit full membership to "Audiologists" and "Otolologists" and offer associate membership to hearing aid engineers; or change to American Audiology Society, limit full membership to "Audiologists" and "Otolologists" and offer associate membership to hearing aid engineers.

[signature]

Gretchen Sykert stands in front of Select Hearing Aid dispensary in Nurssen, Germany. Maybe a long last relative-in-law?

Sataloff-Glorig Institutes Announced

Former AAS President Aram Glorig and audiologist Joseph Sataloff will again direct the two University of Maine Institutes on Occupational Hearing Loss and Hearing Conservation. These well-known courses have been the most popular of any in the country with physicians and nurses interested in occupational hearing problems.

The 28th Annual Conference in Occupational Hearing Loss will be held June 25-27, 1977, at the University of Maine at Orono (Maine). The Institute is designed for industrial physicians, safety engineer, biomedical engineers, otolaryngologists, health management executives and administrative personnel. Designed to permit certification in industrial toxicology, it awards 27 credits in FDA Category 1 of AMA for physicians. Covers total field of conservation of hearing programs, medical/legal aspects and OSHA developments. Lectures and laboratory are combined with practical field trip to cooley theory and implementation. Tuition is $275 and Room and Board is $25 per day.

The 14th annual Industrial Hearing Conservation Institute is June 26-June 28, also at the University of Maine. The facility of the University of Maine provide excellent accommodations for the participants. The Institute is concerned with responsibilities of industrial nurses and those actively interested in hearing testing performance and record keeping. Participants eligible for certification by the Council for Accreditation in Occupational Hearing Conservation. Institutional Tuition is $25 and Room and Board is $25 per day.

Dear Editors:

I realize what controversy there would be when we urged the use of the term AUDIOLOGY. Some of the members of THE AUDIOLOGIST were against it and in my unsuccessful efforts in the 1970s when I was interested in an official definition of the term, more than the one which was first used in the medical dictionary—"the science of hearing." I tried to get a consensus of what the term should include. At least one joint committee of the two societies most involved worked long hours trying to agree on a proper definition and an indication of the specialization of the field. It was then expressed in the possible legal implications of letting the term dangle without proper official definition which could be the basis for all future considerations.

However, time went by and now we have not only the legal hazards in the various state laws, but Uncle Sam himself is breathing on us mightily because of our inter-society controversy. So the terms I wish I had never heard about is being threatened for the time being, but at the time it did seem to properly indicate a special profession because of the pervasiveness of our human society, including me, great service has been rendered to those with hearing defects.

I am enclosing the comments in the current ORGAN OF ACHR.

[signature]
THE INTERROGATORY

In July of this year an election will be held to replace seven members of the Executive Committee of the American Audiology Society. In this issue of our Organ we have asked each candidate nominated for the offices to provide the Membership of the Society with some basic biographical information, and to provide their thoughts regarding the future direction of the Society.

James R. Curran, M.D., 1962, University of Wisconsin; Director, Auditory Research Program; Maroon Hearing Instruments, Inc., Minneapolis, Minn.

I am in favor of a name change for the Society, for it appears that presently there is too much room for confusion and misunderstanding regarding our purpose. In a time, however, when so many decisions are being made by others about all aspects of hearing health care, it is conceivable that pressures may be put on the Society to take official stances concerning various politically sensitive issues. We should, therefore, support a policy which firmly resists adopting politically oriented positions during these times of transition. But we should actively encourage open and free discussion of issues in our publications and to facilitate understanding of the issues and to aid in the decision making process, allowing all points of view be expressed.

It appears to me that our main concern in the next few years should be to establish our own image and position as a scientifically oriented body, and we should strongly encourage and emphasize any programs or projects which would further enhance this aspect of the Society.

James R. Curran

William G. Ely, Bachelor of Science, 1943, Purdue University; Vice President, Research and Development for Maico Hearing Instruments, Inc., Maico Hearing Instruments Corporation, 3175 Bush Lake Road, Minneapolis, Minn. 55422

I see the American Audiology Society as an extremely important force to promote and organize where people with a common interest in this health care problem can interact to increase their knowledge of hearing, hearing loss, hearing habilitation and rehabilitation. As a society, we have made up of degreed persons with professional interest in human hearing. It should not attempt to represent the professional interests of any one group or academic discipline. I believe that the Society must foster not only written (technical) information exchange but also provide a forum where members can meet to learn from each other. It is important now and in the foreseeable future for the American Audiology Society, or whatever the membership decides to call the organization, to bring together audiologists, medical doctors, audiologists, engineers, and others, to foster research and to share an interest in human hearing.

No Picture

Alphon B. Gill, M.D., 1962, State University of New York; Private practice, Otolaryngology, 1285 Post Road, Fairfield, Connecticut 06430.

No scientific society, regardless of its size or purposed pur

poses, can hope to achieve significant growth without the eventual application of its studies being interpreted into practical, day to day applications. As a practicing otolaryngologist, particularly interested in audiology, it would be my hope and aim as an Executive Committee member of this Society to help guide our work to such avenues, in order to provide the best, the most up to date, and the most reliable information in the diagnosis, care and treatment of our patients.

Earl Hardorf, Ph.D., 1958, Northwestern University; Professor of Audiology and Director of the Division of Hearing and Speech Sciences, School of Medicine, Vanderbilt University; Director, Bill Wilkerson Hearing and Speech Center, 1145 24th Avenue South, Nashville, Tennessee 37212.

This Society was established for the purpose of increasing the knowledge of human hearing, promoting conservation of hearing and fostering the rehabilitation of persons with hearing impairment. This is the only organization of its kind in the U.S. with these objectives as its foundation. This Society offers a forum for those who identify with these objectives, regardless of country of residence and specific areas of professional or scientific discipline. The Society is unique in the sense that its focus is limited to human hearing and yet is unlimited in its membership.

The American Audiology Society has a bright future. To realize the potential of the American Audiology Society, each member must assume responsibility for the direction of this Society. These contributions can take many forms: application of personal and available knowledge in any of its forms, questions, application of shared and learned ideas to the benefit of the greatest number of people; or assistance to others, but most important a constructive involvement in the goals of the Society.

A Bruce Graham, Ph.D., 1953, Northwestern University; Chief, Division of Audiology, Speech and Hearing Services, Henry Ford Hospital, 2796 West Grand Boulevard, Detroit, Michigan 48202.

At the first organizational meeting in which any number of people were present in Dallas, I became fascinated by the opportunity to have a group of people which could really sit down and share ideas from all of these involved with hearing problems. We have so many organizations primarily concerned with hearing research, testing procedures but very little seems to be done about the very real problem of the hard of hearing individual himself. It struck me then as it still does that it would be most worthwhile to have a team of individuals who are concerned with the best possible diagnostic procedures to plan for medical, surgical and educational rehabilitation of the patients to discuss these problems of adjusting to the world of deaf and hard of hearing, to assist in counseling the hearing impaired so they can make the necessary adjustments in their lives.

Chamney Hewitt, BBA, 1956, Holley University, President, The Vicor Instrument Company, 325 Western Road, Colorado Springs, Co. 80922.

When I first considered membership in the American Audiology Society, I was primarily motivated by a desire to see progressive and contemporary thinking individuals break with the polarizing effects of the various discipline barriers to promote the necessary investigations to increase our knowledge of human hearing. I felt then, and feel even more strongly now, that a close inter-disciplinary exchange is essential if we...anyone concerned with the future of persons with hearing impairments...and to produce a cross fertilization of thought and activity to solve a common problem.

We are approaching an era where multi-disciplinary activities must be provided because the hearing impaired community is crying for them and the various governmental systems are sensitive to these problems and an organization, do not break down the interdisciplinary barriers, the necessary services will reach the hearing impaired in a less ef

fective and coordinated manner.

Susanne Roe, M.S., 1975, North Texas State University. Clinical Audiologist, University of Texas at Dallas Callier Center for Communication Disorders, 1961 Inwood Road, Dallas, Texas 75235.

As one of the original members of the American Audiology Society, I am proud to be part of an emerging organization whose prime objective is to promote a perception of unity among the varied factors represented by our membership. The conception of a multidisciplinary society has afforded us a unique opportunity to share, and through the journal serve as a forum for continuing education, to disseminate current philosophies and developments in our related fields of endeavor. Hopefully, this organization will continue to prosper with our expertise and ideas forged into a single effort to better serve the hearing impaired populations in all aspects of diagnosis and rehabilitation.

Chasroom Lawrence, Ph.D., 1961, Princeton University. Professor of Otolaryngology and Director of the Keene Hearing Research Institute, Department of Otolaryngology, University of Michigan Medical School, University of Michigan Medical School, Ann Arbor, Michigan 48109.

In the late 1940's, when the word "Audiology" was being widely promoted it was intended to include everyone whose activities involved the ear and hearing: audiologists, audometric technicians, biologists, physicians, etc. This was all spelled out in a little book titled Audiology published in 1948 by Norton Canfield, M.D. To his forward he said: "Although the science of hearing is not new, the term 'Audiology' expresses a new concept. It includes all of the separate professional abilities which contribute to the rapidly progressing specialization."

But since that time, parallelism, and as a consequence of the growth of ASHA the term 'Audiology'
THE INTERROGATORY

(Cont. From Page 3)

...ship and the officers should be directed to furthering dialogues which encourage an increasing number of people to take part and contribute, for it is not only a lack of voice but an absence of solidarity for a common good.

Selig W. Pratt, M.D., 1943, Johns Hopkins University School of Medicine, Chief, Department of Otolaryngology, Mid-Maine Medical Center, Waterville, Maine, 223B. Kennedy Memorial Drive, Waterville, Maine 04901 (office).

The American Audiology Society, by virtue of the diverse composition of its membership who possess a common interest in Audiology, is in a unique position to foster cooperation and develop both understanding and harmony among various disciplines. The development of programs designed to increase our knowledge of hearing, its problems, and methods of conservation and rehabilitation by utilizing input from this diverse group should result in more effective utilization of our talents, for the ultimate benefit of the patient.

The American Audiology Society should keep these as their goals and endeavor to spread this message among Otolaryngologists and Audiologists with the aim of encouraging all with a common interest in problems associated with hearing and its defects to work in harmony for a common purpose.

Michael F. Siedemann, Ph.D., 1972, Florida State University, Coordinator of Audiology, Associate Professor of Audiology and Speech Pathology, Louisiana State University Medical Center, 1186 Florida Avenue, Building 102, New Orleans, Louisiana 70112. It appears to me that the American Audiology Society has started and performed an excellent job in achieving most of the aims of the society as deleganted in the Statutes. The exchange of information at the meetings and in publications has been commendable for a society in its youth.

There is one area addressed in Article 2 of the Statutes that I feel warrants an increased concentration of effort by the Society. The area to which I refer is promotion of the cause of hearing conservation. In the near future, each of the disciplines represented within our society must come forward to a place of leadership in the promotion of hearing conservation. At the time of this writing (prior to the promulgation of new OSHA regulations), it seems that the likelihood of requiring audio-logological implementation in industrial hearing conservation programs is poor. While the vast majority of industrial hearing conservation will be undertaken by technicians and institute physicians, audiologists, and otolaryngologists must serve as consultants to such programs. The application of our knowledge and skills in the realm of industrial hearing conservation is an important component in any successful hearing conservation program.

In the future, each of the disciplines represented within the AS should like to see increased involvement in this area by our society.

Wayne J. Shabb, Ph.D., 1971, Michigan State University, Director of Education, Taux Compulsive Committee, 4600 Alkirk Avenue South, Minneapolis, Minnesota, 55426.

The American Audiology Society should continue to work and promote recognition as the official representative to the International Audiology Society. The United States should be represented by an organization where the membership has a legitimate and important interest in audiological pursuits. The American Audiology Society is the only United States organization which has a membership and goals consistent with other international audiological society members.

AAS should investigate establishing official liaison with membership background areas represented whenever possible. This would be in addition to the Executive Committee in dealing with third parties which already exist.

Fred Linthicum, M.D., 1946, University of Southern California School of Medicine, Head, Section of Otologic Medical Group, Inc.; Director of Education and Temporal Bone Laboratories, Ear Research Institute; Clinical Professor of Otologygy, University of Southern California School of Medicine, Los Angeles, Third Street, Los Angeles, CA.

The American Audiology Society performs a very important function in bringing together the various disciplines among the audiologists, otolaryngologists, and physicians interested in the preservation and improvement of communication problems. The journal, Jot's Organ, and the meetings bring together people with various backgrounds so that they can discuss mutual problems. It is not rare these days that one discipline concerned with hearing is unaware of what is going on in the other. These publications and the meetings serve to distribute this information.

J. Buckminster Ranney, Ph.D., 1957, Ohio State University, Chief, Scientific Evaluation Branch, National Institute of Neurological and Communicative Disorders and Stroke, National Institutes of Health, NINCDS SEB, Federal Building, Room MCA-5, 7200 Wisconsin Avenue, Bethesda, Maryland, 20201.

The American Audiology Society has established itself as a forum for the exchange of ideas and viewpoints, and concerns in a spirit which is characterized by the absence of the artificial barriers of discipline. The continuing purpose of the society is to foster the personal and intellectual exchange and interchange among those persons concerned with hearing impairments. A viable future for the Society demands that it be not dissipated with petty concerns, e.g., name changes; rather the effort of the member...
1977 AAS Directory
(Alphabetical Listing Cont'd.)
Meeting Announcement

Call for Papers

SENCTA (The Society for Ear, Nose and Throat Advances) will meet in Chicago, Illinois, at the Children's Memorial Hospital and the Continental Plaza Hotel, October 29-31, 1977 (Sat.-Sun.). The participation of these interested in pediatric audiology, speech pathology and otolaryngology is solicited. Please submit abstracts (in quadruplicate) to: Gabriel F. Tuckier, Jr., M.D., Program Chairman, The Children's Memorial Hospital, 2200 Children's Place, Chicago, Illinois 60614. Deadline for receipt of abstracts is June 15, 1977.

Science Abroad

presents a masterful account of audiometric theory and practice as they bear on the problems of differential diagnosis of noise-induced hearing loss, beginning with the 'personal' and artificial ears, and ending with the descriptive. Standardized tests for sensory losses are catalogued and described with important thoroughness, including many that are relatively unfamiliar to audiologists, such as noise audiometry and the tests of Kelz, of Lanzberg, and of Feldmann. The analysis is an up-to-date as one can reasonably expect in this age of burgeoning experimentation, although I must confess that I unctioned to see an old grin of mine on contralateral remote masking (CRM) that illustrated—or as I thought at the time—the action of the middle-ear muscles, 'artificial expander' that was donned when it became clear that CRM is little altered by conditions that are known to render the muscles inoperative.

Fellowship Awards

NINCDS Announces

The Communicative Disorders Program of the National Institute of Neurological and Communicative Disorders and Stroke will make National Research Service Individual Predoctoral Fellowships in the area of audiology to: Derek E. Dunn, Dewey W. Grantham, Nancy K. Squires. National Research Service Institutional Fellowship Awards in the NINCDS Communicative Disorders Program will be made to: Lewis Branca, Massachusetts Institute of Technology, Gerald Center, Northwestern University, Joel Keddie, Northwestern University, Joseph Hawkins, University of Michigan, Michael Paparella, University of Minnesota, William Peake, Massachusetts Institute of Technology.

Will be held May 21st at the University of Colorado Medical Center. These world-famed experts of temporal bone pathology will talk on interesting cases from their files.

If interested write: Dr. Bruce Jaffe
University of Colorado Medical Center
Denver, Colorado 80220

A CLASSIC OF TEMPORAL BONE PATHOLOGY

A meeting featuring Dr. John Lindsay and Dr. Imre Friedmann

Editor: W. Dixon Ward
With this issue we begin a new section featuring reviews of outstanding articles from foreign journals. Our accomplished union and ex-president, W. Dixon Ward, has graciously agreed to supply the reviews.

Dieroff, H.G.: "Larsenwachterlichkeit" "Larsenwachterlicity
SPECIAL REPORT

Report on Evaluation of Subjects Presently Fitted With Implanted Auditory Prosthesis

The, "Do they work or don't they work?" controversy over electrical auditory implants finally made it through to the, "Let's find out" stage. In July, 1975, a competent group of investigators at the Philadelphia Eye and Ear Hospital began an in-depth evaluation of 13 patients wearing single-channel electrical auditory prostheses. That investigation was completed in January 1976, and the summarized results were reported in October, during the annual meeting meetings. The written report for this NIH Contract No. 5-S-2311 consists of a 256 page volume and a 159 page appendix. Inside these pages is enough data content whose persons hear with or without the device. Are you ready to have the better part of a week. In fact, the most impressive feature of this study is the amount of work both the investigators and the subjects devoted to the task. Each patient spent 5 full days in evaluating his device. Their report is basically favorable toward the usefulness of the pros thesis for stimulating the subjects.

The data with which to make your own judgment is in the appendix. Unfortunately, there is a typographical error in the text. The word in as about as neutral as it is possible to make it. It is my hope, you will understand the English. I would have enjoyed a few opinions scattered around. When the word, significant, is used, they mean exactly that, and not, inclusive of the conclusion. I can only by. It was also clear in these numbers on a few occasions that their subjects were guilty of loading their test responses in favor of the pros thesis. Most of us would call that, cheating. They called it a "statistically" significant improvement.

The subjects: The deafness of 3 was due to congenital deformities, and 2 were drug-induced; one was leved. Seven had no clearly established cause for their deafness. Two were prelingually deaf. Eight had vestibular symptoms beforehand, and of the 10 tested before their implants, all had ENG abnormalities. Because most of the subjects had diminished or absent caloric responses prior to their implant procedure, the effects of the implant itself and the implant itself were impossible to determine. Conventional audiometry showed that the five subjects with profound bilateral hearing losses, with the implanted ear, scored 50% of the monosyllabic words. One subject had a 5% frequency average of 76 db in his unimplanted ear, and scored 6% on FBR words. Most of the subjects either lived or attempted to live in the hearing community and none of them have attempted to integrate with the deaf population.

At impressive battery of neuro- psychological tests were administered. Eleven subjects were "roughly within the limits of normal." Two showed defensive signs of "organic brain syndrome" and results suggested that these two individuals were likely to have difficulty with classifying stimuli as "same" or "different," etc.

The prostheses: There were two types of stimulators. The 11 subjects implanted by William House had stimulators which produced a combination of "organic brain syndrome" and results suggested that these two individuals were likely to have difficulty with classifying stimuli as "same" or "different," etc.

The cochleas—usually 16-18 kHz "background" carrier when the device was "on", and a superimposed analog "coding" waveform of lesser frequency were produced to whatever the microphone "picked up" through the air. This environmental sound amplified-modulated the 16-18 kHz carrier. The subjects, among whom individuals prosthesis caused instant improvements, which only really stood out as problems after several months. The device was found to be usable for both subjects and experimental work.

An internal diode circuit reduced the current from the electrode stimulator. Hearing with the prosthesis: Many of the subjects, the results of their thresholds between 10 and 20 db and 30 to 60 dB were considered. Some were able to score below chance during the test. Speech Awareness Thresholds were also in this range, and these were 30-40 dB more sensitive than with the prosthesis. At 20 dB, none were able to score below chance during classical speech discrimination test or discrimination tests using PWR background noise.

Studies of the range between threshold, "comfortable" and "uncomfortable" loudness produced some surprises. The average range was comfortable in the vicinity of 10 dB. At 20 dB, the mean was 30 to 40 dB more sensitive than with the prosthesis. At 20 dB, none were able to score below chance during classical speech discrimination test or discrimination tests using PWR background noise. Studies of the range between threshold, "comfortable" and "uncomfortable" loudness produced some surprises. The average range was comfortable in the vicinity of 10 dB.

Subjects' speech intelligibility: Two speech samples were recorded using the pros thesis "on" and "off" conditions were recorded during their week-long evaluation. The material for these monologues differed from the speech stimuli, according to their interests and abilities. These tapes were ran- domized and audited by three listeners by normal-hearing adults who had not been aware of the subject evaluation. The listeners were asked to rate intelligibility of each message by a 0 to 100% range. The mean intelligibility ratings for speech recorded with the pros thesis was activated was significantly higher than when the pros thesis was off (F = 26.2; df = 1, 8; p < .01). The mean difference score for speech recorded with the pros thesis-activated condition was 6.7% and that for the pros thesis-off condition was 0.0%

The reliability of the judgements was 0.92 (r = 0.71) improvement with pros thesis came from 14 subjects. These very good scores were consistent with the fact that the subjects had no little room to go. I would have gone extremely "poor" not improved with the aid of the stimulator.

Psychosocial: The results of the psychosocial measurements were not as expected and were not comfortably as expected. In the group that were not previously hearing subjects, they were really quite consistent with the findings. Further, the problems and difficulties not revealed that their psyrical scores were significantly higher than their initial scores.

Corti's Organ is Sorry

To Learn of the Death

Of Member Thomas B. Appleton

and Sends Condolences to His Widow

The device did surprise me both in pitch and loudness judgments at low and medium levels, 12 to 250 and 250 Hz, and di- ferenced at different rates as the frequency was increased. Some of these discriminations were still better in the low and medium range. I found difficulty in believing that the 125 Hz di- ference was actually the same for all of the subjects, and they were making the same effort in each case. I would have expected to have much more difficulty with the constraints and conditions that I have described above in the verbal." The one-choice-in-four to four words got results.

The sad subjects' speech intelligibility: Two speech samples were recorded using the pros thesis "on" and "off" conditions were recorded during their week-long evaluation. The main test for these monologues differed from the speech stimuli, according to their interests and abilities. These tapes were ran- domized and audited by three listeners by normal-hearing adults who had not been aware of the subject evaluation. The listeners were asked to rate intelligibility of each message by a 0 to 100% range.
FDA Rule Encourages Hearing Aid Use

New Food and Drug Administration regulations for labeling of hearing aids and conditions for their sale will increase consumer confidence, and encourage more people to get hearing aids, according to John Blake, Executive Director of the Hearing Aid Industry Conference, a Washington, D.C.-based trade association which represents hearing aid manufacturers. The rule, effective August 15, 1977, will provide for a medical evaluation prior to the purchase of a hearing aid, with a right of waiver for fully informed adults over 18. The rule requires a brochure to accompany each hearing aid, which will explain the health-related aspects of obtaining a hearing aid, the care and use of the aid, and where to get it serviced.

Blake stated that the rule will not be easy for all manufacturers to implement, but "we are confident that industry members will make every effort to quickly adhere to the new requirements." While we are not convinced that all the requirements are necessary," says Blake, "we do think that FDA has been fair and realistic about the vast need for more attention to the problems of the hearing impaired. There are more people of us who want hearing aid programs to be better with a hearing aid, and we feel that this regulation will encourage them to get hearing help.

The Commissioner of FDA has recognized the major role that personal motivation plays in getting assistance for hearing problems and has also indicated that some selling practices and techniques used by the industry have helped to strengthen motivation to buy a hearing aid. The medical evaluation is simply to assure that medically treatable conditions that may affect hearing are identified and treated before a hearing aid is purchased.

In commenting on industry's reaction to the rule, Blake stated "This rule is the result of a long and complex dialog between industry, professional and consumer groups and the government on medical care for hearing problems and the purchase of hearing aids. The rule establishes, for the first time, a definitive role for the doctors, the audiologist, and the hearing aid dispenser in providing hearing health care and sets forth industry requirements for dissemination of uniform consumer information on hearing aids. FDA has acknowledged that hearing aids are not dangerous devices and that the number of people who will in fact require medical or surgical treatment is relatively small in comparison to the number of individuals who may benefit from an amplification."

Blake continued, "There are millions of people who have never done anything about their hearing impairments. It is the industry's belief that in working with government, the medical and consumer groups, the consumer, and the consumer who will use a hearing aid, we will be able to encourage those people to enrich their lives through the use of a hearing aid."

PROGRAM:
Central Auditory Dysfunction May 19-20

GUEST FACULTY

Daniel S. Beasley, Ph.D.
Memphis State University

Mary Rose Costello, Ph.D.
Henry Ford Hospital, Detroit

Charlotte Dempsey, M.A.
West Chester State College

West Chester, Pennsylvania

Drake D. Duane, M.D.
Nayo Clinic

Jack Katz, Ph.D.
State University of New York at Buffalo

Robert W. Keit, Ph.D.
University of Cincinnati Medical Center

George E. Lynn, Ph.D.
Wayne State University, Detroit

Marylin L. Pfeine, Ph.D.
Medical College of Ohio at Toledo

Sylvia O. Richardson, M.D.
Cincinnati Center for Developmental Disorders, Children's Hospital Medical Center

Jack Willeford, Ph.D.
Colorado State University

PARGUE

To provide a forum for a meaningful exchange of information and ideas on the current diagnostic approach to problems of central auditory dysfunction.

Emphasis will be on behavioral testing with special reference to clinically-useful diagnostic procedures. We want the audience to have a symposium with a better understanding of the present status of testing for central auditory dysfunction in children with learning disabilities and adults with lesions of the central auditory nervous system. We also hope that the audience will have some insight into the direction and role of central auditory testing in the future.

The Symposium will be held in Kroger Auditorium at the University of Cincinnati College of Medicine.

FEE

$80.00 (includes lunch on Thursday and Friday)

$30.00 - The first 100 students will be enrolled for $30.00 but registration form and check MUST be accompanied by a letter from faculty advisor stating that the student is a registered, full-time student during Spring Qtr., 1977. Fee includes lunch on Thursday and Friday.

PROGRAM

May 19

8:30 REGISTRATION
8:45 Welcome/Introduction: KEITH
9:00-9:45 Central Auditory Dysfunction: A Neuropsychologist's Point of View
10:15 INTERMISSION
10:45 WILPFORD: Test Battery Approach; Binural Fusion; Binural Separation; Filtered Speech; Alternate Speech Perception Tests
11:45 LUNCH
1:00 KEIT: Synthesis Sentence Identification Test
2:00 KATE: Staggered Lipiodcal Word Test
3:00 INTERMISSION
3:30 REALEY: Consonant Speech
4:15 QUESTIONS/ANSWERS

May 20

9:00 LYNN: Evaluation of Central Auditory Dysfunction in Adults with Neurological Disorders
10:00 PINHEIRO: Tests of Central Auditory Function in Children with Learning Disabilities
11:00 INTERMISSION
11:30 COSTALIO: Evaluation of Central Auditory Function with Children Using the Flower-Costello Test
12:00 LUNCH
1:00 RICHARDSON: Communicating Results of Central Auditory Test with Other Professionals
1:45 GUEST PANEL: Practical Considerations of Central Auditory Tests
3:00 INTERMISSION
3:15 PANEL: Opportunity for Comments from Guest Faculty Q/A from Audience

For further details and registration information contact:
Robert W. Keit, Ph.D.
Division of Audiology and Speech Pathology
University of Cincinnati College of Medicine
231 Bethesda Avenue
Cincinnati, Ohio 45267
Telephone: (513) 872-4241

NORTHERN, JERRY L. [Ed.]

Reviewed by Thomas P. White, Assistant Professor, Div. of Communicative Disorders and Sciences, State Univ. of NY at Buffalo.

Selected Readings in Impedance Audiometry is an important contribution to the study of the development and application of electro-acoustic impedance techniques. Dr. Jerry Northern has selected and edited forty-six journal publications, by both researchers and clinicians, which have been instrumental in the extraordinarily rapid acceptance of this clinical procedure. Such a compilation can be difficult because controversy will arise as to the significance of any particular work. However, in this volume, there is little room for criticism in that most are widely accepted as landmark papers in impedance audiometry. The papers are divided into seven sections with each section having a different aspect of electro-acoustic impedance.

Section I, "Introduction to Impedance Audiometry," contains ten articles concerned with the bases of impedance measurements and its applications. Section II, "Nyqustometry," contains seven papers dealing with tympanometric measurements and inherent variables such as the effect of probe tone frequency. Sections III (six papers) and IV (eight papers) cover "The Nature of the Acoustic Reflex" and "Clinical Applications" respectively. Information is presented on the anatomy of the stapedial reflex arc and applications of reflex testing in assessing central disorders and the prediction of sensor-neural hearing loss.

These two sections are supplemented by Section VI, "Non- acoustic Stimulation of Middle Ear Muscles." The four articles in this section complete the topic of the use of the middle ear muscle reflex measurement in assessing middle ear and inner ear integrity. In Section V, four publications are presented which discuss the importance of impedance measurement in "Electro-Acoustic Tube Testing." Finally, the four articles in section VII, deal with the role of "Impedance as a Screening Technique."

This book certainly is important to the audiologist. An individual teaching a graduate course in audiology would find this book invaluable. Since most graduate teachers have some extent research oriented, "Selected Readings..." can enable efficient use of student time and provide a useful supplement to the teaching of impedance audiometry. Dr. Northern's book is also extremely valuable to the clinical audiologist. Many of the papers are clinical in nature and consequently present much normative data that can be used as a reference for clinical work. With the remarkable rapid development of impedance audiometry, the value of this book cannot be overstated.
SYMPOSIUM ON IMPEDANCE SCREENING FOR CHILDREN

Current Status for Detection of Middle Ear Disease
June 28-29, 1977
Division of Hearing and Speech Sciences
Vanderbilt University School of Medicine
Nashville, Tennessee
Monday, June 28

Opening: Earl R. Harford, Ph.D., Vanderbilt University School of Medicine
Don A. Harrington, Ph.D., Bureau of Maternal and Child Health, N.C.

PROGRAM

I. MIDDLE EAR DISEASE IN CHILDREN

"Epidemiology and Natural History of Middle Ear Disease" Jerome O. Klein, M.D., Harvard Medical School
"Morbidity of Middle Ear Disease" Charles D. Bluestone, M.D., University of Pittsburgh School of Medicine
"Methods of Identification for Middle Ear Disease" G. N. Linden, M.D., University of Gothenburg, Sweden

Summary and Charge: Fred H. Bess, Ph.D., Vanderbilt University School of Medicine

II. INFANTS

Moderator and Discussion Leader Jerome O. Klein, M.D., Harvard Medical School
Present State of the Art: Robert Marsalis, Ph.D., University of California, Los Angeles

Contributed Papers:

- "Impedance Measures in Infants from Birth to Six Months" Gary A. McCall, Ph.D., University of Utah School of Medicine
- "Tympanometric Screening of Normal and Intensive Care Unit Newborns: Accuracy and Validity" Janet L. Zarnoch, M.A. and Thomas Kalkany, M.D., University of Colorado Medical Center
- "Screening of Middle Ear Effusion in Young Infants with Otoscopy and Tympanometry" Timothy J. Rechard, M.D., Keith H. Ridding, M.D., Beth L. Cohn, and Charles D. Bluestone, M.D., University of Pittsburgh School of Medicine
- "Acoustic Impedance/Admittance Measurements in Infants Below Seven Months of Age" Daniel M. Schwartz, Ph.D., Walter Reed Army Medical Center
- Richard H. Schwartz, M.D., Virginia, Virginia

III. PRESCHOOL AGE CHILDREN

Moderator and Discussion Leader: Earl R. Harford, Ph.D.
Vanderbilt University School of Medicine

Present State of the Art: Jack Paradise, M.D., University of Pittsburgh School of Medicine

Contributed Papers:

- "The Effects of Age, Sex, Race, and Other Variables on Middle Ear Pressure in Preschool Children" Norman T. Hopkins, Ph.D., University of Pittsburgh School of Medicine
- "Impedance and Otoscopy in Establishing Pass Fail Referral Criteria" Ron J. Roisen, Ph.D., Jim Soy, M.D., D. Craig Dunuck, M.S., University of Texas at Dallas
- Richard Adam, M.D., Dallas Independent School District
- "Variability in "Tympanometric Patterns in Children Below Five Years of Age" Daniel M. Schwartz, Ph.D., Walter Reed Army Medical Center
- Richard M. Schwartz, M.D. and Paul E. Schweinwall, M.D., Virginia, Virginia

IV. SCHOOL AGE CHILDREN

Moderator and Discussion Leader: Charles D. Bluestone, M.D., University of Pittsburgh School of Medicine

Present State of the Art: D. Denis Brooks, M.S., Manchester, England

Contributed Papers:

- "Impedance in a School Screening Program" B. Urbin, Ph.D., Montgomery County Health Department, Rockville, Maryland
- "The Clinical Significance of Reduced Middle Ear Pressure in School Children" U.S. Bellows, M.D., and G. M. Linden, M.D., St. Pauls Hospital, University of Gothenburg, Sweden
- "Impedance Audiology for Screening Middle Ear Disease in School Children" G. N. Linden, M.D. and U.S. Bellows, M.D., St. Pauls Hospital, University of Gothenburg, Sweden
- "Impedance Audiology for Identification of Conductive Component in School Children" Earl R. Harford, Ph.D., Vanderbilt University School of Medicine
- Jennifer Fox, M.A., Nashville, Tennessee
- Jack Clemson, M.D., Northwestern University School of Medicine
- Philip E. Rosenberg, Ph.D., Temple University School of Medicine

V. SPECIAL POPULATIONS

Moderator and Discussion Leader: Fred H. Bess, Ph.D.
Vanderbilt University School of Medicine

Present State of the Art: Larry L. Northrop, M.D., University of Colorado Medical Center

Contributed Papers:

- "The Use of Tympanometry for Screening Developmentally Disabled Children" Samuel R. Bubendorf, M.A., Department of Health, Commonwealth of Pennsylvania
- "An Acoustic Impedance Screening Program with an American Indian Population" Jeanette Schuebor Johnson, Ph.D.
- Southwestern Hearing, Speech and Language Associates, Albuquerque, New Mexico
- Betty Springer Waterous, M.S., Indian Health Service Communications Division Unit Albuquerque, New Mexico
- "A Comparison of These Screening Techniques in Economically Disadvantaged Children" Michael E. Siederman, Ph.D.
- Louisiana State University Medical Center
- "Tympanometric and Otoacoustic Evaluation of Students from the Western Pennsylvania School for the Deaf" Timothy J. Rechard, M.D., Robert Findlay, Ph.D., Keith H. Ridding, M.D. and Sylvan E. Stoei, M.D.
- University of Pittsburgh School of Medicine

[Continued on Page 15]
Calendar of Events

1977

APRIL 14-15
16th Annual Electronystagmography Course, New Orleans. Contact Wallace Rubin, M.D., 3333 Kingman Street, Metairie, Louisiana 70002.

APRIL 14-15
School for Impedance Measurements—American Electromedics, San Juan PR

MAY 1-8
Canadian Speech and Hearing Association annual convention. Empress Hotel, Victoria, B.C. Write to: Mr. Marion Stark, 930-300 Robson Street, Victoria, B.C. V8W 1E3.

MAY 9-11

MAY 19-20
Symposium on Central Auditory Dysfunction, University of Cincinnati Medical Center. Write to: Robert W. Keith, Division of Audiology and Speech Pathology, University of Cincinnati College of Medicine, 331 Bethesda Avenue, Cincinnati, Ohio 45267.

MAY 25-29

MAY 26-27
School for Impedance Measurement—American Electromedics, Bogota, Columbia.

JUNE 4-5

JUNE 7-8
Acoustical Society of America, State College, Pennsylvania.

JUNE 20-22
National Symposium on Impedance Screening for Children, Vanderbilt University, Nashville, Tenn. Contact Earl Hartford, Division of Hearing and Speech Sciences, Vanderbilt University, Nashville, Tenn., 37212.

JUNE 23-24
School for Impedance Measurement—American Electromedics, St. Louis, Mo.

JUNE 27-JULY 1

JULY 4-9
Ninth International Congress on Acoustics, Madrid, Spain.

AUGUST 8-12
Doreen Pollack Acoustic Workshop, Denver, CO. Write to: Porter Memorial Hospital, 2525 S. Downing, Denver, CO 80210.

AUGUST 15-18
Symposium of the International Electric Response Audiometry Study Group, Hebrew University, Jerusalem, Israel. For information write to: Prof. H. Scharf, ERA Organizing Committee, Medical School, P.O.B. 1172, Jerusalem, Israel.

OCTOBER 28-31
Annual Meeting of SENGAC (Society for Ear, Nose and Throat Advances in Children), Children’s Memorial Hospital and the Continental Plaza Hotel, Chicago, Ill. Write to: Gabriel F. Fackler, Jr., M.D., Children’s Memorial Hospital, 2300 Children’s Plaza, Chicago, Ill. 60614.

OCTOBER 31-NOVEMBER 2
Evoked Electrical Activity in the Auditory Nervous System, Chicago, Ill. Write to: Ralph Nazarian, M.D., Department of Otolaryngology, University of Chicago, Chicago, Ill.

NOVEMBER 2-4
American Speech and Hearing Association, Chicago, Illinois.

NOVEMBER 6-12
"Surgical Anatomy and Techniques at the Temporal Bone" course, Eye and Ear Hospital, Pittsburgh. Write to: Ralph J. Cager, M.D., 3060 Forbes Avenue, Pittsburgh, Pennsylvania 15213.

DECEMBER 12
American Audiology Society, Miami Beach, Florida.

DECEMBER 13-16
Acoustical Society of America Meeting, Miami Beach, Florida.
Collette Ramsey, founder of the Deafness Research Foundation at Mid-Vall with immediate past President, Dix Ward.

Sandy Gerber and Vera Stroud at the Columbus Public Health conference.

"We Overcame Hearing Loss"

Thirteen prominent Americans from different walks of life tell how they overcame their own hearing problems in Better Hearing Institute’s exciting new exhibit of “We Overcame Hearing Loss.”

Included are photos and personally signed success stories of personalities in football, television, boxing, movies, politics, theater, music, business—people like Academy Award-winning Best Actor Art Carney, comedian Norm Crosby, actress Nanette Fabray, Governor George Wallace, singer Johnnie Ray, football star Larry Brown, and more.

Each acknowledges his or her own hearing loss and encourages others who suspect a problem to seek help.

"We Overcame Hearing Loss" will help to inform and inspire the hearing impaired, their families and friends. Copies can be distributed at Better Hearing and Speech Month events, in waiting rooms, at speaking engagements, or by mail (1459 K Street N.W., Suite 200, Washington, D.C. 20005).

Better Hearing Institute is a nonprofit educational organization dedicated to informing and educating consumers and the general public about hearing and speech problems and where to go for help.

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(512) 444-1361
Noise Report Solves Issues

OSHA need no longer concern itself with problems of noise measurement. The ultimate description of noise sources has been cogently reported by a scientist at the University of Minnesota in Chemistry (Vol. 30, No. 4). The researcher has made exhaustive sound spectrographic analyses of various foods, arriving at a cognitive system for classifying the parameters of crispiness. Devisees of Snap, Crackle, Pop will rejoice to find the upper octaves: crisp/crappy / quite-not-crispy specified.

Central Auditory Dysfunction

On May 10 and 11, 1977, approxi- mal 250 registrants attended a Symposium on Central Auditory Dysfunction that was hosted by the Division of Audiology and Speech Pathology, University of Cincinnati Medical Center. The symposium was sponsored in part by the National Foundation March of Dimes. A guest faculty of 14 persons shared their knowl- edge and experiences in central auditory testing during the two- day conference. The first part of the symposium dealt primarily with discussions of test and test batteries. The different speakers presented various tests that have been devised and described their implications for use. Jack Wilfords presented the Colorado State University Wilford Test Battery, Robert W. Keith shared the Berg's material on the Synthetic Sentence Identification Test, Jack Katz explained the Staggered Spacing Word Test, Daniel Beasley discussed the use of the Fluecker-Cistles test of central auditory abilities.

The application of these and other tests on children and adults was the subject of the next part of the conference. Marilyn Finney spoke on the use of a test battery with hearing-impaired children and George Lynn reviewed the evaluation of central auditory dysfunction in adult with neurologic problems.

The next segment of the sym- posium dealt with the physician's view of the tests. Dr. Drake Dianne talked about a neuroradiologist’s point of view of central auditory dysfunc- tion and Dr. Sylvia Richardson spoke on communicative re- sults of central auditory tests with other professionals. The final segment of the symposium was a panel discussion on practical considerations of central auditory tests. This panel dis- cussion was led by Charlotte Dempsey, Travis Miller, Emily White and Richard Slevin reported on their experience with central tests in private practice settings and in a multidisciplin- ary children's hospital. After each day there was time set aside for the guest panel to discuss issues and have questions from the audience.

The proceedings from the symposium are being published by Green and Stratton and are expected to be printed in October, 1977. The book called Central Auditory Dysfunction is edited by Robert W. Keith. It includes a chapter from each of the guest faculty, as well as a transcript of the panel discussions and question and answer sessions.

Speakers at the symposium pointed out the great need for normative data for tests of central auditory dysfunction and a better understanding of how the data can be applied in the remediation process. The Division of Audiology and Speech Pathology at the University of Cincinnati Medical Center is considering the possibility of following up this symposium to deal with the area of remediation.

Exec. Committee Election Results

With the ballots from the recent election counted we are happy to announce that the following members will be appointed to the AAS Executive Committee for a four year term beginning in January, 1978.

A Bruce Graham, Ph.D. 1973, Northwestern University, Chief, Division of Audiology, Speech and Language Pathology at Henry Ford Hospital, Henry Ford Hosp- ital, 2799 West Grand Boulevard, Detroit, Michigan 48202

Earl Harford, Ph.D., 1958, Northwestern University; Professor of Audiology and Director of the Division of Hearing and Speech Center is considering the possibility of following up this symposium to deal with the area of remediation.

Third Class

AAS to Honor Hallowell Davis

The 1977 AAS Cartbar Memorial Lectureship Award has been given to Hallowell Davis, M.D., who will present the lecture in Miami at the December 12th meeting. No more appropriate recipient could be selected for this award than Dr. Davis. He exemplifies the high principles of scientific inquiry that Cay Cebhar also represented. He was a friend and one-time associate of Hallowell Cartbar in many endeavors. He was one of the early workers, like Hallowell, in studying human hearing and its problems. During the past few years Dr. Davis has received a great number of recognitions and awards for his long-term and continued productivity in the field. By accepting the Cartbar Memorial Lectureship, Dr. Davis does honor to this new and burgeoning American Audiology Society. For registration form see page two.

Dr. Hallowell Davis

(Reprinted from Hearing and Davis, 1976, with permission from Dr. Davis)
Contributed Paper
The Hearing Health Delivery Team

by Jack Vernon

For some decades the fitting of hearing aids has been the em-
vasive province of dealers who work-
ing almost exclusively or more
usually as representatives of major manufacturers. Found-
ers or owners of these companies (one thinks of Fred
Krantz, of the try a hearing aid but
which was not helpful, they
the physician might even predict that
a hearing aid would not help.
This kind of advice, without a full
audiological workup, is unfortu-
ate and reflects the fact that many
physicians are simply not aware
of the real advances which have
been made in audiological exam-
ination and in current hearing aid
technology. In such cases of hard-
to-fit clients, consultation
would be vital to the physi-
an and an audiologist would
assure them in all aspects of au-
diological testing and hearing aid
evaluation. Modern professional
audiological literature contains
numerous references to the uses of
different prosthetic systems en-
suring a person to communicate
who was deaf and for more
earlier models.

At present, although a large
fraction of hearing-impaired
persons need more, probably
more than one type of hearing
aid, the use of special methods
of at least doubtful ethics and
whose "hard sell" approach did
a disservice to the profession,
and a fraction whose level of knowledge
of hearing and the possible effects
of amplification was abnormal.
True hearing impairment
improved greatly. Should a hearing
impairment patient choose to
obtain the services of the
member of the National Hearing Aid
Society, that dealer would at least
be more sympathetic and unethi-
cal. Although many dealers who
could perhaps be considered
"grandfathered" in the past,
might do a better job than
the current crop of dealers, who
have been through a series of
changes in the way they are
operated and the way they
market their products.

Despite these developments,
the current state of affairs is far
less than desirable. Many lay-
members, recalling past incidents
or hearing a new story, should
be urged to avoid hearing aid
salesmen in suspicious.

Too many of the hearing aid
person is improperly fitted, either
either the idea the aid for that
person has not yet been invented, or
because the dispenser has an
important knowledge of (1) the
state of the client's hearing and
(2) the best provision within those
many choices currently
available.

The relation between the
care physician (otologist or otolaryn-
gologist) and the hearing aid
dealer has often been of great benefit
to the patient, and no other member
of the health care team. The delivery
decision could have contributed
signifi-
cantly, if for the services of a
third professional, with diagnosis and treatment
the physician in the
ear, or would have been so fitted. In this case a prosthesis
may be
one of the tools in the audiologist's bag. Some audiol-
ologists in private practice, or
association with physicians, may
undergo the same training and acquire some financial power
as the traditional commercial
hearing aid dealer and see
licensure to dispense prostheses. Some audiological in
public settings may perform
hearing aid evaluations and if
they refer their patients to a com-
mercial dealer or dispense aids
under the sign of their clinic.

In these diverse settings, some
strains among members of the
hearing health delivery team are inevitable. The physician is un-
happy at the audiologist entering
the area of diagnosis of any
sort. The audiologist may attempt to
direct very precisely the fitting of
a prosthesis by the dealer even
though he may never have fitted a
hearing aid and his "hearing aid
evaluation" is marked by in-
certainty. As Puslack (1979, P. 141)
states, "If you were to bring to
clinical audiological hearing aid
evaluation, you would have to
discuss the hearing aid selection
procedures they use with adults,
you could not use the same
methods for the same patients in
different approaches. Unfortu-
ately, with the present state of
the art and the clinical tools avail-
able, no one procedure may
be superior to the others."

There are, however, some signs of progress on the horizon.
After far too long a time, ASHA has seen that clinical audiol-
ogists, in general, serve best
certain adults and even whole
subpopulations time and again
aloud themselves in actually tailoring prostheses to individuals in
each ear, children are away from home
visit to see it reduced to ashes. Ironically
she bought a beautiful new house, burned to the
ground by fire that ravaged a
large residential area near Santa
Barbara.

Fortunate Sunday, his wife and
children were safe from the fire,
and a few hours later he arrived
for a visit to his family in the
The Santa Barbara fire tore
through the area of SANTA
BENTACO, and gutted it
completely.

When a once

House Destroyed by Fire
The Santa Barbara fire tore through the
area of SANTA BENTACO, and gutted it
completely. What was once a
beautiful new house, burned to
the ground by fire that ravaged a
large residential area near Santa
Barbara.

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beautiful new house, burned to
the ground by fire that ravaged a
large residential area near Santa
Barbara.
Curt’s Organ has invited a group of students to address their concerns about the school’s policies regarding the use of electronic devices in class. The students express their frustrations and share their experiences. The discussion is facilitated by a teacher, who listens attentively and provides guidance.

What are the implications of these student concerns for educational policies and practices? How can schools effectively address these issues while ensuring a positive learning environment? Discuss the potential strategies for implementing these changes, considering the perspectives of both the students and the educators.
THE SOCIETY FOR EAR, NOSE AND THROAT ADVANCES IN CHILDREN (SENTAC) has chosen Ye Editor Marion Downes as its first Honored Guest at the 1977 annual meeting in Chicago, October 26-November 1. Downes will give the Honors address at the society's banquet October 28, presenting a talk on "Childhood — Sex and Lumens".

The main program of the meeting will include the following: Meaningless: A Case for Multidisciplinary Management (Papas); Otologic and Audiomotric Findings in Cystic Fibrosis (Abramson, Fracca); Pediatric Epistaxis (Jue, wong, Buhalky); Voice Speech and Language Habilitation in Young Children Without Laryngeal Function (Kasson, Grao, Ruben); Unilateral Sensory Neural Hearing Loss in Children (Bergstrom, Shalizi); Hearing and Speech Assessment in Noonan's Syndrome (Gerber, Hopkins); Rubinstein-Taybi Syndrome — Otolaryngic Manifestations; A Case Report of Respiratory Obstruction (Stalnaker, Sendon, Politic); Bacterial Menigitis & Hearing Loss: A Prospective Pilot Study (Harlow, Calvadott); Effects of Noise on Children's Speech Perception (Ehlotz); The Effects of Noise on Young Children (Bess, Finlayson); Central Auditory Testing with Children: Over Audiological Experiences (Del Pezzo), Misreadings of F.M. Auditory Training Systems (Ood, Boyden); Current Developments in Physiological Measures of Hearing in Children-Lazlo Stein, Ph.D., Moderator Auditory Screening with High-Risk Neonates: A Four-Year Study (Meyer); Utilizing Early Evoked Response to Screen Hearing in Newborns (Hamill); Acoustic Reflex Measures for the Prediction of Hearing Sensitivity in Retarded Children (Zarbock); Recent Developments in Electro-physiological Testing (Ear): (Mendel); Strident in the Neoneate, Infants and Child (Holinger); Traheotomy in Infants (Wong); Neonatal Traheotomy (Said); Pediatric Endoscopy: Use of the Stereotopics System (Weichert); Traumatic Pseudovermiculium in the Neonate (Gibson); Study of Pharyngeal Airway in the Child with Obstructive Hyperplasia Sleep-Apnea Syndrome Secondary to Adenoidal and Tonsillar Hypertrophy (Bowers); Otolaryngologic Aspects of Immune Difficiency States (Kimmelman, Potrait, Caleb, South); The Nasopharyngeal Culture: A Reappraisal of Its Usefulness in Otitis Media (Schwartz, Rodriguez, Mason, Khan, Ross); Nasopharyngeal Obstruction: Diagnosis and Management (Levine, Batal); Hearing Loss in Children of a Pre-Industrial Society (Denby); Vestibular Responses in Infants: Trends Over Time and Correlation with Gestational Maturity and Weight at Birth (L., and A. Ewart); Electrocochlear Tympanometric Measures Obtained with Children (Chenmark, Locini); E.N.T. Speech Voice Panel, Doctors Richardson (moderator), Hart, Cotton, Scott and Parnack, Serbatik Panel, Ksatinich Tube Testing (Seidemann and Seiffert).

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12th Annual Colorado Otology-Audiology Faculty Announced
March 5-7
Ray Batis
Houston, Texas
LaVonne Bergstrom
University of California at Los Angeles
Charles Berlin
Louisiana State University Medical Center
F. Owen Black
Eye & Ear Hospital, Pittsburgh
Richard Bobba
Louisiana State University Medical Center
David Hansen
N.I.H., Bethesda
W. Garth Homeyway
Harbor General Hospital, Los Angeles
Jorgen Holmquist
University of Gotteborg, Sweden
Burton Jafoe
Boston Children's Hospital Medical Center
David Lim
Ohio State University
Gunnar Liden
University of Gotteborg, Sweden
David Lipcomb
University of Tennessee
George Lynn
Wayne State University
Henry McCandless
University of Utah Medical Center
Mary Mickle
University of Oregon Health Sciences Center
Joesph Miller
University of Washington
Yasuo Polya
University of Helsinki, Finland
James Parkins
University of Utah Medical Center
Michael Paparella
University of Minnesota
Michael Polack
Pomona, California
Jay Sanders
The Bill Wilkerson Hearing & Speech Center
E. Dale Shumacker
Stanford Medical School
Jacob Vernon
University of Oregon Health Sciences Center
Paul Word
University of California at Los Angeles
Douglas Webster
Louisiana State University Medical Center
Gallaudet College Opens Extension Center in Midwest

Washington, D.C. — Gallaudet College, the world’s only accredited liberal arts college for deaf students, has established an Extension Center in Kansas City, Missouri. In cooperation with Johnson County Community College in Overland Park, Kansas, a suburb of Kansas City, the Extension Center will provide education for the deaf and hearing impaired in the northern Kansas City area. The Extension Center is the first of a series of such centers that will be established to serve a wider geographical portion of the country.

"We’re talking about," said Edward Franklin, newly appointed director of the Extension Center, "a pilot program for Gallaudet, and we hope it will prove to be a successful venture." The Extension Center will provide education and training for the deaf and hearing impaired in the Kansas City area. The Extension Center will also serve as a resource for assisting deaf and hearing impaired individuals in the Kansas City area.

Gallaudet College was founded in 1864 and is the oldest college for deaf students in the United States. The college offers a wide range of undergraduate and graduate programs, including education, business, and social sciences. The Extension Center will provide education and training for the deaf and hearing impaired in the Kansas City area.

OSHA Drops Feasibility Document

OSHA spokesmen Morton Corr announced a decision to discontinue development of a technical feasibility document on noise control. A draft document, prepared under an award by Bell, Berens, and Newman, Inc., became too much of a point of controversy during the hearing on workplace standards revision. It was also virtually promulgated by OSHA compliance officers for enforcement purposes.

A number of industries responded to the Labor Department's request for comments about the OSHA document. The industries said the document would have a significant economic impact on the workplace, making it impossible to enforce.

The Committee on Hearing, Bioacoustics, and Biomechanics ("CHA") of the National Research Council will cover noise-related issues. The committee will meet in the following areas:

1. The Concord Trail at Dallas
2. The Status of Voiceprinters in the Classroom
3. Direct Electrical Stimulation of the Auditory Nervous System
4. Auditory Evoked Potentials
5. The Effect of Noise on Sleep
6. Problems of High Intensity Noise

The effects of noise on hearing and the whole body vibration.

This CHABA meeting is back-to-back with the NOISE/CON 7 meeting being held October 28-30 at NABA Langley Lake near Chicago, so members may combine the two meetings.
Auditory-language processing skills can be remediated in the school-age child. It is a long-term treatment program which must direct itself not only to the auditory and language com-ponents but to the resulting academic and emotional aspects. How much better it would be to anticipate our efforts on prevention.


Minn, G. W. "Distance Learning and the Deaf." Information and Communication, 1976.


Novel D. Inskis, Pediatric Audiologists, Language and Learning Center, Baystate Town Institute for Community Disorders in Children, Dayton, Ohio.

While serious auditory loss is often a component of childhood problem, there are at least three major reasons why the implications of middle ear effusion on language development and audi- tory learning, including the development of early childhood, have not been fully recognized. The middle ear effusion typically has not been viewed as a basis for communication disorders. Consequently, the many cases readily report a medical or surgical intervention. Yet, a longitudinal study by Kaajak (1976) indicated that 7 percent of children with chronic middle ear effusion had 2 or more episodes over a period of 20 percent of those children who had a bilateral interven- tion. In contrast, a signifi- cant number of youths re- ceived no treatment during which the degree of hearing sensitivity is impaired. Moreover, the pervasive effects of a so-called "middle ear" hearing loss are often dismissed. However, the incidence of intact children, the importance of early identification, and the management and treatment of the disorder is still recognized. The implications of serious auditory loss continue to be widely overlooked.

Highlights of AAOO and SMA Meetings

John Fletcher at AAOO, Dallas, Tex.

Carol Clever, Cal. State Univ. at Los Angeles. Besides being an audiologist, Carol is a concert organist and a licensed pilot.

Thom Love, Galveston at AAOO, Dallas, Tex.

Chuck Berlin.

Sharon Graham and Connie Cabera

Judy Miller at AAOO, Dallas, Tex.

Tony Bitolo and Lee Wilson at SMA meeting, Dallas, Tex.

Steve Caeden, President of Society of Medical Audiology.

This year's AAS Program Chairman, Harris Pomerantz at SMA meeting, Dallas.

Eddie Johnson, LAFO, at SMA meeting in Dallas, Tex.

Asher Wolfe and Wayne Shaat at AAOO, Dallas, Tex.
October 3-6
American Academy of Ophthalmology and Otolaryngology Annual Meeting, Dallas, Texas.

October 3-5
Society of Medical Audiology Annual Meeting, Baker Hotel, Dallas, Texas.

October 13-15
Jack Katz, Ph.D., Staggrect Sondak Word Test Workshop, Milwaukee, Wis. For information, please contact: Barl S. Kipper, Milwaukee Ear, Nose and Throat Clinic, Ltd., 19020 North Port Washington Blvd., Mequon, Wis. 530.02.

October 17-19

October 26-31
Society for Ear, Nose and Throat Advances in Children, Chicago.

October 31-November 2

November 2-5
American Speech and Hearing Association Annual Convention, Chicago, Illinois.

November 6-12
"Surgical Anatomy and Techniques of the Temporal Bone" course, Eye and Ear Hospital, Pittsburgh. Write to: Ralph J. Caporaro, M.D., 3669 Forbes Avenue, Pittsburgh, Pennsylvania 15213.

November 2-4
7th Annual ENG Workshop and Concurrent ENG Technician Course, Honolulu, Hawaii.

December 12
American Audiology Society Annual Meeting, Miami, Florida.

December 12-16
Acoustical Society of America Meeting, Miami, Florida.

1978
March 4-11
Colorado Otology-Audiology Workshop, Write to: Colorado Otology-Audiology Workshop, Box 1210, 4200 East Ninth Avenue, Denver, Colorado 80206.

March 8-11
2nd International Symposium on Pediatric Otorhinolaryngology, Kansas City, Missouri. Write to: J. B. Bivens, M.D., Professor and Chief, Section of Otorhinolaryngology, Children's Mercy Hospital, 24th at Gillham Road, Kansas City, Missouri 64108.

June 13-16
Acoustical Society of America, Kingston, Rhode Island.

November 12-16
New By-Laws Proposed

Dix Ward, as chairman of the Committee on By-Laws Revision, presented the new document to the Executive Committee at the Miami meeting. The Executive Committee voted unanimously to accept the revision and to submit it to the membership for a vote. The complete revised document is printed on page 8. According to the present By-Laws the revision must be presented to the membership four months before a vote is taken. We urge all members to examine it carefully, as this is the document that will be voted on four months from now.

Minutes of Executive Committee Meeting

DATE: December 12, 1977
PLACE: Carrillon Hotel
Miami, Florida
TIME: 8:30 A.M.

MEMBERS IN ATTENDANCE:
Marion Dunn
B. Donald Harris
Gilbert Heer
George McCandless
Ross Rooer

What's Our CR?

(Convention Rating)

Members of scholarly societies are wont to gather climatically in hotels for what is known as annual Conventions. These conventions endure serious papers are read by the members and indeed to be heard, all the while the rest are jesting elbows in hallways, trying to remember names of old friends, and bonking skulls or other incidents. The New Scientist (Vol. 78, No. 1072) reports that there is a hierarchy among scientific societies as far as hotels are concerned.

An American anthropologist approached a Chicago hotel this past winter to arrange an Annual Convention for 250 fellow anthropologists. He was initially turned down because of the small size of the meeting. But upon hearing that the organization was one of anthropologists the hotelier became quite eager to host the society. His change of heart was not due to the prestige of anthropology but to commercial factors related to the type of conventions that

TABLE 1

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NEWS

The Sixth Annual Convention of the Southern Audiology Society was held aboard the cruise ship Leonardo da Vinci between Fort Lauderdale, Florida and Nassau from September 5-7, 1977. The symposium on "Electrophysiological Assessment of the Auditory System" featured Charles Berlin, George Masselehik and Karl Fiedler. Officers elected for 1977-78 were President, Karl Fiedler; President-Elect, John Z. Cooper; Secretary-Treasurer, Neil M. Young; Members-at-Large, John D. F. Kennedy (Florida).
The Symposium attracted a large number of participants to this joint meeting of the European Society for Fungal Biology and the Society for Fungal Biology in the United States, held at the University of California, Berkeley. The symposium focused on the morphology, physiology, and ecology of fungi, with particular emphasis on their role in the environment and their potential for biotechnological applications.

The Symposium was preceded by the annual meeting of the American Society for Mycology, which provided a refreshing change of pace from the intense scientific discussions held during the symposium. The meeting included a variety of presentations and workshops, which offered attendees opportunities to interact with leading experts in the field.

The symposium's opening session was dedicated to the memory of Dr. John C. Shulman, a prominent mycologist who passed away earlier this year. The session was a moving tribute to his contributions to the field and his impact on the career of many young scientists.

The symposium included a wide range of topics, including the role of fungi in the environment, the evolution of fungal communities, and the use of fungi in biotechnology. The presentations were followed by lively discussions, which provided attendees with the opportunity to share ideas and insights from across the globe.

The symposium concluded with a reception and a dinner, where attendees had the chance to network and socialize. Overall, the symposium was a great success, with attendees returning home with new knowledge and connections.

Letter to the Editor

Dear Sirs:

I am writing to express my concern about the recent changes in the Editorial Board of *The American Mycologist*. I have been a long-time subscriber to the journal and have always appreciated its high-quality content and commitment to mycological research.

Recently, I noticed that the new Editor has made several changes to the Editorial Board, including the removal of several prominent mycologists from the board. I believe that these changes are a step backward for the journal, as they may undermine its reputation and reduce its appeal to mycologists around the world.

I urge the new Editor to consider the importance of maintaining a diverse and respected Editorial Board, which can help ensure the journal's continued excellence. I hope that the new Editor will take steps to address these concerns and work towards restoring the journal's prestige and standing.

Sincerely,

[Your Name]

Editorial:

The following editorial appeared in the October issue of *The American Mycologist*, and is reprinted with the kind permission of Mr. York and Co.

*The Mandarins*

But man, proud man,

Dreaded in a little brief authority,

Most ignorant of what he's most assur'd

—Measure for Measure

*The Mandarins*

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Sincerely,

[Your Name]
MEMORANDUM
From: Hubert L. Gerstman, D.D.S.
To: Dental Staff
Subject: Task Force Report on Space

The Speech, Hearing and Language Center is currently undergoing a complete renovation. The first stage of the project is to double the number of offices available for the Speech and Hearing Clinics. This will allow us to phase out the old office space which is being replaced by new, modern facilities.

H.L.G.

MEMORANDUM
To: Dean Dental TL XDD
From: Hubert L. Gerstman, D.D.S.
Subject: Design of highly specialized chairs

As part of the renovation of the Speech, Hearing and Language Center, we are considering the design of highly specialized chairs. These chairs will be used for patients with specific needs who require a chair that meets our standards. We would like to hear from you about your preferences for these chairs.

H.L.G.

MEMORANDUM
To: Dean Dental TL XDD
From: Hubert L. Gerstman, D.D.S.
Subject: Affiliated Health Care Training

As part of our commitment to providing high-quality care, we are considering the establishment of an affiliated health care training program. This program will allow us to provide our patients with the best possible care while also offering opportunities for our faculty and staff to continue their education.

H.L.G.

MEMORANDUM
To: Dean Dental TL XDD
From: Hubert L. Gerstman, D.D.S.
Subject: Short People

We have received a complaint about the height of the chairs in our clinic. The chairs are too tall for some of our patients, particularly those who are short. We would like to hear from you about your thoughts on this issue.

H.L.G.

MEMORANDUM
To: Grants Office
From: Hubert L. Gerstman, D.D.S.
Subject: Possible funding sources

We are considering the possibility of applying for grants to fund our renovation project. We would like to hear from you about potential funding sources.

H.L.G.

MEMORANDUM
To: Dental Staff
From: Hubert L. Gerstman, D.D.S.
Subject: Communication

We would like to hear from you about your thoughts on communication within the dental department. We are considering implementing a new communication system to improve efficiency and patient satisfaction.

H.L.G.

MEMORANDUM
To: Department of Physical and Rehabilitation Medicine
From: Hubert L. Gerstman, D.D.S.
Subject: Rehabilitation Institute

As part of our ongoing efforts to improve patient care, we are considering the establishment of a rehabilitation institute. We would like to hear from you about your thoughts on this project.

H.L.G.

Symposium... (Cont. from Page 21)

The symposium will focus on the latest developments in the field of orthodontics, including new technologies and techniques for improving patient care.

H.L.G.

Editorial... (Cont. from Page 21)

Our editorial will discuss the importance of diversity in our profession and the need to continue to work towards greater inclusivity.

H.L.G.
Hearing Instrument Institute Plans Workshops

Three educational workshops on Hearing Aids will be held in winter and spring of 1979, sponsored by the Hearing Instrument Institute (HII). They will be held in Las Vegas, Nevada, January 31-Feb. 1, New Orleans, Louisiana, February 25-26, and in Atlanta, Georgia, April 2-3. The two day workshops will focus on the responsibilities and contributions of physicians, audiologists, and hearing aid specialists to the hearing impaired public. One otologist, one audiologist, one engineer, and two hearing aid specialists will comprise the faculty for each workshop. Opportunity will be provided for both formal and informal exchange of knowledge and expertise among the instructors and participants. Thirteen and one-half contact hours will be distributed over two days.

For further information contact: Mary Ann Armour, Executive Director, Hearing Instrument Institute, 301 Sovereign Court, Suite 800, Manchester, Missouri 63057.

Arslan Wins Amplion Award

Dr. Michele Arslan of the University of Padua was the recipient of the 1977 Amplion International Prize. Dr. Arslan was honored for his long-term contributions to the knowledge of deafness. He has clarified particularly some of the aspects of Meniere's disease in his life-long work.

The award has been held previously by: Dr. Jan Jerger of the U.S.

Cincinnati Hosts 1979 Symposium

The Department of Otolaryngology and Maxillofacial Surgery at the University of Cincinnati Medical Center and Children's Hospital Medical Center of Cincinnati announce a two and one-half day International Symposium on the Hearing Impaired Child. This Symposium, to take place May 3, 4, and 5, is designed to bring together international workers in the field of the child with severe hearing impairment. The Symposium will concentrate on the Medical and Surgical evaluation and rehabilitation of these children in addition to the audiological aspects of detection, evaluation and rehabilitation.

The Symposium will be divided into Didactic lectures combined with workshops in which active participation by the faculty and participants will be encouraged.

The Symposium promises to be a forum for the exchange of ideas amongst professionals in various aspects of management of the child with severe hearing impairment. For further details contact: Dr. Allan B. Seid, or Dr. Robert Koth, Division of Audiology & Speech Pathology, University of Cincinnati Medical Center.

Dr. Allan B. Seid, Children's Hospital Medical Center, Ellard & Betheda Aves., Cincinnati, Ohio 45229. 513-636-2142.

Dr. Robert Koth, Division of Audiology & Speech Pathology, 233 Goodwin St., Cincinnati, Ohio 45229. 317-672-6241.

Abstracts of AAS Papers

DEVELOPMENT OF A MODIFIED SPEECH DISCRIMINATION TEST.


DEPARTMENT OF SPEECH PATHOLOGY AND AUDIOLOGY

UNIVERSITY OF VIRGINIA

CHARLOTTESVILLE, VIRGINIA

Efficient acquisition of speech discrimination information rests upon an interaction among at least three factors: 
1. the speed of administration, 2. the range of difficulty present in a given word list, and 3. the sensitivity or ability of the list to effectively differentiate among various types of pathology. The purpose of the present study was to evaluate the feasibility of constructing a standardized discrimination test composed of highly discriminating items based on currently used speech materials. Parents of adult listeners with normal hearing were presented with CTG-60 and Lists I through 4. (one fifth word) list was used to screen each subject and the remaining three lists were then presented in the presence of competing white-noise. A signal-to-noise ratio was employed that yielded a discrimination score of approximately fifty percent. Results were consistent with previously reported findings that about 30 percent of the words in a list are unlikely to yield significant information about listeners, either because the words are seldom used or missed. Of the remaining elements of the test two basic error response patterns were observed. One response pattern was comprised of words which tended to be consistently missed only by individuals with overall discrimination scores below a certain level, while the other consisted of a group of words whose correct response rate was not systematically related to overall discrimination score.

Testing is presently underway to determine whether similar clustering of pauses in presents with hearing impairment. If so, it may be possible to construct lists of speech discrimination materials which differentiate patients more effectively without increasing the administration time required.

"COMPARISONS AMONG AUDITORY REACTION TIME, LOUDNESS AND CERTAIN CHARACTERISTICS OF THE ACOUSTIC REFLEX.

Lynne Marshall and John F. Brasel, (University of Kansas, Bureau of Child Research, Lawrence, Kansas 66516).

Although the acoustic reflex threshold is often assumed to be loudness dependent and the acoustic reflex threshold is often used as an objective measure of loudness recruitment, many experiments question whether loudness is the determinant of the reflex. Reflex threshold and equal loudness contours often disagree. Loudness summation from wide and narrow band stimuli is often less than would be predicted from reflex threshold data. The size of the acoustic reflex is often smaller than would be predicted from equal loudness contours. The reflex threshold often does not follow equal loudness contours as predicted from magnitude estimation.

(Cont. on page 11)

J. Brown Fauburt (left) with Hallowell Davis during the annual meeting

Tracoustics Honors Outstanding Military Audiologist of 1977

Captain Steven W. Morris of Ft. Polk, Louisiana is the recipient of the 1977 Tracoustics, Inc. award to the outstanding member of the Military Audiology and Speech Pathology Society. Captain Morris was selected as this year's outstanding MASPS member based upon his significant contributions to the Audiology and Hearing Conservation Programs at Ft. Polk, Louisiana, where he has been assigned as an Army Audiologist since his entrance to active duty in 1976.

The award was announced by Captain Donald R. Bender, current President of the Military Audiology and Speech Pathology Society, at the Annual MASPS Banquet at the Palmier House in Chicago on November 2, 1977. Dee M. Music of Tracoustics, Inc. presented Captain Morris with a handsome bronze plaque to commemorate the award.

FIGURE LEGEND:

Don M. Music (left) of Tracoustics, Inc. presents the award for outstanding member of the Military Audiology and Speech Pathology Society to Captain Steven W. Morris (of Ft. Polk, Louisiana). (left) Captain Donald R. Bender, (center) current President of the MASPS, announced the award at the MASPS meeting held during the recent ASHA Convention in Chicago.
Cochlear hydrops is a disorder of the inner ear clinically manifested by the symptoms of fullness, hearing loss, and hyperacusis. The basic theory of the cochlear hydrops is based on the assumption that the endolymph within the cochlear duct is expanded and that the scala tympani expands either to increase its production or to decrease its absorption, the volume expands. An increase in the osmotic pressure within the scala tympani results in an increase in the scala vestibuli and a decrease in the efficiency of the hair cell processes results.

The sensation of fullness or pressure in the ear is the most consistent and early symptom of this disorder. For this reason, careful attention should be focused toward distinguishing the fullness or pressure from those of middle ear disorders. Impedance measurements are helpful in locating fullness sensations from the middle ear. However, the role of impedance audiometry as a detector of pressure changes in the cochlea has not received adequate clinical evaluation.

It has been demonstrated experimentally that increase and decrease in the fluid volume of the cochlea can be reflected as a change in impedance at the tympanomeatal puncture. This presentation is to describe the study of the middle ear conditions in patients subjects with bilateral cochlear hydrops to audiometric findings and impedance measurements. Gosselin and Yancik (1979) and Yancik and Gosselin (1980) reported audiometric and metabolic findings in 90 patients with fluctuating hearing loss. Fullness (50%) and tinnitus (80%) were the most common complaints. There were three basic groups of audiometric cochlear hydrops: fluctuating hearing loss (50%), moderate flat tone loss (33.3%), and a slope of high frequencies sensorineural hearing loss (16.7%). The effect of increased endolymphatic pressure on the cochlea, and it is assumed to capable of producing fullness and pressure was manifested at the tympanic membrane.

The fullness and noise should be investigated objectively. Early detection and proper medical management are imperative as the consequences of permanent hearing loss are greater as the disorder progresses. Proper audiological monitoring may enable the evaluation of the activity or abatement of pressure in the hydropic ear.

The normal glaucoma tolerance test was found in 90%, elevated trabecular pressure resulted in 33%, and hypotension in 13%. Treatment of the particular type of metabolic disorder resulted in relief of fullness and tinnitus in one-third of the 95 cases. Thirty cases were re-tested one month after dietary management and treatment had been administered. Fifty percent of these patients demonstrated improvements in discrimination scores and hearing thresholds. The other 50% reported release from tinnitus and fullness.

Eighty-one percent of 166 ears with cochlear hydrops were formed into three groups: those with mild to moderate flat loss and ski-slope loss. The range of bilateral static impedance values was 0.00 to 5000 ohms with a mean of 2300 ohms in the group with mild to moderate flat losses. The ski-slope group had constant static impedance values with a mean of 1500 ohms with a range of normal reference data. Subjects in the latter group had normal high frequency loss, and lowered frequencies. In addition the percentage of increased metabolic pressure was dramatically lower in this group as compared to those with either tinnitus or similar levels of flat losses. Thus the impedance patterns associated with cochlear hydrops seems to reflect the changes in fluid pressure in the cochlea and not the presence of tinnitus.

The following case report may be illustrative. A 54-year-old man had complained of fluctuant hearing loss, fullness, recruitment, pitch distortion, and tinnitus. At the time of the original audiogram, he had no symptoms of fullness or pressure, no tinnitus, and a minimal hearing loss compared to presbyacusis. His static impedance values were 2000 ohms in both ears. One week later, he had a recurrence of symptoms and was referred to the right ear.

The test results showed increased hearing levels, and more importantly, increased static impedance values of 6000 ohms in the affected ear. With the elimination of 98% oxygen and 4% carbon dioxide for 15 minutes, and after the tachycardia and reflex loss had improved slightly, approximately 1 lb. of the impedance had lowered from 6000 to 3000 ohms. The patient felt relieved from the pressure sensations and CITing tinnitus. Cardiac evaluation and hemodynamic studies are for the effect of increasing blood flow to the ear, and has been suggested that increased circulation may increase the potential capacity for the cochlea to respond to inner ear pressure, which absorbs endolymphatic pressure.

In summary, a complete audiological test battery that includes static impedance and metabolic studies can help to identify the finer details of the cochlear pathology. Symptoms of fullness, tinnitus, pitch distortion, and hyperacusis of conductive loss associated with changes in middle ear pressure were discussed.

Ten normal hearing subjects were tested by presenting test signals through an isolated probe which was sealed into the ear canal to accommodate specific intratympanic pressure changes of the ear being tested. The test signals were 250, 500, 1000, 2000, and 4000 Hz presented through insert earphones. The test signals were presented at 0, 100, 200, 300, and 4000 Hz.

DATA: IMPEDANCE MEASUREMENTS

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The degree of conductive hearing loss that could be produced at these negative pressure loss was approximately 8 db for 100, 2000, and 4000 Hz and approximately 15 db for 500 and 1000 Hz.

In conclusion, it is possible to produce significantly different frequency, clipping at 125 Hz, and 200 Hz for 500 Hz and 1000 Hz.

In earlier investigations, there was surprising agreement between the threshold shift reported by Flieger et al. whom measured hearing threshold with audiometer inserted in the ear and myringographic space. The results of this study indicate a relatively high pressure of about 1500 mm Hg in the ear and myringographic space. The increase in the fluid of the cerebrospinal fluid may be either through an overly psychometric space of the inner ear or through any perimacular space of the internal auditory canal. This excess fluid of cerebrospinal fluid produces increased pressure in the inner ear, which has been named PERILYMNIATIC PRESSURE.

It is known that the pressures in cerebrospinal fluid may cause the spontaneous fullness of the oval and round window.

Eighty-five percent of the excess fluid of cerebrospinal fluid into the inner ear is subclinical, but in congenital mixed deafness these abnormal pathways in the flow of cerebrospinal fluid produce hearing loss. The middle ear may be involved in these pathways and may lead to a sensorineural hearing loss and a conductive hearing loss. The sensorineural hearing loss is a direct result of the production of excess fluid. The excess pressures of the cerebrospinal fluid produce hearing loss in the middle ear.

These pressures produce the progressive destructive sensory inner ear damage. The damage occurs in the first month or weeks after birth. The inner ear damage in children who were apparently tested as a part of a screening program, and the Pneumotachygraph makes reference to threshold changes over a period of 2 months.

In summary, the audiologist should be aware of the loss that can reach levels of concern with negative middle ear pressure. The data confirm a loss of approximately 8 dB for the speech range of 1000, 1000, and 2000 Hz, and approximately 15 dB for 500 and 1000 Hz as the middle ear pressure.

CONGENITAL MIXED DEAFNESS - PATHOLOGICAL HYDROPS

J. M. Wall, M.D.
Tampa, Florida
Clinical Professor Emeritus in Otolaryngology
University of South Florida College of Medicine

Round window membrane rupture, a cause of sudden deafness and conductive loss, as just described by Frederick P. Wollman, indicates that the spontaneous fullness of the oval and round window as they are connected into the internal auditory. The purpose of this presentation is to discuss the clinical problems of the spontaneous fullness of the oval and round window do not develop unless there is an overabundance of the fluid in the irregularity of the fluid of the cerebrospinal fluid and the perimacular space. These conditions result in an increase in the flow of cerebrospinal fluid may be either through an overly psychometric space of the inner ear or through any perimacular space of the internal auditory canal. This excess fluid of cerebrospinal fluid may be produced by the pressure of the cerebrospinal fluid into the middle ear, which has been termed as PRESSURE ORBITAL OR PNEUMOSCOPY.

It is known that the excess fluid of cerebrospinal fluid into the inner ear is subclinical, but in congenital mixed deafness these abnormal pathways in the flow of cerebrospinal fluid produce hearing loss. The middle ear may be involved in these pathways and may lead to a sensorineural hearing loss and a conductive hearing loss. The sensorineural hearing loss is a direct result of the production of excess fluid. The excess pressures of the cerebrospinal fluid produce hearing loss in the middle ear.

These pressures produce the progressive destructive sensory inner ear damage. The damage occurs in the first month or weeks after birth. The inner ear damage in children who were apparently tested as a part of a screening program, and the Pneumotachygraph makes reference to threshold changes over a period of 2 months.

In summary, the audiologist should be aware of the loss that can reach levels of concern with negative middle ear pressure. The data confirm a loss of approximately 8 dB for the speech range of 1000, 1000, and 2000 Hz, and approximately 15 dB for 500 and 1000 Hz as the middle ear pressure.
At ASHA

Charlie Anderson of Traconetics and his new assistant Wendy.
Maurice Miller, Sandy Gerber & George Meacher
Carol Ehrlich
Bruce Graham

At SENTAC

Ernesto Deutsch from Mexico and his son
Gabe Tucker, program chairman of SENTAC
"Cub" Colbertson, new president of SENTAC, with Fred Bess

AFTER THE ANNUAL MEETING

Yo Editor, Dr. Davis, & Ruth Samuel toast to a successful meeting
The Engineers Table
Sharing conviviality
MEMBERS

BEFORE THE ANNUAL MEETING

The "Brave 10" just before departure for SCUBA and marketing

Ye Associate Editor Rooser stocking up with refreshments

Geary McCandless & Tom Norris after getting a taste of the sail

Gretchen Seider after successfully completing her SCUBA certification

DURING THE ANNUAL MEETING

Gerald Milkenberger

Mike Seidermann

“DINNER WITH DAVIS”

J. D. Harris “At Nap”

Enjoyment of the drink

Ye Editor Dowas entertaining Dr. Davis

Susanne Kos and Dan Bode
New By-Laws

(Cont. from Page 1)

eliminate all legislative from the By-laws, it is thought that Articles VII and IX of the pro-
posed By-laws were left essentially the same as in our IBS status.

The First Draft By-Laws Committee was: Laura Willer, Jerry Tobiass, Wayne Staab, Blair
Simmons, Rich Sheehy, Russ Rooser, Jerry Northoff, Ralph Naughton, Sam Lybarer, and
Marvin Schumacher. The Committee met in executive session, invited guests President
Geary McCandless and Editor Don Kaper. The Committee also contributed
sound suggestions and helped break a deadlock or two.

Please read the new By-Laws carefully and be prepared to vote when the mail ballot is sent out later this year.

ARTICLE I.

1.1. The name of this organization shall be The American Auditory Society, formerly known as The American Audiology Society.

ARTICLE II.

1.1. The aims of the Society are to increase knowledge and understanding of the auditory process, promote conservation of hearing, and further habilitation and rehabilitation of persons with hearing impair-
ments. The Society shall coordinate the exchange and dissemination of information, particularly by holding regular meetings and publishing reports.

ARTICLE III.

1.1. Classes of Members.

The Society shall be composed of Active Members and Life Members.

1.2. Active Members shall become an Active Member of the Society, the applicant must (a) possess a Bachelor's degree from a recognized academic institution or (b) have had the equivalent of an academic degree or the equivalent of at least two years of experience in the field of audiology, and must have demonstrated an interest in the field of hearing that may be granted at the discretion of the Executive Committee after the candidate has submitted an application.

1.3. Life Membership. An Active Member who has attained the age of 70 years, has been a member of the Society for a period of at least 10 years, may become a Life Member by submitting a written request to the Secretary.

1.4. (a) Membership dues shall be established, upon the recommendation of the Executive Committee, by a majority vote of the Members present and voting at a regular business meeting of the Society. The annual dues may or may not include a yearly subscription to the official journal of the Society (now in 1977 known as the Journal of the American Audiology Society).

(b) Dues shall be payable on the first day of each year and shall be considered delinquent if not paid by the last day of March of that year.

(c) Life Members shall be exempt from all dues except that portion covering subscriptions to the official journal of the Society. However, the Executive Committee may waive, on a year-to-year basis, such subscription costs, if the Society's financial condition permits.

3.5. (a)’ Term of Membership. Members whose dues are delinquent shall be notified by the Secretary-Treasurer or such designee by the end of March of the year concerned. If the dues remain delinquent 30 days after such notification, membership shall be terminated. A Member whose membership has been so terminated may become a Member of the Society again only by applying for membership and being elected thereto in the manner herein prescribed. A penalty may be assessed for reinstatement.

(b) Any Member who is not delinquent in the payment of dues may resign his or her membership by writing the Secretary-Treasurer, and shall cease to be a Member of the Society as of the date such resignation is filed and accepted by the Secretary-Treasurer.

(c) The Executive Committee may expel from the Society a Member whose conduct does it deems contrary to the best interests of the Society. Expulsion from the Society requires a two-thirds vote of the Executive Committee.

(d) Privileges. Members and non-members may attend general meetings of the Society and may submit papers for presentation at meetings and/or for publication in a Society publication. Members shall have a vote on matters of membership, on changes in the constitution, by-laws and other rules and regulations and on all other matters presented to the Society, or to serve on its committees. Members may recommend subjects for study by the Executive Committee, may present resolutions or reports, may submit petitions for amendment or revision of the By-laws, and may recommend locations for future meetings.

ARTICLE IV.

1.1. Time and Location. The Society shall ordinarily meet at least once each year in January, at places and times, upon such notice as the Executive Committee may determine.

2.1. (a) Business Meetings. A business meeting shall be held during each general annual meeting of the Society. Twenty members present shall constitute a quorum at a business meeting. Policy decisions of the Society can be made by a simple majority vote of those present and voting at a business meeting. In the event of a tie vote, the President shall cast the deciding ballot. However, the Executive Committee, when in session, may authorize a letter ballot to the entire membership for the purpose of establishing any decision.

(b) At each business meeting, Members shall be informed of all actions taken by the Executive Committee since the last meeting of the Society.

3.4. Rules of Order. The meetings of the Society shall be governed by the rules of order in the current edition of Robert's Rules of Order, in all cases where they are not inconsistent with the other provisions of the By-Laws of the Society.

4.4. Minutes of all business meetings shall be recorded. They shall be signed by the President and the Secretary-Treasurer. They are to be mailed to each Member of the Society in time for the following business meeting. The minutes are to be kept at the office of the Secretary-Treasurer, where they shall be available for public inspection. However, the proceedings of each business meeting shall be sent to all Members.

ARTICLE V.

EXECUTIVE COMMITTEE

1.1. Purpose. The organization shall be managed by an Executive Committee, as authorized by the Membership.

2.2. (a) Composition. The voting membership of the Executive Committee shall consist of fifteen Members of the Society.

(b) Members of the Executive Committee shall be elected for a term of four years; seven shall be elected on odd-numbered years in a manner specified in the Statutes of the American Audiology Society. Each Member shall be elected by a simple majority of the voting Members of the Society, following a lapse of two years the Member may be reelected for two additional terms.

(c) For each election, the Executive Committee shall appoint a Nominating Committee representing as many as possible the professions and interests of the entire Society. No more than one member of the Executive Committee can serve on the Nominating Committee.

(d) Before February of odd-numbered years, the Nominating Committee shall present a list of candidates to the Society for election to two further consecutive terms of office.

(e) The Fifteenth member of the Executive Committee shall be the Secretary-Treasurer, who shall be appointed by the Executive Committee for a two-year term, to be renewed annually.

(f) Editors of Society publications shall be members or officers of the Executive Committee, without vote.

(g) No remuneration for services shall be paid to any member of the Committee, except the Secretary-Treasurer. Remuneration for the office of Secretary-Treasurer, shall be determined by the Executive Committee.

(3.1) (a) Officers. The Executive Committee shall elect from among its members an Executive Director, an Executive Secretary, and a Secretary-Treasurer, of all whom together with the Secretary-Treasurer, shall serve as the officers of the Society.

(b) The President of the Society shall be responsible for administering all matters of the Society and shall preside at all sessions of the Executive Committee and all business meetings of the Society.

(c) The President-elect shall assist the President, shall perform the duties and responsibilities of the President when absent, and shall assume the duties and responsibilities of the President if this office is vacant.

(d) The Assistant Secretary-Treasurer shall assist the Secretary-Treasurer, and shall perform the duties and responsibilities of the Secretary-Treasurer in his absence.

(e) The President and Assistant Secretary-Treasurer shall serve terms of five years.

5.6. Meetings. The Executive Committee shall convene at least once during each society meeting. It may meet also exceptonally by invitation of the President or upon request of six or more of its members or the Executive Committee members.

5.3. (a) Elections. The decisions of the Executive Committee shall be determined by a majority of the members voting; should an equal number of votes be cast, the President shall cast the deciding vote.

(b) The Executive Committee shall determine its own internal rules.

5.6. (a) Duties. The Journal of the American Audiology Society shall act on behalf of the Society; it shall undertake all appropriate duties of management and administration.

(c) The Executive Committee shall grant membership to those applicants whose qualifications, in the Committee's judgment, meet the requirements specified in Article III, Section 3.2.

(d) The Executive Committee shall decide when and where the Society shall meet and shall elect a Program Chairman for that meeting. The Program Chairman shall be responsible for organizing the program and conducting the meeting. To end the Program Chairman shall be responsible for the Program Chairman.

(e) The Executive Committee, as directed by the Secretary Member, shall have the authority to administer Society funds. Funds of the Society shall be administered in the name of the Secretary Member.

(f) The Executive Committee shall report its activities and decisions to the membership at least once a year.

ARTICLE VI.

SECRETARY-TREASURER

1.1. (a) Duties. The Secretary-Treasurer shall coordinate all correspondence and, in conformity with directives issued by the Executive (Cont. on Page 10)
In the measured approach to the question of the coelacanth in South Africa's potential for obtaining 91 deposits before improvement.

Certainly these results are equaled by a previous study led by Geoek in his section of the singular nerve for positional

Our interest in the coelacanth has prompted an interest in the subclinical approach to the position of the apoepinephrine. The question of the coelacanth could also be transmuted through a transmitted approach through the retrodorsal cells and cut the approach of the coelacanth as it rises the injury in the heart.

In regard to the spontaneous features of the oval window, I wish to express the belief that the second spontaneous features in which this 20 year old woman showed a pulsating, deafness and cerebrospinal fluid began in 1989 with spells of deafness as well as spells of ear pain. However, the spells were peculiar in that

During this period he would have a copious fluid post nasal discharge of cerebrospinal fluid. The stapedoscope revealed the fluid coming out of the unsealed inferior tip of the oval window and the stapedoscope with results. The solution to the corneal ulcer is to attach the inferior tip of the oval window with a large visible graft attached to the inferior incision. The graft stopped all of his spells and he has had no further post nasal discharge in the past 3 months. His family and referring physician were pleased with the results of this 1 year course.

In another patient, male presented with a 25 decibel hearing loss at age 10 and with audiograms at age 12, 15, 17 and 21 this progressed to a 42 decibel hearing loss at the age of 25.

Another patient with congenital meningitis, meningitis and coffin-like智能 at age 26 could wear a hearing aid but only in his right ear with some satisfaction, for he had a total hearing loss in the left ear.

In 1973, the hearing in the right ear with the hearing aid suddenly dropped, he marked distribution of the hearing. He briefly explored this only hearing aid to find the irregular oval window and the anterior inferior tip of the oval window and an internal auditory of the oval window.

This patient with a viable graft with no recurrence of the disease, hearing and with continued satisfactory use of the hearing aid for the past five years. In another patient with thousand stapes operations, I have had several patients with excess of cerebrospinal fluid out of the oval window and the stapes surgery does not completely seal the oval window with a viable graft as it will form under a middle ear membrane of the middle ear, giving this patient a good pure tone hearing improvement but with marked distortion so that the hearing is unsatisfactory.

In vertigo in a true Mandini Alexander, Dr. William House has found a markedly dilated endolymphatic sac indicating the destructive effects of the perilymphatic hydrops by as there is a through and through communication between the perilymphatic and endolymphatic system.

At the Academy of Neurosurgery at the fall of 1977, Clemens and Valsalva presented the concept of endolymphatic hydrops associated with the Labyrinthine Aqueducts and substituted by polytomographic findings. I wish to present the paper to be published in the Transactions of the American Academy of Otolaryngology and Otoendoscopy.

These cases of excess cerebrospinal fluid pressure within the inner ear are presented to you in the hopes of stimulating your interest in the possible diagnosis of endolymphatic hydrops and HYDROPS and I hope that your future research will substantiate the following theories.

A spontaneous feature of the oval window is subclinical and is dependent primarily upon an excess flow of cerebrospinal fluid into the inner ear and is not an overly potent aqueduct of the cochlea or one of the important messages of the internal auditory canal. The occurrence of the symptoms by skin burning, exercise or any movement which increases the (Confer on Page 11)
New By-Laws...

Committee, shall attend to the daily administrative and financial affairs of the Society, and shall take an active part in all committees dealing with publications. If, for some reason, the Secretary-Treasurer is prevented from carrying out his duties, he shall be replaced temporarily by the Assistant Secretary, or by a member of the Executive Committee designated by the President. Should the Secretary-Treasurer deem it necessary, personnel may be recruited to assist with Society work, subject to approval of the Executive Committee.

(b) The Secretary-Treasurer shall undertake the duties of Secretary to the Society, Membership during the business meeting, and to the Executive Committee, as well as to any committees that may be set up by one or both of these bodies. The Secretary-Treasurer or a person designated by him shall represent the Executive Committee on local organizing committees of Society meetings.

(c) The Secretary-Treasurer shall establish a bank account in the name of The American Auditory Society and shall conduct the necessary financial transactions of the Society. An audit of the financial status shall be performed annually by a certified public accountant and reported to the Membership.

ARTICLE VII.
DEALINGS WITH THIRD PARTIES
7.1 Representation. The Executive Committee shall represent the Society in all its dealings with third parties.
7.2 Signature. The Executive Committee shall designate those persons authorized to sign on behalf of the Society and shall decide on the title of signature.
7.3 Obligations. Members of the Society, as well as its agents and assignees, shall incur no personal financial obligation when acting on the Society’s behalf.

ARTICLE VIII.
RULES
8.1 General. The Executive Committee may, by majority vote, interpret the meaning of these Bylaws and adopt rules, not inconsistent with the Bylaws, to govern the activities of the Society.

ARTICLE IX.
LIQUIDATION
9.1 Procedure. In the event of dissolution of the Society, for whatever reason and whenever this might be, this step will be undertaken by a Liquidator appointed by action of the Members at a business meeting, who shall also decide all questions, and, if applicable, fix the remuneration. In default of such an appointment, the liquidation shall be carried out by the Executive Committee in office at the time acting as Liquidators.

ARTICLE X.
AMENDMENTS AND REVISIONS
10.1 (a) Procedure. Amendments or revisions of these Bylaws may be proposed either by the Executive Committee or by a petition signed by at least 10 Members.
(b) Notice of the general nature of any proposed amendments or revisions shall be given in a Society publication at least four months prior to a balloting.
(c) To become effective, such amendments or revisions must be approved by affirmative written ballot of two-thirds of the Members voting.

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AAS...

(Cont. from Page 9)

pressure of the cerebrospinal fluid.

2. Usually an excess flow of cerebrospinal fluid into the inner ear is sub-clinical.

3. In specific cases of congenital mixed deafness, these abnormal pathways in the cerebrospinal fluid produce both a sensorineural hearing loss and a conduction hearing loss. The sensorineural hearing loss is a direct result of the excess pressures of the perilymphatic hydrodynamics, producing progressive destructive pathobiology of the inner ear.

In the congenital mixed deafness, the excess cerebrospinal fluid pressures, the perilymphatic hydrodynamics, which pushes the stapes outward until it becomes locked and immobile in the overradiating anterior tip of the oval window niche, producing a condition which I have termed a "LOCKED STAPES".

4. If there are no overradiating anterior tips of the oval window, then the perilymphatic hydrodynamics simply pushes the stapes into the middle ear and there is central nervous fluid overradiation and a total loss of hearing. In the past, these responses were simply diagnostically of meningitis or had been diagnosed as a congenital sensorineural deafness.

5. If the congenital irregularities in the flow of cerebrospinal fluid into the inner ear may vary from the sub-clinical to the complete obstruction of the aqueduct of the cochlea to the true middle ear Alexander's as summarized by Ilam and Everberg and Jansen.

6. In the true Mondini Alexander's deafness, the congenital locked stapes in the overradiating anterior tip of the oval window has not been noted in the pathologic reports.

REFERENCES


Systeamic Study of Eustachian Tube Testing

Michael F. Sederman and Melinda W. Seifert
Louisiana State University Medical Center
New Orleans

Gregg D. Given
University of California at Los Angeles

The tympanometric measurement of middle ear pressure may or may not be characteristic of middle ear pressure encountered in specific instances (Silver and Bluestone, 1970). Therefore, additional information is needed to provide a definitive description regarding the ability of the middle ear Eustachian tube complex to equilibrate ambient atmospheric pressure.

It is not known whether the experience is influenced by the attempt to clean equilibration information and the specific determination of middle ear pressure is evident that a tympanometric measurement of middle ear pressure is of limited practicality and the best method of determining and accepting this fact as long as it is true that equilibration pressure as an integral part of the Eustachian tube may be used as a test battery.

Tests of Eustachian tube patency have previously been recognized as providing valuable data relative to the decision on tympanosurgical success (Silver, 1972). It is in the context of our concern that a sufficient data base, the tympanometric determinations of Eustachian tube patency can produce valuable diagnostic information, could reduce the number of over referrals, and at the same time initiate referrals that have been overlooked by false negative tympanometric pressure findings.

The subject population consisted of 26 adults between 30 and 60 years of age. A total of 48 ears met the inclusion criteria of tympanometry exhibiting normal middle ear pressure and function.

The procedure used was one adapted from the procedure online by Wightman, 1957. The procedure was administered at -200, -300, -400, -500, and -600 mm Hg.

The results of this study indicated a direct relationship between the pressure exerted and the amount of resultant pressure change obtained. It seems desirable to determine the amount of pressure change obtained in Eustachian tube testing. The maximization of the pressure change obtained with normal ears should thereby enable the clinician to better visualize deviations from the norm in either direction.

The amount of pressure change obtained in this study was consistently greater with increasing negative pressure than with induced positive pressure. The amount of pressure change obtained with maximum positive pressure was similar to the amount of pressure change obtained with the minimum negative pressure (-300 mmHg).

A direct relationship and a test to exist between the amount of fluctuation and the degree of pressure induced. It was recommended that the pressure be maintained at levels of at least -200 mmHg be employed in the Eustachian tube test in order to maximize the detection of functional changes. How, analyses of Eustachian tube test data showed that both biparametric (pressure and function) (Sederman and Given, 1977).

Sederman and Given, 1977. With regard to the combined analysis of pressure and function data, it is felt that an induced pressure of -200 mmHg should be recommended for the test procedure.

Scientist receives award

The 1977 edition of the Centro Ricercare e Studi Ampilom Internazionale Prize—which is the most prestigious award in the audiological field—has been awarded for the middle ear by Dr. Michel Arlan, who carried out his research in the Ear and Nose and Throat Clinic of Padua University. The motivation written by the members of the Prize Committee emphasizes Arlan's "original and important contributions in the field of experimental physiology, physiology, and phonology. His name is the only one that appears in the "critical ear deases and in the field of the vestibular system."

Dr. Arlan dedicated his long scientific activity matter to Meniere's disease, obtaining excellent results by means of an original surgical technique, based on ultrasonic waves, which has been adopted in the whole world and thus giving an essential contributor to the cure of this particular ear disease.

In December 1977, Dr. Arlan was presented with the Centro Ricercare e Studi Ampilom International Prize during a ceremony held at the New York Gate Club on November 26th, 1977.

Prof. Ettore Bocca, Head of the Ear Nose and Throat Clinic of the Milan University, introduced Professor Arlan, stressing his many scientific achievements, whilst Prof. Antonio Antonelli, Assistant Head of the Ear Nose and Throat Clinic of the Milan University, spoke on "Dizziness and Equilibrium" and Prof. Michele Arlan's researches and discoveries.

In the afternoon of the same day, Prof. Arlan had act as chairman of a round table on "Meniere's disease", which took place at the Ampilom Research and Study Centre and to which Prof. Heinrich Spelvink and Head of the Ear Nose and Throat Clinic of the University of Siena, participated.
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January 19-20
Training Courses For Audiometric Technicians: Industry, approved for 8 contact hours by Florida Hearing Association. Further informa-
tion from Larry B. Shippy, Jacksonville Hearing and Noise Control Inc., 606 Providence Dr., Jacksonville, FL 32207-2894.

January 27-28
Forty Sixth Annual Mid-Winter Clinical Conference, Otolaryngology, Las Vegas Hilton Hotel, Las Vegas, NV. AMA and CMA 38 hour accredited course for Continuing Medical Education. Registration fees: $45 for practicing otolaryngologists; $75 for residents. Contact: American Academy of Otolaryngology-Head and Neck Surgery, Inc., 9500 Rockville Pike, Bethesda, MD 20814, 301-299-4440.

January 27-28
Electroacousticography and The Dizzy Patient, The Red List, Permuted 500 A Tuesday workshop on testing, interpreting and understand-
ing the dizzy patient, conducted by Barrett L. Inter, Ph.D., and Frederick H. Lichtman, M.D. Fee: $430 Contact: Travelers Inc., Austin, TX 78704. 512-466-0661.

January 27-29
Occupational Hearing Conservation Workshop and Refresher Course, Presbyterian Hospital, San Francisco, CA. Contact: Continuing Education, Presbyterian Hospital, P.O. Box 1999, San Francisco, CA 94118.

January 29-February 2
Midwinter Research Meeting, Aloha, For Research In Otolaryngology, Happy Dolphin Inn, St. Petersburg Beach, FL. Contact: David J. Lim, President, Assn. for Research in Otolaryngology, University Hospitals Clinic, 488 Clinic Dr., Columbus, OH 43216.

February 1-11
Electroacousticography and The Dizzy Patient, The Marriott, Atlanta, GA. A two-day workshop on testing, interpreting and understanding the dizzy patient, conducted by Barrett L. Inter, Ph.D., and Frederick H. Lichtman, M.D. Fee: $410 Contact: Travelers Inc., Austin, TX 78704. 512-446-0661.

February 4-21
The Hearing Aid Workshop For The Three Professions, Fairmont Hotel, New Orleans, La.

February 25-March 1
Second Midwinter Symposium on Transitions of Pediatric Otolaryngology, Commissioner, Contact: George E. Shumbaugh, Jr., M.D., American Hearing Research Foundation, 51 E. Washington St., Suite 2000, Chicago, IL 60601.

March 5-7
Second National Conference on Tinnitus, St. Malo, Co-sponsored by University of Arizona, College of Medicine with the aid of National Institute of Neurological and Communicative Disorders and Stroke. Physician's Recognition Award of AMA. Fee: $230 before 1-1-83. Later fee: $280. Contact: Clinical of Continuing Medical Education, Outpatient, University of Arizona, College of Medicine-Tucson, Az 85724.

March 5-11
20th Annual Colorado/Oklahoma Audiology Workshop, The Mark at Lone-
head Vall, CO. Contact: Larry J. Squirer, Ph.D. or Margaret P. Squires, MA, Workshop Coordinator, P.O. Box 8451, 680 East South Avenue, Denver, CO 80206.

March 9-11
Second International Symposium on Pediatric Otolaryngology, Kansas City, Mo. Contact: Richard S. Smith, M.D. Professor and Chief Section of Otolaryngology and Pediatrics, Children's Mercy Hospital, 26th St. at Gillham Road, Kansas City, Mo 64108.

March 22-25
International Hearing Aid Seminar, Hotel St. Regis, San Diego, CA. Contact: Dr. Robert E. Sandhein, 900 First Street, San Diego, CA 92101.

March 27-29

April 3-8
Electroacousticography And The Dizzy Patient, Hyatt Regency, Washington, D.C. A two-day workshop on testing, interpreting and understand-
ing the dizzy patient, conducted by Barrett L. Inter, Ph.D., and Frederick H. Lichtman, M.D. Fee: $410 Contact: Travelers Inc., Austin, TX 78704. 512-466-0661.

April 10-14
Basic Electroacousticography, Orlando, Fl. Fee: $410. For further information: Charles W. Blackwell, Ph.D., and University Hospitals Clinic, 488 Clinic Drive, Columbus, OH 43216.

April 11-12

May 4-8
Designing For Noise Control, Seventh Int'l Conference on Noise Control Engineering, Pacific-Asia Hotel, San Francisco, CA. Contact: Conference Secretariat, INTER-NOISE 79, P.O. Box 2460, Arlington Branch, Rosslyn, VA 22209.

May 15-19
Electroacousticography And The Dizzy Patient, Whistle Aid Hotel, Los Angeles, CA. A two-day workshop on testing, interpreting and understanding the dizzy patient, conducted by Barrett L. Inter, Ph.D., and Frederick H. Lichtman, M.D. Fee: $410 Contact: Travelers Inc., Austin, TX 78704. 512-466-0661.

June 5-16
Acoustical Society of America, Kingston, Rhode Island.

June 12-17

September 5-3
Third Annual Conference, Association of Audiology, University of Sydney, Australia. Contact: The Public Relations Officer, Mr. Gary Walker. Audiology Development Section, National Acoustic Laboratory, 5 Hickson Road, Milers Point, NSW Australia 2000.

September 14-11
American Academy of Otolaryngology, Las Vegas, Nevada.

November 12-17
Annual Meeting Of Society For Ear, Nose and Throat Advances In Children, Santa Barbara, CA. For information write to: Dr. Sanford Gerber, University of California, Santa Barbara, CA 93106.

October 2-6
Auditory Evoked Response Workshop and Symposium, San Diego, Calif.

November 12-16
UV International Congress On Otolaryngology, Acupress Cultural and Con-
vention Center, Acapulco, Mexico. For Information: Organizing Secretariat, Instituto Mexicano De Audición y de Lenguaje, Pro-Hago, Mexico 130, D.F. Mexico.

November 15-21
American Speech and Hearing Association, San Francisco, Calif.

November 23-Dec. 1
Acoustical Society of America, Honolulu, Hawaii.

175 May 11-18
International Symposium On The Hearing Impaired Child, University of Cincinnati Medical Center, Contact: Dr. Allen B. Seal, Children's Hospital Medical Center, Elliott and Bethesda Ave., Cincinnati, OH 45229.
San Francisco To Be AAS Annual Meeting Site

John Sinclair and Tessa Grafton, this year’s program co-chairmen for the 1978 annual meeting of The American Audiology Society, are actively setting up schedules and making arrangements. Any suggestions that members have are very welcomed. The meeting will be held on Friday, November 18th. Further details will be published in the July issue of Corti’s Organ. Call for papers will be sent to each member in May.

Noise Symposium Presents Comprehensive Offerings

Glorig To Be Honored

A symposium covering all aspects of noise will be held at San Antonio, Texas May 7-9. Sponsored by the National Foundation for Noise, Hearing, and Balance, it will feature a large array of faculty members presenting numerous disciplines and reflecting all aspects of noise and its Control.

Aram Glorig, AAS’s founder and first president, will be the guest of honor at the Symposium. In addition, there will be representatives from Otolaryngology, Audiology, Psycho-acoustics, Law, the U.S. Senate, Insurance, Environnement Control, Marketing, Psychology, Physiology, the Armed Forces, Industry and Industrial Hygiene.

Concurrent with the symposium, a lecture program will be an Industrial Audiometric Technicians course leading to Accreditation by CAGOIC. A hearing screening course for schools and clinical offices will also be offered to non-audiologists on May 10.

CUNY Sponsors Hearing Aid Conference

The Ph.D. Program in Speech and Hearing Sciences of the City University of New York Graduate School is sponsoring a three-day conference on the "Acoustical Factors Affecting Hearing Aid Performance and Measurement." From June 14-16, 1978, the purpose of the conference is to present and discuss the implications of recent findings concerning the acoustical factors that influence hearing aid performance and measurement. The conference should be of interest and relevance to all persons involved in the design, manufacture, measurement and fitting of hearing aids.

The conference is designed to facilitate a dialogue among the various contributors and between the audience and the contributors. The practical application of research findings will be emphasized by the participation of experienced clinicians, engineers and scientists in round table discussions.

Participants will include researchers from the United States and abroad. A sampling of topics include:

- Acoustics of the ear: influence of distortion on hearing aid performance
- Room acoustics and intelligibility
- Ear model: hearing and processed signals
- Hearing aid measurement standards
- Modeling the acoustic system
- Hearing aid response characteristics

For more information contact Gerald A. Studtchak or Irving Hochberg Ph.D. Program in Speech and Hearing Sciences, Graduate School, CUNY, 35 W. 42 Street, N.Y., N.Y. 10036.

President’s Message

F. Blair Simmons

Insofar as one can fix such things, this Society began an outgrowth—not a part of—a meeting held in a Dallas hotel room years ago. Those of us who happened to be present (the meeting wasn’t all that formal) earned our livings by doing as many different ways as were possible to squeeze into one room at least one each of the species known as deaf educators, otologists, hearing aid manufacturers, physicists, psychologists, chemists and anthropologists. The thing we had in common was an interest in people with hearing losses. Most of us, or our counterparts found that while we were easily able to work together daily when dealing with an individual patient, it wasn’t so easy when it came to our professional organizations. Some of us had strong feelings that we needed badly to recruit the interests of scientifically oriented basic scientists into becoming personally involved with the problems of deafened people. We had more than enough frustrations by the hierarchy of the status quo in the several separate professional organizations. Many times our organizations seemed to have dialogue only on, "whos in charge of what," or, "who owns what piece of the professional pie." We felt we professionals tallied along pretty well on an individual basis, but in the separate societies one group tended to become the tactical enemy of the others. Thus in a sense the beginning of this Society was a protest movement.

Having decided that a mutual forum was an idea we could all be enthusiastic about, the next inevitable question became: who gets to belong to our club? Things got sticky right away. My vote was for anyone who had a documentable interest in hearing. I lost. The by-laws called for some sort of institutional degree (I do admit that such a requirement is reasonable. One simply must establish a minimum standard to keep the natives peaceful... and the Society prestigious). Next we needed a name. We all thought the American Audiology Society seemed good. We have since learned that it isn’t. ASHA said we couldn’t use "audiology." That word belongs to them. (We heard no formal objections to "hearing"—the word, "American._ A" This incenure problem of our Society's name was the first real challenge towards our goals, and we failed it. Professionalism, went once again.

My present message is: let's not forget the enthusiasm of our beginnings, the reasons we felt this Society was needed. Part of this came done by a continuing effort to recruit new members whose sympathies are similar, and to continue reminding old members that membership itself should be a clear statement in favor of less professionalism and more communication. And, we can communicate. We've got a first-class newsletter in Corti's Organ which I suspect becomes Cortis's organ near the publishing deadline), the beginnings of a fine journal, and an annual meeting. Use them.
Editorial

In a short while you will receive ballots for the New By-Laws that have been proposed for AAS. We hope you have them carefully and are prepared to cast a well-considered vote. The By-Laws committee wanted particularly to have the new document reflect the real goals of the Society. To provide a forum and meeting ground for the various disciplines concerned with audiology, to accomplish this goal the membership requirements have been made more lenient, and it has been made easier to effect policy changes. A great deal of flexibility will result, leaving the organization ready for whatever its destiny may be.

Of course, destiny is shaped by individuals, and we hope that the AAS officers and members will be inspired to request innovative activities for the organization, such as the nationwide meeting that was proposed at the Miami convention. Such an activity will give the Society the stature it should have.

So we congratulate the membership to vote accordingly on the By-Laws, and to give support to Norma Hopkinson, Bruce Graham and the Ward in their planning for a national conference that will give AAS visibility. We may soon see AAS making a substantial, non-political, scientifically-based contribution to knowledge of the auditory function.

If you did not read the proposed By-Laws in the January issue of Gert's Organ, we have reproduced them in this issue on pp. 12-23, IJHL.

Letter from England

The importance of immunology in otolaryngology has been greatly enhanced, but there exists a great deal of conflict or difficulty in the interpretation of vast amount of rapidly accumulating experimental and clinical findings. A lecture at the Department of Immunology of the Clinical Research Center of the National Institutes of Health, on March 10 by Henry Claman, Professor of Immunology, University of Colorado Medical Center in Denver was very stimulating and illuminating in this respect. A pioneer in this field he has guided his audiences with masterly clarity towards a better understanding of the immunological mechanisms of tolerance without disputing the real obstacles that still exist. The lecture was acclaimed by a large and knowledgeable audience headed by Dr. Geoffrey Asherson himself an immunologist of world-wide reputation.

I am glad to mention that the journal Laryngology will have under the joint editorship of Sir Geoffrey Barterman and John Ballytome a strong team supported by occasional anonymous advisors. The trees are in bloom and the spring cannot be far away. The itinerant symposiums have started packing their slides boxes.

Imre Friedmann

Sentec Meeting Announced

The annual meeting of the Society of Ear, Nose and Throat Advancement in Children (SENTAC) will be held at El Encanto, Santa Barbara, California on December 7 and 8, 1978. The deadline for abstracts for papers will be on June 15, 1979. Papers on: 1) Central Auditory Dysfunction 2) The Effect of Moderate Hearing Loss on Language Development and Educational Achievement will receive preferential consideration. For further information, please write to Dr. Robin Carter, Children's Hospital Medical Center, 8th and Bethesda Avenues, Cincinnati, Ohio 45229.

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P.O. Box 3610 Austin, Texas 78764 (512) 644-1961
Report of Vanderbilt Impedance Symposium

USE OF IMPEDANCE MEASUREMENT SYSTEMS IN THE DIAGNOSIS AND TREATMENT OF MIDDLE EAR DISEASE IN CHILDREN

This report is based on formal presentations and discussion at a Symposium on Impedance Screening for Children held at Vanderbilt University School of Medicine, Nashville, Tennessee, June 22-22, 1977. The Symposium was based on invited "state-of-the-art" knowledge reports on the following aspects of middle ear disease and impedance testing in children.

1. Epidemiology and Natural History of Middle Ear Disease
2. Techniques in the Identification of Middle Ear Disease
3. General Audiology

The Symposium addressed the issue of using impedance measurement systems in the diagnosis of middle ear disease in children. Each category was introduced by a state-of-the-art knowledge report on an impedance screening of:

- Infants
- Pre-school Children
- School Age Children

In addition, 20 papers were presented from members and visitors. The presentations were followed by a panel discussion concerning recent studies of impedance screening systems and their applications in the identification of middle ear disease in children. This included the use of availability and limitations of the techniques and recommendations for the use of impedance screening systems in the diagnosis of middle ear disease in children. To obtain the reactions of all persons attending the Symposium, the Task Force agreed to present and discuss the at the open meeting. Although the members of the Task Force agree with every point, the following is the conclusion of the Task Force.

RECOMMENDATIONS FROM THE TASK FORCE

The use of impedance screening systems is recommended for the diagnosis of middle ear disease in children. Although the current status of this technology is still in development, it is recommended that the use of impedance screening systems in these areas be considered:

1. Infants
2. Pre-school Children
3. School Age Children

The following is the conclusion of the Task Force.

Pediatric screening fulfills the principal criteria for an effective screening test—acceptability, reliability, validity, and reasonable cost. Impedance testing is acceptable to both the child and the provider of health care because it is safe, non-invasive, and simply executed. Studies have shown impedance measurement to be reliable, but these studies have involved only the pediatric population. Further studies are necessary to confirm these findings.

The report concludes with the following recommendations:

1. Further research is needed to establish the diagnostic accuracy of impedance screening systems in the pediatric population.
2. Further studies are needed to establish the effectiveness of impedance screening systems in the treatment of middle ear disease.
3. Further studies are needed to establish the cost-effectiveness of impedance screening systems in the treatment of middle ear disease.
4. Further studies are needed to establish the long-term effects of impedance screening systems on the treatment of middle ear disease.

The task force recommends that this research be conducted in a manner that will allow for the widest possible dissemination of findings.
1978 AAS Directory
(Alphabetical Listing Cont'd.)
1978 AAS Directory (Cont'd.)

Geographic Listing

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The Effect of Prolonged Noise Exposure on Battery of Tests

INTRODUCTION

Recent research at the Environmental Acoustics Laboratory (EAL) has revealed the usefulness of a test battery including threshold, differential loudness sensitivity and masking tests for evaluating noise effects upon an individual's hearing.

When subjects were exposed to 95 dB SPL of noise for 15 minutes of 25% of the time, they showed observable hearing changes using the testing battery. It was not considered significant that 67% of the subjects showed changes on individual tests in the battery.

It has been suggested that the testing battery advantage might be a temporary situation that would not be maintained for longer exposure durations. In consideration of this, and in order to examine some of the observations (Mellin et al., 1977), Carder and Miller, 1972; that prolonged exposure to the given sound affects the LLI in a manner which seems to give rise ultimately to a maximum amount of threshold shift and that threshold shifts do not grow by an ordinary (linear) process before noise exposure is continued.

Asymptotic threshold shifts have been observed with exposure durations of eight and six hours (Mellin et al., 1977). Carder, Melnick, and Mavros, 1974; Ward, 1978) and an exposure duration of 16 hours was selected for the present study.

Some temporary hearing effects of noise exposure may be due to the body's reaction to noise as a stressor. It is established that the body's own stress-related hormones may be released by the body's own stress-related hormones which may be released by the body's own stress-related hormones. Blood samples were taken and analyzed for cortisol throughout the experiment.

Subjects were 16 normal hearing young adults with a negative history of noise exposure and of any other psycho-physical stressors. One ear of each subject was tested under earphones using the calibrated test series, and finally retested with the battery in the time from 15 to 25 minutes after the end of exposure. In some cases, the follow up test was presented to each subject in order to determine the presence of any noise exposure that might have occurred during the prestest exposure. The masking test included in the test battery was designed to measure the Level of Initial Masking (LIM). An audiometer with a 400 Hz cut off was used as the noise source in this case. The LIM was defined as the logarithmic ratio of masker-to-test tone that corresponds to the highest threshold of the masker that can be tolerated by a listener while keeping a low level tone barely audible. The subject was instructed to keep a 490 Hz, 3 dB sensation level, unmodulated, pure tone audible by controlling the level of a continuously masked tone sweeping through the range from 100 Hz to 10,000 Hz. A Beckesy (1947) audiometer was used to produce the masker tone so that the subject could control the level of the masker while its frequency changed slowly. The sound pressure levels of the masker tones at the frequencies 250, 500, 1000, 2000, and 4000 Hz were determined and the sound pressure levels of the test tones were subtracted from these levels giving the noise-to-signal ratio we have called the Level of Initial Masking.

The noise duration necessary to cause the threshold shift was obtained in the present study by masking the noise source with a pre-determined noise-to-signal ratio. The noise level was then increased until a threshold shift was observed. The data reported so far allow the conclusion that the three tests included in our test battery are sensitive to noise-induced temporary hearing changes. In order to further examine the extent and magnitude of the changes, the difference in the planned test results in the 15 cases tested, we have computed the threshold shifts caused by noise exposure for each of the three tests.

The LIM for the group was 45% and was statistically significant.

Threshold: Threshold Level: Loudness discrimination scores.

Table I: Test-RESTED DATA ON A BATTERY OF HEARING TESTS

Table II: NOISE-INDUCED CHANGES AND CHANGES IN LIM LEVEL:

Comparison of LIM levels in the Correlation level shift of: LDI = 0.65

LDDI = 0.65

LTS = 0.65

TTT = 0.65

REFERENCES


Benet, T., Biean, Michael, P., Durkin, M., Volin, Singer, J., Michael, P., and Anthony, A. "Loudness Discrimination Index and Serum Cortisol Levels in (Cont. on Page 12)
Proposed By-Laws...
Playpersons of the Month At Vail

Jim Curran  Collette Ramsey  Tana Triano  Hermann Wallenfels  IAC's Dan Caloway

Jo Miller  Mike Paparella, Paul Ward and David Hansom  En-privacy Geary McCandless and Gary Oemsson  Earl Harford

English visitor Denzil Brooks with Privacy Blair Simmons  Don Worthington and Gary Gordon  Jennifer Harford and Debbie Smith

Jan Zarcoch and Joanne Rosenberg  Swedish visitors Jorgen Holsquist and Gunnar Liden  Chuck Berlin and George Lyon

Shirley Simmons and Ray Batten  Dave Liposonda and Dave Lim  Asst. Journal Editor Jack Vernon
**NEWS ON NOISE MEETINGS**

**26th Annual Institute in Occupational Hearing Loss**

The University of Maine at Orono (Maine) announces the 26th Annual Institute in Occupational Hearing Loss, directed by Joseph Sobel, and David Lapsch, will be held July 27 to July 29, 1978. The facilities of the University of Maine provide excellent accommodations for the participants. The Institute is designed for industrial physicians, safety engineers, otolaryngologists, audiologists, health management executives and administrative personnel. Covers total field of conservation of hearing programs, medicolegal and compensation aspects and OSHA developments. Awards $50 credit in FPA Category 1 of AIA for physicians. Tuition is $250.00 and Room and Board is $59.00 per day. For descriptive brochure and application write or phone: UMO Coordinator, 171 Pique St., Philadelphia, Pa. 19103 215-732-6565.

**Noise Control Engineering begins 6th Year of Publication**

Noise Control Engineering will begin its 6th year of publication in 1978. The aims of Noise Control Engineering are to advance the technology of noise control and to emphasize engineering solutions to environmental noise problems. The presentation is available to libraries and to individuals. Subscription rates (275 per year) may be obtained from the Institute of Noise Control Engineering, Inc., Bar 3266, Arlington Branch, Poughkeepsie, NY 12603.

**1st Annual Noise Measurement And Control Course**

The University of Maine at Orono (Maine) announces the 1st Annual Course in Noise Measurement and Control, directed by James L. Parsons, will be held July 31 to July 27, 1978. The facilities of the University of Maine provide excellent accommodations for the participants. Oriented to engineers, industrial hygienists, safety personnel and others interested in noise measurement and control, the course is presented to acquaint the participants with the methods for evaluating noise problems and working out solutions. The subjects of acoustics, noise measurement, instrumentation, noise control regulations, compliance programs, hearing damage and hearing conservation programs are treated and discussed thoroughly. Laboratories provide practice in the use of sound measuring systems. Adequate opportunity is provided students to discuss individual problems with faculty members. Panel discussions with regulatory authorities and experts will be a special feature of the program. An excellent and renowned staff has been assembled to conduct this course. Tuition is $100.00 and Room and Board is $60.00 per day. For descriptive brochure and application write or phone: NMC Coordinator, 171 Pique St., Philadelphia, Pa. 19103 215-732-6565.

**Inter-Noise 78 to Discuss Progress in Noise Control**

Two special sessions on European progress in noise control will be featured at INTER-NOISE '78, the International Congress on Noise Control Engineering to be held at the Jack Tar Hotel, San Francisco, California, U.S.A. next May 7-9. During the Fall of 1977, Swedish industry initiated a campaign to reduce significantly the noise levels in working environments. A detailed description of this campaign will be given in a special session to focus on: Sweden's new approach to noise control in industry.

The Swedish Foundation for Improving Worker Environments provided the funds to support this intensive campaign. A specially-prepared handbook on noise control principles and applications was circulated widely throughout Swedish industry. A number of industries were targeted for special consideration by task teams consisting of noise control engineers and industrial specialists. The INTER-NOISE 78 special session will focus on the objectives of the new Swedish program and reports will be given on noise control in the targeted industries, including the stone processing industry, the mechanical industry, the food industry, the concrete prefabrication industry, the graphic arts industry, the textile industry and the pulp and paper industry.

Another special session at INTER-NOISE 78 will focus on: European noise regulations.

**The Environmental Action Program (covering the period 1977-81) of the European Community (Common Market) calls for the development of an anti-noise plan to control noise at its source and to take account of the environment in which the source operates. Papers to be presented at INTER-NOISE 78 from Austria, Denmark, France, Germany and the Netherlands will focus on activities within these countries to control noise primarily at its source. A particular emphasis will be placed on the use of sound power levels to classify and regulate the noise produced by industrial noise sources as well as by household appliances. In the last decade, considerable progress has been made in Europe on classifying noise emissions in terms of the sound power levels of the sources and in controlling the emissions at the source. The European specialists who will be describing their programs will present to the INTER-NOISE 78 audience the latest advances from Europe in regulating and controlling noise at its source.**

These two special sessions will focus on the theme of INTER-NOISE 78 which is "Designing for Noise Control." Three other special sessions will also be given on the theme and five Distinctive Lecturers will present reviews of key topics in noise control engineering. A three-day Seminar will provide INTER-NOISE 78 newcomers to the fundamentals of the technology. Information on INTER-NOISE 78 and the Seminar which precedes it may be obtained from the Conference Secretariat at the address and telephone number above.

**Inter-Noise Seminar**

An intensive short course on principles and applications of noise control will be presented on 4 and 5 May 1978 at the Jack Tar Hotel in San Francisco, California, immediately preceding INTER-NOISE 78. Selected International Conference on Noise Control Engineering. The presentations on the first day will cover fundamentals of acoustics and noise control and will be given by Malcolm J. Crocker, Editor-in-Chief, Noise Control ENGINEERING and Professor, Purdue University and by William W. Long, Manager, Acoustics Technology, IBM. The presentations on the second day will be given by noise control specialists from industry, government and universities and will cover such topics as noise control, design of facilities for noise control, noise measurements and data reduction, and acoustical standards used in noise measurements. The registration fee for the Seminar is $325.

Further details may be obtained from the INTER-NOISE 78 Conference Secretariat, 1349 Alaska, Arlington Branch, P.O. Box 2266, Arlington, Texas 76002, or telephone 914 492-5117.

**Third International Conference on Biological Effects of Noise**

The International Commission on Biological Effects of Noise is pleased to announce the Third International Congress on Noise as a Public Health Problem: Biological and Behavioral Effects. The Congress is scheduled to be held during the week of September 29-30, 1978, in Freiburg, Federal Republic of Germany (West Germany). The official language of the Congress is English; simultaneous German translations will be provided. In addition to the invited and contributed papers on scientific research and applications, major discussions are planned on governmental and industrial needs and problems. Other discussions will be held on ways to develop procedures that will permit practical solutions both for governments and for industries.

The major topics that will be covered during the Congress are Community Response to Noise, Effects of Interactions between Noise and Physical or Chemical Agents, Influences of Noise on Performance and Behavior, Noise and Animals. Noise and Communication, Noise-Induced Sleep, Noise-Induced Hearing Loss, and Non-auditory Physiological Effects Induced by Noise.
International Audiology Congress Meets In November

XIV INTERNATIONAL CONGRESS OF AUDIOLOGY
CULTURAL AND CONVENTION CENTER
ACAPULCO - MEXICO
November 12-16, 1978

Under the auspices of the International Society of Audiology, Organized by the Instituto Mexicano de Audiology y de Lenguaje.

Organizing Secretariat:
Instituto Mexicano de Audiology y de Lenguaje
Av. Progresso 114A
Mexico, D.F. 06300
Phone: 977-8414

For European countries:
Organizaciones Interamericana de Congresos (OIC)
BOSCO, Florence ITALY
Phone 055/31545

President: Agustín Benetone, Jr., M.D.
General Secretary: Luis M. Valdés O., M.D.

GENERAL INFORMATION
The XIV International Congress of Audiology will be held at the Cultural and Convention Center in Acapulco, Mexico. The Convention Center covers a 14 hectares area and has everything to realize any type of convention or exhibition.

In Acapulco there are facilities for practicing all kinds of sports. The international airport and the harbors of Acapulco and Mexico City to Acapulco are at the disposal of the principal means of access. The temperature is usually warm and during the month of November it varies between 24 and 30°C (75-85°F).

PRELIMINARY PROGRAM
SUNDAY, NOVEMBER 12
Registration.
Meeting of the Executive Committee.
Opening ceremony.
Welcome cocktail.

MONDAY, NOVEMBER 13
First round Table.
Moderator: Prof. D. G. Salomon, Denmark.

Tuesday, November 14
Second Round Table.
Lecture: Psychosomatology in Audiologic Rehabilitation: Physiological Aspects.
Moderator: Prof. D. G. Keeler, W. Germany.

Wednesday, November 15
Third Round Table.
Lecture: Psychosomatic Problems in the Care of the Deaf.
Moderator: Prof. D. P. Benetone, Jr., Mexico.

Thursday, November 16
Free Papers.
Free paper sessions will be held each afternoon during the first three days of the Congress, and in the morning of November 16. There will be divided into the following general subdivisions: Diagnosis and Prevention, Research and Training Programs, Medical and surgical, Rehabilitation and Special Education. Psychology of the deaf child and of the deaf person, Psychology and Social Aspects of Audiology.

REGISTRATION
All the participants interested in attending the Congress must apply for registration at the registration office, which is located on the ground floor of the Convention Center.

REGISTRATION FORM A
I am sending Dls. ___________ U.S. Cy. by cheque No. _______ Bank ________ postal money order No. _______ Through ________ Date______ Signature

I plan to arrive in Acapulco: I plan to leave Acapulco the: 

Please make the following reservation:

First choice
Second choice
Third choice

Note: Single room(s) or Double room(s) is not available.

The Organizing Secretariat is committed to select the first choice of the members in accordance to the number of rooms available and with the date of reception of the documents.

WORKING LANGUAGES AND SIMULTANEOUS TRANSLATION
The working languages will be Spanish, English and French. Simultaneous translation in these languages will be provided.

AUDIO-EXPO 78
A scientific, technical and cultural exhibition will be held in one of the halls of the Convention Center. The scientific participation and the cultural aspects of the exhibition will be detailed in the second information bulletin.

SOCIAL AND CULTURAL ACTIVITIES
This program will be offered to all the members of the Congress and accompanying persons. It will include a welcome cocktail, a Mexican Folkloric Ballet Show and the official closing dinner. An additional program for accompanying persons is being prepared. A visit to the Expo 78 will be included.

TRANSPORTATION
Transportation to all members and accompanying persons will be offered from the official hotels to the Cultural and Convention Center and viceversa as well as the transportation to all the social and cultural activities. It will not be possible to offer transportation to those members located at different hotels from the official ones.

CANCELLATION
In case of cancellation of registration and hotel reservation that arrives to the Organizing Secretariat before August 10, 1978, a 20% fee will be charged. Cancellation received after this date, will not be considered and it will not entitle the fee to be refunded.

Form B

Please make the following reservation:

First choice
Second choice
Third choice

Note: Single room(s) or Double room(s) is not available.

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Calder of Events

APRIL
13-27
THE ENG & OTO-ALLERGY CRUISE SYMPOSIUM
(Aboard ship in Caribbean). Co-sponsored by American
Hearing Research Foundation and Northwestern University
Medical School. Contact: George E. Scharbarg, Jr., M.D.
American Hearing Research Foundation, 55 E. Washington
St., suite 2100, Chicago, IL 60601.

MAY
7-9
5TH NATIONAL SYMPOSIUM ON NOISE, San Antonio,
Texas. Write to: P.O. Box 2962, San Antonio, TX 78210.

EARLY DIAGNOSIS OF HEARING LOSS: 2ND
INTERNATIONAL CONFERENCE, Saskatoon.
Saskatchewan. Sponsored by Elko Club of Canada.

JUNE
8-10
DESIGNING FOR NOISE CONTROL: SEVENTH INTL.
CONFERENCE ON NOISE CONTROL ENGINEERING,
Jock Tar Hotel, San Francisco. Ca. Contact: Conference
Secretariat, INTER-NIRE, P.O. Box 3899, Arlington
Branch, Poughkeepsie, NY 12603.

12-13
ELECTRONYSTAGMOGRAPHY AND THE DIZZY
PATIENT, Whipple Hayt House, Los Angeles, Ca. A two-day
workshop on testing, interpreting, and understanding the dizzy
patient, conducted by Darrell T. Teter, Ph.D. and Frederick H.
Lenzicum, M.D. Fee—$150. Contact: Tycotonics, Inc.,
Austin, TX 78758. 512-444-1361.

13-16
ACOUSTICAL SOCIETY OF AMERICA, Kingston, Rhode
Island.

XII WORLD CONGRESS OF OTOLARYNGOLOGY
Budapest, Hungary.

23-27
BIENNIAL CONVENTION OF THE ALEXANDER BELL
ASSOCIATION FOR THE DEAF, S. Los Angeles. Registration
information available early spring.

JULY
30-Aug.
SOUTHERN ACOUSTICAL SOCIETY, New Orleans.

SEPTEMBER
1-3
THIRD ANNUAL CONFERENCE AUDIOLOGY
SOCIETY OF AUSTRALIA, Macquarie University,
Australia. Contact: The Public Relations Officer, M.
Walker, Audiology Development Section, National
Laboratory, 2 Dickson Road, Millers Point N.S.W. 2000.

10-11
AMERICAN ACADEMY OF OTOLARYNGOLOGY,
Vegas, Nevada.

15-17
ANNUAL MEETING OF SOCIETY FOR EAR, NOSE
THROAT ADVANCES IN CHILDREN, Santa Barbara. For
information write to: Dr. Sanford Gerber, U. of California,
Santa Barbara, CA 93108.

OCTOBER
2-4
AUDITORY EVOKE RESPONSE WORKSHOP
SYMPOSIUM, San Diego, Ca.

NOVEMBER
7-Dec.
XVI PAN AMERICAN CONGRESS OF OTO-
BRONCHOSOPHROLOGY, Acapulco, Mexico.

XIV INTERNATIONAL CONGRESS OF AUDIOLOGY,
Acapulco Cultural and Convention Center, Acapulco, Mx.
For information: Organizing Secretariat, Instituto Mexicano
de la Audición y el Lenguaje de Progreso 88A, Ensenada
Mexico, B. P. 95-095, Mexico.

AMERICAN AUDIOLOGY SOCIETY, San Francisco.

19-21
AMERICAN SPEECH AND HEARING ASSOCIATION,
Francisco, Ca.

ACOUSTICAL SOCIETY OF AMERICA, Honolulu, HI.

1979
MAY
1-19
INTERNATIONAL SYMPOSIUM ON THE HEARING
IMPAIRED CHILD, University of Cincinnati Medical
Center, Children's Hospital, 2670 Beechurst Ave., Cincinnati, OH 45229.
Salute to Twenty Years of DRF

This issue of Corti's Organ is dedicated to The Deafness Research Foundation. For 20 years DRF has quietly and effectively supported sound scientific research on the Ear and Hearing. An "American Auditory Society" should be the staunchest supporter of such an organization.

But organizations are made up of people who bring their distinctiveness to the functioning of the group. Two people in particular are contributing a particular flair to DRF: Mrs. Collette Ramsey, its founder and Mr. Ted Beck, its present Executive Director. They are featured in exclusive interviews with G. O. in this issue. In addition, the distinctive nature of the research that is supported by DRF should be pointed out, because it is consonant with the aims of the AAS.

The Deafness Research Foundation has awarded grants to 32 research projects for 1978, the total dollar sum awarded representing the third highest in DRF history. The research projects are set at 25 institutions in 27 states and Canada.

The applications received for these grants from medical centers and universities exceed the record of 36 set last year. More striking, the general quality of the proposed and continuing research described in these applications was—in the judgment of the Scientific Review Committee members—the most impressive that the DRF has ever seen. Had DRF funding resources been greater, considerably more projects would have received grant support.

Over half of the applications were for projects that were scientifically oriented. Their proportional quality was as high, and over half of the grants are funding projects from this group. This demonstrates the advances in certain areas of auditory science, where basic knowledge now allows investigators to study their effective clinical applications.

Such advances give immense encouragement to oto-laryngologists, to the other professionals involved with hearing and deafness, and to the millions of men and women who are intimately familiar with the diseases and disorders of the ear.

The following data give a general profile of the principal investigators on the research projects receiving DRF grants.

Principal investigator's degree: M.D. or M.D. 12 Ph.D. or M.S. 20

Principal investigator's age: 36-50 1 51-60 5 31-40 14 41-50 2 36-40 9 51-60 1

Principal investigator's department (overlapping for joint appointments): Otolaryngology 5

AAS Becomes the American Auditory Society

With this issue, the AAS changes its name to the American Auditory Society. The name change is incorporated in the new by-laws which were recently voted on by the membership. The result of the balloting is as follows:

To Adopt By-Laws: 212
To Keep Original By-Laws: 5


c Ms inappropriate Mailings: 9
Abstention: Total 554

The name change, plus the more flexible By-Laws, will allow the AAS to extend into all fields of inquiry and to allow a larger variety of disciplines to hold dialogue together.

This issue of Corti's Organ is addressed to prospective members. A new wave is part of the great increase in the number of oto-laryngologists who are interested in the varied approaches to hearing that are represented in this organization. To this end we are simplifying the membership application. All one needs to do is send us the form on page 14, and the Society's secretary will obtain signatures from present members in the same geographical area.

So we urge all professionals, whether they be oto-laryngologists or psycho-linguists, or psychologists, or linguists, or engineers—if you care about hearing, join the American Auditory Society.

The Life and Times of Alfonso Giacomo Gaspar Corti

Collette Ramsey's Magnificent Obsession

JOIN UP!
Become a member of the American Auditory Society

Fill out the form on page 14 for application for membership.

AAS Goes AUDITORY! Results of ballot, page 1
AAS Salutes the Deafness Research Foundation in its 20th year pages 1, 9

FIRST CLASS

American Audiology Society 1985 Second Road Dallas, Texas 75220

Collette Ramsey (Mrs. Robert C. Ramsey)


Q: Tell us about the surgery
Ramsey: That was in 1952, the second ear in 1954, when Dr. Julius Lempert had perfected the fenestration operation. I was found to be a suitable candidate for surgery, and I asked him to perform it on me. The chances of improvement that were quoted to me were to two out of three chances. That was good enough for me. I went in for the surgery eagerly and hopefully. At first I had the usual dizziness following surgery, but thank the Lord, when the packing and dressing were removed I COULD HEAR! I per- haps had as good a result from the fenestration operation as it's possible to obtain from a very bad condition. I had to learn to be a little more careful in being able to hear well for the first time that I could remember! I was simply filled with gratitude that this miracle could have happened to me. Grateful that I had a conductive type deafness that could be helped by modern surgery rather than nervous deafness for which there was no medical or surgical means to restore hearing.

Corti: And then you remembered your voice?
Ramsey: Indeed I did. That accomplishment was a private thing between myself and my Maker—but I have been mindful of it ever since. Actually it hasn't been "hearing"—it has been a great joy and a source of deep inner satisfac- tion. Next to my husband and family, DRF has been the most- spring of my life. Without my husband, my life would have not reached to as high a point as it has. The hope that lies ahead for millions of the deafened, as
Letter from England

I am trying to follow in the footsteps of the great Alashtar Cooke whose world-famous "Letters From America" have occasionally been written from England. My letter will not be written "from England" but "from America." Spring this year has reminded us strongly of England and it has been more "rainy California"

Centurion Club Open to Professionals

DBP is unique among foundations in that its operational expenses are borne by a group of professionals called the Centurion Club, which has been largely supported by audiologists who have contributed $100 annually to the DBP. The money has not been generally known, but it is now open to audiological professionals at a reduced rate of $5.00 per year. Thus, audiologists, psychologists, speech pathologists, electronic engineers—indeed, anyone interested in the hearing field—can contribute to the support of the DBP. The payoff is the knowledge that all of the income from the capital funds of DBP can be devoted to its chief goal—the support of our research. Any research profession has been the recipient of DBP research funds. It is time that this group of the profession be recognized for its contributions. We urge every ASHA member to become a Centurion by sending his $5.00 to:

The Centurion Foundation
362 Madison Avenue
New York, New York 10017

Sentea Meeting Announced

The annual meeting of the Society of Ear, Nose and Throat Surgeons, in Atlantic City, will be held at the Eileneo, Santa Barbara, California on October 7 and 8, 1978. The deadline for abstracts for papers will be on June 15, 1978. Papers on the following topics will be given preference:

- The Effect of Moderate Hearing Loss on Language Development and Educational Achievement
- The Effect of Moderate Hearing Loss on Learning and Academic Achievement

Society from what might have become a bad situation. So from the "picaresco"—we salute you gentlemen and ladies, and thank you for being the kind of people we want to continue to associate with in this organization. We hope you'll find the "auditory society" a little more comfortable to live with, as we believe, we will.

Saludos, amigos

MPJ-RR
The Life and Times of Alfonso Giacomio Gaspari Corti

By Ren J. Hoester

Associate Editor

Most antologists, osteologists, and others who have studied anatomy and physiology, when thinking of Corti, remember him only for his organ, the organ of hearing that he is credited with first describing. Born June 22, 1852 near Pavia, Italy, the Marchese Alfonso Giacomo Gaspari Corti was the eldest son of the Marchese Gaspare Giacomo Corti di Sant Stefano Belbo di Marconia. In 1851 Ulisse (1851) states that the Corti family had an old and impregnable line. In fact, a young nobleman bearing the Corti name was born in 1075 and in 1170 Henry II rode into the city of Pavia. Another Corti was a Ghibelline Castellan, and another a friend at court to Galeazzo, Charles IV's visor. Another, Young Alfonso's grandfather, had taken his sword against Napoleon.

Although many of the Corti family foresaw that they would be friends of the arts and the pursuits of science to follow painters, sculptors, poets, lawyers, engineers, and artists, and, of course, the first of Pavia and Bologna, the historian Guazzetti wrote that he could be compared only with the great Hippocrates and Galen.

But Alfonso's father had other plans than medicine for him. Instead of fostering his love for anatomy and physiology and studies in anatomy, botany, botany, and physics, the Marchese made him study the humanities. In this area his parents planned for him to add to the name of Corti and indeed so it would also enhance his mother's name as well. The Malpignian family had several noted介者

As a boy he spent his formal school years in Pavia, Italy, from 1859 to 1867. He was a student of medicine. He was 22 years old when he was given his diploma. The young medical student began medical studies. In dietetics, he had been taught in his master's degree. He was received his doctor's degree and at the end of that year he was chosen as Corti's second professor. Ulisse (1851) states that Corti's interest in the auditory system was piqued by a condition termed the cataract of the cataract. In the cataract the cataract was the condition where the erythrocytes were abnormal. One of the erythrocytes was a cataract, and the other the erythrocyte.

Upon questioning Hyrtl about the specimen, Corti was told that after spending fifteen years on the work that Hyrtl had barely scratched the surface on discovering how the ear worked. In fact, it was not even known what section of the ear was responsible for hearing. Hyrtl did not even know if it was the cochlea or the semicircular canals that was responsive to sound.

The real difficulty seemed to be in the way that the ear was worked. Before the specimen could even be put under the microscope it first had to be removed. Therefore, an instrument was made of lime and bone.

In January 1856, Corti began his studies with the examination of an early discovery of the mechanism of hearing. In his first endeavor he explored the function of the human ear. He dissected a dog's ear and in his second attempt he discovered the cochlea. In 1857, Corti published his findings in the Societe de Biologie.

In 1837, Alfonso was 22 years old, of his students, 24 years and 22 years old. By 1844, he was an established name in the medical world. He had been elected to the Societe de Biologie, a scientific society, and the Academy of Sciences, a scientific society, in Paris, and the Academy of Sciences in Paris in 1851.

A better published in 1844 was to the medical world. He had been elected to the Societe de Biologie, a scientific society, and the Academy of Sciences, a scientific society, in Paris, and the Academy of Sciences in Paris in 1851.

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Corti had to be therefore a member of the wedding of his long time friend Rudolph Virchow in Berlin, and visited the occasion to visit with Schroeder Van der Kolk and Harting in the Netherlands.

During the visit Harting, Corti, and others were engaged in and discussing the preservation of delicate specimens. It was stated that to keep from freezing, such materials must be suspended in fluid. What fluid. Harting mentioned several with different constituents. Most of all, however, he was engaged in and discussing the preservation of delicate specimens. He stated that to keep from freezing, such materials must be suspended in fluid. What fluid. Harting mentioned several with different constituents. As far as aqueous, he was engaged in and discussing the preservation of delicate specimens. He stated that to keep from freezing, such materials must be suspended in fluid. As far as aqueous, he was engaged in and discussing the preservation of delicate specimens. He stated that to keep from freezing, such materials must be suspended in fluid. As far as aqueous, he was engaged in and discussing the preservation of delicate specimens. He stated that to keep from freezing, such materials must be suspended in fluid. As far as aqueous, he was engaged in and discussing the preservation of delicate specimens. He stated that to keep from freezing, such materials must be suspended in fluid. As far as aqueous, he was engaged in and discussing the preservation of delicate specimens. He stated that to keep from freezing, such materials must be suspended in fluid.

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Salute... Continued from page 1

Two Reversibly Ototoxic Drugs... Continued from page 1

Inter-Noise 78
Proceedings Published

An A800-page volume, "Designing for Noise Control," has been published and is available to those concerned with environmental noise and its control. "Designing for Noise Control," the Proceedings of the 1978 International Conference on Noise Control Engineering contains the papers presented at INTER-NOISE '78 and its affiliated symposium, the National Institute of Noise Control Engineering and organized by INCE-U.S.A. The Conference Secretariat was the responsibility of Noise Control Foundation.

More than 400 engineers and other individuals concerned with noise control attended INTER-NOISE '78 at the Third INTER-NOISE Meeting held in California. The previous six INTER-NOISE Meetings have been held in Washington or overseas. The theme of INTER-NOISE '78 was "Designing for Noise Control." The 1980 page book of Proceedings, edited by Conference Chair Dr. M. S. Bailey, contains papers covering all branches of noise control, in-plant noise control, transportation noise control, instrumentation and analysis, noise abatement, etc.

The authors of the Conference was a series of five Distinguished Lectures on several successful noise control projects. The special lectures were: "Acoustic Engineering" by Richard H. Bolt; "Noise Reduction by Design" by D. A. Lynn; "Standards and Criteria for Noise Control" by Kenneth M. Feders, "Uses of Sound Power Level" by Peter K. Bande and "Impact Noise from Industrial Machinery" by E. J. Richards. Special presentations highlighted the theme of the Conference, and the text of each paper has been published in a special issue of Noise Control Engineering.

Copies of the INTER-NOISE '78 Proceedings are available from INTER-NOISE '78 P. O. Box 366, Arlington Branch, Poughkeepsie, NY 12603 U.S.A. The prepaid price is $5.95. Overseas orders must be paid in U.S. dollars. Shipping costs are also payable in U.S. dollars.
The Second International ELK'S Conference

Bob Galambos, San Diego, and Maurice Mendel, Santa Barbara.


Halowell Davis, C.I.D. and Martha Rubin, Lexington School for the Deaf, N.Y.C.

George Mencher of Halifax and Bob Cooling, Elk's Club of Canada.

THE ISRAELI CONTINGENT: George Mencher (currently on Sabbatical in Jerusalem); Mordecai Himmelfarb, otolaryngologist from Hadassah Hospital in Jerusalem; and Lilly Tel, audiologist from Hadassah Hospital in Jerusalem.

Burt Jaffee, Boston; Bob Coulling, Elk's Clubs of Canada, with The Canadian Minister of Transportation.


Don Worthington of Bay's Town, Omaha; Lynn Bressler, arranger of the Conference; and Mick Moore, Seattle.

Burt Jaffee, Boston, with Jean-Marie Aran of Bourdeaux, France.

Terry Pictin and Canadian representative.
A Minority Report of the Impedance Task Force

Editor's note: In our last issue we published the Recommendations for Impedance Testing of the Task Force of the Vanderbei Symposium. A substantial minority of the Task Force (almost 30%) disagreed with the majority vote, and have submitted the following letter to the editor to register this protest.

Letter to the Editor:
The Task Force from the Symposium on Impedance Screening for Children (Nashville, 1977) examined an enormous amount of time, effort, and energy in their formation of Recommendations for impedance screening. However, consensus was not reached on all issues and we believe that the final recommendations clearly demonstrated the old adage that "a camel is the result of a committee trying to design a horse." We do recognize that the final product represents many serious interests from several professional points of view concerning impedance screening and ear disease. It is our intent in this letter to the editor to express viewpoints of some members of the Task Force which were not included in, or are not in the final set of "Recommendations From the Task Force." First, and foremost, we oppose the Task Force statement that "At the present time, and until additional information has been developed, the Task Force does not recommend the use of impedance measurements for universal mass screening of middle ear disease in children of any age group." This statement is in contradiction to what several members of the Task Force have reported that much of the current pulsion for mass screening was motivated by the need for early identification and management of this prevalent disease. It is inconceivable that a set of referral criteria and other guidelines for impedance screening, as set forth by the Task Force, but at the same time, identifying "unacceptable" children, would not have been taken into account because the impedance screening procedure "needs further development," but rather because there is considerable uncertainty about the appropriate guidelines, and the identified pathologic condition.

We understand and acknowledge that middle ear effusions are frequently transient and self-resolving; however, cases contributing to over-referral in screening programs. However, at the same time we are of the opinion that sufficient information presently exists to formulate specific referral criteria. We believe it is necessary to develop a public health program, and while we did urge the Task Force to advocate impedance screening as an essential screening procedure, we believe it is necessary to promote a program with the appropriate guidelines and referral criteria.

We do acknowledge that additional research is needed before mass impedance screening can be advocated. Much of the data which was collected by the Task Force was obtained "clinically" rather than in research programs, and therefore, not truly representative of the population for which screening measures are intended. In addition, the radical change in the impedance instrumentation during the last few years; primarily in electronic components, this has made the equipment and screening procedures very expensive.

We have studied the correlation between CMV infection and congenital deafness. This correlation is difficult to establish because the screening program at the same time, we support, rather than discourage use of impedance screening as a means of increasing the wealth of information which would be generalized.

We also find that the recommendations for initial screening failure must be revised. The Task Force's statement that "…child with a "no-mobile" TM" flat tympanogram, with an absent acoustic reflex on the screen should not be referred until six weeks" is not supported. We agree that a "no-mobile" TM (flat) tympanogram, as well as absent acoustic reflex, is a consistent finding at the current time, and this does not confirm the presence of pathology. Such findings on initial screening should be cause for immediate referral and medical evaluation. They should also provide the opportunity for including appropriate counseling in the audiological evaluations.

In summary, we reiterate our belief that the appropriate guidelines, and the Task Force recommendations provide the appropriate guidelines for Task Force discussions. However, we feel that the final recommendations of the Symposium do not reflect the consensus of these Symposium participants. We hope our few words will be considered in the discussion of the issues.

Alan S. Goldstein, New York
Jerry L. Northern, Denver, Colorado
Laura Wilkes, Evanston, Ill.
Virgil M. How, Huntsville, Alabama

NICOLET CA-1000...

for evoked response measurements in situations where the use of conventional behavioral audiometry is not practical.

Evoked response measurement protocols are especially useful for patients who are unable to accurately describe their sensory experiences because they are retarded, comatose, suffer neurological disorders, or are normal, but anxious.

Auditory evoked response measurements involve the use of click or tone burst stimuli at various intensities, frequencies, durations and frequencies which are used to non-invasively record electrical activity along the auditory pathway.

Some typical applications include:

2. Middle ear latency components measured using tone burst stimuli to check specific cortical responses over a wide range of frequencies.
3. Electrocorticography using click or tone burst stimuli to evaluate conductive hearing loss.

The result of the auditory evoked response measurement is a precise waveform where the elements of interest are the amplitude, latency, and morphology under various stimulus conditions giving the examiner a valuable tool for diagnosing hearing problems.

The CA-1000 is a complete portable system including stimulus generators, acoustically shielded headphones, recording electrodes, preamplifier, signal averager computer with built-in oscilloscope display including accurate numerical readout of latency and amplitude, recorder for permanent records and a convenient equipment cart.

For complete details of the CA-1000 system or to arrange a demonstration please call NICOLET.

References:

Salute!

"A Clinical Study of the Relationship between CMV Infection and Congenital and Acquired Deafness."

With studies of temporal bones and of cortical stimulation in affected persons, this project will produce important information on the role of CMV in the development of congenital and acquired deafness.

Middle Ear: Physiology
G. O. Proulx, M.D. University of Iowa
Dues Increase
The AAS Executive Committee recently voted to increase dues by $4.00 per year in the following years: 1979, 1980, 1981, 1982, and 1983. The reason for the increase was increased costs of the Journal of the American Auditory Society.

With the ratification of the new By-Laws, future changes in dues will be voted on by The Society Members at the next Executive Committee.

References:

Continued from page 21

Kansan Medical Center, Department of Radiology, University of Kansas Medical Center, Kansas City, Mo.
"The Study of the Relationship between CMV Infection and Congenital and Acquired Deafness."

Examining the effects of stimulation in children with congenital and acquired deafness and the use of corticosteroids may help to unravel the exact correlation between CMV infection and congenital and acquired deafness.

Middle Ear Infection and Disease
Robert L. Saxe, M.D. University of Iowa
"The Study of the Relationship between CMV Infection and Congenital and Acquired Deafness."

Using immunologic methods to study the effects of bone destruction in chronic otitis media, this project may indicate the role of CMV in the development of chronic otitis media.

For complete details of the CA-1000 system or to arrange a demonstration please call NICOLET.

Continued on page 7

2525 Verona Rd, Madison, Wisconsin 53711
Telephone: 608/271-3328

NICOLET INSTRUMENT CORPORATION
Pass through coursework without being influenced by her contributions. Thousands of patients, especially grateful for her concern and wisdom have benefited from her devoted effort to better their lives.

For recognition as an outstanding educator, clinician, author and progressive advocate for the hearing-impaired, Mrs. Downs has been honored by her professional colleagues and peers. Today, in continued recognition of a warm, sensitive human being concerned with the betterment of life for those handicapped by deafness, it is with great affection and pride that the Board of Regents of the University of Colorado honors Marion P. Downs by awarding her the University of Colorado Medal.

Mrs. Downs holds ASHA certification in Audiology, is a Fellow of the Association and has been very active in state, national and international audiological activities.

Marion Downs

Salute...

Continued from page 6

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Mrs. Downs holds ASHA certification in Audiology, is a Fellow of the Association and has been very active in state, national and international audiological activities.

Former President of the American Audiology Society, Marion P. Downs, was honored by the University of Colorado for her contributions to the field of audiology.

Mary B. Meikle, Ph.D. University of Michigan Health Sciences Center, "An Animal Model for Electrical Stimulation of the Cochlea" (Ted yr).

In this important effort to establish a valid animal model for evaluation of single unit responses—electrical stimulation of the cochlea, the investigator has established the difficult guinea pig as a suitable model, and has finished mapping the specific zones corresponding to the turns of the cochlea.

Electrophysiology


The investigator has already worked with 15 animals, the initial results giving a clearer understanding of the complex make-up of the after-potential. The peak, e.g., was reached at the instant sound has completely stopped, and at the moment it begins to stop.

Embyology and Genetics

Peter Heywood, Ph.D. Brown University, "Selected Ultrastructural Aspects of Inner Hair Cell Development in the Guinea Pig" (Ted yr).

A study (also cytochemical) of certain aspects of cochlear development in the fetus, this project will contribute considerable information on the development of hair cells, and the changes that occur during the growth of the cochlea.
HEARING...

Audiowhere's dedication to the Hearing Impaired

The Human Ear performs one of man's most demanding functions—listening. So when a hearing loss affects listening and a hearing aid is needed, only the best is good enough.

Audiowhere has made a commitment to produce the highest quality hearing aids possible. To insure lasting performance, only the finest, most durable materials are used. Each component is thoroughly tested before passing a demanding system of quality controls.

Since 1949 Audiowhere has served the needs of the hearing impaired. Such technical advances as Audiowhere's CUSTOM FITTING and MULTI-PLATE AUGMENTED DEVICES hearing aids help the hard of hearing enjoy a fuller, more active life.

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Salute... Continued from page 1

The nature of the membrane-bound cells of the vestibule.

William F. Mansel, Ph.D., Mt. Sinai School of Medicine-New York, "Ect Differention" (2nd yr.)

This project is studying the development of normal and abnormal in oocytes in the mouse.

Thomas Van de Water, Ph.D., Albert Einstein College of Medical New York, "Fate Mapping of the Mammary Gland in Vivo" (2nd yr.)

Having completed the time-lapse mapping of the normal mouse oocyte in culture, the project is now mapping the growth of the kind of mutant mouse oocyte, as a first model for abnormal development; these delineations of the sites of origin of the same ovary structures of the embryonic inner ear provide remarkable evidence for the study of congenital deafness.

Histopathology
Joseph R. Holak, Jr., M.D., Honolulu, HI.

"Electron Microscopy of Human Inner Ear" (1st yr.)

This electron microscopic study of the temporal bones from people with normal hearing and with various kinds of nerve deafness should provide important ultrastructural information on what actually happens in the inner ear, especially when combined as this is with sound clinical and audiological data for each donor.

Implant
Richard A. Wollberg, Ph.D., University of Oregon Health Sciences Center, "Behavioral Evaluation of Single-Tissue Implants in Cats" (1st yr.)

Having implanted the multi-channel electrodes in the cochlea, the investigator has increased the sensitivity of the behavioral controls on the limits of electrical stimulation and is now concerned with the crucial demonstration of latency differences for changes in frequency in the stimulation.

Neuropsychiatry Neurophysiology
Joseph M. Flataut, Ph.D., University of Minnesota, "Receptor Potentials and Neural Response in Acoustic and Lateralis Sensory Cells" (1st yr.)

Aimed at clarifying the effects of noise and drugs on the transmission process as a step toward understanding the neural coding of this process, the project's technical goal is to relate the microphonic response of hair cells to single-im responses through a simultaneous recording.

Eileen S. Kain, Ph.D., University of Pennsylvania, "Identification of Neurones in the Lower Auditory System of the Cat" (1st yr.)

A broad, sophisticated study of the problems of neuron transmission and the development of nerve synapse in the cochlea, the project should help us understand how auditory information received in the peripheral cochlea is processed at the central.

Michael J. Lynch, M.A., State University of New York, "Central Conduction of the Stapedius Muscle of the Cat" (2nd yr.)

Directed toward locating, enumerating, and studying the motor neurons in the brainstem which supply the stapedius muscle in the middle ear, this project...
Meet Ted Beck DRF’s Executive Director

He’s the kind of guy you’d like to sit down and have a beer with, and talk football and baseball. But ask him about Ear Research and he’s off to the races. This is the man who has been DRF Executive Secretary for 20 years. He’s learned all about deafness, about what will help people who are deaf, and how the kinds of information professionals need to fight deafness. And he talks about it with an engaging enthusiasm that stems from a love of people and ideas.

It’s his energy that engages people with a new kind of physical and mental energy. The ideas keep bubbling up, as if they were in you, and you become an expert with them as he is. During a fairly brief tenure he produced a top-notch newsletter for theReceiver and put out several excellent information pamphlets. And kept up a constant flow of announcements and promotional materials.

Ted Beck became Executive Director of the DRF in November 1979 after a dozen years as an English professor at the University of Nebraska. Before that, he was president of the American School for Deaf Children and before that he was a first-year professor at the University of Connecticut.

But you’ve got to look at him in historical perspective. The 1950s and 1960s were the days when hearing aid manufacturers used to advertise their wares as “off the shelf” to those who were “hard of hearing.” This meant that the hearing aid manufacturer was simply giving the hearing clinician the instructions for fitting the hearing aid. The hearing clinician was responsible for the final fitting of the hearing aid. Today, the hearing aid manufacturer is responsible for the final fitting of the hearing aid. The hearing aid is designed to fit the individual’s ear and not the other way around.

Salute...

Continued from page 1

The greatest success obtained by the two research teams in Audiology has been the development of a new objective audiometry technique called the “amplaid.” This technique uses an electrostatic speaker to produce a series of pure tones. The hearing aid is designed to fit the individual’s ear and not the other way around.

Amplaid’s International Immittance and Evoked Response Symposia

The greatest success obtained by the two research teams in Audiology has been the development of a new objective audiometry technique called the “amplaid.” This technique uses an electrostatic speaker to produce a series of pure tones. The hearing aid is designed to fit the individual’s ear and not the other way around.

The speakers at the Auditory Evoked Responses Symposium: from left to right: A. C. Holland, D. S. Sammons, A. J. Asterhan, D. F. Grandori, J. B. Meguro, G. K. Elberling, G. D. Golub, and M. C. Lederer. The symposium was held in conjunction with the 3rd International Symposium on Auditory Evoked Responses, the results of whose research and studies and of their further analysis of auditory electric potential recordings were presented in this and in 1979.
**Book Reviews**


*Are we really going to have a National Health Insurance Plan? What form will it take? Are doctors  practicing more preventive medicine because of escalating malpractice suits? What can the government do to control malpractice suits? Are PHSO here to stay? How far is medicine responsible for preventive health care?*

These and other relevant questions are answered rationally and intelligently in a special issue of *Science* devoted to Health Care. The editors have chosen their authors and topics selectively to reflect the best opinions available on the current health care controversy. Its relevancy is indicated in an overview showing that the "health industry" accounts for 9% of the gross national product and is one of the three largest industries in the nation. But the likelihood of a comprehensive government-owned and operated system like those in these European countries is low.

What is advocated here is national health insurance which should be an "aggressive buyer of health services," rather than a "race insurer that protects people against the cost of medical care. For example, the national health plan would seek out, without any barriers of age, employment, insurability, or past health history, the medical services that people need. The overall cost to the individual would be distributed among all the people who use the same services, which would be financed by the government or through insurance. This would eliminate the problem of "cost shifting," which would be eliminated entirely. An interesting concept, but one that is not feasible in practice. The editors chose their authors and topics selectively to reflect the best opinions available on the current health care controversy. Its relevancy is indicated in an overview showing that the "health industry" accounts for 9% of the gross national product and is one of the three largest industries in the nation. But the likelihood of a comprehensive government-owned and operated system like those in these European countries is low.

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The Seventh Annual Convention of the Southern Audiological Society will be held at the Monteleone Hotel in New Orleans from August 23 through September 1, 1979. The program of technical and scientific papers will be on hearing aids. For con-

vention information, please con-
tact Ray Verone, Ph.D., Audiologist and Speech Pathologist, Veterans Administration Hospit-
al, 1611 Poydras Street, New

orleans, Louisiana 70116.

Boys Town Institute
Scientific Dedication

The Communication Disorders Institute of Boys Town in Omaha will be dedicated October 4, and it is a special scientific conference entitled "Childhood Communication Disorders: Present Status and Future Priorities". Honored guests will be Dr. John A. Breslow and Dr. Thomas L. Smith.

Dr. Patrick Broderick, Director of the Institute, has announced a distinguished faculty that includes well-known international participants: Dr. Jan Taylor of England, Dr. Jan Beutels of Poland, Dr. Oskar Liden of Sweden, Dr. Paul Fletcher of England, and Dr. Harold Everett of Denmark. In addition some fifty leading clinicians, educators, researchers and health planners from this continent will be featured speakers.

Attendance at the conference is by special invitation only, due to the limited auditorium seating space.

Burchfield Elected To Better Hearing Institute Directorship

James R. Burchfield, Sertoma Foundation president and prac-
ticing Columbus attorney, has been elected to the board of the Better Hearing Institute (BHI), a nonprofit educational organization dedicated to informing the hard-of-hearing and others about hearing loss and available hearing help. The announcement was made today by BHI President Ralph Compagna.

Collette . . .
Continued from page 4

sufficiently to merit vastly increased support from federal or other sources of funding. In 1960 we saw that one of the most impor-
tant things we could do for oto-
ynology was to establish a network of temporal bone labora-
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stant input of temporal bone for us. So after one my wife, Dorothy, has three children.

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Sataloff Elected to BHI Board of Directors

Dr. Joseph Sataloff, prominent Philadelphia ear, nose, and throat surgeon, was elected to the board of directors of the Better Hearing Institute (BHI) today. Sataloff's appointment was made by BHI President Ralph Campagna.

Sataloff said he has always been very proud to be a part of the American Medical Association (AMA) and the American Academy of Ophthalmology and Otolaryngology. He now hopes to bring his expertise and experience in treating hearing loss to the board of BHI.

Sataloff is a professor of otolaryngology at Jefferson Medical College and visiting professor at the University of Maine. He is the executive editor of the American Journal of Otolaryngology and the editor of the American Journal of Otolaryngology: Head and Neck Surgery. He has also written numerous articles on hearing loss, hearing aids, and other aspects of audiology.

Sataloff's appointment to BHI's board is significant because of his experience in the field of audiology and his commitment to improving the lives of those with hearing loss.

AAS ANNUAL MEETING

NOVEMBER 17th

SIR FRANCES DRAKE HOTEL

SAN FRANCISCO, CALIF.

Program:

TIME

7:30-9:50 a.m. Executive Committee
9:00 a.m. Registration Opens
10-12:00 Scientific Papers
12:00-1:00 p.m. Lunch
1:00-2:00 p.m. Carhart Memorial Lecture (Dr. Scott Rose)
2:00-2:30 p.m. Wine Break
2:30-4:30 p.m. Scientific Papers
4:30-5:30 p.m. Business Meeting

Preregistration Form

Name __________________________________________
Address ________________________________________
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AAS Member [ ] Yes [ ] No

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Special Membership Offer

The membership qualifications for AAS include signatures of two active members of the society. Until September 1, 1978 we will accept applications without accompanying signatures for applicants who do not know the names of two active members if they are sent on the form below.

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Send $25.00 to cover dues for 1978. When complete, return to: Ross J. Rooser, Ph.D.
Secretary/Treasurer
American Audiology Society
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Please indicate which is your PREFERRED mailing address: Home [ ] Professional [ ]
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Calendar of Events

**JULY**

**12-14**
ELECTRIC RESPONSE AUDIOMETRY COURSE, University of Nebraska Medical Center. Contact: Richard L. Moore, Center for Continuing Education, University of Nebraska Medical Center, 860 NE 42nd St., Omaha, Nebraska 68198.

**17-22**
28TH ANNUAL INSTITUTE IN OCCUPATIONAL HEARING, Osseo, Minn.

**AUGUST**

**4-11**
1ST ANNUAL COURSE IN NOISE MEASUREMENT AND CONTROL, Osseo, Maine. Contact: NMC Coordinator, 1721 Pike Street, Philadelphia, Pennsylvania 19103.

**FIFTH BRITISH ACADEMIC CONFERENCE ON OTOLARYNGOLOGY,** Birmingham University, London. Contact: V. Hammond, FHCS, 95 Harley Street, London W1, England.

**SEPTEMBER**

**1-4**
THIRD ANNUAL CONFERENCE OF AUSTRALIAN SOCIETY OF AUDIOLOGISTS, Marquarie University, Sydney. Contact: The Public Relations Officer, Mr. Gary Walker, Audiology Development Section, National Acoustic Laboratory, 5 Hickson Road, Millers Point, N.S.W., Australia.

**OCTOBER**

**15**
AMERICAN SPEECH AND HEARING ASSOCIATION ANNUAL CONVENTION, San Francisco.

**16**
AMERICAN SPEECH AND HEARING ASSOCIATION ANNUAL CONVENTION, San Francisco.

**26-29**
ACOUSTICAL SOCIETY OF AMERICA FALL MEETING, Honolulu, Hawaii.

**DECEMBER**

**2-4**
SOCIETY FOR EAR, NOSE AND THROAT ADVANCES IN CHILDREN ANNUAL MEETING, Santa Barbara, California. Contact: Dr. Robin Cutler, Children’s Hospital Medical Center, Eilh is and Bethesda Avenues, Cincinnati, Ohio 45229.

**1979**

**MARCH**

**3-10**
XII COLORADO OTOLARYNGOLOGY WORKSHOP, The Mark at Val, Contact: Colorado Otolaryngology Workshop Committee, Box 1326, 420 E. 9th Avenue, Denver, CO 80220.

**MAY**

**17-19**
INTERNATIONAL SYMPOSIUM ON THE HEARING IMPAIRED CHILD, University of Cincinnati Medical Center. Contact: Allan R. Sodt, Children’s Hospital Medical Center, Eilh is and Bethesda Avenues, Cincinnati, Ohio 45229.

**JUNE**

**20-27**

**NOVEMBER**

**16-20**
AMERICAN SPEECH AND HEARING ASSOCIATION, Atlanta, Georgia.

**ACOUSTICAL SOCIETY OF AMERICA FALL MEETING, Salt Lake City, Utah.**

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CORTI’S ORGAN

The Official House Organ of the American Auditory Society

Vol. 3, No. 4
October, 1978

The Amer. Tinnitus
Asso. Lists Prominent
Board Members

The American Tinnitus
Association was founded in 1975 by Dr. Charles Unice of Downey, Califor-
nia, with these goals: (1) to collect information about tinnitus; (2) to disseminate tini-
tuss information; and (3) to support research in tinnitus. It is this organization that certifies
individuals to do the testing and recommends the masks for tinnitus
sufferers.

As Bob Johnson explains in the interview on page 2, there will be a
number of training seminars for Tinnitus certification this year.
(See page 3 for a complete list.)

AAS Annual Meeting
Starts Early On Nov. 17

An unusually large number of
submittals of papers at this year’s
annual meeting has necessitated
an earlier start than usual for the
program. It will begin at 10:00 a.m. at Sir Francis Drake Hotel.

Scott Reger
Scott Reger To Give
Memorial Lecture

The Honorable Mark O. Hatfield,
United States Senate, Washington, D.C.; Robert W.
Hock, National Chairman ATA, Hocks Laboratories, Portland,
Oregon; David M. Plant, 25th-29th
Street, San Francisco, California; and, Charles Unice, M.D.,
10602 Harley Avenue, Downey, California 90241.

A large crowd is expected to
hear Scott Reger’s lecture as well
as the large number of excellent
reports that will be made. The
complete program can be found
on page 9.

Awards To Be Given At
AAS Annual Meeting

The University of Texas at Dallas
P.O. Box 903
Richardson, Texas 75080

Ken Berger
Shares His
Hearing Aid
Fantasies With Us.

(See page 1 and 2).

Many people have been actively involved in the Tinnitus project at
Kresge Research Labs in Port-
land, and an all acronym
Journal of Audiology. Dr. Scott Reger is a member of the Journal of
Audiology. Dr. Scott Reger is a member of the American Auditory Society.

Scott Reger

The annual Raymond Carhart Memorial Lectureship has been
awarded to Scott Reger of Iowa. To Reger rightfully belongs the
title of First Audiologist in the U.S., for he has been an active
auditory research and as one of the first audiologists.

In 1983 he published the
classic manual with Newhart on
school screening, and was later
1997 involved with Newhart in
a report on group audiometers in
screening programs.

Reger is a member of Phi Beta
Kappa, Sigma Xi, the American
Otorhinolaryngological Society,
and is an Honorary Fellow of the Ameri-
can Academy of Otalaryngology.

It is thus a pleasure for AAS
members to present Dr. Reger to a generation of audiologists who may not have
fully appreciated his immense influence on the field. It will be a
real privilege to hear one of the truly greats of Audiology.

His lecture will begin at 1:00 p.m. November 17 at the Sir Francis Drake Hotel. (See program on page 9.)

Bells Are Ringing
For Jack Vernon

The many people who have been actively involved in the Tinnitus project at
Kresge Research Labs in Port-
land, and an all acronym
Journal of Audiology. Dr. Scott Reger is a member of the Journal of
Audiology. Dr. Scott Reger is a member of the American Auditory Society.

Jo Annris

Jo Annris of the Auditory Society, is a member of the American Auditory Society.
The New Tinnitus Team Member... Bob Johnson

Since June there has been new activity in the tinnitus clinic at Kenge Labs in Portland. Bob Johnson is a big man physically, mentally and professionally and his presence will stir things up on any staff. With his coming the group is launching a large scale training program which will extend the skills and knowledge of the Kenge group to any professionals who are interested.

In an interview with Cort's Organ, Bob explains the direction of the new program and how one can get involved in a tinnitus program.

Q: Tell us how you happened to get interested in the tinnitus work and how you became a part of the team.

A: I always have been interested in the area of tinnitus. However, I didn't actually get involved in it until Jack decided that he should have an audiologist aboard to help him with the tinnitus program, which had expanded considerably from what it had been in the first couple of years. He called last December and asked me if I would be interested in making a change and joining him up in the Portland area to become involved in this kind of a program. So after flying to Portland and looking at the program I decided to devote at least the next few years in working with the tinnitus program with Jack. It has certainly turned out to be a good professional change for my part. But for me we are involved in a tinnitus clinic in which Jack and I share the responsibility. Up to this stage we have not only had a clinic for the tinnitus patient but as you know we have also had a training program which meant bringing in anywhere from 4-10 observers a day. Those observers were generally either otolaryngologists, radiologists or hearing aid dispensers. The program up to this point has been one in which the person observes what is going on in the clinic - an informal type of a program where much of the time was spent answering questions of the observers and trying to supply information. Both Jack and I have felt that this has detracted both from the observer program and from the clinical program, in that what we were trying to do is to give time to both elements and actually probably not spending enough time as we

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Random On Hearing Aid Fitting (While Shaving)

Knecht W Berger Speech and Hearing Clinic, Inc.

Most of the world's religions and numerous other groups have some idealization of the hearing aid. Meditation provides a means of reflecting on letting one's thoughts wander through possible future actions, while briefly blotting out the din of the world's activity. My non-theologian meditation period is each morning, while shaving with an ancient three-theologed electric razor. Without casting suspicion on the products of Messrs. Grasen and Stadler, this old razor makes environmental sounds more efficiently than their costly model 7001 audiometer.

In addition to masking by the use of music, the ideal situation is an excellent period for meditation as such. It requires minimal concentration to the look at hand, that chore having been repeated so often as to become automatic. By now I've shaved 1,187 times (based on 365 days per year x 38 years) give or take a few, since shaving can become an avocation while camping out. But on a few special occasions, especially my birthday, when shaving was in the evening was deemed advantageous, a number of random thoughts about hearing aid fitting have rambled through my head, without any paralyzing effect on them, for whatever their worth, are shared with the reader.

What A Hearing Aid Is Not

A typical textbook definition of a hearing aid is that it is an electronic device having the effect that it is a wearable electronic amplifier, specifically designed for assisting those with hearing impairments. This definition may be correct, but it does not indicate how the assistance is accomplished. A more complete definition of a hearing aid would also mention that it responds to incoming acoustic signals, modifies them, and conveys them to the ear.

The modification and efficient delivery of these signals will, ideally, enable the user to hear things better, to use them more efficiently, and to be able to use them better. The main point is that it is the function of a hearing aid to change or replace any of the acoustic environment, which is opposed to the hearing aid; it merely delivers the modified acoustic signal to the ear.

If one accepts the preceding statement it follows that the hearing aid is not a prosthesis. A plastic or metal skull can be used to replace a damaged system, but, and therefore, is a prosthesis. An obturator may be used in the case of a cleft palate, and is a prosthesis. A hearing aid meets neither the dictionary nor the medical definition of a prosthesis. A hearing aid is a device which modifies the acoustic environment; it does not prosthesis device only conforms to the definition of a hearing aid.

The Federal Food and Drug Administration has recently ruled that a hearing aid is a medical device. Thus, legally the hearing aid is now so classified, by regulation rather than by legislation.

The reasons for the P.D.A. classifying the hearing aid as such seem obvious. A hearing aid is usually little squared with its motive. However, the rationale is less obvious. The purpose of the hearing aid is not a medical treatment. Instead, the hearing aid is an option (a) when surgery or medical treatment cannot correct the hearing problem, or (b) when the individual chooses not to have medical or surgical treatment that might correct the problem. After all, medical and surgical treatment have been dis-Named the same as those of other audiologists.

An analogy on this point may be worthwhile. Analogs are often of assistance in argumentation, to confirm one's biases, perhaps be-concealed until a faked or misused (male). (On that subject I am an acknowledged expert). He can seek the advice of a skin specialist regarding the removal of moles or whether to have surgery to alleviate his problem.

Should the dermatologist conclude that malignant growths or surgery is appropriate the individual can then properly decide whether to purchase a toupee. The toupee would seem to be no more a "medical" device than the hearing aid itself, even if the message that surgery is necessary or that surgery is too expensive may be delivered as a marketing strategy.

One while trying to make certain my graying sideburns were of equal length I began medi-tating about medical devices, in the process of shortening the right sideburn I was considering how to restore to the pure tone audiometer as a "medical audiometer." The pure tone audiometer has no distortion evident, is so to the audiometer as the non-invasive or outside medical use. The pure tone audiometer also is now calibrated to ANSI (1969 standard), of course, is used in the broad medical diagnostic of hearing dis-orders. In addition to diagnostic use, medical use as well as non-medical, results obtained with it also used for purposes of pro-gress and comparison, by unaided and by aided. What was once considered impossible might even have been to use the "medical" audiometer for non-medical simple melodies. For example, with it one can approximate the first phrase of The Star Spangled Banner. Such would be fascinating and amusing, seeing this non-medical use of the audiometer on the Gong Show is frighteningly real.

Consider the tuning fork. This was invented in 1711 by John Shore to Assist musicians in tuning their instruments and to test the hearing of friends the next time the topic of conversation turns to trivia: is it still used by musicians for the same purpose. A century later however, these tuning forks are used for testing hearing. New, are otolaryngology using a tuning fork. In fact, if Carlo Pansini, his brain on the operation of a tuning fork, it would need to be tuned or so the musician or be used for practicing medicine without a license? The point, now well beyond, that a hearing aid, while not a medical device, is marketed as a "medical device" to point to the similarity of the usage to which it is put.

Building and Testing Sound Pressure Level

Meditating about the audio-meter leads directly to (or have hearing level) (HL) and sound pressure level (SPL). The measure-ment and charting of auditory behavior may be on the basis of either, and each has its advan-tages as well as disadvantages. Wernicko's area can't distinguish Hi, from SPL, so the choice be-tween the two is readily of that the operator of the test device and those who will use the resulting data and act accordingly or fail.

Suppose on a frigid winter morning you glance and note that one thermometer reads 32°F Fahrenheit and another thermometer reads 32°C (or Celcius). Regardless of the thermometer or equipment used, you are not a fool, or a warm, by using one of the other. Why? Because the reading on the thermometer is not the only of a hearing aid.

One while trying to make certain my graying sideburns were of equal length I began medi-tating about medical devices, in the process of shortening the right sideburn I was considering how to restore to the pure tone audiometer as a "medical audiometer." The pure tone audiometer has no distortion evident, is so to the audiometer as the non-invasive or outside medical use. The pure tone audiometer also is now calibrated to ANSI (1969 standard), of course, is used in the broad medical diagnostic of hearing dis-orders. In addition to diagnostic use, medical use as well as non-medical, results obtained with it also used for purposes of pro-gress and comparison, by unaided and by aided. What was once considered impossible might even have been to use the "medical" audiometer for non-medical simple melodies. For example, with it one can approximate the first phrase of The Star Spangled Banner. Such would be fascinating and amusing, seeing this non-medical use of the audiometer on the Gong Show is frighteningly real.

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continuous pure tones for free field testing. Under these conditions the test room is well sound treated and the sound level will be 66db higher than the original. If the output noise is close to the noise of the test room it will be 66db greater than the original. If the output noise is close to the noise of the test room it will be 66db greater than the original. If the output noise is close to the noise of the test room it will be 66db greater than the original.

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AAS Members And Others

At The American Academy of Otolaryngology

Las Vegas, Nevada

Eldora Dusseau & Ralph Naunton

Ron Melasser (left) and Dick Bostel.

Eugene Dzirtzick, C. Michael Keo, George Reed & Bobby Alford (standing).

Rod Perkins showing Project HEAR

Aram Gleig and wife Anne. with Vernon Erkenbeck.

Wayne Staah

Nanette Fabrey signing & selling "Over the Rainbow".

Irwin Klar (left) & Ludwig Michael

Eldora Dusseau, Maria Di Pinto, Sue Keo and Harris Pomerantz.
Noise Control

NOISE CONTROL ENGINEERING, the technical journal of the Institute of Noise Control Engineers, has published Volume 11, entered its 6th year of publication.

The handsome, Surely, edited by Professor Malcolm J. Crocker of Purdue University, is the only magazine published in the United States which prints refereed articles concerning exclusively with noise control.

Continued from page 1

Bells Are Ringing...

A new concept and a new phenomenon in the "residual inhibition" idea you proposed.

Q: That's a very important comment that one must make to patients. If you make the demonstration to patients the automatic thing that pops in their mind is "what if I mash all day long?" No it is not linear. We don't know the laws of residual inhibition and we're still trying to define the laws. Now there is some tendency for the period of residual inhibition to increase as you increase the number of cycles, that is the masking process.

As for the music, we have four, six, or eight as many as a dozen patients who are getting very long periods of residual inhibition. For example, there is a lady here in town who puts on her maskers at 8:00 in the morning and wears them until 1:00 or 2:00 and then, she is free of tingling or residual until 4:00 in the afternoon. Then she puts the maskers back on and wears them until she goes to bed. We have a patient in Spohr skala whose masker is on all day and just changes, dressing and going to work... still puzzled a lot of times... then he has twelve solid hours of no tingling. He has had a twenty year history of tingling. Some of these patients are asymptomatic for very long periods, and yet the patient, please don't expect that as part of your relief program. The only relief that you can reasonably expect is in that which you experience during the masking itself.

Q: You have identified 5 different types of effective masking protocols, is that true?

A: We started out with only 1, and I realized that we had about 300 degrees off course on this thing. I thought that all we needed to do was get a hand of noise into the ear and real the only requirement is that it not go down very far into the speech frequency band... I was a little too high with that. We had a sample of 113 patients, 76% of them are above 2000 Hz, and that would have been a very clear signal that we would have to start below 2000 Hz. There may sound like a bad choice but it will turn out that a very high percentage of tingling is above 2000 Hz. Indeed, a sample of 113 patients, 76% of them are above 2000 Hz, and that would have been a very clear signal that we would have to start below 2000 Hz. There may sound like a bad choice but it will turn out that a very high percentage of tingling is above 2000 Hz. Indeed, a sample of 113 patients, 76% of them are above 2000 Hz, and that would have been a very clear signal that we would have to start below 2000 Hz.

And if you look at the data you found that you've very quickly ran into a situation where the original wide-band masker goes about 2000 or 1800 Hz to 500 Hz, simply did not cover a lot of people, mainly those who were above 2000 Hz. Then we started emphasizing to the industry that we needed maskers that go higher. They did find a new transducer, that would go up to 1800 Hz in Holland, rather than being high trouble with that. So we developed for us what we call the high frequency masker, which goes up to 3000 Hz or 3500 Hz. We have continued to emphasize the need for high frequency and very recent audiostreaming produced a high frequency version of the masking thing.

Continued on page 6

Random Thoughts...

Continued from page 1...
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(612) 835-4400

Bells Are Ringing...

Continued from page 5

coll super high or something. It starts around 3000 and some of them go up to 14,000, some of them to 10,000, some of them to 17,000 and indeed about three or four weeks ago we covered up a young patient who had tinnitus at 15,000 Hz. That's one of the highest we've ever seen and yet we could successfully cover up his tinnitus: he is now going back to school, after quitting, and is now in Law School to complete his professional career. In addition to those three measures, there is a low frequency measure that starts at about 1600 Hz and goes downward. We don't see much low frequency tinnitus because we ask that only severe cases be referred here. I think that low frequency tinnitus rarely happens because the other frequencies are higher and there is plenty of low frequency ambient noise around, so that low frequency tinnitus tends to get masked out pretty much as a normal consequence. But we do see it. Out of our 512 patients, I think we've seen 11 or 12 that have tinnitus below 1600 Hz. The fourth one is a combination unit, a combination of a hearing aid and a masker. That unit was really invented for us by one of our patients, who lived in a very loud house and used to turn on the masker and then turn on the hearing aid, and the sound of the masker made it possible to hear. We have not had much success with that, and patients who are really hard of hearing, by plugging in the ear canal and putting a lot of energy in there, Harry Zimmerman at Las Cruces, New Mexico really invented the procedure, excluding the ear and then putting the tube through the occlusion muddling so that they can't get a hearing aid into the ear. He has been successful in some patients and some patients are really interested in that. And you can imagine, if you have tinnitus in the ear, it's really interesting to have a masker like that, and you can imagine, if you have tinnitus in the ear, it's really interesting to have a masker like that. But you can imagine, if you have tinnitus in the ear, it's really interesting to have a masker like that.
New Team Members

Continued from page 2

should have with either group. Therefore, with the added interest in the training program through out the country, a decision was made to change the way in which the certification program was run. Rather than having the candidates work out on the road and gather groups of independent organizations we are now doing the training program for us. The AAO will provide the candidates with the certification, and they will be able to work in groups as desired.

Q: Where will you be?

A: We will be at the special interest tables instead of having a program. There will be tables and daily sessions for each of the certified audiologists, and we will be able to get information from them. There are also some opportunities to see what is being done in the area of audiology, in the very near future, hopefully starting in January. The purpose of the conference was to start up the certification program which will be able to be done by the audiologists who will be able to attend our meetings.

Q: Where do you expect to take advantage of these workshops?

A: These workshops will be primarily for audiologists and audiology aid practitioners, and we will have sessions on audiology and the hearing impaired, and we will have sessions on the hearing impaired.

Q: What courses will you attend at the American Tinnitus Association?

A: The courses will be in audiology and audiologists, and we will have sessions on the hearing impaired, and we will have sessions on the hearing impaired.

Q: What do you see as the future for the Tinnitus Clinic?

A: As far as what's going to happen in the future, we have several research projects and we have talked to many of the people who are involved in these research projects. There is so much about the Tinnitus that has been discovered over the past year. The main emphasis of the project is to help many people in all three disciplines will be very active in the program.
James Korel at California State University at Chico is working on a grant from the Office of Education (HEW) entitled Evaluation of a Method of Hearing Screening of Infants. The work grew out of the previous clinical and laboratory experience gained through a project initiated by HEW with him while he was at SRH. The test stimuli were selected and calibrated at that time and a series of initial studies were conducted and reported. The TV tape recordings of 36 infanies were recorded by Dr. Robert Sandlin and his co-workers at the Speech, Hearing and Neurosensory Center in San Diego under Korel's direction at that time.

The proposed project is designed to evaluate observer's ability to identify stimulus-response chains for infants exposed to auditory stimuli. The technique of video recording provides material which can be used for objective analyses of an observer's ability to identify a stimulus-response chain. Establishing this chain is fundamental to understanding the behavioral sciences. The advantages of using a recorded event for analysis are:

1. It permits evaluation of the judgment that a response occurred without confusing the judgments with a prior knowledge of stimulus-response set by several judges or by the same judge on several occasions, thereby providing estimates of inter- and intra-judge variance. Third, it allows for the determination of behavioral changes associated with the test stimuli. And fourth, the recorded material may be used for training observers to recognize responses that may both occur and mislead a judge to associate a behavior response with the test stimuli. It allows for the objective determination of behavioral responses associated with stimulus at different age levels.

GORDON'S FIRST LAW
If a Research Project Is Not Worth Doing At All, It Is Not Worth Doing Well.

Special Membership Offer

The membership qualifications of AAS include signatures of two active members of the society. Until January 1, 1979, applications will be accepted without accompanying signatures, provided that they are sent on the application below. The secretary will contact active members to obtain the signatures.

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Send $29.00 to cover dues for 1979. When complete, return to:

Ross J. Roese, Ph.D.
Secretary/Treasurer
American Auditory Society
1985 Inwood Road
Dallas, Texas 75235

Please indicate which is your PREFERRED mailing address:

Home  Professional

If you wish to obtain the 1978 issues of the Journal of The American Audiology (Auditory) Society and Corti's Organ, check this box and send an additional $25.00.

Happy Anniversary at the 19th Otology Audiology Workshop at Vail include, standing left to right: Linda Perrera, Tam Nordo, Martha Simon, Dr. and Mrs. David Down, Paul Yostock, and seated, Kathy Blair and Janet Zarenich.
Annual Meeting Schedule

Sir Francis Drake
Empire Room
San Francisco

November 17, 1978

7:30-9:50 Executive Committee Meeting
9:00 Registration opens
10:00-12:00 Scientific Papers
Darrell Teter, Ph.D.
"Tension That Never Should Have Been Ordered"...
Gail Harzech, M.A., David Riddel, Ph.D., Kim Williams, M.A.;
Steven Harwit, M.D.
"The Effects of Continuous vs. Pulsed Signals on Acoustic Reflex Decay"...
Roger Funck, Ph.D., Debora Furci, M.S., Ernest Nilo, Ph.D.
"Effects of Prophylactic Cervical Pressure and Seal on Acoustic Reflex Magnitude:"
Ulf Rosenhall, M.D.
"Hearing Loss Following Menigitis:"...
Robert Mackay, M.A., Thomas Towsend, Ph.D.
"Reliability of the SSI In Hearing Aid Evaluation:"...
William Hyl, Jim Curran
"Performance of ABC Hearing Aids:"...
Richard Navarro, Ph.D., Peter Ivory, M.S.
"A Comparison of Custom In-The-Ear Hearing Aids:"...
12:00-1:00 Lunch

1:00-2:00
Scott Reger, Ph.D.
Carhart Memorial Lecture "Origin of Clinical Pure Tone Audiometry in The United States."...

2:00-3:00 Scientific Papers
John Williston, Ph.D.
"A New Look at Evoked Potentials"
Clifford Olsen, Ph.D.
"Threshold Prediction Based on Motor Reaction Time:"...
Gerard Mellenberger, M.A., Bobbie Corbin, M.S.; Gerald Dastow, M.S., John Cobb, M.S.
"Measurement of Central Auditory Processing Skills in Children:"...
J. Donald Harris, Ph.D.
"Computer Assisted Audiology:"...
3:00-3:30 Wine Break
3:30-4:30 Scientific Papers
Jack Vernon, Ph.D.
"Problems Associated with Masking Tinnitus:"...
T.E. Burton, Ph.D., W.H. Moore Ph.D., S.R. Clark MSC.
"Treating Tinnitus with Electrolymographic Feedback:"...
F. Blair Simmonds, M.D.
"Automated Neural Hearing Screening:"...
4:30-5:30 Business Meeting

Siemens introduces two new hearing aids
two new hearing aids
more versatile, simpler-to-set than ever before.

Siemens Hearing Instruments, Inc.

Preregistration Form

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Any Questions?
To get full details on Siemens new, versatile hearing instruments, write to Siemens Hearing Instruments, Inc., 660 Liberty Avenue, Union, New Jersey 07083, 900-631-7660.

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Send before Nov. 8 to:

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Impulse Noise Standards Needed, Concludes 3rd ICBN Congress

Report from Freiburg
W. Dixon Ward, Foreign News Letter

Development of an acceptable standard to limit exposure to impact and impulse noise appears to be the most pressing problem facing the members of the Noise and Vibration Hearing Team of ICNEN (International Commission on the Biological Effects of Noise) during the 3rd International Congress on Noise as a Public Health Problem held at Freiburg im Breisgau, West Germany, on Sept. 25 through 28. Data relating hearing loss to steady noise exposure are now adequate to allow us to specify what exposure limit will restrict hearing losses at audiometric frequency X to less than Y dB. However, the complex nature of the data and the arguments in this area have become quibbling over what values of X, Y and Z should be used (for example, read the editorial in the July-August issue of S. V.). However, the field of impulse noise enjoyment has shown advancement. Development. Present exposure limits that merely put a curtail on the instantaneous pressure of pulses from firearms and devices such as explosive drivers or guns are now being developed by forging machines, thus ignoring their duration and spectral characteristics, are clearly incorrect. The present USA limit of 16 dB, for example, puts cap guns some 20 dB over the top. ICEN is composed of eight Teams that collectively cover the effect of noise in air, water, and soil (with workers in each having individual influences) on hearing loss, communication, physiological and psychological function, task performance, sleep, and community attitude. Each Team is composed of up to 12 experts in the area concerned, no more than two of whom can be citizens of the same country.

The formal goals of ICEN are to encourage international cooperation in the study of the biological effects of noise, to promote communication among researchers, governments and agencies, industries and workers, and others regarding these effects, and to stimulate the exchange and dissemination of information about them. The informal goals are to encourage all nations to accept and become involved in community guidelines. These goals are achieved through meetings, symposiums, an official journal, a newsletter, and a newsletter. At these meetings, each Team reviews the progress. If any, in the last year or so, given the nature of current research, and discusses the direction that, in their opinion, research should take on the international level.

Impulse noise is not, of course, the only problem in the area of noise and hearing. However, it was apparent that little progress has been made in some directions since 1972, when the previous Congress was held in Dubrovnik, Yugoslavia. For example, the International Noise Research Committee has initiated an effort to predict the attempts to predict susceptibility to noise-induced hearing loss or to differentiate hearing losses caused by long-term exposure to noise caused by trauma, disease, or aging. Nor has a major effort been found that would reduce auditory damage, although encouraging results were reported by R. Bolinas de Korneck South (New Mexico) and H. G. D. B. S. (St. Louis, Missouri) with inhaled carbon monoxide (5% oxygen, 5% carbon dioxide).

The lack of correlation, in experimental animals, between the conditions of hair cells and the behavioral threshold threshold (in earphones and audiometers) was a particular problem. This has led to a search for measures of auditory ability that are more sensitive to such physiological damage as the pure-tone threshold and a search for tests that, unfortunately, was not successful.

In view of the Hearing Team presentations, Ross Coles (EYH, Southampton, UK) stressed the need for studies in (1) to test the role of other factors weighting noise (such as noise reduction in storms), (2) to determine the interaction between hearing loss, eye protectors, and response to warning signals, and finally, in agreement with the other presentations (3) to determine the true incidence of hearing loss in random samples of the population of every country accompanied by thorough follow-up, so that, by eliminating from this sample all persons with significant industrial noise exposure, one can obtain an accurate estimate of the amount of hearing loss caused by non-occupational noises and by diseases, drugs and industrial chemicals. Coles also discussed the practical problem of getting workers to wear protective devices in industry. A dramatic increase in use was produced by a program that involved asking workers to wear protectors on one day and not on another. measuring the auditory fatigue on both days, and then showing each member the effect on his own thresholds.

A persistent theme that appeared in several Team presentations was the possible link between noise exposure and hypertension, a relation suggested by the early research of the Chairman of ICEN and the organizer of the Congress, Gerd J. Hast (Mannheim, Germany). Paul Kaupisch (Amsterdam) reports a greater incidence of hypertension in high-noise (7000 vs. 1200 m) than in low noise (2000 m) areas, measured directly in one study, and inferred from sales of drugs for hypertension in another, and Sheldon Cohen (Oregon) found higher blood pressure in school children near Los Angeles International Airport. On the other hand, Alex Cohen (New York) found no relation between Hearing Levels and hypertension per se in workers in a paper making plant. It is clear that work in this area should be expanded.

The Sleep, Performance and Noise in Wildfire Teams are struggling to find long-term effects on consistent effects and to familiarize themselves with George Thomas' work in Ottawa, Canada, but not by Meret and Ehrhart in Strasbourg, France. Furthermore, V. L. G. H. (Czechoslovakia) showed that results obtained in the laboratory are not always confirmed when responses of test subjects are recorded in their own houses. Although the majority of ICEN members seem still convinced that noise must have some effect on sleep and task performance, this degree of skepticism is clearly still unclear.

By contrast, the Community Reaction Team has no problem showing that annoyance is engendered by noise. Unfortunately, the degree of annoyance, although to some extent dependent on a host of factors, is still so unpredictable in the specific individual that only group tendencies can be relied on. Indeed, measurement of annoyance during noise exposure to a difficult problem that most investigators in the Congress were confused to merely divide the data, providing the highest annoyance, and the remaining. In my opinion, the most interesting development in this area was the demonstration by J. B. Glidlehead (London, UK) that the for sleep nighttime "puzzle" used in the USA for calculating annoyance is probably far off the mark. Instead of a 15-dB penalty for noise occurring between 11 p.m. and 7 a.m., as calculation of our Life dictates, his study suggests that we should attach only about a 5-dB penalty in noise between 11 p.m. and midnight or 1 a.m. - TV-viewing hours among other activities - with the rest of the night not

As there were no parallel sessions, business took as much of our time-unusually at least 10 hours a day (if some sessions) that the only social event was a banquet dinner on the last night of the Congress. However, this night was still an excellent opportunity for the participants to discuss future plans. The proceedings of the Congress, to be edited by Tobis, Hazen, and myself, will appear as an ASRA monograph by, we hope, next spring.

The next Congress is planned for Baku, perhaps in Turin, Italy, or somewhere in France. It is hoped that firm plans can be made within a couple of years, although perhaps we can be sure to bring several Russian scientists, and they had accepted, apparently a year or two years after the same time, in addition to getting through the Sarajevo Red Cross.

Bells Are Ringing...

Continued from page 5

developed specifically for tinnitus. Biofeedback has also been reported to be successful in treating tinnitus.

Q. Why would patients accept masking? Why would patients object to their internal sound and accept an external sound?

A. To many patients and to many physicians it does sound like a weird state of affairs. I have a few patients who I don't know if hearing masking was indeed quite acceptable to the patient or perhaps more, that it was not the external sound an uninteresting sound and we could routinely shut off external sounds when they are not interesting to us. And what we can do up a patient's tinnitus with an external sound will he automatically more his own sound, and this is very hard to do normally, such as in severe tinnitus. Secondly, most of the tinnitus is in high pitched tones and people are using, achieving high pitched tones, and this is quite unacceptable. We are also using, up with a band of noise and it is much more acceptable, much more pleasant and easier to tolerate than that piercing tone. Then the third reason we have is that the psychological, is that for the first time it gives the patient an element of control over his tinnitus. By adjusting the balance of the masking sound they have control over their tinnitus which they have never had before.


continued from previous page
New Institute Healing Hope
Booklets Offer Hope to Nerve Deafness/Tinnitus Sufferers

WASHINGTON, D.C., October 9, 1979: "Nerve Deafness and You," by Gale Gardner, M.D., and "Tinnitus, or Head Noises," by Norman Lee Barr Jr., M.D., F.A.C.S., new booklets now available from the Better Hearing Institute, help dispel myths and provide much needed information on two major hearing disorders affecting more than 40 million Americans.

Sponsored by a special supplemental grant from Knowles Electronics, Inc., the attractive, well-crafted booklets should be very helpful to members of the hearing health team in their public information efforts. Both booklets can be used by audiologists, otolaryngologists, general practitioners, hearing aid dispensers, audiologists, schools, social clubs, and others for Paul Vanier, Jr., M.D., Lindsay L. Pratt, M.D., Steven W. Vargh, M.D., Bruce A. Siegenthaler, Ph.D.

FOR FURTHER INFORMATION CONTACT:
Pennsylvania State University
Kent R. Adkins, Conference Coordinator
430 J. Oral Deans Bldg.
University Park, Pa. 16802

Margaret W. Skinner, Ph.D.
F.J. Martin, M.D.
David P. Pascoe, Ph.D.

Book Reviews

-IV INTERNATIONAL SYMPOSIUM ON ACOUSTIC IMPEDANCE MEASUREMENTS
Lisbon, Portugal, September 26-28, 1979
(Calouste Gulbenkian Foundation)

- The topics of the Symposium will include:
  1) Impedance screening in children
  2) Tympanometry
  3) Acoustic and Non-acoustic reflexes
  4) ExactaScope Tube evaluations
  5) Other applications of acoustic impedance measurements

- The Symposium will be divided into:
  Lectures: 45 minutes
  Exposures: 30 minutes
  Free papers: 30 minutes
  Round tables: 30 minutes

- The following invited guests will be present:
  J. Barajas (Spain), DN Brooks (UK), Vencamp (Belgium),
  Danemark (Norway), Alan Fedman (USA), G. Preys (France), M. Gerschart (Belgium), J. Holmgren (Sweden),
  Niemeyer (West Germany), G. Linden (Sweden), A. Moller (Sweden), J. V. Norten (USA), T. Marseea, A. Rosina (Italy),
  T. Broek (Denmark), and E. Eicher (Israel). (F. Cala (Methods),
  A. Mannos (Spain), Oroumbo Costa, F. Des (Menn)

- Languages: the working language will be: Portuguese, English, Spanish and French.

For More Information Write: Organizing Secretariat
Clinic For Audiology
Rua Conde Rodondo 119-30 LIOBA - Portugal

-IV SYMPOSIUM ON THE APPLICATION OF SIGNAL PROCESSING CONCEP'TS TO HEARING AIDS
March 22-24, 1979
SPONSORED BY: Pennsylvania State University, Speech Pathology and Audiology Dept.
CHAIRMAN: Paul Yanick, M.A.
THEM: Rehabilitation of Sensory/Neural Hearing Loss

SPEAKERS:

Gerry A. McDowell, Ph.D.
Gary Stelmach, Ph.D.
Paul Mitchell, Ph.D.
Benoit Bressler, Ph.D.

Joseph P. Millin, Ph.D.
Lindsay L. Pratt, M.D.
Steven W. Vargh, M.D.
Bruce A. Siegenthaler, Ph.D.

Continued from page 7
Gerber and his colleagues at the University of California at Santa Barbara have written a text on infant audiology in which they attempt to provide a comprehen-sive review of the literature we all face in defining, identifying, and assessing the effects of hearing loss in children. This team should be acknowledged for assuming such an overwhelming undertak- ing. As stated in Gerber's own words: "at first I had thought to write the entire book myself, but then I decided to solicit contribu-tions and looked about for the most qualified people. I am very proud that these people turn out to be my own colleagues at the UCSB Speech and Hearing Center."

The text is in chapters, each chapter beginning with a chapter covering epidemiology and pathophysiology of hearing loss, followed by chapters on risk factors, and then chapters on behavioral and psychological tests of auditory function. The remaining chapters discuss the consequences of hearing impairment in such areas as speech, language, social, and emotional development.

The topic of physiological testing techniques is very well covered in this text, particularly in the chapter on Electroencephalographic Tests of Hearing written by Maurice Mendel, Ph.D. The chapter on behavioral testing techniques seems to be lacking in information and specifics. The book emphasizes psycholographic measures in the area of testing children, in fact it is behavioral techniques and not psycholographic measures that are most often used clinically. It would have been valuable to include more information on how various behavioral techniques are utilized in practical applications.

The chapters dealing with the consequences of hearing loss are good, but it is too bad that the book is not more detailed concerning hearing aids than what is usually covered by most formal training programs, information pertinent to the proper handing of hearing aids and their accessories.

The purpose of this book is "to provide information about the world of hearing aids for the individual who has more than a passing interest in the electrical amplifier as it is used to serve the hearing impaired population."
amplied 707, immittance meter for school and pediatric screening

Portable, exacting, the new amplied 707 provides for absolute and expanded tympanograms, 4 pure tone frequencies for contra- and ipsilateral acoustic reflex testing, and threshold audiometry. Easy to clean probe, especially soft tips and simplicity of operation make the amplied 707 ideal for school screening programs and for pediatric use.

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the specialized line for audiology
A Feast of Auditory Science Features Annual Meeting

Program Chairpersons John Sinclair and Terry Grabik presented a rare offering of scientific papers at the annual AAS meeting in San Francisco. Members agreed that it was the most stimulating program of the Society’s 5-year existence. There was something for everyone in the recital of offerings. And Sinclair, as he introduced the speakers, added a lively wit that gave a special flavor to the meeting. John and Terry are to be highly commended for their excellent conducting of the entire program. Abstracts of many of the papers are to be found in this issue and others will appear in later issues of Corti’s Organ. A number will be published in full length in the Journal of the American Auditory Society.

President Blair Simmons presided at the brief business meeting of the Society. The minutes of the meeting are on page 6.

At the conclusion of the business meeting Evelyn Inn of Hawaii presented President Simmons with a Hawaiian lei and the traditional greeting.

Reger Charms New Generation At AAS Meeting

Scott Reger

Scott Reger, who was a Compliment Audiolologist long before many of his listeners were born, intrigued an audience of younger scientists with fascinating tales of the early days of audiology. In accepting the Carhart Memorial Award at the AAS annual meeting in San Francisco he gave a truly memorable address to the more than 200 members in attendance. He disclaimed having been the First Audiolist in the U.S. despite the fact that his writings appeared in the early 30’s. Cordia Bunch, he insists was a true audiolist even before Reger began to practice.

President Blair Simmons introduced Scott Reger with amusing tidbits of Reger’s life. A picture of Reger’s office showed an enormous number of manuscripts piled upon each other, none of which was ever published. In those manuscripts probably reposed more knowledge than any single audiologist now can boast. Simmons also mentioned Reger’s appeal for classical music, resulting in his wiring his large home so that high fidelity stereo reception could be obtained in any room in his home.

Company which later became the Radioline Corporation. His association with this company was to continue for 35 years, so he celebrates in February 2002 a golden anniversary with Radioline. He was permanently employed there following his graduation, chiefly in hearing aid engineering and design.

Lybarger holds 22 patents which were awarded on a master hearing aid design, dated 1948. This certainly pre-dates any other Master Hearing Aid in the industry. In 1946 he was awarded a patent for a magnetic microphone, and produced commercially the first hearing aid with a magnetic tape. In that same aid was the first telephone pick-up in a wearable hearing aid, pre-dating by eight years the use of telephone pick-ups by other makes of aids.

For many years Lybarger served as advisor to his president and retired in 1974 from that post. Since then he has been active in consulting work related to the field. His professional organizations, in which he is still busily participating, include: Tau Beta Pi, honorary engineering fraternity; Acoustical Society of America—since 1932; International Audiology Society; Institute of Electrical & Electronic Engineering; Sigma Xi.

Audiology Engineering Society: Fellow, American Auditory Society;

(Continued on page 2)
Reger Charm...  
(Continued from page 11)

Sam Lybarger...  
(Continued from page 11)

Letter from England

By Imre Friedman

Dear Editors,

I have begun writing this letter in England. I have just spent some time in the beautiful city of Oxford, and I am now traveling to Cambridge. My work has been very productive here, and I have had the opportunity to meet many interesting people.

I have been studying the history of tuberculosis, which has been a major public health issue in the past century. My research has led me to uncover some fascinating stories, including the role of wealthy patrons in funding medical research.

I am looking forward to continuing my work in Cambridge, where I will be attending a conference on the history of medicine. I am excited to learn from other scholars and to share my research with a broader audience.

Yours sincerely,

Imre Friedman

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Corti's now has Advertising Manager

Terry Stark, an attractive audiologist from the Cajun state of Louisiana, has accepted the position of Advertising Manager of Corti's Organ. Terry is very excited about her new responsibilities and has started a campaign to increase advertising in the publication. So, you potential advertisers, don't be surprised if you hear from her soon. Her address is: Terry Stark, 2131 Avenue, Shreveport, LA 71104.

---

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Three major journals are appearing almost simultaneously in the auditory spectrum: An American Journal of Otolaryn- 
gology, a Journal of Pediatric Otolaryn-
gology, and a Journal of Pediatric Otolaryn-
gology. Each in its way has some unique aspects that fill voids in the otolaryngology field. As 
each will include a great many articles relevant to the auditory field, it is important for AAO 
members to be acquainted with the purposes and editorial policies of these new publications.

The International Journal of Pediatric Otolaryngology
Editor-in-Chief: Dr. Robert J. Robb, The Albert Einstein College of Medicine, 
Bronx, New York

Aims and Purposes:
The International Journal of Pediatric Otolaryngology has a special focus on providing useful information for all those 
in the areas of pediatric otolaryngology who are interested in the care of infants and children. This includes medical, surgical, and medical-surgical 
treatments for otolaryngological disorders in infants and children. The Journal will include those who are involved in pediatric otolaryngology.

The purpose of the International Journal of Pediatric Otolaryngology is to concentrate on and disseminate information concerning the prevention, care, and care of otolaryngological disorders in infants and children.

The Journal will publish original papers, reviews, and case reports on the care of infants and children. It will also publish articles on the care of patients with anomalies and disorders of the head and neck, and diseases of communication, including voice, speech,

and language disorders. All original contributions will be reviewed by recognized national authorities in the field. Each article will be accompanied by an abstract.

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Threshold Prediction Based on Model

Clifford C. Olsen
Central Michigan University
Mt. Pleasant, MI.

Reaction time procedures have evolved over the past several years where it is particularly difficult to obtain a specific behavioral response to a supra-threshold stimulus that is independent of a reinforcement schedule or other variables. As often is the case, the experimenter's design influences the animal's report of the stimulus more so than the sensory input itself (Moody, 1970). Reaction time, therefore, is the most convenient way to study the stimulus response with any specific training. Variations in the latency of the animal's reaction are in a linear manner with respect to changes in stimulus intensity. The latency with which a specific motor response occurs in reaction to a stimulus has been shown to be a valid index of the loudness of such stimuli. Application of this technique to the control of a signal indicates how the latency is a function of both the loudness and the discrimination of the signal intensity. Normal hearing subjects were required to respond to a tone by wearing the standard Békésy method of latency measurement. They faced a display light panel and a telegraph key and were instructed to press the key upon the onset of the "ready" light. Depress the key instantly after the light has been turned on and release it as quickly as possible upon tone onset. RT then became a measure of the latency between tone onset and key release. Monaurally presented stimuli of 200, 1000, and 4000 Hz were randomly presented in all 3 steps between 50 and 90 dB. The reaction time functions obtained from 30 normal hearing subjects for three different frequencies were determined with decreased signal intensity. The data can best be represented by a simple equation of the form: V = a X b, where V corresponds to signal latency, X to signal intensity, and a is a constant corresponding to a linear relationship. A psychometric function, plotted on linear and intensity is such that latency is scaled on the ordinate and intensity along the abscissa. If these axes are reversed it is found that the reaction time function reaches an asymptote as a hearing level corresponding to a threshold latency. The threshold of these functions is a function of the reaction time and sensitivity of the monkeys. The most significant factor that controls the threshold is the absolute latency to the reaction time and latency to the reaction time. If the stimulus is presented in the ear that has been found to be impaired (either conductive or sensorineural hearing loss), the reaction time threshold of this ear is shifted to a higher reaction time latency corresponding to a greater threshold as compared to the normal ear. To test this, the intensity-latency functions were obtained from 10 hearing impaired adults (no conductive) at three frequencies...
Abstracts...

Measurement of Central Auditory Processing Skills
Barbara Cortier

Gerald Dawson
Howard University School of Medicine, Washington, DC

One hundred subjects between the ages of 20 and 60 were included in this study. The subjects were from the following three groups: African-American, Hispanic, and Asian-American. All subjects were given five central auditory processing (CAP) tests. Each test was administered to each subject. The three tests, as described by Wilfong (1970) consisted of an electrodiagnostic task involving sequences of related sounds. Identification of monosyllabic words which have been sent through an electronic filter which is set to pass only those frequencies below 2500 Hz and between 300-6000 Hz is measured by the Word Identification by Picture Identification (WIDP) test is utilized. As in the study by Beamsley, the words presented to our subjects were timed at 24 sec and at a rate of 40 of original time. The final CAP test included in this study was the CAPB, a sequential task with a shortened form of the original Stagner Spontaneous Word Test (SWT) developed by Katz, Burt (1971). This method of the SWT test with hearing disabled children wherein the stimulus is presented at a rate of approximately twenty words/sec. The major purpose of the study was to determine the degree to which 35 of one of the five CAP test results would vary for each subject.

The Reliability of the SSQ in Hearing Aid Evaluations
R. D. Madory
T. H. Townsend
Central Michigan University

The reliability of the Synthesic Sentence Identification test for purposes of evaluating hearing aids of the same category on sensorineurally impaired listeners was examined. Each of ten subjects was tested with four different postauricular aids at five speech-to-noise ratios (SNRs). Data averaged across all conditions was analyzed by calculating the correlation coefficient after the scores were transformed to the tabulated values. The correlation coefficient was 0.75. Also the standard deviation (S.D.) of the test-retest scores was determined to be 8.9. At the SNR of 10 dB S.D. was 16.2. Within this group there was a significant improvement in scores among those of the same change in scores among those of the same S.D. The significant improvement in scores was significantly greater for the data averaged across MCA, and for that one group was a standard age range for test-retest and recent aid.

The effects of Continuance of Pulsed Signals on Acoustic Reflex Decay
Gail Linn

David Roland

St. Louis Med. Center

Previous studies have noted that acoustic reflex tests have become more sensitive in detecting test stimuli. In the present study, the patient was instructed to focus on the stimulus while the reflex decay was measured at a constant rate of one to two seconds. The results of the study indicated that the acoustic reflex was significantly greater for the data averaged across MCA, and for that one group was a standard age range for test-retest and recent aid.

Acoustic Impedance Measurements of Patients with Sensorineural Hearing Loss
Graun Stadler
Middle Ear Anatomy

The effect of the ear mass on the middle ear is recommended that in the assessment of central auditory processing skills of children at least the five CAP tests described in this study be utilized.

Acoustic Impedance measurements were compared between patients with Sensorineural Hearing Loss (SNHL) and a group of normal hearing individuals. The results showed that the high frequency (9 kHz) sound waves had a more profound effect on the middle ear mass than the low frequency (2 kHz) sound waves. These findings indicate that the measurement of the high frequency sound waves is important in the assessment of hearing loss.

An Investigation of Hearing in ACG and Peak-Climping Hearing Aids
William G. Ely

Anthony J. Becker

Maico Hearing Aids

The phenomenon of "listening in the response of a hearing aid has been regarded as a new area of interest. No one has yet offered a precise definition of hearing in hearing aids. The purpose of the present study was to determine if this phenomenon exists in the low frequencies, i.e., as the low frequencies are not analyzed by the hearing aid, a greater amount of amplitudization occurs in the low frequencies in relation to amplification at higher frequencies.

Nonclinical data which maintain a constant frequency response shape at all levels of input, from 20 to 1000 Hz, were presented. The study investigated the relationships of hearing in hearing aids. It has been suggested that a small hearing aid in the ear canal increases the effective sound pressure, and as a result, reduces the effective sound pressure. The results of this study indicate that for the most part, as ear canal pressure increases, the effective sound pressure reduces relatively to maximum compliance, so that the smaller the noise stimulus, the greater the difference between pure tone and noise AR thresholds. Regardless of the nature of the stimulus, the difference between pure tone and noise AR thresholds. Regardless of the nature of the stimulus, the difference between pure tone and noise AR thresholds.

Effects of Probe-Ear Canal Pressure and Seal on Acoustic Reflex Decay
Deborah L. Tuozzeo

University of Virginia Medical Center

Measurement of AR growth has recently been used as a means of assessment of seventh cranial nerve function in patients with Bell's palsy. These procedures have been shown to be relatively different from other reflex pathologies that the mere observation of presence or absence of an AR measurement of its absolute threshold is the superior sensitivity of AR growth in assessing the cause of disturbances that the same measure may be more easily and more objectively measured at the middle ear or the intensity of the probe. The usual use of threshold as an objective measure of the AR, which may not be the case with measurement of reflex growth and other dimensions of the AR.

The present study was designed to determine the influence of relatively small pressure changes in the external ear canal on measures of both threshold and growth of the AR. In addition, the effects of a non-sealed probe upon those same reflex parameters were studied.

Acoustic reflex thresholds (1000, 1000, 2000, 4000 Hz) were measured for each of 20 normal hearing individuals. Individual data were analyzed at the point of maximum compliance and when at the point of maximum compliance, the pressure (in random order) relative to this point: -20, -10, +10, +20 dB. Pressure sensors were stable in 16 of the subjects following the addition of the probe seal. The acoustic reflex thresholds for the stimuli were found to cluster around 48 dB HL when measured at the point of maximum compliance, whereas acoustic reflex thresholds were not significantly affected by the addition of the probe seal. Final, the group of 20 normal hearing subjects presented an average of 5% reflex decay to a continuous tone but little or no decay to a pulsed tone at 2000 and 4000 Hz.

We also observed the lack of acoustic reflex decay to a pulsed signal in a patient with a left sided acoustic neuroma. In this patient, with continued conductive stimulation of the ear on the AM and the G.S. 1232 were significantly greater than 50% reflex decay to a continuous tone but little or no decay to a pulsed tone at 2000 and 4000 Hz.

Analysis of reflex amplitudes as a function of probe seal indicated that no significant change in probe sound pressure level (PSL) was found with the addition of the probe seal. In the analysis of the effect of the probe seal on the acoustic reflex amplitude, it was found that the amplitude of the acoustic reflex was not significantly affected by the addition of the probe seal. The results of this study demonstrated that the addition of the probe seal did not significantly affect the amplitude of the acoustic reflex.

HINMAN'S FOURTH LAW
Necessity is the mother of strange bedfellows.
JAMER'S LAW
If the facts do not conform to the theory, they must be disproved.
ETORRE'S OBSERVATION
The other line measurement.
HOAR'S LAWS OF LARGE PROBLEMS
Every large problem is a problem struggling to get out

(Continued on page 7)
Minutes of the American Auditory Society

San Francisco, California
Date: November 15, 1978
Place: Conrad Hilton Hotel
Time: 2:30 p.m.

Members Present: Dave Bower, Marion Downs, Bruce Graham, Ely Harford, J. Donald Harris, Gil Herer, Norma Hopkins, Suzanne Kos, Sam Lythberg, Russ Rossner, Hiroshi Shimizu, P. Blair Simon, W. Diem Ward, Laura Ann Wilber

Invited Guest: James Berger

Member Absent: James Bentz, Leo Doeffler, Fred Lichfunc, Merle Lawrence, George McCandless

1) President Simmons opened the meeting at 2:35 p.m.

2) The minutes from the 1977 Executive and Business statement for the period January 1 through October 31, 1977 were presented and discussed. There were no revisions.

3) The income and disbursement statement for the period January 1 through October 31, 1977 was presented and discussed.

4) A list of 68 persons who had submitted complete applications for membership during 1978 was presented. This list included applicants' names, highest degree held, and names of two members or two members of the organization. There were 680 applications for membership, of which 68 persons were accepted as members. The list includes those who joined in the January issue of Corti's Organ.

5) A list of 10 individuals with incomplete application was reviewed. Additional sponsors were needed for 14 of the 10 applicants. Members of the Executive Committee suggested that these individuals postmembering and offer to support their applications. These 6 new members will be added to the 68 names to be published in the January issue of Corti's Organ.

6) The name of 3 applicants with completed applications before January 1, 1979 will be sent to the executive committee by mail for approval.

7) Blair Simmons was selected for program chairman for the 1979 annual meeting to be held in Denver, Colorado, in conjunction with the American Academy of Otology.

8) Discussion of the American Auditory Society and the need for an organizing meeting to discuss organizational and administrative issues was held.

9) An alternate meeting on the fund was held.

10) The meeting adjourned at 4:45 p.m.

A M E R I C A N A U D I T O R Y S O C I E T Y
INCOME AND DISBURSEMENT STATEMENT
For Period
January 1, 1978 - October 31, 1978

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<th>Income</th>
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Hand Check Account 1-17-78
Cash on Hand Savings Account 1-17-78
$3,430.07

JAS Allowance
2,000.00

Interest earned on Account
239.45

Selling of Advertising Corti's Organ
951.00

Convention Registration
150.00

TOTAL INCOME
$3,931.32

Supplies
$250.07

Postage-Office
541.49

Postage-Corti's Organ
1,865.00

Duplicating Costs
81.91

Telephone
128.94

Total
$2,446.39

Publications Costs-JAS
11,811.00

Publications Costs Corti's Organ
2,835.67

Bookkeeping and Audit Expense
286.75

Contract Services Office
240.60

Convention Expense
396.11

JAS Income Allowance
2,860.00

Expendable Supplies & Equipment for Corti's Organ
420.39

Allowance for Secretary-Treasurer
200.00

20,781.61

Cash on Hand 10-31-78
$12,680.45

Cheque Account $50,735.00 (see note 1)

1. $8,397.06 for 1979 dues

The meeting adjourned at 9:45 a.m.

Respectfully submitted,
R. Rossner, Secretary-Treasurer

APPLICANTS FOR MEMBERSHIP - 1978

<table>
<thead>
<tr>
<th>NAME</th>
<th>DEPARTMENT</th>
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<tbody>
<tr>
<td>Abol, Debra Berger</td>
<td>Boston, OH</td>
</tr>
<tr>
<td>Arck, Judith</td>
<td>Andover, MA</td>
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<td>Bode, Daniel L.</td>
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<td>Bower, Kerriame</td>
<td>Royal Oak, MI</td>
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<td>Bradley, Scott T.</td>
<td>Beckley, WV</td>
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<tr>
<td>Brewer, Carmine</td>
<td>Washington, DC</td>
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<td>Carman, Anthony T.</td>
<td>Simplot, ID</td>
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<tr>
<td>Campbell, Paul A.</td>
<td>San Antonio, TX</td>
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<tr>
<td>Carey, Ross M.</td>
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<td>Cox, Nancy Anne</td>
<td>Huntington, WV</td>
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<td>Daves, Carol</td>
<td>Jacksonville, FL</td>
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<tr>
<td>Dennis, Kyle</td>
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<tr>
<td>Derlack, Eugene E.</td>
<td>Chicopee, MA</td>
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<td>Di Palma, Mary</td>
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<td>Emerson, Sandra</td>
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<td>Freeman, Douglas C.</td>
<td>Los Angeles, CA</td>
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<tr>
<td>Fussler, Donna</td>
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<tr>
<td>Gold, Ted</td>
<td>Forest Hills, NV</td>
</tr>
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</table>

Respectfully submitted,
R. Rossner, Secretary-Treasurer

(Continued on page 7)


**Membership :**

Rice, Evans K. Edward D. M. D. 1985. L. J. C. & W. E. D. M. D.
Tate, Mark A. Lowell, IN. Ph.D. 1993. J. A. & T. A.
Tate, J. H., Jr. Indianapolis, IN. M.D. 1994. J. H. & J. H.

---

**CHABA Covers Infant Testing**

In an unusual angle of topics for the Committee on Hearing, Speech, and Language Sciences and Biomechanics (CHABA), a press conference on November 18th was held to discuss the latest research in infant hearing and speech testing. The meeting was held at the beautiful new Boy's Town Institute in Omaha, Nebraska. The press conference, which was titled "Evolved Response Audiometry for Infants," was featured by Dr. Robert Galaburda and Dr. Waldo Wood.

Other presentations included a discussion of the effects of noise exposure on infant growth and development, and the evaluation of infant hearing aids. The meeting also featured a roundtable discussion on the latest research in infant hearing and speech testing, with participants from around the world.

The meeting concluded with a panel discussion on the future direction of infant hearing research and the role of CHABA in shaping the field. The panelists highlighted the importance of continued research and collaboration in order to improve the lives of infants with hearing loss.

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**Abstracts**

(Continued from page 3)

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**Katz Presents Workshops**

The University of Wyoming Department of Speech Pathology and Audiology will be hosting a three-day workshop on the SNV and CFS (Staggered Speech Word End) in Competing Environmental Sounds tests on May 3, 4, and 5, 1979. The workshop will be presented by Dr. John Katz.

---

**Example of Non-Blooming Aid**

![Example of Non-Blooming Aid](image-url)

**Example of Blooming Aid**

![Example of Blooming Aid](image-url)

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**Other significant papers on noise were given by such people as Karl Kryter, who reported on the effects of noise on infants, and by William F. Kramer, who described the application of a high risk filter to identify noise threshold risk.**

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**A Comparison of Causes**

In The Ear-Hearing Aids M. Richard Navarro and Robert J. Smirk.

Custom in-the-ear (ITE) hearing aids are not suitable for all individuals. Many audiologists are reluctant to recommend such aids for a variety of reasons. For example, it is not feasible to have four or five custom units built for each patient in order to carry out a comparative hearing aid evaluation. Furthermore, the training of audiologists is still under the impression that custom ITE units are made for those individuals with mild hearing loss, and that the individual is made by a manufacturer. The absence of a standardized fitting approach as well as the number of manufacturers and aids available makes the situation even more complex.
Abstract...

(Continued from page 7)

intriguing questions regarding the nature of commercially available hearing aids and their impact on audiologists and hearing aid manufacturers.

The purpose of this study was to investigate the efficacy of ITE hearing aids provided by different manufacturers.

A comparison of four ITE hearing aids, including two custom ITEs in the fitting of moderate to severe hearing losses, was made. The subjects were 40 subjects with varying degrees of hearing loss.

To identify possible subjective benefits of the ITE hearing aids over traditional behind-the-ear hearing aids, subjective data were collected on a 10-point scale.

In order to evaluate the effectiveness of the ITE hearing aids, audiologists were provided with a pair of custom ITE aids and were asked to rate their performance based on a 5-point scale.

The study was designed to evaluate the effectiveness of three hearing aid models provided by manufacturers A, B, and C.

In a review of the current literature, 10 articles published in 1999 were identified. The results of these studies were synthesized and compared to the results of the current study.

The results of the current study were compared to those of the previous studies, and it was concluded that the current study provided more comprehensive and objective data.

In conclusion, the use of ITE hearing aids is highly recommended for individuals with severe to profound hearing losses. The effectiveness of the custom ITEs provided by the current study was comparable to that of the previously tested hearing aids.

* Hearing aid selection using this measure.


ters was told that the hearing aids would be evaluated in the Consumer Reports hearing aid testing order by using a battery of tasks. Each subject was asked to rate the hearing aids on a 0-10 scale. The task included building binocular instruments and to provide an overall rating of the hearing aids based on their subjective impressions.

The study evaluated the effectiveness of five pairs of custom ITE hearing aids with a patient who possessed a moderate to severe sensorineural hearing loss. The results of four clinical measures were compared to those of the commercial ITEs, and it was found that the custom ITEs provided better hearing aid performance than the commercial ITEs.

The results of the current study were compared to those of previous studies, and it was concluded that the custom ITEs provided better performance than the commercial ITEs. The effectiveness of the custom ITEs was comparable to that of the previously tested hearing aids.

In conclusion, the use of custom ITE hearing aids is highly recommended for individuals with moderate to severe hearing losses. The effectiveness of the custom ITEs provided by the current study was comparable to that of the previously tested hearing aids.


tern of sound quality, accessibility of volume controls and tone settings, signal-to-noise ratio of wind and noise, and usefulness of the speech discrimination.

Table 1. Composite summary of rankings for five hearing aids based on four clinical measures.

This study was conducted to evaluate the effectiveness of five pairs of custom ITE hearing aids with a patient who possessed a moderate to severe sensorineural hearing loss. The results of four clinical measures were compared to those of the commercial ITEs, and it was found that the custom ITEs provided better hearing aid performance than the commercial ITEs.

The results of the current study were compared to those of previous studies, and it was concluded that the custom ITEs provided better performance than the commercial ITEs. The effectiveness of the custom ITEs was comparable to that of the previously tested hearing aids.

In conclusion, the use of custom ITE hearing aids is highly recommended for individuals with moderate to severe hearing losses. The effectiveness of the custom ITEs provided by the current study was comparable to that of the previously tested hearing aids.
Abstracts

Sntauc Abstracts

Sntauc Auditory Function: A Behavioral Means of Assessing One Aspect of Central Auditory Function

Wesley R. Wilson and Allan J. Anderson
University of Washington
Seattle, Wash.

Existing behavioral procedures used in the assessment of central auditory function have been effective in testing children under five to six years of age. In fact recent neuromotor data showing the wide dispersion of scores obtained on children in the two and three years old suggest difficulties in interpretation of scores in children between five and 10 or 11 years of age. Among the problems in application of the existing two and three year tests with children are the dependence on language and the motoric functions imposed by the measurement task. This paper describes a procedure developed that is independent on language as a motoric function imposed by the measurement task.

The Effect of Early Otitis Media on Auditory Achievement

Virgil M. Howie, M.D.
Nurse Sister, Department
James W. Fleming
Millard, Utah
Stanley Meigs
University of Texas
Medical Branch
Galveston, Tex.

Otitis media has recently been established to be more prevalent than anyone ever believed. Development of modern electronic techniques in detecting otitis media makes it important to know whether or not otitis media is needed of any great importance in terms of the audiometric life potential. The following study was designed to test the effects of otitis media occurring in the first eighteen months of life and to evaluate the present educational achievement. Two groups of children were collected from families known to have otitis media; one group representing otitis media and the other group of children with no history of otitis media. Of the eighty children tested, 72 pairs of ears were tested. The pairs were made on the basis of one or more speech sound errors in the style of a possible 12, 13, or 14 deafness. The presence of otitis media in the first eighteen months of life significantly affects the speech development of the auditory system. The first group of children had a mean otal score of 84 per cent, and the second group of children had a mean of 36 per cent. The difference between the two groups was significant at the one per cent level. The results of this study suggest that children who have otitis media in the first eighteen months of life will have a significant effect on their subsequent development of auditory function.
Article Review

Developmental And Psychosocial Sequelae of Chronic Otitis Media

Peter W. Zink, Marvin P. Cohen, and Mark Schapiro


This article presents compelling evidence that severe and recurrent otitis media in early life has a long-lasting effect on the language and educational development of children between the ages of 6 and 11 years. This study managed to avoid some of the problems of other studies in this field such as possible differences in socio-economic levels. Tests were administered and scored by persons unaware of the otitis media status by means of rating scales.

Forty children (average 8.5 years) were selected from a larger group of children of comparable evaluation because of absence or presence of otitis media. Their scores on the Wechsler Intelligence Test for Children-Revised were used to examine the presence or absence of developmental problems, and to measure and continue otitis media during the first three years of life. All children were from white, middle-class backgrounds. Those suspect for general, perceptual, or postnatal CNS injure, as well as those who were psychologically or emotionally disordered were not included in the study. Children with such symptoms were also noted and recorded, but no tests were administered.

The following defects were observed in the 18 children with average IQ scores below 70: high incidence of word and sentence substitution; poor expressive and receptive language, but normal vocabulary, with a vocabulary score of 90 or less, with a vocabulary score of 90 or less. Finally, no children had normal language development.

The following findings were obtained: in both normal and otitis media children, a higher incidence of word and sentence substitution was observed, but not in the absence of language development in children with otitis media. Therefore, these results are consistent with the hypothesis that children with otitis media have normal language development, but that the incidence of word and sentence substitution is higher in children with otitis media.

Science & Sex

According to the text, Science and Sex are the titles of two sections. The first section, "Science and Sex", discusses the number of AAs known about sex, the menopause, and the role of hormones. The second section, "Sex and Science", discusses the relationship between science and sex, and the role of hormones in both.

The role of hormones in sex and science is further explored in the article, with a focus on the effects of hormones on cognitive function and behavior. The author argues that hormones play a significant role in shaping gender differences in the brain, and that understanding these differences is crucial for improving our understanding of sex and science.

The author concludes that further research is needed to fully understand the role of hormones in sex and science, and that this knowledge will be important for improving our understanding of sex and science. The author encourages further research in this area, and suggests that future research should focus on the effects of hormones on cognitive function and behavior, as well as the role of hormones in shaping gender differences in the brain.

The study was conducted using a group of 150 individuals, with an equal number of males and females. The results of the study suggest that sex and science are significantly correlated, and that hormones play a significant role in shaping these correlations.

The study was published in the journal "Science and Sex" in 1978, and has since been widely cited in the field of psychology.

Abstract: This study investigates the relationship between science and sex, and the role of hormones in both. The study was conducted using a group of 150 individuals, with an equal number of males and females. The results of the study suggest that sex and science are significantly correlated, and that hormones play a significant role in shaping these correlations.

The study was published in the journal "Science and Sex" in 1978, and has since been widely cited in the field of psychology.

Cont. from page 11

Minimal Standards for Hearing Aid Performance

Robert E. Sandlin

Vice President

Board of Medical Quality

American Academy of Audiology

State of California

This document is a Technical Report submitted to the Hearing Aid Dispenser Examining Committee of the State of California. It attempts to develop a standard by which hearing aids can be measured on hearing impairment and other factors. Maximum variability is defined in terms of specific criteria to differentiate between hearing aids that are of acceptable and non-acceptable quality. This report represents the work of the Committee and the conclusions reached by the Committee.

The authors of the paper believe that the recommendations made in the paper are reasonable in view of the information available. The Committee is aware of the differences between the various hearing aid standards and recognizes that none of the categories in this paper is the only one. Therefore, the Committee recommends that the various categories be used in combination.

The Committee recognizes that the use of hearing aids is mandatory in the United States and that there is a need for a standard that is acceptable to all hearing aid manufacturers.

The Committee wishes to make it clear that no attempt was made to exclude any of the hearing aid manufacturers from participation in the development of the standards. The Committee believes that the standards developed are fair and reasonable and that they will meet the needs of the hearing aid industry.

The Committee also wishes to make it clear that the standards are not intended to be a replacement for professional care. The Committee believes that the standards are intended to provide a framework for the development of new hearing aids and for the improvement of existing hearing aids.

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hearing impairment, the click is a good indicator of the condition. In some cases, more specific tests can be used, such as the pure tone audiogram. On the other hand, with a hearing aid, the click may be decreased, indicating a potential for improvement.

The brainstem response test is another useful diagnostic tool. It involves stimulating the ear and recording the electrical activity in the brainstem. This test can be used to determine the level of hearing loss and whether the loss is cochlear or not.

Several methods are used to treat hearing loss, including assistive listening devices, hearing aids, and cochlear implants. Early intervention is crucial in order to prevent language delays and other associated problems. Therefore, regular hearing screenings are recommended for all children, regardless of age.

Auditory Processing Deficits in Children With a History of Otitis Media with Effusion

This study was designed to investigate the effects of otitis media with effusion (OME) on auditory processing in children. A total of 30 children (15 with OME and 15 without) were included in the study. The children were tested on a battery of auditory processing tasks, including speech perception, rapid serial naming, and auditory discrimination.

The results showed that children with OME had significantly poorer auditory processing abilities compared to those without OME. This finding highlights the importance of early intervention and the need for targeted intervention programs for children with OME.

In conclusion, hearing loss is a significant problem that affects millions of children. Early detection and intervention are crucial in order to prevent further hearing loss and associated complications. Regular hearing screenings and targeted intervention programs are essential in providing optimal care for children with hearing loss.
Maico Features

Computer Audiometer

A new, 4-color brochure featuring the Maico M-80 Computer Audiometer is now available from Maico Hearing Instruments, Inc., Minneapolis, Minnesota.

This 6-page descriptive brochure provides important information for your company's hearing conservation program. It explains how, by using the M-80 Computer Audiometer, you can cut employee hearing test time by 30% or more, minimize errors, and yet achieve greater accuracy in testing.

The M-80 Computer Audiometer presents an automatic printout of test results for each employee, including step-by-step documentation of each threshold. This data can also be transmitted to your company's main computer. The printout record can become a permanent part of an employee's personnel file, and can assist you should medical compensation questions arise.

For a free M-80 Computer Audiometer brochure with complete specifications, write to Maico Hearing Instruments, Inc., 7375 Bush Lake Road, Minneapolis, Minnesota 55440 or call our toll free number 800-328-0396.

International Symposium on Amplification in Education

An International Symposium on Amplification in Education will be held in Nashville, Tennessee on September 26, 27, and 28, 1979. The purpose of the symposium is to present new research and clinical advances in the use and care of classroom amplification. Some of the topics covered will include: Sensory characteristics of hearing impaired children; Educational uses of amplification; Symposia on classroom amplification, and selection of amplification systems. The symposium will be held at the Nashville Convention Center, with accommodations available at a variety of hotels.

For further information contact: Vanderbilt Continuing Education, 302 Medical Arts Building, Nashville, Tennessee 37212.
Glorig Receives CRS Amplifon Award

Past AAS president Aram Glorig has been awarded the cherished Amplifon CRS Research and Study Center Award. The award, which carries a $10,000 cash prize and an additional $10,000 to the university from which the awardee comes, is bestowed on an outstanding researcher who has contributed to the advancement of hearing sciences and who has made outstanding contributions to the fields of hearing science and hearing aid technology.

The Spring Convention of the West Virginia Speech & Hearing Association will be held April 17-19, 1979, at the Radisson Inn in South Charleston, WV. This year's convention will be highlighted by an outstanding list of guest speakers including Kenneth Berger, Ph.D., Kent State University; Eugene Cooper, Ph.D., University of Alabama; Frederick Darley, Ph.D., Mayo Clinic; Stephen Kaaden, M.S., Pawlina, R.I.; and Derek Sanders, Ph.D., State University of New York, Buffalo, for further information contact Richard J. Squires, President-Elect.

West Virginia Speech & Hearing Assoc. Holds Spring Meeting

Noise/News Begins Eighth Year Of Publication

NOISE/NEWS, published bi-monthly for the Institute of Noise Control Engineering, begins its eighth year of serving the noise control community. During this period, there have been two significant milestones: the passage of the Noise Control Act of 1972 and the Quiet Communities Act of 1977. The Occupational Safety and Health Administration (OSHA) also took important steps towards a revision of its workplace noise regulation and federal agencies such as EPA and DOT have issued many proposals and regulations concerning noise. All of these items have been regularly reported in NOISE/NEWS.

More than 1000 government reports on noise have been listed, and a contract award information is published regularly. Standards and recommendations for noise control are also included. NOISE/NEWS is the only publication dealing with noise control issues that remains an active source of current information.

INCE To Sponsor Noise-Con Seminar

On February 26, 1979, a seminar titled "Noise Control Engineering" will be held at the University of California, Santa Barbara. The seminar will focus on the latest developments in noise control engineering and will feature presentations by leading experts in the field. The seminar will be sponsored by the Institute of Noise Control Engineering (INCE) and will be held in conjunction with the 1979 Annual Conference of the Noise Control Engineering Society (NCEC).

INCE would like to sponsor Noise-Con Seminar

International Electric Response Audiology Study Group Meets

The International Electric Response Audiology Study Group will hold its biennial symposium on the campus of the University of California, Santa Barbara, from Monday, August 6, through Thursday, August 9, 1979. The meeting will be hosted by the Speech and Hearing Center of the University of California, Santa Barbara.

Program: The all-day sessions of the Symposium will be devoted to all aspects of ERA including electrocochleography. New and evolved potentials, cochlear microphonic and summating potentials, frequency following responses, middle ear potentials, and the contingent negative variation will be covered. The sessions will include short lectures, round table and group discussions, and demonstrations of the recording in man of the various evolved potentials. Topics for round table discussions are invited.

Free Volumes Of NCE For New INCE Associates

The Institute of Noise Control Engineering has announced that five volumes (issues) of the bi-monthly technical publication Noise Control Engineering will be given to individuals who become members. The offering is intended to encourage individuals interested in noise and its control to participate in the activities of the Institute. New members will be given the latest issues of Noise Control Engineering, the only publication in the United States which publishes refereed articles devoted exclusively to noise control.

For AAS Membership information write:
Membership - American Auditory Society
1966 Inwood Rd.
Dallas, Texas 75235
Call (214) 783-3036

Received the bi-monthly publication Noise/News in addition to NCE. Noise/News contains articles of broad interest in noise control, reports of federal regulations and legislation, contract information, lists of government reports and other useful noise control information. The Institute of Noise Control Engineering issues Noise/News and is available from the Membership Secretarial, INCE, P. O. Box 3306, Arlington Branch, Poughkeepsie, NY 12603, U.S.A.
Calendar of Events

1975
FEBRUARY
3-4
8-9
15-17
16-17
ELECTRONYSTAGMOGRAPHY AND THE DIZZY PATIENT. Miami, FL. Two-day workshop on testing, interpreting and understanding the dizzy patient, conducted by Darrel L. Peters, Ph.D., and Frederick H. Lanthum, M.D. Fee: $110. Contact: Tracoustics, Inc., Austin, TX 78704 or call 512-144-1901.
16-17
ELECTROEYNGSTAGMOGRAPHY WORKSHOP. San Bernardino, CA. Southern California Ear Clinic. Contact: Dr. David Wilson. Information about private practice Contact: Dr. Harold A. Dettman, Dept. of Speech Communications, Oregon State University, Corvallis, OR 97331, or call 503-738-5500 or 738-5500.
23-24
24-26
MARCH 23
THE 13TH COLORADO OTOLARYNGOLOGY AUDILOGY WORKSHOP. Vail, CO. Tu-Tue, $550; Wed-Sat, $620; Sun-Mon, $220. Contact: Colorado Audiology Association, P.O. Box 1702, Cheyenne, WY 82003.
25-27
TINNITUS WORKSHOP in conjunction with 12th Colorado Audiology-Audiology Workshop.
25-26
MARCH
3-10
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‘Mr. Ear’ To Be Carhart Lecturer

The annual AAS Carhart Lecture is an important event in the audiological community. This year, Aram Glorig, founder and first president of AAS, will deliver the lecture. His work has significantly advanced the field of auditory physiology, and his contributions continue to influence the modern understanding of hearing.

In 1969, Glorig became a key figure in the development of the Otologic Medical Group in Los Angeles, where he developed new techniques for evaluating hearing loss. His work has been instrumental in the development of modern diagnostic tools such as the audiometer, which is used to measure hearing loss.

Glorig was also a leading figure in the development of the American Academy of Audiology, which is the professional association for audiologists in the United States. He served as its first president and was instrumental in establishing the academy's mission and objectives.

The AAS Carhart Lecture is a significant event in the annual meeting of the American Academy of Audiology. It is a testament to the importance of Glorig's contributions to the field of audiology.

Program of the 1979 AAS Annual Meeting

8:00—Registration opens
9:00—Metabolic Mapping of Cortical Activity. William P. Rentelmann.
11:00—Brainstem Evoked Response Audiology Results from Hydroptic Patients. Claude P. Hobelka, Dorsey Ann Flemming, Andrew R. Bappuport, and Gayle P. Riemer.
11:45—Aram Glorig’s Carhart Memorial Lecture: Noise: Past, Present and Future. Sam Lybarger, President
CORTI'S ORGAN is a quarterly publication of the American Veterinary Physiological Society, printed in Dallas, Texas.

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A meeting of the British Society of Audiology was held in London on 28th September. The chairman of the meeting was Mr. M. C. Martin, O.B.E. The following are the obituaries and reports of the meeting:

CURRENT TRENDS IN THE USA

by Samuel P. Lyamburger

Acoustical Consultant Me-Murray, Pennsylvania, USA

Governmental regulation of "medical devices" by the U.S. Food and Drug Administration includes hearing aids. ANSI Standard S3.22 was developed with the aim of providing highly reproducible test methods and is used in FDA regulations to compare actual hearing aid performance to that stated by the manufacturer. One new concept in this standard is the use of the "entrance pressure method" of determining input sound pressure levels.

Other areas of activity in the USA:

"In-situ" measurements of hearing aids using the KE تمام method are currently being made in individuals with hearing aids by dispensers.

Determinable of desirable frequencies for use in hearing aids, the work on Pascoe of particular interest.

Wide-band hearing aids with specialized earmold "plumbing" proposed by Killion.

Signal processing in hearing amplifiers for noise reduction (Graupe and Causey) for special types of compression.

Timeouts research at the use of tuned random noise maskers.

PSYCHOACOUSTIC FACTORS RELATIVE TO DESIGN OF HEARING AIDS TO COMPENSATE FOR SENIORITY EFFECTS ON HEARING LOSS

by R. C. Moors

Department of Experimental Psychology, University of Cambridge

The differences between normal listeners and those with senescent hearing impairments are described in relation to the physical, biological, psychological factors: loudness, masking, lateral localization, and the magnitude, and temporal acuity. The effect of these differences on the ability to recognize the discrete components is discussed. It is concluded that hearing aid can only be of limited benefits, and that severe problems can be expected under conditions of background noise or high room reverberation.

The rationale and drawbacks of hearing aid designs (such as multi-channel compression) which compensate for sensorineural hearing loss is discussed. In some cases, sensorineural hearing loss may be able to extract information from novel sounds. It is concluded that speech comprehension will only be achieved if the aid provides exact intelligibility to the listener. The different devices are described, including the "real" hearing aid, which is typically distributed in the high frequencies (e.g., 2 to 6 kHz) into a detectable low frequency component.

In general, the rationale underlying the use of hearing aid device has proceeded largely from information theory or engineering considerations, e.g., focusing on how to "perceptually" occupy an 8 kHz bandwidth into a loudspeaker with a time-limited signal which appears, however, that the degree of added benefit which may be obtained is highly dependent on the type of hearing impairment and the method of recording employed. For example, when using the residual hearing bandwidth and the rate of ability to patients to make use of their residual hearing.

A given recording technique, therefore, it can be shown to be of benefit, should be applied in the context of that a "clinical package". This would consist of a procedure for the selection of those patients likely to benefit from the test, means for fitting the device (e.g., adjusting the level of "mix and change" and "non-recording" information) and means for assessing the activity of the technique enjoys in the case of normal-hearing.

It is also timely the art of selecting and adjusting a hearing aid, and the particular hearing impairment is scrutinized such that the results of the hearing aid, the hard of hearing, may factor may prevails over the present initiative approach.

WHERE DID THE USER WANT TO GO?

by Mr. Neville Brown

Engravers Hearing Aids 7 Shepherd Street, W.1

Every hearing aid user knows the sound of an unsuitable hearing aid not coming without hesitation. He wants to go straight to what he believes will be the ultimate stage; he wants to have a hearing aid that can be seen when it is in use. That requires no manual adjustment, and that gives him exactly the "natural" hearing. Most users would be prepared to forego the first two requirements if the third one could be attained; although in practice, the essential need for adjustable hearing aids can only be of limited benefits, and that severe problems can be expected under conditions of background noise or high room reverberation.

The miniatureisation of hearing aid components for the popular hearing aid has led in some cases to less available power and narrower, irregular frequency range. The frequency range, which is determined by the electrical response of the ear, is not a constant. This is provided! This is of particular importance to the National Health Service which issues aids on the philosophy that for the majority of aids users, a single frequency gain characteristic provides optimum amplification. A study was conducted to determine whether smoothing and extending the frequency range of the hearing aid would have any beneficial effects upon the speech discrimination of impaired hearing aid. The result of this study was that there was a significant improvement in the average frequency response.

Feedback for the speech of the deaf

Department of Psychology Goldsmiths College, London

In cases of sensorineural hearing, useful residual hearing exists only in the low frequency region (e.g., below 2 kHz). Selective amplification may be insufficient to restore intelligibility to speech, and then the limitations of the ear may be desirable to "remote." The hearing aid is commonly distributed in the higher frequencies (e.g., 2 to 6 kHz) into a detectable low frequency component. This is generally, the rationale underlying the use of hearing aid device has proceeded largely from information theory or engineering considerations, e.g., focusing on how to "perceptually" occupy an 8 kHz bandwidth into a loudspeaker with a time-limited signal which appears, however, that the degree of added benefit which may be obtained is highly dependent on the type of hearing impairment and the method of recording employed.
Abstracts From Vail Conference (Continued from April Issue)

OTOTOXICITY AN IATROGENIC DISEASE
by Robert Brunstrom
University of Oregon

Over the past several years it has been well documented that a devastatingly high percentage of patients receiving both anaminoglycoside antibiotic and a loop diuretic diuretic. The aminoglycoside antibiotics that are currently in use are streptomycin, neomycin, kanamycin, gentamicin, tobramycin, amikacin, and paromycin. The available loop diuretic diuretics are ethacrynic acid and furosemide. Furthermore, two experimental loop diuretics, bumetanide and piretanide interact well. None of the other classes of diuretics exhibit this interaction.

The characteristics of this interaction is that it takes place within a few hours of the first single doses of each drug are given. The interaction can be monitored by a depressed ability of the cochlea to generate the neurochemical signal. This depression has been seen about two hours after the drugs are administered.

Clumping of the nuclear chromatin of the outer hair cells can be seen by electron microscopy within two hours of administration and at two hours, a loss of the smooth cristae system of the subcellular eustere is seen. Both the hair cells and the hair cells are markedly damaged and may be dead. Alterations in the mitochondria are not seen before 4 hours.

While this effect is rather specific for the loop diuretic diuretics, it is not so specific for the aminoglycoside antibiotics. All of the aminoglycoside antibiotics are similar in this effect, but in addition, some of the non-aminoglycoside antibiotics, viz., neomycin, carbenicillin and polymyxin B. The antibiotics, streptomycin, polymyxin B and spectomycin do not produce the interaction. It therefore, appears that antibiotic induced interactions with the diuretics is not unique to aminoglycoside antibiotics but may be a much more general phenomenon than is currently believed.

It is therefore, recommended that the interaction be monitored by a depressed hearing. The interaction would be expected to develop in those patients receiving both aminoglycoside antibiotics and a loop diuretic diuretics.

HIGH CONCENTRATION OXYGEN INHALATION AS PROTECTION AGAINST NOISE INDUCED HEARING IMPAIRMENT
by David Lipscomb

A series of research projects was reviewed in which it was found that a high concentration oxygen could be used to decrease the amount of damage produced by noise exposure. Both the inhalation of high concentrations of oxygen and the administration of high concentrations of oxygen were found to be protective. Whether or not the inhalation of high concentrations of oxygen is protective after noise exposure, the groups inhaling high concentrations of oxygen showed a significant decrease in hearing loss compared to the control groups which inhaled low concentrations of oxygen.

Identification and Implications of Visual Impairments for Hearing Impaired Persons: An Overview of Research Conducted by Frank Cascio, Ronald D. Johnson, Nancy J. Kadish, and Ada Rashid

It is possible to reduce the learning disability of the child by decreasing the presence of sound and differentiating between a wide range of devices signals that are not present in the environment. This disinhibition of visual input due to the presence of auditory information may facilitate the development of visual acuity.

The project has three main objectives: 1) to determine the characteristics of visual impairments occurring among hearing-impaired children and adults; 2) to determine the incidence of hearing loss among children and adults; and 3) to determine the association between hearing loss and visual impairment.

The project was made possible by the support of the National Institute on Disability and Rehabilitation Research, the National Institute on Deafness and Other Communication Disorders, and the American Academy of Ophthalmology.

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The results of our tests on the CVA cases, selected for comparison with the vasculitic cases, did not confirm the conclusions of others on the degree of temporal lobe involvement, and generally those on the former group showed more striking clinical anomalies. Small strokes, strongly indicated that extracranial factors (e.g., hypertension) on the competing sequence test (100% on the carotid) to the extent of a major cerebral lesion (in general, extracranial) seem consistent with the finding that the lesion, either diffuse (dominant right cerebral hemisphere) or focal, may be associated with the occurrence of aura, but the opposite tendency to occur in the dominant hemisphere. In our cases, all of the distinct aura sensations, are influence effects of the degree of disturbance of the background and even personality of the patient. Most importantly, the best appearance of speech, under stressful hearing conditions, of a particular deviation of central function located in brain areas that are known to be frequent, and often distant locations from each other.

While the present findings from the use of tests of CAN'S disorders are encouraging, we must recognize that these are such tests in the search for false negative diagnostic is still uncertain.

THE DEVELOPMENT OF THE EAR

By David Lipschutz

In this workshop session, the audience of educators to the auditory sense were discussed in detail to language development for understanding more 2023. Yet, similar, structural entities represent the two major ears of inner ear. A review of the progress stages in development of the ear ranged from auditory mechanisms, through amphibian, reptilian, and avian species. The appearance of the outer ear comprises the ears in early reptile forms initiated a anxious condition with a share gap in early (jaw development and middle ear structure and function. Furthermore, another important feature is a complex system of the carotid that was often used by arteries that had been altered and entwined in sensory nerve fibers. The audiometric results, generally good, are shown by the demonstration of an extreme, but type of fibrosis, the most obvious change may be their degree of high-frequency hearing loss and low-frequency hearing threshold. The way of this quality of the fibrous change in relation to this case which were obtained by evaluating a through a flattened out area of the functional result of the same due to the use of a living tissue. Sensory cell loss or cell death in the cochlea.

1. BASEL IN LOCALIZATION OF POSTERIOR FOSSA LESIONS

The major points reported in this section were:

1. In the normal basal MRI recordings obtained at 7.5 and 10 (H) IL in the basal region of the brain is the most important component of the response of basal MRI. The 10 cm diameter tumor and 1 to 3 cm IL to V intertransverse angle. Amplitude, waveforms, and relationship between the basal responses is also important.

2. All 11 cases of confirmed extracranial cerebral venous angle (CPV) lesions involving the auditory cortex (intertransverse angle). Wave V was abnormal in normal ears could be considered aural unilateral basal transient dysfunction. Bilateral abnormalities in the cranial nerves, blood flow imaging of the basal brain recordings in the posterior region were also abnormal.

3. The absence of intracranial lesions revealed a normal or abnormal hearing. In the cases, the basal responses were normal. This is because the basal MRI recordings were guided by the presence of previous lateralizing involvement in the brainstem and the posterior area with significant change in the cranial nerves. The TIF-OPTIMIZATION OF OTOSPONGOSIS


SUMMARY

This technique of stereotaxic, the “TIF-optimization,” i.e., (o) tumor against external graft, was first presented for the first time in France in 1969. Fifty years later, and at the International Congress held in Tokyo in 1969. This was a great impetus for the development of the TIF-optimization of OTOSPONGOSIS. Weiner et al. have tried to improve their technique and to obtain better results. Some components of the stereotaxic pattern are important if one wishes to differentiate the intra and extra-axial lesions. The level of the lesion is the level of the tumor, and the side primarily involved. Interstitesional lesions were presented to illustrate the importance of the TIF-optimization of OTOSPONGOSIS in neurosurgical disorders.

MEDICAL MANAGEMENT OF OTOSPONGOSIS

by J. J. Causee, Otolaryngology Center, New York University.

I. PROBLEMS OF POST-OPERATIVE THERAPY

Among the abundant literature dealing with otospongiosis in middle ear surgery, very rarely are the papers mentioning postoperative care. In fact, the authors may not realize the possibility of postoperative complications. In such a case, the audiometric results, generally good, are shown by the demonstration of an extreme, but type of fibrosis, the most obvious change may be their degree of high-frequency hearing loss and low-frequency hearing threshold. The way of this quality of the fibrous change in relation to this case which were obtained by evaluating a through a flattened out area of the functional result of the same due to the use of a living tissue. Sensory cell loss or cell death in the cochlea.

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AAS Member

At The International Symposium on The Hearing Impaired Child

Bert Jaffee with the English surgeon Mr. Wilson at the Cincinnati Conference.

Allen Stahl, the instigator of the Cincinnati Conference.

LaVonne Bergstrom and George Shambaugh Dr. Shambaugh was an honored guest at the Cincinnati Conference.

John Shalup and friends at the Cincinnati Conference.

The English Surgeon at the Cincinnati Conference, Mr. Smith.

Bob Keith with the Director of the Cincinnati Conference, Susan.

The Hearing Instruments Workshop for the Three Professions at Philadelphia, May 18-19.

Mary Ann Armour, Ray Rich

Lindsay Pratt

Ray Rich and Jim Endicott
At The International Symposium on Otitis Media

Jan Zarenoch & Sylvan Staud discussing after meeting. Staud presented School for the Deaf Study.

Imre Friedmann discussed the Pathology of Otitis Media. He is our English correspondent.

Earl Harford and Fred Bess enjoying Columbus' best. Both presented papers at the Symposium.

Jennifer Harford was an eager listener.

Jerry Klein, Boston presented an excellent epidemiological report on Otitis Media.

Paula Metzak, Boston gave an impressive discussion of language and hearing.

John Ferraro & Jerry Northern. Northern participated in the Impedance Screening Debate.

Abstracts...

(continued from page 9)

jections made intermediately that it was the only drug that did not cause penicillin fever or side effects. This method of administration has also been found to be safe and effective in the treatment of other infections.

4. EVALUATION OF THE NEW DRUG

In this study, the new drug was evaluated in a double-blind, placebo-controlled clinical trial. The results showed that the new drug was effective in treating penicillin fever and that it did not cause any significant side effects.

5. CONCLUSION

In conclusion, the new drug has been found to be effective in the treatment of penicillin fever. It is safe and well-tolerated by patients. Further studies are needed to confirm the results and to assess the long-term efficacy of the drug.

REFERENCES


Pre-Registration Form for 1979 Annual Meeting of AAS
Dallas, Texas
Oct. 9, 1979
8:30 a.m. to 1:15 p.m.
Registration Fee: $6.00 member, $10.00 non-member
To: American Auditory Society
1966 Inwood Road
Dallas, Texas 75235
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Address_______________________________________
Number of Registrations:_______________________
Amt. Enclosed: $______________________________

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Speech Pathologists Have Laws Too

With the spate of pseudo-scientific adages—such as Murphy's Law, Peter Principle, Jeering Corollary etc.—Cori's Organ is happy to announce a newsworthy of great magnitude among our own colleagues. As a speech pathologist, no less. In Gordon School's of Louisiana State University Medical Center, Shreveport, who has come up with what we consider the most telling of all such profound exhortations. Hereewith is printed the latest brain child of this author, lecture, poet, philosopher, and great human being:

GORDON'S LAWS

I. You can't make me angry without my permission.

II. I myself personally am redundant, etc., etc., etc.

III. The problem with being assertive is—if you're dumb it really shows.

Acoustic Tumors edited by William F. House and Charles M. Littley is written in two volumes. This is a report on the first volume. Diagnosis. The second volume on Management will be reported in the next issue. The book is a report of five hundred patients with unilateral acoustic neuromata operated by the members of the Otologic Medical Group in Los Angeles between 1961 and 1975. There were 253 females and 235 males ranging from age 6 to 76 with equal occurrence on right and left sides.

The history of acoustic tumor surgery is discussed with reference to the work of Cushing from 1900-1917, the "Dandy Era" from 1917-1961, and the present work pioneered by House.

The book on pathology suggests that tumors arise from excessive hearing loss cell proliferation at the schwann-glial junction near the porous acousticum. The anatomy of the anterior-inferior cerebellar artery (AICA) is discussed as related to the cerebellopontine angle tumors as well as the base of AICA often found within the internal auditory canal (40%) and usually giving rise to the internal auditory artery (80%).

Tumor symptoms are categorized into three types: changes related to the internal auditory meninx (VII, VIII, changes related to the CPA (V, VI, IX, X, XI, and cerebellum) and distant effects due to internal hydrocephalus and increased intracranial pressure.

The anterior and B light microscopic pathologic configurations are well illustrated. In bilateral, or Von RollKlinsman's cases, the nerve fibers are more intact and not compressed to one side as much, but separated by growing tumor.

In section III, selected case histories are presented and the neuro-otologic evaluations detailed. The treatment and surgical procedure is discussed in length. The last chapter was a case report of a non-infratentorial acoustic neuroma that was successfully treated with both surgical techniques and radiation therapy, which resulted in complete remission of the tumor.

A new technique for the management of acoustic tumors was described, which involved the use of a stereotaxic frame, allowing for precise localization and guidance of the surgical approach.

—By R. E. Miehle

Deaver, Colorado

Middle Ear Effusion Poses Problems

One of the highest powered meetings in the country is the Columbus Conference on Recent Advances in Middle Ear Effusion. Held this year on August 8-9 at the Ohio State University College of Medicine, Columbus, Ohio. The conference was organized by the American Academy of Otolaryngology-Head and Neck Surgery.

Registration fee is $35,000, including luncheon and workshop materials. Registration is limited. Contact: Kenneth W. Berger, Ph.D., Speech and Hearing Clinic, Kent State University, Kent, Ohio 44242. Telephone (216) 368-2182.

Audiology Congress Meets In Krakow In 1980

The International Audiology Society will hold its 10th biennial Congress on September 24, 1980, in Krakow, Poland. A group of experts will be invited to present papers on the following topics:

2. Psychologic Factors in Sensorineural Hearing Loss

In addition to the invited main sessions, contributed papers will be presented on audiological topics. Applications may be sent to:

Dr. Andrew J. R. Halama, Kopernika 24a, 31-041 Krakow, Poland.

A group of experts will be invited to present papers on the following topics:

2. Psychologic Factors in Sensorineural Hearing Loss

The conference will be held at the University of Krakow, which offers state-of-the-art facilities for audiological research and training.

Speech Conference Scheduled

The Ph.D. Program in Speech and Hearing Sciences of the University of Nebraska at Omaha Graduate School is sponsoring a three-day conference on "The Speech of the Deaf: Research, Training and Personnel Preparation" from October 31 through November 2. The purpose of the conference is to present and discuss the latest research in the field of speech and hearing. The conference will be held at the University of Nebraska at Omaha Graduate School.

The conference will feature presentations on the latest research in the field of speech and hearing. The conference will be attended by professionals in the field of speech and hearing, including professors, researchers, and graduate students.

The conference will provide an opportunity for professionals in the field of speech and hearing to learn about the latest research and developments in the field. The conference will also provide a forum for professionals to network and share ideas.

For more information contact: Richard H. Schmalstig, Ph.D., Program in Speech and Hearing Sciences, University of Nebraska at Omaha Graduate School, Omaha, Nebraska 68182.
Blood Flow Biofeedback Training

Dear Editor:

I have referred over 20 patients with fibromyalgia to a biofeedback clinic and have found the House data to be supportive. Much of the information presently being offered by this clinic is based on the involvement of fibromyalgic patients with biofeedback. This involvement is apparently justifiable, given the evidence from the literature. The results of the study presented by House et al., however, suggest that biofeedback training can help to alleviate pain and improve function in patients with fibromyalgia.

Sincerely,

[Signature]

M.A. COCA

[Full name]

[Address]

[City, State, Zip]

[Phone number]

[Email address]

Blood Flow Biofeedback Training

When a person becomes stressed, the blood vessels feeding the skin and extremities dilate: the blood flow is increased, allowing the extremities to maintain a higher body temperature. At the same time, the reverse occurs for the blood vessels feeding the somatic muscles of the legs and arms. Dilatation and constriction of specific blood vessels is an important part of the flight or fight reaction discussed earlier which increases the cholinergic reactivity of the skin. Physical and emotional stress, and the accompanying activation of the sympathetic nervous system, lead to increased blood flow to the skin and decreased flow to the muscles of the extremities. Long-term stress can lead to persistent changes in the flow patterns, resulting in increased skin temperature and decreased muscle temperature. These changes can be measured with biofeedback, and training protocols have been developed to alter the flow patterns and reduce the effects of stress.

The plethysmographic method is sensitive to the blood flow because it is influenced by the color of the skin. The venous blood flows through the skin and becomes darker as the capillary blood flows through it. The venous blood is the part of the blood that is not oxygenated, which gives the skin a bluish tint. Changes in the color of the skin can be measured with a plethysmograph, which is a device that measures the amount of light absorbed by the skin. The plethysmograph is sensitive to changes in blood flow because the amount of light absorbed by the skin is affected by the amount of blood flowing through it.

In one study, researchers used a plethysmograph to measure blood flow changes in response to stress. The researchers found that the amount of blood flowing through the skin increased significantly during the stress period, and that the increase was greater in the limbs than in the trunk. These results suggest that the limb skin is more responsive to stress than the trunk skin.

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Evidence from the literature suggests that stress can lead to changes in blood flow patterns. These changes can be measured with biofeedback, and training protocols have been developed to alter the flow patterns and reduce the effects of stress.
CALANDER OF EVENTS

AUGUST

NINTH INTERNATIONAL CONGRESS OF PHONETIC SCIENCES, Copenhagen, Denmark.


SEPTEMBER

VIII ANNUAL CONVENTION OF THE SOUTHERN AUDIOLOGICAL SOCIETY, Savannah, GA.

INTERNATIONAL SYMPOSIUM ON SENSORY-NEURAL HEARING LOSS, VERTIGO & TINNITUS, University of Minnesota, Minneapolis. Write to: Continuing Medical Education, University of Minnesota, Box 255 Mayo Memorial Bldg., 420 Delaware Street, S.E., Minneapolis, MN 55455.

TINNITUS WORKSHOP, Atlanta, GA. Contact: American Tinnitus Assoc., P.O. Box 5, Portland, OR 97207.

NONLINEAR AND ACTIVE MECHANICAL PROCESSES IN THE COCHLEA, The Institute of Laryngology and Otology, 386-288 Grey's Inn Road, London WC1X 8EE.

IV INTERNATIONAL SYMPOSIUM ON ACOUSTIC IMPEDANCE MEASUREMENTS, Lisbon, Portugal. For information write to: Organizing Secretariat, Clinica Fono-Audiologica, Rua Conde Rodinho, 115-3, 116 Lisboa-Portugal.

INTERNATIONAL SYMPOSIUM ON AMPLIFICATION IN EDUCATION. Bill Wilkerson Hearing and Speech Center, Nashville, Tenn. Contact Vanderbilt Continuing Education, 361 Medical-Arts Bldg., Nashville, Tenn. 37212.

TINNITUS WORKSHOP, San Diego, CA. Contact: American Tinnitus Assoc., P.O. Box 5, Portland, OR 97207.

OCTOBER

AMERICAN AUDIOTHERAPY SOCIETY, Dallas, Texas. Meets in conjunction with The American Academy of Otolaryngology. Contact F. Blair Simmons, M.D., Stanford University Medical Center, Dept. of Otolaryngology, Stanford, CA 94305.

TINNITUS WORKSHOP, New York, N.Y. Contact: American Tinnitus Assoc., P.O. Box 5, Portland, OR 97207.

HEARING AID PRESCRIPTION WORKSHOP, Kent State University. Contact: Kenneth W. Berger, Ph.D., Speech and Hearing Clinic, Kent State University, Kent, OH 44242.

SECTION ON OTOLARYNGOLOGY AND BRONCHOSCOPY OF THE AMERICAN ACADEMY OF PEDIATRICS, San Francisco. Contact: Gerald B. Healey, M.D., Children's Hospital Medical Center, Dept. of Otolaryngology, 206 Longwood Avenue, Boston, MA 02115.

CONFERENCE ON THE SPEECH OF HEARING IMPAIRED. (See page 98 for details).

NOVEMBER

SOCIETY FOR EAR, NOSE AND THROAT ADVISERS IN CHILDREN (SENTA) 7TH ANNUAL MEETING, Cincinnati. Write to: Bill Moran, M.D., Oklahoma City Clinic, 736 N.E. 10th St., Oklahoma City, OK 73104.

AMERICAN SPEECH AND HEARING ASSOCIATION, Atlanta, GA.

ACOUSTICAL SOCIETY OF AMERICAN FALL MEETING, Salt Lake City, Utah.

TINNITUS WORKSHOP, Dallas, Texas. Contact: American Tinnitus Assoc., P.O. Box 5, Portland, Oregon 97207.

1980


JUNE 12-17, 1980. 16TH WORLD CONGRESS OF REHABILITATION INTERNATIONAL, Winnipeg, Canada.


AUG 5-7, 1980. 25TH INTERNATIONAL ASSOCIATION OF LOGOPEDICS AND PHONATRICOS, Washington, D.C.

SEP 2-4, 1980. XV INTERNATIONAL CONGRESS OF AUDIOLGY, Krakow, Poland. Thruulent papers or register write to: Dr. Andrzej P. Halam, Kopernika 23a, 31-001 Krakow, Poland.

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CORTI'S ORGAN
The Official House Organ of the American Auditory Society
Vol. 4, No. 4/Vol. 5, No. 1
Winter, 1980

AAS at AAO is AOK

Good fellowship, good research papers, and the long awaited AAS presentation of its highest award, the Carhart Memorial to AAS's first president, Aram Glorig. These items were the bill of fare at the annual meeting of the AAS held in conjunction with the American Academy of Otolaryngology in Dallas, Texas on October 9. Blair Simmons as program chairman put together a stimulating program that included a number of distinguished scientists presenting some challenging scientific papers. But the most enthusiastically received was the lecture by Aram Glorig as the Carhart Memorial lecture award for 1979.

Glorig presented a classic review entitled "Noise: Past, Present and Future" in which he described the origins of the noise problem, its recognition, and the attempts man has made to solve the problem. No new elem is as cogent as all aspects of noise as Glorig, as he has devoted a lifetime to its study and attempts at solution. His interest began as long ago as 1931 when he dealt with noise exposure in the Army as an Army oto-laryngologist. After the war he became Director of the Audiology and Speech Correction Center at Walter Reed Army Medical Center in Washington and continued his interest in noise induced hearing loss. Later he became chairman of the Subcommittee on Noise for the American Academy of Otolaryngology. There he published most of what is known about the problem of noise in industry, studies which are as valid today as they were then. From 1946 to 1977 he continued research into the problem as Director of the Caliber Hearing and Speech Center and after leaving there went back to Los Angeles to pick up the threads of the work he had left there in 1964. There he is Associate Director of Research at the Ear Research Institute, in charge of two major research projects: one on the aging ear and tone on hearing aid design. In his office he examines patients who are involved in litigation for noise exposure and determines if the disability is related to the noise exposure. He works as a consultant in legal cases and on many committees concerned with noise in hearing. His excellent paper will be published in Ear and Hearing, so that members will be able to read it for themselves shortly.

Abstracts of the papers presented at the regular session of the AAS meeting are published in this issue. Readers can ascertain for themselves the high quality of the reports that were made.

Executive Committee Election winners announced

The following members were elected to the Executive Committee as a result of the elections held last August:

- Charlie D. Anderson
- Ralph F. Naunton
- Malcolm C. Graham
- Hiroshi Shimizu
- Ed W. Johnson

These members will serve a four year term beginning January 1, 1980.
Editorial: A Spade is a Spade

Well, we have to admit it—this does really aren't that gong do about Audiology! Despite Blair Simmons' efforts to include the AAS meeting in the program of the Academy of Otologyngi, the turnout was disappointing compared with last year's attendance at the AAS meeting. We're glad that the fact that not many audiologists care to learn more about audiology phenomena.

The good news of course is that the those who do come to the AAS meeting are the elite of the Otolaryngology world: our own Blair Simmons, Aram Gorge, Ralph Naumon (the past and future presidents), Howard Bass, Malcolm Gram, Mike Paparella, Fred LUCHNIS, Hiroshi Shinno, and several others. These men are a special breed of otologists who desire a more thorough understanding of the way auditory function relates to the anatomy, physiology and path of the ear. They are not satisfied with a mere routine clinical auditory test. They are intellectually curious men who require a deeper knowledge of the world of our ears in working processing acoustic material.

Not that the acoustic and psycho-acoustic people altered any better when we met with the Acoustic Society. The showing at the Miami AAS meeting was not that good either. But there are so few of them and so few of us interested on being their best with our ears too.

But facts have to be faced, and it looks as if two options are open to us. First, we can attempt a campaign to interest other otolaryngologists and audiologists in our society; and second, we can decide to cast our lot with the audiologists group represented by ASH, and hold meetings with them exclusively. If so, we do the otolaryngologic elite and the acoustic elite will probably stay with us and be faithful to attending meetings.

The Executive Committee would welcome hearing from the membership about this dilemma. Send your letters to Curr's Organ on this topic and we will publish them. M.D./H.U.

Dear Editor:

An abstract of the paper we delivered at the 1978 American Auditory Society Convention appeared in the January 1979 issue of Curr's Organ. In the July issue, Mr. G. S. Simmons written in register his criticism of the content of the abstract, at the same time asking the editor to print an unsigned opinion treating the method of employing feedback to improve hearing. Mr. Simmons has misinterpreted some of the information presented in the abstract and seems misinformed on several points. Consequently, we are taking this opportunity to respond to his comments.

Says Mr. Simmons: "The comment that EMG feedback does not reduce noise and increase bloodflow in the ear canal." We say: Yes, this comment was not printed in the abstract, we presented no data upon which to base such a statement, and as such, we didn't offer to share it. If he re-reads the abstract, or preferably, have it read to him, he will find that we made a quite a different observation.

Says Mr. Simmons: "There is no evidence that has demonstrated that EMG feedback may improve hearing." We say: We utilized electronic intracranial feedback throughout the course of the experiment and entitled the paper "Treating Tinnitus with Electromyographic Feedback." Stated differently, our paper did not deal with EMG feedback and any discussion of this subject would have been irrelevant to our purpose.

Says Mr. Simmons: "...temperature feedback has been shown to reduce anxiety and increase bloodflow because this method is a more direct link to the auditory system, which in fact controls bloodflow by regulating bloodflow. EMG feedback does not provide such a connection." We say: Where is the support for that contention? The "attached" apparently refers to psychologist Keppner's monologues printed alongside the letters section. Unless our eyes deceive us, and, alas, they do not appear to do so, Keppner makes no such assertion. What can Mr. Simmons be talking about? (More about Dr. Keppner in a minute?)

Says Mr. Simmons: "I was further dismayed that this highly impressive paper was printed as an article suggesting that EMG feedback as a treatment for tinnitus be "encouraged" when the method may not be safe for the ordinary patient." We say: What Mr. Simmons seems to have forgotten is that the Organ printed was not an article, it was an abstract and the information contained in the abstract should not have been unmasked. Even though the abstract mentioned a "doubtful reversal" situation experimental design, he apparently missed it. In fact, we utilized an "ABACAD" design, and Mr. Simmons perhaps fell into THE ONE SUBJECT TRAP.

Says Mr. Simmons: "I have referred over 20 patients with tinnitus to a feedback clinic and have found the House (Dr. John house) data to be supported." We say: Easy, you're difficult to prove. Where is the data? We hope Mr. Simmons will provide some. And with an observation of two of our own. (1) Mr. Simmons has written a letter full of compound and inaccuracies over the abstract of a paper for which he has not even signed. (2) We reached Dr. Donald Keppner, the psychologist whom Curr's Organ credited with the accompanying "Blood Flow Feedback Tinnitus." Dr. Keppner is a private practice in Atlanta and an enthusiastic and knowledgeable man, but, however, known of Mr. Simmons or the American Auditory Society or even Curr's Organ. After hearing what we had written, Dr. Keppner promulgated that although it was possible he could have written something concerning tinnitus, he did not know anything at all about the work and then he was 'satisfied with what we had written." Mr. Simmons apparently has taken Dr. Keppner's considerable license in asking that such remarks be printed in support of his letter.

In all, Mr. Simmons' letter is a gross misinterpretation of our results and of the abstract which was published in Curr's Organ. Had he addressed his concerns to us instead of Curr's Organ, we would have been pleased to present him with our data and a more complete manuscript. We are always ready to grant our critics access upon the showing of criticism and the promise to refine.

Cordially,

O. E. B. Omri
W. H. Moore, Jr.
S. C. Clark

Dear Editor:

As a proud member of the American Auditory Society, I was particularly pleased to be invited by Mr. P. Adams and Dr. Naumon to join your organization, the Greater D.C. Auditory Society. I see. I look upon this as a serious organization dedicated to establishing good will and fellowship among professionals in the field. As such, however, I believe that we should acquire all of the trappings of a true professional organization—such as a MOTTO and a SONG:

MOTTO: "All Things in Modulation." SONG: "Anthem to the Ear" (Sting to the tune of "All for Rose's Honor"—slightly modified)

Raise your glass and your honor for the Rain Wash praise upon you Down your mug of beer.

My ears, my ears, to all things in modulation.

(Most things, I trust, are now under control.)

Here's to the tube Eustachian And to the American Society.

(Cost: refrain)

Here's to Curr's Organ. May it carry on forever. Most wonderful of erics, We love thee.

Mr. Simmons' letter is a gross misinterpretation of our results and of the abstract which was published in Curr's Organ. Had he addressed his concerns to us instead of Curr's Organ, we would have been pleased to present him with our data and a more complete manuscript. We are always ready to grant our critics access upon the showing of criticism and the promise to refine.

Cordially,

O. E. B. Omri
W. H. Moore, Jr.
S. C. Clark
COCHLEOSCOPY:
A preliminary report of an ultimate Technique and Investigation

The first documented cochleoscopies in the human were published years ago by Retzius (1837) who introduced a small straight tube in the cochlea of Swedish human cadavers. It is of some interest that Retzius' observation were directed at the lastly much discussed "acoustic channels" (Hawkins and Johnson, 1972, Fig. 3) which Retzius supposed constituted a particular sensory apparatus in the cochlea. As is well known now, these channels are clearly documented to be post mortem artificial collapsed vessels (Jordan et al., 1973) a fact which, Retzius, investigating the cadaver, obviously could not be expected to know (3).

It is to be noted that the approach first taken for development of cochleoscopy was based in part upon the experience gained by one of the authors (A.J. B.) during an intensive twelve-month postdoctoral study program in proctology. In that case, study and experience is a different office of the body provided the technical knowledge so necessary for the approach we have undertaken and found fruitful if not, indeed, satisfying.

METHODS

A variety of subjects, human as well as animals, without truth regards or concern for sex, but with preference for sex, weight, age, type, sex, height, sex, color, were used in the present investigation. As outlined below, certain defined groups proved particularly useful, i.e., aristocrats, boners, deaf, composed. However, those of the preliminary results based on the findings in American volunteer medical students, other non-human primates, patients from Group Health, and American Indians (Fig. 4), since the availability and personal choice make these categories most easily achievable.

Figures

Most of the present investigation has been to develop a new method for the examinations - cochleoscopy or in our mother tongue, navel peeping.

LITERATURE SURVEY

Surprisingly, the first mention of cochleoscopy derives from the famous French Savarin (1) who used a simple method of examining masts with a device called the Droit-Droit-Savarin, who suffered from severe short-sightedness, used his mirror to evaluate whether the nails he was going to serve his ship's master contained defects and selection so appropriate for specimens ("Seek and Ye Shall Find," Hallen, 1975, personal communication). Thus, then, was the first indirect application of cochleoscopy in lower animal forms.

Later, Hippocrates (2), walking the beaches of Peloponesse (we had picked one of the abundant masts and observed closely the ventriculus of the nail. His constant curiosity made him take a stone and crunch the small in order to get a direct view of the inside.

Ereukha (3) the first direct cochleoscopy was fait accompli (Fig. 2).

Fig. 3

The aim of the present investigation has been to develop a new method for examinations - cochleoscopy or in our mother tongue, navel peeping.

Fig. 4

Approach:

Briefly, our approach is based upon an attempt to introduce a flexible light source (Fig. 5) and viewing tube into the labyrinth, in vivo, for the visualization of microstructure and function of the living cochlea. The primary characteristics of concern were: (1) size, (2) flexibility, (3) illumination, (4) visual definition and (5) an appropriate, just and durable observer. As might be imagined, such of these characteristics presented a series of technical challenges on their own. However, the problems resulting from the interaction of each of these features (particularly size with flexibility and for future extension and development by young investigators (Liden, 1973) in this new, exciting field, must be overlooked and cannot be underestimated. We have found it necessary to manufacture a set of cochleoscopes, each to be used for a particular clinical entity.

Fig. 5

Fig. 6

4) These instruments are available commercially MillIax Company Partners, Incorporated, Model No. 1372, Patent Pending.

5) This served to be a fortuitous decision, that it worked. We must say that as in many factually beneficial discoveries, serendipitously played a role. The ultimate solution to this difficult technical question came to the authors during one of our many evening working sessions. At the moment of careful application of the corkscrew to the third bottle of wine (Chateau Trudon) the answer came simultaneously to both authors (perhaps slightly sooner to one, J.M.) Careful development of the idea was carried out on six additional subjects (Chateau quatrieme-maure). The addition of a Roto-Rooter control device came unexpectedly the following morning.

Fig. 7

FOOTNOTES


2) Hippocrates, Gary (Greenhouse) to the famous H., 1840. The diary of a Greek steel picker. J. Peloponesse, 2:3.

3) Admittedly, there was an earlier case published by Vergilius, R., 1843. (AD) in a living human. However, it was later established that the case, in fact, was a direct videography of what is now known as the centipede or the retreat of the printer was misinterpreted as cochleoscopy.

Fig. 8

6) Antibiotics, and more common medicines, e.g., Hyparix, Donaldson, 1975, personal preference and for sampling of fluids. For repeated samples, however, we suggest using a disposable tip on the cochleoscope (Hallen, 1975). (3) small rat-tooth forceps were found helpful for tissue sampling.

7) Figures 6 and 8 for injection of vitamins, hormones, silastic, and more.

FOOTNOTES

Page 3
observation of the origin of the DC potential was a severe electric shock. Later, models of the cochlear nucleus are additionally equipped with a lightning rod grounded in the perilymph (suggested by S. Simmons).

Mechanical Trauma

It is to be noted that this procedure cannot be immediately put to use in humans by the naive operator. We negated many hours of pre-op training on cadavers and animals (e.g. mice) prior to use in human. The output, of course, will vary with the motor competence and handling/cigar/coffee addiction of the surgeon (Donaldson, 1964-73). Our first attempt to introduce this device for exploration of the scala media was not without mishap. Just as the cochleoscope rounded the "hook region", the patient (Xaviera Holland) suffered a severe gastro-intestinal disturbance (peripheral effluent in nature). This produced an inadvertent movement of the cochleoscope resulting in slight damage (corrugation) to Corti's Organ in a restricted area of the basal turn (Fig. 11). (This patient has since been transferred to Los Angeles. However, unfortunately, a cochlear implant did not help. This result is noteworthy; however, since it may be the one case in cochlear implant that did not produce satisfactory results that will be available in print.) Caution is suggested at all times in the use of this instrument. Undoubtedly effects have been demonstrated to result in cochleocentesis using which in turn may result in single cell isolation (Fluck, 1970). Accidents, as these, should not discourage the naive investigator; they never discouraged the sophisticated one. Indeed, we feel our approach to the scala media is effective.

Physiological Findings

Using the unisected tip of the cochleoscope, it was possible to determine the origin of the intracochlear resting DC potential. This was only found in cases of severe experimental hearing loss, where the membrane literally "rested" on the hair cells. The potential measured at 20 V in Fig. 15 was observed from the internal part of the degenerated cells (DC).

Technical Experiences

In addition to the visualization of the intracochlear structures, we know to all our readers, has also been possible to add a device for registration of sound originating in the Organ of Corti. Any kind of sound, whether noise or music, can be transmitted to the outside world. Interestingly, this is not only the case with sound from the surroundings but also melodies or sentences that originate in the patient's mind (probably mediated via the aberrant bundle, Wersall, 1973). In this way we are able to closely follow the patient's reaction of the procedure, critical or praisng comments, and adjust the performance in accordance to these. The future of this "mem-mapping" cannot be overstressed. Several composers have already expressed an interest in the drug as the objective registration of their musical fantasies. However, a problem remains in excluding verbal garbage (G. Strohner) or indifferent comments which all too frequently mix into the musical associations.

Electrophysiological

As is well known, the endocochlear potential originates in the scala media (McPherson, 1975, personal observation). Our latest results indicate that the cochlear nucleus (at the axis versus in 18) is the first close-up examination of the potential, however, was quite unfortunatly to the investigator. The result of our curiosity and close

Fig. 11. Patient (medical student) demonstrating the ideal position for right sided cochleoscopy.

Fig. 12. The scope is gently pushed through the respective scala under direct visual observation of intracochlear structures, the observer, and the audiomecroscope. Particular care must be taken of the patient's neck, which due to the high quality of the video imaging is often poorly illuminated. The Wigand steel of the instrument is achieved by completely opposite movement to the introducory. The introduction tube must be twisted by a piece of chewing gum, well chewed, (Wrigley's et al., 1973, Fig. 10).

Lately, critical foreign voices have been raised concerning the injection of contrast media in the intracochlear vessels ("rubber", Johnson, 1971, Dallas). However, our experiences in arteriost patients have demonstrated that these patients have naturally occurring Prussian blue of the same color and intensity as these animals injected with the contrast (Compare Figs. 15a and 16b).

Precipits

Fig. 13. Vessels from arteriost containing "blue blood". (b) Vessels from monkey injected with Prussian blue (reprint kindly permitted by L.G. Johnson).

This indicated that more arterioles in the future should be examined both in vivo and in vitro, particularly if exhibiting hearing disorders. Additionally, in vivo examination of the cochlea of the horse, captured in the Soviet Union in Germany, shows naturally occurring Prussian blue in the vessels of the foot cochlea (Fig. 17). Clearly it is somewhat premature to generalize this isolated finding to humans. However, we do feel this finding clearly supports and justifies further use of Prussian blue injection for the study of the cochlear vasculature. Equally, we are aware that if the use of some acid if this stuff can be demonstrated histochemically in our future studies of any living animal (same goes for Araldite).

Pathology

Our extensive experiments in the maladies of the scala must here be space-limited to two conditions: Noise-induced hearing loss and prosperity disease.

1. Noise-Induced hearing loss

The cochleoscope clearly demonstrates the changes induced by noise (Fig. 18). In early stages (temporary threshold shift), the internal hearing loss is total and then the whole basal turn is elevated and shifted upward towards the second turn (as predicted by Snyder, 1973). Long-standing observations which required much patience from the patient and the operator clearly showed that the shift (elevation) Fig. 19 was not temporary and the hearing loss was always reassumed its original position. Contrary, in early stages of permanent hearing loss, the ejection of the striae is lost, they appear as "tired, swollen, bent down, shrink, and then disappear" (Fig. 19). The proud elevation of their heavy cover, the connective striae (Lawrence) is lost and the cover rests directly on the cell bodies. Interesting and promising treatment measures permitted by the cochleoscope have made this degeneration reversible, also in pronounced cases. Different measures include:

- Oxygen supply directed to the outer hair cells (Fig. 20)
- Microinjection of vitamins in the cells (Fig. 21)
- Detack carasing of the cell bottom by the aid of brushes (Fig. 22)
- Injection of hormones in the outer hair cells (Fig. 23)
- Administration of silence (Fig. 24)
- The injection of silicate in the boxula (Fig. 25)
- The injection of big with a vibrator (Lee's Nicker Fig. 26)
- 2. Menière's disease

Surprisingly, this condition was clearly established to be caused by two different etiologies. 1. We find it to be a ductal entity being caused by globules of the Bucherer's duct. The excretion of the microtubule has resulted in prominent intravenous changes by globular masses, i.e. fluid treatment (Shambaugh) and by the onus treatment with chemical agents giving the use of both elements. 2. We have been able to verify the pathological corollaries of the disease named by the French Progrees Monters which we, according to the promising treatment, who would like to rename to Prosperity Disease. (Admittedly, one of the authors, J.M., wanted it to be renamed after him, i.e. Miller's Disease, which however was not accepted by the courtier, who would rather use this descriptive name for their allergy, hereby as
Multi-disciplinary Workshop on Rehabilitation through Amplification

The American Hearing Research Foundation is conducting a Multi-Disciplinary Workshop on Rehabilitation Through Amplification, June 20-25, 1980, at the Pick Congress Hotel in Chicago, Illinois. The Workshop will be of interest to otolaryngologists, audiologists, hearing aid manufacturers and hearing aid dealers. Sessions on ear molds, ear tips and masking, medical aspects of hearing impairments, testing of the hearing aid, acoustic testing, special considerations of amplification for infants and children, new federal legislation impact on hearing aid, acoustic testing, special considerations of amplification for infants and children, new federal legislation impact on hearing aid dispensing, and lectures on the planning and organization of your business operation, are the informative areas that will be covered in this workshop. This continuing medical education offering meets the criteria for 34 hours of credit in Category I for the Physician's Recognition Award of the American Medical Association. For further information contact:

Jack D. Clemin, M.D.
Program Chairman,
American Hearing Research Foundation
Suite 2105
55 East Washington Street
Chicago, Illinois 60602.
Telephone number: (312) 726-9670.

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Behind the Iron Curtain with AAS

AAS's European counterpart, the International Audiology Society, will hold its XV Congress in Krakow in September 1980. To make it reasonable and congenial for AAS members to attend, group tours are being planned for members, their families and friends. Among the AAS members who will present papers in Krakow will be Ralph N. Atton, Acorn Hearing, La Verne Bergstrom and Marion Downs. Philip Fellman will also be on the program. There will be three primary sessions:

1. Evaluation of Auditory Function after Surgical Procedures
2. Etiologic Factors in Sensorineural Hearing Loss
3. Pseudoaudiology

In addition, contributed papers will be presented.

Two options are being planned for the tour: one a seven-day trip to the Krakow Congress and back; the other an additional week’s tour of Vienna, Budapest and Southern Russia.

TOUR 1
Sunday, August 31: Leave New York
Monday, September 7: Arrive Krakow
September 7-8: Attend Audiology Congress
September 8: Leave Krakow for Warsaw
September 9: Tour Warsaw
September 10: Return to New York

TOUR 2
Sunday, August 31: Leave New York
Monday, September 7: Arrive Krakow
September 7-8: Attend Audiology Congress
September 8: Leave Krakow for Vienna
September 8-9: Tour Vienna
September 9-10: Tour Budapest
September 10-11: Tour Ljubljana
September 11-13: Tour Kiev
September 14: Leave Krakow for New York

*Air Fare to Krakow and return from:

Dallas: $299.00
Denver: $319.00
Los Angeles: $335.00
Other Western Cities: $359.00
Chicago: $299.00
St. Louis: $329.00
Detroit: $449.00
Other Mid-Western Cities: $469.00
New York: $499.00

TOUR 2:
Air Fare plus ground travel, hotel accommodations (with breakfast), for extra week in
Vienna, Budapest & South Russia:
Add $600.00 to above prices

NOTE: These prices include special baggage handling, assistance at departure & hotels, and
a cocktail party prior to departure at J.F.K. Airport.

*All fares are approximate & subject to changes such as fuel surcharges.

Woodruff World Travel
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291 University Blvd.
Denver, Colorado 80206

Please send information on Krakow tour with the American Auditory Society.

Number in my party

Signed

Address

Raves on Vanderbilt Conference

One of the finest meetings ever held in Memphis in September, titled an International Symposium on Amplification in Education, sparked by Fred Bess of Vanderbilt, it tackled some of the novel problems that professionals are faced with in carrying out the mandates of the 1975 Education for Handicapped Children Law.

The speakers pointed out the mind-boggling impact of the Law on the responsibility of speech, hearing and language clinicians as well as deaf educators. More and more these professionals will serve as advocates in the primary classroom teacher. It will be incumbent on them to manage effective amplification in the classroom whether with individual hearing aids, FM systems or other auditory trainers.


A.E. and Marion Downs, M.A.

Dr. Eric Wedenberg of Karlssons Institute in Sweden was the house guest speaker, reviewing the history of the development of auditory training. Marion Downs gave the banquet address, "The 11th Commandment: Thou Shalt Listen."

Fred Bess, Barry Freeman and Steve Sinclair comprised the committee's necessary for this outstanding symposium. The transcriptions will be published. Watch for them.

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• B.S.R.
• Electronystagmography
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• High frequency audiometry
• Improved Sound Field testing
• New procedures in hearing aid fittings

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Birmingham, Alabama February 22 & 23, 1980
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San Francisco, California
Washington, D.C.
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Abstracts of AAS meeting

Word Discrimination in Quiet and in Noise
A Re-Examination
Gail D. Chermak

Communication Disorders Program
Washington State University
Pullman, Washington 99164

The purpose of the present investigation was to establish developmental word norms for discrimination in quiet and in noise and to determine whether there was evidence for the presence of minor variations in noise level for word discrimination performance.

Twelve children from each of four age groups (X age = 7.0, 8.0, 9.0, and 10.0 years, respectively) were tested in Experiment 1. Hearing sensitivity and tympanometric measures were obtained. The children were divided into four subgroups: (a) those who performed at or above the 25th percentile of the normal standard deviation of the mean at 2500 Hz for each ear for each ear; (b) those selected for experimental testing on an alternate basis. Experimental conditions were identical to those in the first experiment. Twenty-four children from each of the two experimental conditions were selected for experimental testing in the second experiment.

In the second experiment, children were divided into four subgroups: (a) those who performed at or above the 25th percentile of the normal standard deviation of the mean at 2500 Hz for each ear for each ear; (b) those selected for experimental testing on an alternate basis. Experimental conditions were identical to those in the first experiment. Twenty-four children from each of the two experimental conditions were selected for experimental testing in the second experiment.

The data were analyzed using a factorial design with repeated measures on one factor. Analysis of the data indicated that there was a significant difference between the two age groups in the percentage of correct responses. The data were analyzed using a factorial design with repeated measures on one factor. Analysis of the data indicated that there was a significant difference between the two age groups in the percentage of correct responses. The data were analyzed using a factorial design with repeated measures on one factor. Analysis of the data indicated that there was a significant difference between the two age groups in the percentage of correct responses.
Otitis Media Conference

Sven Ingelstedt, Guest of Honor from Sweden was given accolades at the banquet.

Tunna Palva and Jack Paradiso, Palva represented Finland.

Joseph Salt of Israel and Elino Papparella, Minneapolis. Papparella defined and identified O.M. and Sade described pathogens.

Eldyl Mussen and Buckminster Rayner. Rayner gave keynote address to the Otitis Media Research group.

Joan and Irene Friedman from London with Dr. Jahn, Univ. of Minn.

David Lim, one of the organizers of the AAS Symposium with his charming wife Young Sook.

Vanderbilt

The three pioneers celebrate the conclusion of the Symposium: Barry Freeman, Fred Hess and Steve Sinclair.

Dan Ling argues a point with Eric Weisemberg.

Mark Ross amplification.

The three pioneers celebrate the conclusion of the Symposium: Barry Freeman, Fred Hess and Steve Sinclair.

Dan Ling argues a point with Eric Weisemberg.

Mark Ross amplification.
and others at

Conference

Deafness Research Foundation

Dr. and Mrs. John Shin of Memphis.

David Lim of Columbus, one of DRF's researchers.

New Centurion, DRF President Mike Pegnozzi with Wesley Haggins of DRF.

Jean and Fred Luntzmer of DRF. Joan is head of the women auxiliary group, DRFA.

AAS Member Bob Roberts and Editor of new journal attends DRF meeting with Bobby Alford, Archives Editor.

CHABA

Wayne Henderson, former CHABA chairman.

Dan Schwartz of Walter Reed.

George Sheringham, Head of Callier Center.

Bob McLaughlin was an avid listener.

Freeman McConnell, the grandfather of the Symposium.

Bill Eld of Malee speaks on electronics.

Dan Worthington of Boys' Town in Omaha gave talk on testing procedures.

Dr. and Mrs. John Shin of Memphis.

David Lim of Columbus, one of DRF's researchers.

New Centurion, DRF President Mike Pegnozzi with Wesley Haggins of DRF.

Jean and Fred Luntzmer of DRF. Joan is head of the women auxiliary group, DRFA.

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Bill Eld of Malee speaks on electronics.
Minutes of the Executive Committee of the American Auditory Society

DATE: October 7, 1979
PLACE: Dallas, Texas
TIME: 4:30 P.M.

MEMBERS PRESENT:
Charlie D. Anderson (Non-Voting)
Susan Conway-Pihlan (Non-Voting)
Marlen P. Down (Non-Voting)
Bruno Grunbach
Gilbert Hoffer
Susanne Ken
S. Lyngby
Ralph Nasnoff (Non-Voting)
Richard B. Nieder
Hiroshi Shinomiya
Blair Simmons

MEMBERS ABSENT:
J. Donald Harris
David Dobowitz
Elod Horvath
Norma Hopkins
Merle Lawrence
Fred Ludich
W. Dixon Ward
Lee A. Neuringer

1. President Lyngby opened the meeting at 4:30 p.m.

2. The minutes of the 1979 Executive Committee Meeting, held in San Francisco, California, were presented and approved without change.

3. The income and disbursement statement from the period from January 1 to August 31, 1979 was presented, discussed, and approved.

4. A list of 21 persons who had submitted applications for membership during 1979 was presented. The list included applicants, names, highest degree held, city and state of residence, and the names of the members sponsoring the applicant. The applicants were approved for membership, with the exception of one whose application was incomplete. Upon obtaining the sponsorship of one more member, the applicant who was not approved will be admitted to membership. The names of those accepted as members will be published in the next issue of Organ's Ear.

5. The meeting site for the 1980 annual meeting of the Society was changed from Los Angeles to be held to conjunction with the winter meeting of the Auditory Association of America, December 28-January 2, 1980. The 1980 Annual Meeting was held in St. Petersburg, Florida, in 1981 will be explored. The Committee to report to the Executive Committee at a future date on this possibility.

6. The discussion was held regarding the possibility of the Society sponsoring a national meeting. Bruce Graham and Norma Hopkins were appointed co-chairmen of a committee to explore the possibility of such a meeting. It was suggested that the meeting be held in conjunction with the Academy for Research in Otolaryngology in St. Petersburg, Florida in 1983 will be explored. The Committee will report to the Executive Committee at a future date on this possibility.

7. Upon discussing the Carhart Memorial Lectureship, a decision was made that a committee be formed consisting of: President, immediately Past-President, and President-Elect to develop a list of three possible candidates and present that list for vote by the Executive Committee prior to December 31, 1979.

8. Ross J. Roesser was appointed Secretary-Treasurer for 1980 and 1981.

9. Susan A. Kasai was appointed Assistant Secretary-Treasurer for 1980 and 1981.

10. Ralph Nasnoff was appointed Vice-President/President-Elect for 1980-81.

11. President Lyngby discussed the implementation of a membership drive. At the present society has the only minimal recruiting efforts. In order to keep the membership class at a minimum and support the journal the membership should give substantially to the society. Several alternatives were discussed and following this discussion a committee was appointed consisting of Charlie Anderson, Susan Conway-Pihlan, Malcolm Graham, and Hiroshi Shinomiya (Chairman).

12. The Executive Committee voted unanimously that a letter of commendation be prepared and sent to Dr. J. Donald Harris for his outstanding efforts in developing the Journal of the American Auditory Society.

13. Discussion was held regarding the new journal, Ear and Hearing. Ross Roesser has been appointed Editor-In-Chief. He stated that the entire content of the new journal will be of interest to all hearing professionals.

The new journal will be designed principally for the practicing clinicians/physician-educators who are dealing with the assessment, diagnosis, and management of hearing disorders. The journal will take on a "clinical" theme, and will be in direct harmony with the aims of the American Auditory Society.

Featured in the new publication will be submitted manuscripts on clinically-relevant topics, as well as regular sections that will be edited by the following persons: Phillip A. Belleville (Section on Auditory Education and Rehabilitation), Henry M. Currier (Human Auditory Field Section), J. Donald Harris (Original Articles Section), Robert W. Keith (Clinical Notes Section), Fred Turner and Eugene C. Shoebly (Book Review), F. Blair Simms (New Developments in Otolaryngology), John C. Schairer (Techniques and Applications of Hearing Aids) and W. Dixon Ward (Foreign Translation Section). Invited papers will also be selected from papers presented at the upcoming meetings. The editor will prepare the manuscript with a notice for the next issue of the journal. A rebuttal regarding the comments will also appear in the same issue.

14. Marion Dowse gave a report on Organ's Ear. The Executive Committee commended her for the publication and made no suggestions for revision or addition.

15. It was suggested that the Executive Committee give consideration to opening another class of membership in the Society. Specifically, an Associate Membership category was discussed. The Associate Member would need not have a Baccalaureate degree, and would not need to publish. It was also suggested that the signature requirements be relaxed for Associate Members.

It was recommended that a committee for the Bylaws be formed to study the Associate Membership category. It was decided that the Board of the Council for the Executive Committee for the rate. D. Ward was appointed chairman of the committee.

17. There being no other business, the Executive Committee adjourned at 7:30 p.m.

S. Lyngby, President

Ross J. Roesser, Secretary-Treasurer

Applicants for Membership

1979

John Adams
William A. Aldrich
I. Kauffman Arendregt
David J. Asher
Janice E. Badger
Ashley H. Baker
Marlyn S. Bechtold
Franklin Blaisdell
Patricia Blomstrem-Closs
Roy M. Bormback
Kristje J. Brown
Carolyn M. Buck
H. E. Calder
Joan Braverman Callahan
Alfred S. Cane
Curt A. Cancel
Pat A. Carambas
Kathleen M. Coats
David M. Colley
Gladys D. Compton
M. C. Cullen
Alan D. Davis
Donelle Ehrlich
Martha Jane Ellis
Mary Powers Evans
Joseph H. Ferruto, Jr.
Consuelo Fierro
Lynn M. Fister
Brian D. Forger
Jennifer L. Fox
Gregory Fraser
Elise J. Fugina
Lois A. Donaldson
Patricia A. Gentry
John C. Gillmore
Barbara Goldman
Clarissa Green
Evergreen G. Grimes
Joseph A. Hollowey
Mary Lynn Hockman
Jay Hains
David H. Hines
Anne Forrest Josey
Barbara H. Kinney
Camille S. Klein
Sandra E. Koffman
James Smiths Lang
Dennis J. Lenox
Debra H. Luellen
James A. Lyons
Howard T. Maggie
Judith Seper May
Patricia Starkey
Robert M. McLaughlin
Gail McMillan
Mary Miller
Wynette Mooney
Vernon R. Morgan
Barbara M. Murphy
Carolyn K. Murnett
Igor V. Nabtes
Jud K. Pederson
Edward S. Porubsky
Deborah Price
Lawrence J. Putz
Rob K. Randolph
Patricia P. Reisen
Alan M. Richards
Counsel Sakti
Bath Sargent
Thomas L. Schreiber
Stephen Steg
George E. Smithson
Karen Stock
David Smith
Scott Stein
Leon Stein
John R. Braun
Charles Tait
Jean Ann Trelfa
Gail N. Tralka
Debra M. Vanderset
Kathryn Bills Yokes
CPT Thomas M. Watkins
Deborah L. Webb
William Y. Web
J. William Wright
Ann M. Yetich

AMERICAN AUDITORY SOCIETY

Income and Disbursement Statement

Per Period
January 1, 1978 - August 31, 1979

<table>
<thead>
<tr>
<th>Income</th>
<th>Disbursements</th>
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<td>CASH ON Hand-Checking Account 1/1/78</td>
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</table>

Checking Account | $407.00 |
Savings Account | $700.00 |
subject for further observation and study.

Characteristically, Mondelli’s patients demonstrate a shorter cochlear duct than normal. In 12 cases showed such a shortened cochlear duct. 3 of 12 contained no cochlear turns but an even more rudimentary spiral. In two cases it was more profoundly initiated earlier in the first trimester. In 3 of these patients, cochlear organ lesions and associated neuronal deficiencies interpreted as being sufficient to account for a serious sensorineural hearing loss were seen in 7 cases. However, 2 of these (cases 1 and 2) were Schirmer’s deafness with which a full complement of cochlear turns was seen histologically. That is, seven ears of seven cases with a shortened cochlear duct contained end organ lesions or there were 1 cases where the cochlear lumen otherwise appeared normal. In these latter cases there was no apparent malformation or structural anomalies other than that of a shortened cochlear duct with a full complement of organ of Corti. These differences in cochlear duct length as compared to the normal cochlear duct with end organ lesions or no lesions at all have been noted and commented on by other authors. In general, it can be said that a shortened cochlear duct is a consistent feature in these cases.

From these observations it is apparent that the cochlear duct is shorter in cases of CIU than in normal ears. In 12 cases examined, the cochlear duct was shorter in 10 cases, while in 2 cases it was normal. These differences were most pronounced in the second and third turns of the cochlear duct. In the first turn, the cochlear duct was normally proportioned.

The results of these studies are presented in detail in a forthcoming publication. It can be concluded that the shortened cochlear duct is a consistent feature in cases of CIU and that it is associated with end organ lesions.

**PERCENT HEARING LOSS:**

**WHAT YOU SEE AND WHAT YOU GET**

By Neil V. Helfer

Allan Helfer authored an article titled "Workmen’s Compensation for Hearing Loss: Paradoxes in the Law." In this article, he presents an excellent review of the legal aspects of workmen’s compensation for hearing loss. He refers to the article and concentrates on various methods used in calculating percent hearing loss, impairment, and handicap. This work is comprehensive and of great interest to professionals in the field of hearing loss.

Since the invention of the so-called "electric audiometer," the first published audiogram in percent hearing loss has been studied and reported; in fact, the first audiograms were rated as percent of dynamic range by frequency. With the adoption of the decibel notation, Fletcher proposed a "point eight" rule for conversion purposes. But in 1949, a method of determining percent hearing loss was adopted. The method was published in the Journal of the American Medical Association in 1959.

The introduction of the so-called "electric audiometer" has revolutionized the field of hearing loss. In the first published audiogram in percent hearing loss, the first audiograms were rated as percent of dynamic range by frequency. With the adoption of the decibel notation, Fletcher proposed a "point eight" rule for conversion purposes. But in 1949, a method of determining percent hearing loss was adopted. The method was published in the Journal of the American Medical Association in 1959.

1) For those who have forgotten, those who weren’t around, or those who want a refresher course, let me begin by describing the JAMA. For each of the test frequencies of 125, 1500, 2500, and 4000 Hz, the test of percent hearing loss is divided into five levels: normal hearing, slight loss, moderate loss, severe loss, and profound loss. These levels are based on the level of sound pressure necessary for a person to hear a standard pure tone.

2) The scale encompasses two important concepts: (1) percent hearing loss was rated as percent of dynamic range by frequency. With the adoption of the decibel notation, Fletcher proposed a "point eight" rule for conversion purposes. But in 1949, a method of determining percent hearing loss was adopted. The method was published in the Journal of the American Medical Association in 1959.

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8) Shown here is a comparison with the 1947 scale.

9) Here is an audiogram which would be commonly associated with a noise-induced hearing loss, the slowly sloping high frequency loss associated with debris (MAC, 1900, and 2000 Hz - right "the low fence" - thus, no excess or convex hearing loss. It is difficult to tell the patient to use breaths to try hearing aids and in the next, tell him he has no hearing loss.

10) The fallacy, of course, is the absurd notion that the good hearing above the low fence at 900 Hz somehow compensates for the poor hearing below the low fence at 2000 Hz.

11) Interspersed equiluxes which I wear, results in 20 minute test and reveals the problem as a more general averaging of this kind.

12) Using the same numbers from the sample audiogram, there is somewhat of a percent hearing loss using this cut off.

13) An even greater percent loss is obtained if one uses the least reliable averaging of these three.

14) A proposal in 1975, a modification by subtracting the loudness loss result from percent average test, each, is adopted by the Office of Worker Compensation Federal D.

15) Using the same numbers from the sample audiogram, there is somewhat of a percent hearing loss using this cut off.

16) An even greater percent loss is obtained if one uses the least reliable averaging of these three.

17) The National Institute of Occupational Safety and Health, in 1972, proposed that the average hearing level, frequencies 500, 1000, 1500, and 2000 cycles per second be determined for hearing impairment caused by noise, and suggested these frequencies be used in the basic AAO formula.

18) The test frequencies are not of equal bandwidth. 2000 Hz samples a 42 dB, 2000 Hz samples 41, 1000 Hz samples 1, 500 Hz samples 0, and an octave on the low end. The test frequency of 4000, 1000, and 1500 are selected because of the form of the middle ear reflex and some data suggest that it is more reliable.

19) The test frequencies are not of equal bandwidth. 2000 Hz samples a 42 dB, 2000 Hz samples 41, 1000 Hz samples 1, 500 Hz samples 0, and an octave on the low end. The test frequency of 4000, 1000, and 1500 are selected because of the form of the middle ear reflex and some data suggest that it is more reliable.

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A Eulogy to Philip E. Rosenberg May 22, 1979

SOME OF OUR RICHEST DAYS ARE THOSE IN WHICH NO SUN SHINES OUTWARDLY, BUT SO MUCH MORE SHINE INSIDE. THIS IS ONE OF THOSE DAYS. FOR MY MUCH LOVED FRIEND AND RESPECTED COLLEAGUE, PHILIP E. ROSENBERG, WHOSE 60 YEARS HAS PASSED THROUGH THE DOOR SERENELY AND WITH HUMILITY ON STILL ANOTHER NEW EXPERIENCE WHICH SOMEDAY HE WILL SHARE IN HIS SPECIAL WAY WITH ALL OF US. HE HAS LEFT US ALL WITH MEMORIES—THOSE WONDERFUL THINGS THAT BRIGHTEN OUR LIVES.


PHIL FIRST TOUCHED MY LIFE IN 1940-41 AND AGAIN IN 1946-47. MANY EVENTS OF MY EARLY MEMORIES OF HIM WAS AS A BLACK-FACED GAGGERTY IN THE UNIVERSITY OF MARYLAND THEATER PRODUCTION OF "PETRIFIED FOREST". VOLTAIRE ONCE SAID, "THE HUMAN BEING WHOSE REACTION TO MEMORIES OF MEAN OLD DAYS, THEATRE DAYS, AND PERHAPS YOU CAN RECALL AS I CAN THAT EVEN FRENCH THEATER MAKE-UP COULD NOT DULL THE GENTLENESS IN HIS EYES. HE WALKED THE THEATRE WITH ITS MAKE-BELIEVE, BUT HE LOVED REALITY MORE, AND THE LIVED HIS LIFE REAL AND TO THE FULLEST.

HE BECAME MY CAMPUS FRIEND, MY SAGE, MY CONFIDANTE—AS HE DID TO SO MANY IN THE YEARS TO FOLLOW. I REMEMBER WE LAUGHED A LOT EVEN IN THOSE EARLY YEARS AND LAUGHTER BECAME THE HALLMARKS OF OUR RELATIONSHIP.

WE SPENT TIME TOGETHER AT THE ARMY AUROLOGY AND SPEECH CENTER OF WALTER REED—PHIL AS THE STUPID STUDENT, AND I AS A CIVILIAN AND AN AUROLOGY TRAINEE. I REMEMBER THE SIGHT OF HIM AT EARLY MORNING ROLL CALL, A MIXTURE OF ORDINANCE AND MISCHIEF WITH HIS GREAT ARMY OVERCLOTH PULLED TIGHTLY ABOUT HIS CHIN TO HIDE THE COLLAR OF HIS PAJAMAS STILL WORN UNDERNEATH. —STILL WARM FROM SLEEP. A CIVILIAN SOLDIER WE CALLED HIM, OUR SECRET WEAPON IN COMEDY DISGUISE. WE LAUGHED ABOUT IT THEN— AND ISLEME AT THE MEMORY EVEN NOW.

WE COLLECTED AUROLOGIC DATA ON HUNDREDS OF TUBERCULAR PATIENTS AT THE OLD GALINGHER MUNICIPAL HOSPITAL IN WASHINGTON, D.C. AND THEN THE PROTECTIVE MASKS WE WORE IN THAT CONTAGIOUS WARD WE LAUGHED AT THE SIGHT OF US IN FITTING PROTECTIVE GOWNS. WE DRAINED TOGETHER IN THOSE DAYS, WE DOUBLE-DATED IN A 1934 PLYMOUTH. WE FREQUENCED PLACES IN THE NATION'S CAPITAL, TOOK JOY IN THE SIMPLE THINGS OF LIFE, THE SMALL PROGRESS, AND FROM IT ALL I HAVE THE MEMORY OF A TIME MADE BETTER BY THE FRIENDSHIP OF A GENTLE MAN.

WE LEARNED MUCH TOGETHER IN THOSE EARLY YEARS ABOUT THE DISCIPLINES OF A PROFESSION, AND THE ORGANIZED PROFESSIONS OF SCIENCE; ABOUT OUR GOALS, AND AS SO OFTEN HAPPENS GOALS DRAW CLOSE FRIENDS TO DIFFERENT GEOGRAPHIES, TO NEW EXPERIENCES, AND SO IT WAS WITH US, BUT HIS LETTERS WERE BRIGHT SPOTS, SERIOUS TIMES. WHEN AN OCCASION WARRANTED, HE USED THE VOCABULARY OF OUR FIELD PRECISELY AND THE LANGUAGE OF OUR LAND ESQUIINTLY.

WHEN INNERN TURMOIL, TORMENTED HIM HIS OUTWARD CONTINUANCE WAS ONE OF PEACE, HIS VISION FROM HIS INTERIOR TIME OF HIS VISITED OR SPORADICALLY, PHIL, DURING THESE PAST 25 YEARS, NEVER LOST THE WONDER OF THAT RECENT MEMORY WITH ME.

A FEW SHORT WEEKS AGO, I SAT WITH PHIL IN HIS LIVING ROOM SOON AFTER HE HAD BEEN TOLD THE SERIOUSNESS OF HIS ILLNESS. THE VISION SEEMED SOMEWHERE EASIER FOR HIM THAN ME. AMONG THE TALK OF MIRACLES AND REALISMS, WE HIT UPON AN INCIDENT INVOLVING THE GENTLEMAN WHO IS PHIL'S FATHER-IN-LAW, AS THE DETAILS OF THE DETECTIVE AND THE TEENAGED UNFORDER UNFOLED WITH SURPRISE AND LAUGHTER IN THAT LIVING-ROOM THE BRIGHTNESS OF ENJOYMENT SPARKLED IN PHIL'S EYES. IN THE CONTEXT OF HIS OWN LIFE-TAKING NEWS HE SAID, "THAT'S THE MOST INCREDIBLE THING I'VE EVER HEARD," AND HIS GAVE THAT FUNNY LAUGH OF THIRTY YEARS AGO.

A CLOSE AND DEAR FRIEND WHO VISITED WITH HIM A FEW WEEKS AGO SHARED WITH ME SOME OF HIS CONTEMPLATIONS. WE ALL HAD LEARNED ABOUT HIMSELF AND ABOUT OTHER PEOPLE DURING HIS ILLNESS ABOUT ACTIONS AND REACTIONS. WE ALL/The close and near his dignity and class came through He said, "I WOULDN'T HAVE MISSED IT FOR THE WORLD.

HE TOUCHED THE LIVES OF US ALL, GENTLY AND INDELIBLY, AND SOME OF OUR RICHEST DAYS ARE THOSE IN WHICH HE IS IN THE PICTURE BECAUSE OF HIM SO MUCH MORE SHINES IN THE HEARTS OF TWO FRIENDS, PHIL ROSENBERG, I HAD NOT MENTIONED THAT I HAD MISSED THIS FOR THE WORLD, AND I SENSE, TOO, THAT ONE DAY I SHALL LAUGH ONCE MORE WITH MY FRIEND.

David Rensick

BOOK REVIEW

Continued report on Acoustic Tumors by William F. House and Charles M. Lueije by Robert Mischeke

Volume II: Management

This volume begins with aesthetic considerations, discussing preoperative and intraoperative and postoperative management. Out of 251 patients, 5.6% suffered some postoperative pulmonary difficulty. Controlled ventilation is preferred. Large doses of narcotics should be avoided. Closed observations continues for 6 to 8 hours postoperatively.

The middle cranial fossa approach to tumors is used for removal of small acoustic tumors in an attempt to preserve hearing. In an only-hearing ear, this approach can also be used to preserve the internal auditory canal may also be approached through the middle fossa. The technique is basically the same as illustrated and discussed.

The translabyrinthine approach is preferred for tumors outside the internal auditory canal, including larger tumors, reasoning that a higher percentage of facial function is preserved with this approach. The supine position is preferred for surgically access as well as reducing hazard of air embolism. Two staged removal is used, primarily just when necessary due to vital signs changes. The surgical technique of tumor removal using the translabyrinthine approach is discussed and illustrated in great detail.

Presentation of facial functions was studied through questionnaires, reasoning that a higher patient may be critical of any weakness. 229 of 444 (51.6%) responding indicated some weakness for over one year or more postoperatively. This represented 20.8% of small tumors, 45.5% of medium tumors, and 69.6% of large tumors.

The New ACO Criteria for Industrial Audimetry

The American Council of Otolaryngology (ACO) has developed new criteria and procedures for audiometry as a part of the occupational hearing conservation programs to classify kinds of problems that should be referred otolaryngologists.

According to the new regulations, workers whose audiograms show a change of more than 10 dB at 2000 Hz and more than 20 dB at 3000 Hz and more than 30 dB at 4000 Hz should be considered for specialist for examination. When compared with previous or baseline audiograms with a monitoring audiogram, the elapsed time between testing should be more than two years.

Referral should also be made to a specialist when the average hearing level is greater than 30 dB at 500, 1000, 2000, or 4000 Hz and more than 30 dB at 2000 Hz and more than 40 dB at 3000 Hz and more than 50 dB at 4000 Hz; when there is a difference in average hearing level between the better and poorer of more than 15 dB at 2000, 3000 or 4000 Hz; or more than 30 dB at 3000, 4000 and 6000 Hz, and unpaired hearing loss or inconsistent responses. The Council recommends that testing should be performed by a certified audiologist using equipment that meets ANSI standards on ANSI requirements for the proper environment.

Direct referrals should be made to an otolaryngologist in the presence of persistent ear pain, drainage, dizziness, severe persistent tinnitus, fullness or discomfort in either ear, or a history of any of these problems in the past year. Also, visible evidence of cerumen accumulation or a foreign body in the ear canal requires direct referral. Whenever a worker develops ear pain, drainage, dizziness, or severe persistent tinnitus, or shows a significant change in the hearing level to be recommended. The Council recommends that new Audiocriteria may be obtained from: American Council of Otolaryngology; Suite 601, 1100 17th Street, N.W. Washington, D.C. 20036.
Recovery of eighth nerve function after C.P.A. tumor resection has been reported by other authors, but none have utilized the pre-and post-therapeutic diagnosis of supranormal auditory testing. Two cases are presented, one a medulloloblastoma, and the other an acoustic schwannoma in which there was recovery of function in a variety of threshold and suprathreshold tests.

Case 1: A twenty-six year-old male presented with a right sided hearing loss and signs and symptoms of a right C.P.A. tumor. CAT scan revealed a 5 cm mass in the right C.P.A. At operation, a large myxomatous mass was found and subsequently resected. Suprathreshold audiometric special test procedures were monitored sequentially before surgery, after surgery, during radiotherapy, and following radiotherapy.

The auditory procedures of choice include a Suprathreshold Adaptability Test (STAT), Performance Intensity of Phoetically Balanced Words (PIPS), Crossed Acoustic Radiiue (CAR), Bokery Comfortable Loudness Tracings (BLT), and Synthetic Sentence Identification (SMI-CM-SCM). Auditory Brain Stem Evoked Response Measurements (ABR) were also utilized throughout the entire post-operative period regardless of conditions. The patient continued to manifest a mild demyelinating hearing loss for a while, with temporary involvement of the involved ear being slightly worse than the noninvolved ear. Those special tests which demonstrated recovery include STAT, CAR, PIPS and BCL. ABR measurements obtained three months and ten months post-treatment revealed clearly defined wave V with normal latencies from monaural stimulation of the non-involved ear. Monaural stimulation from broad band stimuli presented to the involved ear, revealed the appearance of waves I and II at normal latencies. No measurable activity following wave II was present, either three months or ten months post-treatment. In adult medulloblastoma, the prognosis is poor, with a 30% chance of five year survival. The biochemical or mechanical mechanisms underlying the recovery of auditory parameters are speculative. The tumor mass may have caused pressure on the right eighth nerve trunk causing nerve edema interferring with the first and second neurons transmission. The patient's hearing was improved combined with irradiation of the tumor-surrounded (i.e. neuplastic) tissue and subsequent acoustic mechanism at the partial functional acoustic.

Case 2: A twenty-one year-old male was referred for dizziness, tinnitus, and hearing loss. He had no demonstrable hearing in the right ear and decreased hearing in the left ear. CAT scan revealed a tumor on the right side. A carotid angiogram was performed and a large, right acoustic aneurysm was observed. Special audiometric suprathreshold test procedures were monitored on the contralateral to the pathology. Special audiometric suprathreshold test procedures were monitored on the ear contralateral to the pathology. Special audiometric suprathreshold test procedures were monitored on the ear contralateral to the pathology. Test procedures included STAT, PIPS, CAR, and ABR. All test procedures were obtained before surgery and two months following surgery. ABR was available after surgery only. Two procedures indicating possible retrocochlear pathology demonstrated some degree of recovery postoperatively. Low frequency pure tone thresholds improved postoperatively. Performance intensity of phonetically balanced words also improved postoperatively although PIPS reevaluation index remained abnormal. ABR was obtained four and six months postoperatively revealed no measurable response on the ipsilateral ear and the appearance of waves I and II from monaural stimulation of the contralateral ear. The mechanism underlying the recovery of pure thresholds and PIPS on the contralateral ear are speculative in this case. There was no evidence of postoperative pathology in the contralateral ear other than displacement of the brain stem from the relatively large tumor mass. This displacement could have affected the contralateral cochlear meatus so that with nerve, producing an abnormal index and low frequency sensory hearing loss. The release of pressure from the brain stem and contralateral eighth nerve may be the mechanism underlying the recovery of certain auditory parameters.

Hearing Dog, Inc., whose staff was formerly with American Humane Association’s Hearing Dog Program, is a non-profit organization solely devoted to training dogs for the deaf. Although it costs Hearing Dog, Inc. $2400 to train and place a dog, the dogs are free of charge to the deaf. Agnes McGrath, master trainer in the program, is not involved in the training methods used today. She did a feasibility study in 1973 through the Minnesota Society for the Prevention of Cruelty, and has been involved with the training of hearing dogs since that time. Martha Foss, master trainer, has been involved with all methods of dog training including search and rescue. She has added her expertise in training of hearing dogs for the last four years. Sandi Kilstrup, a test animal, was taught the training methods by Agnes and Martha, an audiologist who has worked in clinical rehabilitation and research with the hearing-impaired. Her training has led to hearing dogs for the past two years.

The staff also includes an R.N. who is the kennel manager, and a secretary whose background is in deaf education. All members of the staff mainly communicate.

The training begins with the selection of dogs from animal shelters. The dogs must be healthy, happy, and intelligent...with a special ability to please and work for people. Over a period of three months, they are trained in auditory awareness and obedience. The sounds they are trained for include door/doorbell, security buzzer, smoke alarm, alarm clock, telephone, baby cry, and unfamiliar sounds which may indicate danger or some other emergency to the deaf owner. Basic obedience is necessary as there are currently twenty-five states which allow the hearing dogs to take the same rights as dog guides for the blind.

Hearing dogs have been placed with deaf people from the ages of 17 to 84. Those who are not living with hearing people and who have no other dog, are of priority, for they have the greatest need.

Hearing Dog, Inc. relies solely on donations from the public to have the program continue. Agnes, Martha, and Sandi all have their own trained hearing dogs and will be glad to demonstrate how a hearing dog works. Also available is a slide presentation which shows the facilities of Hearing Dog, Inc. and the dogs in action. Those interested in donating to or applying for a hearing dog, or wishing a demonstration, please write to Hearing Dog Inc.

3901 E. 88th Ave.
Henderson, Colorado 80640 or call (303) 257-EARS (voice or TTY).

Movie star June Lockhart with her Hearing Dog.
An enthusiastic group of over 100 audiologists and otolaryngologists took part in the Aspen-Snowmass Conference on Vestibular Disorders the week of August 20th in Snowmass, Colorado.

The conference, organized by Darrel L. Teter, Ph.D., of Denver, Colorado, in conjunction with Tracoustics, Inc. in Austin, Texas, featured Professor L.B.W. Jongkees, M.D., and a distinguished faculty.

Professor Dr. L.B.W. Jongkees's wife accompanied him on the trip from Amsterdam, Netherlands, was a visitor on the faculty by Dennis G. Pappas, M.D., F. Owen Black, M.D., Jack D. Cleary, M.D., Charles W. Stockwell, Ph.D., Frederick H. Limbic, Jr., M.D., James W. Waale, Ph.D., Ruck C. Brown and David M. Rasmussen, Ph.D. Each member of the faculty made presentations on two topics and all joined in lively round table discussions of current techniques, applications and research in treatment of disorders of the vestibular system.

Meetings were interspersed with activities such as a mountain bike ride and cookout, trout fishing, hiking and swimming, enhanced by beautiful summer weather in the Colorado Rockies.

In response to inquiries following the Conference, the coordinating committee of Darrel L. Teter, Ph.D., Jerry Nollner, Ph.D., and Charlie D. Anderson, President of Tracoustics, Inc., will announce dates for the 1988 Aspen Snowmass Conference within the next few weeks.

The conference will be again be administered by Tracoustics, Inc. of Austin, Texas, and inquiries should be directed to Tracoustics, Inc., P.O. Box 11904, Austin, Texas 78786; telephone (512) 444-9682.

Tracoustics Holds Sales Meeting

Tracoustics' Annual Super Summer Sales Seminar...fun time.

Tracoustics Representative (left): Rick Shaw of Whittier Co., State College, PA, admires the Summer Sales Meeting T-Shirt held by Charles Eau of Mid-Acoustics. Karl Tredre of Tracoustics/Denver is otherwise engaged.

Tracoustics' Anderson (1) gives award for Highest Sales to Karl Brandt as a representative of AudioMed, Inc., Santa Fe Springs, CA.

Tracoustics' Anderson (2) recognizes award winner R. J. Baird of Raytown, MO.

A group of 10 TRACOUSTICS' representatives and staff members gathered at the company's Austin office and manufacturing facility for a plant tour on Friday morning, and then returned to the Tracoustics for a day-long session which included a workshop on ENG techniques, discussions of current audiological assessment, and new developments in the audiometric room design.

The two days of intensive presentations ended with an informal Awards Banquet where Tracoustics President, Charlie D. Anderson, recognized Russ Baird of R.J. Baird and Associates, Raytown, Missouri, as representative with the most exceeding quota, based on population, and gave an award to AudioMed, Inc. of Santa Fe Springs for largest sales volume. For the second consecutive year Karl Brandt of AudioMed accepted the plaque for this award.

Everyone was given a Tracoustics Sales Seminar T-Shirt complete with armadillo design, which must have been from the chartered bus which took the group to Dallas for the American Academy of Otolaryngology Annual Meeting.
EFFECTIVENESS OF SCREENING IN A SCHOOLS
HEARING CONSERVATION PROGRAM FOR
CONDUCTIVE HEARING LOSS

R.J. Pekar, Jr.
Division of Otorhinolaryngology
University of Texas Health Science Center
San Antonio, Texas

Impedance measures have demonstrated their value in detecting middle ear pathology. Because conductive hearing loss is a major threat to young children, a variety of experts have advocated the use of impedance screening in hearing conservation programs. However, such use has not been without criticism. A major problem has been over-referral and at least one report has proposed re-screening to reduce its magnitude. A second issue has emerged as a byproduct of the availability of a rapid, easily applied screening technique. That is the assertion that different racial groups have different rates of middle ear disorders. The following investigation had two purposes: 1. To shed light on screening criteria by examining the pattern of results on re-screening, 2. To compare black children to Hispanic children in order to determine if there are any differences in the indicators of middle ear pathology between the two groups.

Information: This report was taken from ongoing screening program within the San Antonio Independent School District in which over 17,000 children were screened with impedance audiometry and a 4-k Hz pure tone at 25-85 dB, during the 1978-79 school year.

Our findings reinforce, on a larger scale, the demonstration by Lewis, Dupil, and Jorgensen (1975) that single impedance measures are unlikely to give an efficient index of the probability of chronic, medically attendable middle ear dysfunction. At approximately the same time, Cooper, Gates, and Dickman (1975), cautioned those using impedance techniques for screening that it was likely to result in a significant over-referral rate. In both reports, premature referral would occur when initial screening produced a "C" tympanogram.

In conclusion, we feel that the present data permit the following two admonitions to be made to those employing impedance techniques:

First, an accurate picture of middle ear condition is unlikely if based upon any measure when single negative middle ear pressure. This is true in either an ongoing hearing conservation program or in a screening program to describe the incidence of middle ear pathology.

Second, any attempt to correlate the relationship between degree of negative middle ear pressure and likelihood of spontaneous recovery is still needed before firm referral criteria can be developed for hearing conservation programs.

REFERENCES

Central Auditory Dysfunction conference announced

The University of Cincinnati Medical Center will sponsor a 3-day symposium on Diagnosis and Remediation of Central Auditory Dysfunction in Children. The conference will be held at the center's E.L. Institute in Cincinnati on May 21, 22, and 23, 1980. The purpose of the symposium is to provide a forum for the meaningful exchange of current information and ideas on the diagnosis of and therapy techniques for central auditory disorders in children. To accomplish this end, the conference will comprise formal presentations by invited faculty, including Norma Ross, Katherine Butler, Sylvia Richardson, and Robert W. Keith. Shorter papers submitted by participants, panel discussions, and workshops intended to promote audience participation, as well as exhibits by publishers and equipment manufacturers will also be incorporated. Persons wishing to present a paper should submit a 400-600 word summary. Application has been made for 12 credit hours in Category 1 of the Physicians Recognition Award of the American Medical Association. Further information about the symposium or details on submitting papers is available from:

Dorothy H. Air, Ph.D., Division of Audiology and Speech Pathology, University of Cincinnati Medical Center, Mail Location #238, Cincinnati, Ohio 45219.

Telephone: (513) 827-4841.
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If you are a small country like Denmark, you can’t afford to ask, “What does our insistence on quality cost us?” On the contrary, we have learned to ask, “What would it cost us to send an inferior quality product on the world market?” Thus we do not consider our rigid quality inspection an expense, but an investment.

Danavox dealers and service centers in 70 countries throughout the world know this perfectly well. It is therefore of more formal interest that Danavox has extended its warranty from one to two years.

Danavox Inc.
415 West 37th Street
Minneapolis, Minnesota 55409
413-4464 toll free (612) 338-6988

CALENDAR OF EVENTS

JANUARY 19-20
ADVANCED ELECTRONYSTAGMOGRAPHY, Orlando, FL. 16 hours. Category II AMA Credit. A course designed to sharpen the technical and interpretative skills of the experienced electronystagmographer by reviewing test procedures, misogynistic qualification and tracing interpretation. Contact: Life-Tech Instruments, Inc., P.O. Box 6021, Houston, TX 77065, 713-785-6500.

FEBRUARY 9-10

MARCH 1-8
14TH ANNUAL COLORADO OTOLARYNGOLOGY WORKSHOP, Val. Colorado. Contact: 14th Colorado Otolaryngology Workshop, Box 1219, 630 E. 9th Avenue, Denver, CO 80202 or call toll free (303) 220-6039.

JUNE 21-23

JULY 9-16
TENTH INTERNATIONAL CONGRESS ON ACOUTSTICS, Sydney, Australia. The Congress will explore the future of acoustics in its many aspects. Contact: ICASA (Congress Secretariat), GPO Box 2089, Sydney, NSW, Australia 2000.

AUGUST 5-7

SEPTEMBER 2-4
INTERNATIONAL CONGRESS ON EDUCATION OF THE DEAF, Hamburg, West Germany. Contact: S. Fiedler, Silverman, P.D., Central Institute for the Deaf, 4185 East St. Louis, MO 63110.

NOVEMBER 20
ANNUAL MEETING OF THE AMERICAN ACADEMY OF OTOLARYNGOLOGY (AMERICAN OTOLARYNGOLOGY). Detroit, Mich. Contact: A. Bruce Graham, P.O. Box 170, Henry Ford Hospital, Detroit, Mich.

JUNE 21-27
12TH WORLD CONGRESS OF OTOLARYNGOLOGY, BUDAPEST, HUNGARY. Write to: Dr. G. Sajic, P.O. B. 112, Budapest H-162.

AMERICAN ACADEMY OF OTOLARYNGOLOGY ELECTS 19 OFFICERS

DALLAS. - New officers of the American Academy of Otolaryngology were elected at its 1979 Annual Meeting, which was held Oct 7-11 in Dallas Convention Center. Over 3,000 attended scientific presentations and continuing education courses on the latest research in otolaryngology at head and neck surgery.

Jack R. Anderson, MD, of New Orleans will take office as President of the Academy on Jan 1, 1980. The other elected officers are Bobby Alford, MD, of Houston, President-Elect; Paul H. Ward, MD, of Los Angeles, First Vice-President; Roger Boles, MD, of Stanford, Cal., Second Vice-President; D. Thane R. Cody, MD, PhD, of Rochester, Minn., Secretary of Program; George F. Reed, MD, of Syracuse, NY, Secretary of Continuing Education; Ralph J. Caparosa, MD, of Pittsburgh, Pa., Treasurer; and Loring W. Pratt, MD, of Washington, D.C., Registrar of Members.

Wesley H. Bradley, MD, of Glenmont, NY, was approved as Executive Vice-President. He will serve as the Academy's primary administrative officer. A member of the Academy since 1953, Dr. Bradley is professor of Surgery (Otolaryngology) at Albany Medical College and chief of Otolaryngology Services at the Veterans Hospital, Albany, NY.

Dr. Anderson is clinical professor in the Department of Otolaryngology and Maxillofacial Surgery, Tulane University School of Medicine. Dr. Alford is chairman of the Department of Otolaryngology and Communicative Sciences, Baylor College of Medicine. Dr. Ward is professor of Surgery and chief of the Division of Head and Neck Surgery (Otolaryngology), University of California at Los Angeles.

The American Academy of Otolaryngology is a postgraduate medical organization dedicated to advancement of the science and art of medicine practiced by otolaryngologists. Its headquarters are in Rochester, Minn. An otolaryngologist is a physician who specializes in the treatment of diseases and injuries of the ear, nose, and throat and related structures of the head and neck.
COMMITTEE ON HEARING, BIOACOUSTICS, AND BIOMECHANICS (CHABA)

The Committee on Hearing, Bioacoustics, and Biomechanics deals with problems concerning any aspect of hearing. These problems involve engineering and equipment, the physics of sound, physiology of hearing, human perception, and the social consequences. While the Committee deals chiefly with problems submitted to them by hearing specialists, it also works on problems it generates, particularly those that would be likely to interest the sponsors.

The Committee concerns itself with any field of science or technology that it finds necessary in pursuit of its objectives. These fields may include pertinent aspects of biological science, behavioral science, physics, chemistry, mathematics, engineering, and medicine.

Examples of specific areas of interest to the Committee include:

- Hearing
- Measurement and evaluation of hearing
- Conservation of hearing
- The ear and associated central nervous system, its functions and means of protection against intense sounds
- Communications, particularly speech communication in the presence of noise
- Bioacoustics
- The auditory effects of intense sound fields on man and means for protection
- Psychological and social reactions of man exposed to sound, for example, noise produced by jetplanes, rockets, gunfire, weapons, and vehicles
- Physical and engineering problems of the generation, measurement, and control of acoustic energy
- Biomechanics
- The specification of the mechanical properties of the human body or its component parts

(Continued on p.3)
Letter from England

Dear Editor of Conn's Organ,

This letter will be 'a touch of nostalgia' because I have just visited that beautiful historic city, Edinburgh. I had the honour of delivering the Second McFadden Lecture entitled 'Malignant and the Malapropic Geonomania Syndrome' (Peter McBride 194-1984) was the founder of dermal physiology in Edinburgh and his department consisted, in 1883, of one small room only. Dr. Kenneth McCay, one of his present successors, and his colleagues have a large modern department with nearly 100 beds. McBride has been credited with the first description in 1897 of the so-called 'malapropic geonomania', an enigmatic dermatological disease of the afflicted tissues. It has stimulated a vast literature and an excess in experimental medicine rostrums of late terms might suggest an excess salutary to my letter.

Credit is due to another great Scottish dermatologist, J.P. Stewart (1841-1929) and going strong; whose review of the clinical findings of the disease in 1893 has remained a classic. I feel that the enemy I have suggested in 1955, 'Stewart's Geonoma', is not only well marks but hopeful. It is gratifying to find both pathologist and everyone attending my lecture agreeing with my concept of Stewart's type geonoma.'

I have travelled by train to Scotland, an almost forgotten way of travelling, enjoying a reminiscence. The train was the 'Aberdonian' and it reminded me of the pride of Scotland. When the Titanic sank an Aberdeen newspaper carried the headline—'Aberdonians had on high ship.' I often thought that the ship slips were the Atlantic—perhaps we might not be rushing to and from so many campuses.

We have, as you know, attended in September a friendly meeting of the Collegium O.R.I.C.I. in San Francisco under the Presidency of our old friend Frank Stock, the greatly respected Chair. We promptly flew to Los Angeles where, at the Institute for Brain Research Institute, a Symposium on Eye movements of the ear has attracted a large and interested audience from all over the world. It has always been a great treat to provide our regional audiences and our new home edition under Dr. Frank Sloby, contributed greatly to the success of the Symposium.

As always there is a huge push of interest in the medical communities.

I wish you and your readers many more happy returns in your wonderful country and continued success in New York.

I. Friedmann

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A.G. Bell Assn. Names President Elect

Dr. William E. Castle, vice president of BIT and director of NTU's recently elected president of the American (A. Graham Boll Association of the deaf) AGRAD.

Castle served as president-elect for two years beginning July 1, 1980, and will become president during AGRAD's 1982 international convention in Toronto. He will serve as president until 1984 and will continue to serve as president-elect until 1986 as past president.

Castle has served a leading national role in bringing together the leaders of several major organizations serving the United States in 1969, he took the following four respective leaders of the National Association of the deaf (NAD), the International Association of Parents of the deaf (IAF), the Oral Auditory Association (OSS), and the International Parents Organization (IPOG) to discuss issues regarding deafness in the 1980s, which led to a further coming together of organizations serving the deaf.

Castle says, "Our many organizations need to be able to arrive at an appropriate united front in the interests of deaf people without any one of the organizations controlling or even dictating or dictating the overall philosophy.

During our 1979 meeting, an important point of agreement among the four leaders was that the oral/vocal component of total communication must be restored by those who practice it. In reality, thesan caused was that, NAD, IAF, OS, and IAO can readily establish a unified front on many issues regarding deafness, including early identification, early intervention, the need for better quality education, and optimal implementation of Public Law 94-142 through the maintenance of all legitimate alternatives from which the deaf and their parents may choose.

Castle served as dean and director of NTU until September 1979, when he was appointed to the president of BIT, NTU's host institution. He held his NTU director's position. Dr. Castle also serves as an NTU's chief executive liaison with the legislative and regulatory bodies of the federal, state, and local government and with national and international constituent groups.

A native of Wataipher, S.D., Dr. Castle obtained his under

graduate degree from Northern State Teacher College in Aberdeen, S.D. He later earned his master's degree at the University of Iowa and his doctoral degree in speech pathology and audiology from the University of Wisconsin.

Dr. Castle had extensive teaching experience at the college level before coming to NTU in 1968 as assistant professor and as director of NTU's Division of Instructional Affairs. He was named dean of NTU in 1969 and directly in 1977.

(Reprinted with permission from NTU's Focus magazine.)

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Verbo-Tonal Workshop Scheduled

A workshop—day Verbo-Tonal Workshop, July 27 - August 12. Certification can be earned, in teaching hearing impaired children and adults, foreign lan

guage, and speech correction of normal hearing, sponsored by the Institute for Avail Rehabilitation. Write or call Carl L. H., American Association of Audiology, Speech and Pathology University of Texas, Austin 78713-1061 5186

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 Classified Ad

I.A.C. Sound Booth, Serial 400, 6 X 8 ID. Excellent condition.

$3,000. Phone (415) 497-5134.

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Editorial

ONE BRIDGES TOO FAR?

It was with mixed emotions that we received the following announcement in our mailing nucleus:

Dear Colleague,

September 4th, during the XV International Congress of Audiology in Toronto, a group of physicians in audiology decided to form an International Association of Audiology (IAA). Participants of the inaugural meeting were Drs. Heinrichs, Davin, Martin, Blanchard, Stephens (United Kingdom), Bentzen (Denmark), Barr, London (Sweden), Jasse (Finland), Backlund-Karlsson (Finland), Prasaukh (Thailand), and Niemeyer (German). Its apologia for not coming were Drs. Gomory (Canada), Gvilar (Israel), and Solomon. Dr. Stephens was elected secretary. Dr. Niemeyer, provisional chairman, was directed to organize a meeting on the 17th of September, 1980, in Germany (Marburg or Wiesbaden).

Thus, after having arranged the priority taste of organization, I have now the pleasure to invite you to participate in our formation assembly in Wiesbaden on Saturday, November 17th to Sunday, November 18th.

The meeting will be held to formalize a constitution following the model of already-established national Associations of Physicians in Audiology, e.g., in England, Denmark, etc., its function highlighting the marked difference between Audiology in the U.S. and Audiology in Europe. Although England has begun to train a specific profession of Audiologists, and other countries such as Israel have followed the U.S. model of Audiology, most European countries have continued to follow a British audiologist model.

We question whether the attempts to be both Otology astronaut and Audiologist may not reduce the quality of both performances. The physician-audiologist does not perform the actual day-to-day audiometry and hearing evaluation, leaving that to technicians with little or no academic training. The use of technicians presupposes a contempt for the title of audiometry—dealing with the technical side of the field of medicine, that is, with the function of the machine on what the profession is engaged. It is.

We are saying that we are the American model, where the audiologist is a doctor and the audiologist is nocturolog.

We held a training seminar on the common ground of hearing function. To make that training ground more effective has been the concern of the American Audiology Society. We like to do.

(MF's)
Among the causes of injury to the ear must unfortunately be regarded as rubbing. Not that this habit is of importance on account of the ear being thus necessarily injured, but it behooves us to take care that the habit is not contracted. Rubbing the ear by scratching it, or by using a worn-out toothbrush, is an injury that should be avoided. In cases of extreme irritation, when the ear is already inflamed, the ear should be kept moist and quiet. A cool compress or a gentle massage will often alleviate the symptoms.

In the treatment of infections of the ear, it is important to remember that the use of hot applications is generally contraindicated. Warm applications, on the other hand, are often beneficial. The use of hot applications in the treatment of infections of the ear is generally contraindicated, as they may aggravate the infection and cause further damage to the ear.

In summary, it is important to remember that the causes of injury to the ear are multiple and varied. In cases of injury, it is important to seek medical attention to prevent further damage to the ear. The treatment of injuries to the ear should be aimed at relieving pain, reducing inflammation, and preventing further damage to the ear.
Absracts and Summaries from Annual AAS Meeting

CARHART MEMORIAL LECTURE
The INFANT AUDITORY SYSTEM: RE-PROGRAMMED FOR LANGUAGE?
By Marlene P. Davis
University of Colorado Health Sciences Center
Denver, Colorado

Marion P. Downs
The new era of inquiry into language development must assume a high priority with audiolinguists and ontogenyologists. We have a unique opportunity to make to psycholinguistics - one which linguistics and psycholinguistics cannot offer - and that is the study of the degree to which the acoustic parameters of language learning in the infant are innate, pre-programmed processes, and how they influence language learning. Already there is research evidence demonstrating that there may be specific, learned auditory abilities that are present in the newborn and that the process of perception for the various acoustic dimensions of speech is, in the prenatale period. In this paper we review what is known about the acoustic parameters of language learning, and to propose constructions that can be made by our disciplines.

How well accepted in the hypothesis that humans are born with a genetic endowment for recognizing and formulating language. It has been proposed that genetic information for language may be coded into our nervous system - that we carry with us as special DNA for syntax, special neurons for grammar, special circuits for coding out the parts of language. New linguistic theories (1) support a hypothesis that we are programmed to identify words and sentences and genotypes, as it intrinsically produces functions. This ability evolved, therefore, as an evolutionary process exclusive in nature. And it developed, through the mechanisms of an evolved, articulated speech that has itself evolved, differences between languages.

For language has lived only through its transmitting mechanisms, speech, which is dependent upon our control over acoustic energy in various malleable forms. Were it not for this acoustic energy being transferred through our vocal cords into the air, the speech itself has no identity, and the speech acts which we make are considered in many instances of social behavior. The speech acts, however, are those in which we use language to convey meaning. In this process, the speech acts are the products of language, and the relationship between the two is explored in the next section.

The vibration of sound is heard by the ear, which is a semiautomatic, mechanical process. The ear, in turn, can be considered as a device for converting vibrations into electrical signals that can be processed by the brain. These signals are then interpreted by the brain in the context of the current environment and used to produce meaning. This process is the foundation of speech perception, and it is this process that is the focus of this paper.

Speech perception begins with the detection of sound by the ear. The sound waves are then converted into electrical signals by the cochlea, which is a spiral-shaped structure located in the inner ear. The electrical signals are then transmitted to the brain via the auditory nerve. The brain then uses these signals to interpret the sound, using a combination of linguistic and non-linguistic information. This process is complex and involves many different brain regions, but it is essential for successful communication.
Minutes of the Executive Committee of the American Auditory Society

DATE: November 20, 1980
PLACE: Henry Ford Hospital Detroit, Michigan
TIME: 12:30 p.m.

Members present: Marion Downes, Bruce Graham, Eriel Hartford, Susanne Kok, Ed Johnson, Ross Boomer, Hiroshi Huzuma, Laura Wilber

Members absent: Charlie Anderson, Susan Conway-Fidlin, Melanie Gidwitz, Robert Hermitage, John Linthicum, Samuel Lyshagar, Ralph Naunton, John Sinclair, Duncan Ward

President: William L. Ward opened the meeting at 12:30 p.m.

1. The minutes from the 1979 Executive Committee meeting held in Dallas, Texas, were presented and approved without discussion.

2. The income and disbursements for the period January 1, 1980, through August 31, 1980, were reviewed, discussed, and approved.

3. A list of 142 applicants for membership during 1979 was presented. Of these, number 144 were approved for membership. Three had incomplete applications as they did not have the necessary examination results, and 1 was denied membership due to lack of the minimum educational experience and due requirement.

4. A list of the ballot to amend the AAS bylaws was presented. The ballot had been blank at the one-sixteen votes approved the adoption of the above membership and liquidation amendments. Two voted to adopt only the associate member amendments, 60 voted to adopt only the liquidation amendment, and 5 voted to change the final result that was both the amendments and the amendment.

5. A discussion was held regarding consideration of a dues increase for 1982. Although it was realized that increased costs will eventually mean an increase in dues, after the discussion it was decided that due not be increased for 1982.

6. The 1981 meeting will take place in New Orleans, Louisiana, in cooperation with the American Academy of Otolaryngology.

7. The program chairman for the 1981 meeting will be Dr. Michael Sedman.

8. A conference was held regarding future meeting sites. Following the discussion, the 1982 meeting of AAS will be held at the American Speech-Language-Hearing Association and the American Academy of Otolaryngology.

9. President Nelson was appointed the chairman of the 1982 meeting. More information will be presented to the next meeting regarding the sites for the 1982 Executive Committee members will vote on the candidate. It was recommended that the committee of the conference committee (chaired by Lyshagar) be shared with him.

10. Ross J. Boomer was appointed secretary/treasurer for 1980.

11. Susanne Kok was appointed assistant secretary/treasurer for 1982.

12. Charlie Anderson was appointed Vice President/Elect for 1981.

13. It was agreed that American Auditory Society would forward the name of Howard Barton as a candidate for the CRB Amplifier Award.

14. Dr. Hartford brought up the proposal of publishing a separate membership directory. After discussion it was decided that the directory be published.

In order to continue a minimum of interest on the Executive Committee, 4 audiologists, 2 otolaryngologists, and 1 individual representing the hearing aid industry must be nominated for election.

17. A discussion was held on the status of Ear and Hearing.

A) $0,000,000 would be transferred from the American Auditory Society account to the Ear and Hearing account.

B) Annual awards will be given out for outstanding papers published in the journal. These would consist of a first place award of $1,000, a second place award of $500, and honorable mentions having no cash award. These awards will be initiated for volume 2 (1981), and would be presented at the 1982 annual meeting. The editorial board would be solicited for advice on the selection of awards for honor mentions. These awards would be reviewed and approved by the Executive Committee.

18. After a discussion a motion was made that members should be prohibited from using the name of the society in press releases advertising their meetings. The motion was seconded by Marion Downes and was approved by the President to provide guidance on this matter.

There being no other business, the meeting adjourned at 2:05 p.m.

Decibel (From p1)

"in time weighted averages exposure levels of 80 dBA with a 5 dB trading factor is necessary to ensure that no employee will be harmed. A maximum of 90 dBA is recommended. Continued exposure to noise levels above 100 dBA has shown to result in hearing loss. The American National Standards Institute and the American Industrial Hygienists recommend a maximum exposure level of 90 dBA for a 40 hour week.

In October 1979, it was to keep everyone on our toes, EPA identified 60 dBA as safe, but made no recommendation to OSHA, and then continued, "in order to take into account the fact that susceptibility to noise-induced hearing impairment varies widely among the population, OSHA must select a maximum permissible exposure level adequately protective of a fraction of at least the 90th percentile." Further, into October and from "Noise Report"[19] Pressure is mounting to permit continued use of hearing protection, yet, consumers have been evaluated thirty-year-olds and found some of the hearing tests can offer absolute protection. AAS (American Auditory Society) OSHA figures that medium-sized business (between 200 and 400 employees) are most often cited for noise violations. Ninety-seven years was now upon us and still no final decision. A 10% reduction in the noise level was very little and might be ignored by our ears. And sure enough, they were not more hearings, more reports, "more discussion" between the groups involved.

The National Academy of Sciences' "study" that was heralded as the true reveal of a cancer and effect was going abroad, and the issue specific prevalence of the number of workers. Environmental groups, labor organizations, insurance companies, EPA and OSHA officials, and the American Speech and Hearing Association issued statements this week, industry and management countered with vigor. But will not final hearing, although public hearings had ceased.

December of 1978 was distinguished by a memorandum proposed by Leon Billings, staff director of the Senate Public Works Subcommittee on Environmental Pollution, on scheduling 90 days during which to extend to the National Academy of Sciences in 1977 which indicated that three days of on-site hearings on implementation of the Act (Noise Control Act of 1972) will probably be conducted during 1977 in preparation for amendments in 1978 (11). Therefore, 1978 was distinguished by a memorandum proposed by Leon Billings, staff director of the Senate Public Works Subcommittee on Environmental Pollution, on scheduling 90 days during which to extend to the National Academy of Sciences in 1977 which indicated that three days of on-site hearings on implementation of the Act (Noise Control Act of 1972) will probably be conducted during 1977 in preparation for amendments in 1978 (11). Therefore, 1978 was distinguished by a memorandum proposed by Leon Billings, staff director of the Senate Public Works Subcommittee on Environmental Pollution, on scheduling 90 days during which to extend to the National Academy of Sciences in 1977 which indicated that three days of on-site hearings on implementation of the Act (Noise Control Act of 1972) will probably be conducted during 1977 in preparation for amendments in 1978 (11). Therefore, 1978 was distinguished by a memorandum proposed by Leon Billings, staff director of the Senate Public Works Subcommittee on Environmental Pollution, on scheduling 90 days during which to extend to the National Academy of Sciences in 1977 which indicated that three days of on-site hearings on implementation of the Act (Noise Control Act of 1972) will probably be conducted during 1977 in preparation for amendments in 1978 (11). Therefore, 1978 was distinguished by a memorandum proposed by Leon Billings, staff director of the Senate Public Works Subcommittee on Environmental Pollution, on scheduling 90 days during which to extend to the National Academy of Sciences in 1977 which indicated that th
The Unnatural Laws of Academe

The Golden Rule of Arts and Sciences
Whenever he has gold he puts the rules.

Boren's First Law
When in doubt, mumble.

Bart's Distinction
Those who distinguish people: those who distinguish people into two types, and those who don't.

Signals Law
If you catch a watch knows what time it is. A man with a watch is never sure.

Ninety-Nine Rules of Project Scheduling
If at least 90% of the work takes 90% of the time, and the last 10% takes the other 90%.

Hower's Law
Every man has a scheme that will not work.

Skinner's Constant (Plannagg's Finagleing Factor)
That quantity which, when multiplied by, divided by, added to, or subtracted from the answer you get, given you the answer you should have gotten.

CHABA was founded in 1979 at the University of Arizona. As of 1982, it had 150 members, with the major emphasis on the study of the hearing impaired. CHABA is serving on the national group as an advisor and is the chairma of the National Accidental Death and Suicide Prevention Fund. The organization has been successful in raising funds for research into the causes of deafness, and in providing support and resources for the hearing impaired.

The group's main goals are to increase awareness of the issues faced by the hearing impaired and to provide support and resources for those who are deaf or hard of hearing. The group has been active in raising funds for research into the causes of deafness, and in providing support and resources for the hearing impaired.

The Unlimited listing of enrollment is unlimited.

Address communications to:
Robert Libby
Hearing Aid Prescriptions Workshop Chairman
University of Arizona
3650 South Main Street
Tucson, Arizona 85721

The Unlimited listing of enrollment is unlimited.

Before 1920, the word "hearing aid" was used in a general sense to refer to anything that could assist in the perception of sound. The first true hearing aid was developed by Dr. William Marke in 1920. Marke's hearing aid was a mechanical device that amplifies sound, and was designed to help people who were deaf or hard of hearing. Marke's hearing aid was a significant breakthrough in the field of hearing aids, as it was the first device that could accurately reproduce sound.

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Sponsors of the Antibody Update series are SUNY Upstate Medical Center, Syracuse, N.Y.; and the University of Nebraska Medical Center in Omaha. Program directors are Alan Feldman, Ph.D., professor of otorhinolaryngology and communication sciences at SUNY, and T. Wellington Norris, Ph.D., professor and director of the Division of Audiology and Speech Pathology at Nebraska.

The 1979 program, held in Boston, IL, focused on hearing aid dispensing, with emphasis on practical aspects, and on language and language processing. A review of language as a tool in audiological evaluation and impairment in auditory processing was supplemented by an overview of the status of auditory evoked potentials in the evaluation of the central auditory system.

For the 1980 program, in addition to Feldman and Norris, were Robert Cox, Ph.D., Memphis State University; Joel Davis, Ph.D., University of Iowa; David Goldenberg, Ph.D., Purdue University; C. Thomas Grimme, Ph.D., SUNY Upstate Medical Center; Stephen D. Keifer, M.S., University of Florida; and James D. Smith, Ph.D., University of Nebraska Medical Center.

The 1980 Antibody Update will be held June 24-27 at the Hotel Viking in Newport, R.I. Topic of the program is "Protocol for Audiologic Diagnostic Evaluation in the Ear.

Sessions will cover idiopathic hearing loss, evaluation and management of transitory, audiologic evaluation of minimal ear discharge, ear canal dimensions and audiologic function, ENG as an audiologic service, brainstem audiometry, and speech audiometry in hearing loss. Practitioners will be offered on acoustic immittance and interpretation of ENG records.

Faculty will include Robert G. Turner, Ph.D., James F. Jergensen, Ph.D., Robert J. Martin, Ph.D., Stephen D. Keifer, M.S., Robert J. Brown, M.D., Alan S. Feldman, Ph.D., C. Thomas Grimme, Ph.D., Charles Parkins, M.D., Lynne Loflin, M.D., and Mary Errickson, Ph.D.

Further information on the Antibody Update 1981 is available from:

James Van Arsdell, Ed.D.
University of Nebraska Medical Center
Center for Continuing Education
Chapel and Dennys A
Omaha, Nebraska 68105
(402) 559-4152

AAS Papers
(Cont. from page 4)

Special Amplification for the Mentally Retarded: A Helmet-Mounted Hearing Aid

David A. Klein and Leslie J. Block
H. J. Goffman, and Terry Goffeing

ABSTRACT:

Disabling hearing loss and providing appropriate amplification for children and adults with mental retardation are two conflicting goals of audiological assessment. The paper offers a clear description of the similarities and differences between the two programs.

The paper also presents the results of a study conducted by the authors to determine whether or not the use of a helmet-mounted hearing aid would be beneficial for children with mental retardation.

The study was designed to test the hypothesis that the use of a helmet-mounted hearing aid would improve the ability of children with mental retardation to communicate.

The study was conducted in a controlled environment in which the children were divided into two groups: one group received the helmet-mounted hearing aid and the other received a standard hearing aid.

The results showed that the children who received the helmet-mounted hearing aid were able to communicate more effectively than the children who received the standard hearing aid.

The authors concluded that the helmet-mounted hearing aid is a valuable tool for improving communication skills in children with mental retardation.

Children's Speech Discrimination in Noise

BRIAN M. SHAW and HOWARD M. GUTSCH
BOWLING GREEN STATE UNIVERSITY
BOWLING GREEN, OHIO 43403

Text of speech discrimination in a background of noise, have been investigated extensively. Auditory investigations have shown that children who have hearing problems may show speech discrimination abilities similar to that of normal children.

For example, one study showed that when a group of children who had normal hearing scores were exposed to a speech discrimination test, they performed as well as children with normal hearing.

The children were then exposed to the same test in a quiet environment. The results showed that the children who had normal hearing performed significantly better than the children with hearing loss.

The authors concluded that the speech discrimination abilities of children with normal hearing are similar to those of children with hearing loss.

The study was conducted by exposing children to a speech discrimination test in a quiet environment and then exposing them to the same test in a noisy environment.

The results showed that the children who had normal hearing performed significantly better than the children with hearing loss.

Further investigation is needed to determine whether the results of this study are applicable to children with normal hearing as well as children with hearing loss.
AAS Members and Others at the Annual Meeting

At Registration

Speakers & Participants

The Executive Committee

At Dinner
At the International Audiology Society Meeting

At the SENTAC Meeting
Infant Auditory System (cont.)

The fact that infant abilities to discriminate various sounds, including those that are not naturalistic, are evident by the age of a few months (Bower, 1965), is consistent with the view that auditory abilities are not acquired through speech and listening to speech but rather are innate and do not require training. However, it is important to note that infants do not learn to discriminate all sounds equally well. For example, some sounds, such as those associated with the vocalization of other infants, may be more easily discriminated than others, such as those associated with mechanical or environmental sources.

The infant abilities to discriminate sounds are not limited to naturalistic sounds. Infants are also able to discriminate between synthetic sounds, such as those produced by a computer, and real sounds, such as those produced by a human voice. This ability to discriminate between synthetic and real sounds is an important aspect of infant auditory development and is believed to be a key factor in the development of speech perception.

Recent research has shown that infants are able to discriminate between different types of sounds, such as those associated with different languages, even before they begin to hear speech. This suggests that the ability to discriminate sounds is an important aspect of infant auditory development and is a key factor in the development of speech perception.

In conclusion, the infant auditory system is a complex and dynamic system that is capable of discriminating a wide range of sounds, including both naturalistic and synthetic sounds. This ability to discriminate sounds is an important aspect of infant development and is believed to be a key factor in the development of speech perception.
Decibel (From p.56)

A decibel is a unit of measurement used to express the ratio of two intensities of sound. It is a logarithmic unit, which means that it is based on powers of ten rather than the linear scale. This is useful because human hearing is logarithmic, so the perceived loudness of a sound increases more slowly as the sound intensity increases. A decibel is defined as the ratio of two powers of ten, specifically the ratio of two intensities of sound. The logarithm of the ratio is used to express the decibel value:

\[ \text{Decibels} = 10 \log_{10} \left( \frac{I_1}{I_2} \right) \]

where \( I_1 \) and \( I_2 \) are the intensities of the two sounds being compared.

Decibels are used to quantify the loudness of sounds, from the softest whispers to the loudest explosions. Here are some common decibel levels:

- Below 20 dB: Whisper, rustle of leaves
- 20-40 dB: Light traffic, soft music
- 40-60 dB: Quiet conversation, radio on
- 60-80 dB: Typical conversation, active office
- 80-90 dB: Heavy traffic, loud parties
- 90-110 dB: Loud music, jet engines
- Above 120 dB: Painful and damaging to hearing

These levels are based on subjective perception, as the human ear is more sensitive to some frequencies than others. The threshold of hearing is typically defined as 0 dB, and the threshold of pain as 120-130 dB.
CALENDAR OF EVENTS

March 1981
22-27
2nd INTERNATIONAL CONFERENCE ON CHOLEC, TEATOMA AND MASTOID SURGERY, Hilton Hotel; Tel Aviv, ISRAEL. Sponsor: The Tel Aviv Univ., Shtrikh Sch. of Medicine, the Weizmann Inst. of Science and the Univ. of Minnesota, Dept. of Oto. Fee: $250 US; Resident/Fellow $175. Extra Persons $100. 25 hrs. AMA Category 1 credit. CONTACT: The Secretariat, 2nd International Conference on Cholecistostomy and Mastoid Surgery, P.O. Box 10217, Tel Aviv, ISRAEL; call 03/292037.

23-25
CURRENT CLINICAL CONCERNS IN OTOLARYNGOLOGY 1981, Eden Roc Hotel, Miami Beach, FL. Sponsor: University of Miami School of Medicine, Dept. of Otolaryngology. 15 hrs. AMA Category I credit. Chairmen: James R. Chandler, M.D., CONTACT: Betty Howard, Univ. of Miami School of Medicine, Div. of CME D234, P.O. Box 12850, Miami, FL 33101; 305/247-4074. *On conjunction with Pan-American Symposium on Trauma of the Head and Neck.*

27
COMMUNICATION DISORDERS, New York, NY. Sponsor: The Dept. of Otolaryngology and the Page and Wm. Black Post-Graduate School of Medicine, Rochester, N.Y. 25 hrs. AMA Category I credit. CONTACT: Director, The Page and Wm. Black Post-Graduate School of Medicine, Mt. Sinai School of Medicine, One Gustave L. Levy Pl., New York, NY 10029; call 212/650-5717.

27

30-1
1st INTERNATIONAL SYMPOSIUM OF RECENT ADVANCES IN EAR SURGERY, Palestrina Hotel, Alexandria, Egypt. Sponsor: Alexandria School of Medicine, Chairman: A. Belal, Jr., Assistant, Prof., ORL Dept., Alexandria School of Medicine, Alexandria, Egypt; phone Alexandria 428465.

APRIL 1981

ENG INTERPRETATION, San Diego, CA. CONTACT: Maria Servio, Interpretation and Control Systems, Inc., 1430 Interstates Rd., Addison, IL 60101; call 312/545-6520.

23-May 15
DIVING MEDICINE IN DEPTH: AN ADVANCED PROGRAM, Plantation Hotel, Honolulu, Hawaii. Amputees is attendance at Basic Program, 28 hrs. AMA Category I credit. Speaker: Dr. H. K. Moe, Human Undersea Research Unit and the Undersea Medical Society, Fees: $300 for academic program; other rates; $150 hrs. AMA Category I credit. CONTACT: Program Coordinator, Dept. M 911, Human Undersea Research Unit, P.O. Box 5639, San Antonio, TX 78229; call 512/455-3595.

30-May 2
POSTGRADUATE COURSE IN EAR SURGERY, Nijmegen, the NETHERLANDS. Sponsor: University Eye, Nose and Throat Dept. of the University Hospital. Fee: $290 per person. Dr. F. van den Brink, Philips van Leydenlaan 15, 6500 HB Nijmegen, the Netherlands.

MAY 1981

5-9
HEARING HEALTH CARE TEAM CONFERENCE, Caribbean Cruise from San Juan on the Star Princess, Sponsor: Dept. of Speech Communication, Oregon State Univ. CME credit available. CONTACT: Paul J. Walsheughy, Ph.D., Cruise Coordinator, 12309 W.N. Kearny, Portland, OR 97226 (call 503/229-9475 or 646/4528).

8-15

15-16
NEW DEVELOPMENTS IN MICROBIOLOGY AND OTOLOGY, Springfield, IL. Sponsor Div. of Oto., Dept. of Surgery, Southern Illinois University School of Medicine. 14 hrs. AMA Category I credit. CONTACT: Hunt E. Irwin, M.D., Chairman, SIU School of Medicine, Dept. of Surgery, P.O. Box 3599, Springfield, IL 62705; call 217/788-6140.

23

25-26

JUNE 1981

10-13
THE 5TH ANNUAL FITZ-HUGH SYMPOSIUM, PEDIATRIC OTOLARYNGOLOGY, The Booth's Head Inn, Charleston, W.Va. Sponsor: University of Virginia, Dept. of Otolaryngology, Box 930 Medical Center, Charlottesville, VA 22908.

11-13
PEDIATRIC OTOLARYNGOLOGY, Galveston, Tex. Sponsor: Dept. of Oto., University of Texas Medical Branch, Galveston, Fee: $350. 20 hrs. AMA Category I credit. Contact: Faculty: Dr. Robin Cotton and Sylvania Shook. CONTACT: Chairman, John K. Jones, M.D., Dept. of Oto., Univ. of Texas Medical Branch, Galveston, TX 77550; 713/765-3633.

AUGUST 1981

2-6
F.I.T. HALL 22ND ANNUAL SEMINAR IN OTOLARYNGOLOGY, Waterville, ME. Sponsor: Colby College and the Mid-Maine Medical Center. Fee: $250. CONTACT: Colby College, Mayflower Hill, Waterville, ME 04901.

5-7

SEPTEMBER 1981

ANNUAL MEETING OF THE AMERICAN AUDITORY SOCIETY, New Orleans, LA (See Page 1 for details).

OCTOBER 1981


MAY 1982


OCTOBER 1982

AMERICAN ACADEMY OF OTOLARYNGOLOGY AND HEAD AND NECK SURGERY ANNUAL MEETING, New Orleans, LA. CONTACT: Ruth C. Enquist, Director of Meetings and Membership, AAoN, 15 Second St., Rochester, MN 55901; call 612/332-7844.

APRIL 1983


OCTOBER 1983

AMERICAN ACADEMY OF OTOLARYNGOLOGY AND HEAD AND NECK SURGERY ANNUAL MEETING, Ana- hporn, CA. CONTACT: Bart C. Enquist, Director of Meetings and Membership, AAoN, 15 Second St., Rochester, MN 55901; call 612/332-7844.

NOVEMBER 1983


MARCH 1984

7th SAMURAI WORKSHOP ON OTOMASOCRYSIS- SURGERY AND THE ETHIOPEAN FLUCCUS-HARING LOSS SYMPOSIUM, Northwestern University's Thorns Hall, Chi- cago, IL. CONTACT: National Hearing Assoc., 1916 June Blvd., Suite 300, Oak Brook, IL 60521; call 312/235-7300.

SEPTEMBER 1984

AMERICAN ACADEMY OF OTOLARYNGOLOGY AND HEAD AND NECK ANNUAL MEETING, Las Vegas, NV. CONTACT: Ruth C. Enquist, Director of Meetings and Membership, AAoN, 15 Second St., Rochester, MN 55901; call 612/332-7844.

OCTOBER 1984


AAS ANNUAL MEETING – NOV. 21st
I Remember:
The International Audiology Society

By Aram Glorig

Since this is the year for the first national Audiology Society to meet, it is appropriate that perhaps the history of this society be published by the younger society known as the American Audiology Society. When, I first approached this task, I thought that it would be rather easy to do, but having written to quite a number of members of the society who were knowledgeable about its beginning, I find it in even more difficult, particularly if it is to be accompanied by photographs et al, which make the article much more interesting.

Consequently, in order to meet a deadline for the April issue, Marion has asked me to write a short and brief history taken from my own memory and from a few suggestions here and there. You will probably all remember—that is, those of you who are gray-haired enough—that audiology had its beginnings in the Army hospitals during World War I and certainly, shortly after World War II ceased. My first contact with any organized activity as far as audiology was concerned, was in 1940 when I became Director of the newly formed Walter Reed Army Hospital Audiology and Speech Correction Center. Shortly after this, as a matter of fact, in 1944, the first conference on audiology was held in Stockholm in September. At that time there was no organized society, but quite a few well-known individuals in the field of audiology gathered together for a conference under the immediate sponsorship of Gunnar Holmgren of the Karolinska Institute in Stockholm, Sweden. The conference participants were men like Carhart, Curtfield, Glorig, Hildreth, Johnson, and Bill Hurry. I believe Dick Silverman and Hal Davis were there also. The year 1945 marks the beginning of the International Audiology Society, but it was not actually organized as a society until 1948. Prior to that there were conferences on audiology and courses in audiology.

Some of the material I have includes notes on some very interesting events. In 1960, under the initiative of Prof. Holmgren, 40 participants representing 16 countries attended the conference which I mentioned above. In 1960, it was decided that a committee which had been appointed in 1958 to study the problem of organizing audiology should be enlarged, but it was not thought at that time that the founding of a "great society" was yet appropriate. In 1961, again under the initiative of Prof. Holmgren, 40 participants with 22 from 22 different countries attended a second course in Sweden. In 1958, the first executive committee of the society was chosen. The President at that time was Prof. Lasch. Vice President was Prof. Tato, Prof. van Dishoeck, and Prof. Langenbeck.

(See page 3)
Letters from England

(Continued from pg 1)

I Remember

I am to end on a very sad and the death of the Doyens of British audiology and ophthalmologist Dr. C.S. Halpke. Others more competent than I will pay tribute to his great work, I have been encouraged by his knowledge of the pathology of the inner ear and his entirely scientific approach to its study.

That wonderful man Pope John Paul the Second has been speaking of peace and reconciliation everywhere. Why is it so difficult to achieve. Sacred friendship, the goal of the Colloquium, should be our goal too.

I, Friedmann

London, Autumn 1979

My dear Editor,

A previous letter may not have reached you with my con- gratulations to Dr. Glauc's awards and honours, so well merited by his pioneering contributions to audiology and his continued research work at the Ear Research Institute. Am mull that.

The last issue of Corti's Organ brought back most pleasant memories of the Colloquium Symposium chaired not only by the knowledge of the death of our great friend Dr. Zingel. His vitality and energy will be sadly missed at all our meetings.

Taking of meetings I have referred briefly to the stimula- ting conference of the Colloquium in Budapest last Sept- ember, the head and all the other organisations of the day.

Your work in this field may rightly be called a work of God's grace and has gone longer than we know, every year. Your work in Vail may rightly be called the work of God's grace. I have met you and your work on the stimulation of the Colloquium and in Manchester.

The last issue of Corti's Organ has been focused on the Royal Society of Medicine in London. Always well attended it is going to remain the centre of meetings. Nevertheless the once a month gathering and the knowledge that the meetings of a new Research Society and of several Courses e.g. the Cadbury Colloquium and the Ear and Course in Pathology at the Institute of Otolaryngology and in Manchester.

Corti in all this is due to the pioneers of British otolaryngology, prominent among them, Dr. Charles Skinner Halpke C.B.E., F.R.S., F.R.C.S., who died aged, 79, last year. He was an authority on hearing with an international reputa- tion. As Director of the National Research Council's oto- laryngological unit he contributed greatly with his co- workers, Hoed, who has succeeded him, and Taggart in the advancement of our knowledge of the pathology of the inner ear.

The Colloquium has appreciated the high standard of historical technique demanded by Halpke in the study of the tinman of the inner ear. The Colloquium was agreed by the pathologists of the Colloquium, and the advancement of our knowledge of the pathology of the inner ear.

We have not been too bad and we have been very fortunate in the past when there have been some, particularly in the Southern California. Weather or no weather the political climate is not improved but that is another story.

I, Friedmann

London, Autumn 1979

I Remember

The Secretary General was Dr. Vorreut. Members of the committee were Michelle Arslan, Raymond Carhart, Terrance Cauchot, Dr. Care, Holladay Davis, Harold Eibes, Armitage Freiberg, and Henry Augustin. Those who are still known as the "Giants of Audiology." It is also inter- esting to note that the bulk of the leaders of the field is the field of audiology. The beginning of audiology is concerned with medically educated men who had an interest in hearing.

It is also noted that about 40% of the men who were involved in the beginnings of audiology were not medically educated individuals, a group which these we know were Corti, Hardy, Silverman and L. Donofer. I point out merely to restate what has been said by many of us many times, that audiology is a medically related field and should be so considered by all of us.

One anecdote that I remember clearly occurred during the first or second meeting of the audiology conferences that were held in Sweden. It was taught a group of about 25 individuals of mixed nationality. Among these were three languages, Swedish, Norwegian and Danes. Discussions which followed the session amounted to somewhat less than I noticed that each of the Scandinavians were speaking in their own languages. I wonder whether they understood each other quite well. I asked the Swede how he explained this and he stated that the Swedes do not understand each other. I said to the Norwegian in a dialect of Swedish, but Danish is a disease of the throat."
EFFECTS OF VIBROTACTILE STIMULATION ON THE SPEECH PRODUCTION OF THE DEAF AND HARD-OF-HARING CHILDREN

Barbara Franklin, Ph.D.
San Francisco State University

The writer is currently directing a study designed to investigate whether there is an improvement in the speech of deaf and deaf-blind children with vibrotactile stimulation using a tactile belt, the Teletactor. This paper reports on a study of 20 subjects with a visual impairment who were given vibrotactile stimulation. The subjects were children from the San Francisco School for the Blind in San Francisco, CA. The Teletactor has been used successfully in the past to improve the speech of children with visual impairments.

Cont. from pg 2

I Remember

I would like to close this brief description of the beginnings with a quote from the Statutes of the International Society of Audiology, "The aims of the Society are to facilitate the knowledge, promote rehabilitation, and improve the technical aspects of human hearing, and to end it coexist with one another and with the deaf."

President's Message

though this group may also diminish during the next decade, it is of course reduced by the anticipated increase in awareness and understanding. The hearing aid has been a tremendous tool for increasing the range and depth of communication for those who are deaf or hard of hearing. The importance of this tool cannot be overstated. The number of people who can be helped by amplification will increase during the next decade.

I hope that you will consider attending our Annual Conference this year. We are excited to see you there!
CONTINUED FROM PAGE 35

THE DIAGNOSIS OF SPINAL FUSION

III. TREATMENT OF THE DISORDER

A. Operative Treatment

B. Non-operative Treatment

IV. COMPLICATIONS

A. Infection

B. Non-union

C. Scoliosis

D. Neurological Complications

5. References

(continues from page 35)
position Technique: On the whole, this section shows the middle ear contribution to the pre-operative B.C. and, its dissection technique is in the labyrinthine fluids pressure after stapedectomy.

But according to post-operative functional results, obvious improvement of hearing level and patients' subjective discomfort. The conclusion that can be drawn from these results is that the presence of the cochlear nuclear component is a major factor in determining the quality of hearing after stapedectomy.

In conclusion, the study confirms the importance of the cochlear nuclear component in the post-operative hearing improvement, and suggests that further research is needed to elucidate its role in the restoration of hearing function.

The authors acknowledge the contributions of the following institutions:

1. The Department of Otolaryngology, University of California, Los Angeles
2. The Department of Audiology, University of California, San Francisco
3. The Department of Neurology, University of California, Berkeley

References:


The Effect of Tympanic... (cont. from page 14)

The drumhead may be associated with extensive tympanosclerotic changes. At times it is difficult to determine if a tympanic membrane perforation has been healed with a monomeric membrane. Post-operative imaging under microscopy will allow this diagnosis to be made. The healed monomeric membrane can be visualized under the microscope and motion of that membrane can be assessed.

Case #1: M.M., represents a patient with bilateral tympanic membrane perforations each measuring approximately 2mm in diameter. In addition, the patient has extensive tympanosclerotic changes of the remainder of both tympanic membranes. Audiometry illustrated in Figure 1 represents bilateral mixed hearing loss. Tympanometry for the right ear is indicated in Figure 2, and for the left ear in Figure 3. Flat configuration is attributed to the extensive tympanic membrane tympanosclerosis. There is no fluid visualized through either middle ear space. The perforation has healed over with a monomeric membrane on the right side, but is patent on the left side. The measured volume difference in the two ears is an indication of the patency of the tympanic membrane perforation.

McGill University Schedules Dan Ling

Summit Colloquium on SPEECH, LANGUAGE AND SENSORY PROCESSING IN HEARING-IMPAIRED CHILDREN, August 15-17, 1989. This colloquium directed by Daniel Ling, Ph.D., will provide practical information and strategies that can be directly applied in the remedial treatment of hearing-impaired children. Cost $80 U.S. or $175 Can. Detailed information will be available on request from March 1, 1989. Contact Ms. Carol Sheffold, School of Human Communication Disorders, McGill University, 1244 Pine Avenue West, Montreal. P. G. HIG 1AA.

Name These Famous Audiologists (Answer on pg. 16)

Symposium on Personal Hearing Protection

Sponsored by the Department of Otolaryngology and the Occupational and Environmental Health Unit, University of Toronto, and Mount Sinai Hospital, will be held May 14-15, 1986, at the University of Toronto. Coordinator: P. W. Alberts, University of Toronto, and Edgar Shaw, National Research Council, Ottawa. For: Audiologists, Design Engineers, Industrial Hygienists, Industrial Safety Personnel, Occupational Nurses, Occupational Physicians, Otolaryngologists, Research Scientists, etc.

Topics include: Biology of Hearing Loss; Biases from sound; Economics; Personal dosimetry; Hearing Protectors; design, safety, effectiveness; laboratory and shop floor; Motivation for use; Hearing Conservation: serial audiometry; the audiologist and the hearing conservationist; including Ontario Bill 70, and government monitoring; is it Effective? and MUCH MORE. More than 20 international experts from Canada, England, France, Germany, Sweden, United States, etc. Registration fee $250.00 before April 1st 1986, $275.00 after April 1st.

For further details and registration application contact Mrs. D. McBride, Office of Continuing Medical Education, University of Toronto, Faculty of Medicine, 245 Flather Hall, Toronto, Ontario, Canada...

Calls for Papers is Issued Inter-Noise 80

An Announcement and Call for Papers for INTER-NOISE 80 is available from the Institute of Noise Control Engineering. INTER-NOISE 80, the 1980 International Conference on Noise Control Engineering, will be held December 8-9, 1980 at the Hotel Inter-Continental in Miami, Florida, and will have the theme "Noise Control for the 80's." Papers are being solicited in a number of technical areas, including machinery noise reduction, the source, impulse and impact noise, noise emission measurements, labeling, active noise attenuation, acoustical data banks and noise control in industry.

The meeting is the ninth in a series of conferences which have been held annually since 1972. Deadline for the receipt of abstracts is May 12, 1980.

Copies of the announcement and further information on INTER-NOISE 80 are available from the Institute at P. O. Box 3336, Arlington Branch, Poughkeepsie, NY 12601.
Effect of Tympanic Membrane Segmentation

Cont. from pg. 14

a long history of recurrent otitis media and bilateral tympanic membranes on three occasions. Otoscopy reveals the tympanic mem-
brane which has been segmented by bands of fibrous scarring. Large areas of the posterior tympanic membranes are deficient in the fibrous layer. These seg-
mental retraction pockets were slightly retracted but were
hypervisible with pneumatic otoscopy. The tympanometric patterns indicate hyperresonant systems with negative middle ear pressure. (Figures 6 and 7) This pattern of tym-
potogram does not fit well in the classical descriptions and possibly indicates a Type Cd.

The next patient, C. Z., is a 67-year-old female with pro-
gressive bilateral decreased hearing and a childhood history of recurrent episodes of otitis media. Her audiogram, Figure 8, represents bilateral sensorineural hearing loss with no

significant conductive component. Otoscopy indicated tym-
pal membranes segmented by fibrous tissue and areas of
monomeric or dimeric membranes. The anterior superior
membrane was bulging in the left ear as seen by binocular
microscopy. A similar area in the right ear was retracted.

Figure 9 and 10 represent two tympanometric patterns seen
in these two ears respectively.

The next patient, L. B., also has bilateral segmental retrac-
tions. Otoscopy of the left ear indicates a normal appear-
ing pars tensa with a retracted pars tensa, i.e., attic retraction

ANSWERS to
— Name These Famous Audiologists

Top—Our President
Laura Wilber

Bottom—Our Editor
Mariana Downs with
Doreen Pollock Performing
GSR Audiometry—(How times
have changed!!!)

Use of Minicomputers
in Speech and Hearing Research

An intensive five-day course at the introductory level.

Sponsored by:
Northwestern University
Department of Communication Disorders

August 1980
and January 1981

This course is designed to provide speech and hearing scientists, neurologists, physiologists, and psychologists with a basic understanding of how minicomputers work and how they are used in various areas of research. The course will cover the basic concepts of computer hardware and software, control of experiments, stimulus synthesis and analysis, data acquisition and reduction, and the elementary techniques involved in interfacing a computer to other laboratory equipment. Each topic will be covered in lectures, with extensive demonstrations of computers and associated laboratory equipment. The lectures will be complemented with small-group laboratory sessions, which will give participants hands-on experience with many of the techniques discussed.

Course Instructors: Fred Wightman, Ph.D. and Israel Raz, Ph.D.

Enrollment Limited.

Address inquiries to Frederic L. Wightman, Auditory Research Laboratory, Northwestern University, 2298 Sheridan Road, Evanston, IL, USA 60201
Effect of Tympanic

Cont. from pg. 16

A tympanometric pattern in this ear is a Type A. Figure 11. Her right ear demonstrates a large anterior

monocyclic membrane which is hypermobile. There is no evidence of middle ear fluid or abnormality of middle ear ventilation. The tympanometric pattern elicited in this ear is indicated in Figure 12.

SENTAC Meeting Announced

The Society for Ear, Nose and Throat Advances in Children (SENTAC) is holding its annual meeting at The Mark at Vail, December 5A and 7, 1980.

This is a call for papers for the annual meeting. Papers should be devoted to new ideas in the fields of audiology, speech pathology, otolaryngology and pediatrics relating to the concept of ear, nose and throat advances in children.

The papers will be of 8 minutes duration and an abstract of 216 words maximum will be required. The closing date for receipt of abstracts is July 15, 1980. Papers submitted for presentation for SENTAC will be submitted to The International Journal of Pediatric Otolaryngology for consideration for publication.

For further information, please contact:
Allan B. Seltz, M.D.
Program Chairman, SENTAC
Children's Hospital Medical Center
Elliott and Bellenda Avenues
Cincinnati, OH 45229
G. T. is a 76-year-old female with a large secondary acquired cholesteatoma. Surgery has not been advised because of her age and general medical condition. Cleaning of the cholesteatoma cavity is accomplished every three to four months. Following each cleaning, her cholesteatoma is found to extend into the attic. It has destroyed the posterosuperior bony canal wall and extends into the posterior tympanic with destruction of the scutum, stapedia, and a portion of the bulla. The inferior tympanic membrane segment, in the region of the attic, is absent. However, this segment represents probably less than 10 percent of the total area encountered by the sound probe. Her tympanogram is indicated in Figure 16.

It must be remembered that many of these pathologies can occur in combination. The otologist can examine the tympanic membrane with both conventional microscopy and pneumatic otoscopy; however, he is usually unable to see middle ear structures, especially the medical ossicles. Their mobility and degree of impingement by pathologic processes. Combination pathologies are more difficult to predict. Seventy-Two.

Tympanic membrane pathology does affect tympanometric patterns. These effects are usually predictable. The tympanic membrane can be examined under an operating microscope and utilizing laryngoscopic technique. A full-thickness or a hand depth otoscope is the method of examination. Middle ear inflammation or edema, with or without a perforation, or retraction of a healed perforation may overlap in the tympanic membrane pattern. This is crucial for tympanic membranous disease. It is essential, therefore, that the tympanometric pattern and the results be evaluated in a cooperative manner.

BIBLIOGRAPHY


Scott Regehr Honored By West Virginia University

On the occasion of Scott Regehr's award of an honorary degree from his alma mater, West Virginia University, the following citation was made.

"Doctor Regehr is certainly a uncommon man. His achievements have gained him an enviable international reputation in the field of audiology, acoustics, and otolaryngology. He is certainly in the category of West Virginia University graduates who have gained unusual eminence in their profession."

"Although a modest, humble man, personally, Dr. Regehr is an auditory mechanism, but one of the true pioneers in the field of auditory measurement. He is considered by many as the first audiologist in the United States and was among the first scientific investigators in this country interested in the quantitative measurement of hearing levels. He has been active in this field since the early 1960's and there are many aspects of low frequency phenomena that were not originally investigated by him.

"His work has been creative and inventive. Coupled with unique technical knowledge and skills. This has enabled him not only to design, but to construct instruments to measure hearing acuity which at that time were unattainable. For example, he was credited with the design and construction of the first clinically useful model of the otic automatic audiometer available to this general medical community."

"Through Dr. Regehr's work on the measurement of the ear, he has gained the reputation of having little theory goes in the field of hearing science, but in related disciplines as well, such as acoustics and otolaryngology. This recognition is evidenced by his being named an Honorary Fellow of the American Academy of Ophthalmology and Otolaryngology, a Fellow of the Acoustical Society of America, a Fellow of the American Laryngological, Rhinological, and Otological Society, a Fellow of the American Speech and Hearing Association."

"He has been instrumental in the establishment of firm intercommunication with the field of otolaryngology. He often served on the board of examiners of the national boards of the American Academy of Ophthalmology and Otolaryngology.

"He was one of the early scientists to recognize the relationship between exposure to intense noise and damage to the inner ear of man. He devised instrumentation and clinically useful techniques to detect and measure the extent of this damage. The research into this hearing interest has culminated in recent years in the Federal Government's active role in the protection of the ears of workers in industry from unacceptably intense noise."

"He received the Bachelor of Arts degree from West Virginia University in 1932 and then took the first two years of the medical school curriculum. In 1935, he went to the University of Iowa as an Eastern Fellow in Psychology of Music. He has remained at the University of Iowa ever since, receiving the Master of Arts degree (1935) and the Doctor of Philosophy in 1939. He then joined the University of Iowa Medical Center for many years he was a musicologist participating in the Ward section of the University of Iowa faculty orchestra."

"Regehr has been an outstanding contributor and innovator in all facets of the field of audiology and acoustics. He has been an influential and administrative. He is truly one of the most respected leaders in his field. As Provost Emeritus at the University of Iowa, he continues to make significant contributions to his profession. He has been a native of West Virginia (West) and a graduate of West Virginia University. Dr. Regehr is a great credit to the University of Iowa and to the state of West Virginia."

Mr. Corbino proudly salutes our colleague and friend, Scott Regehr. 7/12/76.

ABR Course Announcement

The Krige Hearing Research Laboratory of the South (KSL) Medical Center, New Orleans, Louisiana, will present a Short Course in Auditory Brainstem Response Testing, July 11-15, 1977. The course will be conducted under the direction of Dr. John C. McCandless, of LSUMC, and will be instructed by J. A. B. Regehr, of LSUMC, in collaboration with the Medical Education and Training Section of the University of Louisiana. The course will be for persons with an interest in auditory physiology and electrophysiological research. The course will be divided into four parts: 1) anatomy and physiology of the auditory system; 2) clinical testing techniques; 3) computer analysis and control of the testing procedure; and 4) surgical and clinical applications of the technique. The course is open to all interested persons who can attend the day-to-day training. The fee for the course is $350.00. The fee includes all lectures, examination, and meal tickets. The course will be held in the Medical Center, 1100 Poydras St., New Orleans, LA 70112. For further information, call Dr. Regehr at (504) 522-1234.
Attacking the Ski Slope

Model AE

Problem:
Classic sensorineural hearing loss where speech intelligibility is the primary concern.

Recommendation:
Evaluate Dahlberg's new Model AE, engineered to eliminate low frequency amplification (below 1,000 Hz) with usable gain to 6,100 Hz.

(37 dB). Model AE has both fitter and user adjustable features.

We invite you to compare the high frequency response of Model AE to any other instrument currently available.
AAS Members and A
Winter Tail at Vail

The Group Takes to the Slope

A Ski Mobile Foray

At the Exhibitors Wine and Cheese Party
Friends at Vail

The Opening Cocktail Party

Fun at the I-C Buns Skating Party

At the Awards Banquet
What is the American Auditory Society?

The American Auditory Society was formed in October 1914. In June 1926, after a vote by the members of the Society, the name was changed to the American Auditory Society. The following provides basic information regarding the Society.

What Is The Purpose Of The Society?

The primary aims of the Society are to increase knowledge of human hearing, promote conservation of hearing, and foster habilitation and rehabilitation of aurally impaired individuals. To attain these goals, the Society will coordinate and disseminate information, particularly through the holding of regular meetings, and the publishing of reports. Because of the multiple disciplinary nature of the Society's membership (audiology, otolaryngology, deaf education, hearing aid engineering, psychoacoustics, etc.), the Society will provide a formal platform for the interchange of information from allied professional fields.

Who Can Be A Member?

Active membership is open to individuals holding at least a baccalaureate degree from a recognized academic institution or to an individual who has had the equivalent of an academic degree in scientific experience or in professional experience in the field of audition. Admittance to the Society may be granted by the Executive Committee after the candidate has submitted an application with recommendations from two members, and has paid dues for the year in which application is made. Persons wishing to become members must have an interest in human hearing. The Society shall be based primarily within the United States, but there shall be no geographic limitation on membership.

When And Where Will Meetings Take Place?

An annual meeting will be scheduled to take place either the day before or after annual meetings of other professional groups, such as the American Academy of Otolaryngology (AAO), and the American Speech and Hearing Association (ASHA) and the Audiological Society of America (ASA).

Will There Be A Journal?

The Society publishes Ear and Hearing, Ear and Hearing has a clinical format and is issued bimonthly (6 issues per year). In addition, "Goot's organ" is published on a quarterly basis. Goot's Organ is an informal publication and the purpose is to keep members aware of society activities and other notable events.

How Much Are Dues?

Annual dues are $29.00. Because the Society will not concern itself with political issues, such as licensure, certification, etc., dues will remain reasonable. All members receive both of the publications as part of their dues.

How Does One Join The Society?

To become a member submit an application, with an endorsement from two active members, to the Secretary/Treasurer. For more information write: Ross J. Roeser, Ph.D., Secretary/Treasurer, American Auditory Society, 1966 Inwood Road, Dallas, TX 75225.

Presidents of AAS

- Aron Glorig
- W. Dixon Ward
- Gary McCombless
- Samuel F. Lyberger
- Laura Wilber
- Ralph Nason (President Elect)

Special Membership Offer

The membership qualifications for AAS include a minimum of a bachelor's degree or the equivalent in experience and signatures of two active members of the Society. Until July 1, 1980, applications will be accepted without accompanying signatures for applicants who do not know the names of two active members if they are sent on the form below. The secretary/treasurer's office will obtain the necessary signatures from two active members.

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Send $29.00 to cover dues for 1980. When complete, return to:

Please indicate which is your PREFERRED mailing address:

Home   Professional

Ross J. Roeser, Ph.D.
Secretary/Treasurer
American Auditory Society
1966 Inwood Road
Dallas, Texas 75225
The AAS Tours to the International Audiology Congress

AAS's European counterpart, the International Audiology Society will hold its XV Congress in Krakow in September 1980. To make it reasonable and congenial for AAS members to attend, group tours are being planned for members, their families and friends. Among the AAS members who will present papers in Krakow will be Ralph Namim, Arnon Glorig, LaVonne Bergstrom and Marion Derewa. Philip Pelzman will also be on the program. There will be 13 competitive sessions:

2. Ideologic Factors in Sensorineural Hearing Loss.
3. Pseudoneurology. In addition, contributed papers will be announced.

Two options are being planned for the tour: one a seven-day trip in the Krakow Congress and back, the other an additional week's tour of Vienna and Budapest.

TOUR I—7 days. Air Fare from New York: $850.00.
Departure from New York—August 25
Return New York—September 2

New York—Evening departure for Warsaw on Pan Am.

September 1

Warsaw and Airport meeting and transfer to hotel. Cocktail party and dinner.

September 2


September 2

On your own in Cracow.

September 3

2:30 P.M. Leave by bus for Warsaw. Overnight.

September 7

Morning sightseeing. Take Pan Am for New York at noon.

TOUR II—14 days: $1,450.00.

4 COUNTRY TOUR
POLAND, HUNGARY, AUSTRIA, CZECHOSLOVAKIA
Departure from New York: August 25

New York—evening departure for Warsaw on Pan Am flight.

September 1

Warsaw—Airport meeting and transfer to hotel. In the evening welcome cocktail party. Dinner and overnight.

September 2

Warsaw/Cracow—Leave Warsaw after breakfast for Cracow. On the route stop at Czestochowa to visit the famous Black Madonna Shrine. Continue to Krakow. Dinner and overnight.

September 3

Knock on door. You will continue your tour after 2 P.M. Leave Cracow for Zakopane. Free time till evening at Tatra Mountain resort. Entertainment by the Polish Folk Group. Dinner and overnight.

September 4

Zakopane/Budapest. Morning departure southward to Zakopane in the Tatra Mountains. Dinner and overnight.

September 5


September 7

Budapest—Vienna. Drive through Bratislava and Nickolsdorf to Vienna. Lunch en route. Dinner and overnight in Vienna.

September 8


September 10


September 12


September 13

Prague—New York. After breakfast depart for the airport for your flight home. Arriving the same day.

TOUR FEATURES

ACCOMMODATIONS:

Hotels. Accommodations with private bath or shower, hotel service charges and taxes are included.

MEALS:

Three meals daily in Poland. Seven breakfasts, three lunches, four dinners (in some countries as per dietary.) Transportation and Sightseeing. Transfers between airport and hotels; tips to porter for baggage and hotel; All sightseeing and excursion, by deluxe motorcoach, described. Entrance fees where they apply. English speaking guides.

TOTAL LAND/AIR $1,450.00

Per Person/Double Room Supplement $100.00

Air Fares: GIT/APEX-NC/WAR/PBG/NYC subject to change in event of a fuel increase.

Woodruff World Travel
ATTN: Bob Berg
2401 E University Blvd.
Denver, Colorado 80206

Please send information on Krakow tour with the American Audiology Society.

Number in my party:

Signed:

Address:

They just aren't teaching people to spell correctly anymore!

Russia Gets the Sack from AAS

The 2-week AAS tour to the International Audiology Congress in Krakow had planned to take in parts of Russia after the Congress ends. However, with the current national feeling about Russia's invasion of Afghanistan, AAS withdrew any notion of visiting in the Russian sector. Instead, more time will be spent touring beautiful Vienna and exotic Budapest.

The two options for group tours to the Congress are outlined on this page. Please note that one does not have to be a member of AAS or of the International Audiology Society in order to join the tour. It is open to anyone interested in joining either group for the Congress alone or for the longer two-week tour.

For those going only to the Congress for the week's stay, the price includes airfare, plus the two nights' stay and dinner in Warsaw, the bus trip to Krakow and back and lunch on route. After arrival in Krakow participants in the Congress must make their own arrangements for lodgings and meals.
CALENDAR OF EVENTS

MAY
9-10
RING INTERPRETATION, Washington, D.C. 12 hours Category 1 credit for Physician's Award, AMA. The course is designed to aid physicians and audiologists using electrostenography to secure the accurate interpretation of RING findings. Fee: $200.00. Contact: Marian Servi, R.D.S., Inc., 325 Interstate Road, Addison, Ill. 60131-8388.

10-12
ADVANCED ELECTRONYSTAGMOGRAPHY COURSE, Memphis, Tennessee. Contact: Coon Conference Coordinator, Life-Tech Instruments.

AUDITORY EVOKED POTENTIALS, Houston, Texas. Contact: Alfred C. Coats, 566 Renter Avenue, Houston, TX 77030.

JUNE
4-6
TRAINING COURSE FOR ACOUSTIC TECHNIQUES IN INDUSTRY, Pullen, CA. 18 hours MIN credit. Fee: $350.00. Contact: Max Nelson, Ph.D., Industrial Auditory Institute, 1358 N. Sycamore Ave., Pullen, CA 92581. 714-470-480.

JULY
3-6
TENTH INTERNATIONAL CONGRESS ON ACOUSTICS, Sydney, Australia. The Congress will explore the future of acoustics in its many aspects. Contact: W.R.L. Committee, 34-4 Clarence St., Sydney, NSW 2000, Australia.

AUGUST
23-30
18TH ANNUAL OCCUPATIONAL HEARING LOSS INSTITUTE, University of Maine at Orono, Maine. Fee: $275 in P.A. Category I credit for Physician's Award, AMA. Those are parallel sessions in the practical aspects for technicians and non-technical applications for physicians and enhanced audiologists. Fee: $290. Contact: Marion Servi, R.D.S., Inc., 325 Interstate Road, Addison, Ill. 60131-8388.

SEPTEMBER
21-26
XV INTERNATIONAL CONGRESS OF AUDIOLOGY, Krakow, Poland. Contact: Dr. Andrzej B. Halam, Kopernika 23a, 31-561, Krakow, Poland.

October
3-8
21ST ANNUAL DOREN PALLACK AUDIOPEDIC WORKSHOP, Denver, CO. Contact: Linsten Foundation, 2415 S. Downing, Denver, CO 80222.

NOVEMBER
26-28
ANNUAL MEETING OF THE AMERICAN AUDITORY SOCIETY, Detroit, Michigan. Contact: A. Bruce Graham, Ph.D., Henry Ford Hospital, Detroit, Michigan.

DECEMBER
5-7
SOCIETY FOR EAR, NOSE AND THROAT ADVANCE IN CHILDREN, The Mark, Valley Forge (See page 177).
CORTI’S ORGAN

The Official House Organ of the American Auditory Society

Vol. 6, No. 2
Spring/Summer 1981

AAS Annual Meeting to be a Blast

The 1981 Annual Meeting of the American Auditory Society will be held in New Orleans, La., on September 21, 1981, in conjunction with the American Academy of Otolaryngology Head and Neck Surgery. The meeting will take place at the Marriott Hotel in The LaGalere Annex, No. 3, on the second floor. The theme for this year’s program is Surgical and Prosthetic Management in Auditory Rehabilitation and will include a full day’s presentation of papers and extend into the evening hours with social events. Features in this year’s program are:

Scientific Papers:
Paul Waltz, M.D. — will present the 1981 Cuthbert Memorial Lecture entitled “Research in Communicative Disorders: A Perspective for the Next Decade.”

Charles J. Berlin, Ph.D. — Auditory Brainstem Responses

Jack Tilleau, M.D. — Management of Tinnitus

William House, M.D. — Cochlear Implant

Ted Bailey, M.D. — Hearing Aid Dispensing from the Otolaryngologist’s Office

Selected Submitted Papers

Social Events:
6:30-8:30 p.m. A scenic river boat tour of the New Orleans historic river front with complimentary hors d’oeuvres
9:00 p.m. Dinner at the internationally famous Commander’s Palace Restaurant with a free live Cajun band to entice the evening

A pre-registration form is on page 20.

XVI International Audiology Congress To Meet in Finland

Helsinki, Finland will be the site of the 1982 Audiology Congress May 19-22. Two Americans, Dr. Donald and Fran Curry, will be moderators of one of the Round Table sessions of the Congress. Donald will present a paper on "Cochlear Mechanics" and Curry presents over "Evolution of Hearing and Hearing Hands." Papers are accepted on any audiological topic for the general sessions. Submittals and information requests go to: XVI International Congress of Audiology Secretary-General Dr. Tapio Juhelainen Department of Otolaryngology Helsinki University Central Hospital Hietaniemenkatu 4 E SF-00290 Helsinki 20 Finland

Dr. Donald Curry, well known to American audiologists, is president of the organizing committee of the Congress. He promises a lavish entertainment in the historic city of Helsinki.

A pre-congress symposium will be held at Gottingen, Sweden on May 19-21, organized by Dr. Gunmar Liden. One day will be devoted to "Pediatric Audiology," and the other to "Impedance Audiology," with special emphasis on its use in otologic surgery. Dr. Liden’s address is: Gottingen University, Audiologists and, Otoakustik, Sonoelektronik, 444 Gottingen, Sweden. The 1984 Congress is being held for South America, California, with Sandy Gerber as the president of the organizing committee. This event will be the second time the Congress has been held in the U.S.

The program of the Congress and pre-congress is as follows:

Pre-Congress Meeting: Gottingen, Sweden Thursday, May 20 Problems in Pediatric Audiology
Friday, May 21 Expanding Audiology (Emphasis: Otologic Surgery)

XVI International Congress of Audiology, May 1982 (Continued on page 2)

SPECIAL PROMOTION ISSUE

JOIN UP!

Become a member of the American Auditory Society

Fill out the form on page 9 for application for membership

(Continued on p. 19)

Meet the Nominees for the AAS Executive Committee Election Page 2

The President’s Message

Clinical Research in the Health Sciences: A Collaborative Venture

It is now far more years than I care to count up since, as a relatively newly graduated physician, I entered the practice of hearing and hearing impairment. I can name the day (and almost the hour of the day) when it all started. I had made the decision to enter a residency training program in otolaryngology and on my first day in the program, my now chief told me "Newton, we need you to revolve the Audiology Clinic." (The surname is a form of address in our interesting English custom, it keeps those subordinates in place). The Audiology Clinic at University Hospitals in London had been started a few years prior to the outbreak of World War II by Dr. Phillip T. Kettner, but was brought to a halt first by the outbreak of World War II and secondly by the untimely death of Dr. Kettner. The Clinic was unique in concept, but also in possessing a remarkably efficient and still strikingly enormous sound-treated room the size of a small house.

My reaction to my chief’s urging to revolve the clinic was three-fold: first, I was surprised to find that anyone who was so closely associated with the back of a hearing aid would be asked to assume such a responsibility; secondly, I changed the name of the Clinic to the Hearing Clinic; and thirdly, I immediately set out to establish rapport with the Phonetics Department of the University College. University of London, where, I knew, were basic scientists interested in the physiology of speech and hearing and in the study of hearing impairment and its alleviation. My now colleagues in the Phonetics Department were Dr. Dennis Fry and Dr. Peter Dines. The latter now at Bell Labs. Here I ask our indulgence as, for the first time in print, I express my appreciation to Dennis Fry and Peter Dines for their support and encouragement, as I began to follow the footsteps of Philip T. Kettner.

After that first step I went on to establish liaison with other physicians and electronic engineers in the development of the electronic hearing aid, and its development continued.

Since the early days of the Hearing Clinic in London, my

Pres. Ralph Naunton

experience has included several years as a Scientific Officer with the Medical Research Council of England operating money from the Percy Price, a year at the Central Institute for the Deaf in St. Louis, and many years spent at the University of Chicago in the Department of Otolaryngology. In
Meet The Candidates for AAS Executive Committee Election

In August of this year an election will be held to replace seven members of the Executive Committee of the American Audiology Organization. Executive officers have asked each candidate nominated to provide the office of the Membership of the society with some basic biographical information, and to provide their thoughts regarding the future direction of the Society.

LaVonne Burgart, M.S., F.A.A.A. (1957, University of Minnesota), Professor of Surgery, Department of Surgery, Division of Head and Neck, 52-34 Rehabilitation Center, Los Angeles, California 90024.

The American Auditory Society is truly unique among being an effective multidisciplinary professional organization. It has a fine journal which has been published since 1970 and it also has a very useful newsletter Com.

With this fine record of interest in the functions and activities of the Society, it is important that less than 10% of the published papers have ever been authored by an audiologist or other medical specialist. These figures are based on 75 back issues. Even as the number of full-time audiologists has increased, this trend has continued. How can the Society encourage more participation of audiology in otology? Several factors contribute to this problem. There are several areas where this is evident.

It is obvious that an area exists which would benefit from the careful scrutiny of this issue.

Can someone come up with a good list?

International Meeting

(From page 1)

Sunday, May 31
Opening Ceremony
Reception by the city of Helsinki

Monday, May 24
Board Table Audiology, past and future
Moderator: S.I.G. Stephens
Coffee Break
Round table continued
Lunch Break
Session continued
Coffee Break
Board Table continued

Tuesday, May 25
Round Table Cochlear Mechanics
Moderator: J. Zwischker
Coffee Break
Round table continued
Lunch Break
Session
Coffee Break
Session continued

Wednesday, May 26
Round Table: Evaluation and Measurement of Hearing
Moderator: F. I. Catlin
Coffee Break
Round table continued
Lunch Break
Session
Coffee Break
General Assembly
Reception

Thursday, May 27
Round Table: Retroauricular Hearing Devices
Moderator: L. G. Johnson
Coffee Break
Round Table continued
Closing Ceremony

Letter to the Editor

Dear Editor:

I want to congratulate you and those on your editorial in Corti’s Organ. It is a clear and accurate statement, with which I agree entirely. You mention the effect upon quality of audiological services when an otologist tries to be also an audiologist. There is another side to that analysis which is equally pertinent. What happens to the quality of medical care provided by that otologist when he or she tries to be also an audiologist?

I count as personal friends some of the Europeans mentioned in your editorial. These are individuals whom you respect and whose professional contributions you have praised. Nevertheless, as I have said to them on many occasions, that the American model of multi-specialist audiologist makes more sense in terms of its broad utility and application.

I shall be mailing these to you a copy of your editorial and also this letter. I’m sure we will be hearing from them.

Keep up the good work.

Sincerely,

David P. Goldenstein, Ph.D.
Professor of Audiology

A. Bruce Graham, Ph.D., (1952, Northwestern University), Chief, Division of Audiology, Speech and Language Pathology at Henry Ford Hospital, 2799 West Grand Boulevard, Detroit, Michigan 48292.

I consider myself fortunate to have been involved with some of the early planning sessions concerning the American Audiology Society. At the outset, I made it quite clear how great I thought the opportunity would be, for the bringing together of the many disciplines involved with the hearing impaired. It is truly concerning, however, to see the results of all of the efforts of the past years. One needs to look at the current audiologic trends in diagnosis and medical or surgical management. From the audiologist, come testing techniques and plans for non-medical or surgical rehabilitation or verification. New developments in testing or amplification equipment come from the manufacturer. The most effective educational approaches using these tools and the evidence at hand is the Portable, or the portable, of the educator of the hearing impaired. Each of these professionals has much to offer. There are many professional organizations geared to specific areas of research, but here in the American Audiology Society it is an opportunity for anyone sharing ideas of the benefit to this hearing impaired population.

(Continued on p. 3)

AAS ANNUAL MEETING SEPTEMBER 21st
Meet The Candidates

(Cont. from p. 2)

Earl R. Harford, Ph.D. (1958, Northwestern University), Professor of Otolaryngology, Director of Audiology, University of Minnesota Medical School and Director of Audiology Clinic, University Hospitals Outpatient Department, Audiology Clinic Bldg 282, Mayo Building, University of Minnesota Medical School, Minneapolis, Minnesota 55455.

The basic objectives of the American Audiology Society are to stimulate an increase in knowledge and understanding of the audiological process, to promote conservation of hearing, and to foster habilitation and rehabilitation of persons with hearing impairment. Primary among various vehicles to accomplish this objective is the dissemination of information through official publications and presentations. The Society has not veered from this course the past six years since its founding in October 1974. There have been efforts by other groups and forces to enlist the formal declaration of support from AAS in political and semi-political issues, but the leadership of the Society rejected such maneuvers.

The strength of AAS lies in the fact that it is essentially an open organization that welcomes anyone who has a sincere interest in the objectives of the Society. Membership is open and the objectives of the Society are related to hearing. Those who attend the annual meetings can attest to the harmonious atmosphere and the clarity of the language used by the Society. During the past 16 months the Journal of the American Audiology Society has been a new name. (Ear and Hearing), a new cover, format and Editor (Ross Rosen). Many readers have written or spoken to the editor to support the journal. By all indicators, Ear and Hearing has potential to become one of the major publications for hearing health professionals in the coming years. Audiology, in particular, has been searching, consciously or subconsciously, for many years for an effective publication for the dissemination of their research, clinical experiences and ideas. Ear and Hearing is a natural vehicle to accomplish this need.

As I look into my crystal ball for some enlightenment on the future of AAS, I see productive, exciting and interesting years ahead for this young organization. The AAS can and will meet the needs of many hearing health professionals as a forum for their interests. It must not lose sight of its primary area and continue to avoid the temptations to equally engage in professional politics and non-scientific and non-educational missions. Welcome to all those who can support and maintain the objectives of AAS.

Sussanne Koo, M.A. (1975, North Texas State University), Dispensing audiologist, Metroplex Hearing Aid Centers, Inc., Medical Plaza Hearing Aid Dispensary, 801 Road to Six Flags W #134, Arlington, Texas 76012.

The success of the American Audiology Society has been evidenced recently by the significant increase in members of varying disciplines. This development is of a common interest to human hearing and our trust, an ever-widening marketplace for more sophisticated reiteration of existing rehabilitative capabilities. By fruitful exchange of information, technology, information, knowledge from experiment and experience, we hope to further the barriers which presently stifle our efforts to fully comprehend the auditory system and our attempts to compensate for its abnormalities.

To this end, the official journal of the society has been renamed Ear and Hearing to reflect our shared endeavors. The metamorphosis of this compilation of writings has transformed rather pathetic and somewhat garbled into a format for prevailing, clinically applicable materials. Single issues are now even devoted to special topics for a current collection of works from authors, renowned and novice alike, providing latest coverage with ready reference.


The hearing health care field is vibrant with excitement. Change is occurring constantly and rapidly. The field is undergoing greater changes in many medical areas as well. The hearing health care field is becoming one of the most important in the well being of the public. We face new challenges, new incentives and new goals to meet these increasing and changing demands. The American Audiology Society will and should be in the vanguard of these changes creating new areas of cooperation and growth.

I would be proud to be closely involved with this distinguished professional organization consisting of high quality specialists interacting in an area of shared cooperation helping to shape and reshape the hearing health field.

(Continued on p. 4)

reasons for a closer look at the Maico Series G117.

1. COMPACT SIZE

The Maico Series G117 is a small aid with great performance range. Some small, cosmetically attractive aids are limited in output in either output or gain. The Series G117, however, provides 33 dB peak gain, and 124 dB peak power output (SSP90).

2. UNUSUAL THINNESS

The Maico Series G117 is only .295" thick. This is particularly desirable when fitting the person whose ears are close to the head and who wears glasses.

3. TWO SPECIALY COLORED EARHOOKS

An Open Response (OR) earhook is designed to be used in open (uncoiled) earmold fittings. It tends to reduce the potential for acoustic feedback in tubing type fittings.

4. TWO TRIMMER CONTROLS

Despite its small size, two correlated adjustments control provide a wide range of performance adjustments. The Power Output (HF average) can be reduced from 117 dB to 100 dB SPL independent of gain, and the Low Frequency control reduces gain 15 dB at 500 Hz.

5. ULTRACORDIO DIRECTIONAL PERFORMANCE

Some research evidence suggest the ultracardiodic response is twice as effective in rejecting signals from the rear hemisphere as typical microphones using conventional directional microphones. The Series G117 has one of the best front (0°) to rear (180°) response separations, especially in the higher frequencies, and maintains separation even in open (tubing type) earmold fittings.
Meet The Candidates (Cont. from p. 3)

James A. Norton, R.S., (1958, Oklahoma State University), Director of Engineering Audiology, 2422 West Holly, P. O. Box 2005, Phoenix, Arizona 85062.

"When this Society was founded, I personally was very excited. There was, and still is, a great need for exchange of ideas and information between the various disciplines in our field. I think the Society, through its meetings and publications, has provided a vehicle for that purpose. I hope the Society would continue those efforts. I think the Society is in a position not only to encourage, but origination joint projects between the various disciplines. Joint efforts to solve problems could have some very positive results. Sometimes it is amazing what clever solutions can be found to problems when people with different perspectives take a new look at that problem. With adoration for past accomplishments and great hope for future success of the Society, I would be honored to be elected and serve on the Executive Committee."


As a charter member of the American Auditory Society, I have supported the vision of the Society. During my three years of professional service I have continually participated in the increase of knowledge, understanding of the auditory process, promotion of hearing conservation, fostering of rehabilitation, promotion of successful development, and the dissemination of information both nationally and internationally. As a member of the Executive Committee I would continue my active support in all of the purpose of the Society.

Clinical Application Of Victoreen's MCI Hypothesis

LOREN L. WEBER, Ph.D.
Department of Speech Pathology and Audiology
Western University
Bellingham, Washington

ABSTRACT: The acoustic procedure for presenting hearing aids, as outlined by Victoreen, is based on MCI, values for a damped wave signal (DWS). No independent laboratory has investigated the validity of Victoreen's MCI hypothesis. We evaluated this hypothesis by measuring MCI's in normal and successful hearing aid users with both the DWS and normal noise.

Our results support the Victoreen hypothesis, however, because of high inter-subject variability, the practicality of Victoreen's method is questioned.

An Evaluation Of Victoreen's MCI Hypothesis

Ralph R. Rupp, Ph.D.
The University of Michigan
Ann Arbor, Michigan 48109

The prediction for individual adjustment to wearable amplification is one that should be made by the audiologist following the clinical hearing aid evaluation and the follow-up period. The clinical audiologist can collect subjective information, along with objective data on the older individual which can provide a strong provisional estimate as to ultimate daily satisfaction of the subject's hearing aid.

The purpose of this paper is to present a clinical view of a feasibility scale for predicting the probable use of a personal hearing aid by an older individual. The feasibility scale for Predicting Hearing Aid Use (PUSH) assumes findings on eleven prognostic factors which cumulatively indicate likelihood of successful amplification for the older person.

The eleven prognostic areas include the following:

1. Motivation and manner of referral to professional audiologic services.
2. Self-assessment of the subject's communicative difficulties in reviewing information.
3. Verbalization by the individual as to "smell" for the hearing difficulties.
4. Extent of the hearing loss and understanding difficulties, with amplification and then without amplification.
5. Informed verbalization about the hearing aid during the hearing aid evaluation.
6. Indication of client's state of interaction, adaptability and flexibility.
7. Age of the client.
8. Finger and hand dexterity and mobility of the patient.
10. Financial resources, and
11. The presence of a significant other person to assist the client in the total rehabilitation program.

The most positive prognostics that the patient will become successful hearing aid user is based on the eleven factors just listed. The potentially successful hearing candidate might be described in the following way. He is about 45 years of age, is highly motivated, has a realistic attitude as to the nature of the communicative problem, is flexible and adaptable, has a measurable hearing loss of 25 db HLT, or more, has adequate vision and finger-hand dexterity, has few actual financial worries, on a scale not only or relative, but too limited to accomplish the entire program. Unfortunately, this ideal patient may never exist. A feasibility Scale assists the audiologist in predicting success of hearing aid experience for a specific client. Four classifications for prognosis are located at the bottom of the Scale, and based on the arithmetic total, will suggest the "success" prediction for the subject.

The scoring of the Scale is accomplished by the use of a single page recording form. Not all of the eleven factors receive equal emphasis on the Scale. Factors of motivation, self assessment, and motivation and shift in the hearing loss are weighted more heavily because of their importance to the older person. The decision-making process on the part of the audiologist as to which numerical value to attach before weighting calculus changes made to assist the client in reaching an objective score.

Four prognostic predictions are possible from the employment of the PUSH Scale. They include the following:

Positive - with scores of 61 - 100
Equivocal - with scores of 60 - 60
Limited - with scores of 59 - 61
Very Limited - with scores of below 41

The clinical employment of the feasibility scale for predicting hearing aid use (PUSH) supplies us with analytic support for decision making regarding the need for recommended amplification for our older patients. It identifies the surviving by his roll, economics, and counseling regarding the benefits and limitations of amplification. For a limited number of clients, the Scale points out a population which may need alternative programs to help them improve their receptive language base. The Scale is an effective instrument in that it assists the audiologist in studying key and critical issues related to the client and the probable success in making the adjustment to a hearing aid. It gives analytic structure to the clinical observations made by the audiologist on behalf of the client. The Scale is an effective tool.

The Negative On/Off Effect In Cochlear and Early Stapedial Otosclerosis

Bryan D. Forquer, M.D.
James L. Shekher, M.D.
Otologic Medical Group
Los Angeles, California

ABSTRACT: Acoustic reflex patterns were reviewed for one hundred patients suspected of having cochlear otosclerosis and 73 patients with confirmed suspected cochlear disease and mild conductive hearing loss.

As an administrator of research programs for handicapped persons, the Society will be made to maintain interest and support for handicapped individuals, for research which will further clarify the auditory process, and for means for rehabilitation of hearing handicapped individuals.

W. Dixon Ward, Ph.D. (1953 Harvard University), Professor, U. of Minnesota (Dept. of Communication Disorders, Otoneurology, Environmental Health, Psychology), 2930 University Ave. SE Minneapolis Minnesota 55414.

To the best of my ability, I support the aims of the Society as related to our laws to increase knowledge about audibility, to promote conservation of hearing, and to develop procedures and devices to assist the hearing impaired. In general, I oppose involvement of the Society in political issues, particularly those that have nothing to do with audiology, but including those that are in political terms (the incorrect want monoply).

(Continued on p. 20)

Abstracts and Summaries from 1980 Annual Meeting
(Continued from Winter/Spring Issue)
Abstracts

(Continued from p. 4)
ductive hearing losses of less than five years duration. Three abnormal reflex patterns were exhibited by these patients—each pattern reflected a phase of the test that was responsive. The negative reflex pattern was found to be equally common for each of the subject groups. The different pattern was much more common in the study group. The results of the study imply that the negative reflex is a significant factor in hearing loss.

Speech-Band Audimetry

Barbara Franklin, Ph.D.
San Francisco State University

Although there is agreement that speech is the most effective elicitor of response for certain populations, it has not been used because of the inability to obtain quantitative information corresponding to an audiogram. This investigator has developed a new audiometric testing procedure using filtered speech bands which can be used as an alternative or supplement to pure-tone audiometry (California State Patent 4,453,829). Method of Testing Human Auditory Response, Feb. 13, 1979. Inventor: Barbara Franklin. The phrase “slip clap” has been used to test through a filter with various band-pass low-frequency cutoff points. The frequency range of the bands was varied in order to maintain equal energy levels in each of the filtered bands. Each speech band center is at one of the test frequencies on an audiometer, from 250 to 4,000 Hz.

Presentation of Speech Bands

The speech bands are played through the tape cassette player and filtered through these population typically tested with speech bands, an ascending presentation is used for young adults, for newborns; infants, young children, low-functioning and hard-to-test individuals of all ages, the novelty of the stimulus is crucial to the response.

In order to establish the validity of this procedure, two groups of volunteers were tested. The first group consisted of normal hearing adults, aged 20-40. A second group of individuals with hearing loss was tested. The speech bands were presented using a wide variety of test procedures:

1. Observing of behavioral changes
2. Orientation
3. Contending to environmental stimuli
4. COR audiometry
5. Hand raising
6. Finger tapping

There was a close correspondence between the speech band and pure-tone audiograms for easy-to-test children. There was a significant number of subjects with levels greater than 50 dB for the speech bands, but with levels much lower for the pure-tone audiograms. In the second group, the results were similar. The speech bands were used to establish the validity of the test procedures and to determine the potential of the speech-band audiometry for use in clinical practice. The results indicate that the speech-band audiometry can be used to assess the hearing abilities of normal and hearing-impaired individuals.

Adult-Onset Hearing Impairment: Rehabilitation Directions

B. Gall Frankel, M.A.
Health Care Research Unit
The University of Wisconsin-Madison
London, Ontario, Canada

and Susan B. Hinson, Ph.D.
Department of Communicative Disorders
The University of Western Ontario
London, Ontario, Canada

Little investigation has been done in the area of handicap experienced by adults with adult-onset hearing impairment. To this end, a group of individuals was selected and their handicap was assessed using a questionnaire. In addition, a group of individuals was selected and their handicap was assessed using a questionnaire. The results indicate that the group with adult-onset hearing impairment was more affected than the group with normal hearing. The results suggest that further research is needed in this area.

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More Abstracts
(Continued from page 5)

One would expect that individuals with more serious hearing loss would be experiencing more difficulties in work role performance. This is borne out by our data, both in the Alaskan Social Vocational subscale and in the "work performance" scale developed for this study. Both scales have noteworthy correlations with Better Ear Pure Tone average, in fact, they represent the largest correlations with the actual impairment scale. However, once again the correlations with perceived handicap are considerably higher, indicating the cases where their significance for actual rehabilitation cannot be underestimated.

Social support does not appear to have a strong relationship with either perceived handicap or actual impairment. This is not an unexpected finding, since we see this variable playing an important role as a mediator or facilitator in adaptation. That role will be examined in future reports on this study.

In summary, what we have found in this fairly straightforward preliminary analysis is that standard diagnostic tests do not provide a complete picture of how hearing loss affects individuals in everyday life. Persons with clinically more hearing impairment appear to be experiencing some difficulties in adjustment—emotionally, occupationally and socially.

What does this mean for those interested in aiding rehabilitation? Simply stated, we feel that it may be necessary to extend the assessment procedure beyond the routine diagnostic test battery to include some other aspects of functioning. Audiologists can make judgments about the needs for auditory and visual rehabilitation from their inspections of test results and case histories. Our results indicate that a "hot spot" pure-tone average can be associated with a greater than expected perceived handicap, and a variety of emotional problems. Auditory rehabilitation may need to consider the importance of these emotional aspects and other psychological and social factors in order to provide more complete service to the hearing impaired.

Basic Guidance For Prostheses and Utilization
Norma Baut Norton, M.A.

Fitting a well selected prosthetic and offering an hour or two of counseling is insufficient for rehabilitation of the adult suffering from a hearing impairment. The need for more than basic guidance is apparent, and it appears that there may be a need for a new concept to be developed to serve the needs of the hearing impaired. The main interest in the prosthetic is to maximize the potential for communication. The critical issue is to promote the prosthetic use for any level of hearing loss appear to be (1) the choice of an appropriate device, (2) a scientifically based prosthetic selection process, (3) an individual's and associated motivation, (4) the client's understanding of the limitations of the prosthetic use. A basic guidance program has been designed and put into practice which stimulates early prosthetic use. It provides orientation and support through counseling, sequential auditory cue training, directed and non-directed behavioral modification techniques for communication skill improvement, and leads into a home study program. Home study is considered essential in supporting self-helping, self-directing behavior on the part of the adult client.

These programs and materials were initially developed for destined adults in an experimental single stage telephone cochlear implant program at the Ear Research Institute. The program evolved from work with 18 hearing impaired adults with bilateral hearing losses more than 95 dB HL, ANSD. A subject group of 24 adults with the same or worse hearing levels were trained with various evolutions of the procedures and materials. Additional subjects with hearing losses and vestibular abnormalities have used the materials which are now being modified for these adults experiencing moderate to severe loss.

The basic guidance for prosthesis involves around a nucleus program of 26 hours. The recommendation is for 10 direct contact sessions over no more than 2 weeks. Those direct contacts may vary from a total of 10 to 24 or more hours depending on the communication needs and skills of the client. A major portion of the program can and should be conducted in groups. The home study program can be completed at the client's own pace in months or less. Additional therapy may be suitable for those adults who require it or who have very poor communication skills. Initially, basic guidance sessions focus on refinement or reeducation of critical hearing ability. Minimal cues training of approximately 6 to 8 hours graphically reinforces for the client the multiple uses of either partial or distorted speech and environment.

What is critical in the selection of materials is the client's ability to be differentiated or identified solely by temporal or by a combination of temporal and spectral distortions and by related visual, subjective, internal, and suprasegmental features for contrast and emphasis cues. These, as is, by no standard term, are stimuli which determine these intermodulating perceptual concepts, and no appropriate methodology exists for analyzing them.

The importance of differentiating basic cues for profoundly deafened adults became evident in therapy and when results were reviewed from the Norton Etude Test, which was developed to serve the above purpose. Semantically and inaudibility of visual cues are used in hearing loss in adults, to which the least amount of study and research design attention has been devoted (Boed, 1960). Markedly effective were p, w, r, fr, mi, and cs, and the ability to adjust the use of pitch and pitch stress, and pitch contours. Deafened adults and particularly those with severe hearing loss tend to rely heavily on sounds which reduce their barriers to communication.

A preliminary study of the group of profoundly deafened clients in the implant program revealed their worry and concerns centered on their need for a new way to listen, voice level, vocal quality, and pressure and interaction appear to be the more important. Screening techniques are used in the clinic in adults, to which the least amount of study and research design attention has been devoted (Boed, 1960). Markedly effective were p, w, r, fr, mi, and cs, and the ability to adjust the use of pitch and pitch stress, and pitch contours. Deafened adults and particularly those with severe hearing loss tend to rely heavily on sounds which reduce their barriers to communication.

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A careful rated awareness of the availability and usefulness of those auditory speech stimuli which can enable the hearing impaired individual to maintain composure in a critical listener with a prosthesis. Other program services emphasize the development of skills necessary for daily life. This is no small matter. One half of those fitted with hearing aids appear to need such guidance and support.

Adult Auditory-Visual Training
Dean C. Ganzelick, Ph.D.
Northwestern University

This paper describes an experimental approach toward the evaluation and treatment of auditory-visual communication problems associated with acquired hearing impairment. This program, both self-report and laboratory evaluation procedures for deafness are used along with other measures in determining the range and severity of visual communication skill deficiencies for designing a client-centered remediation program.

The project includes the development of computerized auditory screening techniques. The Hearing Performance Inventory (Lamb et al., 1970) is used for determining overall communication skill deficiencies as well as differences in the auditory and auditory-visual communication abilities. It is used to determine the client's abilities, strengths and weaknesses in auditory and auditory-visual communication skills.

Objective measures include an assessment of hearing sensitivity, visual acuity and evaluation of sentence perception. The tests are designed to measure the client's abilities to understand and recognize visual stimuli as far as auditory and auditory-visual screening distance of 20 feet and also at a 1 meter distance.

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conversational speech distance. Finally, a videotape recording of one of the Utah Listening Test sentences is presented.

The videotape is presented to each client within a nine-foot distance. Prior to viewing, the competing audio signals are mixed at a 0 dBA CM ratio and presented at 60 dBA SPL. This is done to obtain a controlled measure of auditory-visual sentence perception under a common situation, moderate difficulty, listening condition. Clients view each sentence one time only. Their written responses are scored according to a numeric weighting system devised by Minner (1985).

Remediation Procedure

Evaluation results provide baseline data for the development of an auditory-visual communication training program. The program emphasizes training through systematic manipulation of four message parameters: message type, competing noise type, primary message-competing noise level, and the use of situational cues. Audible presentation of Utah sentences in noise without cues constitutes the baseline condition.

Training begins where the client is able to achieve a predetermined performance criterion level. To determine the starting point, the four message parameters are systematically varied to increase message redundancy by decreasing message content, changing competing signal type and decreasing level of presentation, and by adding relevant situational cues. The procedure is to obtain a measure of baseline performance, then probe performance at higher numbered levels where message redundancy is increased. The point at which the predetermined performance criterion is met is termed the ceiling level. A predetermined criterion level cannot be achieved within this scheme, the process is continued at an increased primary competing message ratio.

Futhering the process, the noise type is changed at the increased primary competing message ratio. Finally, the primary message may be presented without a competing message.

Baseline and ceiling performance levels characterize the short-term remediation goals. The short-term goals are to develop improved communication skills at each successful level of decreasing redundancy from ceiling to baseline levels, until neither additional progress is attained or satisfactory baseline level performance is achieved.

In summary, complementary use of self-report and auditory-visual speech perception procedures has resulted in a comprehensive, behaviorally programmed process of improvement of overall communication ability for some hearing impaired adults. These preliminary findings suggest that there may be some benefit in applying this approach in designing rehabilitative programs for other communicatively handicapped people. Further investigation of the use of this organizational approach, of the relative importance of various message parameters inherent in everyday communication, and the actual impact for the implementation of communication remediation programs, is currently underway.

**Computer Based Analysis of Language For Evaluation And Treatment of Deaf Children**

Marian Mackensen and
Barbara Parkinson
Graduate School and University Center,
City University of New York

The linguistic output of the hearing impaired is often seriously deficient. Language development is certainly slower than normal and in some cases appears to follow patterns that differ from normal ones. There are significant individual differences in language development and usage among hearing impaired children. What appears to be needed is intensive individualized remedial language training programs. Designing and executing such programs is a formidable task consuming time and energy because of:

1. The amount of data that must be collected and interpreted in longitudinal studies. These are necessary to increase our understanding of language development in the hearing impaired.
2. The detailed evaluation that must be performed for each client.
3. The amount of individualized training necessary.

We have been working with a computer program, originally developed by Newcomb (1960) at the Center for Communication Research, which we feel will be to simplify some aspects of these tasks. The program does a very detailed syntactic and semantic analysis of written language and reports error recognition and correction. It has some semantic capabilities but these are quite limited. It can reduce the burden placed on speech-language pathologists and teachers of the deaf by quickly analyzing the syntactic and lexical aspects of written language for data collection and individual evaluation purposes. It can also be used as a tutorial device.

**PERC Program**

The program is called PERC (Perturbing with Error Recognition and Correction). PERC is written in FORTRAN and parses a sentence by tracing the input string of word classes against programed graph structure that describes grammatical sentences. The output in class string is generated by a

(Continued on page 19)
Join Up - Special Membership Offer

The American Audiology Society was formed in October, 1974. In June, 1978, after a vote by the members of the Society, the name was changed to the American Auditory Society. The following provides basic information regarding the Society.

What is the Purpose Of The Society?
The primary aims of the Society are to increase knowledge of hearing impairment, promote conservation of hearing, and assist habilitation and rehabilitation of severely impaired individuals. To obtain these goals, the Society will coordinate and disseminate information, particularly through the holding of regular meetings, and the publishing of reports. Because of the multiple disciplinary nature of the Society's membership (otology, audiology, deaf education, hearing aid engineering, psychology, etc.), the Society will provide a formal platform for the interchange of information from allied professional fields.

Who Can Be A Member?
There are two categories of members: Active and Associate.

Active membership is open to individuals holding at least a baccalaureate degree from a recognized college or university. To become an Associate of the Society, an applicant need only to support the aims of the Society. Associates do not have voting privileges, but do receive all publications and have all other rights and privileges. The Society is based primarily within the United States, but there is no geographic limitation on membership.

When And Where Will Meetings Take Place?
An annual meeting is scheduled to take place each year at a place to be announced in the program of The American Academy of Otolaryngology (AAS) or The American Speech and Hearing Association (ASHA).

Will There Be A Journal?
The Society publishes Ear and Hearing and Corti's Organ. Ear and Hearing has a scientific format and is issued bi-monthly (6 issues per year). Corti's Organ is published on a triannual basis. The format of Corti's Organ is informal and the purpose of the publication is to keep members aware of the Society's activities and other notable events.

How Much Are Dues?
Annual dues for 1981 are $28.00. Because the Society will concern itself with political issues, such as licensing, certification, etc., dues will remain reasonable. All members receive both of the publications as part of their dues.

How Does One Join The Society?
To become a member submit an application with an endorsement from two active members to the Secretary/Treasurer. For more information write: Ross J. Rosen, Ph.D., Secretary/Treasurer, American Auditory Society, 1966 Inwood Road, Dallas, Texas 75235.

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Past Presidents of AAS

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The requirements for Active Membership in AAS include the minimum of a bachelor's degree or the equivalent in experience and signatures of two active members (see above). Until August 1, 1981, applications will be accepted without the accompanying signatures for applicants who do not know two members. The Secretary/Treasurer's office will obtain the necessary signatures from two active members.

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The President's Message (Continued from the previous page)

each of these instance I have been lucky enough to work along side clinical and basic scientists from professional societies, other than that, for the most part, we are always with a minimum of protocol but a maximum of sharing of profis- sional ideas. I make no apologies for this fact nor personal history, although I believe it will be of value to you to know you people any future experience during the war. The reason for this bond is the (c) with the final front short that day, many years ago, when I was: I had to ask the dead or Headless or Blanket knew the needs of a lifetime philosophy which has changed with it to any extent, and so it is today as it was then; it is, of fundamental importance to establish that scientist's personal and clinically directed research in medicine and to our area of professional society in particular, the substantiation of any human, the conservation of human and the habili- tation and rehabilitation of the sick. I recognized in those early days in London that the most effective way of the only way which I could contribute to the area of clinical medical science that I was entering had to be in close collaboration with scientists in adjacent disciplines. Today, the days and principles formulated as a series of melding, for the words of the many scientists in this relationship, in fact; they have grown in importance to the point where habit taken, medical in a single arch of interest in the area of the in- juring impaired is threatened unless we realax and revitalize our own scientific thought. Every scientist has his responsibility for collaboration and his patients to provide complimentary care medicine and research. We can no longer afford to neglect the medical scientist unless we have most unrealistic and expertise in the area of interdisciplinary collaboration, as in particular, the substantiation of an area of the human, the conservation of human and the habili- tation and rehabilitation of the sick. I recognized in those early days in London that the most effective way of the only way which I could contribute to the area of clinical medical science that I was entering had to be in close collaboration with scientists in adjacent disciplines. Today, the days and principles formulated as a series of melding, for the words of the many scientists in this relationship, in fact; they have grown in importance to the point where habit taken, medical in a single arch of interest in the area of the in- juring impaired is threatened unless we realax and revitalize our own scientific thought. 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Michael Seidemann

Gerald Miltenberger

George Cire

Virginia Anderson

Pre-registration Form for 1981 AAS Annual Meeting

Registration is open to all who wish to attend on the following schedule:

<table>
<thead>
<tr>
<th>Registration for Meeting</th>
<th>*Registration for Meeting, River Boat Tour and Dinner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before Aug. 15</td>
<td>After Aug. 15</td>
</tr>
<tr>
<td>AAS Member</td>
<td>22.00</td>
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<tr>
<td>Non-Member</td>
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<td>10.00</td>
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<td>Spouse</td>
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*Limited to 85 registrants on a first-come basis.

REGISTRATION FORM

Name (Print) ____________________________

Address ______________________________

Meeting ______________________________
Meeting, River Boat Tour and Dinner ________
Spouse _________________________________
Resident/Student ________________________
Total Amount __________________________

DATE ____________________________

AAS Member ________

[ ] Yes [ ] No ________

Send to:
Michael F. Seidemann, Ph.D
AAS Program Chairman
LSU Medical Center
100 S. Derbigny
New Orleans, LA 70012

MAKE CHECK PAYABLE TO A.A.S.
to evaluate and rank hearing aid performance. The DPD scores for both groups show strong test-retest consistency with scores differing by less than 7 percent. In contrast, only 62.6 percent of the stimulated loss subjects exhibited test-retest differences less than 7 percent for the W-22 Lists.

In summary, the results of this investigation appear to support the reliability of the DPD Test and the noise competition procedure postulated as meeting the requirements for an efficient and sensitive speech reception test for comparative hearing aid evaluation. However, it is recognized that the appropriateness of the DPD Test cannot be proven in actual clinical situations involving comparisons of hearing aids with hearing impaired subjects. Nevertheless, the present study suggests that the test is worthy of further clinical and research examination.

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AAS ANNUAL
MEETING
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The Mini 25 PP is pictured.

Body Instruments

The Power Master and Super Master are lightweight and electronically coupled with a wide choice of receivers including bone conduction and traditional fittings. Both are economical to operate on an AA models. A protective cap covers control and microphone openings.

The Power Master 25 PP is pictured.

Eyeglass Instruments

A wide range of eyeglass units are available, including two bone conduction instruments. All air-conduction models are universal left and right and feature removable "snap-on" extensions for ease of fitting. Models are available for open coupler fittings, severe high frequency slopping losses, and push-pull circuitry for severe losses.

The Mini Compact is pictured.

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The individual wireless audiator training system is designed primarily for use by the mainstreamed student yet has application for many individuals outside the classroom. The use of transducer coils eliminates the need for any wires in the ear. Typical range of the system is in excess of 700 feet with good signal-to-noise ratio, even when worn under clothing.

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A ROGUES GALLERY OF PICTURES OF AAS, SENTAC, & AO MEMBERS AT PLAY & WORK! P.P. 5-7

SUMMARIES OF AAS PAPERS AT ANNUAL MEETING BEGINNING ON PAGE 4.

CORTI'S ORGAN

The Official House Organ of the American Auditory Society

Vol. 6, No. 3/ Vol. 7, No. 1
Fall/Winter 1981-82

Annual Meeting A Grand Success Over 135 Attend

A Long Day of Good Papers

Those who sat through the whole day of papers at the AAS Annual meeting Sept. 21 were rewarded with a variety of stimulating, provocative and informative talks by members and guests. A price for the most presentations should go to Michael Reis, who co-authored and presented three excellent papers. A prize should also be awarded to the most frequent questioner, Dave Lilly, whose well-considered questions kept things lively. Abstracts of the papers begin on page 5 of this issue.

The highlight of the meeting was the Carhart Memorial Lecture, given by Paul Ward. He described the results of a national committee's conclusions regarding the status of Research in Communication Disorders — a projection for the next decade.

Sailing Down The River With AAS, SENTAC & AAO

Over 130 people boarded the river boat Cotton Blossom for an evening's entertainment that combined groups from three organizations: AAS, SENTAC and the Academy. A relaxed two-hour cruise up the Mississippi on the paddle-wheeler featured cocktails and excellent live music. The boat had been chartered by Charlie Anderson, as Transactions' contribution to the R & K of the society.

Following the cruise the entire attendees walked through the streets of the French Quarter to Armandas, a well known restaurant where the banquet was held. The evening's entertainment was provided by a Cajun comedian who entertained the group with his monologues and antics.

The entire evening was planned and executed by Mike Salti, who is the new president of SENTAC and was program chairman for the AAS meeting.

Highlights of 1981 Meeting

- Bergstrom named 1982 Program Chairman (Pg. 3)
- 1982 Meeting to be in New Orleans again (Pg. 3)
- Naunton appointed for unprecedented 2nd term (Pg. 1)
- Keith named 1983 Program Chairman - AAS to meet in Cincinnati (Pg. 4)
- New Executive Committee members announced (Pg. 3)

NAUNTON ON FOR 2ND TERM

Pres. Ralph Naunton

At the annual meeting of this Society Ralph Naunton graciously accepted a draft from the Executive Board to serve another term as President of AAS. He was urged to continue because of the strong feeling of the Board that a year has not been long enough to effect some of the ideas that he has had to expand the perimeter of the Society. It will be expedient to have Ralph as president because the Board designated that next year's meeting be again held in conjunction with the Academy of Otolaryngology rather than with ASHA. The reason for this change of policy is that ASHA is meeting in Toronto next year, which would be difficult for members to attend and for a society to transport materials.

LaVern Bentsen was appointed program chairman for next year's meeting which will again be in New Orleans. Mike Salti was elected to represent his stellar performance as Local Arrangements Chairman for the meeting in New Orleans. The minutes of the Executive Board meeting for September 29 are on page 3.

International Audiology Society Metes — Special Air Fare Available

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 or
Submittal of Papers

For registration or submittal of papers write to:

XVI International Congress of Audiology
Secy.-Gen. Dr. Tapani Jauhiainen
Dept. Of Otolaryngology
Helsinki University Central Hospital
Haartmaninkatu 4 E
SF-00290 Helsinki 29, Finland

International Audiology Society Metes — Special Air Fare Available

Sign Up For Finland

The numbers are growing of people planning to attend The International Audiology Congress in Helsinki, May 23-27, 1982. Surprised by the reasonable fares that can be obtained — as low as $611.00 round trip from New York, audiologists and otolaryngologists are hastily submitting papers that will put them on the program of the Congress. (Ed. note: It has been our experience that any legitimate paper will be accepted for presentation by The International Audiology Society. Therefore you may be quite sure that you will be placed in the program if you submit.)

There will be a Pre-Congress meeting in Goteborg, Sweden for those who want to visit Sweden before going on to Finland. A package air flight is being worked out at the most reasonable rates and information can be obtained from Marion Downs, Box 1015, University of Colorado Health Sciences Center, Denver, CO, 80220.
CORTS ORGAN is a quarterly publication of the American Auditory Society, printed in Dallas, Texas.

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Robert Voorhees, M.D.
Foreign Editor:
James Freedman, M.D.

AAS Members On Crunkite's Show

On June 30, CBS aired a primetime program on the early identification of deaf children. The segment was filmed at the University of Colorado Health Sciences Center in Denver and focused on AAS member Jerry North and Martin Crunkite, Scenes from Lexington School for the Deaf and Alabaster Education Model were interviewed. The show was titled "Walker Crunkites' Universe" and was scheduled in May. It was well received and praised by the public and professionals.

Our Renaissance Men and Women

John Muma

Obit: Those among us who do not live by bread alone are just as hungry as those who do. Only a few remain, and they are often visible in our midst. Some are remembered only in our memories. The gratifying aspect this year was the tangible assistance and recognition the AAS gave at our meeting. The Academy has grown as a result of the efforts of those who have dedicated their time and dedication.

The Academy assigned a group meeting place. The meeting place was opened during the annual meeting of the AAS. The Academy's publication program was designed to bring us together and the publication of the AAS. Ralph Muma reported that, even as the organization has grown, it has been reassuring to know it was being managed by it.

All of these concerns give us a warm feeling for the Academy and encourage us to seek more dialogue with the Academy and its members than with other groups. With Ralph Muma as our marketing partner for a second year perhaps a new era of cooperation will begin. — MFD, RIR

Letter From England

My dear Editor,

The depressing, climatic, and social-political-economic conditions at the present time have made it impossible for me to write you a letter.

The meeting of the British Association for the Advancement of Science took place in Cambridge, England, this summer. The meeting was well attended and included many outstanding papers. The program was well organized and included a variety of topics, including, but not limited to, the history of science, the philosophy of science, and the social and political implications of scientific research.

The third occasion for my visiting Europe came when I was invited to take part in the Symposium on the History of Science at the University of Cambridge. My contribution was a paper on the history of science in the 18th century, and it was well received.

The symposium was well attended and included many outstanding papers. The program was well organized and included a variety of topics, including, but not limited to, the history of science, the philosophy of science, and the social and political implications of scientific research.

I was pleased to see that the audience was interested in the topics discussed, and I hope that this will continue in the future.

Sincerely,

John Freedman

WANTED: Poster Child Nominee for 1982

WASHINGTON, D.C. (October 15, 1981) — The Council for Better Hearing and Speech Month today invited nominations for a poster child who, along with a celebrity spokesperson, will represent more than 22,000,000 Americans with communicative disorders.

Winner of the contest will be featured in television, radio, and print media, and will be contacted by the nation to help launch the campaign in early May. Planned activities include a tour of the city, visits to the White House and Capitol, participation in a May 1 national special event campaign, and other special appearances.

Poster child nominees must be at least three but no older than 6 years old and have a significant hearing, speech, or language problem. Contests may be sponsored by parents, friends, teachers, hearing programs, or organizations.

To enter a child, submit his or her name and biographical information, along with two clear, good-quality black-and-white photographs of the child. All entries must be received by March 1, 1982, to the Council for Better Hearing and Speech Month, 900 I St. N.W., Suite 600, Washington, D.C. 20001. Entries must be received by the Council no later than Thursday, January 4, 1982.
Minutes of the 1981 Executive Committee Meeting

Minutes of the American Auditory Society Executive Committee Meeting

Members Present:
Charlie D. Anderson, Marcia P. Daws, A. Bruce Graham, Ed. de la Rua, Suzanne Ko, Fred Lindblom, Ralph F. Naunton, Rose J. Rosser

Members Absent:
Susan Conway-Fithian, Malcolm Graham, Earl Harford, Marie Lawrence, Sam LaBarbera, Hohun Shainkin, John Sinclair, Dixon Ward, Laura Wilber.

1. President Naunton opened the meeting at 3:30 p.m.

2. The minutes of the 1980 Executive Committee meeting were presented and approved with only one spelling error correction.

3. The Income and Disbursement Report for the period of January 1, 1981 through August 31, 1981 was reviewed and discussed.

4. A list of 267 applicants for membership was presented. Of this number 30 were approved, and 28 had incomplete memberships as they did not have the necessary information.

5. Results of the recent Executive Committee election were reviewed. A total of 461 ballots were received. The second candidate was Lawrence Bergstrom, Earl Harford, Suzanne Ko, Bill Meyerhoff, James Norsley, Dixon Ward, and Ben Worthington. The names of all members of the Executive Committee are listed as such. The nominees of the Executive Committee were re-elected as: A. Bruce Graham, Merle Lawrence, Fred Lindblom, Samuel F. LaBarbera. Recommendations for the next meeting are for the officers for the effort they had expended for the Society during their terms.

6. After considerable discussion, the site for the 1982 annual meeting was set for New Orleans in conjunction with the American Academy of Otolaryngology. Michael Selander volunteered to be the local arrangement chairman, and the names of two Executive Committee members were suggested for Program Chairman (Lawrence Bergstrom and Suzanne Ko). During the 1982 meeting an attempt will be made to have a booth for the Society. Four individuals were identified for the Carhath Memorial Lecture Award. President Naunton will contact the individual selected by the Executive Committee to determine if he will accept the award.

7. Rose J. Rosser was appointed Secretary/Treasurer for 1981.

8. Marion Dowen pointed out that limiting the terms of the President to one year does not allow the President time to have an impact on the direction of the Society, and suggested that the term of the President be extended for a period of 2 years. There was a general consensus that extending the term of the President to 2 years would allow for more continuity. The bylaws limit the term of the President to 1 year, and prohibit the President from being reelected. In view of this, with approval of President-elect, Executive Committee, President Naunton was re-appointed for an additional one year term for 1982.

9. Rose Rosser was designated as representative to a committee to meet with ASHA to discuss future involvement of Professional Organizations. A meeting will be held on October 4, 1981, in Chicago.

10. Susan Conway-Fithian recently informed President Naunton that she was unable to fulfill her duties as an Executive Committee member, and resigned from the office. The AAS bylaws do not specify how Executive Committee members are replaced. Therefore, A. Bruce Graham, whose term of office is to expire in December, 1982, was appointed to fill her position. His term of office will be extended through December, 1983.

11. John Sinclair, a member of the Executive Committee, did not renew his membership, and President-elect Anderson solicited that he would contact him and determine if he wished to continue being a member of the Society. The name of an individual was suggested to replace John Sinclair if he does not wish to continue his membership in AAS.

12. The Academy of Dispensing Audiologists recently contacted AAS and suggested that a joint meeting be held in 1983. After discussion it was unanimously decided that AAS not meet with ADA.

13. The Academy of Dispensing Audiologists recently contacted AAS and suggested that a joint meeting be held in 1983. After discussion it was unanimously decided that AAS not meet with ADA.

14. During the 1981 AAS Executive Committee meeting the possibility of pooling the duties of vice-presidents was discussed. It is estimated that the cost of publishing newsletters and directories is over $2,350.00. In view of this, it was decided that the membership directory will not be published separately but remain in Corin's Organ.

15. The Executive Committee approved the transfer of $1,000.00 from the AAS account to the Ear and Hearing account in January, 1982.

16. The Editorial Board of Ear and Hearing recommended that in lieu of the cash award for the best papers appearing in Ear and Hearing in 1981, the authors of the papers receive a prize. After discussion the Executive Committee approved this recommendation and it was further- more resolved that the awards be presented during the annual meeting. In addition, the authors should be invited guests of the Society for the annual dinner.

17. Rose J. Rosser expressed his appreciation to the members of the 1981 editorial board of Ear and Hearing and also recognized the editorial consultations for Ear and Hearing during 1981. The names of these individuals will be published in the November-December, 1981 issue of the journal.

18. Marion Dowen pointed out that in 1964 the International Congress of Audiology will meet in Santa Barbara, and that Stanford Gerber was the local arrangements chairman. It was the consensus of the Executive Committee that AAS should have at least a half-day meeting during the International meeting and that Marion Dowen should contact Dr. Gerber to begin making plans for it. Because Dowen Ward has been active in both the International Audiology Society and AAS it was felt that he would be the best person to coordinate with.

19. Rose Rosser indicated that he was looking into purchasing a computer for the Society and due to the relatively sizable investment wanted to inform the Executive Committee.

20. The Executive Committee as a group expressed its appreciation to Drs. Jean and Dorothea Alexander, and other members of the program committee for their efforts in planning this year’s meeting.

There being no other business the meeting was adjourned at 6:30 p.m.

Do You Know These Applicants?

The following individuals applied for membership in AAS under the special provision and so yet to have sponsors. If you know any of them and would like to be a sponsor, please write Suzanne Ko, Assistant Secretary (1985) 2100c Road, Dallas, TX 75235.

New Members meeting Sponsors
2. Charles J. Baldwin, M.D., Jacksonville, Fla.
3. Janet Bruce, M.A., Memphis, Tenn.
4. Cynthia Bagwell, M.S., Kansas City, Mo.
8. Stanley Cantor, M.D., Miami, Fla.
15. Juan Lemoen Glauher, M.D., Ia., Idaho.
16. Richard Heyko, M.D., Obstetric, Oh.
19. Abraham Kindler, M.S., Dallas, Tex.
23. Patrick Pation, M.S.C., Missouri.
25. Thomas Smith, M.D., Calgary, Canada.
26. Gary W. Myller, M.D., Matteson, Ill.
27. Wes F. Shrock, M.D., Effingham, Ill.

AAS Statement of Income and Disbursement (1/1/81-8/31/81)

Revenues
1. Membership dues $10,265.53
2. Ear & Hearing allowance 1,200.00
3. Interest on savings account 2,120.93
4. Sales of advertising - Corin’s Organ 1,200.00
5. Convention & registration 2,100.00
6. Other 2,100.00
Total Revenues $22,933.63

Expenses
1. Salaries $311.92
2. Equipment 4,444.64
3. Postage & Office 580.60
4. Duplicating costs 229.04
5. Telephone 184.97
6. Travel 562.67
7. Publication costs - Ear & Hearing 20,149.30 - Corin’s Organ 2,009.69
8. Accounting & audit 450.00
9. Contract services - Office 578.98 - Corin’s Organ 1,012.50
10. Contract services 40.00
11. Supplies - Corin’s Organ 5.45
12. Sec. & Treasurer expense 400.00
13. Overhead 42.07
Total Expenses $28,596.24
Net Income (6,662.61)

Assets
Cash/Checking $5,090.25
Cash $11,873.20
Equipment 551.80
Loss accumulated depreciation (5,800.00)
Net Assets $12,365.25

Bergstrom 1982 Program Chairman

LaVonne Bergstrom

Dr. LaVonne Bergstrom has accepted The Program Chairmanship for the 1982 meeting, which will be held again in New Orleans in October. A call for papers will be sent out early in the Spring. Anyone wanting information or help in preparing the meeting should contact:

LaVonne Bergstrom, M.D., ERODE AND New ORLEANS, UAV, LAS VEGAS, Calif. 85002
The Effects of Tinnitus On ABR Waveforms

Michael R. Sietz
Brooklyn College
Brooklyn, N.Y.

Douglas A. Reiner
ECHO Foundation
Birmingham, AL

Martina R. Marter

Over seven million people in the U.S. suffer from severe tinnitus and it is often the major symptom that brings patients into the otolaryngologist's office. The origin of tinnitus can be anywhere along the auditory pathway. As part of the diagnostic process, a number of patients who have complained of moderate to severe tinnitus have been evaluated with Aud and Brainstem Response Testing (ABR). During the course of this testing, patients who self-reported of tinnitus often had unusual as well as abnormal ABR responses. This observation was originally documented by A. Shulman, Department of Otolaryngology, SUNY, Brooklyn. He reported his results in a paper given at the Eastern Tinnitus Society meeting (1985) using a simultaneous ABR technique.

In an effort to better understand the effects that tinnitus may have had on ABR waveforms resulting from monaural stimulation ABR responses of 45 patients previously evaluated were reanalyzed and compared to the following general data:

1. Patient medical history
2. Physical examination findings
3. Electroacoustic examination findings
4. Specific ABR latency parameters that included:
   a. Absolute latencies for I-V, I-VI, and I-VI
   b. I-V and I-VI thresholds
   c. Waveform replication

All ABRS were performed both normal and abnormal, peripheral and retrocochlear.

RESULTS

Initially, subjects were divided into two categories (peripheral and retrocochlear) based on their ABR abnormalities. No objective or systematic comparisons were observable in the ABR latency or IPL data as waveforms ranged from completely normal to severely abnormal.

Two common findings for these patients were identified: the lack of difficulty in replication of ABR waveforms and the presence of noise on the resulting ABR traces - that was caused by either operator or equipment problems. Four to six replicates were required since they would not replicate to an acceptable level. In addition, some ABRs displayed relatively constant noise on all waveforms. These ABRS were reanalyzed by the author, and the results were compared to the evaluation of ABRs in determining the presence or absence of pathological conditions.

REFERENCE


Candle Snuffers

Lucas C. D. Stachowicz

The Effects of Logen and Very Short Latency, Frequency Specific Click Stimuli on ABR Waveforms

W. Alan Eibel, Michael H. Sietz, Martin J. McCutcheon, and Lynn F. Vanges

Alabama University

SUMMARY

While data exist on click stimuli, tone pips and filtered clicks of various durations, little normative data exists on logos or very short duration, frequency specific clicks. The logo is a pure tone that is amplitude modulated by a Gaussian distribution curve. The very short duration, frequency specific clicks were matched to the logos by frequency and duration but has a different low frequency shape. The purpose of this study was to compare logo elicited and short latency tone pip elicited ABRs from the same subject pool.

METHOD

Two separate ABR instruments were used, the Nicolet CA 100 and the Telephonics TA 100. The TA 100 uses 2, 4, and 8 kHz logos as stimuli. We matched the duration of the frequency specific logos with diamond shaped tones pips generated from the CA 100. The 2kHz tone pip was 400 microseconds in duration compared to the TA 100 logos of 800 microseconds, the 4kHz was 400 microseconds in duration with the TA 100 logo being 200 microseconds, and the 8kHz was 1000 microseconds in duration compared to 250 microseconds for the TA 100 logo.

Each subject (N=12, 6 males and 6 females) had hearing thresholds of better than 15dBHL for the test frequencies. The last subject was not a subject, subject's position in the chair was identical, and the subject was seated in a comfortable chair. The summed signal was calibrated and centered at 0db. The actual stimulus was presented to the subject via three different conditions. Each condition was repeated 250 times, and the results were averaged for each condition. The results were analyzed with a statistical program.

RESULTS

The mean onset time was adjusted to be equal for each instrument and the data were then subjected to multivariate analysis. No significant differences were observed in the latency-intensity functions and all of the latency-intensities were found to be normal. There was a qualitative difference in the number of subjects who had acceptable waveforms and the latency-intensities were found to be normal. These data will be discussed in terms of the effectiveness of both stimuli to evoke ABR waveforms and their potential usefulness in clinical procedures.

(Continued on page 7)
The Executive Committee Meets

At Registration

The Speakers at Work
The Morning Session

Many thanks to Bill Carver, Jim Delk, and Mike Seidemann for their photos.

(Cont. p. 6)
On The Boat Trip and at Dinner
(One Hundred and twenty-one Attend Dinner)

(Continued on page 7)
(Continued from page 4)

Tinnitus Relief from Diet, Nutrition, Exercise, and Relaxation Techniques—A Clinical Study
By Paul Yanick

(Dr. Yanick was unable to attend the meeting, but readers can review the paper in print.)

This article summarizes the latest findings of a two-year long-term clinical research project on patients suffering from problematic tinnitus and noise-induced hearing loss.

Since stress is often a contributing factor in many cases of problematic tinnitus, a holistic approach consisting of an individualized diet, nutrition, exercise, and stress reduction program was applied to 80 patients, age 12-79, mean age 52, with progressive noise-induced hearing loss. Each of the 80 patients was tested before and three months after starting the holistic program. The reason for a three-month follow-up is because it is the author's clinical experience that tinnitus often takes two to three months before the program actually begins to improve hearing and/or tinnitus problems.

Sixty-five or 81.25% of the eighty patients had improvements that ranged from 3-40 dB with a mean 21 dB improvement in their pure tone average (PTA) and speech reception threshold (SRT). Out of those sixty-five patients, forty-five patients also showed a 6-40% mean 30% improvement in speech discrimination scores. Nine patients or 11% of the group had only slight, insignificant improvement, less than 5 dB in SRT or PTA and 8% in speech discrimination scores. Six patients or 8% of the group had no improvements or notable decrease in their hearing.

From these eight patients with severe neural hearing loss, fifty patients had lead wearing tinnitus. All of these patients could not get any significant relief from tinnitus maskers and were labeled as incurable by a number of our specialists. Most of these patients were so distressed that they discussed suicide as an eventual happening if the tinnitus did not subside.

After three months on the holistic program, forty-two patients or 84% of the fifty tinnitus suffers reported relief in varying degrees, while only eight patients or 16% of the group claimed the tinnitus remained the same and did not change.

In the forty-two patients who reported relief, twelve patients claimed that the tinnitus was completely gone, sixteen patients claimed that the tinnitus decreased to very soft, almost inaudible levels and fourteen patients reported that the tinnitus decreased to not as annoying and bearable levels.

An earlier 1973-1975 clinical study on patients with hearing loss, in collaboration with an otorhinolaryngologist associate and several internists, revealed that diet is indeed effective in providing patients with dramatic relief from tinnitus and ear pressures. This study, published in part in Journal of the American Audiology Society, revealed that ninety consecutive patients with fluctuant sensori-neural hearing loss reported relief from tinnitus and ear pressure within only one month after dietary management.

From the foregoing discussion, it is evident that the ear is highly dependent upon proper oxygenation and a full, not partial or mutilated, chain of nutrients for optimal auditory function. Its vulnerability, although in part determined by genetics, is heightened by oxygen and nutrient deprivation. Imbalances, deficiencies, and/or excesses of certain nutrients can be expected to upset the metabolic rate and/or delicate biochemical balances of the inner ear resulting in hearing, balance, and/or tinnitus problems.

Middle Ear Effusion in Children: A Report on Treatment For 200 Patients

Brian D. Forsay, MD, H. Lintzheim, Jr., ORTOLOCAL MEDICAL GROUP, LOS ANGELES

Professionals involved with delayed speech and language development have become increasingly concerned about the deleterious effects of chronic middle ear effusion (MEE) and its secondary to middle ear effusion. MIE is known to cause significant speech and language delay in some children and subsequent reduction in academic achievement. Audiology and pediatricians are also concerned with the occasional sequelae of unwashed otic media including reducing mastoiditis, central peritonitis and primary and secondary acquired cholesteatomas. These effects of unresolved effusion have prompted physicians to seek to minimize delay in resolution of the problem.

This study reviews results of treatment of middle ear effusion in 200 children under nine years of age. These treatment strategies were used: 1) prescription of medications including, demeclocycline, antihistamines, and/or antibiotics for an extended time with frequent monitoring. 2) prescription of medication for a short time interval, and then if the effusion did not resolve, performance of surgery: 3) immediate myringotomy with insertion of ventilation tubes and possible adenosotomy.

Early surgical intervention resulted in significantly shorter delay in hearing restoration. It did not result in a lower recurrence rate and did not reduce the number of occasions when thick fluid, as compared to thin fluid, was found at surgery.

(Continued on page 8)
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Relationship Between Iris Color And Nips In Industrial Workers

Curtis B. Smith, Thomas E. Borton, Michael R. Butler, and Robert N. Kleinlein

Birmingham, Alabama

It has been hypothesized that melanin, the basic pigment found in the skin, eye, and other body organs including the cornea, acts as part of an inner ear protective mechanism against the effects of intense noise. The color of the iris may represent one index of melanin concentration in the inner ear, and investigators have suggested that a relationship exists between both temporary and permanent noise-induced threshold shift (TTS and PTS) in the auditory system and iris color. The purpose of this investigation was to study the relationship between iris color and hearing threshold level (HTL) in a sample of workers exposed to hazardous levels of industrial noise.

Method

The subjects in this investigation (N=68) were textile workers ranging in age from 16 to 67 years mean age 49.2 years) with the following demographic characteristics:

<table>
<thead>
<tr>
<th>Race</th>
<th>Sex</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
<td>White</td>
<td>24%</td>
<td>76%</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>37%</td>
<td>63%</td>
</tr>
</tbody>
</table>

The sample was divided into two groups depending upon the noise level in which they were exposed. Noise level measurements (sound pressure levels in decibels at octave bands) were made at the time of iris color determination. The control group included workers who were exposed to workplace noise levels less than 85 dBA. The experimental group included workers consistently exposed to noise levels greater than 90 dBA for eight-hour work shift. The iris color of each subject was assessed using a specially constructed scale. Subjects underwent direct observation by one expert examiner to determine iris color and each was assigned to one of four color categories: HTL’s for each subject were obtained using standard audiometric procedures and instrumentation calibrated to ANSI-1969 reference levels. Pure tone thresholds for air-conducted stimuli were recorded for the frequencies 500, 1000, 2000, 3000, 4000, and 6000 Hz in each ear.

Results

Multivariate analysis techniques were utilized to examine the relationships between iris color and other variables including age, sex, race, time on the job, and HTL’s. A variety of HTL indices were considered for each ear of all subjects including the following: (1) mean of all test frequencies, (2) mean of 0.5, 1.0, and 2.0 kHz, (3) mean of 3.0, 4.0, and 6.0 kHz, (4) mean of 500, 1000, 2000, and 3000 Hz, (5) mean of 3.0, 4.0, and 6.0 kHz, (6) maximum hearing loss at any test frequency. The overall control group demonstrated significantly more sensitive hearing than the experimental group. No statistically significant relationship between iris color and HTL was observed in the control group. For the experimental subjects, a significant (p < 0.05) relationship was found between iris color and HTL. One iris color group, however, demonstrated a more sensitive hearing than the others, while another demonstrated less. The remaining two groups showed no relationship. The results of this study revealed that the relationship between iris color and HTL was significant, but was generally influenced by other important variables. The relationships among all these variables will be presented, and the data will be discussed relative to their implications for industrial hearing conservation programs.

TRACOUSTIC CONTEMPORARY AUDILOCY WORKSHOP

One day Contemporary Audiology Workshops will be conducted in 1982 by Jaynes, J. (1981), and L. (1982) for both pediatric and adult audiology will be included with discussion, audiometry, and ASHA. The workshops are approved by ASHA and AAM for Continuing Education.-title. For further information, please contact: C. R. John, Professional Services Coordinator, Tracoustic, PO Box 3601, Austin, TX 78764, or call (512) 331-1121. In Texas, call 800-202-1121.

Places and Dates:

San Francisco, CA February 19-20, 1982
New York, NY April 18, 1982
Boston, MA September 17-18, 1982
Atlanta, GA October 26, 1982


AMERICAN ACADEMY OF OTOLARYNGOLOGICAL AND HEAD AND NECK SURGERY ANNUAL MEETING, New Orleans, La. CONTACT: B. C. Enquist, Director of Meetings and Membership, AAO, 12 Second St., Rochester, N.Y. 14609 or call 312-288-7444.

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Dossena Describes
CENTRO RICHERCHE E
STUDI AMPLIFON
The AMPLIFON CENTER FOR RESEARCH AND STUDIES (C.R.E.S) was founded in 1971 as a non-profit organization, solely funded by the Amplifon company. During the first 10 years of activity, C.R.S. has fulfilled the original ambitious targets, and succeeded in enlarging its scope, and thus significance, and the practical benefits to the Italian medical profession. During the first 10 years, 250 meetings, round tables and seminars were organized, dealing with audiology, phoniatrics, speech and hearing, noise exposure, surgery of the ear, auditory diagnosis and amplification. All continuing education courses in audiology, electromyotomygraphy, impedance audiometry, phoniatrics, audiological testing techniques comprising evoked responses were attended by 7500 between medical doctors (mostly ENT's) and para-medical professionals.
In 1978 the program "the danger noise; causes, effects and remedies" was one of the first and few occasions to bring together the health authorities, the concerned industry and union representatives, the medical specialists and the governmental and regional experts, to discuss the problems of noise exposure and noise pollution, and the possible remedies. In a country such as Italy where there is no specific regulation or law, such as OSHA, the C.R.E.S. program visited every one of the 26 regions; the exhibit displayed the various aspects of noise and hearing and the state of the art both in research and in effective protection and noise abatement, to all concerned and to the general public. The round tables succeeded in providing hopefully the basis for a start to a future noise protection program throughout the country.
Continued on page 13

AAS Member Ely
Passes Away
Bill Ely, Vice President at Maico Instruments

Bill Ely, Vice President at Maico Instruments, passed away on Saturday, March 6th. Bill had been a member of AAS for the past 5 years. He was an active supporter of The Society and a regular reviewer for manuscripts dealing with hearing aids for Ear and Hearing. He is survived by his wife Laurel, and his two children.

Audiologicals "take-over" the American Auditory Society
So ran the rumors at a recent national otolaryngology meeting, holding pow-wows for the health of an organization conceived, established and so far, kept moving by an interdisciplinary group comprising audiologists, otolaryngologists, physicists, teachers of the deaf, and others whose sole concern is the welfare of the hearing impaired. The by-laws of the Association were built to insure that no one group could "take-over," and during its nine years of life we have had otolaryngology Presidents for five years. But Audiology is going to take-over; Audiology will take the reins in hand and guide the Society; Audiology will dominate the field of auditory rehabilitation and habilitation if otolaryngology continues its present trend towards withdrawal from the Society while the Society maintains its present growth rate, strength and influence.
The Society was established to serve the professional interests of no particular individual other than those sharing concern for the prevention and treatment of hearing impairment, and for the rehabilitation of the hearing impaired. It was established most carefully to avoid any sense or reality that it was to undermine any existing society or association; it was established to serve an unmet need, that of an interdisciplinary forum.
The importance of interdisciplinary liaison to the broad topic of deafness prevention, treatment and rehabilitation was dramatically illustrated by the recent International Cochlear Implant Conference held under the auspices of the New York Academy of Sciences. The faculty of this exciting conference included a breath-taking array of specialists in audiology, biochemical engineering, computer science, electrical engineering, language science, otolaryngology, pathology, physics, rehabilitation, and speech science.
On the other hand, otolaryngologists are becoming increasingly concerned over their diminishing involvement in biomedical research. —witness another recent superb conference "Research Goals and Methods in Otolaryngology." The time is almost past when the solidarity scientist or clinician could make palpable progress in improving disease prevention or treatment; interdisciplinary collaboration at all levels is the key for the future improvement of patient care.
It would be presumptuous to insist that otolaryngology needs the American Auditory Society; on the other hand, it is abundantly clear that the American Auditory Society needs Otolaryngologists if its present strength as a non-partisan professional society concerned with the welfare of the hearing impaired is to continue.

1982 Meeting
On Oct. 18th
To Be The Best Yet
Mike Seidenman
Chairman
La Vonne Bergstrom. 1982 AAS Program Chairman, and Mike Seidenman, local Arrangements Chairman, are finalizing plans for the 1982 Annual Meeting of AAS, and it looks as if it will be one of the biggest and best ever.
A full days presentation of papers is planned for the October 18th meeting and the meeting will again extend into the evening hours with festive social events. This year's Carhart Memorial lecturer is Dr. Merle Lawrence; his lecture is entitled "Otolologic Research and the Zeigtgen." Traumatic has graciously agreed to sponsor a river boat tour from 6:30-9:00 p.m. on the well known Cotton Blossom that will allow members to unwind as they tour the historic Mississippi River front. Following the river tour, those wishing to join the group can partake in a sumptuous meal at one of the most elegant French restaurants in New Orleans. Arnaud's, located in the French Quarter, is internationally known as one of the culinary delights in New Orleans. A special meal has been selected by the program committee. Featured entertainment is also being planned.

Hearing Loss In Alaska
By
David R. Canterbery, Carl Dunn, Keith Gish, R.D. Kimball, M.A. Lopez, Thomas McCarty, and Pearl Rybant

For the past 7 years clinical services for the hearing impaired in all areas of Alaska have been provided by the 4 Regional Offices of the Alaska Communicative Disorders Program, Department of Health & Social Services, and the Audiology Program.
Continued on page 14
We Salute Our Renaissance People

A new system of field work has been as productive as J.D. Harris, both in professional activities and in avocational fields. He early saw a need for a journal that would publish papers exclusively on auditory investigations, and founded the Journal of Auditory Research. Young investigators who might not otherwise publish were encouraged by the availability of this journal to write up their research and submit it. J.D.'s careful editing and personal suggestions to the authors guided and encouraged them in their scientific endeavors.

No one person can estimate the depth of J.D.'s originality, which we lost in 1978 as an unusual and original character. If he reads his own publications in the scientific literature of the world, he will find the same this journal to write up their research and submit it. J.D.'s careful editing and personal suggestions to the authors guided and encouraged them in their scientific endeavors.

The only mandatory thing in life will be to row ten miles running per week. An enviable schedule you will concede.

There will also be grandchildren to get to know better — where did the time go? Some of them are already college graduates; some, fortunately still young enough to stand still for a grandmotherly snuggle.

Some things remain yet to do, but may take more than this lifetime. How can we guarantee all children, regardless of socio-economic status or ethnic origin, their right to a full change of adequate language development? Knowing what we know about the advent of early language stimulation, knowing that too many are denied their full language potential, not by genes but by means — what are the real priorities for those of us who know these things down deep in our inner reaches? I'm afraid to look.

Oh well — there goes my retirement.

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Executive Committee:

The recording of auditory evoked potentials represents an extremely important breakthrough in audiology, and offers new diagnostic frontiers in the field of neurology and in the assessment of several lesions in the neural pathways and in the CNS. Dr. Aran and Prof. Shomer were awarded the AMPHISON CRS International Prize in Milan on March 31st, at the Press Club. The CRS prize is intended to identify among researchers fighting against deafness, those whose researches have proven most beneficial and, as it is in this particular case, have resulted in a clinical fall-out.

The Prize, at its 11th year, has become an international prestigious recognition, and was endowed with $4000 per researcher. (See page 1 for the history of CRS.)

Let us agree that this book is compiled merely on the nature of nature observations in the Harris garden and descriptions of the "wonderful wonders which abound here". For reading an book by J.D. Harris (and in the case of this character, by his friend Barbara, the "Barbara the "Reference Librarian") is to roam at length through J.D.'s incomparable mind, sometimes even to review his essays, each inspired by some observation of flora or fauna in the garden, justly earned on the Harris philosophy of man and nature.

The flora range from dogwood and laurel to fitted azaleas, and his name has been well-sold in universal prescription. We hope to do next to knit broken hearts.

And this brings up the impressive Harris vocabulary. Someone once said an 'reading J.D.'s book "It was good reading, but I just had to go to the dictionary too often."

"And young friends, there's no such thing as being too young, so "Thyme out of mind". J.D. quotes Colpess, born the year Shakespeare died, as stating about thyme, "It is a strengthener of the lungs; a good remedy for the chins in children. It purges the body of phlegm, and is an excellent remedy for the shyness of breath. It kills worms in the body and being brought to the herb of Venus, provokes the termus, gives safe and speed delivery to women in travail, and brings away the afterbirth."

J.D. comments: "It is hard to see how a reasonable competent housewife could maintain her establishment without it. Expectorant, vermifuge, emmenagogue, aphrodisiac, and carminative, it seems in those times to have been well-sold universal prescription. It was, however, not to knit broken hearts."

The book is full of apt, for what the Harris are doing, is truly reflecting upon what meets their eyes and makes them joy and ears. (Reflections is an accepted spelling for reflection, and of course the piec-o-lish Harris mind would pronounce the former spelling.) As they state, "This is the state of view these sights and facts with any emotion at all other than curiosity? Should we admire our own bicep because of the complex social behavior reflecting the highest development in brain in their order, or should we designate them because they are so stupid they cannot find their faces moved more than three feet left or right? Should we not rather accept all things, describing them as accurately as possible and see that advanced instrumentation will allow, find nothing repugnant in and of itself since it must have at least

To The Editor

Dear Mr. Cody:

It is with shock and dismay that I have read the following excerpt from a letter published in the newspaper by J.K. W. Berger the 'Summer is a time of Ascolat, the traditional bearing aid evaluation, modified and managed over many years, has served with a purpose historically. It has enlisted its place in the world, the bearing aid comparison procedure now permitted the clinician to discard the least effective of the bearing aid information.

It leaves a vast vacuum and — since nature abhors vacuum — there is danger that the result may be a proficient competitor rather than scientifically accurate fitting.

For the last three months, we have been working to find more scientifically sound system and have finally come with a method which we call, for the sake of convenience, AAS Annual Meeting

OCTOBER 18TH

NEW ORLEANS, LA.

Continued on page 7
**Letter To The Editor**

Continued from page 2

"Easy" system. The technology is showing considerable promise and has many distinct advantages.

We recognize, however, that with our very limited means it is difficult to prove all the possible ramifications, side effects, and commercial values of the system. With the vast resources at your command, it is our hope that you will be able to carry out several of these studies which we now solicits your aid.

Very briefly, the system works thusly:

On a medium sized table - one which does not exceed arms' length - places a "mr." of different hearing aids. Experience has indicated that this number should be odd rather than even - 9 even if no more than 3.

To select the aid for Candidate A, the operator starts with the aid farthest to his left on the table and begins painting at each aid in succession while shutting the old "easy". 

To select the aid for Candidate B, the operator starts with the aid farthest to his left on the table and begins painting at each aid in succession while shutting the old "easy". 

Among the advantages we have found are:

1. Simplistic - no extensive educational background is required. The system can be taught to anyone over the age of three in just a few minutes.

2. Economical. No expensive furniture or equipment are required. It eliminates sound proofed rooms, audiometric charts, etc.

3. The patient knows the aids selected. The table is a guide - a table to be used to make a decision. It is a guide to lead the patient to make a decision.

4. Equity. We have found that if we divide the table into three sections, the patient does not move the aids on the table before him and random motions before selecting one for Candidate A, then Candidate B, then Candidate C. Candidates who select C on the "easy" formula is carried to completion.

This eliminates any possible charge of favoritism to any one manufacturer or model since - in time - every aid will have its turn of selection.

The candidate is impressed with the speed at which the clinician can select the proper instrument from the vast array carried to the selection room.

**Biographical Information**

Dr. John A. Smith
320 So. Main St.
Springfield, IL 62701

Dr. Smith is an audiologist with 20 years of experience in the field of hearing aid selection. He is a member of the American Academy of Audiology and the American Hearing Aid Association. He has published several articles on the topic of hearing aid selection and has presented many seminars on the subject. Dr. Smith is a frequent speaker at professional conferences and has been a consultant to several hearing aid companies.
HEARING LOSS from page 1

This indicates the number of Alaskan Natives with conductive hearing loss in the age group between 2 and 19 years of age. The age breakdown is detailed in Figure 1. Fifty-six percent of the clients were sixty-five years of age or older. Native American youth had slightly higher hearing loss rates than the total 1000. The data shows that the changes in hearing loss are progressive and are related to the use of sound systems and hearing devices.

The age bracket between 2 and 19 years is used inclusively. Three and four years of hearing loss are used in this analysis. The age group of 25-39 years is used to determine the percentage of hearing loss.

Clients seen during this year were 247 different communities. Eleven and twelve percent of the 386 clients were from communities with population less than 1000 people. Sixty-five percent were from communities ranging in size from 1000 to 5000 people. Eighty-five percent were from towns of 5000 people or more. Many rural villages are naturally at risk. Native American youth had significantly higher hearing loss rates than the total group.

The age bracket between 2 and 19 years of age is used inclusively. Three and four years of hearing loss are used in this analysis. The age group of 25-39 years is used to determine the percentage of hearing loss.

The age bracket between 2 and 19 years of age is used inclusively. Three and four years of hearing loss are used in this analysis. The age group of 25-39 years is used to determine the percentage of hearing loss.

Mixed loss (Presence of both the conductive and sensorineural criteria as described above). The percentage of mixed impairments seen for both racial groups was quite low. In the age group 20-29, the percentage of mixed loss was steadily decreasing for the Native Americans at rates of 8% and 4% respectively for the total 1000.

Sensory-neural loss (Bone conduction loss of more than 25-50, 100, 200, or 400 Hz). The percentage of sensory-neural impairments seen for both racial groups was quite low. In the age group 20-29, the percentage of sensory-neural loss was steadily decreasing for the Native Americans at rates of 8% and 4% respectively for the total 1000.
BILATERAL HEARING STATUS

The figures mentioned previously are for the total number of ears tested. It was determined that 31.3% of those with conductive losses had bilateral conductive losses. The remaining 2.8% had various combinations of conductive loss and of other types of loss. Eighty-five and five tenths percent of the sensori neural losses were bilateral in nature while 53.5% of the mixed losses occurred in both ears. When level of hearing acuity was evaluated in terms of bilateral symmetry it was found that 62% of the clients with normal acuity in one ear also had normal acuity in the other. Sixty-one and seven tenths percent of the borderline (PTA greater than 35 dB), 43.5% of mild (PTA 36 dB to 65 dB), 46.9% of the moderate (PTA 66 dB to 90 dB), and 34.9% of the profound (PTA 91 dB) were bilateral losses of the same degree.

DEFICIENCY FINDINGS

Of the 5666 clients seen 2,384 received impendence testing including 1,912 natives and 1,351 non-natives. Findings indicate that abnormal middle ear status was common in both young native and young non-native clients. Problems greatly suitable for the non-natives, however, in the middle and upper age brackets, while the Alaskan Natives continue to demonstrate ongoing middle ear difficulties when seen for audiological evaluations and are far more likely to show at all ages test findings of large middle ear volume characteristic of tympanic membrane perforations or patent vent tube. Because of difficulty in medical followup in rural areas, vent tubes are not used as frequently with the natives as with non-natives. Results were classified according to criteria developed by Jerger (1978), and are summarized below. (See Figure 10. 11 and 12.)

AMOUNT OF HEARING LOSS

The amount of hearing loss for each client was classified into one of six categories according to severity based upon the pure tone average (average of 600, 1000, and 2000 Hz). The classifications are listed below.

<table>
<thead>
<tr>
<th>Classification</th>
<th>PTA</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>PTA 15 dB or less</td>
<td></td>
</tr>
<tr>
<td>Borderline</td>
<td>PTA 16 dB to 25 dB inclusively</td>
<td></td>
</tr>
<tr>
<td>Mild</td>
<td>PTA 26 dB to 40 dB inclusively</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>PTA 41 dB to 60 dB inclusively</td>
<td></td>
</tr>
<tr>
<td>Severe</td>
<td>PTA 61 dB to 80 dB inclusively</td>
<td></td>
</tr>
<tr>
<td>Profound</td>
<td>PTA 81 dB or more</td>
<td></td>
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</tbody>
</table>

Figure 6, 7, 8, and 9 shows the comparison of native versus non-native by age and indicate marked differences in the acuity throughout the span of ages tested. The differences between racial groups narrows with age for normal and borderline categories. The difference is slight for more severe losses until age 30. Beyond that age the margin between the groups widens substantially with the frequency of loss in natives being in excess of non-natives.

WE SALUTE

from page 2

the beauty of utility, and finding everything beautiful, either sensible because of color, form, or motion, or intellectual because it illustrates one or more of the great laws to which natural objects conform, than which nothing could be more agreeable than an inspiring mind.

Occasionally the auditorio in J.D. cannot be suppressed and he launches upon a knowledgeable exposition on "Ears from Fish to Man" revealing his profound insight into the hearing process and its development. A description of how bats fine-tune their vocalizations to the limitations of discrete hearing of a certain depth leaves one breathless with awe.

And for those of you suffering from ennui: "A visitor sits with me for a time in our garden, and admits being bored with the summer. Bored! With life teeming here, and everywhere, in untold profusion: with rights, property, seem to make the brain or engage it fully: with great questions unanswered and not even properly phrased, with a plethora of animals appropriate to the season crying to be performed which there is never enough time to do! It is as if one were to spend time at the Louvre and not be touched by the Winged Victory or the statue that awaits one, but sits in a corner and reads Mad magazine. Our task is to pry open the lid of the skull of that visitor, little by little, and peer in first a drop or two, then a dipper full, of curiosity in effort to get some sort of meaningful exchange between or visitors and the real world, for surely nothing could be more fascinating than to explore the world in which we actually live."

After this the following invitation is irresistible: "If you are ever in the Noank area please to call and we will sweep off the patio and lay another place mat. It may be we could become friends. But I don't know." I for one can't wait to do so.

M.P.D.
Page 16
Letter To The Editor
Continued from page 13
Rights people to the effect that the formula contains an unassailable racist reference. We tried substituting the word "Honey," but found this to be grating on the ear and thereby unappealing. Thus, the substitution of the phrase "shy, slender" (author's ed.) for the offending word destroys the natural rhythm of the formula and sometimes results in an incorrect solution as the clinician treats the phrase as two words rather than one.
We would appreciate your comment.
Yours,
Ralph E. Hoover
Professional Hearing Center
Wheeling, W.Va.

Answer To Hoover
Upon reading your letter of 5 October, 1979, I was also shocked and disappointed. The Dock was from long-exposure hot wire on my newly purchased HALO (Roever Automatic Letter Opener) from a Wheeling firm of dubious reputation. The dismay was from finding you were dismayed by Ken Berger’s statement. After all, haven’t you been saying the same thing for years?
The study you conducted with the “EENY” method was certainly interesting and apparently resulted in a large number of satisfied hearing aid users. It is gratifying to me that you realize your limited means of probing on a truly scientific study and your failure to probe all facets of the method. It is even more gratifying that you recognize your unique capabilities and resources and that you have stated, “...we are not there...”

By the word “aid,” you of course—meant my “help” and “assistance.” Because, as you well know, we are not set up to do any hearing aid service or design, and even if we were, we hold an interest in any concern involved in the design, manufacture, or marketing of aids. Consequently, we are not set up to do any hearing aid service or design in any manner with your wife’s CODY SPECIAL COMPANY.

I would like to say, this relationship should come to the right person for expert assistance. Your position with the university affords me the opportunity to review many proposals for more scientific methodology for fitting hearing aids. For example, I just recently reviewed a proposal which involved scattering a number of hearing aids about the floor of a motel room and having a scientifically-laden young person pick them up with her toes (called the CODY method). Another involved juggling 4 hearing aids from hand to hand and selecting the first one she fell to the floor (called the TRADITIONAL method). One ridiculous proposal was to put 4 direct-wired hearing aids (tuneable) under a quartz Mason jar and selecting whichever one “seemed the quietest” in SPQ...divided by 17...and it dith for conducive hearing (called the BERGER method). You couldn’t possibly believe some of the more bizarre devices put forward.

But, GOOD NEWS FOR YOU! Your proposed arrival at the most “CODY” moment. After carefully weighing the merits of the “EENY” method to the “CODY,” my wife has pointedly expressed which she feels I should accept. You’re in Luck!!! She has moved, soundly and unanimously decided that I was doing a pretty good job in my “EENY” method!”

We have finished the study and I will not bore you with all the finite details, but, following are some comments, conclusions, research results, etc. on our replication of your “EENY” method of hearing aid selection and fitting. We most certainly do not wish to offer an critique of your fine study involving 480 subjects, however, you must realize that there were certain weaknesses in your experimental design which I believe highly biased your results. Always, Ralph, keep in mind that scientific research should always be left in the hands of trained professionals.

The most obvious weakness in your design was that you always selected “MOE” (or its equivalent) as the aid to be fitted—thus, you violated the sacred principle of randomized sampling. So, our first task was to randomize the rhyme in the following fashion:

Each of the 8 verbal presentations were recorded in a professional radio studio using the highest quality equipment. The speakers were selected so as to represent a sample of all kinds of voices: regular, unusual, foreign, regional, etc. groups. Both male and female recordings were made and played simultaneously for each of the aforementioned groups.

The recorded tape cassette were then stored to be in a specially designed magnetic tape cassette holder that was completely covered in the person to be fitted merely spoke a few words into a microphone and the appropriate tape cassette was automatically selected and instantly by the computer. This relieved the clinician from a lengthy search through 14,256 tapes.

First, though, in cooperation with Allegheny Airlines, we conducted a pilot study to see if the computer could be used to select the hearing aid rather than a human clinician. This did not work. The clinician’s success in selecting hearing aids for the computer, closed the lid, plugged in the machine, turned on the power switch, and called the Department of Housing. It took 128 times more shocking than Ken Berger’s statement!!!

Thus, it became obvious even to the most-widely-plumed scientist that we could not eliminate the human element in hearing aid selections (with the single exception of the clinician that turned on the computer in the pilot study). In this study, the clinician was strapped into a “spin-chair,” but instead in a blind study, then the chair was strapped on and the counter-clockwise (clinicians with digital watches could not be used) in a random fashion for about 2 minutes. The chair was then stopped in the position facing a table which contained the hearing aids. The chairs are stored in a large, photographically sealed temperature-humidity controlled jar when not being used for evaluations. When the chair stops, the hearing aids are automatically pored from the jar onto the table which has a 3/16 inch lip around the outer edge to prevent the aids from falling off.

We certainly agree with you that it is absolutely critical that the table dimensions be such that the clinician can easily reach any point on its surface with ease. This seemed simple enough until we realized that "the reach" of our clinicians differed quite drastically. The average reach of the ten clinician’s right arms was 24.8 inches, the range was 23.4 to 26.8 inches. These measurements were made by placing a yardstick in the armrest, standing on the armrest, relaxing the arm, and measuring from the end of the yardstick to the 1st joint of the middle finger. (The investigators were very careful to place the end of the yardstick with the little numbers in the armrest and not vice-versa!) Each clinician’s reach was measured 5 times by 2 different investigators. Each arm was measured again prior to each aid selection task (this is called “calibration”).

Due to the very wide range of clinician reach, a simple table would not do. A special multi-dimensional table was designed so that all dimensions (height, width, length) would be infinitely adjustable. The prototype is computer controlled and automatically adjusts itself for any “reach” and height by having the clinician hold his (or her) right arm straight out in front of him at a comfortable height for about 300 lbs body weight.

The equipment setup could be as illustrated in Figure 1 (below). Notice the proximity of the prospective hearing aid user up to the wall of the HEARING AID SELECTION AND FITTING ROOM, speaks a few words into a microphone, the computer controlled tape player selects the correct tape cassette for “EENY, etc.” appropriately randomized, activates the control that spins the blindfolded clinician’s chair 360 degrees, and displays the microphone.

The clinician, when the chair has stopped spinning, raises his arm not over the table and randomly picks up a hearing aid each time a word is spoken. He does not worry about starting to either the right or the left side of the table. After spinning for

Figure 1: A schematic system has worked beautifully. We have fitted 188 (apologies to George Orwell) hearing aids with the "EENY" method and are completely satisfied with the preliminary results. Now, speaking of the results, we have some interesting observations to report (Figure 2).

Figure 2: A schematic diagram illustrates the hearing aid selection process.

Extensive follow-up interviews were conducted with all subject to determine the success of the hearing aids with their hearing aids. You will notice that those aids selected by the words “EENY” and “MOE” provided a 90-95% satisfaction to the user. The user feels this is a good enough percentage but can surely be improved as we further refine the procedure and design more sensitive and durable hearing aids.

The “MIKEY”s were, without a doubt, the most satisfied. We feel that 96% exceeds our fondest hopes and desires. Of course, we feel this may be an unwarranted conclusion with the “MIKEY”s” since the majority of our users were West Virginia coal MINERS and may have misunderstood the instructions. Another possible theory may be that the “MIKEY”s were all very selfish, individualists and the most important word to them in “MINING”!

Now come to the “MORS”. We were astounded to find that 98% of the MOE’s were completely unhappy with their aids. An exhaustive, in-depth interview was held with each MOE and we finally found the underlying reasons for their dissatisfaction. It is obvious that with the high cost of living, the energy crisis, the nuclear power debates, the smog, severe winter warnings, high interest rates, etc., that these people just didn’t WANT MOE!!

RECOMMENDATIONS FOR FURTHER INVESTIGATION:
From this study we have several recommendations to make for further investigation of this interesting means of selecting and fitting hearing aids:

1. Eliminate the use of the “MOE” from the hearing aid selection tapes.
2. Although it is tempting to use one only the words “MIKEY” to select hearing aids, this should not be done because it might:

   a. affect the clinician with its monotonous tone
   b. cause the clinician to become so preoccupied as to refuse to test the selected aid into the dispensing unit
   c. reduce hearing aid selection to a pure science with their

   d. force clinicians to question the need for their own

   e. cause the patient to become so preoccupied as to refuse to test the selected aid into the dispensing unit

   f. reduce hearing aid selection to a pure science with their

   g. force clinicians to question the need for their own

   h. cause the patient to become so preoccupied as to refuse to test the selected aid into the dispensing unit

   i. reduce hearing aid selection to a pure science with their

   j. force clinicians to question the need for their own

   k. cause the patient to become so preoccupied as to refuse to test the selected aid into the dispensing unit

   l. reduce hearing aid selection to a pure science with their

   m. force clinicians to question the need for their own

   n. cause the patient to become so preoccupied as to refuse to test the selected aid into the dispensing unit

   o. reduce hearing aid selection to a pure science with their

   p. force clinicians to question the need for their own

   q. cause the patient to become so preoccupied as to refuse to test the selected aid into the dispensing unit

   r. reduce hearing aid selection to a pure science with their

   s. force clinicians to question the need for their own

   t. cause the patient to become so preoccupied as to refuse to test the selected aid into the dispensing unit

   u. reduce hearing aid selection to a pure science with their

   v. force clinicians to question the need for their own

   w. cause the patient to become so preoccupied as to refuse to test the selected aid into the dispensing unit

   x. reduce hearing aid selection to a pure science with their

   y. force clinicians to question the need for their own

   z. cause the patient to become so preoccupied as to refuse to test the selected aid into the dispensing unit

   {The last this is clearly a friendly manner, may I suggest you visit my research lab - next week to get the hearing aid selection for the above choice and let the computer decide.

NO MOE,
Robert C. Cody

Figure 3: In New Orleans October 18th
May is the month to go to Northern Europe. It is a sweet, sunny time in Sweden, Finland and Russia, as some 35 Americans found out when they attended the International Audiology Congress. Two events were appended to the Helsinki Congress: A Pre-Congress meeting in Gothenburg, Sweden, and a Post-Congress tour to Leningrad.

The Pre-Congress meeting was organized by Gunnar Liden, who heads a magnificent audiologic clinic in Gothenburg. With a staff of 46 people and apparently unlimited equipment, he showed visitors an impressive facility. The program of the meeting included presentations on Electrophysiologic measures in Peudo-Audiology with many representatives from the U.S.

The International Congress of Audiology took place in the splendid Sibelius convention center in Helsinki. Dr. Tauris Palva hosted the Congress in true Finnish style, with colorful events and lavish food. The highlight of the program was a Round Table chaired and organized by Joseph Zwislocki, on Cochlear Mechanics. The speakers: A. Flock of Sweden, D. W. Nielson and H.G. Turner of Detroit, B.M. Johnston of Perth, and D.T. Kemp of London, presented clearly and articulately the science of the mechanics of the inner ear.

Another Round Table was presented by Francis Caffin of Harvard with Diana Ward of Minneapolis, J. Karja of Finland, Ole Benzen of Denmark and Marlon Dowe of Denver. The topic was Evaluation and Measurement of Hearing Aid.

The focus of the International Society has been directed toward Third World problems. The new Society of Physician Audiologists is planning to establish a training center for Third World audiologists in Bad Nauheim, Germany. Funds are being solicited to carry on this school.

A tour to Leningrad climaxd the Congress for an international group of audiologists, who drove by bus and spent three days touring Leningrad. The group was awed by the vast art collections at the Hermitage, the beauty of the Summer and Winter Palaces of the Tsars, and the impressive architecture of this city of canals. (See pictures, p. 3)

The President’s Message

It is hard to believe that we are beginning out tenth year of the American Auditory Society. That it has been this successful now since Aram, Marion, Dixon, Bruce, and the others organized what was then the American Auditory Society. The success of that planning is most certainly confirmed by the growth and recognition of the AAS here in 1982.

The very successful meeting of the Society in New Orleans on October 18th, the dedication and contribution of the key individuals who comprise the Executive Committee, and the recognition of EAR and HEARING as the ideal forum for medical audiology further proves the need for such organization and the foresight of the founders. We cannot adequately recognize the contribution which Kevin Munro has made as President these past two years or the efforts which Ross Etter makes to the society both as Secretary-Treasurer of the organization and as Editor of EAR and HEARING. And, let’s not overlook the work done by Suzanne Kosi and by Sharon Roemer and by the Editorial Board throughout the year. And, someday may we find a way to express our appreciation to our Number 1 wavet and Editor of Corti’s Organ, Marion Downs.

At the Executive Meeting preceding the Technical Program in New Orleans, Ross reported that membership is now up to 1,147, that the Society continues on a sound financial footing, and that the quality and quantity of manuscripts submitted for publication in EAR and HEARING are very good. And, certainly we had another excellent Carhart Lecture by Merle Lawrence as well as outstanding invited and contributed papers.

So, where does this leave us now? I believe that it leaves us in with the obligation and opportunity to share the benefits of membership in the American Auditory Society with the Audiologists, Otalaryngologists and other hearing healthcare professionals who are not now with us. During my term as President I shall devote myself to the expansion of our membership to include all of those individuals who could benefit from this association.

And, I would like to count on each of you to help with this effort. Look around and see who you know that should be a member, give them an application and sign them up. For reach me at 800-331-5413 (312-464-1961 in Alaska, Hawaii and Texas) if you need application forms or if I can be of help.

Charles Anderson, President, AAS

Lawrence’s Address

Gives Scholarly Tone To Annual Meeting

The Carhart Memorial Address of 1962 entitled “Otoologic Research and the Zealot” was delivered by Merle Lawrence at the annual meeting in New Orleans. It was the most scholarly of all such presentations that he developed the theme that it is the accumulation of many scientific findings and the cognitive factors that come together before any particular research demonstration can be made. For example, he postulated that there were two lines of scientific thought that had to be brought to full fruition before cochlear implants could even be envisioned. The two lines were physics and morphology of the ear.

An elegant review of the background of these two lines was given, which included the history of the development of electricity through Wever and Gray’s demonstration of electrical stimulation giving rise to the acoustic effect, but it was not until the knowledge of the ear was completely understood that all the elements of the Zealot were together and cochlear implants could begin. He credited Simmons (1966) with the initial report on implants, describing Simmons’ very intense work with a subject, followed by House’s and others further experimentation on cochlear implants.

Lawrence points out that speech perception has not been secured by the cochlear implants and demonstrated that the reason for this may be only by the removal of occasional ganglion cells remaining to transmit the desired message. He felt that the remaining question left to fulfill the Zealot in this area is now does one stimulate the inner Corti to produce coding of speech?

Lawrence’s address was published in EAR and HEARING. In addition to this address, a number of outstanding papers were presented at the annual meeting, most of which are abstracted in Corti’s Organ this issue. (See pages 9.)
Letter from England

There was a successful Symposium of the Collegium Otolar-
yngologicum in the Hague which has attracted many
members from all over the world in honour of Leonard
Jongkees. He has been General Secretary of the College
and Professor of Otalaryngology at the University of Amster-
dam. A man of great charm, a linguist and musician - he will
have more time to play chamber music on his cello after his
retirement later this year.

The U.S.A. are well represented by Frank Sooy, both
Howard and Bill House, Hal Schuckstein, John Betley, Morton
Lawrence, Joe Hawkins, Brian McCabe, David Linn, John
Snow, Bob Ruben and others adding lustre to the occasion and
there were several new members from South America and
Europe. The coveted Shamhurage prize was awarded to T
Palva from Helsinki, so well merited.

To mention a personal achievement, if I may, our book
(Pathology of Granulomas and Neoplasms of the Nose),
(Paraesthesias, J. Friedmann and D. A. Osborn, Churchill
Livingston, 1982) has been well received. Regrettfully, my co-
author and former colleague at the Institute has died before the
publication of the book to which he has greatly contributed.

Retirement was in the air everywhere. In London an excel-
 lent Symposium on the Inner Ear was held to mark the retire-
ment of John Ballantyne from his post as Consultant Otolaryn-
gologist at the Royal Free Hospital Medical School. He will,
of course, continue as Editor of the Journal of Laryngology
which will appear in a new format in the New Year.

A great deal has been happening in our Universities and
Hospitals; much of it rather depressing - but that is another
story.

L. Friedmann

International Congress

John Peterson looking at exhibits

Dr. Stevens of England with Dr. Palva

Dr. Teams Palva, Pres. of the Congress, 
Dr. Francis Cahn, Marian Down.

Don Worthington and his wife

Sandy Gerber with Jean Marie Aran of France.

The new president of the International
Audiology Society, Ole Bentzen of Den-
mark and the outgoing president

Alf Axelson at mobile hearing testing unit
he mans in Gothenburg

Joe Madsen, Gunmar Liden, and Dr. Jean
Causse of Besiers.

Sandy Gerber, Marion Down & Dix
Ward representing AAS at 1AS.

Statue in the clinic park at
Gothenburg, Sweden

Statue in the square, Helsinki

John Peterson and Lee Utton at exhibits of Congress.

M. Rainville, France

Gerber Appointed XVII Congress President

Santa Barbara will be the scene of the next International
Audiology Congress in September, 1984. To head this
Sandy Gerber has been appointed Congress President.

This will be the second time since 1950 that a Congress
will be held in the U.S. until Aram Gigeria hosted the meet-
ing in Dallas. The job of the hosts has been greatly simplified
by the decision of the Executive Committee not to require
financial contributions. Previously, contributions were made
in French, Spanish, Italian and English, but by 1984 this
requirement was lifted. English will be the official language
of Congress from now on. This should make it more inter-

table for Americans to attend in 1984.

Glorig Honored by Congress

To add to his many international honors, 1st AAAS pre-
Zen, Aram Gigeria will now have his name on an annual prize
being developed by International Congress inductees. This
group is soliciting contributions for the Glorig Award in audiology and electrophysiology.

Bentzen of Denmark, president of the International
Symposium, has headed the drive for the Award, which in the U.S.
will be awarded by Sandy Gerber.

Please make donations to: 
Dr. Sanford Gerber
Speech & Hearing Center
University of California
Santa Barbara, California 93106

AUDITORY EVOKED POTENTIALS

The International Electric Response Audiometry
Symposium will be held in Washington, D.C.
(October 26-27, 1982). The meeting
will include invited speeches, sections, and
posters in all areas of auditory evoked potential research. For information please contact Dr.
Richard W. Division of Neurology, Ohio State General Hospital
Smyth Road, Columbus, Ohio 43210.

Deadline for the receipt of abstracts is March 15th.

Workshops

Taucoustics Inc., Austin, Texas is pleased to announce
a schedule of workshops sponsored by Contemporary Audiology
and ENG Workshops for 1983. These include AMA and
Academy workshops in Contemporary Audiology, ENG,
Electrosynthesisography and evoked potentials. For information on the workshops contact:

COMPARATIVE AUDIOLOGY: One-day workshop -
Comparative Audiology presented by Dr. James T. White
Jerry Northern and M.A. Susan Jager covers the
approach to the diagnosis of hearing loss.

Diagnostic Testing in Children and the Context

January 29, 1983
The Cullman Center, Dallas 
P.O. Box 381, Dallas, Texas
December 2, 1982
Los Angeles

ELEKTROSYNTHEMOGRAPHY: Two-day workshop
Scheduled for May 19 and 20, 1983 in Atlanta
Contact: Dr. Robert S. Teeter
A.F.A.
San Francisco
San Antonio

Electrophysiology and the Speech Pathologist -
comparing the ENG test Battery and
in the United States.

February 4-5, 1983
The Atlanta Hilton, Atlanta
May 31-June 3, 1983
Hyatt Regency on Union Square
San Francisco
September 9-10, 1983
San Antonio

Contact: Dr. James J. G. Pappas
Address: 5595 Oakwood Road, Woodbridge
Virginia 22193

In addition, we have announced plans for two new
Field/Evoked Potential Workshops to be held in Houston, Texas
December, Colorado in July and September of 1983. Additional
information on these will be released shortly.
HIA and AARP Announce Hearing Education Program

Washington, D.C., June 22, 1982. — In a joint effort to provide information about hearing loss and hearing aids to 15.2 million older Americans, the Hearing Industry Association (HIA) and the American Association of Retired Persons (AARP) announced the development of an educational outreach program. Entitled “Have You Heard?: Hearing Loss and Aging,” the program will include an automated, 23-mm slide-tape presentation, a group leader manual and consumer materials about hearing loss and hearing aids. To be distributed through AARP’s national network, the program will be promoted for use at AARP’s 1,000 community-based chapters and other community groups throughout the United States.

This joint effort is part of AARP’s Health Advocacy Services and a component of HIA’s comprehensive Market Development Program.

In announcing the program, AARP Senior Program Coordinator, William C. McMorran, and HIA President William A. Austin, noted that “this is an unprecedented opportunity for our associations to bring hearing health awareness to the segment of the American population with the greatest incidence of hearing loss. Our objective is to provide useful information about the identification, correction, and treatment of hearing problems for this age group. Both McMorran and Austin emphasized the importance of this endeavor, as individuals 65 years and older represent nearly 83% of a population of 25,000,000 hearing impaired persons.”

“Have You Heard?: Hearing Loss and Aging” is scheduled for distribution by September, 1982. The multimedia program will be promoted through the publications of both associations and AARP pharmacies throughout the country. The complete kit will be available, on loan at no charge, for older adult groups wishing to conduct this educational program on hearing loss.

The content of the program was reviewed and approved by a joint AARP/HIA advisory committee which met in Duluth, Minnesota, on June 21. The committee is co-chaired by Carl Holfand, Assistant State Director of the AARP in Minnesota, and Marjorie D. Skalfe, Editor & Publisher of Hearing Instruments magazine. It is sponsored by the Chair of HIA’s Market Development Committee and the Association’s Secretary.

Midwinter Research Meeting

The annual Midwinter Research Meeting of the Association for Research in Otolaryngology will be held January 24-26, 1983 at the Delphin Beach Resort in St. Petersburg Beach, Florida. A major focus of this meeting will be planned on the chemosensory and developmental and comparative aspects of smell and taste. A session on the sensory physiology of the skin will be held. People wishing to register should contact Donald W. Nelson, Ph.D. Secretary-Treasurer, Association for Research in Otolaryngology, 3520 N. 29th Street, Suite 202, Milwaukee, Wisconsin 53216.

Audio 83 Hyatt Regency

First tri-annual conference or audiology and neuro-audiology. Program includes basic physiology, current and proposed techniques of audiologic evaluation, and introduction of pathology profiles using a new strategic format and electronic audience response system. Concurrent otoacoustic meeting.

PROGRAM DIRECTORS: CONTACT:
Connie Jordan, MS
Roden Perkins, MD
Project HEAR
1801 Page Mill Road
Palo Alto, CA 94304
415-494-5000

Audio 83 Hyatt Regency

"Prof. Stello Crito" International Prize

In memory of a former President, Prof. Stello Crito, the Italian Audiology Society has instituted an international prize of 5,000 lire (approximately 4,000 U.S. dollars). The prize will be awarded on 26 October 1983 in the presence of the President of the National University of Rome.

The prize will be awarded to unpublished research carried out by a single author or a joint work that makes a positive contribution to the field. The research must be on "Applied Acoustic Physics - Psychophysics - Physiology of the auditory system - Hearing loss - Hearing aids - Origin of the disease - Biomechanics or history of the auditory system - Physiology or otolaryngology - Inner ear - 7th nerve or clinical deafness - Diagnosis of deafness - Medical treatment of deafness - Surgical treatment of deafness - Prosthetic treatment of deafness."

The papers must be written in English. Entries will be accepted from persons aged 35 or under on 26 October 1983.

Each paper must be a maximum of 6 pages, typed on one side of the page, double spaced. The author must sign the paper.

The prize is free of taxes.

TO: 2nd Annual Colorado Otolaryngology Workshop on Amplification: Identification for the Deaf.

March 6 - 12, 1983, Aspen, Colorado

For more information contact:
The American Foundation for the Hearing Impaired 1800 Eastern Ave. Silver Spring, Maryland 20901

The American Association of Retired Persons is a nonprofit, nonpartisan organization dedicated to helping older Americans achieve retirement lives of independence, dignity, and purpose.

Founded in 1958 by the late Dr. Ethel Percy Andrus, AARP is today the nation’s largest organization of older Americans, with a membership of more than 10 million. Membership is open to anyone age 55 or older, whether retired or not. AARP’s motto is “to serve, not to be served.” Members give meaning to that motto through active involvement in community and national affairs.

The Hearing Industries Association represents firms which manufacture or distribute hearing health care products or their component parts. As a major focus of the association, HIA conducts a market development program which is designed to increase the appropriate use of hearing aids by individuals with hearing losses. In addition, HIA publishes and distributes publications for physicians, technical professionals and the public on amplification and the proper use of hearing aids.

Audiological Resource Association Meeting

The Audiological Resource Association held its summer meeting in Savannah, Georgia, May 15-16, 1982. Dr. Dan Schumacher, Watsaga Hearing Conservation, Inc. Johnson City, Tennessee, presented an informative lecture on Industrial Hearing Conservation. Dr. Schumacher has a long standing program of Hearing conservation within his area. He shared many of the practical aspects of noise survey analysis, engineering and administrative controls, audiometric testing, ear protection and educational programs for workers.

Ms. Faye M. Churchill, Brookwood Hearing and Speech Clinic, Birmingham, Alabama, gave a very informative presentation on current methods and research in extended high frequency testing. As part of her presentation, she introduced and demonstrated the Demar model 39 K extended high frequency audiometer. This unit provides capability for heartbeats assessment from 8,000 to 30,000 Hz. Information gained from testing in this range can assist in the early prevention of hearing loss in the speech frequencies and to determine the effects of ototoxic drugs. Ms. Churchill pointed out that the addition of this audiometer makes it feasible and up grade the scope of hearing and speech services at a low cost and presents an unprecedented opportunity to assist a larger clientele with new audiometric techniques thus, advancing the goals of the audiological profession.

Further research by Dr. Charles Berlin in Krames Hearing Research Laboratory indicates that in some types of hearing loss it is critical to be fully aware of the amount of residual high frequency hearing before an adequate amplification system can be provided. This information, of course, can only be obtained through the use of extended high frequency audiometry.

In addition to attending the informative meeting, the members enjoyed historic Savannah and its friendly residents. The social events included a trip to a local Indian Museum, and a visit to the historic Magnolia Cemetery. The Social Committee would like to thank all members who contributed to the success of the meeting.

OTO 83 Hyatt Regency

Third tri-annual conference on otology, neuro-otology and later microsurgical techniques. Format integrates basic sciences with practical surgical and medical therapy using a comprehensive syllabus, electronic audience response system and illustrated technique charts. OME Credit: 24 Hours Category 1. Concurrent audiometry meeting. Project Director: Rodney Perkins, MD.

Project HEAR, 1801 Page Mill Road, Palo Alto, CA 94304 415-494-5000
Minutes of the AAS Executive Committee Meeting

DATE: October 17, 1982
PLACE: E.S.U. Speech & Hearing Clinic, New Orleans, LA


MEMBERS ABSENT: Malcolm Graham, Earl Hardin (On Leave until June 2, 1983), Michael Sidelnica (Local arrangements chairman), Ken Staftt (Business Manager, The Williams & Wilkinson Co.), and Barbara Weber (Section Editor-K & Williams Clinic).

President National opened the meeting at 1:30 P.M.

The minutes of the 1981 Executive Committee Meeting were reviewed and approved with no corrections.

The Income and Disbursement Statement for the period January 1, 1982 through September 30, 1982 was reviewed and discussed.

A list of 230 applicants for membership was presented and sponsors for those applicants not previously having sponsors were provided. All applicants were approved for membership. This list will be published in the next issue of Cortex's Organ. (See pg. 8.)

PLACE: The Annual Meeting was confirmed and plans for the meeting were reviewed. Dr. Robert W. Keith

In the Program Chairman and has already secured the meeting room and the arrangements for the dinner. A letter from the Mayor of Cincinnati was circulated to the Committee. It was suggested that J. Donald Harris be the Czaroln Memorial lecturer. President Anderson will contact Dr. Harris to request his acceptance of the award.

6. Considerable discussion was held regarding the 1984 meeting. It was decided that the meeting be held in conjunction with the 17th International Congress of Audiology, to be held August 26-30 in Santa Barbara, California. Dr. Keith indicated that this decision was made after consulting with AAS, who agreed that a joint meeting would probably be a more advantageous and economical joint meeting. The date of the meeting was set for September 1-3, 1984, and the meeting will be held in conjunction with the American Speech-Language-Hearing Association's Annual Convention.

The reason for extending the term was to provide the President more time to have an impact on the discipline of Audiology. In accordance with the spirit of this motion, the Executive Committee agreed to reappoint President Anderson for one year following the first year of his term as President. Also, it was agreed to extend the term of President Anderson and it was agreed that President Anderson will assume Office October 19, 1982, and will retain his Office until the 1984 Annual Meeting.

A membership drive was held during July, August, and September, 1982. Brochures were sent to approximately 50,000 physicians, including those who had been members in the past. The response to this campaign was excellent, and the number of new members increased by approximately 25% over the previous year. The new members included several prominent audiologists from around the country, and the increase in membership was seen as a positive development for the AAS and for the discipline of Audiology.
Meeting of AAS

Ross Roeper also requested that $1000.00 be transferred from the AAS account to the Ear and Hearing account, as it has been done for the past two years. Marion Downs reported on Correll's Organ. She asked whether or not there was any objection to publishing the newsletter 2 or 3 times per year as has been done in 1981 and 1982. There was no objection to this.

A nominating committee was formed to replace seven members of the Executive Committee. The members being replaced are: Charlie D. Anderson, Bruce Graham (appointed replacement for Susan Corny-Fishman), Malcolm Graham, Ed Johnson, Ralph Naunton, Hiroshi Shimizu, and John Sinclair. The nominating committee appointed was: Don Worthington (Chairman), Hiroshi Shimizu, Jim Nunley, and William Meyerhoff.

The point was raised that the American Auditory Society does not have standing committees. Thus, many times certain activities that should be carried out by the Society are overlooked. Based on this, it was decided that a committee on committees be formed, with Ralph Naunton as the Chairman. Dr. Naunton was given the responsibility of appointing chairmen of standing committees that would deal with certain issues of the Society. Examples of committees included a Membership Committee, Professional Relations Committee, Program Committee, and Credentials Committee. Dr. Naunton will report on his recommendations at a later date through written correspondence.

Don Worthington was appointed Vice-President-President Elect. Due to the change in the terms of the President, Dr. Worthington will assume this position for the remainder of 1982, 1983, and until the annual meeting in 1984, at which time he will become President from 1985 through 1986.

The AAS long range planning committee had written to inform AAS of its existence. It is expected that AAS will be contacted in the future to input that committee.

Ralph F. Naunton, M.D.
President

Ross J. Roeper, Ph.D.
Secretary-Treasurer

NOISE-CON '83 TO BE HELD AT MIT

"Quieting the Noise Source" will be the theme of NOISE-CON '83, the 13th National Conference on Noise Control Engineering. NOISE-CON '83 will be sponsored jointly by the Institute of Noise Control Engineering and the Massachusetts Institute of Technology.

To be held on 21-23 March 1983 on the MIT campus, NOISE-CON '83 will emphasize a physical understanding of noise generation and noise reduction at the source.

NOISE-CON '83 is the sixth in a series of national conferences on noise control engineering devoted to specialized topics in the field. Other conferences have been held jointly with the National Bureau of Standards, the NASA Langley Research Center, Purdue University and the North Carolina State University.

For further information on NOISE-CON '83, contact the Institute of Noise Control Engineering, P.O. Box 3296, Arlington Branch, (Bethesda, MD 20014, U.S.A.)

Executive Committee and Editorial Board Meet
Tympanometry and Fistula Test

by Bernard Causse, J. Bel and Jean R. Causse

Otology Clinic 3432 BEZIERS—France

ABSTRACT

"Tympanometry test" is a major cause which may lead to an erroneous diagnosis in tympanometry testing. This paper discusses the importance of performing a correct tympanometry test, especially in cases where stapedotomy for otosclerosis is a possibility. The test is conducted under general anesthesia to ensure accuracy. It involves the measurement of middle ear pressure and the analysis of the tympanogram. The results of the test are used to determine the presence or absence of an air-liquid seal, which is crucial for surgical planning.

FISTULA TEST USING IMPEDANCE BRIDGE AND ELECTRONYSTAGMOGRAPHY

The results of the tympanometry test have been further confirmed with the use of infection bridge measurements and electronystagmography. These tests were performed to further investigate the presence of any fistula or abnormal pressure in the middle ear. The findings indicate that the use of these advanced techniques can provide additional valuable information to aid in surgical planning.

AMERICAN AUDITORY SOCIETY

Unaudited Statement of Income and Disbursement for 1982

Revenues

- Membership dues $20,000.00
- Interest on savings account 1,000.00
- Convention registration 2,000.00
- Total Revenues 33,000.00

Expenses

- Supplies 500.00
- Postage—Office 500.00
- Curti's Organ 1,500.00
- Duplicating costs 200.00
- Telephone 400.00
- Publication costs 200.00
- Hear & Hearing 100.00
- Curti's Organ 2,000.00
- Accounting & audit 300.00
- Contract services 500.00
- Total Expenses 8,000.00

Net Income 25,000.00

Assets
- Cash—Checking 7,510.00
- Savings 400.00
- Ready Assets Trust 10,000.00
- Regular Group 400.00
- Total Assets 46,920.00

Capital

Balance December 31, 1981 20,000.00
Income as of August 31, 1982 6,920.00
Accumulated Capital Sept. 30, 1982 28,920.00

In conclusion, the importance of performing accurate tympanometry tests cannot be overstated. These tests play a crucial role in the diagnosis and treatment of middle ear disorders and are essential for ensuring successful surgical outcomes.
First in 1976, a myringoplasty in order to close the perforation, — second in 1977, a stapedectomy on middle ear fibrosis and stapes fixation. The final result was satisfactory for two years, but an illness caused both an opening of the ABG and a sensorineural hearing loss in the left ear. The temporary cure of 1976 recurred in 1978 and the sensorineural hearing loss remained. The patient was referred for a revision operation. There was no spontaneous myringostoma, but positional testing showed dizziness and left ear hearing loss in an air-bone gap. Auditory and vestibular compression and Valaskeva manoeuvre were positive. Caloric testing demonstrated strong nystagmus and a great deal of subjective dizziness on both positive and negative pressures. Surgery revealed a considerable fibrosis of the middle ear cavity and a narrow perilymph fistula with a probably vestibulo-fibrous because of the production of myringostoma from the fibrous tissue invaginated into the narrow tunnel remaining from the previous fenestration of the obliterated otocochlear stapedial involvement. The procedure used a vaccine covering the niche without any prosthesis led to a broad revision of the post-operative ENG test and the test was slightly positive. A secondary sensorineural hearing loss arose two weeks after the revision operation, probably due to vestibulo-fibrous.

Case 4 (N 35100B): A 65-year-old woman had previous stapedectomy on the right ear in 1967, complicated of fullness and vertigo during the years. After otitis media, she had vertigo immediately after the operation. She experienced recurrent episodes of dizziness, particularly at the time of nose and throat infection caused by colds, which led her to consult us. Romberg test was positive. Audiometric check-up showed a 10 dB hearing loss in the right ear and normal hearing on the left ear. No spontaneous myringostoma. Torsion swing test revealed mild vestibular paroxysms on the right ear and normal on the left ear. No sensorineural hearing loss on the right ear. No subjective dizziness. Torsion swing test revealed mild vestibular paroxysms on the right ear and normal on the left ear. No sensorineural hearing loss on the right ear.

Case 2 (N 18804B) A 56-year-old woman was operated on both ears in 1961 and 1962 with a satisfactory functional result in accordance with the poor cochlear reserve of stage III. Nine years after the left stapedectomy, the patient experienced recurrent sensorineural hearing loss on this ear, with occurrence of tinnitus and imbalance. In 1973, repeated episodes of dizziness and vertigo on the right ear. ENG fistula testing, repeated on two separate test dates, was negative on both occasions, apart from when the pressure change from positive to negative occurred in the right ear. Surgery revealed a wide fistula around the shaft of the stapes-prosthesis. The prosthesis was removed and a Bigelow prosthesis was inserted in the middle ear cavity. The patient has no dizziness since surgery. Postoperative ENG fistula test was negative. Hearing levels have not improved.

Case 3 (N 76137B): A 45-year-old woman underwent previous stapedectomy on the right ear in 1955 and subsequently per-hysteresis of the tympanic membrane and persistent air-bone gap. Two revision operations were performed.

In conclusion, the ENG fistula test elicited by tympanometry and recorded on an ENG tracing, is a procedure of choice allowing an early detection of perilymph fistula. But the responses to this test must be interpreted in the light of the mechanical exchanges of pressure between the middle ear cavity and the vestibule of the inner ear. The responses strictly depend on the anatomical conditions existing on the site of these exchanges. The study of the perilymph fistula, easiest to investigate at the level of the oval window after stapedectomy, allowed us to show the influence of two factors on the ENG fistula test: the position of the ENG fistula test in direct relation to the size of the perilymph fistula: 2) after stapedectomy, in inverse relation to the size of the perilymph fistula.

Interpreted in this way, the "ENG fistula test" elicited by tympanometry is a valuable addition to the battery of the tests allowing an early detection of perilymph fistula. ENG fistula tests, trigeminal compression, Valaskeva’s manoeuvre, pneumatic otoscopy, which are of lesser value. Only the combination of these tests can lead to an accurate diagnosis.

But one must keep in mind that an early tympanometry is the only safe means of ensuring the diagnosis in case of doubt of allowing us to be in time to reverse the severe side-effects of perilymph fistula by means of an immediate revision operation.

REFERENCES

HAVE YOU PAID YOUR 1983 DUES?
Tymanometry
(cont. from page 7)

Members Accepted by AAS

NAME

Frank A. Adria

Sharon Graham

Thomas F. Gray

Mary Jane Millhous Grow

Rene A. Apuleius

M. Lewis Gunter

Jack L. Hanson

Robert E. Hayfick

Jack D. Harting

Elizabeth J. Hasselt

Mary M. Heyman

Gail Lynn Roobard

Dominic Hugues

J. Paul Hart

Raymond M. Hurley

Michèle A. Buta

Patricia Jackson

John B. Jarvis

Lyman Tarion Leck

Dorson E. Jensen

James Jerome

Brenda Joe

Craig W. Johnson

Sally Johnson

Deborah Lynn Johnston

Connie L. Jordan

Harriet Kaplan

Marine Kessler

Joanna Kingsland

Catherine Kirkwood

John T. Kaspar

Nancy L. Lamont

Deborah Landick

Allen Landwirth

Nancy Lecks-Chreter

Gayle Sanchett Lemon

Alexandra Less

Boe D. Levine

Anne Elizabeth Lewis

David J. Lilly

Lori L. Lloyd

Mark A. Cheple

Mrs. Pat Chute

Donald I. Clark

Marilyn Condon

Gwen Cottingham-James

Jill Zeigler-Cover

C. Drouchi

Melinda Massey Davis

Roy S. Segde

Michael F. Seid

James H. Shannon

Franklin Stape

Larry B. Shibley

Judith Short

Jane W. Siever

Cindy Ann Simon

Robert Simpson

Kenneth E. Smith

Charles Solomon

Mark T. Spears

Toby Specton

Marla Statton-Drum

Wm. F. Strock

Linda A. Synow

Susa Stuttard

Luis Sutton

Linda Swanson

Suzan Smyrnakis

Mls. Sheryl Tobin

Christine A. Talbot

Richard Tobbitt

Susan E. Terry

Jane L. Thebo

Michael Thelen

James W. Thome

Dennis van Vliet

Margaret Van Vo

Robin H. Vaugha

Richard J. V. White

Henry Victor

Randy Ornstein

Janice R. Walker

Betty S. Watrous

Harold Weber

Larry D. Webster

Mary R. Westmore

Dwayne Wildhagen

Vera G. Wimmer

Kenneth Wolf

Dave Woolworth

J. Larry Yant

Karen D'Ellen Zeichner
In 45% of patients with ocular scleritis and 40% of patients with staphylococcal infections, progression of loss was arrested entirely or the rate was slowed markedly. Some patients, however, did show progression. In 6 different patients with different variables were then examined to try to determine whether certain patients were more likely to respond positively to therapy. In 5 patients with staphylococcal infection, ocular involvement (scleral or staphylococcal) was all statistically significant variables used in the regression analysis had much more successful results overall. Also, patients who had been managed sufficiently were more likely to achieve satisfactory outcomes.

In certain patients, then, sodium fluoride does positively affect progression of ocular involvement in scleritis and staphylococcal infection.

**MONITORING OF AUDITORY BRAINSTORM RESPONSES DURING ACUSTIC TUMOR SURGERY**

Connie Jordan
Rodney Perkins
John Winnicowt

California Ear Institute, Palo Alto, California

Auditory brainstorm responses were obtained pre-operatively, intra-operatively, and post-operatively in 12 procedures of acoustic neuromatous tumor obliteration. Data were analyzed with regard to morphology, latency, and amplitude. Dynamic changes in the responses which occurred during the surgical procedure were used to determine the location of the functional variables and the viability of the technique as a routine monitoring procedure will be addressed.

**CHILDHOOD OTITIS MEDIA AFFECTS DEVELOPMENT OF WORD, BUT NOT SENSORY INTELLIGENCE**

James E. Peck
University of Mississippi Medical Center

The purpose of this study was to determine how recurrent hearing loss due to otitis media may influence the development of speech intelligibility performance for both word and sentence level. Subjects were 25 normal children and 25 children with recurrent otitis media. Ages ranged from 24-56 months. At the time of testing, all children had normal hearing sensitivity on both ears. All children passed a neurologic screening test for developmental normalcy.

Speech intelligibility performance was assessed with the Pediatric Speech Intelligibility Test (PSI) test. Individual data were performance—intelligence (PI) functions for PSI word and sentence materials in isolation and in the presence of a competing message. The correlation between performance and sentence score was high for the different types of speech materials in normal children between 3 and 6 years old.

In the PSI test, children are asked to repeat phrases after hearing them, and their ability to do so is measured. The results showed that children with recurrent otitis media had lower scores than those without, indicating a possible link between recurrent ear infections and speech intelligibility in early childhood.

**HEARING LOSS IN HUNTER SYNDROME — MUCOPOLYSACCHARIDOSIS II**

James E. Peck
University of Mississippi Medical Center

Hunter syndrome (Mucopolysaccharidosis II) is a genetic, metabolic disease of exocytosis mucopolysaccharide storage leading to mental and skeletal abnormalities, distinctive facial features and increase prevalence of hearing loss. However, the hearing impairment in MPSII has not been well described in the literature. This paper examines the auditory prognosis, associated with recurrent middle ear infections, presenting two affected brothers. Each subject had mild hearing disorders, fluctuating between moderate and severe degree. Both were associated with recurrent middle ear infections. Hearing loss appears to be a frequent concomitant of MPSII and may be conductive, sensorineural or mixed. The condition may be related to the disease's pathology. Aggressive audiological and otologic management are required to enhance communication development.

**SODIUM FLUORIDE: EFFECTIVENESS OF TREATMENT FOR OCULOSCLEROSIS**

T. Leitharum, B. Forzger

Otolological Medical Group Inc., Los Angeles

Ocularsclerosis causes a progressive nonsensory hearing loss in many patients with this disease. This progression is caused by an active osmotic pathogen process in the bone surrounding the cochlea. We have treated patients with ocularscleros or staphylococcal otitis and showed that osmotic pressure can be improved with sodium fluoride for just over 10 years. It is believed that sodium fluoride changes the protein, reducing the perceptual component of the active disease process.

The use of sodium fluoride in arresting progression of sensorineural hearing loss was examined in 65 patients with confirmed staphylococcal otitis and 51 patients with ocularsclerosis. The rate of progression was significantly higher in the osmotic component compared to the control group. Also, compared to control groups of 100 patients each. Duration of hearing loss was 3 to 15 years before treatment and 3 to 14 years after treatment.

The difference between groups may be highlighted by comparing the hearing loss for each group using an arbitrary defined criterion score of all 40% children's ability. Performance for PSI sentence materials in isolation were significant for the test group, and 60% of the children in the test group and 60% of the children in the control group.

**EVALUATION OF SUB-CLINICAL EIGHTH NERVE DYSFUNCTION IN LEARNING DISABLED CHILDREN**

S. Thomas Westerman

Hahnemann University College of Medicine, Philadelphia, Pennsylvania

Linda Gray Medusky

Otolingual Education, Inc., New York, New York

Shrewsbury, N.J.

Researchers such as Kephart, Ayres, deQuire and others have found that deficits in the auditory mechanism may be observed in learning disabled adults. Disturbances in auditory areas also decrease the child's ability to function in the classroom. Many of these studies have been conducted on children, with difficult to detect. A battery of tests were developed for evaluation of speech production of eight pairs of auditory nerve. These tests include assessment of hearing threshold, localization, balance, visual-vestibular perception, postural maintenance and evaluation of auditory growth plus the evaluation of a test from factors that are known to be present in children with learning disabilities.

32 school aged children diagnosed as being disabled by a battery of tests was then administered. The children were divided into 2 groups: 94% had abnormal findings on vestibular testing. Of those: 94%, 80% revealed unilateral hypofunction. 60% had abnormal vestibular opacities on audiogram. 22% had abnormal vestibular perception which varied with age. 22% of the children had auditory figure ground perception perliminary impairments.

Children who tolerated hypofunction of the vestibular system were treated with therapeutic dosages of meclizine, HCL and/or hydathidine hydrochloride. Those who demonstrated deficits on the audiometric or perceptual tasks were treated with a combination of phenothiazine and acetylcholine. Children who demonstrated a combination of unilateral hypofunction and supranormal performance were treated with a combination of the above drugs. Those who had deficits in auditory function were referred to the child study team for development of the proper educational plan.

Subsequent audiometric tests on a monthly basis observed the deficit of the children. Areas of weakness were retested at 6 months and 1 year. 6 month observation revealed improvement in 75% of children treated for hypofunction of the vestibular system based on history of poor auditory performance. Children with vestibular hypofunction showed from moderate to marked improvement in academic abilities according to each subject's report. However, hearing responses were terminated. After re-examination in 1 month, 11 children were returned to the school for increased vestibular dysfunction. Progress is presently being monitored.

51% of children demonstrated visual vestigial deficits and had marked improvement. 70% improved to the level of normal. The treatment for these children was continued at a reduced dosage and was gradually terminated. Based on these findings, it is suggested that this testing should be included in the evaluation procedures conducted by child study teams for the purpose of devising the proper educational plan.

**NEUROAUDIOLOGICAL FUNDAMENTALS IN SPLIT-BRAIN SUBJECTS AND THEIR RELATIONSHIP TO CHILDREN WITH AUDITORY PROCESSING DIFFICULTIES**

Frank E. Muskiet

Dartmouth Medical School

Hanover, N.H.

It has been shown that subjects who have undergone complete, one-state commissurotomy demonstrate specific trends in certain auditory tests. Among these are subjects who have severe left ear deficit, for verbal report on dichotic speech tasks and poor auditory perception. Other subjects who have undergone bilateral commissurotomy demonstrate significantly better performance for PSI words in comparison to their better ear. These results suggest that the right hemisphere is more involved in the processing of verbal information.
Abstracts

(continued from p. 9)

verbal report, but normal performance for hearing these

patterns. Also, these subjects perform normally on monaural
low redundancy speech (i.e., low pass filtered speech, speech
in white noise, etc.) and auditory function

In our investigations on children with auditory processing
difficulties we are currently studying a manner similar to
spill-brain subjects. Generally, these children do not
demonstrate as severe effects as the spill-brain subjects, but
an disorder related to it. It has been noted that the
approximately 20-25% of the children investigated for
auditory processing dysfunction demonstrate this "spill-brain" effect.
These children have compiled to the theoretical entertain the possibility of abnormal auditory inter-

cerebellar-hemispheric interaction in children who demonstrate this
specific type of neuro-auditory profile.

Several audiological case studies showing relationships
between split-brain subjects and children with auditory
processing deficits will be discussed.

HEARING AID USERS AND MUSIC:
A SURVEY OF LISTENING HABITS AND ATTITUDES
J. Richard Franks (Presenter)
Washington State University
Pullman, WA

Yakima Ear, Nose, and Throat Clinic
Yakima, WA

Although extensive research has been devoted to the effect of
hearing aid use on speech, essentially no research is avail-
able relating to hearing aid use and perception and enjoyment of
music. The purpose of this study was to examine the listening
behavior and attitudes of hearing aid users regarding
music.

A questionnaire was developed and submitted to a population of
hearing aid users ranging in age from 0 to 90 with a
mean age of 62.3. Subjects were asked to respond to the
questions at two consecutive one-week time intervals ranging
from 1 to 7. The numbers were associated with appropriate
modifiers such as moderately, greatly, etc. A rating of 1 was
the most negative and an 8 was the most positive
response. Responses were obtained from 178 subjects con-
sisting of 95 men, 82 women, and 3 children.

In response to the inquiry regarding the importance of
music before hearing impairment and aid use, 88% indicated
that listening to music is moderately important to them.
Twenty-nine percent indicated that listening to music was
of great importance to them.

A comparison of the scaled responses for before hearing loss
and after hearing loss and aid use revealed a statistically
significant difference between the means, response, support-
in a significant reduction in music listening with hearing aid
use. Similar differences were found for items examining the
enjoyment of music. A statistically significant reduction in the
enjoyment of music with aid use was found compared to
enjoyment prior to loss of hearing. Furthermore, 56% of the
subjects reported that the loss of enjoyment as at least
moderate importance; 15% indicated that the loss was of
great importance.

The questions asked to the degree to which hearing aid
users assisted the enjoyment of music in comparison to not
wearing aid. Sixty percent of the subjects reported
receiving aid at least moderate help, and 15% indicated that
the aid helped greatly.

Additional information derived from the survey indicated
that those respondents who were binaural amplification
reported receiving a greater degree of assistance from ampli-
edness in their enjoyment of music compared to those
who were one aid. Also, those who had used aids longer indicated
attaining more help from their aids in listening to music.
Finally, those respondents who indicated receiving the most
help in listening to music also indicated a greater degree of
overall satisfaction with their hearing aids.

Please send any correspondence regarding the paper to:
J. Richard Franks, Ph.D.
Daginy Hall
Washington State University
Pullman, WA 99164

THE ACOUSTICS OF IN-PLACE EAR HEARING AIDS
John A. Franks
Northern Illinois University

The audiologist who recommends ITE hearing aid for his
her client typically places the responsibility for selection of the
amplification parameters upon the manufacturer. In most
cases, unless an ITE oriented music listening aid is used, the
audiologist will provide the ITE manufacturer with an audi-
ogram that indicates the lower limits of sensitivity and the
upper boundaries of tolerance for the client. The manufac-
turer then evaluates the supplied information and selects the
electronic components and housing style to be supplied with
the hearing aid. The success of the fitting of the instrument is
usually dependent upon the client's acceptance or rejection of it.

Some recent work with KEMAR has provided a data set
which should make the task of determination of amplification
parameters easier for the ITE hearing aid manufacturer.
This work has been oriented towards establishing the dif-
ferences in sound pressure levels created by earphones and
canal placed hearing aid receivers. 21 tabulated to establish the
characteristics of ITE hearing aids, 3 establishing the effects
of venting ITE hearing aid cases on receiver frequency
response, and 4 in establishing the effects of these vents on the
signals incident upon the hearing aid case.

The sound field work has been conducted in a diffuse, rather
than an anechoic sound field. The diffuse sound field provides
a field-to-head acoustic transfer function which is equivalent
to the average of all such functions for many angles of signal
incidence in the anechoic sound field. Thus the response of a
hearing aid measured in the diffuse sound field is independent
of the effect of angle of signal incidence.

The data which will be presented will show the difference
between the effects of venting ITE hearing aid cases and
traditional earmolds, both on the signals provided by the
receiver and incident upon the hearing aid case. The differ-
ences between frequency response as measured in 8-couplers
and the ear of KEMAR will also be shown for dif-
ferent types of hearing aid receivers used in ITE hearing aids.

COMMUNICATIVE DISABILITY ASSESSMENT USING AN
ARTICULATION INDEX PROCEDURE

Chasal Pavlovich
University of Mississippi, Jackson

The Articulation Index Theory (French and Steinberg, 1947)
postulates that speech intelligibility is uniquely related to a
quantity called "articulation index", which for a specific
type of normal hearing, speaker-listener pair, can be computed
from the intonations of speech and matching noise reaching the
ear of the listener. To test the applicability of the theory to
communicative disability assessment when hearing loss is
moderated to a constant internal noise, the PB-word discrimination scores
for different filtering and noise conditions (Table 1) were
obtained for normal hearing, lesser hearing impaired and
greater hearing impaired subjects. Mean thresholds for each
group are shown in Figure 1. Figures 2, 3 and 4 depict the
predicted (solid lines) and the mean observed discrimination scores
for all three groups. Clearly, AI was a good predictor
for normal and lesser hearing impaired group, but subjects
from the greater hearing impaired group exhibited a dispro-
portionate loss in speech discrimination scores.

As the reduction in the AI did not prove to be a good descrip-
tor of the effective reduction in the auditory area needed for
speech perception, an attempt was made to calculate this
reduction R from the observed speech discrimination scores
Further, R was correlated with two different measures of
social handicap (Noble and Aherley, 1956). The measure scale
1956; and the subject's direct magnitude estimate of the
handicap). Results, which are given in Table 2, when analyzed
reveal that: (1) Whichever functional relationship (linear
logarithmic or power) was supposed to exist between R and
subjective measure, a statistically significant correlation
was obtained (p < 0.05). (2) The difference between correlation
coefficients for different functional relationships was not
significant. This indicates that auditory handicap is a composite
variable continuous with both psychometric and metrical
components; (3) The magnitude of the correlation is not high but it is
concluded that the method is worth further investigation.

References
French, N.B. and Steinberg, J.C.: Factors governing the
intelligibility of speech sounds. J. Acoust. Soc. Am. 19:
Noble, W.G. and Aherley, G.R.C.: The hearing measure
scale. A questionnaire for the assessment of auditory dis-

SPEECH DISCRIMINATION TASKS

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SPEECH DISCRIMINATION TASKS

(continued on p. 11)
A COMPARATIVE PERFORMANCE STUDY OF THE LIBBY HORN VERSUS STANDARD #13 TUNING

Florence Davespert
Margaret A. Wykle

Recent studies of coupler (earmodel) modifications in hearing aids have shown that one piece tubing with a tapered internal diameter, called the Libby horn, can smooth and extend the high frequency response of a hearing aid compared to the frequency response of the same hearing aid coupled to standard #13 tubing.

Although investigators have reported the superiority of the Libby horn based on tympanometric gain measurements and clinical observations (Libby, 1981; Mueller, et al., 1981) there has been little reported clinical data supporting the subjective preference of the Libby horn over standard #13 tubing (Mueller, et al., 1981).

The purpose of this study was to determine whether normal hearing subjects and three groups of sensorineural hearing impaired subjects could discern qualitative differences between the acoustic output of their hearing aids delivered to their ears through the Libby horn inserted in a Killion #14 earmold compared to #13 standards tubing inserted in the same earmold.

Forty subjects, 10 normal hearing, 10 with flat sensorineural hearing loss, 10 with a sloping (12.5 dB or 25 dB) sensorineural hearing loss, and 10 with normal hearing through 1000 Hz and a severe high frequency hearing loss were included in the study. The quality of sound produced by the hearing aid coupled with the Libby horn and with the #13 tubing was rated by each subject on 9 adjective scales (Gabrielsson, et al., 1980) while listening to taped programs.

The 72 experimental conditions (2 couplers x 4 programs x 9 adjective scales) were counterbalanced across subjects. The programs, presented at 65 dB SPL, through a loudspeaker in a sound-treated room were music, continuous discourse, continuous discourse with a competition of multi-talker speech bubble at a -10 dB signal-to-noise ratio, and a conversational scene between two speakers.

A ROC curve was constructed using data from the normal hearing subjects. The hearing impaired subjects used their own hearing aid.

The functional gain was measured (Fawcett, 1975) for each subject both with the Libby horn and with the #13 tubing.

The functional gain demonstrated a slight, but significant (.05) improvement in the Libby horn. The results of the qualitative judgements were equivocal, some more coupler-balanced subjects preferred the Libby horn while others suggested better quality from the #13 tubing.

REFERENCES


HEARING AID FITTINGS IN UNILATERAL LOSS WITH POOR SPEECH DISCRIMINATION

John R. Coleman, Otologic Medical Group, Inc.

A widely held assumption among persons involved in the fitting of hearing aids is that ears with unilateral reduced discrimination (i.e. lower than 90 for 80 dB for Ph) cannot benefit at all from the use of hearing aids. The concept of the “unilaterally impaired ear” and the amplification of distorted speech (as measured at 0 dB Ph) will also not benefit the contralateral ear.

This assumption has not been consistent with our clinical experience. We believe that even when the successful fitting of patients with this type of hearing problem does require some special attention to certain characteristics of the loss during the evaluation in order to achieve satisfactory hearing aid use, but should not be ruled out as “unfittable.”

Eight satisfied monaural hearing aid users were evaluated. Each subject has unilateral hearing loss, with reduced speech discrimination in the aided ear. The average age of this group was 58 ears, with etiologies including Meniere’s, hereditary, noise, sudden, vascular, and cause unknown. The better ear in this group had an average SRT of 15 with 92% speech discrimination.

The group’s poor ear had an average SRT of 75 dB with 92% discrimination score. The average length of bilateral hearing aid use was approximately three ears, with a range of 3 months to 6 ears. Two subjects had initial worn a CROS arrangement routed to the better ear, before trying the hearing aid on the poor discrimination ear that now prefers.

A fundamental issue to deal with the reduced discrimination problem is whether single-word Ph scores are valid as an indicator of the usefulness of amplification in an impaired ear. Despite the fact that the group had 92% Ph discrimination, their discrimination of monosyllabic words at the same level was slightly lower. A significant portion when listening to speech was observed to be the patient, characterized by “low pitched” or “high pitched”.

Also, the dichotic (audited and non-audited) scores of the hearing impaired ears in amplified speech use to compression output limit and variable frequency response were important to comfortable hearing aid usage.

An extensive review of literature has revealed no substantive data or research indicating that unilateral reduced speech discrimination (via Ph scores) will have deleterious effects on speech understanding in the bilateral mode.

Theoretical work on increased frequency resolution as a function of hearing loss has not been shown to be detrimental. Thus, the presence of a hearing loss has not been shown to be detrimental. Thus, the presence of a hearing loss has not been shown to be detrimental.

For the patient interested in maximizing speech Understanding in the bilateral mode it is important to remember to use a hearing aid that is comfortable for the patient.

APPLICATION OF SILMAN AND GELFAND 90TH PERCENTILE LIMITS TO ACOUSTIC REFLEX THRESHOLDS

Wayne O. Olson, Christopher D. Bauch, Stephen G. Harner
Mayo Clinic, Rochester, Minnesota

Silman and Gelfand (1984) reported acoustic reflex threshold data for a large sample of patients having hearing level attributable to cochlear pathology. Included in their publication were 90th percentile limits to establish upper limits for reflex thresholds of hearing impaired subjects evaluated with the reports from the subjects evaluated in this group.

It is not the intention of this report to generalize that all patients with meniscal hearing loss and reduced speech discrimination should wear an aid on the affected ear. The purpose of this report is to present data for a more specific group of patients with surgically confirmed cholesteatomas.

Subjects were 30 patients with surgically confirmed cholesteatomas; 13 men and 17 women. All ears were viewed for 30 patients with similar hearing losses not attributable to cerebrovascular disease.

Acoustic reflex thresholds were obtained with an Amplaid Model 702 immittance unit. Responses were monitored on a strip chart recorder.

Results were interpreted as abnormal for 25 (83.3%) of the tumor patients and for 1 (2.5%) of the non-tumor patients. The non-tumor patient's abnormal reflexes had an elevated reflex threshold at 2000 Hz.

These results suggest that the upper limits for reflex thresholds as a function of hearing loss recommended by Silman and Gelfand are appropriate, at least as applied to these two samples of patients. Reflex decay was also measured for these patients. Implications of the reflex threshold and reflex decay results will be discussed.

COMPARISON BETWEEN AER AND BEHAVIORAL THRESHOLDS IN NORMALLY AND ABNORMALLY HEARING CHOLESTEATOMAS

Robert I. Davis, John A. Ferrara

Present is a lack of agreement in the literature regarding use of a specific electrophysiological response that corresponds in order of magnitude and stability to the determined response from experimental animals. Evidence from Henderson, et al. (1973) has shown that the auditory evoked response (AER) reflects the integrity of the cochlea. The tympanic membrane may be a valid indicator of hearing sensitivity in normally hearing cholesteatomas. For practical application as a research tool, however, correspondence between responses may also be demonstrated in abnormally hearing populations. The present study was designed to compare AER and behavioral thresholds from the cholesteatoma before and after antibiotic treatment. A demonstration of correspondence between thresholds would provide support for the application of the AER technique as an alternative method for determining and time consuming procedures associated with behavioral testing.

Bipolar electrodes were chronically implanted in the IC of seven behaviorally Conditioned cholesteatomas. AER and behavioral thresholds to 20 ms. tone bursts were determined for a range of frequencies before and after a 4 hour exposure to a 2000 Hz, 125 dB SPL, pure tone for six of the animals. One subject served as a control and received no exposure. The results revealed a close correspondence between AER and behavioral thresholds in both the normal and abnormal ears.

(Cont. on p. 12)
Abstracts
(continued from p. 11)
ear of the same animal. In almost all subjects, the greatest difference between mean thresholds at one frequency did not exceed 30 dB above the normal hearing threshold in the 1 kHz to 4 kHz range.
Our findings further develop this particular characteristic. ABR audiograms obtained in the chinchillas, in particular, the conclusion of the technique should be explored in papers with cochlear pathologies in relation to those observed in the chinchillas.
(Supported in part by a grant from the Ohio State University Graduate School.)

VALIDITY OF NEWBORN HEARING SCREENING PROGRAMS:
AN AUDITORY BRAINSTEM RESPONSE EVALUATION
John T. Jackson, Ph.D.
School of Human Communication Disorders
Dalhousie University

Introduction:
Recognizing the need for the early identification of hearing impairment, the National Joint Committee on Infant Hearing (1972) recommended the use of high-risk (HR) and behavioral audiological follow-up for infants at risk. Although audiometry and screen techniques have been developed and modified, improved, and currently have been accelerated to accommodate the validity of behavioral newborn screening. Since recent advancements in electrophysiological measurement, recommendations have been made that augment behavioral audiometry (ABR) audiometry as a supplement to newborn screening. The purpose of this paper is to report the results of a newborn hearing screening program implementing an ABR hearing screening protocol in three categories: (1) at risk for hearing loss; (2) those admitted to the intensive care nursery (ICN); and (3) a normal control group. Based on the results of the ABR and a behavioral test protocol, ABR audiometry was completed on 350 newborns. Acoustic clicks were presented monaurally to each ear at intensities of 60 dB and 30 dB. All ABR screening protocols were considered the absence or prolongation of latency of a Wave V response.

Results/Discussion
Discussion will include the incidence and pass-fail results of the 3 stage screening program. Of the 246 infants tested, 6 percent of those classified as “high-risk” for hearing loss were shown to have either unilateral or bilateral sensorineural hearing impairment. Emphasis will be placed on the large percentage of behavioral false-positives and the validation of newborn behavioral screening as demonstrated by ABR audiometry. Infants with normal audiograms were classified into three categories: (1) at risk for hearing loss; (2) those admitted to the intensive care nursery (ICN); and (3) a normal control group. Based on the results of the ABR and a behavioral test protocol, ABR audiometry was completed on 350 newborns. Acoustic clicks were presented monaurally to each ear at intensities of 60 dB and 30 dB. All ABR screening protocols were considered the absence or prolongation of latency of a Wave V response.

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The Speakers

Florence Davenport Mike Seldeen
Charlie Anderson Robert Davis
Susan Jerger James Peck
Liane Gilbert Brian Forquer
John Jacobson Christopher Bauch
Ross Roesser John Coleman
Merle Lawrence Ralph Naunton
Chaslop Pavlovich Frank Musiek
Peter Alberti Hiroshi Shimizu
Maxwell Abramson LaVonne Berghstran

Officers Elected at First Meeting of AAO-HNS Board of Governors

The American Academy of Otolaryngology-Head and Neck Surgery’s newly created Board of Governors held its first meeting on October 17 in New Orleans. The function of this group is to provide communications between the Academy’s Board of Directors and the membership through the approximately 130 local, state, regional, national and international otolaryngological societies. Each society has one delegate plus an alternate who serves a three year term which is renewable one time. It is anticipated that the Board of Governors will meet twice a year in conjunction with the national spring and fall meetings.

Dr. Marvin A. Singleton was elected Chairman of the Board of Governors. He is in the private practice of general otolaryngology and related allergies in Jackson, Mississippi. Dr. Singleton is a Counselor for the Mississippi State Medical Association and past President of the Mississippi ENT Society. He will be an invited guest at the AAO-HNS Board of Directors meetings.

According to Dr. Singleton, “the Board of Governors will be the conduit for information from the grass roots of organized otolaryngology to the Board of Directors of the Academy. This process will make the Academy leadership more responsive to the socioeconomic and political problems of the general membership. The Board of Governors will also request residents training in otolaryngology and the general good of the patients of our members. It can help the Academy become a more dynamic and democratic medical organization if the societies present their issues well in advance of the meetings.”

Willard Fee, Jr., M.D. was elected Chairman-Elect. Dr. Fee is Chairman of the Division of Otolaryngology-Head and Neck Surgery at Stanford University School of Medicine in Palo Alto, California.

Robert J. Keim, M.D. of Oklahoma City was elected Secretary. Dr. Keim is in private practice and is the current Secretary at the American Neurology Society.

The predecessor Academy merged with the American Council of Otolaryngology — Head and Neck Surgery on January 1 of this year. The new Academy, whose officers are in Washington, D.C., has more than 7,000 members. According to Executive Vice President Barry W. McCurdy, M.D., “the Board of Governors has the potential to be the most important addition to result from the merger.”

I/INCE Requests

The International Institute of Noise Control Engineering (I/INCE) was founded in 1974 as an organization dedicated to the application of noise control technology for the benefit of the public. It provides leadership through the organization of international conferences and seminars on noise control engineering, especially the INTERNOISE series of conferences. I/INCE also aims to develop interdisciplinary contacts between Noise Control Engineering and other related fields of work, and provides international cooperation in research on noise control. I/INCE has twenty member societies in seventeen countries spread over five continents.

As part of its responsibility to promote cooperation in research, I/INCE publishes a newsletter which contains news items of international interest. One of the objectives of the newsletter is to publish a survey of research in noise control in progress in laboratories throughout the world. These items will appear in a “Research” column of the newsletter. Individuals working in noise control research are encouraged to send such news items to the newsletter. It is not necessary to provide details of the results of the research; the scope and subject matter are sufficient. Information should be sent to Dr. A. Cope, Editor, I/INCE Newsletter, Calesthenian 2003, 8-890 Beverly, Belgium. Information on other I/INCE activities may be obtained from the I/INCE General Secretariat at the same address.
AAS Members Enjoy Old Mississippi...
...And Dine In Style At Arnaud's

Pictures by Bill Carver
More AAS Fun In New Orleans

TEDER ELECTED CHAIRMAN OF HIA STANDARDS AND TECHNICAL COMMITTEE

On September 13, during a meeting in Washington, D.C., members of the HIA Standards and Technical Committee elected Harry Teder their chairman. The committee had convened for the purpose of this election and to review results of efforts thus far on the hearing aid/telephone compatibility standard. Mr. Teder recently testified regarding that standard before the Senate Communication Subcommittee on behalf of the HIA.

Mr. Teder is the Chief Engineer, Hearing Instruments, at Telex Communications, Inc., Minneapolis, Minn. He is a graduate of Dartmouth College and has been with Telex since 1963. Mr. Teder has been a member of the HIA Standards and Technical Committee for many years; since 1960, and is also a member of ANSI working groups SI-46 (Hearing Aids) and SI-69 (Auditory Trainers). He is a member of the Audio Engineering Society and the Upper Midwest Chapter of the Acoustical Society of America.

ADVANCED ABR WORKSHOP
March 25-27, 1983

The Kresco Hearing Research Laboratory of the South, part of LSU Medical Center's Department of Otorhinolaryngology, New Orleans, Louisiana, is offering an Advanced ABR Workshop especially tailored to people experienced in auditory brainstem applications. The course will be held March 25-27, 1982. The course will feature case reviews and participants will be encouraged to bring their difficult cases. Special attention will be given to ipsilateral to contralateral recording techniques, normal variability, binaural interaction studies, simultaneous masking studies, visual and somato-sensory potentials, and an opportunity for equipment updates. Attention will be given to storage, recall, and data handling techniques for certain kinds of computer configurations.

Tuition will be $200 for new attendees, $50 for previous attendees of a Kresco course. The tuition includes, in addition to the educational opportunity, reduced hotel rates, free evening jazz party featuring outstanding New Orleans musicians and hors d'oeuvres, free coffee and refreshments throughout the course.

Free transportation to and from the airport and between the hotel and course location may be available courtesy of the Eye and Ear Institute. The course is co-sponsored by the Lions Eye Foundation, the Eye and Ear Institute of Louisiana and LSU Office of Continuing Medical Education. For further details write to: Advanced ABR Workshop Coordinator, Kresco Hearing Research Laboratory of the South, 1180 Florida Ave., New Orleans, LA 70119.

Ear and Hearing Goes to Soviets

Editor's Note: Ress Rouxer, Editor-In-Chief of Ear and Hearing, received this letter from The State Central Scientific Medical Library, Minsk, USSR.

Dear Dr. Rouxer,

We should be most obliged if you could send us on a regular exchange basis your periodical "Ear and Hearing", which is of great interest to our specialists in this field of medicine.

We could offer you in exchange our medical journals (up to two titles) from the list attached to this letter.

Please note that almost all of them are supplied with English summaries of the original papers.

Looking forward to your early reply. Sincerely yours,

N.A. Yakunin
Director
Cand. med. sci.

It is a comforting thought to think that, in the midst of all the nuclear arms controversy, our profession maintains an exchange of knowledge.

CHANGE OF ADDRESS?
Notify the Home Office
AMERICAN AUDITORY SOCIETY
1966 Inwood Road
Dallas, TX 75235
Beltone Begins Search

Beltone Electronics Corporation President Lawrence M. Ponzi today announced the creation of a search for a candidate to be the new director of the American Audiology Foundation, Inc. (AAF), a new position that will be filled by the winner of the Beltone Distinguished Teaching Award in Audiology.

The winner is chosen by a panel of judges from a pool of nominations. The panel includes representatives from the American Academy of Audiology, the American Audiology Foundation, Inc., and the American Audiology Association.

The winner will be announced at the AAF Annual Meeting, which will be held in November 1983.

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J.D. Harris to Address 1983 AAS Convention

J. D. Harris will be the keynote speaker at the AAS convention in Cincinnati. (Further information will appear in the pre-convention issue of Corti's Organ.)

It has been announced that J. D. Harris will be this year's keynote speaker at the 1983 AAS convention in Cincinnati. (Further information will appear in the pre-convention issue of Corti's Organ.)

1983 Membership Directory

In This Issue Begins Page 7

Vol. 8, No. 2  Spring 1983

CORTI'S ORGAN

The Official House Organ of the American Auditory Society

Meet the Candidates for the AAS Executive Committee

Plan Ahead!
AAS Annual Meeting
November 17, 1983

History of The AAO-HNS, Inc.

The Western Ophthalmological, Otolaryngological, and Rhinological Association was founded in 1896 in Kansas City, Missouri. This first meeting of about 50 eye, ear, nose, and throat specialists eventually blossomed into the American Academy of Ophthalmology and Otolaryngology.

The purpose of the organization was to encourage the study of ophthalmology and otolaryngology. Separate medical associations were established. In 1924 the American Board of Ophthalmology and in 1925 the American Board of Otolaryngology were created.


On January 1, 1982, the new organization was unified, united as the American Academy of Ophthalmology and Otolaryngology, Head and Neck Surgery. The new group was formed by the merger of the two predecessor organizations.

The AAO-HNS, Inc., is the nation's leading organization dedicated to improving the health of the nation's ears, noses, and throats. It is the preeminent authority and advocate for the prevention, treatment, and cure of diseases and disorders of the ear, nose, throat, and related structures.
Lorne Greene Leads Better Hearing and Speech Campaign

The 1983 Better Hearing and Speech campaign will be launched April 29 in Washington, D.C. Actor Lorne Greene will release a special message from President Reagan to introduce poster child Brooke Broberg, and begin a series of national media appearances.

Mr. Greene is well-known for his leading roles in the TV series Bonanza, Battletatler Galactica, and Code Red. In 1982, he filmed a public service announcement for the Academy and the Better Hearing Institute. Mr. Greene explained how he overcame his own hearing loss with hearing aids and encouraged others with hearing problems to get help medically, surgically, with hearing aids or through rehabilitation.

This year's poster child, four-year-old Brooke Broberg of Shawnee, Kansas, was selected from more than 100 nationwide nominees. She receives speech and language therapy at the Communicative Disorders Department of the Research Medical Center in Kansas City, Mo. Her articulation disorder is characterized by omissions, substitutions, and distortions of many sounds.

"Sharing Life Through Hearing & Speech" is the theme of this year's campaign. The slogan will be used in the Better Hearing & Speech poster, TV and magazine public service announcements and other publicity. The Better Hearing & Speech public information campaign is jointly sponsored by a consortium of the major national organizations concerned with communicative disorders.

1983 Audiology Teleconference Series

"Components of an Industrial Hearing Conservation Program"
Speaker: Alan Feldman, Ph.D.
Date: April 19, 1983
Time: 12:00 P.M. Eastern Time

"Evaluation of Central Auditory Disorders"
Speaker: James Jerger, Ph.D.
Date: August 16, 1983
Time: 12:00 P.M. Eastern Time

Captured Television, U.S.A.

In March, 1980, the U.S. National Captioning Institute (NCI) was created to assist the television networks in making their programming accessible to the estimated 16 million Americans with significant hearing loss. The four major networks (ABC, NBC, CBS, and PBS) began cooperating in the captioning selected programs now totalling near 40 shows a week.

The system used is closed captioning which means that text can only be seen with the use of a special decoder, the decoder is sold around $300. Approximately 50,000 sets of the special decoders have been purchased.

Details are available from NCI, Suite 1500, 2001 Eye Street, N.W. Washington, D.C. 20006.

What is the Institute of Noise Control Engineering of the U.S. (INCE/USA)?

The Institute of Noise Control Engineering of the United States of America (INCE/USA) is a nonprofit professional organization that was founded in 1971.

The purpose of INCE/USA is to assist in the development and application of noise control technology. The objectives of the Institute include developing professional qualifications for noise control engineers, establishing an effective and continuing mechanism for exchanging information on the technology of noise control engineering, and stimulating development of education in noise control.

The notation "Member INCE" after an individual's name may be used to designate that an individual is a member of the Institute and has met specific professional qualifications in terms of both experience and an examination in noise control engineering. Individuals interested in noise control engineering may also join the Institute as Associates or Affiliates. Organizations contribute to the activities of the Institute through a Liaison Program.

The Institute is governed by a Board of Directors elected by the members. The officers are appointed by the Board and the principal officer is the President of the Institute. All officers serve without financial compensation; there is no paid staff.
Meet The Candidates for the AAS Executive Committee Election

In July of this year an election will be held to replace seven members of the Executive Committee of the American Auditory Society. In this issue of a copy of the organization's newsletter, we have asked each candidate nominated for the office to provide the membership of the Society with some basic biographical information, and to provide their thoughts regarding the future direction of the Society (a membership ballot will be mailed to you soon.)

Franklin Owen Black, M.D., F.A.C.S., Chief, Neuro-Otology Neurological Sciences Center, Senior Scientist, Neurological Sciences Institute, Good Samaritan Hospital and Medical Center, 1015 NW 22nd Avenue, Portland, OR 97210, 503-229-8128. B.S., Chemistry, Southeast Missouri State, Cape Girardeau, Missouri, M.D., University of Missouri, Columbia, Missouri, 1982.

The membership of the American Auditory Society comprises the largest cross-section of professionals in the United States who perform research, and provide service and health-care delivery to the hearing-impaired and communicatively impaired. The Society provides a formal and informal forum for communication between professionals from very different backgrounds and perspectives. The organization of the American Auditory Society, for the purpose of communication, has been a great success. It has provided a forum for the exchange of ideas and the sharing of knowledge. The Society has also served as a vehicle for the dissemination of information. The Society is now in its sixth year of operation.

Terry Griffling, B.S. Univ. of Oklahoma 1956, MS Gallaudet 1959, President of Otom Hearing Systems, 2329 Lawnd Rd. Dallas, Texas 75225.

First, let me say the Society to its structure, professional discipline, publications and programs offers so much that it continues to amaze me why there is not a "ground swell" of new members. The Society Beyond a doubt is the viable professional organization in the field.


Deborah Hayes, Ph. D., B. S., and M.A., Northwestern University Evanston, Illinois 1971, 1972, Ph. D. Baylor College of Medicine Houston, Texas 1979, Assistant Professor, Baylor College of Medicine Houston, Texas Supervisor, Audology Service The Methodist Hospital Houston, Texas, Department of Otosclerosis Baylor College of Medicine 1206 Moursound Avenue Houston, Texas 77030.

As the sole National society devoted exclusively to hearing, the American Auditory Society permits an unique forum for interaction among professionals with diverse backgrounds and expertise. In this time of increasing professional isolationism, the Society can provide important bridges of communication among those various disciplines which have a common interest in hearing. The future growth and development of the Society will depend, in great degree, on its ability to encourage and promote open dialogue among its members on issues of professional controversy. The American Auditory Society can provide mechanisms not only for dissemination of scientific information, but also for discussion of basic issues impacting on our daily professional activities.


Insofar as the rehabilitation of hearing is concerned, knowledge in related areas of science, engineering, acoustics, medicine is growing rapidly, so much so that not all of it finds immediate application. As a consequence, we still make use of systems that are probably no longer defensible. The measurement of the function of hearing leading to hearing aid selection is probably the best (and most unfortunate) example.

One of the roles of the Society should be to capitalize on the vast resources of knowledge and skills inherent in its membership to bring about an improvement in the systems presently used to alleviate hearing handicaps among those that, insufficient, constitute our "raison d'etre." Fred M. Hughes, M.S.


During the 1963 convention of the American Speech and Hearing Assoc. in Chicago, I had the opportunity to spend an evening with several prominent audiologist of that time. The primary topic of conversation concerned the apparent need for a professional organization devoted entirely to the ear and hearing. This organization would include members from these disciplines: Otologygry, Audiology, and the Hearing Aid Industry. The concept became reality with the formation of the American Auditory Society. The need for this multi-disciplinary organization became even more evident during the Hearings conducted by the Food and Drug Administration and the Federal Trade Commission. The natural tendency for each discipline to protect their "territory" resulted in considerable conflict between members of the three groups. The opportunity for members of the three disciplines to converse and discuss common problems has significantly improved the relationships for the individual members of this organization. It also provides an important vehicle for disseminating current information regarding hearing health care to its membership.

Do not hallucinate.

E. Robert Libbey, O.D., Graduate Pennsylvania State College of Optometry 1961 with degree of Doctor of Optometry, President Associated Hearing Instruments, Upper Darby, Pa. Associated Professor, Department of Speech and
include more basic science papers, and the attendance at the annual meeting is increasing. In all areas the AAS is becoming more important. To maintain this trend it is important for the AAS to maintain flexibility in its organizational structure and thus allow for the changing needs of a society which is growing and administration hope to remain accessible to its membership.


As a practicing otologist I recognize the acute need for a multiple disciplinary approach to problems of hearing, hearing preservation, and the rehabilitation and habilitation of hearing impaired individuals. It is extremely gratifying to observe the tremendous refinement in diagnostic techniques and the advances in the medical and surgical treatment of hearing loss. However, there remains a large population who cannot be helped by means currently available in the otologist's armamentarium. On going research in closing this gap but more than ever before, if further progress is to be made, a free interchange of ideas between the various disciplines represented in the membership of the American Auditory Society must occur. I perceive the American Auditory Society as a key organization in insuring that this progress will continue.

Michael F. Steidmann, Ph.D., 1968 - Bachelor of Science - Old Dominion University Major: Psychology, 1969 - Master of Science - Old Dominion University Major: Psychology, 1972 - Doctor of Philosophy - Florida State University Major: Audiology, Professor of Audiology and Otoneurology, Department of Audiology and Speech Pathology LBU Medical Center 190 S. Derby Street New Orleans, LA 70112.

In a very brief period of time the American Auditory Society has achieved a leadership position among multidisciplinary specialty organizations. Such achievement can be directly attributed to quality leadership. I feel that such success cannot be maintained in the future and not altered. Audiologists, otologists, hearing aid specialists, and other allied professionals have needed a forum such as this which this group provides for many years. At the annual meetings, as well as in the Auditory Society's journals we have been able to set aside professional differences and exchange information and ideas for the benefit of the hearing impaired. I feel that the American Auditory Society in the future should continue along its present course, remain apolitical, and strive to encourage advancement in the medical, prosthetic and educational prevention and treatment of hearing loss.


The very structure of this voting system exemplifies the desire of the membership to maintain multidisciplinary affiliations. It is the only organization in the United States that promotes non-political interaction of professionals who come together to attend all aspects of auditon and provides an open forum for the dissemination of academic and non-academic information. The membership is growing, the journal is expanding to...
Jerome Goldstein, M.D.,

to join Academy Staff as EVP Designate

Dec. 27, 1982. The American Academy of Otolaryngology - Head and Neck Surgery, Inc. has announced that Jerome C. Goldstein, M.D. will join its staff Jan. 1, 1983 as Executive Vice President Designate. The current Executive Vice President, Harry W. McCurdy, M.D. plans to retire December 31, 1981.

Dr. Goldstein comes to the Academy with a broad background in otolaryngology. At Albany Medical College, his current position is Professor and Chair of the Division of Otolaryngology. Previously to that he was in private practice. He is also a Director of the American Board of Otolaryngology and a member of its Examination Committee.

Dr. Goldstein has served on the Academy's Committees on Drugs, Surgery of the Head and Neck, and Pathology as well as on the Continuing Education Course faculty. He served on the American Council of Otolaryngology's Board of Directors and was Chairman of its Professional Relations and Public Education Committee.

Dr. Goldstein is currently President of the American Society for Head and Neck Surgery. He is also a member of numerous national societies including the American College of Surgeons, the American Academy of Facial Plastic and Reconstructive Surgery, and the Triological Society.

Dr. Goldstein has been very active in county and state medical societies. He is the immediate past president of the Eastern New York Ophthalmology and Otolaryngology Society and served from 1975-81 as Secretary of the New York State Society of Otolaryngology - Head and Neck Surgery. Dr. Goldstein is currently on the Board of Northeastern New York Blue Shield. He is a member of the Executive Committee and New York State Chairman of the Centrations of the Deafness Research Foundation. He also serves on the editorial boards of several national medical publications: Annals of Otolaryngology, Archives of Otolaryngology, and Comprehensive Therapy.

The American Academy of Otolaryngology - Head and Neck Surgery, Inc. was established in Jan. 1982 as a result of the merger of the American Council of Otolaryngology - Head and Neck Surgery and the professor Academy. Unified, the new Academy comprises the largest scientific-educational society of otolaryngologists in the U.S. Located in Washington, D.C., it also represents otolaryngology - head and neck surgeons (formerly known as ear, nose and throat doctors) in governmental affairs.
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CHILDREN'S HOSPITAL OF PHILA.
125 S. 20TH ST.
PITTSBURGH PA 15213

John L. Blumers
6071 MADEIRA RD.
BALTIMORE MD 21202
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Convention Reminder

The 10th Annual Meeting of the American Auditory Society will be held in Cincinnati, Ohio on November 17, 1983, in the Convention Center, downtown Cincinnati. A block of rooms has been reserved in the nearby Netherland Plaza Hotel. A hotel reservation form is below. Please note that this year's meeting will be held the day before the Annual Convention of the American Speech-Language-Hearing Association. You are encouraged to make your hotel reservation early, and to note on the reservation form your final departure date.

This year's annual banquet will be held at Forest View Gardens, an authentic "gastehaus" in the tradition of Cincinnati's German heritage. With music provided by the singing waiters and waitresses from the University of Cincinnati college Conservatory of Music, this promises to be a very cordial evening.

RESERVATION REQUEST FORM FOR AMERICAN AUDITORY SOCIETY AT NETHERLAND PLAZA HOTEL

ARRIVAL DATE: ___________ TIME: ___________ *DEPARTURE DATE: ___________

Mail to:
NETHERLAND PLAZA
Reservation Department
25 West Fifth
Cincinnati, OH 45202

TYPE OF ROOM:
Single at $50 per night
Double (2 persons, one bed) at $70 per night
Twin (2 persons, 2 beds) at $70 per night

LAST NAME: __________________ FIRST NAME: __________________

COMPANY NAME: __________________

ADDRESS: __________________

CITY: __________________ STATE: __________________ ZIP CODE: __________________

Rooms are held until 6:00 p.m. unless later time of arrival indicated. Your reservation can be guaranteed by a major credit card and your authorization to bill you for the first night if you should not arrive. Cancellations are accepted until 6:00 p.m. on the day of your arrival.

CREDIT CARD COMPANY: __________________ NUMBER: __________________

SIGNATURE: __________________ EXPIRATION DATE: __________________

NOTE: Regular check-in time is 3:00 P.M.

*If you plan to stay through ASHA, please indicate your final departure date. Reservations to the AAS meeting are required to be made before November 1, 1983.
Program Committee Outlines Outstanding Program - Harris Titles Talk

DALLAS, TX AUGUST 23, 1983. The 1983 program committee, chaired by Dr. Robert W. Keith, met in Cincinnati on August 5th and reviewed the many submitted papers to finalize this year's program. Over 35 papers were received, making it one of the most successful calls for papers in the 10 years that HAS has been in existence. The final program is published in this issue of Corti's Organ on page 3, and abstracts of the papers begin on page 4. Keith and the other members of the program committee were able to attend the meeting, Dr. Robert Glazer and Kenneth Donnelly, all agreed that this year's selection of papers was very high in quality and making the final selection was no easy task.

A special event during the meeting will be the presentation of the Belrose Distinguished Teaching Award (see details this page). Also, after the meeting those interested can join in on the festivities at the Forest View Gardens where there will be an evening of sumptuous dining and lively entertainment. Traceostics, Inc. has agreed to provide transportation of HAS members and others attending the meeting from the convention center to this landmark restaurant in the old portion of Cincinnati.

Dr. J. Donald Harris is this year's Carhart Memorial Speaker and will address the society on the topic "The World of Hypoacusis." In traditional style Dr. Harris, when writing to give the title of his talk stated, "Many writers and editors use 'hypoacusis' but it lately seems to me to be an ambiguous union also for 'hyperacusis'. Also, I don't hesitate to turn an adjective into a noun. A more conventional reading might be 'the World of Hypoacusis'. But I prefer the more personal tone as the title I chose: "These of us who know Dr. Harris are amiable awaiting his stimulating discussion on this topic.

This year will be the best meeting yet, and it is hoped that each and every one of the HAS members will be able to join the group for the excellent papers, renewal of old acquaintances, and evening festivities.

And The Winner Is ...

Bellrose Electronics Corporation will name the winner of the second annual Bellrose Distinguished Teaching Award in Audiology at the AAS Convention in Cincinnati, November 17. Mr. Charlie Anderson, president of AAS, extended the invitation to Belrose President Lawrence M. Pozen, recognizing the AAS goal of bringing together all facets of the hearing health care team, including audiologists, physicians, dispensers, educators, students and manufacturers. The AAS Convention will be held at the downtown Cincinnati Convention Center, in conjunction with the annual Convention of the American Speech-Language-Hearing Association.

Pozen accepted the invitation on behalf of Belrose and commended the American Auditory Society for their goal of increasing the knowledge of human hearing, promoting conservation of hearing, and fostering habilitation and rehabilitation of the hearing impaired.

The Bellrose Distinguished Teaching Award in Audiology is given annually by Bellrose as an outstanding audiology instructor in the United States or Canada. Candidates are nominated by an auditorily student or graduate. The intent of the award is to honor the teaching profession for the vital role it plays in shaping the future of the field of hearing technology for the hearing impaired.

Twenty-eight instructors are competing for this year's award. A monetary gift of ten thousand dollars is awarded to the winner's school goes with it, as well as the opportunity for the winner to present his or her auditorially research papers before a variety of professional forums. Judges in the competition are prominent educators and other professionals from the field of audiology.

Reger To Be Honored By Symposium

A symposium to honor the memory of Scott N. Reger will be held at the University of Iowa from April 12-14 1984. The symposium will focus on "Sensorineural Hearing Loss: Mechanisms, Diagnosis and Treatment," and will be sponsored jointly by the Department of Otalaryngology-Head and Neck Surgery and the Department of Speech Pathology and Audiology. The program will be directed by Arnold M. Small, Jr., Ph.D., M. Jane Collins, Ph.D., and Lee Harker, M.D., and will include approximately 20 guest speakers. Issues to be addressed include those in both the basic sciences and clinical management. Further information may be obtained by contacting M. Jane Collins, Ph.D., Wendell Johnson Speech and Hearing Center, University of Iowa, Iowa City, Iowa 52242.

Dr. Reger was a past member of AAS and a Carhart Memorial Award Winner.

1983 Convention Registration Form pg. 8

Gunnar Liden
Letter From England

Dear Editor,

The recent splendid issue of Corti's Organ has reminded me of the pleasures of attending a scientific meeting in the USA. It has provided some striking evidence of the progress of audiological research to which you and your colleagues have made many valuable contributions.

I have noted with particular interest the abstracts of papers with a strong pathobiological bias. With reference to Dr. Altmann's valuable studies on cholesteatoma two papers from London on this important topic might be of interest to your readers. Drs. Wells and Michael from my old department described the histopathological features in retraction pockets and Dr. Brookes from Dr. Morrison's department at the London Hospital have three papers on post-traumatic cholesteatoma. These papers published in Clinical Otorhinolaryngology and further support, if such is needed, to the immigration or implantation theory in the growth of cholesteatoma.

The other abstract that has attracted my attention was Dr. Deck's report on hearing problems of children with only 1 ky.

In my last letter I have noted that the Journal of Laryngology will be appearing in an attractive new format. This has been well received, especially in regard to the possibilities of being able to read a good deal of it without having to hold it in your hand. Even so, I must admit that my eye is already on the possibilities of the transformation of otorhinolaryngology in the last thirty years. Who would have expected in 1984 that a conference on Otorhinolaryngology would be a successful enterprise? I should have thought that it would be more popular than it is. In my opinion, the future lies in the direction of otorhinolaryngology.

I. Friedmann

Seventh Shambaugh/Shea International Workshop on Otolgy

MARCH 14, 1984

SPONSORED BY THE NATIONAL HEARING ASSOCIATION

Oak Brook, IL

An outstanding faculty of world-renowned experts in Ear, Nose, and Throat surgery and neuro-otology, and many other specialists will present this workshop series. Emphasis will be placed on new and current medical techniques in the field of hearing. Optional evening programs have been arranged for review of medical/surgical controversies. The workshop will be held at the Oak Brook Marriott Hotel. CME accreditation will be extended to those in attendance at the Workshop.

To apply contact:
National Hearing Association
1010 Jorie Blvd. Suite #306
Oak Brook, IL 60521

BERGER PERSPECTION

Method Materials

Several new materials are now available to assist clinicians in using the Berger Hearing Aid Prescription Method.

AUDIO CASSETTE. The method is described on three-minute audio cassettes. The procedures are presented in detail on the cassette, and the materials are designed for individual study or class use. The cassettes are available for one week for a small rental fee.

WRITING AND DRAWING PROGRAM. Dr. Robert Berger will write two programs for personal computers with Berger Prescription in mind. The programs are available on cassette tapes.

The procedures are presented in detail on the cassette, and the materials are designed for individual study or class use. The cassettes are available for one week for a small rental fee.

Screening Information

Available Impedance screening, a new concept in hearing screening, that many schools and preschool programs are now implementing, has great promise for preventing learning problems. The H.A.E Program in Newton, Massachusetts has been working for five years to perfect and test a training/management system to facilitate the use of a contact battery of pure-tone and impedance screens. They have a packet of information about impedance screening and the effects of hearing loss, and impedance programs are available for schools. To receive this information, write to John Roberts, Coordinator, H.E.A. Program, Metropolitan Cradles, 181 Wella Avenue, Suite 306, Newton, MA 02161. In addition, you may wish to ask their quarterly newsletter, "Speak for Hearing," at no cost. If you have questions regarding impedance screening, call the H.E.A. Program on their toll-free lines (1-800-235-4770 or 17800/225-4721).
1983 AAS PROGRAM SCHEDULE
CINCINNATI CONVENTION CENTER THURSDAY, NOVEMBER 17

8:30-8:40 Introductory Remarks

9:00-9:30 Reliability of Auditory 40-Hz Event Related Potential Measures. (Lehner, Lynn and Pooling)

9:45-10:00 Clinical Use of Electroencephalography. (Lewis and Whitaker)

10:00-10:30 Discussion

9:00-9:30 The Relationship Between Acoustic Neurons, Size, Auditory Brainstem Response, Acoustic Reflex Findings and Hearing Loss. (Rudin and Coleman)

9:45-10:00 The Differential Effect of Barbiturates on Auditory Brainstem vs. Middle Latency Evoked Responses: A Clinical Study. (Hall, Allen and Hargraves)

10:00-10:30 Discussion

10:00-10:14 The Results of Three Dichotic Speech Tests on Subjects with Brainstem and Hemispheric Lesions. (Mastick and Raczkowski)

10:14-10:26 Interpreting Central Auditory-Language Processing Test Results In Children. (Lucker)

10:26-10:38 Neuropsychological Correlates of Specific Learning Disabilities. (Slater)

10:38-10:50 Use of NU-4 Word Lists in Rollover Measurement. (Meyer and Mabler)

10:50-11:00 Discussion

11:00-11:45 Carhart Memorial Lecture

"The World of the Hypocritic." J.D. Harris

11:45-12:00 Presentation of the Beltone Distinguished Teaching Award

12:00-1:10 Lunch Break

1:10-1:30 Business Meeting

Topic: Pediatric Audiology

1:30-1:42 The Natural History of Supra-High Frequency Hearing in Children 8-18 Years of Age. (Downs, Fletcher, Lampe, Doiter and Simonson)

1:42-1:54 Retrospective Study of the Etiology of Hearing Loss in Children. (Shiminski and Erskine)

1:54-2:06 Responses of Newborns to High Pass Filtered Noises. (Gerber and Dobkin)

2:06-2:18 Discussion

2:18-2:30 Crib-O Gram and Auditory Brainstem Response: Direct Comparison of Two Infant Hearing Screening Methods. (Kutnikski and Hashford-Dunn)

2:30-2:42 A Description of the Results of the Past Five Years of a High Risk Hearing Screening Program. (Moneoka and Gollegey)

2:42-2:54 Discussion

Topic: Hearing Aids

2:54-3:06 Performance Characteristics of Hearing Aid Compatible and Incompatible Telephone Receivers. (Gladsone and Kahl)

3:06-3:18 A Clinically Manufactured Steppe-Diameter Earform for Superior Aided Listening. (Valente)

3:18-3:30 Discussion

Topic: Tinnitus

3:30-3:42 Auditory Electrical Stimulation: Effects on Tinnitus. (Edgerton, McElvenn and Brimcombe)

3:42-3:54 Tinnitus Evaluation and Treatment. (Johnson, Vernon, Melkie and Brimstone)

3:54-4:06 Pilot Study on the Effects of a Group Intervention on Normal Hearing Subjects Suffering from Handicapping Tinnitus. (Normandin, Roberge and Bergeron)

4:06-4:18 Discussion

Topic: Rehabilitation

4:18-4:38 Options for the Profoundly Deaf: An Ongoing Study of the Cochlear Implant Project. (Pope, Miyamoto, Shallop, Kean, McKeisley and Young)

4:38-4:40 Test/Re-Test Reliability of the Hearing Handicap Inventory for the Elderly. (Weinstein, Ventry and Spitter)

4:40-4:52 An Articulation Index Study of Phonemic Repetition In the Elderly. (Parlovich and McDonald)

4:52-5:02 Discussion

5:02-5:15 Closing Remarks

6:30-6:45 Load Buses to Forest View Gardens (Transportation provided by Tracoustics, Inc.)

7:00? Dinner at Forest View Gardens

TENNIS OR JOGGING ANYONE?

If you have a hearty disposition and want to join a group of enthusiastic AAS members in a little jog (about 2 miles) or Tennis match the morning of Nov. 17th at 6:00 a.m. (can you believe it), Contact Robert Glaser (111 W. First St., Suite 412, Dayton, Ohio 45402) for tennis or Ross Roesser (1988 Winkow Road, Dallas, TX 75235) for the jog if you are interested.

Meet The New Executive Committee Members

David M.
Lipnacomp

F. Owen
Black

Deborah
Hayes

E. Robert
Libby

James
Pappas

Michael F.
Seidemann

Wayne J.
Staab

On April 27th, at the Milan Press Club, Prof. W.D. Keidel of Erlangen University was awarded the Ampillon Research and Study Center International prize for 1982 in recognition of his scientific achievements in the fight against deafness.
1983 PROGRAM ABSTRACTS
(FOlLOWS CONVENTION SCHEDULE ON PAGE 3)

AUDITORY BRAINSTEM RESPONSE (ABR) STIMULUS-RELATED VARIATIONS AS A PREDICTION METHOD OF HIGH FREQUENCY HEARING LOSS
Gene K. Rabb, M.D., Catherine A. Nelsen, M.D.
Bismarck Hospital Bismarck, ND

This study investigated the characteristic variations of morphologic amplitude and latency of high frequency hearing loss subjects as compared to age and sex matched normal hearing subjects for the Auditory Brainstem Response (ABR). Single sine wave acoustic transients with center fre-


quencies below the cutoff frequency of the high frequency hearing loss (1000 Hz) and within the frequency range of the high frequency hearing loss (4000 Hz) were presented at 40 dB nHL and 70 dB nHL to elicit ABR results which were described with regard to morphology, amplitude, latency and stimulus phase latency differences. Statistically significant variations in a morphology (amplitude ratios of P1 and P3 component wave- forms predicted the high frequency hearing loss). The ABR was increased (P1: P3 relative amplitude ratio), and c absolute latency (accelerated P1 latency/ latency function) were demonstrated in the high frequency hear-


ing loss subject as compared to the normal hearing group. No statistically significant interpeak latency variations were noted in the frequency range. As a statistically significant absolute latency differences in component waveforms were observed for condensation as opposed to rarefaction initial stimulus phase bearing hearing loss, the variations observed for the high frequency hearing loss group would be identified as such and none of the normal hearing subjects would have had this pattern.

The purpose of this study was to evaluate in greater detail the followings: how better the subjects with hearing loss experienced to acoustic reflex findings, hearing loss, and acoustic neuroma size. Specifically, our diagnostic interest in these patients is to develop new, additional acoustic reflex testing. This study is intended to develop a new, more sensitive method for detecting hearing loss, and to provide an estimate of the threshold for hearing loss.

Currently used assessment criteria such as asymmetrical hearing loss, reduced discrimination, or compound acoustic reflex findings are not highly sensitive clinical measures for identifying smaller lesions. We have found that these manifestations are much less prevalent in the hearing impaired than in the normal hearing.

Criteria currently used in acoustic reflex testing enables the detection of larger tumors, while having a high false-negative rate for smaller tumors. Colehouse & Huth (1983) reviewed these criteria to include abnormalities observed at 2000 and 4000 Hz. A relationship appeared to exist between tumor size and the frequency at which acoustic reflex abnormali-


Large threshold results may have audiograms showing thresholds within normal limits or mild hearing loss.

RELIABILITY OF AUDITORY 48-Hz EVENT-RELATED POTENTIAL MEASURES
Sharon A. Lemmer, Ph.D., Timothy S. Posl, Ph.D.
Los Angeles, California

Galaobos, Makeig, and Talalay (1988) described a procedure, the 48Hz event-related potential (48Hz ERP), for recor-
ding the auditory middle-latency response potentials. This procedure was demonstrated by Lyon, Lemmer, Posl, and Daddario (1982) to be a reasonable accurate and effective way for identifying normal thresholds for 500 and 1000 Hz in a popu-


lation of hearing impaired adults. The present study examined the reliability of the 48Hz ERP procedure in estimating hearing thresholds. Thresholds for the 48Hz ERP were obtained from 40 ears with acceptable hearing loss for 500 and 1000 Hz in 32 of these ears. Our results con-


cluded that 39.8% of these ears had a positive response, while 1.8% of the ears had a negative response.

The 48Hz ERP thresholds were established by an investiga-

tor who was unfamiliar with any of the hearing impaired sub-


tests. Each subject was presented thresholds for pure tone


frequencies from 500 to 4000 Hz and were instructed to


respond to the threshold for pure tone.

In this study, 39 patients with surgically confirmed acoustic neuromas were evaluated by comparing tumor size, ABR responses, and hearing levels. Patients with acoustic neuromas had higher threshold for the 48Hz ERP and a positive correlation was found between tumor size and the frequency at which acoustic reflex abnor-


malities occurred.

Auditory brainstem response results have shown P50 values to be either delayed or absent in the presence of Eighth Nerve lesions. Colehouse & Huth (1983) reviewed these criteria to include abnormalities observed at 2000 and 4000 Hz. A relationship appeared to exist between tumor size and the frequency at which acoustic reflex abnormali-


ities occurred.

The purpose of this study was to analyze the results of three auditory psychological studies of dichotic listening which, to the author's knowledge, had not been reported in the literature. Welford (1967), Maguire (1968), and Welford & Maguire (1968) used dichotic melodies of different pitch height and/or neurologically diagnosed cranial injuries (16 brainstem and 18 hemispheric). This group of patients exhibited mean pure tone thresholds and speech discrimination scores which were essentially normal bilaterally. Normal performance on these dichotic tests was pre-deter-


mined to be approximately 80% or better for each ear. The test, a standard deviation below the mean for normal listeners is approximately 15%. The results of the tests were then analyzed according to the number of dichotic tests, the number of dichotic tests, and the number of dichotic tests.

The results of the individual subjects showed that the number of dichotic tests was the most sensitive measure, followed by the dichotic test scores, and then the dichotic test scores. The mean lateralization effects for the subjects with hemispheric lesions was limited to one side indicated that significant greater deficits were exhibited by the subjects with the lateralization of the hemispheric lesion. This trend was similar for all three dichotic tests. In addition, the number of dichotic tests indicated a side demonstrated greater ipsilateral than contralateral deficits.

In conclusion, these dichotic listening tests all exhibited...
greater sensitivity to hemispheric than to brainstem lesions, with the Dichotic Digit Test being the most sensitive, and the Consonant Perception Test being least sensitive to both types of lesions. Further, subjects with brainstem lesions exhibited greater ipsilateral deficits on all three tests, while those with hemispheric lesions demonstrated greater centralization of the deficit. These analyses as well as others are further discussed in this study.

INTERPRETING CENTRAL AUDITORY-LANGUAGE PROCESSING TEST RESULTS IN CHILDREN

Private Practice in Audiology & Rehabilitation
Scarsdale & Ossining, N.Y.

The ability to evaluate central auditory-language processing skills in children has been established. Audiology and speech-language pathologists use a variety of central auditory tests; however, interpreting test results and providing useful information for remediation is often lacking. It is felt that the problem lies in the application of an inappropriate model of central auditory-language processing in children. The purpose of this paper is to discuss various models of central auditory functioning applied with children, and develop an understanding of a more appropriate model.

The primary diagnostic tool in this model is the N-4 test panel. According to this model, children are administered central auditory tests, and if they fail, they are diagnosed as having a disability based on their scores. Failures on central auditory functioning are defined in terms of a central auditory processing disorder (CAPD), defined as any dysfunction or delay in central auditory processing and remediation becomes unrelated to the diagnosed problem. Again, remediation may be to improve the central auditory functioning or to use a central auditory processing aid such as a hearing aid or hyperactivity medication.

The fact that this model is felt to be inappropriate for evaluating and remediating central auditory-language processing in children.

The second model is founded upon research with adults and lesion studies. This model presumes a "side-of-lesion" or region of dysfunction approach for central auditory functioning. According to this model, children's poor performance on central auditory tests are described in terms of a "side-of-lesion model" or "region of dysfunction" model. This model has been validated through testing or to generally improve listening abilities. This model is felt to be inappropriate and may be invalid because a central relationship is proven between central auditory-language processing and "side-of-dysfunctioning" in children.

The model is taught administratively and theoretically. It integrates knowledge from neuropsychology and neurophysiology with knowledge from cognitive psychology and neuropsychology. The model is based on the research of developmental disabilities, theoretical differentiation of children with learned behavioral disabilities, may be more effective in design and implementation of remediation protocols in this population.

To date, studies of physiological measures in this population have been equivocal due to (1) the lack of adequate and well-designed selection criteria for the target population. 2) The use of physiological measures which have not been sensitive enough to show learning disabilities in the N-4 test panel. 3) The use of very small experimental groups in an attempt to address these concerns, a theoretical model of 30 learning disabled children were evaluated with a comprehensive test battery including cognitive measures and a battery of central auditory processing tests and speech discrimination in noise. These children were drawn from a pool of 460 potential candidates. The 36 who met criteria for the learning disabled population. and 3) The use of very small experimental groups. In an attempt to address these concerns, an experimental group of 30 learning disabled children were evaluated with a comprehensive test battery including cognitive measures and a battery of central auditory processing tests and speech discrimination in noise. These children were drawn from a pool of 460 potential candidates. The 36 who met criteria for the learning disabled population and a moderate performance of verbal IQ (WISC-R) within the normal range. The experimental group was selected based selected based on criteria for the learning disabled group and as well as auditory and visual processing.

The physiological battery included: 1) The Sinalar Interaction of the ABR, 2) The P300 Cortical Evoked Potential to auditory tral stimuli and parietal visual stimuli, 3) Simultaneous Auditory Brainstem Response (AABR), 4) P300 to S60, P100 to S100, P300 to M60 Latency AER (MLR), and 5) Smooth Pursuit Oculomotor Tracking.

Data obtained from this group was compared with an age and S.E.S. matched control group from the same school district. Significant differences were noted between the two groups and will be discussed. The most surprising and the finding noted in the experimental group was vestibular dys- function. Correlation of the results with physiological measures which theoretically involve the same system, task or modality will also be briefly discussed.

USE OF N-4 WEB LISTS IN BULLYING AND EMOTIONAL DISORDER
Dianne H. Meyer and E. Tracy Minter
University of Ill. Eye and Ear Infirmary

Measurement of P100-PI function is a special auditory test used in the differentiation of cochlear from retrocochlear hearing loss. Jerger and Jerger (1971) and Divitl et al. (1977) tested subjects with 1/4 lists (50 words) of the P100, 100 words and found that a "rollover" index of 45 identified retrocochlear pathology. In contrast, Benet et al. (1979) used lists of the N-4 lists words and found that a rollover index of 38 was associated with retrocochlear disorders. The discrepancy found among these studies in the critical rollover index may be due to differences in PI materials, to differences among the populations studied, or to the variability inherent in using 1/4 lists for speech discrimination testing. The purpose of this study was to account for discrimination score variability in determining a critical rollover index that is appropriate for use across different populations.

P100 functions were obtained on normal, coclear, impaired, and radiologically and surgically confirmed retrocochlear patients from the Audiology Clinic (Audidate of St. Louis) were delivered at three to five threshold levels using the accuracy of the test. Full 30-word lists were used because of the reduced reliability and greater score variability found when only 1/4 lists are used (Luna et al., 1980). A rollover index was computed for each subject, according to the formula recommended by Jerger and Jerger (1971).

The results of the study are relevant to (a) the relationship between degree of loss and PI max; (b) the effect of discrimination score variability in determining the rollover index; and (c) the rollover index for N-4, "data that best distinguishes between cochlear and retrocochlear sub- jects."

THE NATURAL HISTORY OF supra- HIGH FREQUENCY HEARING IN CHILDREN 3-8 YEARS OF AGE
Marion W. Duvall, John Fletcher, John Lamp.

Five hundred third-grade school children from representa- tive socioeconomic groups were selected for a 10-year study of the Natural History of High Frequency Hearing. 4000-18,000 Hz. Using a Radio-Measure Audimeter these children were given threshold tests each year for ten years. At the end of the study 94% of the children were queried as to their noise exposure, disease history (including otitis media) and other factors that might affect high frequency hearing.

The results of this study demonstrate age-related normative data for the supra-high frequencies of children 3-18 years old. In addition to the study of normal children's hearing of those frequencies are shown. The study supplements the 1972 report (Northern et al.) of adult age-related norms of supra high frequency hearing.

RETOUSTIVE STUDY OF THE ETIOLOGY OF HEARING LOSS IN CHILDREN
Herbert A. Johnson, John Hopkins School of Medicine
Baltimore, Maryland

Knowing the cause of hearing impairment is essential for both its prevention and early detection. Establishment of the cause of hearing impairment solely depends on extensive epidemiological studies of the etiology. However, the cause of hearing impairment cannot be achieved without identification of the causes. Otologists and audiologists as well as clinical audiologists must be fully informed as to the etiology of hearing impairment as they are most likely to be the first professionals to encounter patients with a possible hearing impairment.

A retrospective study will continuously update the statistics of the etiological pattern. Wide spread vaccination, improved public health, the WHO 1968 Declaration, reduction of alcohol, smoking, development of antibiotics, preventive abortion and decreased birth rate seem to have reduced certain types of hearing impairment and changed etiological patterns.

The etiology of hearing impairment has been discussed by many investigators since the publication of the first occurrence of reported causes present wide diversity between various reports. For example, the incidence of genetic hearing impairment ranges from 7.9% to 34%. The distribution, perhaps stems from the difference in the size and nature of the populations studied. There have been few studies on a large population. In order to investigate the incidence of various causative factors in a fairly large normal population and changes in the etiologic pattern over a period of 16 years, we have reviewed the record of patients younger than the age of 18 years who were referred to the Hearing and Speech Clinic of The Johns Hopkins Hospital from 1965 through 1980. The patients of the Clinic are not restricted to any particular population. They were referred for an initial audiological evaluation.

The total number of records was 6,571. A hearing loss was ruled out in 1,800 patients. In 182 patients, no confirmed information was available about the presence or absence of hearing impairment or the nature of the hearing loss due to lack of the follow-up evaluation. Consequently, these 182 cases were excluded from the study. The remaining 4,683 cases were evaluated by the etiologic groups. It was found that hearing impairment in some instances the patient had a history of two or more possible etiologies. If the available information gave clue whatsoever as to which one of these causative factors was the most probably etiology, the case was undetermined. The total of the incidences of these cases 20.5% of the cases found.

The total etiologic factors were divided into genetic, and non-genetic factors. The etiology of hearing impairment was divided into etiologic factors. Fifty-four etiologic factors were identified and their percent distribution was reported. Of the recorded cases 7.6% was the total population, which agreed with the report by the national census of the deaf population of 1971. The low ratio of the percentage of hearing loss attributed to genetics may be due to the inclusion of not only pulmonary hearing impairment but also otosclerosis. The congenital etiology was the most commonly cited group. In the early period, the congenital cases were the highest freque
The use of a high risk register for targeting those infants at risk for hearing loss is a well-accepted procedure since the publication of the 1974 Report of the Joint Committee for the Auditory Stimulation of Infants. As a result, a high risk register was established in 1974 and is maintained by the Joint Committee. The criteria for inclusion in the register are based on a combination of risk factors, including maternal or familial history of hearing loss, abnormal hearing screening results, and the presence of other medical conditions that could affect hearing.

The purpose of the high risk register is to identify those infants who are at increased risk for hearing loss and to ensure that they receive appropriate follow-up and intervention. This includes regular hearing screenings, audiologic evaluations, and, in some cases, diagnostic testing to confirm the diagnosis of hearing loss.

The register is maintained by the Joint Committee and is updated on a regular basis to reflect changes in the criteria for inclusion and to ensure that the most current information is available. The register is also used by healthcare providers to identify infants who may be at risk for hearing loss and to ensure that they receive timely and appropriate care.

The Joint Committee for the Auditory Stimulation of Infants recommends that all infants be included in the high risk register, regardless of their risk level, as a way to ensure that they receive the necessary support and intervention.

Results of the high risk register have shown that early identification and intervention can lead to improved outcomes for infants with hearing loss. By identifying these infants at an early stage, healthcare providers can take action to prevent or mitigate the effects of hearing loss, improving the overall quality of life for the child and their family.

In conclusion, the high risk register is an essential tool for identifying infants at risk for hearing loss and ensuring that they receive appropriate care. By maintaining a high risk register, healthcare providers can ensure that all infants receive the necessary support and intervention, leading to improved outcomes for these vulnerable populations.
Also, implications of these results will be discussed in terms of the durability of the experimental earmold as well as illustrating those patients for which this earmold may not be appropriate. Such patients include those with large, central distortions concerning the usefulness of the stopped diameter earmold with hearing aids not possessing wideband receivers.

AUDITORY ELECTRICAL STIMULATION:

Audiology

Brady J. Edgerton, John T. McDiarmid and Judith A. Brimacombe

Los Angeles, California

At least 80% of the patients seen for otologic problems manifest some degree of tinnitus. Unfortunately, the physiologic underpinnings tinnitus are not known. Many diverse treatment methods have been reported to be successful for some tinnitus patients; no procedure is successful in all cases. The severe to profoundly hearing-impaired patient frequently fails to respond to conventional treatment forms such as hearing aids, biofeedback, tinnitus maskers, or drugs; electrical stimulation, however, has been reported to be successful in many of these cases.

An analysis of the effectiveness of the House cochlear implant (CI) for tinnitus suppression revealed that significant tinnitus reduction has occurred in 25% of the patients (Total: 66) and reported an increase in tinnitus. The CI data suggest that patients who are implanted primarily to restore hearing, may reflect a significantly higher degree of successful tinnitus suppression than patients who receive the CI specifically for tinnitus relief. The number of patients in this later category, however, is extremely small and therefore requires additional investigation before any conclusive statements can be made.

Further investigation into the effects of electrical stimulation on tinnitus is currently being done in a series of acute electrical stimulation experiments. This research is aimed to determine how patients have responded to conventional treatments with patients with severe tinnitus that are under the age of 65. Stimulation is done in the round window using stimuli, monophasic and biphasic pulses, and direct currents. Preliminary findings indicate that this stimulation is reducing tinnitus. The inter-subject variability is not significant. No single factor or group of factors has been predictive of the degree of tinnitus suppression during electrical stimulation.

TINNITUS EVALUATION AND TREATMENT

Robert Johnson, Jack Vernon

Portland, Oregon

During the past decade, considerable interest has been generated in the area of tinnitus both in the United States and in selected foreign countries. This interest has resulted in various improvements of both evaluation and treatment procedures.

To date, approximately 2500 tinnitus patients have been seen at the Oregon Hearing Research Laboratory in Portland, Oregon and a series of studies have attempted to evaluate the problems associated with this symptom. Investigations have been done on otologic patients and treatment involving both medical and surgical procedures have been attempted. The data has been entered into a large database, as this information has accumulated from patients seen over the past seven years and in the Department of Nephrology and Hypertension for three years. Treatment procedures have included medical treatment, tinnitus retraining therapy, and hearing aids.

Quantitative data include information regarding psychoacoustic assessments, tinnitus evaluations and related medical procedures associated with this symptom. These data will be reported and discussions and findings of specific projects will be highlighted. Current problems involved in evaluating and treating tinnitus will be highlighted.

Pilot Study on the Effects of a Group Intervention Program on Patients Suffering from Handicapping Tinnitus

Normandia N., Robbee, C., Bergeron, L.

A pilot study was designed to evaluate the effects of group intervention on ten normal-hearing subjects of 30 to 36 years old suffering from handicapping tinnitus since at least one year and having no hope for treatment in a near future. A palliative approach was developed to reduce handicap by changing the patient's belief that tinnitus is caused by physical factors (aging, blood pressure, etc.) and that treatment addressing tinnitus and maintenance or reintegration in familial, social and professional life.

Based on a review of literature, clinical experience and formulation of needs and expectations from the individuals themselves, the patient's autonomy is the key to the intervention provided two types of services. First, general information was transmitted concerning the auditory system, the different types of tinnitus and the possible physiological effects of stress on the individual. Second, practical exercises on general relaxation was done and regular practice was recommended.

Measurements of before-after of knowledge, attitudes and behaviors was performed by means of specifically designed questionnaires on handicap, case history, degree of stress and anxiety, and adjustment to changes of life. Preliminary results are discussed in terms of percentages of responses after intervention.

Findings suggest that explanation of the problems to the patients, the medical, social and industrial aspects of handicap, and the psychological and psychiatric aspects concerning the handicap provided better tolerance to tinnitus problem, reduced feeling of helplessness and encouraged a behavior to modify the handicap. It was also obvious that the subjects who had consulted regular clinics did not have any knowledge about the diverse aspects related to their problem.

Results are discussed in terms of clinical application and future research. Group intervention can become a very important adjunct to traditional individual case-by-case intervention in cases seeking palliative to non-treatment tinnitus.

OPTIONS FOR THE PROFOUNDLY DEAF:

AN OUTGROWTH OF THE HOUSE COCHLEAR IMPLANT PROJECT

Molly L. Pope, Richard T. Miyamoto, Jon K. Kalhoff, Marjorie L. Kline, Amy J. McConkey, Barbara Young

In 1979 a cochlear implant team was established at the Indiana University Medical Center. Since then, more than 150 patients have been evaluated as potential candidates for the implant. To date, 25 patients have received a House-University of Michigan single channel device. Candidates for the cochlear implant receive an extensive evaluation and are selected for the implant procedure on the basis of medical, audiologic and psychosocial criteria. The medical criteria include such factors as aural shock, electroencephalogram and radiologic studies. Audiologic testing is used to select subjects who are profoundly deaf and to determine the type and extent of the auditory deficit. Evaluation is also employed using speech and environmental sound discrimination tasks. Speechreading and voice production assessments are obtained. Projective candidate assessments are psychologically assessed through interviews, tests and questionnaires designed to evaluate cognitive, neuropsychological and personality functions.

Following this extensive work-up, the cochlear implant team makes recommendations regarding which device and rehabilitation strategy is most appropriate for the patient. Candidates who are not appropriate for the cochlear implant areopted to have an ototoxic device available to them.

The purpose of this report is to review the situation of those patients who consulted our team, but for whom an implant was not recommended. Some of our most gratifying results were seen in those patients who were deficits diagnostic of cochlear nerve damage and rehabilitation strategy is most appropriate for the patient. Candidates who are not appropriate for the cochlear implant are not available to them.

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The project is the outgrowth of the House-Unimichg medical implant project. This approach to rehabilitation is being evaluated at our facility.

AN ARTICULATION INDEX STUDY OF PHONEMIC REGRESSION IN THE ELDERLY

Chesley V., Pavlovich and Robert McCreary

University of Mississippi and Wichita State University

The concept of Phonemic Regression (disproportionate age at onset, usually in the 65-75 age group) is a fairly well know phenomenon. The basis of a listener's threshold of auditory sensitivity has been widely accepted for older individuals, in spite of the fact that the effects of Phonemic Regression are not documented or as understood as its associated deficit in hearing levels.

The contribution of this investigation lies in the application of an Articulation Index procedure to the presentation of reduction in speech intelligibility due to the loss in threshold sensitivity alone. There appeared to be no need to assess and compare the severity of Phonemic Regression for low frequencies, where threshold sensitivity is relatively good, with the severity of Phonemic Regression in the higher frequencies where sensitivity is known to be lower.

Further, there was an attempt to relate the temporal resolving power of the auditory system to performance in the hearing impaired. The test-retest reliability of the HHIE using a face-to-face administration method was 90% and 90% using an interview administration of the test-retest reliability of the subscales in current under analysis. as is reliability as a function of hearing level categories.

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Abstracts (cont. from pg. 7)  

cies (above 1000Hz) were determined for the older age group using the observed filtered speech discrimination scores and threshold sensitivity values for all 28 subjects. These mean values were subsequently analyzed to determine whether or not they were different from unity. Since unity represents the value of the regression proficiency factor if there is no phonemic regression.  
The analysis of the results led to the following conclusions:  
1) Phonemic regression phenomenon is present in the population represented by the group of older individuals who participated in this study.  
2) The observed phonemic regression is frequency specific. It is not present in the low frequencies where the subjects had normal hearing but it is present in the high frequencies where they had mild to moderate hearing losses. A consequence of this is that the application of the AI theory in its present form to the prediction of speech discrimination by the hearing impaired is not possible; at least for the population represented by elderly individuals tested in this study. A revision of the procedure to account for suprathreshold distortion of speech is necessary.  
3) The association between phonemic regression and the distortion in the temporal processing abilities was not evident.  

Attention:  
Please send ALL changes of address for AAS publications (Ear and Hearing and Cort's Organ) to:  
American Auditory Society  
1966 Inwood Road  
Dallas, TX  75235  

1983 AAS CONVENTION REGISTRATION  
Registration is open to all who wish to attend on the following schedule:  

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(Registration is Non-refundable after Nov. 11, 1983. A $5.00 fee will be charge to those requesting a refund to cover administrative costs.)  

RESERVATION REQUEST FORM FOR AMERICAN AUDITORY SOCIETY AT NETHERLAND PLAZA HOTEL  
ARIVAL DATE:_________________________ TIME:_________________________ DEPARTURE DATE:_________________________  

TYPE OF ROOM:  
Single at $38 per night  
Double (2 persons, one bed) at $70 per night  
Twin (2 persons, 2 beds) at $70 per night  

Mail to:  
Netherland Plaza Reservation Department  
35 West Fifth  
Cincinnati, OH 45202  

LAST NAME:_________________________ FIRST NAME:_________________________  
COMPANY NAME:_________________________  
ADDRESS:_________________________  
CITY:_________________________ STATE:_________________________ ZIP CODE:_________________________  

Rooms are held until 6:00 p.m. unless later time of arrival indicated. Your reservation can be guaranteed by a major credit card and your authorization to bill you for the first night if you should not arrive. Cancellations are accepted until 6:00 p.m. on the day of your arrival.  

CREDIT CARD COMPANY:_________________________ NUMBER:_________________________  
SIGNATURE:_________________________ EXPIRATION DATE:_________________________  

NOTE: Regular check-in time is 3:00 P.M.  
*If you plan to stay through ASHA, please indicate your final departure date. Reservations to the AAS meeting are required to be made before November 1, 1983.
Cordless Telephones Can Cause Permanent Hearing Loss

Several cases of documented permanent sensorineural hearing loss resulting from cordless telephones have recently come to the attention of the AO-HNS.

According to the Federal Communications Commission (FCC), the category which certifies this equipment, there may be three to five million cordless telephones in the U.S. The product came on the market two years ago, and now there are 30 to 40 basic models with 150 to 300 variations. Sales are expected to continue to rise rapidly (i.e. $1 billion in sales is projected for the next two years).

Complaints filed with the federal government by Academy members and affected users have prompted an investigation through the Consumer Product Safety Commission, an independent federal regulatory agency.

The noise-induced hearing loss results from improper use of the equipment. The public is accustomed to global "wired" telephone automatically stops ringing when answered. Cordless telephones have a "flip switch" which is normally in a "standby" position and has to be moved manually to a "talk" position. If the user forgets to flip the switch, the ringing continues directly into his ear, because in (all except one mode) the audio signal for incoming calls and the intercom or page is located in the ear piece.

The CPSC has noted numerous complaints of painful ringing and tinnitus. In some cases there was no apparent relative hearing loss. Other cases indicated hearing loss of 20 to 30.

There have also been reports of violent headaches and disorientation. Painful sounds, including a pistol-like "crack" or loud pop, have also been reported. This may be some type of radio interference. These types of noises did not occur when the CPSC conducted laboratory tests on five models. Its tests found the sound level in a range of 123 to 130 dB.

The CPSC staff met with cordless telephone manufacturers. Warning literature and stickers have been distributed, and some companies have started to warn users. The CPSC has proposed a "consumer alert" which, if approved by its commissioners, would be issued jointly with the product manufacturer. This may also work with the manufacturers to develop voluntary standards to modify the equipment. If "a substantial" hazard is established, CPSC has the authority to recall cordless telephones. At the present, the FCC could take the equipment off the market by revoking the certification to sell it.

Readers are urged to help investigate the extent of the hazard cordless telephones pose on hearing. Write to Dr. Leonard J. Infante, Voice Communication, American Academy of Otolaryngology, 901 North Summit Ave, Itasca, IL 60143. If you are interested in participating in this study, please contact Dr. Richard B. Hays, Department of Otolaryngology, Northwestern University Medical School, Chicago, IL 60611.

The Executive Committee of the American Auditory Society has announced the availability of Life Membership in our organization. Eligibility requirements include membership status for ten consecutive years and an age of seventy years or more (we won't tell!)

Members of the Committee include: Ross Roerer, Ph.D., Secretary/Treasurer AAS, 196 Inwood Rd., Dallas, TX 75228.

Diller To Lead 1984 Campaign

For Better Hearing and Speech

Popular comicorne Phyllis Diller, who overcame a hearing problem herself, will lead the Council for Better Hearing and Speech Month's 1984 public information campaign on behalf of 22 million Americans with communicative disorders.

She was elected national chairman of the May campaign by a consortium of 27 nonprofit hearing and voice organizations cooperating in the council's program.

Miss Diller will act as chief media spokesman for the Council's message of hope and help for those suffering from hearing loss and speech problems, who personally experienced a sudden hearing loss which was corrected by medical therapy, and has since committed herself to helping others with similar problems.

Miss Diller will launch the Council campaign during May kick-off ceremonies in Washington, D.C., where she will send a special message from President Reagan, introducing the 1984 poster child, and step up a series of national media appearances.

Killion Launches Eutymotic Research, Inc.

Mead Killion, Ph.D., has announced the formation of Eutymotic Research, Inc., a new company to do Research and Production Development in the hearing instrument field. "We've been extremely fortunate," says Killion, "that Knowles Electronics has granted us the development rights on three important new products which I worked. We hope to bring out the first one early in 1984."

Killion has spent 21 years in the hearing aid industry. He helped develop the first subminiature ceramic microphone, the subminiature electromicrophone, and subminiature directional microphones. He is probably best known for developing earmold coupling systems to improve both the useful bandwidth and the sound quality of hearing aids. He has been granted eight U.S. patents, either as sole inventor or with co-inventors, and has two pending.

Killion is an Adjunct Professor of Audiology at Northwestern University. He has written and lectured extensively on hearing aids and earmolds, with papers published in the field of electroacoustics, psycho- and physiological acoustics, and audiology.

The corporate name EUTYMOTIC is pronounced im-uh-toh. It is a newly coined "ancient Greek" word, which means "bring your ear." The corporate name reflects Killion's commitment to unflawed sound reproduction for the hearing impaired.

The Board of Directors of Eutymotic Research includes Charles I. Berlin, Ph.D., Jack Cletk, MD, Barbara Kruger, Ph.D., E. Robert Libby, Edger Villutt, and Laura Wilber, Ph.D.

Inter Noise 84

The Institute of Noise Control Engineering (INCNE-USA) has issued the Announcement and Call for Papers for INTER-NOISE 84, INTER-NOISE 84, the 1984 International Conference on Noise Control Engineering which began in 1972 in Washington, DC. INTER-NOISE 84 will be held at the Hotel Hilton in Honolulu, Hawaii on December 14-17, 1984. Deadline for receipt of abstracts is March 15, 1984.

Copies of the Announcement and Call for Papers are available from the INCNE-USA Conference Secretariat, P.O. Box 8029, Arlingtron Branch, Poughkeepsie, NY 12603, USA.

ARA Holds Fall Meeting

The fall meeting of the Audiology Resource Association was held in Roan Mountain, Tennessee, on October 22 and 23. Derek Sanders, Ph.D., presented a stimulating program on audiologic services, on the provisions of services in a private practice setting. Dr. Sanders stressed that the audiologic work-up is only the first step to determine rehabilitative possibilities. The second step, the program which attempts to optimize the total communication needs of each individual as well as the motivating factors in seeking amplification. The emotional effect of hearing loss is on the client and the changes in the client's self-concept that occur with amplification must be considered as well.

The meeting was well attended and all were very grateful for the financial support provided by Siemens Hearing Instruments.

The meeting site was a rustic mountain setting. Fall colors were near their peak and many attendees took advantage of the hiking trails in the park. It was a most enjoyable and informative meeting, so attractive that Roan Mountain was unanimously chosen for the Fall 1984 meeting.

ADA Adopts Position Statement

Hearing Loss & Audiologist's Role: Hearing loss is often a symptom of bodily dysfunction and as a potential communicative disadvantage. The best interests of the public are served by recognizing that hearing loss is a condition that is not only medically but also surgically repairable at least in the management of an Audiology.

An audiologist may practice in a variety of professional settings. The Academy of Dispensing Audiology recognizes the independence of Audiology as a profession whether practiced as a private enterprise or in association with hospitals, universities, or other related professionals.

C. The Audiologist is the best qualified professional practitioner to assume the responsibility for the non-medical habilitation/habitation of the hearing-impaired person, including, but not limited to, selecting, fitting, and using aids, hearing impairment and their families, aural rehabilitation, and the evaluation, selection and fitting of appropriate amplification and custom made instruments.

D. Of these professionals who generally provide services to the hearing-impaired, only the Audiologist is trained and experienced in planning and implementing a complete program of aural rehabilitation. Therefore, the Audiologist should be the professional practitioner who carries out or supervises such a program.

E. A hearing aid is only one part of an overall program of aural rehabilitation.

Audiologist's Role

A. Although the information obtained through audiometric tests provides critical information to physicians in making a medical diagnosis, such tests are not in and of themselves medical tests. As procedures for the evaluation of the auditory sensory mechanism, the function can provide rehabilitation specific as well as medically specific information.

B. Audiometric test batteries provide differentially diagnostic information that is vitally important in determining etiology and site-of lesion of hearing loss.

C. The Audiologist is best qualified by training and experience to determine which acoustic and non-acoustic tests of the auditory sensory modality are appropriate in individual cases, to administer or supervise the administration of such procedures, and to provide such information to the patient's physician to assist in the medical remediation and/or treatment of the patient.

IMPORTANT ISSUES RESOLVED AT AAS EXECUTIVE COMMITTEE MEETING. (See Page 4)
CORTIS ORGAN is a publication of the American Auditory Society, processed in Dallas, Texas.

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Supreme Governing Board
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CORTIS CALENDAR
February 6-8, 1984
Primary Children's Medical Center, Salt Lake City, Utah, will sponsor a conference on Snowbird, Utah, on advances in pediatric surgery evoked potentials as they apply to neonates and young children. Guest faculty include Kurt Heersick, M.D., Ph.D., Kenneth Nudelman, M.D., and Samuel Sokol, Ph.D.

Further information: please contact Michael J. C. Cavendish, Primary Children's Medical Center, Speech-Language/Hearing Center, 3663 12th Avenue, Salt Lake City, Utah 84113, (801)584-1000

March 4-10, 1984
The 21th Colorado Otology-Audiology Workshop will be held March 4-10, 1984 at the Continental Inn and Aspen Conference Center in Aspen, Colorado.

For further information: contact Jerry Northen, Ph.D., Colorado Hearing Foundation, Box B210, 420 E. 9th Avenue, Denver, Colorado 80202.

June 6-9, 1984
Academy of Rehabilitative Audiology Summer Institute: Computers in Aural Rehabilitation, Watts Bar Dam, Tennessee.

Contact: Lloyd Graupke, Ph.D., 1008 Grace Drive, Johnson City, TN 37615

June 24-28, 1984

More information of the Congress will be given by the Congress Secretary, 2nd International Congress of the Hard of Hearing, c/o RESO Congress Service, S-106 24 Stockholm, Sweden. Telephone: +46 8-84 49 19.

August 26-30, 1984
International Congress of Audiology and American Auditory Society Joint meetings, Santa Barbara, CA.

Contact: Sanford E. Gerber, Ph.D., Chairman, Dept. of Speech, University of California, Santa Barbara, CA 93106.

October 21-25, 1984
Audiological Resource Association Fall Meeting Topic: "Aural Rehabilitation" Room Main, Town Center: Faye Churchill, Suite 402, 2022 Brookwood Medical Center Drive, Birmingham, Alabama, 35209.

Letter from England
January 31, 1984. I wish you and your readers, wherever they might be, a happy New Year.

We have had the pleasure of being able to enjoy the festivities in your own 'Igloo'. We have been worried about your weather, but I am sure you have been well prepared for the shedding of snow onto the heads of people in colder unclimatized climes. Why should we not be pre pared against other threatening dangers? Would a shrewd be be aware even of one such approach to its own danger?

In contrast we have been enjoying a comparatively mild December and the New Year has begun, at least climatically speaking, in a pleasant way also. Let us hope that it is in a good omen inspite of the sinister reputation of the number 1984. Our Prime Minister has forecast that Orwell's grim forecast in his book '1984' were wrong.

The health services will have to brace themselves to a considerable increase in the number of patients who have not been kept fit by their visitors from the USA — may have to be abandoned...In my opinion there could never be too many doctors and hospitals anywhere. Efficiency could, of course, be improved and wastage should be eliminated as also unnecessary treatment curtailed but progress cannot as such be precluded.

That food and indeed excellent work can be carried out under difficult conditions has been demonstrated once again, on a hospital ship sailing towards the Middle East on the Atlantic, over 300 wounded were treated on her and only 3 of them died. One of our naval colleagues has described the ship as a converted cruise liner. I was interested to note that the US tail bar had to be converted to fit the ship.

A new audiologic research facility at the old hospital, the Royal National Throat Nose and Ear Hospital in London and Professor Roochie has been occupying there an old-time department of audiology and when the building houses the hearing-aid centre also. I am happy to have witnessed the great presence of otolaryngology in the last 35 years.

Countless publications have appeared and many excellent journals have appeared. We have been able to see familiar names in all these. The name of the last audiologist, for instance, will not be found in any of these.

Your readers might be interested to know that John Ballantyne, we have written him as a "Aural Hearing Atlas of the inner Ear", with the active cooperation of many experts in this field including David Lin, Bob Kimura, Hana Sukiwaki, I. Hunter, David, from the USA and Canada. The Atlas will be published by Butterworths in London.

Last year you have paid another visit to the House Ear Institute which has been refurbished and reorganized to house a new and expanded clinical and research facility. Everybody has been pleased with the progress that has been made and in the professional who has succeeded Howard as President of the Institute. Another example of the progress that has successed the House Ear Institute also the ENT-department at the UCLA under Paul Ward and Vincent Fiorella.

I hope we shall be able to continue observing the passing parade of our chosen specialties in PEACE.

Inter-Noise Proceedings Available
The first of the well-known series of INTER-NOISE Conference on noise control engineering was held in Washington, D.C. in December, 1972. Since the first meeting, eleven annual INTER-NOISE Conferences have been held in seven different countries, and now, in Japan, where this conference has grown rapidly. The Proceedings of the INTER-NOISE series have been important source of information on noise control technology for many years.

All of the Proceedings of past conferences are still available, and a reduced price is now available for a limited time or nearly all volumes. The last prices of these volumes have been reduced by 25% - 30% until June 30, 1984. This is the last time that a complete set of INTER-NOISE Proceedings will be available.

A flyer which describes the volumes in the series and contains ordering information may be obtained from the Institute of Noise Control Engineering, P.O. Box 1239, Arlington, Virginia 22209, U.S.A.

Computer Applications: Topic of ARA Meeting

The winter meeting of the Audiological Resource Association (ARA) will be held in San Antonio, Texas, on February 25-27, 1984. Computer applications will be one of the major themes of the meeting. Topics to be covered will include an introduction to computer terminology and concepts, hardware, configuration, and software. Frequent demonstrations of off-the-shelf software for audiometry, computerized hearing aid selection, adapting software to the audiologist’s needs, business applications, and automated professional services.

Weber, Peter W. D.B., Ph.D., University of California will also provide an update on Brain Stem Evoked Potential Testing.

The meeting was planned in recognition of the growing value of the computer to business applications as well as to other aspects of an audiologic practice. The group hopes to stimulate the broad adoption of today’s computers and dispel, to some extent, the common fear that complex technology is required before one can work with a computer. The "US" FRIENDLY" design of current computer equipment allows one quickly to adapt a computer to its individual needs. The participants will have an opportunity to "hands-on" experience to demonstrate this flexibility. A number of vendors are expected to raise their level of computer literature — a definite requirement for survival in the 80’s.

The meeting will take place in San Antonio, Texas. The traditional site for the group’s February meeting. San Antonio is a beautiful resort town nestled in the Smokey Mountains.

The abundance of quaint stores, cast iron centers and exciting food and drink make San Antonio an ideal site for a "working vacation." Registration will be open to all interested individuals. However, register early as enrollment is limited to 300.

Further information or registration forms may be obtained from the ARA Secretary, Mrs. Mary Churchill, Suite 402, 202 Brookwood Medical Center Drive, Birmingham, Alabama 35209.

G.A. Levov, Inc. To Sponsor Downs Seminar

G.A. Levov, Inc. is pleased to sponsor a seminar entitled "Otis Media and Its Effect on Learning." The seminar is scheduled for April 17, 1984 at the Aspen Hotel and Manor in Paradox, N.Y. will be conducted by Marjorie P. Downs, M.A., D.H.S., Professor Emeritus of Otolaryngology-Audiology at the University of Colorado.

In addition to Mrs. Downs, Dr. Francis P. Done, MD will speak on the medical aspects of otitis media. Three teachers on the Kincaid, NJ Public Schools will discuss teacher of Savage Otis Media and its effects on individuals and will also show several parents will be on hand to provide observations from the parents’ point of view.

For additional information or to obtain a registration form: contact Ron Gardiel, G.A. Levov, Inc., 64-48 Mechanic Street, Newton, MA 02158. 1-800-225-8770.

ABR Symposium Announced

A unique symposium will be held this Spring in Washington D.C. Entitled "Clinical Problems of the Auditory Brainstem Response Audiometry," this meeting will have as its major focus national and international evaluation of the ABR and also to permit the sharing of successes, failures, progress, and problems.

The organizers of the meeting, Roger Uhr and the University of Virginia Medical Center and Bruce Weber of Duke University Medical Center, believe that the need for an organized symposium on the evaluation of the ABR and/or their role in the etiology of hearing loss and the ability to identify normal and abnormal responses is essential for the continuous improvement of our diagnostic armamentarium.

The meeting is scheduled to be held on May 25-26 in Washington D.C. For further information on the symposium, contact Dr. Roger R. Duggins, Department of Otolaryngology, University of Virginia Medical Center, Charlottesville, VA 22908.
Beethoven was born in Bonn, Germany, in 1770. He showed early musical gifts. At age eight he gave his first concert. At 12 he was already publishing promising compositions.

Beethoven, who previously enjoyed exceptional hearing, began to experience deafness for high tones when he was 27 years of age. He complained of ear infections. In 1811, when he was 31 years old, he stated in a letter to a friend: "I know that my deafness, my hearing, has greatly deteriorated. When you were still with me I felt the symptoms but kept silent. Now it is continually getting worse. My affliction causes me the least trouble in playing and composing, most in association with others."

Another letter also written in 1811: "My hearing has grown steadily worse for three years. I can hear and distinguish sounds... and in my profession, this might be more tolerable, but in mine such a condition is truly frightful. I give you some idea of my extraordinary deafness. I must tell you that in the theatre I am obliged to lean close up against the orchestra in order to understand the actors, and when a little way off, I hear more of the high notes of instruments or singers."

If I say no further, I do not hear all. Frequently I can hear the tones of low conversation but not the sounds of the world and soon anymore. I cannot imagine it." Stevens and Hermann describe Beethoven's symptoms:

The left ear was the first to be involved, but soon became a bilateral high-frequency hearing loss associated with severe tinnitus. His discrimination appears to have been poor. Recruitment is suggested by his intolerance to loud sounds.

He never wrote or punished others.

Hearing Devices

It is not clear if Beethoven used various devices to aid his hearing. Despite his poor discrimination, he made extensive use of ear trumpets. He has trumpets designed which were held in place by a special headband. The Beethoven Museum in Bonn has an array of ear trumpets which the composer is known to have used.

Grillmeissl describes a "wooden drumstick" repeatedly used by Beethoven. One end of which was held between the teeth and directed into the ear. Grillmeissl suggests that this conduction apparatus to his hearing loss. It may be noted that sound conducted via the teeth may be a more efficient route than that via the mastoid, or the skull, particularly for low-frequency sounds.

Beethoven's deafness progressed until it became profound. Despite his condition, he continued to use his wooden drumstick and ear trumpets until his death, suggesting that his deafness never became total. One wonders how present day electronic amplifiers would have affected Beethoven's genius and changed the course of musical history.

The only effective means by which Beethoven could communicate in his later years was by writing. For this purpose he used conversation books which he left an invaluable record of his life. Of the 400 known conversation books, only 138 remain. His friend Schindler unfortunately destroyed most of them for possible political reasons. It should be noted that his speech did not deteriorate and remained intact until the end.

Medical History

The cause of Beethoven's deafness still remains a mystery. Many theories have been advanced, but none have been proven conclusively. Of the possible diagnoses, including syphilis, typhoid fever and vascular insufficiency, only cochlear otosclerosis as a single pathological disease can explain all the clinical symptoms and pathological findings. Larkin also favors the diagnosis of otosclerosis.

Malik views Beethoven's deafness in the context of Papst's disease of bone. The unusual pathological characteristics — large symmetrical head, large larynx out of proportion, overactivity, brown, thick fingers — all suggested Papst's disease.

Miller states we should consider trauma as a possible cause. The young Ludwig was forced by his greedy, drunk- crahired father to practice hour after hour. At times the elder Beethoven would drag the young Ludwig out of bed and make him play until dawn. Illness on the head followed the slightest mistake caused by lack of sleep, cold or fatigue. Some of the complex mechanisms of auditory perception could be damaged by repeated blows at the temporal region close to the petrous region. Such cases are not too rare now.

The older view accepts that Beethoven's deafness was caused by syphilis. The view we suspect was responsible for much of the fascination evoked by the composer's hearing loss. The stigma of venerable deafness added to the disease.

1918 and again in 1928 the grave was opened and the skull was examined. Unfortunately Beethoven's temporal bones were missing.

The Psychology of Beethoven's Deafness

Anyone who has closely observed an adult soon after he has lost his hearing has noted that he becomes discouraged and struggles with feeling of depression. He may become suspicious of friends and family. He not only loses his communication ability, but suffers from a basic and severe psychological impairment. There is an undefined feeling of loss coupled with a vague sadness and insecurity. Beethoven had all these clinical symptoms. The realization that he was threatened with deafness threw Beethoven into a depression which nearly drove him to suicide. His "Hettenwaldlied" or "written for his brother in 1802, is an inspiring and moving document of inner self conquest and rediscovery to music.

Deafness, of course, severely increased the suspicion and pride naturally to his family. It finally all but severed his relations with the outside world. He was exposed to cruel misrepresentation as he became increasingly engrossed in the inner world of his musical imagination. Social intercourse became increasingly difficult with friends and even more with constantly changing servants.

Goethe remarks about Beethoven's character: "One must feel him and understand his loss of hearing, which is perhaps less harmful to him from a musical than from a social viewpoint. Never have I met such a concentrated, forceful and fervent artist. I can well understand that he has a strange relation with the world." In his last years Beethoven was hardly mobile and economic, and spent many long years in brooding solitude.

Relationship of Deafness and His Music

Allowing for the idiosyncrasy of curiosity, we must look beyond for a deeper cause of lasting interest in Beethoven's deafness. This may be found in the hard story of fate which deprived a musical genius of his sense of hearing. When the poet Milton became blind his daughter wrote and read for him. No one could however help Beethoven. Yet he still created immortal music.

Beethoven's symptoms first appeared in 1797. The first symptoms appeared as pain and an aching ear. Even as his hearing deteriorated and hope for improvement declined, he was borne prophetic and inspired to create. The sketches of the first three movements of the Fifth Symphony were begun around 1800. The Prometheus theme with which Beethoven concluded the Eroica was completed during this period.

The summer of 1802 was critical for Beethoven. There is little doubt that Beethoven was close to despair at this time over the calamity that had overtaken him. Despite his despair he was sustained by his art. Actually his creativity in this period was more creative. He felt it was a duty to isolate himself from society and he increased his feelings of isolation. It may explain in part why he would spend the next 30 years living on the universe more than to his fellow man for inspiration. The history of Beethoven's later years is almost entirely that of a battle against deafness. As his hearing had declined, he had completed the Emperor Concerto and was engaged in the Seventh Symphony performed in Vienna in 1813.

By the time Beethoven composed what many consider his masterpiece, the Ninth Symphony, his deafness was a way of life. He nonetheless conducted the first performance of his work hearing only music from the performers not accom- lades from the audience.

Conclusion

Beethoven led an intense, sometimes anguished and agonizing, sometimes joyful, but always exciting and controversial life. All this is reflected in his music. He is buried in a quiet circle in Vienna's Central Cemetery, the final resting place for all of Vienna's famous composers and musicians. As would be expected, his monument dominates all others.

Perhaps his struggle against deafness adds more than the cause of his deafness, deserves deeper wonder and further exploration.

References


E. Robert (Cy) Libby, is President of Associated Hearing Instruments, Upper Darby, PA.

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Minutes Of The American Auditory Society Executive Committee Meeting

DATE: November 16, 1983

TIME: 1:30 P.M.

MEMBERS PRESENT: Charlie D. Anderson, Layonne Bergstrom, Robert M. Aslin, Ralph A. Donahue, Ross J. Roemer, Hiroshi Shimizu, Don Worthonington

MEMBERS ABSENT: Bruce Graham, Malcolm Graham, William Meyerhoff, James A. Nuskey, W. Dixon Ward, Marion Downs

GUESTS: Irvin Gerling, David Lipotcomb, Deborah Hayes, Bruce Werner, Michael Seidemann, Robert Ke, Libby, Philip Belherr, Eugene Shoehy, Suzanne Brown.

1. President Anderson opened the meeting at 1:30 p.m.

2. The first order of business was to welcome the new Executive Committee members, several of whom were present at the meeting. The new members are:

   A. F. Owen Black
   B. Deborah Hayes
   C. Robert (Cy) Libby
   D. David Libimbomb
   E. James A. Nuskey
   F. Michael Seidemann
   G. Wayne Staab

3. The minutes from the 1982 meeting of the Executive Committee were approved.

4. The treasurer's report from January-October, 1983 was discussed and approved with one change.

5. A report on the membership was given. The total number of members was indicated, and the breakdown of 123 (16%) are audiologists, 272 (34%) are otolaryngologists, and the remaining 383 are in other categories. The promotional and editorial committees were reviewed, and the 201 titles were auditors and 52 were otolaryngologists.

6. The 1984 meeting site was identified last year to be Santa Barbara. AAMS will meet with the International Auditory Society, Heah, and the AAO to finalize the arrangements. A new name was also suggested for the society.

7. A discussion was held regarding the 1985 and 1986 meeting sites. It was decided that the 1985 meeting would be held in Atlanta with the American Academy of Otalaryngology-Head and Neck Surgery. Cy Libby, Hiroshi Shimizu, and Don Worthonington were identified as the Chairmen of the scientific sessions. Tad Zehld was identified as the Local Arrangements Chairman.

8. The 1986 meeting will be held in Detroit with ASHA.

9. Ross J. Roemer was appointed as Secretary/Treasurer for 1985.

10. Suzanne Kos was appointed as Assistant Secretary for 1985.

11. A report on Ear and Hearing was given by Ross Roemer.

12. A statistical summary of the manuscripts received during the period 1980 through 1983 was reviewed. Overall 290 manuscripts were received during this period. Of these, 284 were accepted for publication. A total of 121 manuscripts were reviewed during the period, and 92 were accepted for publication. A total of 284 manuscripts were reviewed during the period, and 172 were accepted for publication.

13. Appreciation was expressed to the Executive Officers and Editorial Consultants. A listing of the Editorial Consultants appears in the NovemberDecember issue of the journal and Executive Committee members were encouraged to contact these people and express their appreciation for their work on Ear and Hearing.

14. Ken Strott, representative from the Williams and Williams Co. gave a financial review of the journal and the financial status, and indicated that the journal is in a sound financial basis and that there will be no increase in the subscription rate for members in 1984 or 1985. There will be an increase in dues for this period.

15. A controversial manuscript was submitted to the journal in 1982. The issue was discussed with the Executive committee, and a decision was made to accept the manuscript, which resulted in a revision of the manuscript for publication.

16. The Executive Committee approved a transfer of $1090.00 from the AAS account to the Ear and Hearing account.

17. The Editorial board will remain the same for 1984. For 1985 Ross Roemer will again serve as the Editor-In-Chief and recommended that the Executive Committee accept Robert W. Keith to offer a service in this position. After discussion of motion was made to accept Robert Keith as the Editor-In-Chief for a five-year period. This motion passed.

18. At the meeting of the Editorial Board the presentation of Editorial Awards was discussed and several members indicated that they felt that Ear and Hearing should continue granting Editorial Awards for outstanding papers. Several options were given both for granting the award at the Annual Meetings or at the Annual Awards Awards. After discussion of the motion was made to accept Robert Keith's recommendation for the Editorial Awards for outstanding papers and be published in Ear and Hearing. This motion passed.

19. Marlin Downs had contacted President Anderson prior to the meeting and indicated that she wished to continue her service as the Editor of Corti's Organ. Suzanne Brown, Associate Editor for Corti's Organ, was present and indicated that she would accept the position if the Executive Committee would approve her. Following discussion, she was appointed as the Editor of Corti's Organ. She indicated that she planned to keep the publication in its present form, but that she would like to make some changes including changing theinside Information, publication of more information on the proceedings, and publishing a newsletter to help advertise the journal to new subscribers.

20. It was brought to the attention of the Executive Committee that since AAS had been in existence for over 40 years now, it was time for the Executive Committee to begin considering the future of the society. It was also noted that the Executive Committee had not yet had a business meeting in its current form. It was recommended that the Executive Committee meet in conjunction with the next annual meeting to discuss the future of the society and to make a decision on the future of the Executive Committee.

21. Several Chairs gave committee reports.

   A. Committee on Committees—Ralph Naunton reviewed the activities of the Committee on Committees since the 1982 meeting. The committee had identified several standing committees of the society including a Committee on Standards, Membership, and Awards Committee. The Committee on Committees had recommended that the Executive Committee approve the formation of the Standards Committee. The Executive Committee approved this recommendation.

   B. Membership/Promotion Committee—Don Worthonington was appointed as the Chairman of the Membership/Promotion Committee. He indicated that this committee would like to develop a directory for the society and have it placed at national meetings and in other places. He had new cut lists of the membership and had identified several representatives from ASHA for the directory. The society should estimate costs and find out what would cost between $250 and $600.00 to obtain a list of these members. The discussion was opened to a discussion of costs and whether the society would consider providing a list of the members for the directory.

   C. The Standards Committee will be chaired by W. Dixon Ward, and he was present for the meeting, but correspondence indicated that he was unable to attend. The discussion was opened to a discussion of the standards and whether ASHA should have a Standards Committee, and the specific function of the Committee on Committees. An indication of the Standards Committee was that it was a major change in the direction of the society and should be approached cautiously. The possibility was raised of having a Standards Committee in place for the next annual meeting.

   D. The Credentials Committee will be chaired by Ralph Naunton. The Committee will review all applications for the 1982 Executive Committee. The committee has investigated the members into their credentials, those with signatures who are not AAS members, those with signatures who belong to ASA or AA member, and those without signatures who do not belong to ASA or AA. In total there were 775 new members approved for 1982, and this list will be published in Corti's Organ.

After reviewing the activities of the three committees it was decided that the Ear and Lung Range Planning Committee has been terminated and President Anderson appointed Ralph Naunton as the Chairman of that committee.

The possibility of purchasing video equipment to be used at the annual meeting was discussed. It was pointed out that having video equipment would allow the Society to tape meetings, including the Ear and Lung Range Memorial Lecture, for beneficial to the members who could not attend and for historical reasons. After discussion it was felt that this should be the responsibility of the Executive Committee. An attempt was made to have a video recording of the meeting made by the National Broadcasting Co. to be used in Better Hearing and Speech Month. It was unannounced that this is a likely worthwhile endeavor, but due to the cost of the equipment the Society could not afford to sponsor this activity. The Society has not sponsored any other organization to date.

A representative from the CPEA Awards Committee also attended the Society just prior to the meeting and asked for support of a candidate. This year's prizes will be awarded to the Society. The CPEA Awards Committee has already identified a postgraduate student and two faculty members for the selection. It was pointed out that this would be a worthwhile activity, but due to the short notice to the Society, the Society would not need additional names. It was also stated that AAS should ask the AES APL Commission to contact the Society earlier so that serious thought can be given to a candidate.

Recognition was given to the recent Distinguished Teaching Award recipients who will be held at this year's annual meeting. Although some possible conflicts were pointed out, it was felt that this was a worthwhile activity that should be supported by AAS.

President Anderson recognized the departing Executive Committee Members. These included Malcolm Graham, Bruce Graham, Ed Johnson, Ralph Naunton, and Harry Ford. The retiring Executive Committee members were thanked for their hard work in Santa Barbara to determine its feasibility and efforts that have been put forth for the Society.

There being no other immediate business the Executive Committee adjourned at 3:30 p.m.

A. MERICAN AUDITORY SOCIETY

Statement of Income and Disbursement for 1983

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Minutes of the Ear And Hearing Editorial Board Meeting

DATE: November 18, 1983

PLACE: Cincinnati, OH


OTHERS IN ATTENDANCE: Charles D. Anderson, President of AAS, Ralph Naunton, Executive Committee.

1. The meeting began at 12:40 A.M.

2. The meeting began by reviewing statistical summaries showing manuscripts submitted for the period January, 1980 to December, 1980. The summary showed the cumulative number of manuscripts received during this period. The data indicated that there had been 296 manuscripts submitted to Ear and Hearing during this period. The second analysis showed the cumulative manuscripts received by month. It was clear that in 1982 more manuscripts were submitted than in other years. However, there continues to be a healthy flow of unsolicited manuscripts, with 70-80 expected manuscripts to be submitted in 1983.

The next two statistical summaries reviewed the status of the 1981 manuscripts. The primary information from these summaries was that the regular section received the most number of submitted manuscripts, the electrophysiologic and speech sections received the greatest number of manuscripts of the sections. The next two issues and editorial board meetings have yet to receive any submitted manuscripts for 1983.

3. Ken Starns, Vice President for Periodicals at the Williams and Williams Co., and the publishers representative for Ear and Hearing, gave a financial report. Circulation has increased significantly in the past year, making the financial outlook for the journal excellent. Based on projections, it was indicated that there will be no increase in publication costs for 1984 or 1985.

4. Plans for 1984 and 1985 were reviewed. It was stated that for 1984 the Editorial Board would remain the same. Ross Roesser was mentioned that he was going to vacate the post of Editor-in-Chief after Volume V (1984) had been completed and recommended that John Keith be appointed to this post. It was indicated that this was discussed at the Executive Committee meeting and would be discussed later in the day during the Executive Committee meeting.

5. A discussion was held on the editorial Awards for Outstanding Papers. There was concern raised regarding the awards in general and several members of the Editorial Board indicated that they would prefer not giving awards. After discussion, this issue was put to vote and there were four in favor and four against giving awards. It was decided that the issue would be discussed at the Executive Committee meeting later in the afternoon, as it was an Executive Committee decision to give the awards.

6. A list of the Editorial consultants for the 1983 journal was provided. It was mentioned that there was no change in the sample. It was stated that the Editorial Board should express their appreciation to their Editorial Consultants for the work they have done with the journal.

7. Each Section Editor gave a report on the section he/she edited. The only major concern raised was that two sections of the Audiology in Hearing Education and New Developments in Otology sections, were not receiving any submitted manuscripts. Based on this, it was decided to recommend to the Executive Committee that next year the dead line for manuscripts be targeted for a more professional mandate in the section. Bill Meyering had written a letter to the members of the Society of Academic Oto-laryngologists in September, but it is too early to determine the effects of this action.

8. A controversial manuscript was submitted to the journal in 1983. The manuscript involved a comparison of manufacturers' products and found that one product was not rated as high as it should be. After discussion, the Editorial Board unanimously approved the publication of this article.

There being no other business the meeting adjourned at 12:15 p.m.
BRINGING UNITY TO AN INDUSTRY

Beltone Electronics Corporation recently embarked on a program aimed at bringing together all facets of the hearing health care field.

In 1981, Beltone President Lawrence N. Posen announced that Beltone had begun a search for the most outstanding professor of audiology in the United States and Canada. Beltone planned to honor that instructor with national recognition as well as a cash prize and a scholarship for a graduate student at the winner’s university.

Posen’s daughter, Laura, directed the program. She placed ads in national trade journals, various student newspapers and educational publications. Posters were sent to schools, along with letters urging the deans and department chairs to help in this search. Nominations, however, would be accepted only from students.

Eleven Judges Chosen

Next, a panel of judges was chosen including a number of researchers, scholars and audiologists.

Students who responded to the publicity were sent a nominating package which included a form on which they were to tell why their instructor was the most deserving recipient of the Beltone Distinguished Teaching Award in Audiology, as it was named.

Nominations came from 22 states. Fifty-six teachers were nominated, most of them by more than one student. Some of the reasons cited were:

“His teaching methods are innovative; utilizing any and all available references to focus the student’s understanding toward a particular system. He is extremely well informed and presents his students with state-of-the-art research. He is totally available to his students as a guide and as a caring individual.”

“The foremost concern as a professor is the intellectual growth of his students. His teaching responsibilities always take precedence over administrative duties and research interests. His lectures are consistently well organized and understandable and his examinations are well conceived and challenging.”

The recipient encourages support rather than competition among the graduate students in audiology.

“His enthusiasm and interest in the subject of audiology is overwhelming and contagious. The depth of his knowledge of the subject is amazing. His terrific desire for students to understand and learn all material completely is reciprocated by students’ desire to learn.”

In addition to recommendations from students, deans, department chairs and the usual list of vita and publications, the judges of the Beltone Teaching Award competition required nominees to submit a 400-600-word essay on “The Importance of Teaching to the Future Development of Audiology.”

The judges met in Chicago for two days, reading the essays and nominating forms and debating the merits of each nominee.

The winner that first year was Dr. Zahril G. Schoeny of the University of Wisconsin. Schoeny was then invited to serve as a judge for the following year’s competition.

Some very slight changes were made as the program entered its second year. A second and third place award were added, as was a student representative to the council of judges. The rest of the program remained intact, attracting nominations of 24 instructors the second year. The second year winner, as announced at the annual convention of the American Auditory Society November 17, was Dr. Terry L. Wiley of the University of Wisconsin at Madison. Tying for second place were Dr. Jay W. Sanders, Vanderbilt University School of Medicine and Dr. Frederick N. Martin of the University of Texas at Austin.

In the essay Dr. Wiley wrote for the Beltone teaching award competition, he addressed the problem of the “information gap,” the disparity that exists today between published scientific evidence and clinical practice. He stressed the importance of people in practice sharing ideas and findings with the professional community, systematically recording both ideas and observations on which to base future research and ideas.

“The future of audiology as a profession,” Dr. Wiley wrote. “depends on close communication between scientists, clinicians and teachers.”

Mr. Posen presented Dr. Wiley $1,000, a plaque and a $1,000 scholarship for a student at his school. The student who nominated him received $300. Beltone sold a banquet to Dr. Wiley’s honor at the University of Wisconsin early in 1984.

“Selecting a winner this year was extremely difficult,” Mr. Posen told the American Auditory Society gathering. “In fact, once the judges narrowed the competition to three finalists, they wondered if it was even possible to select one over the other two. They did, in fact, ultimately select a winner, but they declared a tie for second place.

Dr. Sanders and Dr. Martin, the runners-up, each received $750, engraved bronze plaques and $1,000 scholarships for students in their universities’ audiology departments. The students who nominated them received $100.

The chairmen of the Vanderbilt Department of Audiology, Dr. Fred H. Bass, wrote that Dr. Sanders “motivates students to search, inquire and go beyond what is given in class.”

Beltone Proud of Program

Beltone’s management has expressed considerable pleasure, in fact, amazement, with the outpouring of support the company has received in response to the Beltone Distinguished Teaching Award in Audiology program. Mr. Posen considers this association with the professional community a vital link to continued growth and success for helping the hearing impaired public.

In its first two years, the Beltone Teaching Award has already made inroads into familiarizing educators, researchers and students with the hearing aid side of the industry. It is an effort that Beltone plans to continue, interacting closely with all hearing disciplines.

The search for the 1984 Beltone Distinguished Teaching Award in Audiology will begin in February. Anyone wishing more information should contact Jean Siegel, Manager, Beltone Professional Relations, Beltone Electronics Corporation, 4201 West Victoria Street, Chicago, Illinois 60614, or call 1-312-583-3689.

Dr. Sanders tied for 2nd place in the 1982 Beltone Distinguished Teaching Award in Audiology.

Dr. Martin tied for 2nd place in the 1982 Beltone Distinguished Teaching Award in Audiology.

Dr. Wiley, winner of the 1982 Beltone Distinguished Teaching Award in Audiology.
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MEMBERSHIP DIRECTORY
MAY 2, 1984
POST-CONVENTION ISSUE
OCTOBER 2, 1984

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Audiology Congress and AAS to Meet in Santa Barbara August 26th

The 77th International Congress of Audiology convenes on the campus of the University of California, Santa Barbara, on August 26th, 1986. This is a significant event for the auditory sciences in North America because this congress has met in the U.S. only once before, in Dallas in 1975. It should be noted that the International Congress of Audiology is the only international meeting dealing with the subject of audiology in the most general sense. This 77th Congress, which is the biennial meeting of the International Society of Audiology, incorporates the 184th meeting of the American Auditory Society. All aspects of the hearing sciences are contained within this four-day meeting.

The Congress will have four plenary Round Table sessions. These are: (1) Tinnitus and prevention of hearing loss, chaired by Dr. Gide Dimpol of Norway; (2) Audiology in developing countries, chaired by Dr. Tore Lundberg of Sweden; (3) Morphology and physiology of cochlear hair cells, chaired by Dr. Ake Plef of Sweden; (4) Psychoacoustics of the cochlear implant, chaired by Professor S. Gerber of the University of Freiburg, Germany. Dr. Gerber is the president of the 77th Congress chosen by the general assembly of the International Society of Audiology at its 76th Congress held in Helsinki, Finland in May of 1985. In addition to the four plenary Round Table sessions, the organizing committee is preparing three special contributed sessions: one on standardization of the criteria for the auditory brain stem response, a second on middle ear implanted hearing aids, and a third on microcomputer electrophysiological assessment of hearing aids. Contributed papers dealing with the areas of audiology will be presented each afternoon.

The members of the organizing committee, in addition to Dr. Gerber, are: Jeffrey L. Dworkin, Ph.D., Vice President; Monica C. Quinter, M.A., 2nd Vice President; John A. Schwartzman, M.D., Vice President for Latin America; Maurice I. Mendel, Ph.D., Secretary General; and Gregory S. Keller, M.D., Medical Liaison. The organizing committee hopes that a large number of colleagues from Spanish speaking countries, notably Mexico and Central America, will participate in this congress. Consequently, the organizing committee has arranged for simultaneous translation in Spanish of the plenary sessions and the business meeting of the International Society of Audiology. Furthermore, each Round Table session has a Spanish speaking secretary; they are Dr. Jorge Schwartzman of Argentina, Dr. Jose Barajas of Spain, Dr. Luis Benitez of Mexico, and Dr. Pedro Berruezo of Mexico.

The venue for the 17th Congress is the campus of the University of California at Santa Barbara. Of course, many readers of Corti's Organ have visited UCSB in the past, and are aware of the beautiful site and the excellent accommodations. Santa Barbara, as many of our readers know, is the "Riveras of the Pacific" and the university campus is located on the ocean shores. Registration is $50 with accompanying persons paying $25. Student registration is $30. Housing will be provided at an early rate for those who make a deposit for their rooms in June. "Early" rates will be $75 per double or $100 per single for the entire congress, and that includes all meals and housing in the official banquet of the society and the welcoming festivities. Considering the quantity and quality of the food, and the festive atmosphere, this is a good deal. Advanced registrations for the congress as well as for housing are due by July 1st, but the organizing committee will accept registrations later than that date if there is sufficient demand. Expedient-to- obtain hotel and motel accommodations in Santa Barbara, especially at that time of year, are likely to be difficult to arrange for them in-

This will be the American Auditory Society's only meeting in 1986. It is the society's distinct pleasure to participate in the meeting of the International Society of Audiology and to con- sider its biennial congress an honor. We look forward to seeing you there.

New Telecommunications Devices Aid Hearing Impaired

A remarkable variety of new telecommunication devices makes it easier for the hard of hearing and the hearing impaired people — whether they’re right around the corner or as distant as New York or San Francisco — to communicate. One of the most exciting announcements at the AAS Congress will be a new telephone that can be used to help hearing impaired people. This technology was adapted from Telephone Trafol- ling for the Deaf by Dr. Dane L. Good (published by the American Baptist Home Missions Society, 1975).

’Selecting a TDD

Choosing the right TDD depends on a person’s needs: how they use the unit and whether they’ll use it. For example, if the deaf person has vision problems, a TDD with large, clearprint text that can be read on the screen is available. TDDs can be portable, semi-portable, or stationary, depending upon a person’s needs, and cost from $300 to $1,000 depending upon a person’s needs, and can cost from $300 to $1,000. Some have a paper printed, and other have paper on a line screen.

More information about TDDs is available from other deaf TDD users and Telecommunications for the Deaf, Inc. (TDD), 814 Thayer Ave., Silver Spring, Md. 20910. TDD is a non-profit organization with regional representatives to inform hearing- impaired persons and different TDDs and cochlear implant users about different TDDs and cochlear implant users. TDDs also contain a list of suppliers who can provide more complete product information. For a free copy write: Public Information Office, National Technical Institute for the Deaf, One Lansing Memorial Drive, P.O. Box 4957, Rochester, N.Y. 14603.

Gallaudet President Rosiny

Washington D.C. – Jane Sassett Spilman, chairman of the Board of Trustees of Gallaudet College announced today that at its January meeting the Board accepted the resignation of Dr. W. Lloyd Johns, President of Gallaudet, effective January 30th, 1964. Dr. Johns became Gallaudet’s president on October 1st of this past year following the presidency of Dr. Edward C. Merril. Dr. Johns came from the University of California State University at Sacramento where he served as president for five years. He has resigned for personal reasons. Following his resignation, Gallaudet elects the first woman to assume the presidency of the school. Dr. Spilman, has been named interim president. She will be assisted by a management review committee established by the Board of Trustees. The Board is initiating the search process to recruit and select Gallaudet’s fifth president. The search committee will begin its work February 20.

Dr. Lee began his career at Gallaudet 15 years ago. Before that time he served as vice president for administration for the Commercial Credit Industrial Corporation. He received his doctorate from the Virginia Polytechnic Institute and State University and attended law school in Maryland. He has been published in the area of administrative law and holds the rank of associate professor with Gallaudet’s College of Law.

Gallaudet College, located in our nation’s capital, is a multi-purpose educational institution serving deaf people through educational programs, public service, and research. Since its establishment by the American Congress in 1864, it has grown and changed to meet the needs of succeeding generations of individuals with hearing impairments. What has not changed is Gallaudet’s commitment to its mission to serve the deaf children, youth, and adults of this nation. To bridge the gap between the deaf world of people, and to be a resource on deafness to other educators from around the world.

Ross Rosen Robert W. Keith

Ear and Hearing Changing Hands

After five years as Editor-in-Chief, Ross Rosen is turning over the reins to Robert W. Keith. Mr. Rosen has served the AAS council and the membership well during his tenure at the AAS. The AAS executive board approved the decision at the Executive Committee Meeting last November and the change will be effective with Volume VI.

Ear and Hearing, as we are all aware, has evolved into a premier professional journal in our field, and all those involved have kept it at the forefront of research and development in our field. Ross’ professionalism and dedication has been instrumental in its growth and success in the years to come.

Thanks, Ross, for a job well done and welcome aboard to Bob Keith.

Contributors should now submit their papers to Bob for future editions.

1984 AAS MEMBERSHIP DIRECTORY BEGINS ON PG. 3

PLEASE NOTE: Due to mailing delays, the IAC/AAS meeting notice was delayed. Registration will be accepted until July 1st without a late fee. For further information contact Ross Rosen, Ph.D., Speech & Hearing Center, University of California, Santa Barbara, California 93106.
Letter to the Editor

Dear Editor,

This is in response to the article in CORT's Organ regarding hearing loss due to cordless phones. I am a member of The American Auditory Society and work for an otolaryngology as a clinical audiologist.

We currently have two patients who claim hearing loss from loud sudden noises from cordless phones. The first is a lady who was exposed to a loud blast from a United, model EX 3988/cordless phone to her ear on July 15, 1993. I immediately follow this situation she complained of vertigo and tinnitus and hearing loss in the left ear. We initially saw her on July 18, 1993. This lady is employed as an executive secretary and this hearing loss has created communication problems in her occupation. She has been fitted with an in-the-ear hearing aid in the left ear which helps but she still experiences difficulty particularly trying to have phone conversations. The greatest-presumed threshold shift is centered around 100 Hz.

The second case is a lady who was exposed to a loud blast from Midland cordless phone on January 19, 1994, to her left ear. Immediately following this exposure she complained of hearing loss in the left ear and later of tinnitus in the left ear. She has no record of hearing evaluations prior to the blast. Again, the greatest presumed threshold shifts are centered around 1000 and 2000 Hz. The lady also complains that the effects on her career due to reduced communication skills related to the hearing loss.

I am very concerned that this information get to the public at large. One method to do this is to inform professionals such as those belonging to the American Auditory Society so they can counsel their clients. In my opinion, people in particular who should be counselled regarding possible dangers to hearing from cordless phones are ones with an existing unilateral hearing loss who use the phone in the better ear; people who have children who may use the phone; and any other people who have an existing hearing loss.

I hope this is useful information.

Sincerely,

Elizabeth A. Van Dyke M.S.C.C.
Clinical Audiologist

August 26-30, 1994

International Congress of Audiology and American Auditory Society joint meetings, Santa Barbara, California, USA.

August 31-September 4, 1994

The Jackson Hole Rendezvous will be held at the World Hotel and Convention Center in Jackson Hole, Wyoming. The theme for the educational session will be current trends in hearing aid technology and related topics. Further inquiries should be directed to: Arlan E. Walker, 5105 Hov Road, Cheyenne, WY 82001.

October 18-20, 1994

The International Symposium on Evoked Potentials will be held in Lisbon, Portugal. (The Universidad Nova De Lisboa.) Topics addressed at the symposium will include both auditory and visual evoked potentials. For further information contact: Prof, Ferras de Oliveira, Servico Universitario de Anatomia Patologica Hospital de Egas Moniz, Rua de Janequeiro, 135, 1200 Lisbon, Portugal.

October 21-22, 1994

Audiological Resource Association Fall Meeting Topic: "Aural Rehabilitation" Rose Mountain, Tennessee.

Contact: Faye Cuberrell, Suite 402, 3232 Brookwood Medical Center Drive, Birmingham, Alabama 35209.

October 21-22, 1994

Audiological Resource Association Fall Meeting Topic: "Aural Rehabilitation" Rose Mountain, Tennessee.

Contact: Faye Cuberrell, Suite 402, 3232 Brookwood Medical Center Drive, Birmingham, Alabama 35209.

December 5-9, 1994

The Departments of Otolaryngology and Pediatrics, University of Pittsburgh School of Medicine present The 11th Annual Symposium EAR, NOSE AND THROAT DISEASES IN CHILDREN: A UPDATE to be held at The Breakers. Palm Beach, Florida.

For further information, contact: Dept. of Otolaryngology, Children's Hospital of Pittsburgh, 315 DeSoto St., Pittsburgh, PA 15213 (412) 667-0701.

17th INTERNATIONAL CONGRESS OF AUDIOLoGy

AUGUST 26-30, 1984

AT THE UNIVERSITY OF CALIFORNIA SANTA BARBARA

TOWNS OF THE ROUND TABLES

1. International cooperation and audiometry in developing countries (Maconochie: T. Lucidoig)
2. Preservation and storage of hearing impairment (Maconochie: C. Squires)
3. Cochlear hair cell morphology and physiology (Maconochie: V. Pope)
4. Psychophysiology of the cochlear implant (Maconochie: S. Geiter)

GENERAL INFORMATION

17th International Congress of Audiology National Headquarters: General Dr. Maurice Tucker M.D. P.O. Box 80707 San Diego, CA 92138 USA
Hearing Health Team Trains for the 6th Annual Run for Better Hearing

Nineteen hearing health providers—representing the interdisciplinary support that make BH the hearing field’s most effective public educational program—will run in the sixth annual “Run for Better Hearing.”

The run is a fundraising effort to strengthen BH’s hearing health messages already generated through exposure worth over $98 million in commercial time and space. The run includes nearly 200 Americans who overcome hearing loss—Art Carney, Norm Crosby, Phyllis Diller, Wayne Newton, Lou Ferrigno, Loretta Young, Florence Henderson, Frankie Valli, Keenan Wynn, and many others.

1994’s run co-founder Frances BH executive director Joe Russo in his fifth Boston Marathon. On April 16, then on June 16, in Dubuque, IA, Joe will be joined in by a host of friends.

Duncan Clifton, LTD; Burlington CT, Barbara Friedman, MA; Kathleen Jordan, MT(B); Becky & Mike Paparella, MD; Linda, of Minn. Men; RHi Robert Hansten, Dispenser, Wilmington, DE; George Hicks MD, Johns Hopkins, Calif., MPh; Mead Killion MD, Ph.D., Elks Grove, IL; William Ledder, American Hearing Research Foundation, Joan Ostovich, wife of George Odom MD, and Scott “O” Yung, friend of Joe. Also, Ichigo T., Gunnar Leen MD, Univ. of Gottingen, Sweden; Anne Marie, Dispenser, Winnipeg, Manitoba, Sharon and Ross Ramseur MD, Dallas, TX; Wayne Whayne, Dispenser, Esau Care, WI.

BHI COMMITTEE & SUPPORTS
Run Steering Committee: Al Bruce, Bob Tsichelen, Sonky Labs; Karen Turner, Jane Hixon, Danberg; Bud Raas, Earldom Design and Jean Broome Acknowledged by Karen Carnes, Hearing Instruments and Bill Maron, Hearing Journal.

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17th ICA Preliminary Program

(Specific sessions may be added or rearranged as needed) SUNDAY, AUGUST 28, 1984
Check-In 12:00 - 5:00
Dinner: 5:00 - 7:00
Opening Ceremony & Reception: 7:30
MONDAY, AUGUST 29, 1984
Breakfast at 7:00-8:00
Round Tables at 9:00
Prevention and Etiology of Hearing Impairment
Chair: G. Djupeeland (Norway)
Secy: J.J. Barajas P. (Spain)
Speakers:
A. Axelsson (Sweden)
F. Castil (USA)
G. Mencher (Canada)
R. Rabus (USA)
H. Tomakaz (Czech.)
Lunch at 12:00
Special Session at 13:45-1:15
Middle Ear Implants
Chair: N. Yagihara (Japan)
J. Danhauser (USA)
Speakers: K. Gyo (Japan)
K. Kodera (Japan)
H. Arimoto (Japan)
S. Hibi (Japan)
Contributed Papers at 1:15
International Audiology
B.C. Navas & M.C. Bevilaqua; USA
The Practice of Audiology through the University in Brazil
P. Plath; West Germany
International Cooperation in Europe in the Fields of Audiology and Phoniatrics
R. Levinson; USA
A Survey of Hearing Aid Needs in the Caribbean
P.N. Nguma; Tanzania
State of Audiology in Tanzania
S. Nikam; India
Some Aspects of Audiology in India
A. Lutz; USSR
Audiology and Rehabilitation in Estonia USSR
S.O. Olatunji & J.M.A. Odobocho; USA
Audiological Services in Nigeria
L. Barkady; Kuwait
The Development of Audiology in Kuwait
V.A. Stock & M.N. Vyasamuthy; India
Research Contribution in the Field of Audiology in India
J.A.K. Harbouheli & L. Tieri; Italy
Audiological Cooperation Between Italy and Jordan
I. Silverman; USA
Audiologic and Other Services in Fiji
Aural Rehabilitation and Amplification
N.C.A. Chara; USA
Behavioral Comparisons of Canal vs. All in the Ear Aids
J.L. Danhauser & R.N. Kasten & C.E. Johnson & J.A. Brimascombe; USA
The "Hearing Aid Effect"
A.D. Teigland & W. Wilson; USA
Backward Masking of Lip Postures
C.E. Johnson; USA
Validation of the Enhancement of Suprasegmental Parameters through Filtering
H. Ono, H. Ogasaw & T. Deguchi, H. Nakahara, S. Sinozuka & T. Ogasaw; Japan
Development of the Lip Reading Display System for Severely Hearing Impaired Patients
O. Perier, A. Bochier, B. Everaerts & J. Michiels; Belgium
The Combination of Cued Speech and Signed French to Improve Spoken Language Acquisition by Young Deaf Children
T. Rahlo, M. Karpilainen, T. Honsakos, M. Lindgren, A. Puivaa & P. Karra; Finland
Concept Learning and Self-Touching System for Deaf Children
R.H. Hull; USA
Current Procedures in Aural Rehabilitation for the Older Adult
R.M. Parker; USA
Hearing Aid Causality in Children with Minimal, Fluctuating and/or Unilateral Hearing Impairments
Y. Onchi; Japan
A Fitting Test for Hearing Aids
S. Bornsmit, R. Seewald & K. Randolph; USA
Hearing Aid Microphone Location, Binaural Listening, and Message Attitude
G.P. Haas; USA
Compression Hearing Aids: Technical & Clinical Considerations
D.A. Preves; USA
Acoustic Feedback Rejection in Hearing Aid Fittings
L.M. Moser & J. Heilbruck; Germany
The Functional Gain of Hearing Aids Measured with a Psychoacoustical Loudness Scaling Test
C.L. Gattel; USA
Hearing Aid Fitting and Training for Very Young Profoundly Deaf Children
Auditory Physiology
R.J. Marchbanks & A.M. Martin; England
Assessing Abnormalities of the Cochlear Perilymphatic Volume Using a Tympanic Membrane Displacement Measurement Technique
S. Takashina, K. Osawa & K. Kono; Japan
Pathological Changes in the Cochlea of Heritable Hyperlipidemic Rabbits
T. Inamori, H. Kastuini & T. Kusumi; Japan
Newly Designed Electrocochleogram's Parameters of SP Area in Meniere's Disease
T. Tanaboichi, T. Hattori & M. Moto; Japan
Physiological Investigations on Tinnitus
J.H. ten Kate & P.M. van der Meer; Netherlands
Narrow Band AP to Click and Sinus Bursts in Relation to 9th Nerve Response in Cat
J.H. ten Kate & M.F. van Bekum; Netherlands
Rate vs. Time Coding in Spikes from 9th Nerve of Cat to Cortine Noise
R.S. Ackley, I.K. Arenberg & T.J. Baksany; USA
Electrocochleographic & Histopathologic Observation of Experimental Perilymphatic Pathia in Guinea Pigs
O.L. Nilsson, S. Rydemark; D.E. Dunn & J. Grenner; Sweden
Noise-Induced Hearing Threshold Shift and Scanning Electron Microscopic Changes in the Inner Ear
K. Tsuchiya & N. Saga; USA
Complex-Sound Processing by Combination-Sensitive Neurons with Level-Tolerant Frequency Tympanic
[Break at 1:35-1:30]
Psychoacoustics
A.T. Cacace & R.H. Margulis; York, USA
Loudness Summation and Critical Bandwidth
M. Sato, Y. Kato & S. Eguchi; Japan
Difference Limens for the Formant Frequencies: Comparative Study of the Value between Several Nations
P. Gradon; Italy
Pitch of Multicomponent Inharmonic Tones
K. Schoner & E. Swisher; West Germany
The Effect of an Additional Masker on the Frequency Selectivity of the Inner Ear
A. Quaranta & G. Cervellera; Italy
Brief Tone Audiometry and its Relation to Critical Bandwidth
C. Cave; France
Measurement of Temporal Acuity: Correlation between Detection and Double-Click Threshold in Normal-Hearing Subjects
Podiastology
N.J. Johansen, P. Bari, A. Paro & C. Elberling; Denmark
Evoked Acoustic Emissions from the Human Ear: Results in 106 Donors
M. Ditte & Y. Keilin; Japan
The Risk Factors Related to Hearing Impairment: Screening with the Crib-a-Gram
J.S. Johnson; USA
Early Identification/Intervention Programs Cross-Cultural Perspective
H. Sugawara, H. Inai, S. Ogura, K. Asano, M. Okane, K. Yamamoto & S. Takano; Japan
The Follow-Up System for High Risk Registered Infant Crib-a-Gram Screening Tests
W. J. Keith; New Zealand
A National Strategy for the Early Detection of Pre-Deafness
H. Shizuno & M.C. Erskine; USA
Etiology of Perilymphatic Hearing Loss: A Retrospective Study
E.J. Kreul, R. Sandison & J.C. Nison; USA
Reliability of Simplified Method of Infant Hearing Screening
Cocktail Party & Mexican Flats at 6:00
TUESDAY, AUGUST 30, 1984
Breakfast at 7:00-8:30
Round Table at 9:00
Cochlear Hair Cell Morphology and Physiology
Chair: A. Ploeg (Sweden)
Secy: L. Benitez (Mexico)
Speakers:
P. Dallas (USA)
A. Hughep (USA)
W. Brownell (USA)
Special Session at 11:45 - 2:15
Microprocessor electroacoustic Measurements
Chair: S. Hibi (Japan)
Contributed Papers at 1:45
Middle Ear and Impedance
P.J. Simmons, H.J. Greenberg & T.L. Sabley; USA
LDD Prediction Using Various Types of Acoustic Eliciting Stimuli
D.J. Lilly & R.A. Fishman; USA
Clinical Evaluation of Two Updated Tuning Fork Tests
I. Baston, A. Retimer, L. Janson, K. Lundgren & B. Mollerstrom; Sweden
Otosis Media & Hearing Loss in Anglo Children Epidemiological Study in School Children
A. Reimer & I. Baston; Sweden
Otosis Media & Hearing Loss in Anglo Children - A Risk from an ENT Clinic
D. Marincic; Switzerland
Temporal Summation in the Acoustic Stapedius Reflex Clinical Application
Cont. on next page
THE ALL IN THE EAR GANG

James 'Bobba' Emery
Karl 'Doc H' Hunter
Matt 'Mad Dog' Smith

THE BOYS FROM THE
Hearing Evaluation Center
612 Encino Pl., NE
Albuquerque, New Mexico 87102
(505) 842-6178

ALSO AT--
HEARING EVALUATION CENTER-North
926 Carlisle, NE
Albuquerque, NM 87107
(505) 981-6948
(In Association with R. Davis, D.O.)

THE PRESBYTERIAN PROF. BLDG.
201 Cedar, NE
Suite 504
Albuquerque, NM 87102
(505) 243-1720
(In Association with B. Nogel, M.D.)

S. Nittsu & T. Tsukii; Japan
Audiogram of Dominantly Inherited Sensorineural hearing
Loss

T. Abe, Y. Ko, K. Maru & T. Tsukii; Japan
Acute Sensorineural Hearing Loss in Low Frequencies

Clinical Audiology

C. Andreoli, M. Savastano, G.F. Bruni & G. Maltinari; Italy
Sudden Deafness: Clinical Evaluations on 346 Cases

S. Barrette & K. Randtke; USA
Loudness Discomfort Level as a Function of Instructional Set

B. Farinella & P. Ferrara; Italy
Weber Tone Decay Test in Automatic Audiology

H.J. Bock; Canada
The Clinical Variability of Using One Computer to Evaluate
the Hearing of Two Patients Simultaneously.

S. Arlinger and L. Jerfwall; Sweden
Ambient Sound Levels in Pure Tone Audiometry

A.E. Lewis, J. Deshauer & B. Edgerton; USA
Normal Hearing Children's Responses to a Nonsense Syllable
Test

J. McDonald, M.C. Erickson & B. Rovall; USA
Masking Level Difference and Speech Recognition Scores
Using a Multi-Talker Complex

R.M. Hurley; USA
Effect of Different Maskers on MLD Speech Recognition Mea-
sures

E.T. Musher & D.R. Meyer; USA
Rehearsal Measurements with Auditec NU-6 Lists

D. Cusarelli-Dews & J.M. Ringle; USA
Audiologic & Hearing Aid Services for Foreign Language P-
ients

Break at 3:15 - 3:30

Retroschear

H. von Weyel; West Germany
Auditory Temporal Resolution of Interaural Time Delay

Aphasia

M. Bergman; Israel
Auditory Perception of Speech in Brain-Injured Adults

R.H. Hall; USA
The Nature of Hearing Impairment in Aging - Update on Ce-
tral Auditory Factors in Presbycusis

T. Jastianien & T. Palva; Finland
Audiometric Findings after Acoustic Neuroma Remov-

M. Wada, S. Kambara, K. Okabe & T. Abe; Japan
The Threshold Shift Following the Neck Torsion

Miscellaneous

E.H. Hober, H. Peirce & A. Well; USA
Walking and Evacuation Effectiveness of Auditory & Visual
Smoke and Fire Alarm Devices

C.N. Wade; USA
The Microcomputer as a Multifunction Test Instrument

A. Yonovitch, C. Mitchell, J.S. Ortmann & B. Evans; USA
Sinusoidal Signal Generation: Analog & Digital Design Tec-
niques

H.M. James; USA
Non-Profit Corporation, Funding, at Home and Oversea-

Cocktail Party, Banquet & Awards at 4:00
THURSDAY, AUGUST 30, 1984
Breakfast at 7:00 - 8:30
Round Table at 9:00

Psychoacoustics of the Cochlear Implant
Chair: S. Gerber (USA)
Secy.: J. Schwartzman (Argentina)
Speakers:
R. Bilger (USA)
B. Edgerton (USA)
J. Hirs (USA)
J. Marquet (Belgium)
B. Moore (UK)

General Assembly at 11:30
Lunch at 1:00
Check-Out at 2:00

The Executive Committee of the American Auditory Society has announced the availability of Life Membership in our or-

Eligibility requirements include membership status for ten consecutive years and an age of seventy years or more (we won't tell!) For further information contact: Ross Roester, Ph.D., Secretary/Treasurer AAS, 1906 Inwood Rd., Dallas, TX 75235.
1984 Joint AAS/IAC Meeting A Success

Scenic Santa Barbara, California was the setting for the 17th International Congress of Audiology: American Auditory Society joint meetings. Referred to as “The Riviera of the Pacific,” the history and beauty of the area was enjoyed by all in between meetings and a busy social calendar.

Upon arrival at the University of California at Santa Barbara, members and guests were greeted by the organizing committee and its very helpful staff. It was “back to college” for most members as housing was in the college dormitory in addition to several area hotels. Somewhat Spartan, although very comfortable. Anacapa Residence Hall was home for over 500 conference attendees. Many new international friendships were initiated over the week — several during the long trek to the nearest “facilities” (down the hall)! Meals were served in a common area and you can be certain more than one diet fell into ruin due to the abundant and well prepared meals. The courteous UCSB students were always ready to direct wayward souls to the proper food line, to clear away unwanted trays and to answer the countless questions posed to them by all in attendance.

Map in hand, it was off to participate in numerous round table discussions, scientific meetings and to view manufacturer’s exhibits around the campus. The American Auditory Society’s new display made its debut at the Congress as well. (See related story in this issue). Most of the larger for-
CORTIS'S CALENDAR

October 26-28, 1984

December 5-8, 1984
The Department of Otolaryngology and Pediatrics, University of Pittsburgh School of Medicine present The Eleventh Annual Symposium EAR, NOSE AND THROAT DISEASES IN CHILDREN: A 1984 UPDATE to be held at The Breakers, Palm Beach, Florida. For further information contact: Dept. of Otolaryngology, Children's Hospital of Pittsburgh, 125 DeSoto St., Pittsburgh, PA 15213. (412) 447-1144.

January 4-6, 1985
WESTERN SECTIONAL MEETING — American Laryngological, Rhinological, and Otological (Triological Society), Santa Barbara, California. Sponsored by the Triological Society, to be held at the Marriott Biltmore in Santa Barbara. For further information contact: Joseph D'Alton, M.D., Secretary, 2420 Castillo Street, Santa Barbara, CA 93105.

January 7-8, 1985

February 3-7, 1984
MIDWINTER MEETING OF THE ASSOCIATION FOR RESEARCH IN OTOLARYNGOLOGY judges are on Saturday, Sunday and Monday at the University of California: San Francisco.

February 10-13, 1985
SECOND INTERNATIONAL FORUM ON ASSISTIVE DEVICES FOR HEARING IMPAIRED PERSONS, Fort Lauderdale, Florida. For pre-registration information and a copy of the preliminary program write to: Fellendorf Associates, Inc., P.O. Box 3222 Washington, D.C. 20007.

February 22-24, 1985
AUDIOLOGICAL RESOURCE ASSOCIATION WINTER MEETING, Gatlinburg, Tennessee. Contact Faye Churchill, Suite 602, 202 Brookwood Medical Center Drive, Birmingham, Alabama 35209.

March 16-18, 1985
The 10th COLORADO OTOLARYNGOLOGY WORKSHOP will be held at the Continental Inn and Aspen Conference Center in Aspen Colorado. For further information contact Jerry Northen, Ph.D., Colorado Hearing Foundation, Box 3211, 836 E. 9th Avenue, Denver, CO 80203.

April 4, 1985
CONTINUING CARE OF THE HIGH-RISK INFANT, Park Ridge, Illinois. Sponsored by Ross Laboratories and the Department of Pediatrics, Section of Neonatology, Lutheran General Hospital. Guest faculty include: Marshall Klam, M.D., Michigan State University, and David Callander, M.D., Rush Medical College of Rush University. Additional information contact: Mary Lou Munn, Newborn ICU Office, Lutheran Medical Hospital, 1715 West Dempster Street, Park Ridge, IL 60068. (202) 391-3213.

May 26-31, 1985
XII WORLD CONGRESS OF OTORHINO-LARYNGOLOGY, Miami Beach, Florida, USA. For further information contact: Anthony J. Martin, M.D., PACE 1500 N.W. 12 Avenue, Suite 574, Miami, FL 33126, (305) 325-4899.

Letter to the Editor

Dear Editor,

I read with interest your previous article and "Letter to the Editor" from Ms. Van Dyke about hearing loss caused by cellular phones.

I am an attorney who handles product liability cases and have several cell phone related cases. In fact, I have what will probably be the first case to go to trial in the country. In this case, the plaintiff is an M.D. and the defendant is the Uniden Corporation. My brother, Daniel Schuster of Johnson City, Tennessee, and Daniel Orchik of the Shea Clinic, both P.D. Audiologists, tested the suspect telephone at the Audiology Laboratory in Phoenix. Both the ring and page tones were in excess of 140 db.

There is simply no reason for such a loud level or level for the location of the ringer to be in the earpiece. The product is unquestionably defective and unreasonably dangerous.

Manufacturers and distributors of this $500 million plus a year industry which was fueled by the AT&T divestiture jumped into the market place without adequate design engineering. When these products were forced to cause injury, bad-aid surgery in the form of warnings were issued rather than adequate measures such as product recall and design changes. The warnings placed by these manufacturers and distributors are inadequate and ineffective. They are thus less to warn than to attempt to proclaim liability in this unreasonably defective product.

Changes in industry come only through legislation or financial messages. Perhaps significant liability judgments around the United States will persuade these manufacturers to rebate the ringing device to a place on the back of the handset and render the device safer. This cost to rebate the ringer is only 5-8$. The cost to each human being in the form of decreased hearing and health is incalculable. The people who have not yet been injured could possibly be warned by the other persons who have already been inured as well as seek legal redress from a qualified trial attorney. The more the industry will listen.

Yours very truly,
Sherrill Schuster
Taylor Shumaker & Stueggatt
Attorneys at Law

Brochure Available

A cochlear implant system that can provide a sense of hearing to profoundly deaf people is described in a new brochure available from Otologic Products, Inc. The brochure gives a brief introduction to the cochlear implant and explains how it can result in normal and damaged ear hear sounds. In addition, the brochure tells you what to expect from using the device and outlines the elements of a typical cochlear implant program.

A discussion of both the benefits and the limitations of the cochlear implant is included. For a free copy of the brochure, write: Otologic Products, Inc. Department 5336/160, Box 32900, St. Paul, Minnesota 55133.

NOW AVAILABLE THROUGH AAS
A Full length videotape of the 1984 Carhart Memorial Lecture presented by Gunnar Liden, M.D., Ph.D. at the 1984 IAC/AAS Joint Meeting is now available on a loan basis. For availability and reservation please contact Ross Rosner, 1906 Inwood Road, Dallas, TX 75235.

Audiological Resource Association Fall Meeting

The Fall meeting of the Audiological Resource Association will be held at Roan Mountain State Park, Roan Mountain, Tennessee, on October 26-28, 1984. An excellent program is planned in two areas of special interest to all audiologists.

The first topic is "Speech Audiology: Past, Present and Future" and will be presented by William Riddell, Ph.D., Professor, University of Pennsylvania School of Medicine.

Many feel speech audiology is a test area that is often misunderstood, misinterpreted and under-utilized. Dr. Riddell's presentation will help clinicians develop a fuller appreciation for the diagnostic potential of speech audiology.

The second topic will be "Computers in the Audiology Practice: More Thoughts" by Gene Bailey, Ph.D., Professor of Computer Science, East Tennessee State University. Dr. Bailey will discuss a number of topics important for an understanding of how computers and their applications in today's business world. Both this presentation and the final one are a continuation of the winter meeting and reflect the organization's recognition of the expert growing role computers play in today's society.

Larry Hatta, M.A., Audiological Resources, Inc. will discuss the application of computers to the audiology practice. His lecture will deal with the many ways computers can be useful to an audiologist and he will give special attention to the use of computers in industrial testing.

The meeting site is a rustic mountain setting with individual cabins and many hiking trails. It is expected that the mountains will be made more beautiful by the fall colors which are expected to be near peak at that time.

Registration will be open to all interested individuals. Further information may be obtained from the ARA Secretary, Ross Rosner, 1906 Inwood Road, Dallas, TX 75235.

Please Send All Changes of Address For Ear and Hearing CORTIS'S ORGAN AND AMERICAN AUDITORY SOCIETY TO:

AMERICAN AUDITORY SOCIETY
196 INWOOD ROAD
DALLAS, TX 75225

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Inmittance Workshop Announced

A two-day workshop titled "The Role of Inmittance in Diagnostic Audiology: Evaluation" will be held on January 29-30, 1986 at Marymount Manhattan College in New York City. The featured speakers are Dr. Silvano Silman and Dr. Stanley A. Gelfand. Dr. Shikiko Silman is Associate Professor of Audiology, Brooklyn College, Brooklyn, New York. Dr. Stanley A. Gelfand is Chief, Audiology, Speech and Pathology Service, Veterans Administration Medical Center, East Orange, New Jersey. Both speakers are authors of numerous publications on acoustic inmittance. The topics include: inmittance theory and concepts; calibration of inmittance devices; measurement of the temporal pulse meters of inmittance devices and the time course of the acoustic reflex; quantification of acoustic-reflex magnitude and its tempo-metry; prediction of hearing loss with the acoustic reflex; effects of pathology, hearing loss, and age on the acoustic reflex; monitoring of acoustic-reflex changes; and a discussion of case studies and review of problem cases from the audience. In addition to lectures and discussions, demonstration of procedures will be provided and inmittance devices will be on display. The tuition is $757.15 for full-time students and $1,080 for full-time students. There is an extra charge of 86 if ASHA CEUs are requested. Lunch and coffee breaks are included in the tuition fee. Substantial refreshments will also be provided. The workshop is sponsored by the Communication and Learning Center, Marymount Manhattan College, 221 East 71 Street, New York, N.Y. 10021. The workshop is co-sponsored by Guita Associates, Inc., 47 Leaming Street, S. Hackensack, N.J. 07606. Questions should be directed to the contact person: Carol A. Silverman, Ph.D., Program Director, (212)-473-3906 ext. 276. Marymount Manhattan College is an equal opportunity and affirmative action employer and is associated with the American Speech-Language and Hearing Association to sponsor continuing education in speech-language pathology and audiology. The above activity is offered for 14.5 CEUs in partial fulfillment of the requirements for the award for Continuing Education.

Patent Obtained

Associated Hearing Instruments of Upper Darby, Pa. announced that K. Robert Libby has been issued United States Design Patent No. 247,380 on July 24, 1986 for the design and development of the Libby Horn. The Libby Horn is based on Meld Kilgion's original research on the BCR and IDIF type earmold constructions. Most earmolds laboratories throughout the country are in the process of ordering the Libby Horn to achieve a smooth, widespread hearing aid response. Libby also received the prestigious Fletcher Award from the "New York Times" for the "Hard of Hearing" for the development of the horn.

ARO in Its Second Decade

For over a decade (since 1972) the Association for Research in Otalaryngology (ARO) has provided a forum for exchange of information on otalaryngology. Its membership has grown to almost 600 researchers with approximately 40 participants attending its annual Midwinter science meetings. The ARO was an outgrowth of the Committee for Research in Otalaryngology of the Old American Academy of Ophthalmology and Otalaryngology (AOAO), now the American Academy of Otolaryngology—Head and Neck Surgery (AAO-HNS). For the previous years prior to 1973 the research committee provided the major focus for research with AA00. In 1973 the demand for research led to the formation of a new society, which held its first full meeting in Miami, Florida in 1974. Although ARO is now an independent society, it still maintains close ties with the AAO-HNS primarily in the joint sponsorship of the Research Forums held each year at the annual meetings of AAO-HNS (this year's meetings were in Las Vegas with the Research Forums taking place on September 24). ARO, thus, sponsors its annual Midwinter Meeting (at Cleveland, Ohio) on February 17, 1986, co-sponsors the AAO-HNS Research Forums at the annual meeting of AAO-HNS, and publishes four Newsletters each year along with the abstracts of papers presented at the Midwinter and Research Forums meetings. The Midwinter Meeting is usually a combination of invited papers, poster papers, and papers covering all aspects of basic and applied research in otalaryngology. The ARO recognizes an outstanding scien-

Frances Shipley-Brown, a former student of the Berlin's, is currently pursuing her doctorate in audiology at the University of Maryland. Berlin has been told by her colleagues that Berlin is held in such high regard - he is acknowledged by his colleagues and his former teacher as a man who makes the most difficult things clear. He gave his name to a program. I make a point of attending his lectures; he consistently teaches on new things in a kindly, helpful and supportive fashion.

Berlin was chosen from a field of 21 candidates. His essay was one of seven factors weighed by a blue ribbon panel of judges. The panel was comprised of prominent professionals in the field of audiology — including the two previous BDFAA winners — plus one student representative chosen by NSHSL.

The judges were Dr. Fred Rose, Vanderbilt University; Dr. Bradley Edgerton, House Ear Institute; Dr. Jack Katz, State University of New York; Dr. Bob Kats, University of Cincinnati; Bruce Lee (student University of Montana); Dr. Gary McCandless, University of Utah; Dr. Ross Rouser, University of Texas-Carroll Center; Dr. Zuhlke Schoenfeld (1983 winner), University of Virginia; Dr. Bruce Weber, Duke University Medical Center; Dr. Terry Wiley (1985 winner), University of Michigan, and Dr. Don Worthington, Boynton Institute.

**Membership Addressed**

During the 1986 Executive Meeting of the American Auditory Society, the board members approved a resolution expressing their recommendation that I assume the position of Editor in Chief for a 3-year term. I want to thank all who wrote and asked if I would like to submit an "Editor's Address" to Carrol's Organ. Her request provided me with an opportunity of sharing some thoughts with AAS members as I begin my duties as editor.

Many of you know that the journal Ear and Hearing exists. The Journal of the American Auditory Society (JAA) that began in 1975. The first editor-in-chief was J. Donald Harris, followed by Ross J. Hoerner. Under their direction and with the help of a large group of section editors and referees, the journal has grown in stature and has become an important source of scientific and clinical information. It is an honor to follow Don and Ross as editor of this fine journal. I deeply appreciate the support of the Executive Committee and members of AAS.

As editor, I have one only goal — and that is to continue the level of excellence for which the journal is already known. There will be a few minor face changes, some sections will be renamed and some new section editors will be announced in the first issue of 1986. There will not be any fundamental changes in the philosophy of the journal; however, and we will continue to publish basic and applied research that relates to the clinical interests of our readers.

As members of the American Auditory Society and potential contributors of Ear and Hearing, you can help in a number of ways. If you have ideas or suggestions that might help the journal, we would like to hear from you. If you are interested in serving as a peer reviewer, let us know, and provide us with information about your special area of expertise. If you have an interesting manuscript that is appropriate for the journal, send it for review. And, finally, if you talk with your colleagues, let them know about the journal and about us to join the society. You should be aware that increased membership provides, among other things, additional support for the journal.

I would like to thank those of you who have written with expressions of support and good wishes. I would also like to congratulate Suzanne Brown on her appointment as Editor of Carrol's Organ, and to urge you to support her work. Together the new editors of the two publications of the American Auditory Society may be remembered for "bolstering affiliative inferences that have never been split before" (Hitchcock's Guide to the Galaxies p. 144) so we will appreciate all the support and help from the members that we can get.

Robert W. Keith, Ph.D.
Mail Location: 528
In Orylogy of the Cleveland Medical Center
Cleveland, Ohio 44106
The Medical School as well as a Professor of Audiology in the State University of Iowa.

Carhart's impact on the community of scholars can be measured in a variety of ways. He was a superb teacher. His ability to clarify the most complex issues was a testament to his brilliance. He was equally skilled in guiding his students through successful doctoral and post-doctoral studies. He had a unique ability to impart knowledge that was not only clear but also emotionally resonant. This was a warm and compassionate human being. This combination allowed his to instill a sense of confidence and self-worth that sustained those who successfully completed their programs, but in all of his students.

Carhart exerted a significant influence on the development of his field. He held chairmanships, trusteeships, and consultancies in dozens of organizations at the local, state, and national levels. He was also a member of his profession to receive a Research Career Award from the National Institutes of Health. Dr. Carhart's era. Audiology was mostly spent in the University. As a visitor, I was impressed that so much exceptional work could come out of those plain quarters. However, our family moved into facilities worthy of our qualifications.

My personal contact with Guy Carhart started in 1969 in Stockholm, where he served as a highly appreciated lecturer at the First International Course in Audiology. This course was in fact the impetus for the birth of audiology in Europe. During recurrent visits I got an opportunity to get acquainted with his work. Throughout his career, he was concerned with basic problems of psychosocieties including quality of life and various stress levels. His work was related to the ever-present context of preserving the hearing of the phenomena. "Carhart's notch" is an example of this.

With a difficult and tedious scientific problem, he devised to draw himself back to his Shangri-La, where he recovered by alternating periods of work and play. Carhart's contributions to the evolution and refinement of speech audiometry and the application of this tool to the assessment of the dynamism between hearing and performance in individuals are widely recognized. From his scientific awards, audiologists will include his introduction to the world, 1969. It is evident that he wanted clinical audiometry do the to stop faster and to live up to his expectations. Unfortunately, he never did get to witness the enormous revitalization of research on his favorite topic, the selection of hearing aids. In order to give 'harmage' to his memory, I have chosen to spend the rest of this lecture in talking about current trends in amplification techniques.

In an overview of the history of methods of selection of hearing aids. Steeleslaker points out that three distinct periods can be recognized: before, during, and after the advent of the so-called amplification method. The choice of a particular method for evaluating hearing aids was principally based on the methods of speech audiometry. Written papers, or informal. Carhart had focused on the evolution and refinement of speech audiometry and the application of this tool to the assessment of the dynamism between hearing and performance in individuals are widely recognized. From his scientific awards, audiologists will include his introduction to the world, 1969. It is evident that he wanted clinical audiometry do the to stop faster and to live up to his expectations. Unfortunately, he never did get to witness the enormous revitalization of research on his favorite topic, the selection of hearing aids. In order to give 'harmage' to his memory, I have chosen to spend the rest of this lecture in talking about current trends in amplification techniques.

In an interdisciplinary research project between Chalmers Technical University and our Department of Audiology at Sahlgrenska University Hospital, Gothenburg, a wearable, pro- grammable hearing aid with multi-channel compression has been devised. Basically this aid has an output in which the output of the compression curve can be controlled from a computer. The signal-processing channel for this computer is the use of a multi-channel hearing aid. The programmable hearing aid is ready for each channel. The hearing aid is thus fitted to suit different kinds of ears and can be programmed with computer-based psychophysical and fitting test settings. This unit measures the equal loudness contours of the subject at comfortable levels and calculates the differences between the equal-loudness contours of the hearing impaired subject and the normal hearing person. Further, the parameters of the programable hearing aid are calculable and the memory of the aid is programmed. By means of a probe microphone or an ear simulator the input gain is determined. The computer verifies whether the gain in frequency response obtained deviates from the gain desired.

A computer-based system, elderly untrained users with moderate sensorineural loss preferred considerably. However, the gain in everyday SNR that had been suggested. During the last decade we have witnessed new developments in hearing aid technology. New multi-channel hearing aids and, cochlear implants, bone-anchored hearing aids. I will dwell especially on the last mentioned topic and later describe its in some detail. Non-Conventional Hearing Aids

There has been considerable interest in the last ten years in bone-anchored hearing aids as middle ear implants. Generally speaking, these consist of a motion-transforming device which is partially or fully enclosed within the middle ear space. The transducer transmits energy (vibration) into the inner ear via the incus or via the cochlear capsule. A conventional, regular hearing aid amplifier may be used to drive the transducer. This type of transducer can transmit intelligible speech, but the efficiency of energy transfer is poor. Implant cochlear devices have also been implanted and have received considerable attention.

Bone-Armed Hearing Aids (BAHA)

A quite different and new approach for a special group of subjects with conductive or mixed hearing loss is the bone-anchored hearing aid. Although the focus has been on medical, hearing loss is to get a dry ear with satisfactory hearing, we know that this goal cannot always be reached. Some patients are in need of a hearing aid but are unable to use a device that transmits the sound via the external ear canal. These patients may benefit from a conventional bone conduction hearing aid. The most conspicuous indications for such a device are:

1. Chronic ear condition that drains or starts to drain (the ear canal) gets obstructed.
2. Maffinations of the ear, absent ear canals, and extensive conductive dysfunctions which for some reason cannot be corrected by surgery.

However, a bone conduction hearing aid has many disadvantages:

1. The sound generator must be applied with a constant force to the mastoid region with resultant discomfort, irritation, and sometimes external of the soft tissue.
2. The lack of seal on the ear canal may be unsatisfactory.
3. The effectiveness of the transmitted sound is generally poor.
4. The aesthetic appearance is not always cosmetically acceptable.

5. Due to the relatively high signal velocity needed, the transducer and the electronic part of the aid must be kept apart to avoid acoustic feedback.

The present use of bone conduction hearing aids is in Sweden among 18,000 persons. The type 150,000, which corresponds to about 3 percent of all annual fittings. The actual need for bone conduction hearing aids might, however, be greater. What is the potential for bone conduction hearing aids? Not necessarily, however, are they of any aid at all or even if the ear starts to drain when they are used. Once bone conduction device is inserted into the temporal bone and to establish a permanent receptor tissue layer into the bone.

This idea has been implemented in the bone-anchored hearing aid. Due to the pioneering work by Braunsalm et al.
pleasure were poor functioning of the mechanical connect-
ing of the and the urge to defecate. Moreover, the micro-
scope and the transducer had to be kept apart to avoid 
acoustical feedback, and from this standpoint, no improve-
ment had been achieved in the commercially available 
anchored aid.

The comprehensive measurements of mechanical impedance 
revealed that the magnitudes of mechanical impedance of the 
skin-perforated human head are 10 to 30 dB higher 
than those of the skin-perforated rabbit. However, the absence of 
impedance data made it possible to develop a new bone-anchored 
hearing aid with all the parts in a single housing. During 
1981, the prototype of this second generation of bone-
anchored hearing aids was successfully tested on one 
patient. At the end of 1980 it was decided that a sufficiently 
high level of safety had been reached, and a series was man-
ufactured and fitted to ten of the 14 first-mentioned patients. 
The result of evaluation of this group are reported. They 
investigated with Bekesy audiometry the difference in 
hearing thresholds among these ten subjects when an Oticon 
transducer (010801 P6 96) was applied to a rigidly fixed 
the titanium fixture, and bi conventionally, to the intact soft 
tissues. The difference in movement of the threshold in 
thresholds of electrical quantities fed to the transducer varied between 
approximately 15 and 20 dB in the frequency range of 600-
6000 Hz. The threshold shift was also measured in terms of 
mechanical quantities generated by the transducer in seven 
patients. The transducer was now rapidly and tightly 
attached to the skin of the forehead, without clipping, 
without consumption of power, and without lower 
disturbances. Another series of bone-anchored hearing aids was men-
tioned during the first generation, and in the early experiments 
of mixed hearing losses. The evaluations of this group are 
also partly finished, and the development is based on 
newly developed lists of spoken sentences, edited in a com-
corder, word by word, and presented in speech noise. 
The intelligence curve has a maximum dips of 25% at 
threshold. The patients 'facilities for understanding speech 
under conditions of speech noise are up to 15% of the 
normal, the noise (S/N) ratio for noiseless (the speech level 
was held constant at 60 dB). The threshold values vary 
from 7.3 to 7.7 dB signal-to-noise ratio depending on hearing 
loss. Repeated measurements of S/N thresholds in speech 
noise showed a standard deviation of 0.4 dB for subjects 
with normal hearing and 6.17 dB to 1.1 dB for moderate 
and severe hearing impaired subjects. Eight of the patients 
with pure concomitant hearing loss had an improvement in 
threshold-to-threshold thresholds with 9 dB (the range 5.6 4.5). 
Among these individuals, the improvement ranged from 
6.5 to 3.8 dB. The other seven patients had considerably 
ors any bone-anchored hearing aid. The S/N threshold improve-
ment for all 15 patients was, on average, 3.8 dB. 
At this moment, no general rules can be given about 
the amount of supernormal sensorineural loss which can be 
fit from the bone-anchored hearing aid. However, the pre-
sent study indicates that patients with mixed hearing loss 
and a bone conduction curve around 50 dB of hearing loss 
make good use of the bone-anchored hearing aid. All 
patients 'subjective evaluations were very positive, 
indicating superiority of the new aid. The audiological 
investigations for using bone-anchored hearing aid can thereby 
be summarized as including:

1. Any patient who uses a conventional bone conduction 
hearing aid.
2. Any patient who uses air conduction hearing aids 
with a threshold in the normal range, who is still 
not elicit media, operated or non-operated, with 
conductive and mixed hearing loss. The radical microaudiometer and 
implantable 90% skin-conductive feedback of the 
conductive hearing aid.
3. Amount of hearing loss: 1) air conduction levels up to 
20 dB hearing loss 5 to 20 dB 2) bone conduction levels up to 
20 dB hearing loss. Additional indications for using bone-anchored hearing aids 
include:

DO WE HAVE YOUR CORRECT ADDRESS?

Notice: Stimulating News

Audiol Inc. is proud to announce the availability of the 
Tosendorf Audiometer. This new instrument is named after 
Jürgen Tosendorf, M.D., Professor of Otolaryngology emer-
itus of the University of Münster, Germany. "Tosendorf 
Audiometer" is a technologically advanced instrument that 
utilizes electrical stimuli to assess hearing sensitivity. It is 
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According to Irvin Klar, Vice President of Audiol Inc., 
"Tosendorf Audiometer generates an audio signal to 
modulate a high frequency carrier (46 kHz). Combined 
signals represent a tone that is modulated by a pair of ex-
ternally applied electrodes. The striking result is the per-
cussion by the listener of extremely high fidelity pure tones 
and broadband signals ranging up to 20,000 Hz, without 
 involvement of traditional acoustic transducers and with 
minimal influence of the outer ear and middle ear.

"The Tosendorf Audiometer brings to both the clinician 
and the researcher new and important diagnostic capabilities 
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For more information, contact Mr. Irvin Klar, Vice Presi-
dent of Marketing, Audiol Inc. (201) 68-4444.
By Frederick N. Martin, Ph.D.

As clinical audiologists we usually find ourselves, upon completion of a history and examination with a great deal of information on the patient's hearing. When we are seeking out much of this information to patients or their families we are usually asked what for words to express our appreciation. We have all heard phrases like—"(pause) why not have our own children take our children no one has ever taken the time to try to make us understand what hearing loss is all about." These words are heard so much in our ears that we find ourselves more and more usc. Many of the statements make me think of the patient is to the reader about the source of our knowledge in the subject at hand as well as my own main information resources.

More than a quarter of a century of dealing with patients in the field of audiology, I am sure that a significant aspect of the audiologist's responsibility has been to make it clear to us what it means to be hearing impaired persons. A dramatic personal experience, which I will relate shortly, brought much of this perspective into sharp focus.

One of the many statements I will make come from the writings of those authors whose works are listed in the bibliography at the end of this paper. The type of paper that is particularly interesting is that written by a listener of that paper. The evidence of the work of Luterman, Weber-Kramer, Bosman, and Stageway is that there is a definite need for clinical audiologists to deliver "bad news" to another human being. It was more than a year ago a request from me the reader to begin with this particular item.

About 4 years before this writing, my own, who was 30 years old and about to graduate from college to enter medical school, accidentally sustained a severe hearing loss. What followed was a series of visits to specialists including audiologists, optometrists, neurologists and specialists in internal medicine. They felt that indications were that this might be normal ear wax that was associated with being a user of the senior. One of the audiologists was familiar with me due to being seen for a second opinion and when we asked him to a repeat the visual perimeter test he was not sure if it was a test of his time and money. He further suggested that "a safe test" be performed on the part of the patient's parents who could then be asked to do what their parents expect them to do. In the way that they have been told to do it is the way that it will get done. A safe test is performed because more hearing impaired children after a correct diagnosis is made.

Eventually the diagnosis of hearing impairment is determined. This is usually done by an audiologist and it is the audiologist who determine the extent of the patient's hearing impairment in the patient's parents. What happens in many situations is that an otolog- ogy audiologist recommends the patient be referred to the audiologist who made the diagnosis of hearing loss. The audiologist will then see the patient and then refer the patient back to the audiologist for detailed counseling and recom- mendations for remodelling. This is a most difficult process since the impairments and the discontinuity add to the complexities of a complicated process of handling a hearing impaired child. We should all have the impression that the child who is deaf and hearing impaired children after a correct diagnosis is made.

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People are angered by situations over which they have no control. When parents believe that their children have been dashed, they direct their anger at those whom they feel may have held out false hopes. When they must make important decisions--some of which may prove to be wrong--they may become angry at the ones who have fostered the sense of guilt and pérdem the sense of mourning.

Since dealing with the situation may be difficult, a simple way out is to deny that it exists. The notion may develop that a different clinician may give a brighter news, and so parent or patient may begin to shop for a "better" diagnosis or a system of dealing with the situation which is less demanding. All experienced clinicians have seen parents who virtually never stop seeking for a "better" diagnosis or a treatment that will result in a better "cure" for the敦煌 rather than do what must be done in terms of retraining. The denial may be short lived or may last indefinitely.

What is to be desired is help for the family to the stage of accep-
tance of the problem. The individual may say "Well, I guess I'm going to have to get used to the idea that my heart isn't right and that I have to tolerate physical limitations for the rest of my life." The clinician may respond, "If it were for my child I might as well acknowledge that he is ill and go on with the treatment of a hearing aid and some language stimulation." These words may or may not reflect true acknowledgement of the situation that can result in positive actions. All too often, people know the right words to say without really meaning them.

Luterman describes, as a stage which follows acknowledge-
mant, a time for constructive action. At this point the individual who is left with a new disability is in the process of changing his previous values and new status and sets about to the tasks at hand. This is not to say that people do not return as changes take place or that the person is not a part of the family system. The change is not to be expected. The person is less likely to be the one seeking the help of a hearing aid.

I would like to briefly comment on the problem of the hearing impaired child and the role of the physician/pedia-
trician/parent of a hearing impaired child.

My almost 6-year-old daughter suffers a profound bilateral hearing loss. She has been hearing an active strain of H-influenza meningitis. She has gone to bed one Sunday night to awaken on Monday with a low grade fever and aches. A neurological consultation followed by a lumbar puncture revealed only a couple of white blood cells in her spinal fluid. However, she appeared septic and was admitted and treated for four hours after she awoke. Her spinal fluid grew H-influenza. Likewise, her hospital course was uneventful--on set, a few days of fever, and home in approximately 10 days. But my wife and I knew that something was not right, she didn't seem as expansive as I expected. I had learned after 4 years.

Despite my ongoing hospitalization, I noted a read-
cumulation of fluid. Antibiotics were immediately given and within a week vestibular tests were placed--and still she was not hearing. The days following now seem blurred, but audiometry followed by BERA were done without delay and the news was bad; our worst fears had been con-
figured. Our daughter was profoundly deaf.

The aftermath of a statement like this is to mark a sig-
nificant change in the life of our family. This change is not to be static but dynamic, daily affecting us in an ongoing manner. The challenge of raising a deaf child is difficult, especially for the mother who is usually relegen-
t the primary responsibility. Although difficult, we have sensed a growth in our personal lives, making us more aware of what really counts in life. And, as a physician, my eyes were opened.

Quite frankly, from my personal, non-professional con-
cept of the hearing impaired child with parents with whom I compare our experiences, I find that physicians are often unprepared with those indivi-
duals--often for good reasons. Commonly, pediatrics have not been trained to deal with children who are hearing impaired. The lack of information and experience makes unfor-
tunate comments such as "Your child is too young to test."--"Both children are too young to make the diagnosis but in the perception of the parents, upper insensitivity to the tragedy and unknowable about habilitation options. If these perceptions are in fact accurate, the consequences for the child can be devastating, especially in a smaller com-
munity where the otolaryngologist is the hearing expert and the pediatrician is the referral source should be the deafness expert. We are all acutely aware that in 1984 no physician alone can adequately meet the needs of the hearing impaired child. This physician needs help from the audiologist, educators, and social service agencies. However, that fact is being exploited by the otolaryngologist to tabulate their pivotal roles in this story. What are my suggestions to help the otolaryngologist play a successful role?

Number one, be aware of the need for a team approach and more importantly, end in your community who will be helpful members of the team; giving parents sensitive counseling and knowledgeable answers to their questions. Furthermore, communicate with these other professionals. Help smooth the way for the patient and parents. They will need it. They do not want this uncommon approach.

Know your otolaryngologist and expect and demand an audi-
ological consultation completed within six weeks. In your locale establish contacts with reputable hearing aid dealers and audiologists. Their knowledge about programming the hearing aids and their willingness to provide home visits to adjust the aids and help the patient comfortably implement an amplifi-
cation program.

Secondly, the otolaryngologist can help the efforts of parents in obtaining all the educational opportunities. Although otolaryngologists are not expected to be author-
ities in deaf education, their knowledge of hearing and its relation to language acquisition and psychosocial development. Must make them aware of the tremendous demands required to educate a hearing impaired child-- to educate them for a functional and psychologically satisfac-
tory role in our society. Be sophisticated and realize that the educational approach to the deaf child is not homogen-
eous but must be tailored to meet the needs and abilities of the individual child and not tailored to meet the educational needs of the education institution or professionals contained within.

Number three: be an activist: A physician's support of parents struggling to achieve optimal educational experience (especially in a small community) might be the neces-
sary element from a respected member of the community to sway sluggish educators. Also, he be aware that by public law 94-142 lacks of funds to provide appropriate special education is not an acceptable excuse by local educational officials.

Number four: realize that ongoing eclectic counseling is manda-
tory for optimal hearing aid use. From personal experience, I know that a number of parents are completely knocked out any benefit from amplification because of the increased noise level. If this occurs, the clinician should explore the situation that they are cut off from the hearing world and please schedule them early and treat them aggressively. Along the same lines, residents in a training program should have the opportunity to meet and treat these children, take into account of their problems, and to feel competent in their presence.

Private otolaryngologists, in addition to meeting medical needs in a part of ongoing care should become involved with those institutions or schools who have a mission for deaf education and habilitation. Serving on a medical advisory board, promoting public education about these problems, and supporting fund raising activities are always appreci-
d and always helpful.

Number five, for those otolaryngologists doing research on deafness, realize the tremendous potential and never forget the tremendous gift of hearing that someday can come out of your efforts. Keep on working despite the ob-
stacles. However, be aware that unneeded and premature
Ampliopt Chooses Winner

Ampliopt Research and Studies Center International Prize for 1983

This prize is awarded yearly to the international person-

ality who has most contributed to the advancement of

studies on deafness.

The 1983 edition of the prize was granted to Professor

Hentrikoff by decision of the Italian, European and

American Scientific Societies of Otorhinolaryngology and

Otology, and the board of Directors of the Ampliopt Research

and Studies Center.

Professor Hentrikoff is a pioneer in the field of

otolaryngology, the branch of medical practice that deals with the

pathological disorders affecting the auditory system and which may

cause a loss of balance, vocal disorders, tremor and deafness.

The prize was delivered to the Swedish scientist by A.

Kollistad, President of CBS Ampliopt.

To honor Professor Hentrikoff a Round Table on “New

Techniques of Functional Analysis in the Field of Neurology”

was held at the end of the ceremony and attended by a
crowd of specialists from all over Italy.

Professor Hentrikoff, in his;amp;lsquo;on the subject of

physiopathological mechanisms and the epistemic

physician realizes the intensity of the situation and that

is not unforgettable or surprising if the mother and/or father
cry. The more amenable physician listens and supports,

truthfully admitting that he does not know everything, es-
pecting the future. The physician, however, can truthfully

state that the future of the child’s life will still be satisfying
despite the hearing loss, the child is still acceptable, still
valued, and still loved.

1984 New Members To AAS

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Michael J. Dennis
Karen M. Dwyer
Sherry C. Dudczak
Tom Domoco
Sherrie J. Duft
Richard D. Dukart
Lou Escho-Chambers
Denise R. Elnko
Linda Ed.
Ala E. Elves
Susan T. Fong
Fayle-Vincent
Debra Fried
Brad W. Frederick
Charles G. Gans
Mark G. Gardner
Jim G. Gecker
Omme Georgoff
Patricia Gillan
Suzanne Gilman
Maurine E. Godfrey
Lawrence A. Gordon
Sandra Gordon-Opel
Raul G. Grabar
Monica G. Greg
Judy Hagedon
Donald A. Hansen
Eileen K. Hansen
Edward J. Handrick
Robert J. Hampton
Cedric W. Hart
Nancy A. Hewes
Polly Hefker
Robert J. Henry, Jr.
Alice B. Hoel
Lucinda R. Holtman
Alice E. Holmes
David W. Holmes
Laura B. Holt
E. Kimberley Hoover
William E. Hubert
Gordon B. Hughes
Edward W. Iandoli
Lou Isia
Kenneth R. Johnson
Candace A. Kamm
Darlene M. Lee
Rebecca Kooper
Marni P. Kolody
Steven J. Kramer
Kay D. Krebs
Sandra Kroger
Margaret K. Kubak
Karen J. Kupec
Karen J. Kupec
Muriel Kusher
Karen D. Labitzka
Constance A. LaPlace
Hartley Larkowski
Lewit Lasker
Amirano Lard
Greg D. Lamont
Francis M. Locks
Jean L. Lucket
Donna M. Madsen
Robert D. Madory
Michael D. Mapes
E. Gai Marcomus
Robertson M. Markson
Laura M. Markson
Margaret C. Mudde
Antonina E. Mazouk
John M. McGovern,
Jr. Eugenia E. Memoro
Lee A. Mek
Laura M. Mittelda
Joyce A. Milligan
Bryan M. Moulton
Dorabf E. Mage
Jane A. Mclllin
John T. Nelson
Michael L. Nichols
Christine E. Oblong
Jeff Forl.
Donna L. Ouellette
John R. Orton
Nora C. Palazza-Hagen
Dou A. Patera
Alexandra M. Plan
Joseph P. Pittman
James E. Powell

Sign up a friend for AAS!

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Aarin Wens
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Stuart G. Trumbull
Thomas W. Tucker
Maris Wunciuni
Katherine M. Unich
Beth J. Usman
Elizabeth A. Van Dyke
Per van Orman
Leanda V. Young
Florenci A. VanElen
Kris P. Wenzel
Donna S. Wiener
Sheryl Tepper Weilman
Laura Weish
Edward T. Whiston, Jr.
Judith E. Widen
Ann L. Wiener
Laura A. Wilber
Peggy S. Williams
Joy Wirthburg
Robert D. Wells, Jr.
Sandra C. Wimcnen
Michael K. Wynne
Sara E. Zachris
Alber Zimmer

Associate Members

Tim Broschew
Joseph C. Demese

Bell Catalog

The Spring Summer Alexander Graham Bell Association for the Deaf publication catalog is now available. The cata-

log features three new books plus many other highly re-

spected educational texts and support materials for paren-
t. The texts, reprints, and audiological materials empha-

sized the auditory-oral components of communication. Please

contact Elizabeth Quigley, A.G. Bell Association for the Deaf,

Volta Place, N.W., Washington, D.C. 20007, for your copy

copies of the catalog.

Associate Members

Tim Broshenam
Joseph C. Demese
American Auditory Society Executive Committee Meeting Minutes

DATE: August 36, 1986
PLACE: "Classroom", Santa Cruz Resident Hall, Santa Barbara, CA
TIME: 1:00 P.M.
GUESTS: Marion P. Downs, Hiroshi Shimizu, Ken Starr.

1. President Anderson opened the meeting at 1:00 p.m.
2. The minutes from the 1983 meeting of the Executive Committee were approved.
3. The treasurer's report for the period 1:04 through 3:04 was reviewed and approved.
4. David Lipscomb reviewed the plans for the 1985 meeting in Atlanta. Talzolke, the local arrangements chairman, and Ross Roeper met in Atlanta on August 4th and discussed all of the details regarding local arrangements. David Lipscomb identified a committee to work on the conference program committee. The theme for the meeting will be "Technical Innovations in Clinical Hearing Science." The possibility of having a 1-1/2 day workshop, rather than individual invited speakers, to present information on one topic was discussed. It was decided that the program chairman would investigate this possibility.
5. A possible Carhart speaker was identified and it was decided that LaVone Bergstrom would contact this individual to invite him to the meeting. (He accepts, Don Worthington, as the president of AAS, will contact him formally on the behalf of the committee.)
6. The procedure for identifying the Carhart speaker was discussed and decided. At its 1983 meeting the committee decided that to nominate speakers, it would be decided by a committee consisting of LaVone Bergstrom (chair), Hiroshi Shimizu, E. Robert Libby, David Lipscomb, and Ross Roeper to develop a list of names for Carhart speakers for future meetings. This list will be presented at the 1985 Executive Committee meeting.
7. The 1986 meeting was discussed. It has been decided that the American Auditory Society will meet with the American Speech-Language Hearing Association in Detroit in 1989. The name of two individuals was presented for program chairmanship at the 1984 meeting. It was agreed that Don Worthington would contact one of these two individuals and request that he accept the position as program chairman. Possible local arrangements chairman were discussed. The idea of holding the meeting in a local facility such as the Henry Ford Hospital was discussed.
8. It was decided that the 1987 meeting will be held in Las Vegas, NV, in conjunction with the American Academy of Otalaryngology-Head and Neck Surgery. The dates for the meeting are September 17-19.
9. Ross Roeper was appointed secretary/treasurer for 1986.
10. LaVone Bergstrom was appointed as vice president-elect for 1986-88.

A letter will be sent to the CRS committee informing them of this information.

11. The question of liability insurance was discussed. The question of whether the American Auditory Society should have liability insurance has been raised at several meetings in the past. It was decided that an insurance carrier wasH, a large company, had realized that for approximately $880.00 per year the Society could purchase this policy. In discussion it was felt that this was not a necessary expense and the recommendation was made that the Society not have liability insurance. The question of liability insurance for Carhart and Hearring that would protect the editors and authors.
11. In the past, manufacturers have contacted the American Auditory Society to present awards during the annual meeting. This is felt to be a hectic worthwhile activity and such activity is encouraged at future annual meetings of the Society. However, it was recognized that some means should be available to monitor and control the material that is being awarded during the awards ceremonies. Thus, the following motion was made and passed: "Any awards presented during the American Auditory Society meetings from outside organizations be given by the president of the American Auditory Society."\n
The issue of CE/ASA/AMA credits was discussed. It was recognized that in view of certification/licensure requirements, having continuing education credit (CE) credits for the annual meeting is desirable and should be explored. Several possible plans were outlined, and Deborah Hayes was asked to develop a brochure describing CE credits for the 1986 meeting. She will report on this area at the 1986 Executive Committee meeting.

13. Ken Starr reported on the membership/promotion committee. There were 1,158 members of the Society. This compares favorably to last year's membership of approximately 1,350. The ratio of women to men is increasing. It was also noted that the membership is still growing. It was less than 10% representation. This year's will be lower due to the Promotions Committee.

The Executive Committee reviews the names of 261 individuals who had submitted their applications to the membership. All of these individuals had the necessary requirements for membership. After reviewing the list the individuals were approved for membership without exception. This list will be published in the upcoming issue of Carhart's Organ.

14. Ralph Raunston, chairman of the long range planning committee, was not able to attend the 1984 Executive Committee meeting. In his place Charlie Anderson reviewed data from his report. A questionnaire has been sent to past Executive Committee members, as well as to the present members. Each respondent was requested to provide information on a number of activities that the Society has or should become involved in. As the various activities were presented they were discussed. President Anderson will report to Ralph Raunston regarding the reaction of the Executive Committee to the issues discussed. It was highly recommended that Ralph Raunston continue as chairman of the long range planning committee.

15. Seven members of the Executive Committee will be re-elected in November this year. The members that will be re-elected include LaVone Bergstrom (otology), Earl Harford (audiology), Suzanne Kos Blum (audiology), William L. Meyerhoff (otology), James J. Pappas (ent), and Don W. Worthington (audiology). LaVone Bergstrom, as the chairman of the nomination committee, was asked to identify two individuals and one alternate for each of the seven positions that will be vacated. The individuals nominated should represent the professional areas of the individuals up for election. This list should be presented to President Worthington by the end of October. It was decided that the candidates can be contacted and the necessary information obtained forballoting in 1985.


Ross Roeper indicated that the transition of the editorship to Robert Keill and Ken Starr was a smooth one. Many discussions have taken place and a formal meeting was on May 8, 1985. By June, Volume V was filled and all new manuscripts were being forwarded to Dr. Ken. There were enough manuscripts in the review process left over from Volume V to fill at least one issue of Volume VI.

Robert Keill reported on the in progress for the journal. The new section editors will be Don Schwartz for the Hearing Aids and Acoustical Rehabilitation Section, Jerry Nordgren for the Clinical Notes in Audiology section, Gary Neely for the Clinical Notes in Otology section, Deborah Hayes for the Speech Auditory section, Terri Sheets for the electrophysiologic techniques in Audiology and Otology section, and Eugene Sheely for Book Reviews. Irving Gottlieb will continue as the Editor of Auditory. The January February issue will be devoted to the New South Conference in Pédia tric Audiology. It was reported that 36 manuscripts had already been received for the period June, July, and August. It was indicated that Ear and Hearing will continue to publish clinically relevant manuscripts and, with only minor changes, the editorial procedures will be essentially the same as the past.

Ken Starr reported on the financial condition of Ear and Hearing. There has been a healthy increase in paid subscriptions in the past year. Total paid circulation is expected to reach approximately 3,000 by the end of 1984. Paid advertising will be about the same for 1984, as it was for 1983. Earnings are expected to be about $38,000 for 1984 which will reduce the accumulated deficit to about $38,000. The overall financial picture for Ear and Hearing was reported to be quite good.

21. Suzanne Brown reported on Carhart's Organ. The next issue will appear in October, 1986. Paid advertising has not been as available as expected. Plans for Carhart's Organ will continue as they have been for 1985.

22. Earl Harford reported that he will make a video tape of Gunter Kadle's presentation at the 1983 meeting. This video tape will be available for distribution to AAS members at the nominal fee. Announcement of the availability of the video tape will be made through Carhart's Organ.

23. The possibility of having a hospitality at the ASA meeting in San Francisco for the AAS Executive Committee was discussed. Wayne Stahl indicated that his company will have food and will invite its associates. A decision in this hospitality and announced to Executive Committee members.

24. There being no further business the meeting was adjourned.

See you in Atlanta Fall 1985.

Tracoustics, Inc.
Changes Corporate Structure

Tracoustics, incorporated has recently announced major changes in its corporate structure. Ernest Butler, M.D. has assumed the position of Chief Executive Officer for the Austin, Texas based manufacturer. Dr. Butler is an Otalaryngologist in Austin and has been a major stock holder in Tracoustics since its inception 15 years ago.

John Frankis, Ph.D. has been promoted to Vice President for the Tracoustics Instrument Division. Dr. Frankis joined the company in 1982 after a distinguished academic career in Audiology. Jeff Schmidt has been named Vice President of the Enclosure Division in the reorganization. Mr. Schmidt is an acoustical engineer, who will also head up Tracoustics new test laboratory.

Wynnard Ellis is now the Corporate Secretary and is Executive Director of Sales. Mr. Ellis has been with Tracoustics for more than nine years and is familiar with all aspects of the company's operation. Together these five capable professionals make up the Executive Committee for Tracoustics. Under their guidance and leadership, Tracoustics is planning increased sales and continuing excellence in the Auditory Room and Instrument market.
Santa Barbara 1984

Presentations...

Planning...
Queens Independent Living Center

Expands Services to Deaf

Beginning on August 15, 1984, the Queens Independent Living Center will expand its services to the deaf by having an on-site interpreter available from 5:30-7:30 p.m. No appointment is necessary and people will be seen on a first come first serve basis.

The Queens Independent Living Center, a non-residential resource center administered by and for disabled people, offers peer counseling, housing assistance, benefits advice, information and referral and advocacy. Regular office hours are 8:30-4:30 p.m. Wednesdays until 7:30 p.m.

The Queens Independent Living Center is located at 4-21 277 Avenue in Astoria and can be reached by subways to Queens Plaza then Q18 or Q19 bus, or RR to 36th Avenue, then Q18 or Q19 bus. Telephone number for voice 728-0011.TTY 728-7812.

Inter Noise Seminar
Offers Two Courses

The Institute of Noise Control Engineering (INCE) is offering two short courses on noise measurement and noise control as part of the 1984 INCE Seminar. The Seminar will precede INTER-NOISE '84, the 1984 International Conference on Noise Control Engineering which will be held in Honolulu, Hawaii on 6-9 December, 1984. One of the two courses will cover "Techniques of Noise Control." The other will be devoted to "Sound Intensity Measurements."

The second short course is being offered for the first time for those who are interested in the applications of sound intensity measurements to problems related to noise control.

The courses of the INTER-NOISE Seminar will be offered in parallel beginning on Thursday, November 29 and concluding on Saturday, December 1. The short courses will be presented at the Vancouver Hilton Hotel in Vancouver, Washington, the location for INTER-NOISE '84 which will be held in the week following the INCE Seminar.

The staff of the Seminar serves at the invitation of the INCE-USA Board of Directors. All staff members have extensive backgrounds in the field of noise control engineering and sound intensity measurement. The staff members have donated their time as Seminar leaders to further the understanding of the fundamentals of noise and its control and the basics of sound intensity measurements.

Professor Malcolm J. Crocker, Editor-in-Chief of Noise Control Engineering Journal, is the Chairman of the short course on "Techniques of Noise Control." Professor Tomochi of Penn State is Chairman of the short course on "Sound Intensity Measurements."

The "Techniques" short course will appeal particularly to those individuals who are new to the field of noise and its control. The "Sound Intensity" short course will be of interest not only to those who are involved directly in such measurements but to others who wish to become current on the latest technique for noise analysis.

Interest in the INCE short course on "Techniques of Noise Control" has been growing over the years. This will be the twelfth offering. One of the principal objectives of this short course is to enable the participants to acquire an understanding of the fundamentals of noise control so that the state-of-the-art papers presented at INTER-NOISE '84 are accessible to them.

This first offering of the short course on "Sound Intensity Measurements" is in response to the expanding interest in this subject. Recent advances in instrumentation, particularly signal processing software and hardware, have made it possible to measure acoustic intensity directly in the field. This type of measurement has numerous applications, including the determination of the sound power levels and the identification of propagation paths from noise sources. The INCE Seminar is undertaken by the Institute to fulfill one of its basic responsibilities to the public.

Further information on both of these courses is available from the INTER-NOISE '84 Conference Secretariat, Institute of Noise Control Engineering, P.O. Box 3336, Arlington Branch, Poughkeepsie, NY 12603, U.S.A. Telephone: (914) 462-4619.

AMERICAN AUDITORY SOCIETY

1984 5 MILE FUN RUN

NOVEMBER 17, 1984

6:45 A.M.

MEET IN FRONT OF THE HILTON HOTEL

☐ YES I WANT TO RUN:

By signing below you acknowledge that the AAC or any of its officers and/or members are not responsible in case of accident or injury resulting from this Fun Run. Also, that there are no provisions made for emergency medical care.

Name

Address

☐ NOT ONLY DO I WANT TO RUN, BUT I WOULD ALSO LIKE A 1984 AAS FUN RUN COMMEMORATIVE T-SHIRT AND HAVE ENCLOSED $5.00

☐ MY SHIRT SIZE IS ☐ SM. ☐ MED.

☐ LG. ☐ X-LG.

SIGN UP NOW!

MAIL TO:

DARCY BENSON
CALIFORNIA EAR INSTITUTE
1801 PAGE MILL ROAD
PALO ALTO, CA 94304

THE FUN RUN IS NOT SANCTIONED BY RUNNER'S WORLD OR TRACK AND FIELD!

CAUTION: THIS MAY BE A GREAT TIME
Nominations Open for 1985 BDTAA

The 1985 search for excellence in audiology instruction has begun with the opening of nominations for the 1985 Bette\'e Distinguished Teaching Award in Audiology (BDTAA).

The BDTAA is the only teaching award bestowed in the field of audiology. To be eligible, instructors must be nominated by a current or former student and have five or more years of experience in teaching audiology.

More than 1000 brochures containing nomination forms were mailed by Bette\'e to audiology students and department chairmen at universities across the country. Deadline for nominations is April 15, 1985.

The nomination form is one of eight factors weighted by the judges to determine a winner. It is worth 16 percent of the overall evaluation. A new aspect of the judging process is the additional input that is being requested of the nominee\'s students and colleagues.

The other six factors and their values are:

1985 Poster Child Chosen for Better Hearing & Speech Month

ROCKVILLE, MD — Five-year-old Nancy Jones of Warrenville Heights, OH, who is hearing-impaired, has been named the 1985 Poster Child of the Council for Better Hearing and Speech Month, a consortium of 23 national organizations united to

Meet the Candidates for the AAS Executive Committee Pages 3-5

1985 AAS Membership Directory Begins on Page 9

Samuel Lybarger to Address 1985 AAS Convention

It has been announced that Samuel F. Lybarger will be this year\'s Garbart Lecturer at the 1985 AAS Convention in Atlanta. (Further information will appear in the pre-convention issue of Corti\'s Organ.)

Call for Papers

The 18th annual meeting of the American Auditory Society will be held in Atlanta, Georgia on Monday, October 21, 1985. This year the meeting is scheduled with the annual convention of the American Academy of Otolaryngology—Head and Neck Surgery.

The theme of this year\'s meeting will be \"Technological Innovations in Clinical Hearing Science.\" The program will incorporate segments containing invited papers as well as contributed papers.

The program committee encourages the submission of papers consistent with the theme of Technological Innovations in Clinical Hearing Science. Papers in other areas, however, may be submitted.

Interested persons are invited to submit six copies of an abstract approximately 300 words in length. The deadline for submission is May 1, 1985. Notification regarding program committee decisions will be mailed to presenters by July 15, 1985.

Abstracts should be sent to:

Michael F. Seidensticker, Ph.D.
LSE Medical Center
Department of Communication Disorders
1900 Gravier Street
New Orleans, LA 70112
Major Hearing Aid Study Completed

WASHINGTON, D.C., JANUARY 10, 1985—A major study of the hearing-impaired population has been completed by the Hearing Industries Association (HIA) headquartered in Washington, D.C.

In announcing the completion of the twelve-month market research effort, HIA President James C. Keyes noted, "This research is the most complete and comprehensive data now available regarding the approximately 16.8 million Americans who experience some degree of hearing loss."

Results, based on a national study from the AudioLab, Phoenix, Arizona, continued, "We have confirmed the beliefs and attitudes of a sampling of this population regarding their hearing losses, professional hearing health care, and hearing aid use. We are confident that these findings will enable us to expand and enhance information, services, and products available to America's hearing-impaired population."

The study of a randomized sample of 1,500 hearing-impaired individuals was conducted for HIA by the market research firm of National Family Opinion, Inc. of Chicago, Illinois. Marketing Consultant to the effort was Robert E. Burgstein, Ph.D., Associate Professor of Marketing at Ohio State University. The project was coordinated by HIA’s Market Development Committee, chaired by Business Telecommunications, Corporation, Chicago, Illinois.

The survey sample included 500 hearing aid owners and 1,000 hearing-impaired adults who do not currently own a hearing aid. Based on a response rate of nearly 60%, to a 135-question questionnaire, the results obtained are highly projectable to the entire hearing-impaired population in the U.S.

Of major importance is the finding that 6.1 million adults wear hearing aids — fully 60%, of the estimated 10.5 million people who do not currently use a hearing aid — have obtained professional evaluation of their hearing loss. Over 40%, have discussed their hearing problem with their family doctor and an equal percentage with an ear specialist. 22% of this group have visited an audiologist, and 19%, a hearing aid specialist.

The study also found that on the high percentage of individuals who have sought professional help for their hearing problems, the survey probed the reasons for an individual’s decision to purchase a hearing aid. Survey results confirmed in other industry statistics that approximately 0.9 million Americans currently use at least one hearing aid and an additional 0.8 million people could benefit from hearing aids.

Of major importance in a hearing aid purchase is the recommendation to use a hearing aid from a hearing health care professional. Additional elements that encourage a hearing aid purchase are the recommendations of family and friends, and the social advantages of better hearing — easier conversational interactions, better comprehension and improved ability to hear television and radio. According to these survey results, appearance factors and expense do not significantly influence an individual’s decision to purchase a hearing aid.

The HIA Market Research Survey also yielded information regarding purchaser demographics, hearing aid user age, product performance and hearing aid batteries. This additional information will assist the industry in carrying out its continued commitment to quality products and service for America’s hearing-impaired population.

HIA is the trade association of manufacturers and distributors of hearing aids and components parts, and suppliers to the industry.

Amplifon Winner Announced

The Amplifon Research and Studies Center Board of Directors met on November 30th in order to scrutinize the votes which had arrived from the national and international societies for the election of the winner of the 1984 Amplifon CIG International Prize.

The winner, resulting from the pool, is prof. P. Dallas from Auditory Physiology Laboratory and Department of Neurology and Physiology of the Northwestern University, Evanston, Illinois.

I wish to thank you very much for your precious cooperation. The prize awarding ceremony will be held on March 27th, 1985.
This summer an election will be held to replace returning members of the Executive Committee of the American Auditory Society. We have asked each nominee for the office to provide the membership of the Society with some basic biographic information, and to provide their thoughts regarding the future direction of the Society. (A membership ballot will mailed to you shortly.)

Patrick E. Brookhouser, M.D., F.A.C.S., Director, Boys Town National Institute for Communication Disorders in Children, Omaha and Chairman, Department of Otologyngology and Human Communication Sciences, Creighton University Medical Center, 250 North 30th Street, Omaha, Nebraska 68131. He is a specialist in otology and has been involved in research on the relationship of hearing loss to language development.

Robert A. Dobie, M.D., M.D., Stanford University School of Medicine, Associate Professor, Dept. of Otolaryngology, University of Washington, Seattle, WA 9446. The American Auditory Society provides a unique forum to foster collaborative research among all disciplines interested in the diagnosis, treatment, and prevention of hearing disorders.

The American Auditory Society offers a unique forum for hearing and its disorders. By careful design, our Society has transcribed appropriate research and established a firm reputation; both its meetings and its journal satisfy a persistent and growing need for interdisciplinary communication. The need for major shifts in goals or strategies for the future of the American Auditory Society, is to encourage balanced representation.

Alison M. Grimes, Humboldt State University, California, MA in Audiology, 1974, and Doctoral studies in Audiology, 1975, is an important member of the American Auditory Society. She is a member of the American Speech-Language-Hearing Association and has taught courses in Audiology and Speech-Language Pathology.

Dr. Barbara Kruger, Albert Einstein College of Medicine, VESCA, Director of Audiology and Speech-Language Pathology, 130 Morris Park Avenue, Bronx, New York 10461.

The American Auditory Society has embarked on a major association with the American Speech-Language-Hearing Association. The success of this society stems, in part, from the diverse backgrounds of its members. Indeed, the American Auditory Society has been unique in its ability to provide a common forum for audiological and speech-language pathology professionals and other scientists.

Please see Candidates, Page 2
increase the interdisciplinary interaction, it should add emphasis to the clinicopathologic aspect of ear disease and auditory dysfunction, encourage clinical papers in the journal and itself more enthusiasm at national and local meetings of physicians and non-physicians alike.

Richard T. Myamoto, M.D., F.A.C.S., Wheaton College, Wheaton, Ill., R.S., 1861; University of Michigan, Ann Arbor, M.D., M.D. 1920, University of Southern California, Los Angeles, CA, M.S. (Otolaryngology), 1928; Indiana University School of Medicine, Indianapolis, Ind., Resident in Otolaryngology, 1928; Otolaryngology Group and St. Vincent Hospital, Los Angeles, CA, Fellowship in Otolaryngology, 1938; Associate Professor & Chief of Otolaryngology, Dept. of Otolaryngology—Head and Neck Surgery, Indiana University School of Medicine; Board of Governors, American Academy of Otolaryngology—Head and Neck Surgery; Secretary-Treasurer, Indiana Academy of Otolaryngology—Head and Neck Surgery.

It is a privilege to share this candidacy and voice my support of the stated aims of the American Auditory Society. The Society provides a unique forum for interaction among professionals with diverse backgrounds and expertise who are involved with the study of hearing and the rehabilitation of the hearing impaired. The future growth and strength of the Society is dependent upon its continued ability to promote this open dialogue and cooperation. As an otologist, I understand the importance of communicating with professionals of related disciplines who have a common interest in hearing because of the increasing complexity of knowledge. Considering the depth and wealth of experience represented in the Society's broadly based membership, I perceive the American Auditory Society as a key organization in our quest to stimulate research and provide care to our hearing impaired patients.

William F. Rentschler, Ph.D., B.S., Arizona State University, 1951; M.A., Indiana University, 1957; Ph.D., Indiana University, 1960; Research Fellow, Northwestern University, 1961-63; Present position: Professor and Chairman, Department of Audiology, Wayne State University School of Medicine, 631 St. Antoine, MI 48201.

A unique feature and major strength of the American Auditory Society is its membership. This membership is composed of a broad spectrum of individuals with varying interests and activities related to hearing impairment, hearing conservation, and aural rehabilitation. The range of activities of the membership encompasses: 1. Teaching; 2. Research; 3. Clinical evaluation/audiometric management & Aural rehabilitation (including hearing aid selection, fitting, sales and counseling); 4. Product (i.e., hearing aids, audiometers, etc.) development, engineering, manufacturing and sales. No other organization has such a broad scope of activities related to serving the hearing impaired. Because of the membership, the American Auditory Society requires dedication to the principles of the Society in future years.

Candidates

Continued from Page 4

Communicative Disorders, 1971; Ph.D. in Communicative Disorders, 1976, University of Wisconsin-Madison.

As society enters the age of information, computers and accelerated technological advances, I believe that the various hearing-related disciplines will experience considerable pressure to adapt and utilize the latest technological advances. Evidence of this already can be seen in such areas as cochlear implants, digital hearing aids, computerized patient record keeping, to name just a few. As we, the members of the American Auditory Society, implement these innovations in order to perform research and to provide service and healthcare to the hearing- and communicative-impaired, the needs for information exchange, for standardization, and for quality assurance will also become greater. Given the multi-disciplinary nature of the Society, I think it is an ideal group to address these needs and issues. Through its annual meetings and its publications, Ear and Hearing, the Society has the opportunity to lead in the development of standards for new diagnostic testing methods, for protocols for information exchange and record keeping, and for criteria for the performance of devices for the hearing impaired. I believe the Society has grown and matured sufficiently that it can now call upon the resources of its members to generate proposals (or additions to these needs as well as others that I have not mentioned) that are unforeseen at present.

Kenneth S. Wolf, Ph.D. B.A. and M.A., University of California, Santa Barbara, 1971 and 1972; Ph.D., University of Wisconsin, Madison, 1977. Chief of Communicative Sciences and Disorders and Assistant Professor of Otalaryngology, King/Drew Medical Center, 11201 So. Wilinton Avenue, Los Angeles, CA. 90035.

The membership of the American Auditory Society enters the second half of the 1980's facing newer and more specific challenges. Many changes in the health care delivery and educational systems will impact us.

The short history of the AAS has emphasized that all aspects of the hearing health community be represented among the membership and Executive Committee. Audiologists, hearing aid specialists, hearing scientists, and otologists have produced increased intellectual growth and promoted diagnostic, rehabilitative and rehabilitative advances. Future progress will be achieved through continued interdisciplinary efforts. Collective activities across specialty areas are needed to expedite expansion of science and service directed toward prevention, detection and treatment of the hearing handicapped.

Caution Required When Removing Earwax

WASHINGTON, D.C. — If it is smaller than your elbow, it does not belong in your ear. Claims a new leaflet published by the American Academy of Otolaryngology — Head and Neck Surgery. The AAO-HNS is the national society of doctors who treat ear, nose and throat and related areas of the head and neck.

Reaching for a cotton swab to remove ear wax is not the method otalaryngologists recommend to clean ears. According to the leaflet, the ear drum is one of the most delicate tissues of the body and one of the most easily injured. Using a cotton swab to remove ear wax, or absent-mindedly playing with a bobby pin inside your ear are possible ways to push further down the ear canal and block hearing, and also injure the skin of the ear canal.

Ear wax, which is formed by glands in the skin of the outer part of the ear canal, does have an important function — to trap dust and other particles and prevent them from reaching the ear drum. Usually, the wax accumulates in the pinna and falls out by itself. But if wax is accumulated near the ear canal and is blocking your hearing or the hearing of someone in your family, it needs to be removed.

Otherwise, this four step method should be employed to effectively wash out ear wax:

1. Use a bath temperature water and an infant emesis or a plain rubber bulb syringe.
2. Lean over a sink, and with one hand pull the ear canal upwards and backwards while squirting water into the ear with the other hand. When finished, turn and pull the ear downward to let the water drain out. You may have to repeat washing 10, 20 or more times if the ear is still blocked.
3. Watch for the wax to fall out. You can prevent "swimmer's ear" by placing an eye-dropperful of rubbing alcohol into the ear canal and then letting it drain out. Do not eliminate this step — it is important and could prevent future problems.

To keep your family's ears clean and healthy, request a single, complimentary copy of the new "Earwax" leaflet by writing: AAO-HNS, 1101 Vermont Ave., N.W., Suite 302, Washington, D.C. 20005. Please specify "Earwax" leaflet and enclose a stamped, self-addressed business size envelope. Multiple copies are available for sale; contact the Academy for details.

ATTENTION: Please send all changes of address for AAS publications (Ear and Hearing and Corr's Organ) to:
American Auditory Society
1966 Inwood Rd.
Dallas, TX 75235

American Auditory Society
Application Form
Please Type or Print Clearly.

Name __________________________ Date __________________________
Home Address __________________________ City __________________________
State __________ Zip __________ Phone __________________________
Professional __________________________
City __________________________
State __________ Zip __________ Phone __________________________
Please indicate which is your PREFERRED mailing address: Home: __________
Professional: __________

This application is for:  ______ Associate Membership (no minimum educational requirement)
  ______ Active Membership (requires at least a Bachelor's degree)

EDUCATION

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<tr>
<th>Institution</th>
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*The signatures of current members are optional for this special membership offer.

Signature of Active Member __________________________

Signed or Typed __________________________

Paid or Typed __________________________

When Completed Return to:
Membership
American Auditory Society
1966 Inwood Road
Dallas, Texas 75235

1985 ($35.00)
7th Run for Better Hearing...

A Marathon Challenge for Hearing Health Team!

Record entries for the 26-mile challenge in the 1985 "Run for Better Hearing" included 35 hearing help providers from across the country and abroad. They include ear doctors, audiologists, hearing aid specialists, manufacturers, suppliers and researchers—representing the interdisciplinary support for hearing health leading to field's most cost-effective public education program.

The seventh annual Run is a fund-raising effort to strengthen BHI hearing awareness projects. Broadcast and print media have donated the equivalent of more than $102 million in commercial time and space to BHI hearing help messages, highlighted by famous Americans who overcome hearing loss. They include: Art Carney, Nancy Crosby, Philip Diller, Nanette Fabray, Lou Ferrigno, Louie Greener, Florence Henderson, Bob Hope, Karl Malden, Clara Peter, Frankie Valli, Kevin Wynn, and others.

1985's Run doubleheader features BHI executive director Joe Rize and his sixth Boston Marathon on April 15. Then on June 15, in Duluth, MN, Joe will be joined in Grandma's Marathon by: Bob Hanrahan, Washington, D.C.; Jim Kelsoe, Monroeville, WI; John, Glen and Mark Rusie, Eden Prairie, MN; Jim Anthony, Kokomo, El Grove, WI; Annie L. Parkhurst, Champaign, Ill.; Becky Rans, Superior, WI; Aimee Park, Youngstown, Ohio; Canada, Randy Pelz, Jr., M.D., St. Paul, MN; Niles Marie Ryan, Alexandria, VA; Stephen Richard Razo, Jr., Ph.D., Chico, CA; Ron J. Roeser, Ph.D., and Sharon Lynn Roemer, Dallas, TX; Emil Schröder, Singapore; Wayne Lee Whitney, Sturm, WI; Dan Wettmuller, Philadelphia, PA; John H. Beatt, K, Jeffrey Daldenberg, Ted Ericksen, Richard Edward Marsh, Leonard L. McMillion, all from Leibyberg Electronics, Golden Valley, MN; Charles Best, Dunham, F. Clifton, Byron L. Nielsen, Gary C. Satter, David Edwardson, Dallas, TX; Richard S., and T. Cooper, Richard H. Torell, President, all from Interlinear Technology, Ontario, Canada; Stephen C. Henshaw, James O. Rose, both from Olsen Corp., Green Brook, NJ; Frank E. Trotta, and Thomas Lee Wessel, both from Phonak, Sun, CA; Mill Valley, CA.

Run Volunteer Committee

This year's Run steering committee includes Al Bruce, chairman, Stanley Lafe, Jim Anderson, Qualuk, Jane Blake, Dataphone, Glenn Bronner, Hearing Services, Bob Brown, Earsell Design, Bob Tischert, Stanley, and Mary Weber, Activist.

"We're urging everyone to pledge their special support to this year's campaign as BHI will continue to run strong," said Run committee chairman Al Bruce.

"Tax-deductible contributions will reach for beyond the 26 miles, 289 yards that our 33 runners will tackle this year. Hearing Instruments magazine, Duluth, MN, will continue to provide a vital role in promoting and coordinating the Duluth Run activities, and the Hearing Journal, Ayr, MN, will extend its special support at the Boston Marathon.

Last year's "Run for Better Hearing" finishers in the Duluth marathon included: (top-to-bottom): Wayne Whitney; hearing aid specialist: Leonard L. McMillion, BHI executive director; and Ross Roeser, BHI board member.

PLEDGE NOW! MAIL YOUR CHECK MADE PAYABLE TO BETTER HEARING INSTITUTE TO:

Better Hearing Institute
1430 K Street, N.W., Suite 700 Washington, D.C. 20005

Name:
Address:
City:
State:
Zip:

If you're supporting the "Run for Better Hearing" team, here's a check payable to Better Hearing Institute.

Yes, please send me more information on BHI.
Oral Communication Possible for Many Deaf

Oral communication is an option that is open to many deaf people. This communica- tion mode requires the deaf person to use spoken language directly with another speaker of the same language, whether hearing impaired or not. The result of receiving and understanding spoken language for the oral deaf person is a combination of lipreading (more accurately termed speechreading) and amplified hearing. Most deaf people (95%), even those profoundly deaf, have a small amount of hearing that may respond to amplification. In many cases, the amplification reaches the decibel levels of some speech sounds, the vowels in particular; short of this, amplification can provide information about intonation patterns.

A person born with a severe or profound hearing loss, or who becomes deaf before the age of about two, does not have the benefit of normal language development, which is a complex process requiring massive amounts of exposure to language and a patient (though uncommon) self- and error campaign on the part of the young child in terms of expression and reception.

No child is too young for a hearing test or too young for the parents to recognize his or her responses to sound. For example, most children from birth to about three months are startled by loud sounds and soothed by their mothers’ voices. During the next six-month period, they turn their eyes and head to try and locate sounds, and they enjoy playing with noise-making toys. From about six months to 10 months, children respond to their own names and can understand common expressions such as ‘bye-bye’ and ‘no.’ From 10 to 15 months, they can usually point to or look at familiar objects or people when asked, and they can mimic simple words and sounds. Finally, by the time a child is 1½ years old, he or she will be able to follow simple spoken directions and have a sizeable vocabulary of single words.

Any parent or professional in contact with a baby who seems to have a hearing problem should arrange for the baby to be seen by a physician or speech and hearing clinic as soon as possible. It is never too early, and it never makes more sense to ‘wait and see.’

The Alexander Graham Bell Association for the Deaf, which promotes oral communication, can supply information regarding the nearest available audiovisual speech training services for locations throughout the United States and many parts of the world. The Association’s address is 3137 Volta Pl., N.W., Washington, D.C. 20007.
Run for A.A.S. '84

The hills and valleys of beautiful San Francisco set the course for the 1984 American Auditory Society five mile fun run in association with the 1984 ASHA convention. The theme, "Run for Your A.A.S." was reflected on the commemorative tee shirts sported by the loyal members participating and observing. See you next year!
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TOMS RIVER NJ 08753
SANDRA D. GETCHELL
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GRABER, GAIL, RUST
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BHI in Explore Motivation of Hearing Impaired

WASHINGTON, D.C. September 1, 1985 —
Better Hearing Institute will launch a series of focus group interviews in major U.S. cities next month to study factors motivating hard-of-hearing people to obtain available hearing help, according to Richard T. Burger, Institute president. Pilot sessions were held last month at Northwestern University in Evanston, Ill. The regular sessions are scheduled to begin in October and will be conducted in Chicago, Boston, and Los Angeles.

Results are expected to help the Institute to further refine its public information projects and to design future messages for maximum effectiveness.

BHI commissioned NFO Research Inc., Chicago, to conduct sessions with two separate groups, one involving only hard-of-hearing people, another with adult relatives living in the same household. Ratios are that relatives of the hearing impaired may perceive level steps to obtain hearing help after exposure to public information messages. In the hearing impaired group, half of the members will have already sought professional help, with the other half not yet doing so.

In the Northwestern University pilot, one focus group consisted of people with hearing problems, and their spouses were interviewed in separate sessions. Both groups reviewed several current BHI television public service messages. They then were encouraged to discuss their reactions and their own personal experiences regarding: (1) factors leading them or their spouses to seek professional help, (2) factors tending to prevent them or their spouses from going for such help, and (3) what messages they believe would motivate people with uncorrected hearing problems to obtain available help.

The pilot was made possible by the generosity of Knowles Electronics and its marketing staff, which is assisting BHI in the focus group series.

We especially appreciate the tireless efforts of Ragi Garrett with this project," said Burger, who previously appointed Garrett to chair a board market research subcommittee. Garrett, BHI secretary, is vice president of marketing for Knowles Electronics.

SHHH is People

Deaf people make themselves heard—few hear about hard of hearing people. To counter this situation and help such people help themselves, a national organization was formed in late 1979. SHHH (Self Help for Hard of Hearing People, Inc.) serves the needs of those who suffer from hearing loss and their relatives who are partially deafened. SHHH teaches them about hearing loss and how they can deal with this problem, as well as continue personal growth and development. SHHH places its emphasis on the person, not the problem.

SHHH actively seeks out those who suffer from hearing loss. It involves them in local chapter meetings and community activities in the belief that education and service are the keys to improvement of the person.

SHHH was founded by Howard E. "Rocky" Russell during World War II. Nevertheless, he had a very successful career with the CIA. He is proud of the fact that he rose to senior officer status, not as an analyst dealing with problems on paper, but in situations where the emphasis was on people and effective communication. Although audiologically deaf, Stone is functionally hard of hearing.

SHHH was founded on the conviction that little progress can be made in helping the hearing impaired until both those who hear well and those who do not, better understand the nature, cause, complications and possible remedies of hearing loss.

SHHH is concerned also with education of hearing people. They are encouraged to join in the fight against America’s most pervasive physical handicap. The services of SHHH include: a Journal about hearing loss (six times a year); a periodic SHHH Newsletter; a Chapter Manual; remedial aid discounts; referrals and advisory service. They feel a strong sense of responsibility and representation; a national constituency and conventions.

Etymotic Research, Alive and Well After Two Years

July, 1985 marks the completion of the second year for Etymotic Research. Ned Killmim began the company in 1981 to develop a line of products that were needed for hearing testing and hearing aid modification.

Shortly after the company was founded, Ed DeVilbiss joined Mead as a partner and business manager. As the business expanded, they were joined by Don Wilson and Jon Stewart in engineering. Connie Moreo as secretary, and Tim Killmim as assembler.

To date, these products have been introduced. The fastest growing product line is a series of insert earphones. One is an alternative for conventional IEM-SP headsets to be used by otoologists as well as audiologists. In addition, this line includes two higher frequency (50 Hz to 10K Hz) insert earphones which have been popular with those doing auditory research. A second product, the open-can, reverse slope, K-BAAS hearing aid has proved an effective fitting for a rare type of loss. Work in this area has led to a series of earhooks which will be available later this year and which will solve several different fitting problems.

The final product is a highly accurate probe microphone custom built for research. This has led to the development of a low noise microphone, also for research, to measure ear canal emissions.

Killmim indicates that the increasing sales of these products has been most satisfying, since it should ultimately permit him to devote more time to his primary interest which is new product research and development.

SEI now certifying hearing protectors

A third-party certification program for hearing protection devices has been initiated by the Safety Equipment Institute (SEI) with the authorization of the U.S. Consumer Product Safety Commission (CPSC). The SEI program parallels an EPA program mandating uniform testing of hearing protectors and assigning them a noise attenuation value called the Noise Reduction Rating (NRR). Under the EPA program, which has been unfunded for years, the NRR was indicated on a label affixed to packaging of hearing protection devices.

"The EPA and SEI have signed a Memorandum of Understanding that authorizes the use of the SEI Mark on the NRR Label and recognizes the SEI Program," said SEI Chairman of the Board, George G. Smith. "This means that for the first time in several years an active program exists for the testing of hearing protection products."

The testing and certification program applies to earplugs, circumaural devices, cap-mounted devicess and supra-aural devices.


"All EPA data from tests conducted since 1980 will remain valid under a separate clause." Smith explained. "Thereafter testing will be required every five years so that at no time will test data be older than five years."

SEI certification of hearing protection devices goes beyond the requirements of the original NRR program established by EPA. Like other SEI certification programs, it will be conducted by Accredited Auditors of manufacturing facilities. These are conducted periodically by an independent auditor, W.A. Gontowski and Associates, to assure that the manufacturer is capable of maintaining consistent quality control in producing hearing protection devices.

Only when both the testing and quality assurance audits are passed will the SEI certification be granted.

SEI, headquartered in Arlington, Va., is a non-profit operation that exists solely to certify a broad range of safety equipment. Products currently certified by SEI include protective helmets, face shields, protective eyewear, emergency eyewashes and safety showers.
From the Editor

Dear Fellow AAS Member,
As the editor of Corti's Organ, our companion publication to Ear and Hearing in the American Auditory Society, I am asking for your personal help. Over the years, I have seen a gradual decline in original material submitted to Corti's for publication. This is despite the dramatic rise seen in AAS membership. I would appreciate your taking a short time on a regular basis to correspond with me regarding clinical or research developments, applications and other activities in your area, of interest to our membership. The formal for publication in Corti's is more relaxed than typically submitted to other journals. Accompanying pictures or graphs are welcome. As usual, we will be happy to announce future events in Corti’s Calendar. Thank you in advance for your time and assistance. I look forward to hearing from you soon.

Sincerely,

Suzanne G. Brown
Editor, Corti’s Organ
8517 Northwest Plaza Drive
Suite 103
Dallas, TX 75225

Corti's Calendar

October 18-20, 1985

October 21, 1985
American Auditory Society Annual Convention. Atlanta Georgia. Hyatt Regency Hotel. For information and registration contact Ross Rosser, 1964 Inwood Rd., Dallas, TX 75230.

January 10-12, 1986
The Triological Society, Western Section Meeting. The San Francisco Hilton, San Francisco, CA. For information: J. Dillibarzomee, M.D., 2439 Castillo St., Santa Barbara, CA 93105.

March 9-15, 1986
The 20th Colorado Otology-Audiology Workshop will be held March 9-15, 1986 at the Continental Inn and Aspen Conference Center in Aspen, Colorado. For further information contact: Jerry Northern, Ph.D., Colorado Hearing Foundation, Box B219, 4200 E. 9th Avenue, Denver, CO 80220.

July 28-31, 1987

3M offers training seminar for cochlear implant teams

Training seminars for otorlogists, audiologists and other clinicians who wish to become involved in cochlear implant practice are being offered by the 3M Otolologic Products Program.

The seminars will focus on the 3M Cochlear Implant System/Hexa Design, the only FDA approved cochlear implant. Hearing health professionals who intend to become involved with cochlear implantation programs are urged to enroll in the seminar, which will provide information on: medical evaluation of implant candidates; administrative and ethical aspects of patient selection; preoperative counseling; surgical technique; fitting and adjusting the device; and post-operative training and rehabilitation.

The seminar will be conducted by 3M with the support and participation of experienced clinicians and audiologists from the House Ear Institute, Los Angeles, and other leading cochlear implant teams from across the United States.

The three-day seminars are scheduled for Nov. 6-8, 1986; Feb. 23-25, 1987; June 4-7, 1986; Aug. 6-9, 1986, and Oct. 15-18, 1986.

For a brochure and complete seminar information, write Otolologic Products/3M, Department HBS00-5, 3M Center St. Paul, MN 55440-1000.

Publication Notice

The Hearing Aid Handbook has been reprinted to meet numerous requests for the handbook after the original printing was depleted.

This is a professional and serious layman's guide to understanding, using, maintaining hearing aids and related amplification devices. Contents include: general description of hearing aids, hearing aid components and their functions, electroacoustic performance of hearing aids, acoustic coupling, hearing aid service and maintenance, special amplification devices and modifications, and a special section on understanding the deaf.

This text has been considered a "must" for everyone involved in hearing health care, including audiologists, hearing aid specialists and consultants, libraries, students, otologists, hearing and speech centers, universities, colleges, hospitals, governmental agencies, schools for the deaf and hearing impaired, interested parties in hearing aids, and public libraries. The book is 568 pages and includes 224 illustrations.

It can be ordered from: Wayne J. Basha
122 E. Canterbury Lane
Phoenix, AZ 85012

Microcomputer Software Directory

The first microcomputer software directory to appear in Ear and Hearing was in the November December 1984 issue. Another such directory, listing software likely to interest AAS members, is planned. Producers of software are invited to send descriptions of their products to:

Eugene C. Sheely, Ph.D.
Book Review Editor
Ear and Hearing
P.O. Box 1903
University, AL 35486
The purpose of this study was to determine the influence of auditory thresholds at 5000, 6000, and 8000 Hz on ABR, and to determine the occurrence of abnormal ABR results when various correction factors for wave V latency were used.

Subjects for this study were over 50 adult patients who were referred for ABR because of suspected retrocochlear pathology. Of these, 40 (79%) were patients found to have no retrocochlear pathology based on medical, audiologic, and/or radio logic evaluations. In addition, we evaluated over 60 surgically confirmed tumor patients. All patients were evaluated by conventional ABR procedures using a three-electrode montage (vertex, left, and right ear) and the following two large positive peaks with latencies which correspond to waves I and III in the standard configuration. The X channel, recorded from the vertex to the seventh cervical vertebra (vertebra ganglion), contains activity very much like the standard vertex to mastoid ABR with the exception of wave I activity which is smaller in the vertical channel.

Spectra of the 3-CLT have been shown to lie in spatial planes using analysis technique modeled after vector cardiography. Human ABR SC-like features contain 15 planes which overlap in time. The clinical significance and research applications of the 3-D technique will be discussed including a method for determining optimal target level for recording various aspects of the ABR.

ABR RESULTS: RELATIONSHIP TO THE PURE-TONE AUDILOGIST Christopher E. Din, J. Thomas Christian, and R. J. W. usage. In clinical audiology, ABR test results are used extensively to help differentiate otitis media vs. retrocochlear disorders. However, a variety of contaminating variables must be considered if ABR test results are to be interpreted appropriately. For example, auditory and/or scope of peripheral hearing losses can yield abnormal ABR results even though the disorder is not due to retrocochlear disease.

Because the occurrence of ABR is important in the clinical evaluation of hearing loss, we have attempted to establish criteria for interpreting ABR test results for various slopes and degrees of hearing loss.

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Because the occurrence of ABR is important in the clinical evaluation of hearing loss, we have attempted to establish criteria for interpreting ABR test results for various slopes and degrees of hearing loss.
In routine ABR testing the brief duration rectangular wave in the cat's ear is transduced through one of two types of standard electromagnetically induced microphones (e.g. TDH-39, TDH-49) housed either in circumaural or supraaural cushions. Since these electrically charged earphones have a high-input-impedance they often impair the delivery of electrical signals to the auditory nerve, especially when the ears are close to the sound field, and the acoustic signal is low. In these circumstances, the error may be minimized by inserting a preamplifier between the microphone and the ABR equipment. The problem is characterized by a marked decrease in the amplitude of the ABR waveforms when the ears are in close proximity to the sound source.

Recently, two new types of air-conduction transducers have been developed that seem to alleviate the problems of high-input-impedance earphones. One is the first prototype developed by John M. Cathey, and the second is a new insert earphone designed by Killion, which is thought to produce a very nearly rectangular voltage pulse at the audiometric threshold. The former is now being evaluated by the National Research Council and the latter is being compared to a series of patients with surgically induced lesions in the posterior fossa.

**EXPLANATION AND IMPLEMENTATION OF A MULTIELECTRODE ARRAY IN THE SAME EAR**

Diane J. M. Fishburne, Judith A. Brimacombe Cochlear Corporation Beverly, CO

Richard C. Dowell, Graeme M. Clark University of Melbourne James F. Patrick Northern Limited

Major controversy surrounds the issue of hair cell damage that can be caused by the intrusion of electrodes for the restoration of hearing. However, successful implantation and reimplantation of a free-standing, 30-channel multielectrode array has been achieved in three patients with a high degree of behavioral restoration. For these cases, the original University of Melbourne, multielectrode array was surgically implanted, then removed five and six years later, then a new multielectrode array was reimplanted in the same site. During both surgical procedures, no complications were encountered in any case. Comparable current thresholds, effective dynamic ranges, and place-pitch ratios for the two multielectrode arrays were obtained following the first and second surgical procedures. Speech discrimination testing revealed that patient's performance continued to improve following the second surgery, and psychophysical measurements remained stable. These findings demonstrate the feasibility of implantation and reimplantation of this free-standing, bandlimited multielectrode array, an important strategy for the future of cochlear implantation.

A WEARABLE MULTI-MONITOR ELECTROTELESTATIC AID FOR THE DEAF AND HARD OF HEARING

Barbara Franklin

There have been numerous attempts to develop tactile sensory aids beginning with the use of electrotactile stimulation to stimulate the skin. Tactile sensations are produced by direct stimulation of the nerve endings in the skin with a paddle. The paddle yields a vibratory sensation which is reliable and effective. The paddle does not present an acoustic information to the skin via a set of sensations worn around the abdomen. Each stimulator responds to a specific pitch, low-frequency sounds are represented as one pitch, with high-frequency sounds represented as another pitch. A sound, rising and falling in pitch, is perceived as a sensation moving left and right around the abdomen. This system allows the patient to maintain their spatial awareness in a number of environments.

The "Telelact" developed by Dr. Frankl and associates consists of 123-channel non-implantable multielectrode and which displays sound ranging from 800-9000 Hz on a belt worn on the abdomen. The first field evaluation of the "Telelact" was conducted in 1978 (Frankland, et. al., 1981). The belt was placed around patients' waists, and patients with profound sensorineural hearing loss, 3-4 years of age. Following a period of training, all children demonstrated the ability to discriminate sound frequency and intensity patterns of utterances, pitch changes, and voice/vocalice (fricatives). A group of 20 deaf adults was implemented with the "Telelact" from 1976 to 1979. An audiometrically deaf child was conducted in 1979 to investigate the effect of the "Telelact" on the speech of four deaf-blind children in the California School for the Blind. The research involved the modification as well as improved voice quality and speech rate.

A wearable 16-channel electrotactile sensory aid designed to supplement lip-reading and residual hearing is currently being evaluated on six profoundly deaf and hard of hearing children between the ages of 3-7 years of age, from the Jackson Hearing Center in Palo Alto, California. The device consists of a lightweight belt worn around the clothing against the skin of the abdomen, connected to an electronic enclosure approximately the size of a Sony Walkman stereo, which in turn receives audio input from a microphone and power from a small battery pack. Each paper will discuss the development of the device, the test battery used to assess communication skills of the project children, the training program designed to teach them how to interpret the tactile information, and the effect of the tactile aid on lip receptive and expressive communication skills. Plans for field testing are also described. The device will be presented. A wearable electrotactile sensory aid should enhance the development of communication skills and auditory awareness by providing the child with continuous feedback of his/her own speech, the speech of others, as well as sounds in the environment. This research is currently being supported by an NIH Small Business Innovation Research Grant.

**DEVELOPMENT OF INTRATRACHEAL INTUBATION AND THE DETECTION OF PERILYMPH FISTULAS**

David J. Lilly, Owen Black and Lewis M. Nasher Department of Otolaryngology and Neuroradiology, University of Texas Southwestern Medical Center

Lucan (1844) in his classic work was the first to describe conjugate deviation of the eyes, objective nystagmus, loss of balance, and blindness in a patient when air pressure in his middle ear was higher or lower than ambient. When this pneumatic test is positive, the results usually are reported as a "positive fistula." In our ongoing research on descriptive fistulas also is an important cause of sensorineural hearing loss. Unfortunately, over the last 100 years, there has not been a simple, non-invasive test for diagnosis of perilymphatic fistula.

In this presentation we shall describe the development of instrumentation and a test procedure for quantification of the fistula test. We also shall describe our clinical findings with this test. Our approach is based upon vestibulospinal responses to variation in air pressure in the naso-
monitor the patient's tongue and center of pressure in relation to the tympanic membrane.

The auditory brainstem response (ABR) for normal subjects and patients with hearing loss is also illustrated. This method is particularly useful in cases where pure-tone audiometry is not possible due to the presence of hearing aids or other auditory prostheses.

The ABR results are expressed in microvolts (μV) and millisecond (ms) units. The latency and amplitude of each component are measured to determine the integrity of the auditory pathway.

**CONCLUSIONS**

- Spectral analysis of the ABR in normal subjects indicates that the resolution of the auditory pathway is more pronounced in the low-frequency region.
- The ABR amplitudes are significantly higher in patients with cochlear hearing loss compared to normal subjects.
- The ABR can be used as a screening tool for hearing loss, especially in children and infants.

**METHODS**

- The ABR recordings were obtained using custom-built electrodes placed on the mastoid process and referenced to the temporal lobe.
- The stimuli were 100 ms clicks presented at a rate of 12 per second.
- The ABR data were analyzed using a computer-based software package.

**RESULTS**

- The ABR waveforms were compared to those of normal subjects and patients with cochlear hearing loss.
- The ABR amplitudes were significantly lower in patients with hearing loss compared to normal subjects.
- The latency of the ABR components was also longer in patients with hearing loss.

**DISCUSSION**

- The ABR is a valuable tool for assessing the integrity of the auditory pathway.
- The ABR can be used to monitor the effects of cochlear implants and other auditory prostheses.

**ACKNOWLEDGEMENTS**

- The authors thank the patients who participated in the study.
- The research was supported by grants from the National Institutes of Health.

**REFERENCES**

PRELIMINARY FINDINGS ON THE EFFECTS OF TENSOR TYMpanic AND TEMPOdy ON ACOUSTIC REFLEX LATENCY AND AMPLITUDE

Traditionally, acoustic reflex threshold and latency have been used in the diagnosis of audiological, neurological, and neuroanatomical disorders. Recently, more subtle measurements, including reflex latency and amplitude, have been developed in an attempt to enhance these diagnostic capabilities. Since reflex latency and amplitude are dependent on the integrity of the entire reflex system, it is conceivable that lesion involving the tensor tympanic nerve and/or the trigeminal nerve could alter the results of these movements. The purpose of this study was to investigate the effects of complete tensor tympanic tympanometry on acoustic reflex latency and amplitude.

Twelve adult, mixed-breed dogs were utilized in the study. The dogs were divided into two groups. Six dogs were subjected to surgical transections of the tensor tympanic tendon, and six dogs served as Sham-operated controls. Pre- and post-surgical measurements of contralateral and ipsilateral acoustic reflexes and latency and amplitude were made on each dog using a stimulus frequency 1 kHz and 2 kHz. The stimulus intensity ranged from 70-110 dB for ipsilateral reflexes and 10-140 dB for contralateral reflexes. Tympanometry and static compliance measurements were made for each recording session to insure that no changes in the middle ear system had resulted from the surgical procedure. Post-tympanometry measurements showed no significant change. The tensor tympanic reflex system has a significant role in acoustic reflex latency and amplitude and that lesions to that system are not reflected as changes in these two reflexes.

NEW NOISE SUPPRESSION TECHNOLOGIES USING REAL-TIME DIGITAL FILTERS

James A. Nunley and Wayne J. Staub

The use of digital signal processing in audio is fairly widely accepted. There was some controversy for a time about the quality of sound produced by this technique. The use of laser discs and other techniques has put the problem of quality to rest. We can therefore expect digital processed audio to be of high fidelity. The obvious reason to consider digital signal processing of audio for the hearing impaired is the signal enhancement. The main problem hearing-impaired have with present audio signals is noise interference. To eliminate the noise and retain the signal, the goal. The signal, in most cases for the hearing impaired, is speech. Speech occurs in real-time, i.e., the word is spoken and the listener receives the sound, immediately. The goal then is to analyze the signal, determine what is needed, and what is to be discarded. There are presently available microprocessors that are fast enough to perform this real-time processing. The significant feature is to instruct the microprocessor what to do. Various mathematical instructions are called algorithms. The algorithms that seem to hold the most promise are ones that look at the signal and make real-time adjustments or adaptive filtering. We are presently looking at several different approaches to real-time adaptive filtering.

One approach is to use the overall signal level, measure the low-frequency content, and adjust the amplifier compression ratio based on frequency bands. A second approach is to analyze the overall signal level, measure the various frequency components, and adapt the compression ratio to various bands. A third approach, and one that shows some promise, is the near-field, the field approach. This method teaches the microprocessor to control the near field, e.g., the speaker, and reject the far field, i.e., the noise.

The presentation will demonstrate these various techniques through tape-recorded examples.

VIRTUAL INSTRUMENT METAPHORS FOR CLINICAL HEARING SCIENCE

David J. Lily

Good Samaritan Hospital and Medical Center

Jonathan D. Black

Virtual Corporation

Portland, OR

Formal training and professional experience have produced generations of hearing-aid specialists who are familiar with the front panel layout and control of analogy instruments. These same individuals, however, have been reluctant to accept personal computers for clinical applications. Much of this reluctance can be traced to inappropriate interfaces between the human operator and the computer. Command-driven software, menus-driven software, and keyboards simply are not efficient for most clinical tasks.

In this presentation we shall describe an extension of the virtual device interface concept to requirements in clinical hearing science. Specifically, we have developed hardware and software solutions that simulate the control panel and the graphic output of an analog instrument on the video display of a personal computer. Interaction of a desired test or procedure is accomplished by pointing to a "virtual control" with a "mouse" or "track ball" and then selecting (clicking) on that function. Intercalation of a test, termination of a run, plotting of results, changing scales and outputting "hard copy" all can be accomplished by selecting the appropriate icon on the display. Most tests can be completed without the keyboard.

We are using the term VIRTUAL INSTRUMENT METAPHOR (VIM) to describe this simulation of an analog instrument. Initial development of this approach has been implemented on a Macintosh computer. Thus, it represents an extension of the "virtual analog" metaphor provided with that machine.

That attached (supplemental) figures provide a graphic overview of a VIM interface for computers in the clinic. The example is for an aural, acoustic-inaudibility system. When the program is run, the first display (Fig. 1) resembles the front panel of an analog instrument. The "virtual needles" on the "virtual analog meters" indicate the approximate quantities and trends while the actual values appear below each meter. The user simply moves the pointer to the desired "virtual control button" and selects it. Figure 2 depicts a similar display for standard tympanometry and Fig. 3 shows the resulting display. These examples will be expanded with clinical results during the presentation.

USING PHYSIOLOGICAL PROPERTIES TO SUPPLEMENT HEARING PROTECTION

David N. Lipton

University of Tennessee, Knoxville

Hearing protectors have historically been found to offer better protection in...
SIMULTANEOUS MULTIPLE FREQUENCY TYPICALLY CONSIDERED TO BE THE TRANSFORMS OF BROAD-BAND SIGNALS

Vernon D. Larson
Audiology and Speech Pathology
VA Medical Center
Augusta, GA

Daniel D. Schwartz
Department of Otolaryngology and
Human Communication
University of Pennsylvania School of
Medicine
Philadelphia, PA

Robert Talbot
Department of Audiology and Speech
University of Washington
Seattle, WA

Christopher Abelnren
Audiology, and Speech Pathology
VA Medical Center
Memphis, TN

CONTINUOUSLY TYPICAL LOW-FREQUENCY SIGNALS WERE RELATIVELY INSENSITIVE TO PATHOLOGIES INVOLVING THE OSSICULAR CHAIN. CURRENT UNDERSTANDING OF THE PHYSICAL CHARACTERISTICS OF THE MID-EAR AND THE MEASUREMENTS MADE AT THIS FREQUENCY (CLASS) OF THE TYPICALLY DEEMED TO BE THE PRIMARY SOURCE OF ENERGY FOR THE COCHLEAR MUCUS.

The concept of electrosensitivity by the cochlea provided the basis for the new view of the auditory system as presented in a recently published book The Dynamism of the Auditory System.

THE ELECTROMAGNETIC FIELD OF THE AUDITORY SYSTEM

George C. Offatt
Gold Coast Sensory Processes
Shapleigh, WV

It is obviously desirable to be able to relate all experimental observations of cochlear function to each other within one unified theoretical framework. The model is a holistic model that is the basis of a unified view of how the cochlea and other organs of hearing function. The preparation of evidence may appear to support the idea that the cochlear system is sensitive to mechanical stimuli-these mechanical stimuli may be the primary source of energy for the cochlear mucus.

The basis of the model of cochlear function is a dual-transduction of acoustic stimulus into mechanical stimulus; the mechanical stimulation of the outer hair cells (OHC), the pressure in the middle ear, and the cochlear hair cells. This dual-transduction is a phase-coherent transducer of a piezoelectric (i.e., linear mechanical) substrate. The mechanical stimulation of the outer hair cells (OHC) may then detect the electrical potentials present at their cuticular surfaces. This proposal negates the problems of nonlinear transduction of cochlear hair cells near threshold and the origin of the tuning observed in the primary neurons. Evidence is accumulating to show that the cochlear pressure wave may be an effective source of energy for the cochlear hair cell.

Possible explanations for some cochlear phenomena such as the tuning and threshold of the cochlear hair cell...
continued from page 7

of the potentials available to the IHC. Tit-
us may be due to the hyperresponsivity of
the IHC after the loss of OHC suppression.
Thus, titus may be thought of as the
subject listening to noise. In the brain, ti-
thus may be when the IHC are respon-
ding to potentials from the IHC. It is
possible that the use of cochlear pro-
thenses may be improved by placing
stimulating electrodes in the scala media
where a more effective stimulation of the
IHC will be achieved.

Assistive devices catalog ready

Sound Resources, Inc., a firm specializ-
ing in amplifying, alerting and conve-
ience devices for the hearing impaired,
has published the second edition of its com-
prehensive mail order catalog. This infor-
mative, fully illustrated catalog offers
over 25 different assistive devices and
ideas from more than 30 manufacturers. It
contains everything from telephone, televi-
sion and doorbell amplifiers to total
alarm and alerting systems. This unique
catalog offers the consumer easy com-
parison of a variety of products and the
convenience of ordering by mail or phone.

BHI reprints available

WASHINGTON, D.C., September 1, 1986

— A new edition of Better Hearing In-
stitute's BHI Otorama Hearing Loss book-
let — adding new personalities who have joined
the Institute's public information program —
has been made possible by a grant from
the Delta Zeta Founders Memorial Foun-
dation.

The new edition will feature the personal
success stories of many of the per-
sonalities in BHI's award-winning tele-
sion PSA series, including Art Carney,
Norm Crosby, Phyllis Diller, Nanette
Faboray, Les Ferrigno, Jeff Flett, Lorne
Greene, Florence Henderson, Bob Hope,
Kiel Martin, Frankie Valli, George
Wallace and Keenan Wynn.

A fourth reprinting of Better Hearing In-
stitute's Timelines, or Noise Handout book-
let has been made possible by the Hearing Aid
Battery Division of Ray-O-Vac Corpora-
tion. The pamphlet, which explores the
causes of tinnitus and its treatment, is
authored by Norman Lee Barr, Jr., M.D., a
member of the Institute's advisory board.

A sixth reprinting of Better Hearing In-
stitute's Store Success and Paybook book-
let has been funded by Activair, a division of
Duraclip Inc. The booklet by Gale Gard-
ner, M.D., has become a classic on sen-
soneural hearing loss, the most
prevalent form of hearing impairment. It
shatters common myths and explains that
most people with nerve deafness can be
helped to hear better with a properly
selected and fitted hearing aid.

If you would like a free copy of any of the
above booklets write to: Angela Hayden,
2031 B. Backlick Road, Annandale, VA
22003.

POSITION AVAILABLE

Howard Payne University in
Brownwood, Texas, announces a vacancy
for a clinical audiological beginning in
August.

The minimum requirements include a
master's degree in audiology and a CCC-A.
Teaching load includes nine hours per
semester. The person is also required to
maintain an audiological clinic which ser-
cices a wide range of population. A new
clinical audiometer has just been obtain-
ced.

Salary is negotiable depending on ex-
perience. Summer teaching is also
available.

If interested please send vita or contact
one of the following people:
Dr. J.W. Cady, Vice President
Academic Affairs 915-646-2852 ext. 302
or
Martha Taylor Graves, M.A., CCC-A
Clinical Supervisor
915-646-2852 ext. 411

1985 AAS CONVENTION REGISTRATION

Registration is open to all who wish to attend on the following schedule:

<table>
<thead>
<tr>
<th>Registration for Meeting Only</th>
<th>Registration for Meeting and Dinner</th>
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<tbody>
<tr>
<td>Before Oct. 1</td>
<td>After Oct. 1</td>
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<tr>
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<td>55.00</td>
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NAME (Print) |
ADDRESS |
CITY | STATE | ZIP |
Meeting |
Meeting & Dinner |
Spouse |
Resident/Student |
Total Amount |

MAKE CHECK PAYABLE TO AAS
(Registration is Non-refundable after Oct. 10, 1985. A $5.00 fee will be charged to those requesting a refund to cover administration costs.)
Aural Rehabilitation Forum

Editor's Note: The following article contains the series of papers which "kicked off" this Forum. In particular, the article prepared by Thayne Smalley, discussing promotion techniques in hearing health care, spurred this issue's segment of the Aural Rehabilitation Forum. Let's keep this relaxed interplay of philosophies going. Send in your contributions!

Marketing Hearing Healthcare Services to a Minority Population

By Ronald C. Jones & Jason Richardson-Jones

Private practice audiologists Ronald C. Jones, Ph.D., and Jason Richardson-Jones, Ph.D., an African-American from Richmond, Virginia "Hearing Health Care: Services to a Minority Population." He received his Ph.D. in Communication Disorders from the University of Cincinnati. Jones Richardson-Jones, Ph.D., received her M.S degree in Community Health Education at Old Dominion University and serves as a community health education consultant for The Listening Ear. Their article is based on their presentation at the 1986 annual meeting of the Speech and Hearing Association of Virginia. Correspondence: 1996 Penmar Drive, Richmond, VA 23223.

Most people would agree that the primary responsibility of advertising is to create interest and to attract new prospects to buy the product or service being offered. This is certainly true in the hearing aid industry, where it has been estimated that over 17 million American have hearing loss severe enough to warrant the use of a hearing aid. And with a large potential market, it is no wonder that hearing aid advertisements are seen in magazines, newspapers, direct mailings and, increasingly, on television. Beyond serving their primary purpose, these ads also do much to inform potential users of the problems associated with hearing loss.

What is peculiar about today's hearing aid advertisements, though, is that they appear to be directed to one segment of the potential market: the whole middle-class elderly population. Rarely, if ever, does one see an ethnic minority represented in these ads. This omission, intentional or not, promotes the notion that minority populations are not part of the hearing aid market — that they do not experience hearing loss or have hearing loss. Therefore, they do not need or use hearing aids. Viewed more critically by ethnic minority hearing-in-audited persons and their family members, for example, the resulting implications of this omission can be serious. "This product isn't for me," "I'm not old enough," "I'm not sick." Years ago, most companies that sold hearing aids or personal hearing products openly refused to use minorities in their advertisements for fear of offending the majority of their market and scaring off sales. However, considering that today many consumer goods marketers routinely employ minorities in their advertisements to take advantage of a burgeoning market, it would be to the hearing aid industry's advantage to do likewise.

One possible explanation for why the hearing aid industry does not use ethnic minorities in its ads is that minority groups do not appear to represent a significant portion of the hearing aid buying population. Thus, when considering advertising budgets, manufacturers and distributors adhere to this belief: "It's better to put your money where it will do the most good." In this case, the white middle-class elderly fit this description. If this rationale were applied, however, it should be based on logic and accurate statistical data — not on casual observations, which from our perspective, appears to be the case.

Minority Market Potential

Although exact figures as to the number of minority persons with hearing problems in the U.S. are difficult to acquire, we can draw estimates from the 1980 U.S. census reports. Conservatively, we estimate the proportion of the U.S. population with significant communication (hearing and speech) problems at more than 10%. When applied to the 1980 minority population within the U.S. of 40 million, this equates to over 4 million people. These 4 million, then, would serve as the potential minority market base for the distribution of various communication aides, including hearing aids.

The number of hearing aids actually sold to minority individuals — specifically, to black persons — is also an elusive figure, simply because the industry as a whole does not keep record of such transactions, at least not on the basis of race. A reasonable indicator, however, would be the number of earphones and/or in-the-ear hearing aids listed to a dark tone,. Assuming, of course, that these would be worn by persons with skin tones to match. Most hearing aids sold to other ethnic minorities are in the dark tone of color, not for the purpose of matching skin tones, but for the purpose of matching skin tones, but for the purpose of matching skin tones.

Early in 1986 we conducted a telephone survey of several hearing aid and earphone manufacturers, asking what percentage of their products were sold to non-white persons. Their replies suggested that from 5% to 10% of hearing aid and hearing aid accessories accounted for 1% of the total number of hearing aid sales in the U.S. during calendar year 1986. This estimated one percent of their figure translates to a little over 11,000 hearing aids sold, presumably, to individuals of dark complexion.

Minority Market Survey

With these figures in mind, we set out to discover whether, with such a relatively large minority market base for hearing aids, there was not a larger percentage of the hearing aid population. To do this, we administered a questionnaire to minority members' decisions to seek or not to seek...
from the Editor

Years ago while I was a student I noticed that when their thesis was shown to students of the class. I realized that this was a serious situation because the physicians who were present would not be able to answer any questions. This is a problem that needs to be addressed in order to prevent it from happening again.

Suzanne Koo, M.D.

Audiology Trivia

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Suzanne Koo, M.D.

The President's Corner

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Suzanne Koo, M.D.
An Important Message from Audiotone

Dedicated to Making OUR COMPETITIVE EDGE, YOUR COMPETITIVE EDGE.

A major Audiotone strength has always been its PEOPLE from your factory representative to our engineers, from our production department to the shipping room...all throughout our organization. Audiotone is dedicated to continue this long tradition of having caring, understanding, and experienced people whose primary objective is to serve you.

Additionally, Audiotone is proud of its history of commitment to PRODUCTS and PROGRAMS—all for you, the hearing aid dispenser.

Now, you will experience even more—a NEW AND IMPROVED MARKETING PROGRAM to ensure your Competitive Edge. Be a part of this Program as it unfolds. And, it begins with PEOPLE. People dedicated to a winning attitude and sharing our success with you.

This winning attitude...these experienced professionals...and our full line of quality, dependable products and programs, all lead up to your continuing advantage.
The American Auditory Society has enjoyed considerable membership growth during the past decade. This growth has had its basis in several important factors. One is the fact that the society is a voluntary health care system. The excellent leadership of the society has fostered a climate within the membership as well as with the auditory professionals. It has an ever-improving journal which has gained recognition for its quality and relevance to the hearing professional. All of these factors have become increasingly important at a time when the profession is facing new and ever-changing challenges. The liaison of professional independence and respect, private practice, integration of technological advances, and appropriate linking of professional, education and continuing education require discussion, direction, and evaluation at the national level.

I believe the AAS can play a major role in the evaluation of these issues. However, this may necessitate more active political involvement on the part of the AAS to represent its constituency and its concerns, both at the state and national level. In addition, continued dialogue between the American Society of Audiology and the society is of utmost importance. It is through these activities that the AAS can continue to meet the goals of the society and the concerns of the hearing professional.

Deborah Hayes, Ph.D., Deputy Director, Audiology, and Speech Pathology, The Children's Hospital, Denver, Ph.D., Radog College of Medicine, 1978, M.A., 1975, B.S., Northwestern University, Chicago, 1971. Ph.D., University of Utah.

My affiliation with the American Auditory Society has been a very rewarding professional experience. In the past few years, the AAS has grown in membership, stature and contribution to the professional community. The unique interdisciplinary nature of the Society provides a forum for exchange of ideas, debate of controversy and increase in knowledge. For all of these members, our journal, Ear and Hearing, has become more than just a mechanism for sharing information. Audiology, our annual meeting continues to grow in attendance and visibility. I have been proud of my association with the Society, and would enjoy the opportunity to continue this association on the Executive Committee. I would like to see the Society continue its steady growth, attracting new membership from all professions dedicated to prevention, identification and habilitation of hearing loss. I would encourage the continued excellence of our journal and meetings, and strive to make these activities important, valuable and attractive to our members. Finally, I would encourage the Society to develop a presence within the national and international arena which would recognize the unique and important role of the American Auditory Society in the professional community.

John T. Jacobson, Ph.D., Director of Audiology, Garfield Medical Center, Duarte, Ph.D., Special Education, San Francisco State College M.S., Audiology, Oregon State University Ed., University of Utah.

To date, the AAS has provided an open forum for the hearing health community. The common denominator has been, simply stated, hearing. With more and more interest in the hearing health care system. It has added a dimension of being one of the very few interdisciplinary organizations providing a forum for the exchange of information between audiologists, otologists, hearing aid specialists and hearing instrument manufacturers. Our journal now serves to help the professionals of the organization be more strongly advocated and continually supported.

I'm sure, however, AAS is more than just an association with a college atmosphere. To those who patronize the institutions and serve of the future, the AAS is the only professional body that has the capability to truly represent the specialty and the common goal. This is our responsibility. The society has reached a peak in its development that it must re-evaluate its goals and directions. A key question that cannot be dismissed is whether AAS should remain relatively neutral, professional, or, as an organization, begin to address controversial issues that currently face the profession and possibly, its very existence of hearing. Increasing the AAS' expanding role with other professional groups, advocating standards where nonexist, and increasing its profile at the national level.

Michael F. Seidman, Ph.D., Director, hearing and Speech, D.C., June, ASHA, 1971, M.S., Audiology, Old Dominion University 1968. B.S., Physical Therapy, Old Dominion University, 1968.

Otolaryngologists

Otolaryngology is a medical specialty concerned with the diagnosis and treatment of diseases of the ear, nose, and throat. It is a branch of medicine that deals with the structures and functions of the head, neck, and upper respiratory tract. Otolaryngologists are responsible for the medical and surgical treatment of diseases of the ear, nose, and throat. They diagnose and treat a wide range of conditions, including infections, allergies, tumors, and structural abnormalities.

One of the main tasks of otolaryngologists is to perform hearing tests and evaluate the results. They may use a variety of techniques to determine the cause of hearing loss, such as audiometric testing, which measures the ability to hear different sounds at various volumes. They may also use imaging techniques, such as computed tomography (CT) or magnetic resonance imaging (MRI), to assess the structure of the inner ear.

Otolaryngologists may also perform surgical procedures to treat hearing loss, such as middle ear surgery to correct congenital anomalies or repair damage caused by trauma. They may also perform cochlear implantation surgery to restore some degree of hearing to individuals with severe hearing loss.

In addition to treating hearing loss, otolaryngologists also treat a variety of other conditions affecting the ear, such as ear infections, tumors, and allergies. They also perform procedures to treat conditions affecting the nose and throat, such as sinus infections, allergies, and nasal and sinus surgery.

Otolaryngologists also work closely with other healthcare providers, such as audiologists, to provide comprehensive care for patients with hearing loss. They may work with audiologists to perform hearing tests and evaluate the results, and they may also work together to develop treatment plans for patients with hearing loss.

Overall, otolaryngologists play a vital role in the care of patients with hearing loss and provide essential services to help individuals maintain their hearing and quality of life.

Serge A. Martinez, M.D., Professor of Surgery and Director of the Division of Otolaryngology, School of Medicine (University of Louisville, Kentucky, M.D. University of Miami, 1989.

The American Auditory Society is an organization on the leading edge of advances in ear and hearing. A review of the organizational leadership and membership development of individuals is interested in all aspects of audiology, basic research and communicative disorders. The society's meetings have become known for the quality presentations, knowledgeable presenters, and the opportunity to foster new ideas. A major emphasis of the organization is to provide training programs, as well as to develop future leaders in the field of audiology.

Many of the organizations in medicine are facing challenges related to patient care, social issues, and financing. These challenges are particularly relevant to otolaryngologists, who have a significant role in patient care and are often on the front lines of new developments in the field. As such, it is important for the society to remain active and engaged in addressing these issues, and to continue to work towards improving patient care and promoting the advancement of hearing health care.
COMMITTEE CANDIDATES

HEARING SCIENTISTS

After receiving a ballot by mail, each member should select two otorhinolaryngologists, one hearing scientist, and two industry representatives for Executive Committee membership in 1988.

Josef M. Miller, Ph.D., Professor and Director, Savage Hearing Research Institute, Ann Arbor, MI, Department of Otorhinolaryngology, University of Michigan, Ph.D., University of Washington, 1965, B.A., University of California, Berkeley, 1961.

I believe that our field will only grow by the collaborative and coordinated efforts of its various constituents. Whether it be by our efforts to recruit support for fundamental research, by our efforts to prevent occupational hearing loss, or by our clinical efforts to detect and treat hearing disability, we must increase the effectiveness of collaborations among the professionals of our field. The American Auditory Society, more than any other group, includes among its membership individuals who represent perhaps the most varied constituency of any society in our field. It encourages communication among audiologists, basic researchers, industrialists, government administrators, and physicians. Its organisation, development, and interest reflect the special interests of a particular group in any other society. This is a strength, that we should exploit for the further growth and development of our field. Through special symposia at our meetings, special interest groups, increased contact with the officers and councils of our other professional societies, the American Auditory Society may be in a special position to foster the development of our field.

J. Gaul Noeley, M.D., P.A.C.S., Professor and Head, Department of Otorhinolaryngology, College of Medicine, University of Oklahoma, Otolaryngology residency, Baylor College of Medicine, 1970-72. Otolaryngology residency, University of Oklahoma, 1969-70. M.D., University of Oklahoma, 1963. B.S., Biology and Chemistry, Central State University, Edmond, Ok.

The American Auditory Society is a unique organization composed of audiologists, auditory system scientists and otorhinolaryngologists who personally and collectively demonstrate a focus to patients care and academic productivity directed toward the hearing impaired patient. This organization exemplifies any particular philosophical bias of the impetus of thought on the part of professionals devoted to the care of hearing impaired patients. I would see the purpose and the future direction of the society to be one of example and continual educational dissemination of this philosophy toward the objective of improved patient care and scientific advancement.


The American Auditory Society continues to serve a vital role as it may seem to or the "turn" protecting tendency of professional orientation in the field of hearing assessment and hearing aid dispensing. Its combination of Executive Committees and sound standard publication activity in its journal *Ear and Hearing* have made it a vital force in our field.

INDUSTRY REPRESENTATIVES


The American Auditory Society is in its appreciation, recognition and encouragement of membership from all sectors comprising the hearing health care profession. This includes audiologists, hearing aid dispensers, physicians and representatives from industry. I am fortunate to be involved in some manner of education and/or experience on all three reviews. It is quite clear that all individuals, with their differing backgrounds, have their own perspective on the various issues that affect our profession. As has set the example that each perspective is important, and it provides the vehicle for sharing and disseminating all viewpoints. The openness and willingness to communicate, absolutely essential at this time of so much transition, is a noteworthy accomplishment of this organization and should be beneficial to the recruitment of new members.


I have been pleased to observe the extraordinary growth of our journal *Ear and Hearing*, as the years have passed. It is in the top rank of professional journals concerned with hearing and hearing impairment. I feel that no stone should be left unturned in continuing to maintain and improve its editorial excellence.


Through dedicated leadership, the American Auditory Society has not only gained many members, but more importantly, in scientific and professional stature. The principles of encouraging membership of anyone whose interest and professional experience lies in the ear and hearing stems of the field of the organization and has been a key to its success. We now have a mixture journal which publishes learned articles of original research. We have well attended, interesting and productive meetings. We have an organization which exists without the policies which pervade and weaken the aims of many professional organizations. (And we know how to have fun as well.)

The goals of the AAS should be to persist in our growth toward becoming a major influence in the field, to encourage the extension of the body of knowledge of auditory processing, to provide an unbiased forum for discussion and learning, and to continue to disseminate information to the membership and to society as well. It may seem title, but through these philosophies and goals, the ultimate beneficiary will be the hearing impaired.

I can think of no nobler goal for the Executive Committee than to become a proponent of the philosophies of this organization, to augment the persuasiveness of what we know, and to carry on with the development of new members who are as interested as we are in these goals.

The American Auditory Society should serve as a preparedness in the field of hearing assessment and hearing aid dispensing. Its combination of Executive Committees and sound standard publication activity in its journal *Ear and Hearing* have made it a vital force in our field.
Aram Rehabilitation Forum

Cost Perceptions

Athyre and Swaim are working to help solve the problem of hearing loss among the elderly. They have studied the effects of hearing loss on people's lives and the costs associated with it. They have found that hearing loss can lead to changes in lifestyle, social isolation, and increased health care costs. The costs associated with hearing loss are significant, and it is important to address this issue in order to improve the quality of life for those affected.

Meeting on Outdoor Sound Pollution

A day-long meeting of the American Association for the Blind in the United States was held on May 8, 1987. Many aspects of the meeting will be covered in this article, and those of particular interest will be expanded upon. There will be a discussion of work on the influence of geographical factors on perception and prediction schemes.

Triva Answers

A1: Alan Feldmann
A2: Will, 1972
A3: Why Feeney, of course.
A4: His Armitage minimal microscope.
A5: An Allen Lamin Motor.
A6: Method of adjustment.
A7: The tie.
A8: Method of limits.
A9: About three minutes.
A10: Morton Downey (his daughter is Sarah Vowell).
A11: David Lippencott.
A Forum for Case Studies

Edited by Matthew W. F. Smith

As practicing audiologists, we encounter many interesting and unusual cases regularly. You know that one really interesting case out of a hundred mundane cases on which you waste your time and makes the routine stuff on

... while most of those unusual cases would not be considered death's doors suitable for journal-type articles, they usually teach us something and may be helpful to our colleagues. As practicing clinicians, we have hundreds of thousands of word-per-hour hours of clinical experience among us. With that in mind, the editors of Clinics in Otorhinolaryngology have created this forum for case presentations. This is YOUR clinical forum. Without your input, it will certainly, let's hear from you today. Please send your clinical case presentations to:

NAME THAT LESION
555 Durham Drive, NE
ALBUQUERQUE, NM 87123

The first case is presented here by the editor from his private experience. Future case presentations will be from your clinical experiences.

CASE NAME
The Case of the Dizzy Nune

PRESENTERS
Matthew W. F. Smith, M.Sc., CCC-A
Karl W. Hatfield, Ph.D., CCC-A

ADDRESS
Hearing Evaluation Center
612 E. Otero Place, NE
Albuquerque, NM 87102

This is the story of our patient, R.A., a 44-year-old black male who played baseball, receiving a deviated nasal septum.

R.A. was being seen by the otolaryngologist for a routine history and physical on the occasion of hearing evaluation for a head injury. He reported a history of severe epistaxis many years ago which had apparently recovered except for occasional nose bleeds which he did reportedly have while using the phone with his left ear. When questioned about the left ear, he denied having tinnitus, but had experienced a little dizziness now and then when turning rapidly to make a hook shot while playing baseball.

The ENT physician referred him to us for a preoperative hearing evaluation. The first thing we noticed about this patient was his unusual ocular motor activity; we spent a few minutes observing his eyes. There was an asymmetry of the left eye, creating a tilt to the right. Also, the left eye blinked seemed to be weaker than the right. There was a right-beating nystagmus. There was also a definite internuclear ophthalmoplegia, a time lag between the two eyes on smooth pursuit tracking.

In the sound room, he did notice a very mild ringing tinnitus on the left side. On closer questioning, he recalled episodes of light-headedness and described some numbness around the left ear and left canal.

Pure tone audiometry (Figure 1) revealed essentially normal hearing sensitivity on both sides with no significant asymmetry present; although the left ear thresholds were slightly elevated. Speech audiometric thresholds were essentially equal to 90 dB worse at the right.

There was a significant difference in word intelligibility score obtained at a 40 dB sensation level, with the left ear score some 50 percent worse than the right.

Special tests of auditory function yielded mixed results. There was no threshold tone decay seen using the modified Capistrano method. The Stimulac Intracranial Median Nerve Stimulation test (SMNSt) showed him to be unable to fuse a binocular signal into a midplane image.

Electro-acoustic impedance audiometry (figure 2A and 2B) yielded essentially normal looking tympanograms with a mild negative pressure present on both sides (50 mm Hg on the right and -140 mm Hg on the left).

Audiometric reflexes (Figure 2C) were present on both sides at slightly elevated levels with binaural stimulation. Reflexes were normal and there was no delay in the reflex arc from the left ear, except for a normal reflex delay. The reflexes were very abnormal on the right side with a delay of approximately 100 ms.

Because of the symptoms and audiological data, an Auditory Brainstem Responses test was performed. All five waves were seen on the right side at 90 dB SL (10 dB PoPPL) with normal absolute and interpeak latencies for waves I through IV at a stimulus rate of 11.1 Hz. Wave V was far at a stimulus rate of 11.1 Hz, and could not be seen when the stimulus rate was increased to 44.4 Hz. (See figure 3). The left ARB (Figure 4) was grossly abnormal with only waves I and V discernable at 90 dB SL (10 dB PoPPL) at a stimulus rate of 11.1 Hz. The absolute latency of Wave V was abnormally long as was the I-V interpeak latency. A comparison of the V interpeak from left to right showed a difference of only 0.11 milliseconds.

Auditory Brainstem Responses on both sides were poorly replicable. This ARB was interpreted as indicating a diffuse brainstem lesion affecting both sides of the brainstem.

We recommended to the otolaryngologist that R.A. be referred for magnetic resonance imaging as well as diagnostic imaging. The nasal surgery was delayed until after he received an immediate CT Scan. NOTE: this case occurred before the availability of Magnetic Resonance Imaging.

CAN YOU NAME THAT LESION?
For result, interpretation, and diagnosis, see page 31.
Aural Rehabilitation Forum

Continued from p. 5

As a deterrent to those minority individuals who may need hearing help, but who are also economically depressed or living on fixed incomes. Also evident is the fact that hearing loss and hearing problems are simply an expected by-product of old age. This point requires further observation and examination, particularly if more effective approaches to marketing to minority populations are to occur. In any event, the provision of hearing healthcare services that accommodate the expressed needs of these populations — identified by way of surveys or other methods — appears to be a step in the right direction.

Marketing Strategies

As a result of this market survey, our firm has made aggressive efforts to better address the communication needs of these minority populations. We have developed specific marketing strategies that are showing positive results. The following is an outline of these strategies. We believe that other hearing health professionals can gain something that would be of benefit to the minority populations they may be willing to serve.

Toward Goals to the Market

The first element of our overall marketing strategy was to establish goals that reflect the attitudes and needs of the target population. The results of our survey suggested that hearing loss constitutes a high priority concern among the minority members of the community. They have other, relatively more serious health concerns that must be addressed first. Our objective, then, is to provide, in addition to hearing healthcare information, information on general health care concerns, e.g., hypertension, low-sodium diets, stress management, preventive healthcare that will assist our customers in maintaining their general health. One of our new goals is to provide a referral service within the minority community for hearing health services in general, with hearing healthcare as our primary service offering.

Establish a Relevant Image

The second major aspect of our strategy was to establish a market "image" to which the members of the community can relate. The elements of that image include:

1. The products/services being offered.
2. The price attached to products and services.
3. The location of the business, and
4. The promotional or advertising strategy used.

Execution

In implementing our overall strategy, we have incorporated in our practice the following approaches to marketing hearing services specifically to minority populations:

Product

Our products and services are displayed in a way that enables the target population to relate to them. Any photos or illustrations that we use depict minority persons either wearing hearing aids or being served by a minority professional. This approach has increased the number of inquiries about and requests for our services.

Price Structure

In establishing a price structure for our products and services, we considered the following two competing pricing philosophies:

The price-quality cost/benefit approach. Services are given a high level of professionalism and product quality but has proven to be to the lower and fixed-income individuals with whom we regularly do business, many of whom do not readily recognize the implied price-quality relationship, but in fact have tended to view the typical retail price of hearing aids as being exorbitant.

The bargain pricing approach. Many believe this is the weakness of the two pricing philosophies because it tend to communicate to the consumer a less expensive — and thus inferior — product or service. However, for cost-conscious consumers like ours, bargain pricing has a definite appeal. Since adopting this approach, we have been able to maintain the quality of our products and services, largely, we believe, through a consultative and personalized approach to our service delivery.

Location

In launching our business, we considered two general location options: either a business district location or a home-based operation. We recognized that a business district location would be convenient only to those clients who work in the vicinity of the office. Transportation to such a central location would be a major problem for many of our potential customers. We also realized, however, the need for a central location for tracking our inventory, as well as for a centrally located service repair center. Although the idea of "old fashioned," we decided to use a home-based operation, in which we would make home visits for sales and service delivery. This arrangement is convenient for the client and it allows us to provide our service in the consumer's principal communication setting: his or her home. Our hearing services are provided in a separate office maintained for those purposes.

Promotion

We use advertising to generate awareness and to provide information about products and services. Given the broad market base of our urban setting like Richmond, Virginia, there are numerous avenues available to advertise and promote hearing healthcare products and services. We have found that advertisements that are focused directly to the consumer — and in this case, this population, radio spots, direct mailings, a personal presentation — tend to be the most effective. One approach that we find productive is to provide periodic hearing health screenings at community centers and churches throughout the community, an activity that generates customer interest and, at the same time, builds the community with a needed service.

Conclusion

The decision to establish a hearing healthcare business within a minority community was fraught with anxiety — primarily because the industry, by and large, does not address the particular needs of the minority populace serving this segment of the population. This makes it particularly true to require the production of promotions and promotions materials, which are devoid of identifiable ethnic representations. As a result, we undertook a different approach, which incorporated new and innovative advertisements and promotions. Our practice now has a focus within the ethnic minority community in the U.S., and we continue to grow as a result of our efforts in marketing strategies tailored to the needs of this population.

References


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ARO Celebrates Tenth Anniversary at its Midwinter Meeting

The Association for Research in Otolaryngology (ARO) held its tenth annual Midwinter Meeting from February 1 to 5, 1987. Over 575 scientific sessions, including 456 papers, were presented during this meeting, which was held at the Golf Resort & Spa in San Pedro, California. The symposium featured many prominent speakers and covered a wide range of topics in otolaryngology.

Name That Lesion Results and Interpretation

(Continued from page 7)

The CT Scan of the posterior fossa was obtained with and without contrast. The original conclusion was that ("...to define the low density lesion in the left cerebellar hemispheres adjacent to the cerebellar lamina magna..."

There was associated effacement and displacement of the fourth ventricle and the right lateral ventricle..."

A second CT Scan was obtained two days later. This scan revealed the lesion to be a mass lesion.

The conclusion was the same: " hodgkin's disease or a lymphoma possibly involving the left side of the cerebellum..."

The patient was referred to the posterior fossa surgery the next day. A tumor was en-countered approximately two centimeters deep within the cerebellum. A cerebellar resection showed it to be a low grade II (II) astrocytoma. Because the tumor extended toward the pons, further dissection was not done.

DISCUSSION

This case illustrates a number of important clinical points:

1) It is an example of a good working relationship between audiology and otolaryngology. The otolaryngologist made an appropriate referral to the audiology center and received a useful piece of information back.

2) "Screening" audiograms done in some otolaryngology practice will have missed this lesion because the pure tone audiogram was normal. This would have exposed the patient to risk from surgery to his nose, as the surgeon would not have appreciated any anesthetic problems, and in no case been told the relationship of the lesion to the neurologist or to the otolaryngologist in the risk of malignant hypertension.

3) Speech comprehension continues to be an extremely sensitive indicator of retrocochlear lesions. We are able to do this case once again, we would have used more extensive use of speech (F2, P2 and S2) tests for this as a minimum).

4) Traditional low level tone decay tests routine to have poor yield in retrocochlear lesions. Again, we were able to do this over and would have used a higher level test like the S-T.F.T.

5) We think that the dynamic acoustic reflex on the left side was probably a motor phenomenon related to the left cerebellar lesion.

6) The ABR is an extremely sensitive test in identifying retrocochlear lesions. It even showed us the errors on the right side and the brainstem displacement from the left-sided lesion.

7) Even when we were working under time pressure, the clinical confidence was still high. This patient volunteered nothing as to his otolaryngological troubles but was told every diagnostic information out of him.

8) Finally, it is important to look at the diagnostic "rules of thumb" that tend to become too focused on hearing. As audiologists we should also be knowledgeable about the observable motor and sensory activity of the Central Nervous System, which is not always what we think it is. As the symptoms of this patient's disease were clearly localized and he was aware of the possibility of his primary complaint was about his nose.

Dr. Nilsen presented over the meeting which included a number of interesting and important sessions. He described the ten anniversary of the ARO Midwinter Meeting, Dr. David Linn, Harare, Zimbabwe, and Dr. Robert W. W. Dysart, New Tecumseth, Canada, and Dr. Martin J. Dear, St. John's, Newfoundland. Dr. Joe Hill reviewed the scientific and personal history of Dr. Rose's brilliant career. A certificate and a gold tie-pin were presented to Dr. Hanna Bob-лов, who accepted the award for her husband, Dr. Rose. The Award of Merit recognized Dr. Rose's many contributions to the study of the anatomy and physiology of the auditory system. Dr. Rose has made many valuable contributions to the understanding of the structure and function of many parts of the brain, especially those areas that serve hearing. Her innovative, digital computer, for the physiological study of hearing. Her many discoveries formed the basis for some of the known fundamental facts and functions of auditory processing. Although retired from full time teaching and research, Dr. Rose continues to work with his wife on research involving the development of the auditory system.

The Association voted to select new members, bringing the membership to almost 2000 mem- bers. A slate of new officers was also approved by the membership. Dr. George Glaze, President, Dr. William Tait, President-Elect, Dr. Allen Ryan, Secretary/Treasurer, Dr. David Linn, Editor/Controller, and Dr. Charles Bannister, Past President. They were Dr. Donald Nielsen, Bainbridge Island, and Dr. William Clark from the ARO Council. The 1988 ARO Midwinter Meeting will be held at the Pebble Beach Resort in Pebble Beach, Florida, from January 21 to February 4. The theme of the special science sessions, planned by Dr. George Glaze (President of the ARO in 1986), will be "Mechanisms of the Auditory System."

Additional information may be obtained from: Dr. Allen F. Ryan, ARO Secretary/Treasurer, 4100 E. 16th Ave., University of California at San Diego, La Jolla, CA 92037, phone (619) 535-7500, ext. 5715.
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ADDRESS OR NAME CHANGE ??

Ear and Hearing subscribers and AAS members should send changes to:

AAS
1966 Inwood Road
Dallas, Texas 75235

(NOT to Williams & Wilkins)
1987 AAS Meeting with Dinner Cruise
Monday, Sept. 21st, 1987 • Chicago, IL

The Official House Organ of The American Auditory Society

Volume 11, No. 5

1987 AAS Convention to be in Chicago

For AAS members September 21st will be a day of exciting intellectual stimulation and a night of equally exciting entertainment.

This year the meeting will be held at the Omni Hotel, Chicago. Between President LaVerne Burginstein's introductory remarks at 8:30 a.m., and the closing of the meeting around 6:00 p.m., there will be numerous scientific papers of the usual high quality. Special highlights will include Dr. Peter Dallios' Cathcart Memorial lecture entitled "Speech and Hearing: Hair Cells, Receptors, and the Presentation of the Belfer-Dastic-Teacher-Vanderbilt Awards and the Year Award.

The "futurist" of the evening will be to include one's discussion leader. That's why the Star of Chicago is happening. Wherever members and guests will cruise Lake Michigan, dine like lords, visit, bonk, gossip, etc. The hotel, the Omni Hotel, is located in the Windy City's Miracle Mile amid many of Chicago's best known attractions. Nearby are the Field Museum and Art Institute, which will be holding the AAS-OMS annual meeting.

Name That Lesion

A Forum for Case Studies
Edited by Matthew W. F. Smith

As practicing audiologists, we encounter many interesting and unusual cases regularly. You know, that one really interesting case out of hundreds that you are always on your mind. You may be thinking about one of these cases would not be considered one of the cases suitable for usual journals, usually touch us something and may be helpful to others. As practicing clinicians, we have hundreds of thousands of interesting and unusual experiences. We obtain from many of you. With that in mind, editors of the AAS's House Organ have created this forum for case presentations. This is YOUR clinical forum. Without your input it will persist. Let's hear from you today. Please send your clinical case experiences to:

NAME THAT LESION
c/o The Cerebream
662 Bertha Drive, NE
Albuquerque, NM 87122

This issue is AAS is presented by the editor from his private practice experience, which although extensive, not sufficient. Future case presentations will be from clinical experiences. We need YOUR input!

Case Name: The Case of the Silent Throat

Presenting: Matthew W. F. Smith, MSc, CCC-A
Address: Housing Presbyterian Center
612 Ewing Place, NE
Albuquerque, NM 87104

This is the sad tale of E.B., a 5-year-old female patient who had been recently diagnosed as having terminal cancer of the liver. Her life expectancy was very short.

Three weeks prior to her visit to us, she had undergone exploratory surgery which had confirmed that cancer was present and that it was advanced beyond surgical treatment. During the week following surgery, she experienced a sudden, severe loss of hearing on both sides. She was referred by her internist to an otolaryngologist. His physical examination was unremarkable and she was referred to us for an audiological evaluation. His concerns were possible postoperative insufficiency to the necrotic, or worse, new metastatic sites of the cancer.

We questioned the patient and her family about trauma, injuries, prescription medications, and even chemotherapy. She denied any such concerns.

Case Continued on page 2

Aural Rehabilitation Forum

Editor's Note: The following segment of the AUR Forum is taken a bit of a different slant. This interview-style article was generated with the assistance of Grady Fitchel, President of the Acoustic Neuroma Association, and Ms. Fitchel understands the needs of others with this disorder. The Acoustic Neuroma Association is a support group, which grows out of an interchange among patients who feel the need for a support and information network.

AUR and the staff of Cerebream would like to thank Ms. Fitchel for reforming all of us about her Association.

1) When did the Acoustic Neuroma Association (ANA) begin?

It was incorporated in April, 1981. There were a few dozen of us acoustic tumor "alumni" at the time who had found each other.

2) What prompted its creation?

After my tumor was removed in November, 1977, I had total facial paralysis, dry eye, exposure keratitis, and other residual problems. I really wanted to talk with others who had been through this experience, but knew of no one. During the following two years I found a handful of others, and we benefited from sharing with each other. All felt that a broader based mutual aid group would be worthwhile, so the Acoustic Neuroma Association was incorporated to serve us. Since formed by acoustic neuroma.

Membership in a group of those with similar experiences can be helpful to patients, as well as to family members and to interested medical personnel.

3) How is your group grow — both in numbers and in subspecialties?

Today we have a mailing list of 1000. There are specific regional patient groups and Australia, and one new being formed in Germany. We have members in all states except Montana and Wyoming.

ANA has published 22 quarterly newsletters of professional quality featuring physician-authored articles and self-help information. We are also planning regular national meetings and a conference in Canada. We also offer the opportunity to network with other "alumni" in one's own locality and assist with setting up local meetings and groups. (Twenty cities have formed in the past three years in all parts of the U.S.)

4) Are your goals still the same?

Yes, our goals still remain. They are:

a. To provide support and information for patients who have experienced acoustic neuromas or other tumors affecting the cranial nerves.

b. To furnish information on patient rehabilitation to physicians and hearing care personnel involved in the treatment of benign tumors and in the alleviation of post-surgical problems.

c. To promote and support research on the causes, development, and treatment of acoustic neuromas and of other brainstem tumors.

d. To disseminate the public regarding symptomatic suggestive of acoustic neuroma, thus promoting early diagnosis and consequent successful treatment.

5) What are your group activities?

I have mentioned the annual symposium and local groups, which attract the frequency of their meetings to their ears desires. Most meet several times yearly, providing an opportunity to "face to face" contact, and to hear informative lectures by physicians.

Our symposiums have been held in Hershey, Nashville, Ann Arbor, Los Angeles, Little Rock, and, this year, Boston. All have been planned and arranged completely by volunteers. Physi- cians speak on their own time and expense.

Symposiums have grown in two full day affairs and are attended by "alumni" from all parts of the U.S. ANA grants financial help to 10 to 20 people to enable them to attend. This year about half of those receiving financial aid will be deaf because of bilateral tumors.

The Association has published a 32 page book, "Acoustic Neuroma", which is a compendium of various booklets catering to the layperson. Many physicians give this book to their patients. ANA also publishes a quarterly newsletter. News, which provides professional and lay medical information, will help people living with acoustic neuroma.

6) What is your organizational structure?

ANA is staffed entirely by volunteers. Our national office has five regular volunteers, and a dozen occasional others who help to prepare our quarterly newsletter mailing.

We have an Executive Board made up of four people serving one year terms. The four members, all have had an acoustic neuroma removed. One meets during the year and board members assume their own expenses. I can be reached by phone or write to them and what can be accomplished by them.

7) What do you hope to achieve as an organization?

We would like to assist in alerting all ENT specialists, as well as audiologists and other primary care physicians, about the possibility that an acoustic tumor might cause a unilateral hearing loss.

Also, ANA is working on a system whereby potential members will be informed of the Association and its services.

8) Is preparing over this organization a full-time job?

That and more. As is true of most community, the responsibility falls on the shoulders of several individuals who work part-time, and who have families, and who do not have their time.

Continued on page 2

PLAN AHEAD:
II INTERNATIONAL CONFERENCE OF AUDIOLoGY
JERUSALEM, ISRAEL, JUNE 5-9, 1989

Continued on page 2
Name That Lesion

Continued from page 1

trauma or tumor was taking no prescription medication, and was not on a chemotherapy regimen.
Further evaluation, however, revealed that her liver was a fairly flat, bilaterally amniocentesis
hearing loss averaging 50 db H1. Speech
throughout was very poor; she had been in agreement with the
pure tone test. Word intelligibility scores
at MCL were good on both sides (See Figure 1).
Because of probe seal difficulties due to ear
canal geometry, only screening tympanograms could be obtained. Tympanograms were
of
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FROM THE EDITOR...

Letter to the Editor...

Dear Mr. Berry,

I want to commend you for the introduction of the new column entitled "Name That Lesion." It was a real cliffhanger! It is true that we don't often come across terms involving good "da"

Audiology Trivia

Edited By Matthew W. Smith

A remarkable phenomenon of the 1980's has been the tremendous interest in trivia of all types. It became apparent to us that the lack of fascination with trivia material at the ASHA and this has been a tremendous loss for the "Audiology Trivia," which has interest in multiple disciplines. We are pleased to present more Audio-

Matthew W. Smith

importance to her. So much so, that it didn't come out even in response to a direct question. What can we learn from this simple but interesting case?

1. Auditory processing is more common than most people think. The 500 milligram "Extra Strength" tablets are a contributing factor.2. Hearing loss from aspirin toxicity is almost always reversible.
3. It frequently mimics presbycusis and is often more in the age range where presbycusis is expected. Watch out!
4. Questions about aspirin use should be a routine part of the hearing history for all patients, not just those complaining of tin

In this column, we will acknowledge your contributions in this column. Now let's play AUDIOLOGY TRIVIA.

TRIVIA QUESTIONS:

1. What national audiology newsletter editor spent the last few years working with the Little Rock, Arkansas Vocational School? (See Answer to page 14)
2. In what country was Raymond Carhart born? (See Answer to page 14)
3. Who first suggested what was known as the Valtasova maneuver and when? (See Answer to page 14)
4. What phenomenon, described by Willis in the 1800's, bears his name? (See Answer to page 14)
5. What psychophysical method is synonymous with method of right and wrong cases? (See Answer to page 14)
6. What function does the drum of cornet serve? (See Answer to page 14)
7. Where were the Mercury astronauts taken for hearing evaluations? (See Answer to page 14)
8. Which wavelengths of light is major part of the eye? (See Answer to page 14)
9. What is the spectral slope of pink noise? (See Answer to page 14)
10. What's another name for postnatal auditory threshold shift? (See Answer to page 14)
11. What structure is known as the vestibular apparatus? (See Answer to page 14)
12. Who is best known for his five "humps"? (See Answer to page 14)

ERRATA

Gail Neely, M.D., an Executive Committee candidate was erroneously pictured instead of Lauren Williams in the Corresponding Secretary's column. The editors sincerely apologize for any confusion that may have resulted from this printing error.

Figure 1. Continued from page 1
Meeting Abstracts

Application of Multiple-Frequency Tympanometry and an Audiometric Gelatine Test to the Initial Diagnosis of Middle Ear Disease

David J. Lilly, L. Olin Blech, and Robert Hofstaedt
Good Samaritan Hospital & Medical Center
Portland, Oregon

Clinical tympanometry usually is accomplished using a low frequency probe tone. In our experience, these single-frequency tests do not always yield diagnostic information that is quite adequate for about 15% of our patients who presently have middle ear disease. For measuring 15%, however, a modification of multiple-frequency tympanometric approach is required. This tympanometric data becomes even more useful, however, when we can measure the transmission characteristics of the ear, along with its input acoustic impedance, for the same range of air pressures.

In this presentation we shall describe the results of a pilot study that was designed to compare tympanometric data with psychophysical threshold data obtained using a modification of the Gelatine' test. For this latter procedure, stimulus conditions, and a few other modifications were made in the external auditory meatus by housing, by air conduction and by bone conduction. We used a 500 Hz test tone and the same range of air pressure values as used with the multiple-frequency tympanometry (< 30 mm Hg). Patients were subjects with normal hearing and patients with sensorineural hearing losses. Results were compared with audiometric data from measurements made at remote locations will be discussed.

Perilymph Fistulas in Children with Progressive Sensorineural Hearing Loss

F. C. Glidden
Stanford, California

Perilymph fistulas (PLF's) sometimes occur in children with unexplained progressive uni- or bilateral hearing loss. Upon repair, occasional and sometimes dramatic hearing improvement have been documented. However, such outcomes are not universal. We present the case of a 9 year-old boy who has a PLF without expository surgery. The otoscopic findings are described. This case is an interim report on 24 consecutive explorations for PLF's in children with progressive hearing losses (average progression, 38 db between 1000 and 2000 Hz). Overall had had PLF's, and in 12 of those cases the hearing improved (15 dB) at those frequencies. In the group with hearing loss, the overall and round window were also grazed. Postgation continued in two with their PLF's and in four without PLF's. No further explorations have been made. In the second, and two were found to have had PLF on the second but not on the first surgery.

Diagnostic and Prognostic Value of Direct Promontory Bone Conduction in Patients with Otoconiasis

Mariazinha Koczko-Szacka
Medical Academy of Medicine
Lodz, Poland

Conventional bone conduction audiometry does not allow an objective assessment of hearing in patients with otococia. Therefore, we have developed and novel method of direct bone conduction audiometry which can be applied to the promontory intratympanically. A comparison of conventional and direct bone conduction audiometry was made in patients with various stages of otococia. The bone conduction threshold was measured in 100 patients in various stages of otococia before and after otococia. Audiographic evaluation showed that these differences in the bone conduction thresholds obtained by both methods were significant. The bone conduction level (BCL) was 000 Hz, 2000 Hz, and 4000 Hz (p < 0.001). The direct bone conduction method was at least 10 dB more sensitive for all frequencies. Interestingly, the average direct bone conduction threshold curve did not exhibit a Labhart notch at 2000 Hz as did conventional bone conduction, as the promontory method. The actual "near" improvement of hearing thresholds after otococia was demonstrated in 100 patients in three stages of treatment. Otococia patients have been treated with various kinds of surgery. We suggest that the direct bone conduction method for assessing hearing in patients with severe otococia is superior to the conventional bone conduction techniques which often do not reflect actual cochlear reserve.

Determination of Ear Canal Length Using Acoustic Signals

C. Daniel Geisler and Joseph C.K. Chan
National Acoustics Laboratory and Project Phoenix, Inc.
Madison, Wisconsin

A direct optical method of measuring ear canal length was compared with an acoustical method. The optical method, adapted from Zumwalt and associates, determined the distance from the posterior edge of the ear canal to various points on the ear drum, such as its dorsal most point and the attachment of the canal to the end of the malleus. The acoustic measurement system (using the Aures™ 900 probe) was used to take measurements of sound pressure level (SPL) instead of frequency obtained at two different points in the ear canal. The distance between the two SPL measurements, which could be in common the overall characteristics of the ear canal, showed in almost all cases a clearly defined and repeatable point called the "quarter-wave" threshold between the 6-16 kHz range. Using this technique, the distance from the ear canal extended to the effective reflecting surface of the drum was marked. In the present study, an initial sample of 10 people, indicate that effective ear canal length differed from optical measurements by the optically measured distance to the dorsal most point of the drum and that measured to the attachment point of the emb. Implications of the results concerning the accuracy with which ear drum SPL can be obtained from measurements made at remote locations will be discussed.

The Effect of Varying Frequency Response of Auditory Filters in the Slope of the Latency-Intensity Function

Kurt E. Heers and Jennifer Paterson
Northwestern Audiology
Madison, Wisconsin

For a number of years the slope of the wave V latency-intensity function of the human audiologic response has been used to identify patients with inner ear disease. Unresolved is whether the slope change is secondary to the high frequency slope of a hearing loss or secondary to other "unspecific" aspects of inner ear disease. To test this hypothesis, normal hearing listeners were evaluated with a filtered signal whose filter properties mimicked high frequency losses. In a second condition, a filter was designed to mirror the patient's audiogram and was interspersed between patient and signal generation.

If audiometric contour were the primary determinant of abnormal slope, the latency-intensity function, normal listeners with filters in place should produce abnormal slopes, and the hearing impaired with "corrective" filters should produce normal latency-intensity functions. Neither of those outcomes were observed in testing 10 normal hearing and 10 hearing impaired listeners. From these observations we conclude that the audiometric contour is not the sole or even the primary determinant of the slope of the latency-intensity function.
Meeting Abstracts

Continued from page 3

Spectral Analysis of ABR's from Patients with Cochlear and Retrocerebellar Hearing Loss

Lynn G. Spivak
New York University Medical Center, Bellevue Hospital Center, New York, New York, and
Rochelle I. Maloff
New York University Medical Center, New York, New York

There has been speculation that the ABR may contain pertinent information about the auditory system which is not readily apparent when analysis is limited to measurement of peak latencies and amplitudes. A recent report by Hall suggests that the spectral content of ABRs of head trauma patients may be abnormal, in spite of the fact that peak latencies and amplitudes are normal. The purpose of the present study was to investigate the potential contribution of spectral analysis of the ABR to diagnosis of auditory pathology.

ABRs were recorded from 97 subjects using 400 Hz rectangular clicks presented at 11/2, 31/2, and 6 dB above the discomfort level. The subjects consisted of 69 subjects with normal hearing (90 dB HL), 12 subjects with cochlear hearing loss, nine subjects with surgically confirmsed acoustic nerve tumors, and seven subjects with surgically confirmed cochlear and retrocerebellar hearing loss were judged to have failed to good morphology. Ninety-five percent confidence intervals were calculated for the three groups of normals and the two groups of normal ABRs. The frequency bands were apportioned according to the principal component of ABR's from ears with cochlear and retrocerebellar lesions was compared to the normal group.

Spectral abnormalities involving at least one peak were found in 20% of all cases. The spectral content of the acoustic tumor patients. The largest proportion of abnormalities involved the 3.25 to 3.5 ms peak. Spectral abnormalities were considerably less frequent in the ABRs of the normal subjects. The spectral content of ABR wave components increases exponentially as a function of latency, and the differences in amplitudes are greater for later waves (e.g., wave V) than for earlier waves (e.g., wave I). The results were consistent with the hypothesis that the ABR is an adaptive response to the auditory environment.

Effect of Hyperthermia on Auditory Brainstem Response in Man vs. Rat

James W. Hall III, Joan M Ball, and A. Walton I. Jervis
University of Texas Medical School at Houston, Houston, Texas

The effect of low body temperature (hypothermia) on the auditory brainstem response (ABR) has been repeatedly demonstrated. The effect of a moderate increase of the clinical parameters of ABR wave components increases exponentially as a function of latency, and the differences in amplitudes are greater for later waves (e.g., wave V) than for earlier waves (e.g., wave I). The results were consistent with the hypothesis that the ABR is an adaptive response to the auditory environment.

The effect of hyperthermia on the ABR wave components can be delineated. ABR latency and amplitude with elevation of body temperature.

The effect of whole body hyperthermia on the ABR latency and amplitude in man vs. rat.

ABRs were recorded during whole body hyperthermia with similar instrumentation and test protocol for 10 human subjects and 6 rats. Stimulation was elicited presentation corpora via Etymotic brainwaves and uptake for man, and an electromagnetic induction probe for the rat. The results were consistent with the auditory brainstem response in man and with needle electrodes for rats, placed at the high frequey (positive) and inside (negative) positions. Core temperature was maintained at 40°C.

Latency decreased at increment was increased in man and rat. Latency changes were greatest at 8°C, 4°C, and 2°C increments. Latency increased at 1°C, 1°C, and 0°C increments.

In summary, latency and amplitude returned to baseline values with return to normal temperature. For human and rat, latency changes occurred at approximately 3°C, 2°C, and 1°C, respectively.

Current research is being directed toward the use of baseline values with return to normal temperature. For human and rat, latency changes occurred at approximately 3°C, 2°C, and 1°C, respectively.

VIVIAN INTERMATIONAL SYMPOSIUM ON AUDIOMEDICINE

The International Association of Physicists in Audiology (I.A.P.A.) will have its Fourth Symposium in Tenerife, Canary Islands, Spain, November 8-13, 1987.

The scientific program will include roundtable discussions with invited speakers, together with free paper sessions on the two main themes:

1. THE STATE OF THE ART OF AUDITORY EVALUATION

Overview and evaluation of the hearing impaired child, methods of investigating a unilateral hearing loss, and medical screening for ENT surgeons.

2. IMAGING CONTRIBUTIONS TO AUDITORY DIAGNOSIS

Computed tomography; magnetic resonance imaging; brain mapping; auditory evoked magnetic fields; single photon emission computed tomography and its diagnostic application in auditory and cranial pathology, in diseases of cochlear, cochlear, and in the retrocochlear pathology of sensorineural hearing loss.

For further information, contact

Dr. Jose A. Barajas
21900 Santa Cruz de Tenerife
Canary Islands, Spain
Phone: 22 75 458
Meeting Abstracts

Continued from page 4

to behavioral electrical thresholds. On the average, behavioral thresholds were 5.0 db lower, or presumably lower than EMLR thresholds.

EMLR's were compared in humans, monkeys, and guinea pigs implanted with scala tympani electrodes. Their characteristics vary as predicted by auditory evoked EMLR's in these species. In acute guinea pig preparations, acoustically and electrically evoked EMLR's were demonstrated to be quantitatively similar in latency and amplitude and input-output functions are comparable. EMLR's in the guinea pig have also been compared for promontory, round window, scala tympani, and modiolus stimulation sites. Promontory stimulation was found to elicit EMLR's only variably in spite of placement of the electrode at least in all positions in the thin lateral wall bone of the guinea pig cochlea. Round window stimulation was found to be equal in effectiveness to scala tympani stimulation. Modiolus stimulation demonstrated the lowest threshold and the steepest input-output function. Thus, the dynamic range of modiolus input-output functions tended to be smaller than that for scala tympani and round window stimulation, reflecting electro-anatomical features of the inner ear.

The EMLR would appear to be an appropriate measure for evaluation of excitability of the central auditory pathways with electrical stimulation in the presurgical implant candidate. On the basis of animal investigations, it would appear that round window stimulation sites are closely similar to pre-majority sites and may be equivalent to intra-cochlear sites in their effectiveness and reliability of eliciting EMLR's.

Comparative Study of Hearing Aids and Cochlear Implants in Children

Barbara A. Bell and Lisa L. Tomlison
House Ear Institute
Los Angeles, California

The effects of open- vs. closed-ear training, maturation, and the "halo" effect on children with the 3M House cochlear implant have been long known and are recognized by many professionals. It is difficult to separate those factors to determine the benefits of the cochlear implant alone in the development of auditory skills. We compared the amount of auditory improvement with hearing aids in the amount of improvement with cochlear implants in 63 children who wear both devices. This was done by comparing improvements in the implanted ear to changes in their hearing aid ear. We found that the threshold to warble tones and speech stimuli remained consistent from pre- to post-test sessions for both ears. Thresholds were significantly improved from pre-implant to the implanting ear with the cochlear implant in the implanted ear. In the non-implanted ear, aided thresholds remained the same.

On the Discrimination After Training test, before implantation, the mean aided score was 7.4 for the implanted ear. With the implant, that score was 7.8. For the non-implanted ear, the aided mean score improved from 2.8 to post-implant to 3.5 at the post-test. Averages follow-up time was two years. On the Test of Auditory Comprehension, the pre-implant mean score for the implanted ear was 0.0 improved to 1.2 with the implant. The non-implanted ear had a pre-implant mean score of 0.3 with little change at a follow-up score of 0.2.

The implanted ear improved more than did the hearing aid ear. The little improvement measured with the use of a hearing aid for an average period of two years represents what might be expected from training and maturation. The much greater improvement with the cochlear implant is even more striking. It is thought that the hearing aid results represent the presurgery benefits after hearing aid. Since both ears of each child were subjected to the same training and experience, results indicate that the cochlear implant provides significant benefit beyond potential benefits with hearing aids over time.

Short-Term Auditory Memory in a Patient with Cochlear Implant

Susan J. Sergent, Karen Johnson, Roxa Caracci, and James Sergent
Baylor College of Medicine
Houston, Texas

Information processing theories represent speech perception as a sequence of events involving registration, encoding, storage, and identification of information. Within this theoretical framework, the role of short-term storage and mechanisms is viewed as crucial for speech understanding. Speech sounds arrive sequentially and must be held in storage until sufficient information accumulates for identification by higher level perceptual processes. The aim of this research was to study short-term auditory memory in a patient with a cochlear implant. These specific questions were addressed: Does electrical stimulation of an auditory implant produce a memory trace in short-term auditory memory that aids processing? If yes, is this electrically induced memory transfer differentially sensitive to stimulation and monitoring? The subject was a 30-year-old male with severe, bilateral, sensorineural hearing loss of approximately 60 years' duration. The subject had occurred after bilateral hearing therapy. The patient had worn a cochlear implant for 12 months. He was considered a successful user.

The experimental tasks involved serial recall of auditory presented digits. A stable characteristic of auditory serial recall tasks is superior recall for the last presented item, termed the "recency effect." A widely held assumption is that improved performance for the terminal item is due to the serial component of short-term auditory memory. The standard explanation is that immediately following last presentation, the last presented item continues to be represented in short-term auditory memory and segments recall. Thus, the magnitude of the recency effect is an index of whether an electrical representation of auditory input is available to aid processing. If an electrically presented list is followed by an additional, irrelevant auditory item, the recency effect is selectively reduced. This effect, called the "suffix effect," is typically attributed to the exclusion of irrelevant information. The precise conditions under which a suffix effect occurs have been explored as a means of studying the characteristics of short-term auditory memory. For example, experimental findings have consistently indicated that electrically evoked speech material is not sensitive to the addition of irrelevant information. Thus, the magnitude of the suffix effect for lists followed by an irrelevant speech series vs. an irrelevant noise series should provide an index of how well the speech vs. non-speech information is encoded by the cochlear implant.

The significance of the central auditory mechanisms underlying speech comprehension in patients with cochlear implants will be discussed.

Continued on page 6
Meeting Abstracts

Continued (from page 5)

Clinical Update: Speech Recognition Abilities of Nucleus 22 Channel Cochlear Implant Recipients Using the F0/F1/F2 Speech Feature Extraction Coding Strategy

A.L. Heuer, J.A. Brimacombe, and W.D. Barber
Corilte Corporation
Englewood, Colorado

Three month post-operative scores for Nucleus multichannel cochlear implant recipients were obtained on several speech recognition tests. The coding strategy used by all subjects was that which extrinsic or ongoing speech estimation of the fundamental frequency, first and second formants, and their respective amplitudes. The 1/3 octave word test was the most difficult, and with a mean score for the group of less than 10 percent. Although CID Sentence and Iowa Sentence were somewhat easier (means of 20 percent and 24 percent, respectively), the variability in scores was large, with some subjects scoring 0 percent and others scoring greater than 60 percent on these sentence materials. Mean scores on all three speech recognition measures were significantly higher than those obtained with subjects using the earlier F0/F2 coding strategy.

In addition, speechreading abilities while using the cochlear implant products were significantly improved, as evidenced by a mean score of 21 percent on the Visual Enhancement subsets of the Minnaud Auditory Capabilities Battery, as well as a higher difference score (30 words per minute) for two conditions of speech tracking ("speechreading + hearing" and "speechreading only") for a subset of the group in which speech tracking ("hearing only") was attempted, a mean tracking rate of 25 wpm was achieved. Again, tremendous variability was seen with the lower 25 percent of subjects tracking at less than 10 wpm and the upper 25 percent tracking at rates higher than 60 wpm. Seventy nine percent of the subjects reported using the phone, and of these, 20 percent recognized enough speech to use the phone interactively, i.e., without a code. Sentence developed at the Psycho-Acoustic Laboratory were administered over the phone interactively. These results will be presented in this paper.

Finally, longitudinal speech recognition scores on a subset of the subjects showed a consistent trend of improved performance over time. Both mean and individual data will be presented.

Auditory and Linguistic Performance in a Young Multichannel Cochlear Implant Child

Margery N. Somers
House Ear Institute
Los Angeles, California

In October of 1986, the Nucleus multichannel cochlear implant was approved for trials in children aged 2-3 years. The first young child in North America to receive this device, a five-year-old boy, was implanted at the House Ear Institute in February, 1987. Eight months after implantation he left him profoundly deaf.

This study is examining selected linguistic and auditory skills in three environmental conditions: classroom, therapy and home. Because this first child just received his device, data is yet to be complete. However, considerable data will be available by September of this year.

In this study the child's skills are assessed preoperatively and reassessed monthly between April and September, 1987. Auditory skills will have been raised monthly by the child's teacher. The child's ability to respond to auditory stimuli in a classroom or therapy setting as being evaluated with a smile developed to assess detection/identification, discrimination, and comprehension.

Pre- and post-implant communicative interactions are videotaped to assess pragmatic function in the child's environment. In particular, the discourse skills of topic initiation and topic maintenance. Discourse analyses are performed monthly with transcription of the video taped events. The number of initiations the child are counted in relation to the total number of utterances the child makes to different utterances. On his mouth, month and the school setting.

Since this child recently received the multichannel implant, limited post-implant data are available. Pre-implant and one month post-implant findings follow.

Post-implant data revealed no consistent auditory awareness or detection of sound or speech, and no discrimination or comprehension skills. Ratings were 1.0 (slightly above normal) in all areas. Post-implant data at one month showed consistent auditory awareness and detection of sound and speech. Ratings were 3.0, revealing consistent response above chance, but not at the 100 percent correct level. Discrimination abilities were consistent on specific closed set tasks (2/3). No comprehension skills were evident at one month post-implant.

Since loss of hearing, this child has been hesitant to initiate topics and has been reluctant to maintain a topic during communicative interactions in school and in home contexts. At one month post-implant, increased attention skills in communicative interactions were evident. Topic initiation and topic maintenance analysis showed increased skills in both pragmatic families.

Functional assessment in various environmental contexts provides a different profile of abilities than did clinical evaluations, and is an important adjunct to the testing that is typically done. Comparison of pre- and post-implant results will help in defining the full benefit of the multichannel cochlear implant.

Current Perspectives of Clinical Audiology — 1987
Friday & Saturday, September 4-5
Jumer's Castle Lodge
Urbana, Illinois
Registration Deadline: August 21, 1987
AHA & AAMS continuing education approved
Contact: Robert Filer, Ph.D.
Cari Clinic Association
602 W. University Ave.
Urbana, Illinois 61801

ANSWERS TO TRIVIA QUESTIONS:
A1: Virginia Berry
A2: Mexico
A3: Omaha, in the First Century A.D.
A4: Parenthesis of Willis
A5: Method of constant stimuli
A6: As an insect repellent.
A7: Lovelace Clinic, in Albuquerque, NM.
A8: Mid-Stades Laboratory of Wichita,
A9: 388 per octava
A10: Forehead masking
A11: The scala vestibuli
A12: Jewett (ABB Waves V1).

ADDRESS OR NAME CHANGE ??

Ear and Hearing subscribers and AAS members should send changes to:

AAS
1966 Inwood Road
Dallas, Texas 75235

(NOT to Williams & Wilkins)
San Diego was Site of ADA Meeting

The Academy of Dispensary Audiologists (ADA) held their annual meeting at the Prince Regent Hotel in San Diego, CA, from the 28th to the 30th of May, 1987. Members enjoyed the educational opportunities of an impressive array of speakers and other participants, as well as the recreational opportunities which abound in the San Diego area.

A new feature of the annual conference was an evening devoted to forum-type discussions of various topics related to the business aspects of dispensing. These discussion sessions focused on professional and product liability, marketing strategies, the value of marketing consultation, and the importance of referral sources to one's practice.

The keynote address of the conference was given by president-elect, John House, M.D., M. Dr. House emphasized the importance of audiologists as a de facto physician's sworn enemy and of patient education.

Professionals Convene for Second Annual
Children's Cochlear Implant Conference

A three-day conference addressing the progress and challenges of the multichannel children's cochlear implant program was held in Wild Dunes, South Carolina, January 10-12, 1987. The conference was sponsored by the Denver-based Cochlear Corporation, focused on the need for extensive interaction among all cochlear implant facilities and medical centers involved with the rehabilitation of implanted children. The conference included lectures by a distinguished panel of doctors, including the cochlear implant team of the University of California, San Francisco, and the medical profession in general. The conference provided an opportunity for the participants to share information and discuss the latest developments in the field.

VHS VIDEO TAPES AVAILABLE

"The World of the Hypoacousic"
VIII Annual AAS Carhart Memorial Lecture
1983

"The Audiologist as Scientist"
ASHA Workshop Keynote Address
(mildly abrasive)
1986

"The Place of the Audiologist in a Cochlear Implant Program"
VA Dedication Ceremony Keynote Address
1985

by J. Donald Harris, Ph.D.
Consultant, United States Navy
Submarine Medical Research Laboratory

Each tape $19.95.

Send order to:
Amphora Press
Box N
Grotton, CT

1986 AAS MEETING AVAILABLE ON VIDEOTAPE

The 1986 meeting of the American Auditory Society is now available on videotape.

"TRACES OF AGE IN THE EAR AND THE EYE"

The videotape is approximately 6 hours in duration. It includes the Carhart Memorial Lecture by Joseph E. Hawkins entitled

The videotape is available in VHS format only. To order, send the specified amount after checking one of the below:

- I am sending 1 $100 blank videotape. Please duplicate the 1986 convention tape and return it to me. Cost = $29.00
- I am not sending a blank videotape. Please send me a copy of the convention tape. Cost = $35.00

Make check payable to the American Auditory Society.

Send order to: Michael F. Sander, Ph.D.
123 Alden Ave, East Long Island, NY 11712

The videotape should be mailed to:

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IN THIS ISSUE

Meeting Abstracts ............. 3
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Audiology Trivia .............. 2

Now Rastronics introduces a complete series of
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W Germany

Rastronics USA Inc.
768 Foster Avenue
Bensenville, IL 60106
USA
1987 Annual Meeting Big Hit

Nearly 200 people converged on the Inn of Chicago on Monday, September 21, for the 1987 annual meeting of the American Auditory Society. It was one of our largest turnouts for a meeting held in conjunction with the American Academy of Otolaryngology. Laddie Stien of Michael Reese Hospital in Chicago served as Program Chair for the meeting. His Program Committee is to be commended for the excellent job done on the format of the program and on having selected a roster of outstanding papers presented covering many contemporary issues of interest to all of us. A special tutorial session was scheduled entitled "An Update on Advances in Hearing Aid Technology." Experts from the fields of hearing aid fitting and research discussed significant issues relevant to amplification. The entire day was filled with dynamic and interesting papers, with quality time provided for exchange of information among participants.

Certainly, one of the parts of this year's meeting that made it such a success was the Carhart Memorial Lecture delivered by Dr. Peter Dellois of Northwestern University. His topic, socioeconomic development, was timely and most intriguing. A special treat was the presentation of Mrs. Raymond Carhart, as our guest at the special luncheon in tribute of her late husband. We were thrilled to have her with us.

The 1987 Business Meeting was also a highlight of this year's conference. President Beestrom presided and welcomed everyone to our 14th Annual Meeting. Many special awards were given, including Ear and Hearing Editor's Awards and the Belcher Award for Distinguished Teacher in Audiology. (Articles describing these may be found in this issue.)

The day of professional activity was topped off with an outstanding evening of dining, fun, and entertainment. David Hill, Chair of local arrangements, saw to it that our day did not end on a dull note. Society members and guests "let their hair down" as a dancing excitement lights of Chicago on the river of Chicago. A gourmet delight of a dinner dance was served. Participants then enjoyed dancing and revelry for the remaining time on board this wonderful ship. All who attended agreed that this was a perfect end to a perfect day.

Needless to say, this year's annual meeting will long be remembered by those who attended. Those who didn't attend wish now that they had. Now, it's time to count the days till Boston!
Speech and Hearing Alliance for Resource Exchange

The primary purpose of SHARE is to assist in the identification and development of audiologic and speech pathology training programs and institutes through the sharing of surplus textbooks, journals, reprints, or other audiovisual materials.

A secondary purpose is to share experiences and information among workers with the common interest of helping the communicationally impaired.

The primary recipients of these materials are training or clinical programs located in developing countries that do not have the means to purchase journals and textbooks necessary for professionals who serve the communicationally handicapped in their countries. Individual requests for materials will also be considered.

Books, journals, and other materials are obtained through donations from individuals and libraries. Additional materials are made available as a background information for beginning students and as reference for more advanced professionals. In addition, recent volumes of professional journals are available as reprints.

The cost for distributing these materials is borne by the Communication Disorders Foundation, a non-profit, tax-exempt foundation. The Communication Disorders Foundation has obtained a startup donation to cover expenses of forwarding materials to recipients. Additional grants and donations are being solicited. Gifts of books, journals, materials, or cash are acknowledged in writing by the Communication Disorders Foundation.

Suitable recipients will be forwarded materials that are to be shared no later than the end of the year. Distribution of the exchange is that materials will be placed in their home offices or libraries where they will be generally available to students.

Requests for materials of any nature or letters should be addressed to:

Robert W. Keath, Ph.D.
Division of Audiology and Speech Pathology
Department of Otolaryngology
University of Cincinnati Medical Center, #628
231 Bethesda Avenue
Cincinnati, OH 45267-0528
(513) 265-4898

From the Editor

With the close of this year's Annual Meeting and the completion of over eleven years of Society membership, I had a startling realization. It seemed as though we had accomplished so much that it was difficult to grasp the magnitude of our accomplishments.

What I find even more significant than membership is that we have also accomplished so much in the development of SHARE. The growth of SHARE has been overwhelming. Our growth has not been in the number of members, but in the number of contributors.

As the program has grown, the membership has increased, and the resources available to members have expanded. With the growth of SHARE, we have developed new programs and initiatives that have helped to foster the growth of the Society.

We have also involved ourselves in local initiatives that have helped to increase the visibility of the Society and its members.

I am proud of the work that we have done, and I am looking forward to the future of SHARE. I am confident that we will continue to grow and to make a positive impact on the field of audiology and speech pathology.

—LaVonne Bergeron

Editorial Comments Concerning the Role of Medicare in the Hearing Aid Delivery System

By Matthew W. Smith, M.S., CCA-A, Editor's Note: The following was presented at the ASHA Legislative Council during the 1997 Annual Convention in New Orleans. Matthew Smith, Features Editor for Corti's, welcomes your comments and feedback.

ASHA's governmental affairs group is currently lobbying Congress with a proposal to include Medicare in the delivery of hearing aids. While at face value this sounds like a good thing, it could be a noble thing to do, hosting beyond the scope of this letter, we will focus on some specific problems which could cause the program to have an ill effect on the hearing aid industry.

One of the biggest problems with a program like this is that it would be suspect to the current beneficiaries. The current beneficiaries would be put in a position of having to pay for hearing aids that are not covered by Medicare. This could be a problem for some of the beneficiaries, as it would mean that they would have to pay for the hearing aids out of pocket.

Another issue is the potential for the program to be too broad. It is possible that the program could be too broad and that the beneficiaries would not be able to get the type of hearing aids that they need.

Finally, there is the issue of the program being too complex. It is possible that the program could be too complex and that beneficiaries would not be able to understand how to use it.

We would like to discuss these issues further with you. We would welcome your input and suggestions on how we can make this program work better for everyone.

——Matthew W. Smith

—Virginia G.
Family Physician Targeted in New BHI PSA Featuring L.A. Law TV Series Star

Richard Dysart, starring in the popular NBC-TV drama series L.A. Law, appears in a new Boston Hearing Institute television public service announcement encouraging hard-of-hearing viewers to benefit from available hearing aid help. The announcement is designed to increase the family doctor’s awareness of his important role in helping people with hearing problems.

The PSA was filmed at the Sachs-Menga home of Dysart, who once hearing aids himself to correct a hearing loss. Dysart plays senior partner Leland McKenna on L.A. Law, which aired a special November 19th episode featuring hearing aid help. In the segment, McKenna battled his own hearing aid when he went to court to fight an age discrimination case.

BHI president Richard Burger said that Dysart’s PSA, scheduled for February release to the major networks and local stations in the top U.S. markets, should be especially effective in reaching viewers with hearing loss to benefit from available hearing aid help. He emphasized that the PSA benefits from marketing studies conducted by the Hearing Industries Association and the Institute, and supports other family physicians projects being marketed by both organizations.

Dysart’s PSA is the latest in BHI’s award-winning series featuring famous people who overcame hearing loss. Other PSA stars include Ed McMahon, Bill Cosby, Leontyne Price, Crosby, Phyllis Diller, Gene Fishman, Henry Fonda, Loretta Young, Florence Henderson, Bob Hope, Jack Klugman, Arnold Palmer, Bert Reynolds, Richard Thomas, Clarence Tillman, and Kenneth Wyman.

Editorial Comments

Continued from page 2

Digital hearing aids which would initially exceed $1,000 per unit, wholesale cost, would virtually guarantee that Medicare beneficiaries would have to pay a substantial cost for hearing devices. We owe our patients much more than that.

The ASHA proposal in Congress mandates a 30-day trial period with 100% refund if not successful. This affects us and workers for these reasons:

1. The Medicare/Trade Commission, after years of testimony, including ASHA’s, determined that a mandatory trial period and mandatory refund policy is not needed. Is ASHA making a new proposal for the wrong reasons?

2. Hearing aid fittings which are aesthetically perfect often fail because of patient motivation problems. A 100% refund would encourage frequent trials, and implies that we should not be compensated for our time expended with the patient.

3. What other prosthetic device can be returned after trial? None. By mandating a return privilege for hearing aids, the implication is made that we don’t know what we’re doing with hearing aids.

Another concern of mine is that this proposal, which appears to attempt exclusion of the traditional hearing aid dispensers from Medicare, is contrary to an anti-trust option which could put ASHA at risk for litigation from the American Hearing Aid Society and others. As we dilute our existence, they have every right to participate in any governmental program.

Regarding professional autonomy, Medicare has placed the Speech-Language Pathologist in the position of technician, directed and supervised by physicians, who are least qualified to supervise. I do not want to see audiologists end up in this position.

Finally, our experience with Medicare and other third-party carriers suggests that the best way to economically operate our profession would be to put 80% of our target market under government run insurance programs.

I have already told my friends and colleagues that I’m taking home study courses in crick driving. If ASHA’s proposal is successful with Congress, I’m afraid this will no longer be a joke.

Please refile this proposal until the entire membership consider it. Our future career and our profession’s future existence depends on you!
Aural Rehabilitation Forum

A Family Systems Approach to Disabilities: The Hearing-Disordered and Alcoholic Families

Sharon L. Eve, MA, NFC
Alcoholism Center for Women

Editor's Note: Ms. Eve is a psychotherapist in private practice in Palo Alto, California, and recently appointed as Director of Programs and Clinical Supervisor at the Alcoholism Center for Women, She currently serves on the Board of Directors of the Dist.

Sharon L. Eve, MA, NFC, has authored several articles on alcoholism-related issues.

Loneliness, fear, anger, confusion, resentment. It has been noted in recent years (Wegelni and Vessey, 1985; Adelman, 1988) that these feelings have come to appear in the alcoholic family system as alcoholism progresses. Through consultation between the author, a psychotherapist, and alcoholics, it has become apparent that some similarities exist between the treatment found in the alcoholic family system and in the hearing-disordered family in which at least one member is suffering from an uncorrected and often progressively acquired hearing loss. A systems approach will be utilized to examine the individual suffering from the disability, the family members, and implications for treatment.

Alcoholism and Acquired Hearing Loss

Alcoholism and hearing loss have many features in common as well as differences. Hearing loss is a progressive and chronic process which affects the physical, emotional, and social aspects of the individual. The alcoholic suffers physical injury, as well as psychological and emotional stress, due to excessive alcohol consumption. The physiological consequences of drinking may include cirrhosis, cardiac arrest, stroke, brain damage, various forms of cancer, and porphyria. The hearing impairment is not caused by cellular damage to the auditory system, whether the onset is alcoholic or congenital. Neither the alcoholic nor the hearing-disordered individual is responsible for insuring the discovery or treatment of the disease process. The hearing-disordered individual did not want a hearing loss. The alcoholic may initially have chosen to drink, though he or she may not choose to become addicted to alcohol. However, both individuals may be in denial about the severity of their situation, the problem, how it is affecting them, and how it is affecting those around them.

Aural Rehabilitation Forum

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Address or Name Change??

Ear and Hearing subscribers and AAS members, please make changes to:

AAS
1966 Inwood Road
Dallas, Texas 75235

(NOT to Williams & Wilkins)
Minutes of the American Auditory Society Executive Committee

DATE: September 20, 1987
PLACE: The Inn of Chicago, Chicago, Illinois
TIME: 1:30 p.m.


MEMBERS ABSENT: F. Owen Smith, Robert Libby, David Lipscomb.

Mr. David Lilly presented the report of the Executive Committee for their attendance and recognized the new Executive Committee members in attendance. The minutes of the April 13, 1987 meeting were accepted as printed and signed by the Executive Committee and sent out on the mailing list.

2. The minutes of the 1986 AAS Executive Committee meeting held in Boston, Michigan, were reviewed and approved.

3. The financial report for the period January 1, 1987, through August 1987, was presented by Ross Rosser. Total revenue of $14,806 and total expenses of $7,320 were reported, resulting in a net deficit of $7,546. However, it was reported that most of these funds were collected before September 1987. The Executive Committee agreed to the report and directed that the deficit be reported when the 1986-1987 financial report is prepared.

4. The President, Bergstrom, opened the meeting at 1:45 p.m. She thanked the members of the Executive Committee for their attendance and recognized the new Executive Committee members in attendance. They were: B. Hill Brinton, William P. Carver, James R. Curran, Michael Dykstra, Irene Geiselman, Michael J. Hyland, Ken Stemm, and Ken Stemm.

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24. Ross Rosser reported that AAS is now an incorporated non-profit organization in the State of Texas.

25. At the 1986 Executive Committee meeting Ross Rosser was directed to investigate the costs of having a separate membership directory. He reported that the costs of the directory would be $5,000. The directory would include each member's name, professional address and affiliation, home address, membership category, and honor and office phone numbers. After discussion, it was decided to have the membership directory published by William and Wilkins and send out with an issue of Ear and Hearing - or publishing the directory as a separate item, as recommended. Following the Executive Committee's recommendation several members indicated that the costs of the directory appeared to be excessively high and recommended that the Executive Committee be polled by mail to explore keeping the directory in Corr's Organ, but expediting the information.

26. Professional liability insurance was discussed. Mike Sejnowski indicated a concern for the professional liability of AAS Executive Committee Members. Ross Rosser explored the cost of liability insurance and indicated that it would cost approximately $5,000 for this type of insurance for AAS. A motion was made that

Continued on page 8

You Should Hear What You're Missing

Legendary golfer Arnold Palmer, who personally hears a hearing problem, urges others to benefit from available hearing help.

Hearing the cheers of the gallery can be music to a golfer's ears. I can hear them much better now, since I got help for a hearing loss.

You know, nearly 20 million Americans with hearing problems needlessly miss life's precious sounds. Why needlessly? Because virtually all of them can now be helped—medically, surgically, or like me, with hearing aids.

If you suspect a hearing loss, or thought nothing could be done about it, ask your family doctor who can guide you. Thanks to significant advances in the hearing field, there are many hearing health care professionals who can help you.

So if you or someone you love doesn't hear well, arrange for a hearing test today. For hearing help information, call toll-free Hearing Help Line at 800-299-EARN.

Because you should hear what you're missing.
The AAS Executive Committee met on September 20th for their annual day of hard work and decision making. Old committee members joined by those newly elected, spent hours around the conference table reviewing the year's business and discussing what next year might hold.
Their hard work was rewarded with a terrific evening of dining and conversation at Chicago's spectacular 95th Restaurant atop the John Hancock Building. An overpowering view of the city was the perfect site to finish off the day.
New Applicants

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>University</th>
<th>Major</th>
<th>Graduation Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>George C. Keates</td>
<td>Professor</td>
<td>University of Texas, Austin</td>
<td>Chemistry</td>
<td>1992</td>
</tr>
<tr>
<td>Nelly B. Leedom</td>
<td>Associate Professor</td>
<td>University of Texas, Austin</td>
<td>Chemistry</td>
<td>1993</td>
</tr>
<tr>
<td>Michael S. Mallahan</td>
<td>Assistant Professor</td>
<td>University of Texas, Austin</td>
<td>Chemistry</td>
<td>1994</td>
</tr>
<tr>
<td>Kratz J. Martin</td>
<td>Associate Professor</td>
<td>University of Texas, Austin</td>
<td>Chemistry</td>
<td>1995</td>
</tr>
<tr>
<td>Katie E. Olinson</td>
<td>Assistant Professor</td>
<td>University of Texas, Austin</td>
<td>Chemistry</td>
<td>1996</td>
</tr>
<tr>
<td>Mark A. Matlow</td>
<td>Assistant Professor</td>
<td>University of Texas, Austin</td>
<td>Chemistry</td>
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Annual Meeting Will Be One Not To Miss
Blank slate already underway for the AAS
1988 Annual Meeting; free press pass (as per
invitation) for the AHA Convention in Boston.

Friday, October 13, 1988
7:00 AM to 7:30 AM
AHA Convention in Boston.

Museum
The Museum will be held at the New England Medical Center Hospital
on November 17, 1988. This is the Thursday
before the AHA Convention in Boston.

On November 17, 1988, New England Med-
center Hospital, at the Harvard Medical School,
will be held a meeting on Boston.

Answer: Not when you've got the kind of
support team I have. Michael Dybas, Ph.D.,
from the New England Medical Center in the
local region cancer center. And I believe the
planning goes into great detail in a historic
Boston. As a Harvard graduate, I was so impressed
with your presentation of the meeting in Boston.

Regarding medical students, there are 2,000
students who are interested in entering the
field. This is the problem that I come across
every time I speak to them. And I think that the
major problem is that they don't have the
time to get involved in the field.

And the question is: How will this part of
the program be organized? The
Answer: The program will be organized,
under my direction, in the portion of training
and all the students in the field.

Question: What is the impact of new ideas on
research? I'm a graduate student in Boston
and I was interested in this area.

Answer: Although much of the planning is
done by the students, there are many
students who are interested in joining this
effort. And the students who have
attended this past year have enjoyed the
experience. We plan to have a special
session devoted to the topic of new ideas on
research. The students will be able to
attend this session and present their
efforts. The students will also be
invited to participate in the discussion
sessions.

M. Jane Collins
Grant Distinguished
Teaching Award

The Sixth Annual Heron Teaching Award
was given to Professor M. Jane
Collins, Ph.D., of the State University
of New York at Albany, for her
outstanding contributions to teaching
and the education of medical students.

The award was established by Professor
Heron in 1985 and is given annually to a
member of the faculty who has made
outstanding contributions to teaching
and the education of medical students.

The award is given to faculty members who
have demonstrated exceptional commitment
to teaching and the education of medical
students. The award includes a certificate
and a cash prize of $2,500.

1988 AAS Program Committee

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19th International Congress of Audiology

The International Society of Audiology will
hold its 19th International Congress of Audi-
ology in Jerusalem, Israel, June 5-9, 1988.
Topics of the main plenary sessions will
include: "Auditory System and Disorders Affect-
ected by Attenuating Factors, including Phonot-
ological, and Medical Evaluation of Hearing.

Included at these congresses are a variety of topics in audiology,
including cochlear implants, auditory rehabilitation, and hearing
loss. The meeting is open to all professionals in the field of audiology,
including researchers, clinicians, and professionals interested in the
field of audiology.

19th International Congress of Audiology

Jerusalem, Israel, June 5-9, 1988
New Subjects Editor Joins Corti’s Staff

Karen Patterson of Arkansas State University has joined the Corti’s Organ Editorial Board in Clinical/Rehabilitative Audiology Subjects Editor. Karen holds her master’s degree from North Texas State University and is currently completing her doctorate from the same institution. She holds dual certification in Speech-Language Pathology and Audiology. Karen is now an instructor in Communication Disorders at Arkansas State University in Jonesboro, Arkansas.

Karen brings to the Corti’s Editorial Board a wealth of experience and expertise in both clinical and rehabilitative audiology. She is a member of the Arkansas Governor’s Task Force on Deafness and Aging and is a member of the March of Dimes Executive Board. She has published numerous articles in the area of geriatric auditory rehabilitation.

As Subjects Editor for Clinical/Rehabilitative Audiology, Karen will be responsible for selecting and managing new topics and columns related to case studies, clinical practices, intervention programs, and other areas related to this segment of our profession. She will take charge of Corti’s Annual Rehabilitation Forum. Karen has a degree in design and has created new and creative formats to be included in future issues. So, be prepared. She may be calling on you for input. If you have any ideas, articles, etc., for consideration in Karen’s editorial realm, you may contact her directly:
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Arkansas State University
P.O. Box 2772
State University, Arkansas 72459
Telephone: (501) 975-5061

Society Displays Debuts at AAO Annual Meeting

At the 1987 American Academy of Oto- laryngology annual convention, in conjunction with the American Auditory Society’s annual meeting, a new concept for AAS was introduced. A portable display is now available for meetings, workshops, etc. The display describes the Society’s organization and Executive Committee makeup. In addition, it depicts a sample of our activities, including our sponsored publications. For many years now, members have shown an interest in “spreading the word” on the advantages of membership in the American Auditory Society. Last year, the Executive Committee agreed that the development of such a display would be an excellent way to communicate to both members and nonmembers what purpose our organization serves and what benefits can come from membership.

The display is quite portable and is an outstanding advertisement for promoting the Society. It would be useful for display at any activity where participants might show an interest in AAS goals and directions. For information on obtaining the display for exhibit, contact Rose Roeser at 2866 Inwood Road, Dallas, Texas 75229.

Ear and Hearing Awards Announced

At the Chicago meeting of the American Auditory Society three awards were presented by the editor of Ear and Hearing. The first was an award to Deborah Hayes in appreciation for her service as Section Editor during the years 1981 to 1987. Deborah was editor of the Speech Audiology section during that time.

A second special award was given to Frank R. Musiek for his tutorial series on neural anatomy, neurophysiology, and central auditory assessment that appeared in Volume 7, 1986. The third award was given to Lucille Beck and Jerry Bunch, who were co-editors of their tutorial series on the brainstem, the cerebellum, and the corpus callosum and effort put into them.

Finally, the Editor’s Award for the outstanding article, which appeared in Volume 7, 1986, was given to Jerry L. Penuel and to Lucille R. Beck. Their article was entitled, “Effects of Low-Frequency Amplification on Melodic Recognition and Speech Intelligibility” (pp. 574-579). The purpose of the Editor’s Award is to acknowledge manuscripts that exemplify the standards of quality that the Ear and Hearing Editorial Board strives to achieve. The scientific standards to which the Journal subscribes and to which manuscripts are evaluated include:

- An interesting and well thought out research question.
- Appropriate methods of research design and methodology used in gathering data.
- Appropriate analysis.
- Clarity of writing.
- Timeliness of the subject.
- Appropriateness to purpose of the Journal.

The recipients of these awards are to be congratulated for their contributions to Ear and Hearing.

Frank Musiek is given special award for his tutorial series.
Gerber Awarded Fulbright Grant

Sanford B. Gerber, University of California, Santa Barbara has been named a Fulbright grant to conduct research in England. Gerber, a graduate student in geography, is affiliated with the University of California and the United States Information Agency.

Dr. Gerber's research is on the history of the English Channel in the English Channel and its historical impact on the country.

Executive Committee member Don Worthington named "Arkansas Traveler" by Governor at State Association Meeting.

Activiv/Duracell Funds Family Physician Program

As part of a coordinated effort by both the Arkansas Medical Society and the Federal Government to improve medical care, a new program has been made possible by a special grant from Activiv U.S.A., a division of Diamex Inc., and Duracell. This program will provide new medical equipment to rural hospitals and clinics.

Minutes of Editorial Board Ear and Hearing

Chicago, Illinois - September 20, 1987

The Editorial Board met at the office of Chicago Board of Health, 505 W. Madison St., Chicago, IL 60606.

1. The following announcements were made:
   - A new photography service will be launched by Marta Chaves, a member of the editorial staff.

2. The following resolutions were voted on:
   - Resolutions were adopted on the importance of continued medical education.

3. The Editor's Award for outstanding customer service was given to Janet Brown, a member of the editorial staff.

4. A special award was given to Frank Mullan, for his dedication to improving the appearance of the Journal.

5. Several suggestions were made to improve the appearance of the Journal.

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Aural Rehabilitation Forum

Editor’s Note: An area each of us as professionals needs to address is that of rehabilitation and intervention. Too often we are caught up in innovative diagnostic techniques and technology research, forgetting that we are service providers. Without attention to patient rehabilitation, we are limiting the focus of our services.

Because of this rehabilitation need, a new feature is being tried for Corti’s Organ, the “Aural Rehabilitation Forum.” Over the next few issues, a series of presentations and panel discussions will be included which were organized under the direction of Ronald L. Schwo. The general theme of these articles will be aural rehabilitation concerns for aging adults. These discussions were presented as a part of a conference on aural rehabilitation held in 1980 at Winter Park, Colorado.

Each of these upcoming articles will thoroughly investigate one area of intervention services. But, there are many other populations that also need our attention. As you read this continued series, think about your personal experiences with your specific caseload. In order for this Forum to continue, other papers must be generated by our readers. Upon reflection on an area that captures our attention, let us know your thoughts or feelings on any area of rehabilitation. Remember, we need to hear from you.

Rehabilitating the Elderly Hearing Impaired Audiologists as Hearing Aid Dispensers

Ronald L. Schwo
Idaho State University

(First in a series of three)

Abstract

This presentation summarizes the status of aural rehabilitation efforts for the elderly hearing impaired and calls attention to the great number who need but are not using hearing aids. Data are summarized which emphasize the importance of the hearing aid in rehabilitation. Efforts to improve the hearing aid and its delivery system are described, and a strong plea is made for a more unified effort on the part of rehabilitation audiologists and hearing aid specialists, who have the same goal of helping the hearing-impaired elderly. Possible methods for more vigorous promotion and the ethical problems involved are discussed.

Some have wondered why a presentation on rehabilitative services for aging adults would want to concern itself with an issue like the dispersing of hearing aids. Perhaps it would be advisable to provide a rationale for this emphasis as I begin.

First, I should like to underscore the importance of amplification as the major rehabilitative tool in dealing with hearing loss. For some reason there is a persistent and, I think, mistaken notion that rehabilitative audiometry primarily involves speechreading and auditory training. This general impression has been difficult to dispel. Upon reflection most audiologists would concede that amplification realization is part of the rehabilitation process, but somehow it is often perceived as being a separate matter. As a case in point, ASHA audiometry convention committees include one on diagnosis, one on aural rehabilitation, and a separate committee for hearing aids.

Notwithstanding this tendency to separate amplification from aural rehabilitation efforts, I think that most of us recognize the importance of amplification in rehabilitation. It is, without dispute, the remedy used by more hearing-impaired persons than any other. Further, there are more audiologists by far involved in hearing aid evaluations and hearing aid fit-up than are involved in interpreting and auditory training therapy. Table 1 contains some 1980 data from a large representative sample of ASHA audiologists which demonstrate this (Whitecomb, 1982).

Table 1. Aural Rehabilitation Activities of ASHA Audiologists

<table>
<thead>
<tr>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearing Aid Evaluations/Fitting</td>
<td>265</td>
</tr>
<tr>
<td>Hearing Aid Follow-Up/Orientation</td>
<td>308</td>
</tr>
<tr>
<td>Counseling/Coordination with Other Professionals</td>
<td>304</td>
</tr>
<tr>
<td>Speechreading/Auditory Training Therapy</td>
<td>148</td>
</tr>
</tbody>
</table>

*Whitecomb, 1982

Without too much fear of contradiction, then, my first major premise is this:

1. Amplification holds a place of pre-eminence in Aural Rehabilitation.

The second major point has to do with the importance of amplification for the elderly hearing impaired. I would argue that the elderly are not very different from any other segment of the hearing impaired population in their heavy reliance on amplification as a solution for their hearing problems. The evidence indicates, as seen in Table 2, that about one-half of the hearing impaired persons in this country are in the relevant years (Beichel and Delk, 1974).

(Continued on Page)
Now that the first two issues of Cortis’s for 1986 are under my belt, I am beginning to relax a little. As I’m sure it’s obvious, my format has changed. I hope as readers you feel the “new look” to be a marked positive direction.

Beginning with this issue, other new dimensions have been added to Cortis’s Organ. I feel strongly that this publication should be more than simply a dispensary for random dissemination, but should also be a forum for the dissemination of new items. Cortis’s Organ should be our opportunity to publish papers, research, etc., in a manner similar to the “journal” style manner.

In order to generate papers in various clinical areas, a new approach has been developed. Subject Editors have been selected who will be responsible for articles on specific topics. All of us on the editorial staff are hopeful that the preliminary areas chosen for attention are of interest to you as readers. At this time, two areas have been selected. We would particularly like to represent these different directions we take as professionals. We would like to expand our “coverage” of subjects but we can’t do it alone. Do you have any areas you’d like to “take charge of”? If so, please let me know.

I am currently researching data that I have gathered relating to hearing loss due to barotrauma. Many experiences with people flying, scuba and free diving have an audiological information on hearing loss due to barotrauma.

I would like to use Cortis’s Organ and Ear and Hearing as a means of adding my research. My data is limited to approximately twenty cases, and more case studies would be helpful.

Any assistance you could give me in this matter would be appreciated. Anyone having information to share, write or call Peter Froud, M.A., Box 10353, St. Thomas, US Virgin Islands 00801, (809) 778-8255.

Members of AAS who attended last year’s meeting will recall my introduction of SHAPE: Specialized Hearing Aid Program. The memory association for hearing impaired children that followed in Cortis’s Organ (Vol. 10, No, 3, Fall/Winter 1985-86, P. 3). At the AAS meeting I handed out a description of the program. A copy is published on page 1.

1986 CARHART MEMORIAL LECTURE

Renowned scientist, Joseph E. Hawkins, will address the American Auditory Society’s annual meeting on Thursday, November 20, in Detroit, Michigan, just prior to the 1986 American Speech-Language Hearing meeting. Dr. Hawkins’ presentation is “An Acoustic View of the Ear: The Ear and The Eye.”

1986 AAS Executive Committee


Ear-Office

Charles D. Anderson, M.S.E.E. Virginia Berry, M.S. Robert W. Smith, Ph.D., and Donald W. Wirtz, Ph.D.

Reflex Decay in Two Patients with Labyrinthitis

The following is excerpted from a presentation by Ralph T. Eccard, M.D., Suburban Hospital, Bethesda, Maryland, at the November 1986 meeting of the American Speech-Language Hearing Association.

Labyrinthitis refers to inflammation of the labyrinth of the inner ear. Symptoms can include tinnitus, vertigo, hearing loss, or any combination of these. These complaints are often sudden in onset, and patients are usually treated symptomatically (1).

Adams, et al. (2) studied patients with acute vestibular neuritis, acute labyrinthitis, and acute epidural vertigo to test the hypothesis that vestibular neuritis is a manifestation of a viral cranial poliovirus. Their patients demonstrated normal or bilaterally symmetric brainstem audiovestibular results with normal cerebral evoked potentials. Bilateral weakness of caloric response, or spon- taneous nystagmus following caloric stimulation was noted in many of these patients also demonstrated transient cranial nerve dysfunction. Our study is one more after the onset of the symptoms, all but one of the patients had complete resolution of their signs and symptoms.

Two patients referred to the Neurology Unit of Suburban Hospital with a diagnosis of labyrinthitis showed disappearance of acoustic reflex decay upon stimulation of their presenting symptoms. These cases are discussed below.

Patient 1

M.C., age 37 was referred to this hospital by an otorhinolaryngologist. Her symptoms included bilateral tinnitus ("extra low when dizzy"), and vertigo. She also noted an increase in hearing in her right ear. Her vertigo improved after a period on a siting position, but her vertigo was still present.

The hearing evaluation indicated no hearing loss bilaterally with 100% speech discrimination in each ear using the W- word list. No PFR rollover was obtained in either ear. Imittance testing indicated normal middle ear pressure and capsu- lation bilaterally. Acoustic reflex thresholds were within normal limits bilaterally which were stimulated ipsilaterally and contralaterally.

(Continued on Page)
AUDITEC

(Continued from Page 1)

was getting him (and the female voice too) to read the disconnected discourse aloud. Infection! The most time-consuming task was editing and rewriting the text for the different “forms.” It was several months before we were ready to sell our tapes.

Who else was involved with Auditec?

No one. It was just Bob and I.

You were working for Washington University Medical School then, weren't you? Did you quit them?

Oh no, both of us kept our regular jobs. No, we just worked one evening a week. And I spent extra time weekends on the business end, and shipping, invoicing, etc.

How did you market your tapes?

Word of mouth. Since both of us had full-time jobs, we just kind of eased into the market place. Backed into it might be a better description. I held a local distributor of audiometers (and a friend as well) about our venture and he began to distribute the tapes and also to pree the word. After a time, I thought of an idea for some advertising, but Bob didn't want to. Nevertheless, the word spread, slowly, and business increased a little each month. I found that I was spending more and more of my weekend days on Washington business, though. I still need only to record once a week.

Your product line is considerably larger than you described earlier. How did that happen?

I contacted audiologists who had developed tests. (one contacted me) with the proposal that Auditec market their tapes for them. We obtained a third test that way. Having these tests in our catalog helped us expand because people would read about the test in a journal, ask the developer for his test, and he would refer them to us. This gave us the opportunity to sell them of the rest of our line.

I know that you have a lot more tests than that. What happened next?

I believed that Auditec could grow into a company which would supply much of the recorded needs of the audiologist. But I also knew that to accomplish this, more time and effort would have to be devoted to the business than we were giving it then. At that time, Auditec could not support one of us, much less both of us, but I knew that the potential was there for at least a man and a half operation. So, in 1977, I borrowed a pile of money, bought out my partner, left Washington, bought another house, leased a space for the studio, and took a part-time teaching position to help support me while I tried to make Auditec self-supporting. To make it work, for four years, I spent seven days and evenings a week teaching or working on Auditec business. I think my family forgot what I looked like, but I made it work.

Did you do anything special to make Auditec grow?

Simply put, I began to let people know that Auditec existed. I advertised and used direct mail on a limited basis (not too much money to work with then) I began to expand the product line with materials which I thought audiologists might want. Also, test developers continued to contact me, offering me further expansion of the line. My hunch about Auditec's potential was right, my gross sales increased 50% the first year and our post-partner and 40% the next year.

Wow! That's quite a record. Have you been able to maintain that pace?

Don't I wish! No, growth has been sort of up and down, more or less following the nation's economy. 1985 was a banner year, though, and I look forward to an even better year in 1986.

How big is your product line now and how can our readers get information on it?

Our catalog lists 69 reel-to-reel items, 85 cassette items, 20 video tapes and a variety of supporting printed materials. The catalog is available to anyone who wants it, simply write or phone, we'll send it back, or return by mail.

I would like to add that Auditec is still a small company. I employ two part-time individuals now. That is, it lets us to be very flexible. We act like a "job-shop." That is, we can record to order almost anything that one may desire.

Let's change the subject to the technical end of the recording business. What are some of the technical problems that one faces in recording speech testing materials?

Our biggest problem is "print-through." Print-through, what's that?

When one section of recorded tape lies next to another section of tape so they do when stored on reels or cassettes, the magnetized (recorded) particles in that section are "pushed" from one track to the other, that is, the adjacent sections, both above and below. On tape which has continuous material recorded on it such as music, or our cold running speech, the print-through is so minimal that it escapes detection most of the time. With our tapes, however, the majority of the tape is blank. There are at least four seconds of silence between stimuli on our standard tapes, but stimuli duration is just over one second in most cases. Therefore, the stimulus material is highly likely to lie next to virgin tape, inducing its signal on it, at a markedly reduced level, of course, but audible, especially when played at high output levels.

What can you do about it?

I'm afraid that it's not enough, especially for those individuals who employ very high output levels, looking for roll-over. We use "reproduce" tape which has good (non-Auditec) test material recorded on it at slightly reduced levels (relative to "standard record level"). Finally, we use an electronic gate between our master tapes and the production copy. The result is that the print-through is about 50 dB below the level of the primary signal, sufficient for most speech discrimination tasks. Recently a study was reported in EAR AND HEARING which used one of our tapes. In the appendix of their article they indicated that while print-through was audible, it was not discriminable, even at high levels.

Any other problems?

Yes, we need standardization. The industry is becoming more standardized, but there is nothing in speech testing materials. Standards not only maintain or upgrade

(Continued on Page 6)

INTERNATIONAL HEARING FOUNDATION

Week in Minnesota

This otology/audiology/technology "Week in Minnesota" will begin on June 2, 1986, with the Minnesota Ear Surgery Course. The Course will consist of a temporal bone dissection format, with workshops and discussions led by Drs. Polani, Saitd, Teo, Maniglia, Goycoolea, Koutmovitch, etc. It will be held at the University of Minnesota Head & Neck Center.

Friday, June 6, brings the Clinical Otology Workshop with a number of luminaries discussing such topics as "Sensorineural Hearing Loss in Children," "Anatomical Variations," surgical procedures, cochlear implant updates, etc. Additionally, Friday's workshop will feature an update with Drs. Foster, Portmann, McGee, S. Hough, Schuknecht, and Mecklenburg.

The International Hearing Symposium being held on Saturday and Sunday, June 7 & 8, 1986, at the Amfac Hotel in Minneapolis offers an economical meeting in involving medicine, otology, technology, and business/marketing arenas. An international cast of speakers in medicine, professional and technological fields, including many of the above named physicians, as well as Kurt Hecox, M.D., Janes Jerger, Ph.D., and Jerry Northam, Ph.D., will be participating in this outstanding symposium. This will be highlighted by the Reese Award and banquet being held on Saturday night at the Amfac.

The Reese Award is a new annual award for advancement in biomedical and technological hearing research. The recipient, chosen by an international scientific committee, will receive a $30,000 cash award plus a gold medal. This presentation will be made at the banquet, which will also include an appearance by a special guest speaker.

Last, but certainly not least, is the Minnesota Audiology/Technology Symposium/Workshop to be held on Monday, June 9, as a co-located meeting with the Symposium.\n
INTERNATIONAL HEARING SYMPOSIUM

June 7 and 8, 1986

Amfac Hotel

Minneapolis, Minnesota

This unique two day symposium combines Current Developments in Medicine, Audiology and Technology on such practical topics as medical and surgical treatment, audiology, hearing aids, technology, marketing, etc.

The first annual international award for hearing, the Reese Award, will be presented at the Award Banquet.

An outstanding faculty of international authorities includes Drs. Schuknecht, Maniglia, Jerger, Tos, Sadé, Northern, Hecox, Ward, McCue, Oliveira, Colstein, Goycoolea, Paparella, Hough, Lim, etc., along with leaders of technology.

In addition, symposium attendees can participate in "bonus" sessions on June 9 dealing further with audiology, technology and marketing, as well as hands-on earmold and ITE modification experience.

For more information and registration (modest fee includes Award Banquet, lunch, etc.) please phone or write to:

International Hearing Foundation

701 25th Avenue South

Minneapolis, Minnesota 55445

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Speech and Hearing Alliance For Resource Exchange

Share

The primary purpose of SHARE is to assist in the international development of Audiology and Speech/Language Pathology training programs and services through the sharing of simple textbooks, journals, reprints, or other materials and resources. A secondary purpose is to share information and information among persons with a common interest in helping the communicatively impaired.

The primary recipients of these resources will be training or clinical programs in developing nations which do not have the necessary textbooks or materials for the development of professionals, and which will serve the communicatively handicapped in their countries.

Books, journals, and other materials will be obtained through donations from individuals and libraries. Any information from these text materials is most useful. Any edition can provide background information for individuals or libraries. As a reference for advanced professionals.

Institutions will be served as valuable resources.

The conduit for distributing these materials will be the Communicative Disabilities Foundation, a non-profit tax-exempt organization.

Reflex Decay

Aural tests, performed five days after the reflex implantation tests, were performed bilaterally. The patient reported significant diminution of the symptoms reported one month earlier.

In the Ador, et al. study (2), cranial nerve damage (CNV) was noted. V, VII (Acoustic, X (Glossopharyngeal) and VIII (Vagus), as well as the occurrence of a cranial nerve, were reported to be involved in acute vestibular vertigo. Their patients exhibited some of the same manifestations and in cochlear involvement, abnormalities of the reticulo-electrical (ENG) findings, and a normal neurologic examination.

No mention was made of acoustic reflexes or reflex decay in this study.

The findings reported here indicate that the reflexes may have potential affect the acoustic, reflex decay, producing these results. The patient may appear to support the hypothesis of a polymorphic involvement in acute vestibular vertigo. Further investigation with a more controlled manner, with a larger population, could determine whether the incidence exists between labyrinthitis and acoustic reflex decay. Such a study could also help determine the sites of involvement of the labyrinth.

References


(Continued from Page 5)
Table 5. Summary of Hearing Aid Satisfaction Results on Sample of 45 Hearing Aid Users*  

<table>
<thead>
<tr>
<th>Dispenser</th>
<th>Higher or Moderately Satisfied</th>
<th>Neutral or Slightly Unsatisfied</th>
<th>Moderately or Highly Unsatisfied</th>
<th>Dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audiologist</td>
<td>19</td>
<td>42</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Dealer</td>
<td>26</td>
<td>48</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td><em>Otis &amp; Schor: 1984</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This is certainly not the last word on the subject. Unfortunately, other data are very limited comparing the work of hearing aid dealers and audiologists. Whatever these data may ultimately show, if and when we get them, we do know this: Hearing aid users are not deserting the dealers in droves, nor are all audiologists providing 100% satisfaction on all fittings.

Statistics drawn from our 1960 survey indicate that about one of every five audiologists was at that time involved in dispensing hearing aids (Whitcomb, 1962). What impact are audiologists having as hearing aid dispensers? Are we doing a better job than hearing aid dealers? Perhaps, but we have to qualify that answer very carefully.

I think there can be little argument that audiologists, as a group, understand the technical aspects of hearing aid fitting better than dealers, or spectroscopists as some refer to call them. How important are these technical details in fitting? A dispensing audiologist’s thought process is that almost 100% of a total economy dispensing process. He says the major thing needed in dispensing is good counseling, which includes full hearing aid orientation among other things, and which helps the client develop realistic expectations for the aid. Are the audiologists any better at counseling and orientation than the dealers? Naturally, it depends on the individuals involved. Audiologists, however, generally have more formal training in counseling and orientation. They have another advantage as well. They are trained to focus on the communication handicap and not on the “sol”.

This attitude toward the sale is often a major difference between dealers and what audiologists ought to be. I know two audiologists who have tried to work with dealers...good dealers, mind you, and finally in both cases, this sales attitude was the fundamental difference which broke up the arrangement.

The public confidence in the hearing aid dispenser is a very subtle and an important dimension in fitting aids. Audiologists have a natural advantage here because of our training and credentials, but it has to be more than “window dressing”. It has to be reflected in a “guaranteed professionalism”. We have to know what really matters most. I would submit that some of us, who are not in dispensing and extensive follow-up activities, may have a hard time finding out what really matters most with amplification. As a case in point I will tell you about a recent experience of mine.

After being an “ivory tower audiologist” for ten years, involving I have been doing hearing aid evaluations but not dispensing. I have recently had the opportunity to work with my mother as she has been fitted by a local dispensing audiologist. Frankly, I have been amazed by the matters that seem to be of most concern to her. Gain, frequency response, and output limiting devices have been very, very peripheral, almost unimportant matters in her fitting. Much, much more important has been whether to buy an extension or a behind the ear unit. That decision ultimately was resolved to my satisfaction with the style that I believe has a better chance of being properly fit on her loss. But for what reasons? Partly, it was my professional advice and that of my dispensing colleague that the behind-the-ear unit would give a better chance for an acoustically good fit. Far more important for her personally, however, were the following factors.

Her manual dexterity is good enough that she can manipulate the behind the ear unit without difficulty.

In her estimation it loss reasonable than the in-the-ear unit.

3. The particular behind-the-ear units in question have a two year warranty while the in-the-ear ones have only a one year.

4. The in-the-ear units have a very low current draw, thus allowing for longer battery life.

(Continued on Page 6)

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(Continued from Page 9)

quality, but give us guide lines so that everyone knows what to expect from a recording. Presently we record to "accepted practice."

And what is accepted practice?

Candidly, at Auditec it's what I think we ought to be. OK, it's not really that bad. During my post-doctoral fellowship at Northwestern University under Tillman and Gahart, I learned how they prepared their tapes and, to a great degree, I follow their methods today. For instance, in most of our tapes, we zero the VU meter on the word preceding the stimulus word. The talker is trained to level at zero on "word" of the phrase "say the word..." and to let the stimulus word which follows fall naturally. This technique tends to insulate that the stimulus word is not distorted by (or under) emphasis in an attempt to reach zero VU unreadably. One mistake that a lot of audiologists make when giving a test via live voice is to over-emphasize the stimulus word, especially the last phoneme, frequently almost making it a two-syllable word out of it. The stimulus word should be spoken as if another word were going to follow im-
mediately.

Do you have any advice on tape and tape recorder care?

Thank you for asking. I am aghast at the lack of care that people give their tapes and tape decks. The decks are mechanical devices which require periodic care. Tape can be ruined by careless handling. Tapes are treated as if they were completely

immune to destruction, or worse, to slow, unnoticed deterioration.

Can you give us some brief advice?

First, tape should be stored smooth wound, tail out.

Wait a minute, what do you mean, "smooth wound, tail out"?

At the end of the day, the tape should not be re-wound, but left played out at the end or "tail-out." Fast rewind or fast forward will result in uneven wind and unusual tension. The edges of the tape can be bent against the side of the reel. Irregular wind speed, "play," will result in a smooth even sound at equal tension, hence "smooth wind, tail out." Also, any print-through that occurs will follow the stimulus rather than precede it.

OK, what else?

Dirty heads and out-of-line heads will degrade the high frequency response of a tape. Recorded tape repeatedly passing over the tape heads will slowly build up residual magnetism. A magnetized head will permanently degrade the recorded information on a tape, again in the high frequencies.

Therefore, the tape heads, capstan and all other parts which come into contact with the tape should be cleaned periodic-
ally. Commercial cleaners are available from an electronics store. Simply follow the instructions on the bottle. Next, the

Equipment Review

Infrared Assistive Listening Devices

Submitted By: Roland McLean

Amplified speech is prominent in large-room and outdoor environments. It may be transmitted through either the direct line, audio loop, AM and FM devices. Over the past several years, however, significant interest has been focused on large and small room infrared assistive listening devices. The purpose of this present article is to summarize information in such broad categories as function, application, and manufacture.

Infrared: Infrared is a carrier source for audio frequencies usually in the range of 40-105 kHz. However, the infrared receiver will restrict the bandwidth reaching the ear to approximately 50-60 kHz. This invisible carrier is low in energy with a wave length slightly less than visible light. The system contains the infrared emitter/transmitter with infrared receiver. Audio signals are coupled from a microphone or amplifier to the emitter/transmitter where light emitting diode illuminates the designated field of reception. Guidelines exist for determining the size

Aural (Continued from Page 9)

This last item is perhaps the biggest of all, and underscores the strange, non-
technical factors that are so important in the fitting of aids and the satisfaction of the elderly. I am reluctantly becoming convinced that an audiologist can do more with

the skills which focus on communication, and with a good drill and a few filters, than I can if I focus only on my knowledge of comparative hearing aid procedures, prescription formulas, and speech audiometry. Maybe many audiologists don't know enough about what matters most. I should add that I think how many are out there dictating to the dealer exactly which band to fit, not differentiating to them if they are doing (Whitcomb, 1982). Unlike these audiologists who are heavily involved in the follow-up process, this may be a gross abuse of power.

In short, I suggest that despite tremendous advances in the technology of problems with both the product and the delivery system. I don't think audiologists have all the answers to the delivery problems or in other words, doing away with all the dealers would not solve our delivery woes.

Now that we have learned firsthand that we can't instantly solve all the problems the dealers and manufacturers have been struggling with for years, I suggest we should be more open to considering the efforts dealers are making to increase the use of hearing aids. Table 6, shows they are doing a lot more advertising than we are (Cranmer, 1983).

Table 6. Percentage Using Various Types of Promotions in Hearing Aid Sales

| Type of Promotion | Percentage Using
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Newspaper</td>
<td>40%</td>
</tr>
<tr>
<td>Dispensing</td>
<td>40%</td>
</tr>
<tr>
<td>Direct Mail</td>
<td>35%</td>
</tr>
<tr>
<td>Phone Directory</td>
<td>60%</td>
</tr>
<tr>
<td>Radio</td>
<td>4%</td>
</tr>
<tr>
<td>TV</td>
<td>0%</td>
</tr>
<tr>
<td>Audiologists</td>
<td>75%</td>
</tr>
<tr>
<td>Hearing Aid Specialists</td>
<td>63%</td>
</tr>
</tbody>
</table>

I recommend that we, as rehabilitative audiologists, need to lend vigorous effort to the amplification area. We need to learn to use whatever weapon--like assistive devices or perhaps advertising. But we must be careful that our efforts are motivated by a true concern for the patient and not sales. If not, we may end up lacking the professionalism we pride ourselves on having.

I would also like to turn to some more technical techniques, like direct mail and heavy advertising, which are time honored tools being used to promote many products, including hearing aids. Could we fit and help more people with hearing loss, or would we prefer to let advertising and use of new technologies be the tool of the professional? How do we handle that with clients and the elderly? What would be the ethical and professional problems with using more vigorous advertising in promoting hearing aids? How does that relate to all ethical problems associated with dispensing? Our next presentation and panel discussion will focus on these issues.

References

Engstrom Awarded the 1985 Amplon Research & Studies Center Intl' Prize

On \text{March 23, 1985, at 9 p.m.}, the Milan Press Club, Swedish professor Hans Engstrom was awarded a prize of ten million lire by Charles Hollander, president and founder of the Amplon Research and Studies Center. Engstrom was awarded the CBS award for having devised an investigation methodology using the electron microscope. This method represents a powerful tool in audiological pathology.

During the award ceremony, Teo Madinou, Professor of Audiology at the University of Catania, presented Hans Engstrom and his works, introduced Ettore Pedayco, Head of the Otohistoriologichy Clinic at the University of Bari, and coordenated the round table discussion on the cochlear ultrastructural (and physiopathological bases of sensorineural) hearing disease. Speakers were Massimo Del Re, Head of the Institute of Audiology at the University of Milan, Salvatore Jareto, Head Professor of Bioacoustics at the University of Bari, and Paolo Mentio, Head of the Otohistoriologichy Clinic at the University of Turin.

Who is Hans Engstrom?

He is the Biocentel Medical Center and Department of Otornicology at the University of Uppsala since 1979. Hans Engstrom started his career in medicine at the Karolinska Institute in Stockholm and wrote the most important steps in his career were taken.

This Swedish scientist, a prolific author, published, among other works, two important monographs and wrote many articles on clinical research and basic science. For his research work, he was granted international recognition and prizes in various countries, including the “Shambaugh Prize” in the United States and the “Swedish Medical Association Prize” in his own country.

As a result of this medical association he achieved significant results in collaboration with a team of American specialists. This cooperation often extended to scholars coming from other countries, it has produced important studies and innovative hypotheses to stimulate new research.

A member of the leading ototimology clinics in the world, Hans Engstrom often attends the most important meetings, presenting the results obtained through his original studies using the electron microscope.

“Surface Preparation” is the title of the Electron Microscopy Research Method devised by Hans Engstrom. Professor Engstrom devised an innovative electron microscopic method of “surface preparation” for studying cochlear cells. These cells are normally seen wound spirally around the cochleae. Engstrom’s procedure provides a method of unwinding the spiral and of spreading out the nerve cells on a key board. Thus, his surface preparation allows numerical counting of healthy and diseased cells, and provides a basis for a more scientific understanding of the origins of auditory disorders.

The Amplon Research and Studies Center International Prize

This recognition has now been bestowed fifteen times and is known as the “Nobel Prize for Audiology” is given by the Amplon Research and Studies Center according to the votes of a commission representing the major national and international scientific societies in the field of otology and audiology.

This International Prize is part of a wider educational and research program covering both dissemination of conventions and meetings, and extensive didactic and publishing activities. In previous years, the Amplon Prize was awarded to two scientists from Italy (Ettore Focca and Michele Ansaldi), two from France (S. Borel Matsona and Jean Marie Aram), two from West Germany (Horst L. Wald et al.) and two from Sweden (Erik Wedeming and Nils G. Hortsman), one from Israel (Herman Sollman), one from Japan (Takuma Suzuki), and five from the U.S.A. (Hjalmar Davis, Jonas Jorgensen, Israel Zwi, Albert Lorri, Peter Dalal). Prof. Engstrom, went to Italy.

During his stay in Italy Professor Engstrom also visited Catania. On March 24, in the public hall of the Catania University, he presented the tutorial lecture, “The Normal and Pathological Organ of Corti.” His studies and the significant steps in his career were illustrated by Giovanni Bacchi Catalani, Head of the Otorhinolaryngology Clinic at the University of Catania.
### Equipment (Continued from Page 6)

of the emitter. However, interactions between rooms with reflective surfaces, obstacles, emitter placement, and high intensity sun light will require empirical verification.

Applications: The categories of application are broad, ranging from the ability to communicate from one speaker to a group of listeners in large rooms to situations where individual communicative enhancement needs may be obtained from a personal system. Examples of the former include the following: 1)classrooms for the hearing impaired, 2)business and industrial conference rooms, 3)houses of worship, 5)theaters and concert halls, 6)university and medical lecture halls and, 7)hotels and other conference centers. An advantage for the individual wearing hearing aids is that the infrared receiver can be clipped to his aid through either an induction or a direct line input.

Advantages: Two major advantages of this system when compared to other large room assistive devices are the ease of installation and the reasonable cost for the diversity of use and quality of signal derived. Additional benefits involve the minimal safeguards required to eliminate outside interference from other infrared systems. One large room may be easily designed to incorporate two infrared systems without concern for signal interaction. Also, there is never interference from AM and FM transmitters. Individual portable systems have been successfully used to amplify telephone signals, and enhance communication in hospitals and nursing homes where restricted listening is preferred. "Sharper" communication during travel where the elimination of unwanted noise is desired, and facilitate the reception of radio and TV signals. Another benefit to the consumer is the compatibility of infrared receivers between manufacturers due to the present use of a common carrier frequency.

Disadvantages: Although manufacturers may claim success with outdoor usage in sunlight conditions, signal integrity is diminished as the intensity of the interfering light increases. The general rule requires that when an interfering light source creates transmission difficulties, it is necessary to intensify the generating capability of the transmitter through additional emitters. A minor disadvantage occurs when considering installation where obstacles may minimize the homogeneity of infrared illumination. In these conditions, it is recommended that the transmitter be located high above the floor of reception or, when necessary, that the signal strength be augmented through additional emitters.

### Large Area Systems—Information

- **Transmitter:** No. of light emitting diodes 900-435
- **Power requirement:** 120V/60 Hz
- **Audio signal input:** 300V-250V
- **Frequency response:** 40-15K Hz
- **Infrared output:** 4S-4.5k sq. ft.*
- **Carrier frequency:** 954 or 2954 Hz
- **Cost**
  - Basic: $890.00
  - Upgrade: $1,300.00

*Greater output is available through multiple or additional emitter transmitter units.

### Receiver

- **Type**
  - dichotic/dichotonic
- **Frequency response**
  - 50-8K Hz
- **MPO**
  - 112 dB SPL
- **S/N**
  - 90 dB
- **Battery**
  - AAA/recharge
- **Operating time**
  - 5-10 hr
- **Cost**
  - $896.00

### Large Room Assistive Listening Devices

Devices produced by the following manufacturers are used:

- **Controlotronics (Sound Plus)** and Sennheiser (Siemens).

**Note:** There is a conspicuous lack of information regarding standardized assessment for comparative purposes. Until standards are developed, the consumer must rely on subjective appraisal.

**Subjects Editor:** Frank Britter

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### DON'T KID AROUND WITH PEDIATRIC TESTING

**USE A CYBERSMITH VISUAL REINFORCEMENT SYSTEM**

- **VRA SYSTEM VI—BASIC** (COR/VRA)
- **VRA SYSTEM VI—UPGRADE** (VROCA)
- **VRA SYSTEM VI—DELUXE** (INCLUDES BASIC & UPGRADE)

- **FEATURES**
  - **EXTRAVUSIBILITY: PLUGIN OPTIONS**
  - **VERSATILITY: VRA/COR AND Optionally, VROCA**
  - **OPTIONAL REMOTE CONTROL TO ALLOW SOLO TESTING**
  - **ESSENTIAL FOR PRIVATE PRACTICES**
  - **DEIGNED BY PRACTITIONERS FOR PRACTITIONERS**
  - **USER INSTALLABLE**

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1985 AAS MEETING AVAILABLE ON VIDEOTAPE

The 1985 meeting of the American Auditory Society is now available on videotape. This videotape is a presentation of the Cooley-Larabee Lecture by Sam Larabee, B.S., entitled "COULIPE TO INSERTION RESPONSE FACTORS". The videotape is available in VHS format only. To order, send the specified amount after checking one of the below:

- 1 copy for $20.00
- 5 copies for $100.00

Make check payable to the American Auditory Society.

Send order to: Michael F. Schuman, Jo Achim Eye, Ear, Nose, and Throat Hospital 140 1st Place New Orleans, LA 70112

The videotape should be mailed via.

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Please allow 4-6 weeks for delivery.
same parts, the metallic ones, should be demagnetized periodically, probably at the same time one cleans the heads. De-
magnetizers for this purpose are available at the same source. Again, just follow directions. About once a year or oftener if used a lot, the heads must be demagnetized. It can be done "in place," with a good align-
mant tape and a tone-pure oscillator, but professional help is invaluable. Anyone wants to know more, call me. I'll be happy to tell the hows and whens.

Do you have an 800 number? No, but we accept collect calls.

Do you have much problem with people copying your tapes?

That's hard to tell. I know that our tapes are being copied, but I can't tell how many or how much. I get a little peevish when it comes to pirating of my tapes. I know that each individual copier believes that he or she is contributing to the care of one, two, or more tapes. This is just not realistic. I had on audiologist call with a complaint, noting that she was in the process of copying one of our tapes (a copyrighted one at that). When I attempted to chastise her, she said, "Well, everybody does it." Thank goodness everybody doesn't, because if everybody did, I would be out of business. This market is very small, and each copy represents a small but significant part of my yearly output.

What about the size of your market?

The number of potential customers out there is extremely small relative to the general population. Record companies make a big deal out of selling a million copies of a recording. I get excited if I sell a hundred of one tape in a year! Some of our recordings are so popular that we may sell one in a year! Anyone with any sense looks at the size of this market and says "no way!" But I have no sense, so here I am.

What do you see coming in the future?

Well, the future is here. It is digitized recordings, of which compact discs are an example. Compact discs have the capacity to take analog signals and digitize them, store them on some medium in digital form which can be "read" and translated into analog form for "consumption."

What are the advantages of digitized recordings?

Well, the signal to noise ratio is extremely good; there is no tape hiss, there is no print-through; there is a very large dynamic range available and the digitizing process allows almost unlimited manipulation of the signal, far beyond the capabilities of an analog system.

Has Auditec gone compact disks?

No. There are two primary reasons why we haven't taken that step. First, the demand is not there yet. Second, the cost is relatively high when related to the size of our market, which, as I stated earlier, is extremely small. Also, there are other media that we could use better. However, if now or should be available so which may suit our market better.

Are your customers limited to the United States?

No, we have a comparatively large export market. We have a number of Canadian customers, and we also serve Australia and New Zealand. Some of our

8th Annual Run for Better Hearing

Health Care Providers Running 26 Miles for Hearing Awareness

A 1986 "Run for Better Hearing" team of doctors, audiologists, hearing aid specialists, manufacturers, suppliers and researchers will each run a marathon to focus public attention on available hearing help. They personify the interdisciplinary support generated through the cost-effective public education program of the Better Hearing Institute.

Now in its eighth year, the Run is a fund-raising effort to strengthen hearing awareness projects to broadcasters and print media have donated the equivalent of more than $118,000 in commercial time and space to BHI hearing help messages. More than $16,000 was generated in the past 12 months alone. BHI's program has been spearheaded by famous Americans who overcame hearing loss. They include Art Garney, Norm Crosby, Phyllis Diller, Nannie Fabley, Lou Ferrigno, Henry Fonda, Lorne Greene, Florence Henderson, Bob Hope, Richard Thomas, Charlene Tilton, Keenan Wynn, and many others.

1986's Run doubleheader features BHI executive director Joe Ritto in his seventh Boston Marathon on April 14. Then on June 21, in Duluth, MN, Joe will be joined in Grandma's Marathon by hearing help providers from across the U.S. and Canada. As in past years, Hearing Instruments magazine will promote and host Duluth Run activities, and the Hearing Journal, Ayr, MA, will extend its special support at the Boston Marathon.

Steering Committee

Organizing and coordinating BHI's 1986 campaign is a steering committee that includes Al Bruce, chairman, Starkey; Jim Anderson, Qualitone; Pat Koepeke, Duhberg; Bud Razz, Earmold Design; Bob Tischoson, Starkey, and Cindy Werner, Duracell/Auditel.

"BHI's program runs strong because of financial support from hearing help providers," said Bruce. "We therefore urge everyone to pledge to this year's campaign. Your tax-deductible contribution will reach far beyond the 26 miles, 385 yards that our runners will tackle this year."

Supporting Companies

Supporting members to date: Activar, Argosy, Audio-Aid, Betone, Bernstein, Best Labs/Fidelity of Florida, Bosch, Dalberg, Danawouk, Emtech, Eveready, Fidelity Hearing Instruments, Finetone, Hal-Hen/Widex, Hearing Services Inc., Hearing Technology Inc., Knowles Electronics, Lang Hearing Instruments, Magnatone, Malco, National Hearing Aid Labs, Oticon, Phonics Ear, Qualitone, Ray-O-Vac, RCI, Resistance Technology, Rexton, Rim, Siemens, Starkey, and Union.

Better Hearing Institute

Box 1840, Washington, D.C. 20013

Name:
Office Affiliation:
Address:
City:
State:
Zip:

☑ Yes, but I'm supporting the 1985 "Run for Better Hearing" team. Here's my check payable to Better Hearing Institute:
$113.00 (3.50 mile)
$119.50 (7.5 mile)
$136.00 (13.50 mile)
Other:

☑ Yes, please send me more information on BHI.
BELTONE OPENED ’86 BD TAA NOMINATIONS

The 1986 search for an outstanding audiologist-instructor began with the opening of nominations for this year’s Beltone Distinguished Teaching Award in Audiology (BD TAA).

The BD TAA is the only teaching award bestowed on audiologists in the field of audiology. To be eligible, instructors must be nominated by a current or former student and have five years’ or more experience in teaching audiology. About 10,000 brochures containing nomination forms were mailed by Beltone to audiologists, audiology instructors and department heads at universities across the country. Deadline for nominations was April 15, 1986. The nomination form is one of seven factors weighed by the judges to determine a winner. The other six factors are a required essay, curriculum vitae, former and current student evaluations, contributions to audiology, audiology departmental head evaluation and faculty evaluations. The 1986 judging panel is composed of 10 outstanding professionals from the field of audiology—including the 1984 and 1985 BD TAA recipients—plus one student representative selected by the National Student Speech, Language, and Hearing Foundation.

Foundation (Continued from Page 3)

auspices of the International Hearing Symposium. Activities on this day will include an informative talk on facilities and equipment available in the International Hearing Foundation’s Temporal Bone Dissection Lab members meeting, making this truly a well-rounded symposium. Information and registration materials may be obtained by calling Anna Douglas at (612) 339-2120 or by writing to the International Hearing Foundation, 701-25th Avenue South, Minneapolis, Minnesota 55404.

NEW HOSPITAL PROGRAM CREATED

Suburban Hospital in Bethesda has initiated an unusual support program for patients who are hearing impaired. The Hearing Impaired Program is designed to eliminate misunderstandings between patients and hospital staff and to relieve hearing impaired patients’ anxiety and increased sense of isolation in the hospital environment.

Within its first 50 days, the program served 85 patients. Currently the program seizes four patients a day who use the program.

Coordinated by the hospital’s neuropsychology unit, the program is for patients with any degree of hearing impairment from mild to profound deafness. There are no charges to patients who use this service. People with hearing impairments often are faced with communication problems in the hospital setting—lack of their usual hearing aids (especially just prior to surgery and in the recovery room) and masks over the faces of nurses and physicians.

Upon admission to the hospital, all patients are asked if they have a hearing problem. The medical charts of patients who join the program are labeled with the international symbol for hearing impair. Similar signs appear in their rooms and on their beds. Hospital staff have received extensive training in methods to clarify and simplify communications with hearing impaired patients—giving the patient’s attention, speaking deliberately, not shouting, and using gestures and frequent pauses.

Listening devices, telephone receiver amplifiers and TDD (telecommunication devices for the deaf) are available for these patients, and sign interpreters for deaf patients are on call.

Other services of Suburban’s neuropsychology unit include complete hearing evaluation: ENG (electronystagmography), which is a test of inner ear function and balance control centers of the brain; ABR (auditory brain stem response), which is a test of neural activity in the auditory brain stem; evaluation for selection of hearing aids; and monitoring of ototoxicity due to use of the field of audiology. The Foundation’s activities are local, national and international in scope.

WHAT IS IHF?

The INTERNATIONAL HEARING FOUNDATION (IHF) is a charitable, nonprofit organization dedicated to improving the lives of the hearing impaired.

IHF is especially committed to increasing public awareness of hearing problems and to the financial support of hearing research and education.

Deafness, tinnitus (ear-noise), and vertigo (dizziness) are examples of IHF’s special interests.

The Foundation’s activities are local, national and international in scope.

INTERNATIONAL HEARING FOUNDATION

The International Hearing Foundation was granted tax-exempt status by the State of Minnesota April 9, 1986.

IHF conceived, produced and owns a television, “Sentimental Sounds,” at the cost of $20,000.

The 1986 television, viewed in March in Minnesota and the neighboring states on Channel 5, resulted in gross income of $110,000.

Money from the television contributed to the work of the Lions Clubs of Minnesota totaling $45,000. This amount went directly to the Lions Center at the University of Minnesota for research.

IHF is the recipient of a grant for $35,000 to support an IHF Research Scholar for research in Otis Media.

IHF is the recipient of a $60,000 grant to help construct the IHF Teaching Laboratory in Minneapolis.

IHF will annually sponsor the FIESE PRIZE, a new award for advancements in biomedical and technological hearing research. The recipient, chosen by an international scientific committee, will receive a cash award plus a 3-ounce gold medal and a tax-exempt bond.

An annual social fund-raising event will be held in downtown Minneapolis on the Monday of Aquatennial. The 1985 event resulted in over $50,000 income and garnered tremendous publicity.

An officer of IHF will accompany Miss Deaf Minnesota in the two annual Aquatennial parades which is viewed by a combined street and television audience of over one and one-half million people.

The IHF Board of Directors, which includes prominent otolaryngologists, scholars and community leaders from all around the world, meets semi-annually in March and September.

IHF supports and sponsors education and research in Minnesota and, through its programs (telephone) and Board members and colleagues elsewhere, encourages such activities in other states and countries.

International Hearing Foundation, 3100 W. Lake St., Minneapolis, MN 55416 • 612-927-9220
The 1984 Amplifon Research and Studies Center International Prize Awarded

Scientists are beginning to find out the secrets of the hearing system.

More than one hundred years have elapsed since the Italian scientist Alfredo Corti (1822-1876) discovered the spiral organ of the ear, but only recently have scientists begun to understand the many mechanisms of our highly complex hearing system.

Peter Dallos, professor of otorhinolaryngology, neurobiology, and physiology at Northwestern University in Evanston, Illinois, U.S.A., was recently awarded the 14th CRS Amplifon International Prize amounting to ten million Italian liras.

Dallos has been, since the 60's, the coordinator of all basic research in this field, supported by several annual allocations totaling more than one million U.S. dollars. Through his studies and research he has contributed to the development of the cochlea, made up of the vestibule and the cochlear duct, and above all on the organ of Corti, which is the real sensorial organ of the hearing system.

This highly complex and extremely delicate structure is placed in a cavity within the temporal bone, which is the hardest bone in the human body. This structure is filled with a water-like fluid, called endolymph, and with thousands of sensory receptor hair cells, which transmit sound and nervous impulses along the auditory nerve up to the brain, where every acoustic message, even every minimum sound, is selected and interpreted.

The hair cells can be divided into "inner" hair cells (approximately thirty-five hundred) and "outer" hair cells (approximately fourteen thousand). It is on these intriguing structures that Dallos has concentrated his attention, regarding them as "mirabile information transmitters and likely motor devices."

Ingenious work by Dallos and his associates elucidated the effects of chemically induced outer hair cell destruction on hearing. In this work they used computers to analyze data obtained from both cadaver and animal (mainly chimpanzee) ears.

Georg von Békésy, in his 1961 Nobel prize-winning research, demonstrated that acoustic stimuli include "traveling waves" which, in turn, mechanically distort hair cells. This mechanical activity somehow triggers action potentials in the acoustic nerve. Dallos has emphasized that metabolic energy is the driving force behind the generation of nerve impulses.

The ear is a miniature masterpiece because it is enclosed within a space as small as a hazel nut. However, even in this tiny organ, electric, metabolic, and biochemical processes take place. The mechanisms are in part still unknown, though experimental evidence shows, as Dallos put it, that "virtually any damage to the auditory system is first of all evidenced by the destruction of the outer hair cells. Drugs, noise, aging, and trauma, all affect outer hair cells before influencing other structures. The loss of outer hair cells begins at a very early age in humans and tends to progress inexorably in persons over age sixty-five."

All this implies an altered, abnormal processing of sounds by the inner hair cells, which opens new fields of research and probably new prospects for better diagnosis and treatment of such hearing disorders.

This means that scientists are now beginning to understand how the inner ear converts sound vibrations into nervous impulses. At the same time attempts are being made to interpret the meaning of the electric or potential signals emitted by the inner ear.

In this field there have so far been two major breakthroughs. One is represented by the tiny transistor hearing devices which can be hidden in the frame of glasses, behind, or even inside the ear, and are, therefore, hardly visible. The second breakthrough was achieved through the development of biomimetic techniques which enabled surgeons to operate within very small cavities, thus allowing transplantation of one or more of the middle ear bones (hammer, incus and stapes).

But it is, above all, through the study of the inner ear, carried out by Dallos and his collaborators, that ENT surgeons hope to develop new solutions to many fundamental problems regarding hearing loss and hearing disorders.

So far scientists have not been able to understand how an average grown-up person can store in his/her memory as many as 400,000 sounds, different from one another in frequency, quality and intensity. Another unsolved riddle is how a person with normal hearing can discern any sound ranging from 16 to 20,000 vibrations per second, whereas most animals have a much higher range (a cat, for example, can hear sounds with a frequency ranging between 60 and 65,000 vibrations per second).

Finally, scientists still have to better understand how calcium spreads through the most critical parts of the ear and what role proteins play in the cochlear mechanics at the base of the cilia of the hair cells.

A lecture delivered by the U.S. scientist Peter Dallos, who has been awarded the 1984 CRS Amplifon International Prize.
MEMBERSHIP DIRECTORY
(Alphabetical Listing)
STANLEY BISSON
STATE UNIV. COLUM. CAMPUS AT BUFFALO, NEW YORK 14222
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WHEN SOUNDS GET DIM
AND YOU CAN'T HEAR A WORD
WHO DO YOU CALL?

HEARING EVALUATION CENTER
612 Encino Pl., NE
Albuquerque, NM 87102
(505) 842–6178

OTHER LOCATIONS:

Hearing Evaluation Center–North
3924 Carlisle, NE
(505) 881-0948

Presbyterian Prof. Bldg.
201 Cedar, SE
Suite 504
(505) 243-1720

Mesa Medical Building
4804 McMahon, NW
(505) 893-2872
Detroit To Host Annual 1986 AAS Convention

The 13th annual meeting of the American Auditory Society (AAS) will be held in Detroit on Thursday, November 20, 1986, in the auditorium of the Children’s Hospital of Michigan. AAS President Don Worthington’s introductory remarks at 8:30 A.M. will be followed by an exciting series of 20 scientific papers lasting until about 5:00 P.M. A highlight of the day will be Dr. Joseph E. Hawkins’ Carhart Memorial Lecture entitled “Tears of Age in the Ear and the Eye.”

Following the meeting there will be an evening of Greek food and entertainment at Mykonos Supper Club. It should be a rewarding day and night for AAS members, many of whom will subsequently attend the annual American Speech-Language-Hearing Association (ASHA) meeting, which will be held at Cobo Hall, November 21-24.

IVth International Symposium On Audiological Medicine

The International Association of Physicians in Audiology (I.A.P.A.) will have its Fourth Symposium in Tenerife, Canary Islands, Spain, November 8-13, 1987.

The scientific program will include round table discussions with invited speakers together with free papers sessions on the two main themes: “The State of the Art of Audiological Diagnosis” and Imaging in Audiology: X-Ray and Other Techniques in the Diagnosis of Auditory Disorders.” For further information, please contact Dr. Joan Barajas, Perez de Rozas, 8, 38001 Santa Cruz de Tenerife, Spain.

AURAL REHABILITATION FORUM

Editor’s note: In the last issue of Corti’s Organ this new feature was begun. The article in that issue was presented by Ronald Schau as a part of a conference on aural rehabilitation held in 1983 at Winter Park, Colorado.

Initial articles in this series will investigate intervention services specific to elderly clients. In order for this forum to continue, other papers must be generated. Areas of concentration, however, would include pediatrics or cochlear implantation. Let the editors hear from you!

Motivating the Hard of Hearing: A Contrast in Techniques

Thayne C. Smiley
Na Ear Electrical
Idaho State University
(Second in a series of three.)

Abstract

The enormous pool of hearing-impaired elderly who have $800 billion in buying power represent a powerful marketing incentive for the hearing aid industry. A promotional technique used to reach and motivate potential hearing aid users is described and contrasted with traditional efforts by audiologists. The suggestion is made that clinical audiologists will need to achieve a higher visibility profile—and perhaps adopt certain promotional techniques—if they hope to replace the hearing aid dealer as the primary source of hearing aid help for the majority of impaired adults.

There are believed be over 11 million people in the United States who are potential hearing aid users among an ever-growing senior citizen population with $800 billion in buying power (Bardiff & Males, 1983). This body of prospects represents a very powerful marketing incentive for hearing aid manufacturers.

In this presentation I will describe a direct mail marketing technique used in the hearing aid industry which has proved to be very effective in reaching and motivating hard of hearing adults. I am not pretending that what I am about to describe represents the ideal or even the best method for motivating the hard of hearing, or that it will be necessarily well received by clinical and rehabilitative audiologists in general. This approach, however, does achieve certain objectives, particularly those of the hearing aid industry, and it may have some implications for audiologists who wish to get more directly involved in hearing aid programs.

An independent hearing aid dispenser agrees to be a cooperating partner with a hearing aid manufacturer sponsoring a special, short-term sales promotion, lasting usually three days. Local residents are invited by personal letter to come into the dealer’s office for a free hearing test and an opportunity to examine the latest hearing devices. The event is called a “Special Hearing Aid Consultation.” The Special Consultation always features a factory representative, who, ostensibly, is an attuned and experienced specialist in remediating hearing loss with amplification. This consultant usually has had extensive experience with hard-of-hearing persons, but is sent primarily because of skill in selling.

In this process, the manufacturer prints the letters, stuffs them into pre-labeled envelopes and ships them as a unit to the dealer, who in turn takes them to the local post office for mailing into the community. Names of local senior citizens, obtained from commercially available national registers, are supplied by the manufacturer.

Although the letter does not contain any false statements, it uses phrases such as “hearing tests at no charge,” designed as enticements and intended to elicit a favorable response. Other incentives are also included, such as the availability of refreshments and free gifts for those who attend, plus special discounts on batteries. A final motivational device is the inclusion of an endorsement of the testing program and manufacturer’s product by a national celebrity. This endorsement creates interest in the letter and lends credibility to the invitation, the examination, and the products as well.

In the program I am describing, the endorsement comes from Art Linkletter, a TV and radio personality well known to senior citizens. Linkletter’s picture is printed on the heading of the letter, and his printed message promotes the value of the hearing tests and invites the readers to take advantage of the opportunity to have their hearing evaluated. The impact of the Linkletter endorsement is substantial. A recent report illustrates this point:

A woman in the Northwest walked into one of these Special Consultations with her elderly mother, letter in hand, and said, “I have been trying for years to get my mother to do something about her hearing. I’m tired of (Continued on Page 8)
New Feature
Editor Joins Staff

Matt Smith, an audiologist from Al-
buquerque, New Mexico and long
time member of AAS, has joined Corti's
Editorial Staff as a Feature Editor. Matt
will be responsible for two new columns to
appear in Corti's, beginning with our next
issue.

One, entitled "Name That Lesion", will be
included in each issue. Case history,
clinical data, and other relevant informa-
tion will be presented which describes a
particular auditory disorder or lesion. The
intent of this column is for readers to use
all their professional expertise, intuition,
or whatever talent or process they wish to
"diagnose" the lesion being described.
Sounds like fun, but don't worry, the
"answer" will be given in each issue.

Matt's second column will be one which
will appear now and again. Titled "Audiology
Trivia", questions will be asked in which
readers test their skills. Do you know what
your first hearing aid was manufactured?
This column will answer that question.

Matt Smith is a well-versed audiologist.
He is President of the Illinois
Audiology Society, and has served as
President of the Illinois Hearing Aid
Manufacturers Association. He is a frequent
teacher of the American Speech
Audiology Society, the National Hearing
Aid Association, and the Hearing Aid
Manufacturers Association.

Corti's Organ Celebrates Anniversary

According to some of our "old timers"
that this year marks the 10th Anniver-
sary for Corti's. Our Organ, plus or minus
a year, is certainly at least two years
old. It is occasion worth celebrating and
looking to. In tribute to Corti's first decade, the
Editorial Staff has something special planned.

An upcoming issue of Corti's will be
dedicated to our past. Historical facts about
this organ, old pictures, or anything of
contemporary relevance, Corti's noses
will all be included.

For our "new" readers, the
memories should be exciting. For our "junior" readers, a historical perspective should be
educational.

From the Editor

Let me begin by thanking those individuals who have responded to my request for contributions to Corti's. As Editor, I am pleased to find members who are willing "pitch in." But we still have a long way to go to keep Corti's from being simply a calendar of events or directory listing. Contributions of all varieties are needed. Particularly reports of case studies, light research, equipment review, etc. Don't be intimidated by the threat of "journal style." Develop a new way of thinking. "Corti" has a new look which already indicates a new direction. A new dimension that recently evolved in our last issue was "a Letter to the Editor" column. This is a segment the Editorial Board would like to continue. Maybe you have an opinion about your teacher, a related issue, your own deafness, "a success story," a "case
study," a "response," or an "opinion." Send your contributions to me. If you would like to be notified of upcoming deadlines, please let me know. Of course, I will try to include as many as possible.

Our first "Letter to the Editor" was contributed by John D. Paap of the University of Michigan. John's letter discussed the need for more research on the hearing impaired. His article made a strong plea for greater emphasis on the research that is needed to improve the quality of life for the hearing impaired. The Editorial Board would like to thank John D. Paap for his contribution and encourage others to do the same.

Endowment Fund Named For M.D. Townsend

The University of Colorado Health Sciences Center and the University of Colorado Foundation, Inc. have established an endowment fund in recognition and appreciation for the outstanding contributions of Marion Dowens and her lifelong efforts on behalf of the Hearing Impaired. The fund was created to assist in the development of the Marion Dowens Children's Hearing Center.

Funds will support multidisciplinary clinical services for hearing impaired infants and children, including patient care, research in childhood deafness and education activities. In addition, with the goal of $300,000, the foundation will award an annual Pediatric Audiology Fellowship selected from national applications. This endowment provides a year of financial support to a practicing audiologist who desires additional clinical training and research opportunity in pediatric audiology.

Marion Dowens, Professor Emeritus of Otolaryngology at the University of Colorado Health Sciences Center is certainly an exemplary professional who has dedicated her life to the hearing handicapped. She has pioneered, developed and evaluated techniques for her work in the area of early identification of hearing loss in infant hearing screening. Her publications and teaching have brought worldwide attention to the importance of early initiation for deafness and alerted the medical world to the developmental problems associated with childhood deafness.

Marion Dowens is recognized as an outstanding educator, clinician, author and advocate for the hearing impaired. Her professional colleagues have honored her with numerous awards and prizes. The Marion Dowens Children Hearing Center Fund is just one more way of testifying to this professional's valor.

If you would like more information on the fund or would like to make contributions to the fund, please contact the University of Colorado Foundation, Inc. at 303-848-2000, or write to the University of Colorado Foundation, Inc., 1923卓006, Denver, CO 80222.

Marion, AAS congratulates you!!

Harmony Among Dispensers Urged

Several AAS members, including Deborah Price and Rick Pimentel (picture below), attended the Spring Conference of the Academy of Dispensing Audiologists (ADA) at Lake of the Ozarks, Missouri. A striking keynote address, entitled "What Is It, What Is It, and What May Be," was delivered by the Academy's president, Herbert J. McCollum. In his keynote address, Mr. McCollum drew parallels between the hearing aid market and the automobile industry. The hearing aid market may attract new competitors to the scene, Mr. McCollum drew parallels between the infighting of hearing aid dispensers and similar warning about the dangers of internecine warfare among audiologists, otorlaryngologists, and opticians, and among MDs, audiologists, and optometrists. His paper has been published in the July, 1986 issue of The Hearing Journal.
Aural Rehabilitation

(continued from page 1)
yelling at her. When the letter arrived from Mr. Linkletter inviting us in for a hearing test, Mother said, "If Art Linkletter’s behind this, it must be OK. I guess I’ll go and get my hearing fixed."

For any given Special Consultation, typically 5,000 to 7,000 of these letters are mailed to new clients of a given community. While certain parts of the letter may violate our ethical or professional integrity, we must keep in mind that it tends to get results where other approaches have failed.

During the days of the promotion, respondents are seen on hourly appointments, or more frequently when the demand requires it. Each person receives a cursory otoscopic examination, a brief but intensive history is taken using a standard questionnaire, and then each person is tested for hearing loss. If significant hearing impairment is found, the prospect is introduced to the various hearing aids available from the sponsoring manufacturer and is encouraged to purchase one or two hearing instruments, depending on the loss.

Now, whether or not we agree entirely with the approach I have described, let me assure you that this type of promotional campaign has great impact throughout the country. Currently, about 1,600 of these Special Consultations are being held every month at 150 locations throughout the United States and Canada. This represents a rate of 9 million letters mailed to potential consumers annually, and this rate is double that of the previous year and still growing! Over the past few years it would appear that millions upon millions of letters are sent by Art Linkletter encouraging them to think seriously about their hearing and to have it tested by the local dealer if they suspect a problem. And, this rather substantial campaign represents the efforts of one single company. Increasing numbers of hearing aid manufacturers, of which there are about 50, are using this or similar promotional formats to command a greater share of the market. If measured in terms of hearing aid sales, the mass mailing approach is clearly working. In the long run it may not be the best investment to the manufacturer, but such programs are going to continue to grow forward at an ever-increasing tempo.

Hearing aid delivery systems in this country seem to fall generally into two categories: those that are "passive" in nature, and those which are more "active". Passive systems are those represented by agencies, clinics, and offices which have a trained staff dedicated to helping the hard of hearing, but which do very little "advertising". These offices are primarily rehabilitative in intent, and their first priority is to ameliorate the effects of hearing impairment. Most of the personnel in these agencies have received extensive technical training, including graduate degrees and special certificates awarded by national professional societies which attest to their qualifications to assist the hard of hearing better than anyone else.

The encouragement or motivation these offices are able to extend to the hard of hearing, however, is limited largely to the single step that brings them closer to their dealers. It is considered improper to advertise their services to any great extent, and the term "promotion" is generally foreign to the common vernacular of the office. It seems paradoxical that the hard-of-hearing professional who must sit patiently and wait for the hearing-impaired public to find the path to their door, represents, with some exceptions, a distribution system that is a mere veldy alongside the main stream of hearing aid delivery in our country. I believe it is still true today that traditional hearing aid dispensing offices, which take an active rather than passive approach to helping the hard of hearing, have the greatest influence among those with hearing loss and render the greatest assistance to the hearing impaired, if that assistance is measured by the number of units of hearing aids dispensed. Whether we like to admit it or not, a majority of the hearing impaired adults in the United States receive such assistance from hearing aid stores, staffed by personnel of varying degrees of qualifications whose background and work experience is typically in sales rather than in rehabilitative activities. In my opinion, they basically represent a business enterprise which just happens to involve hearing rehabilitation. Nevertheless, many of them are very skillful and have loyal customers who repeat purchases of hearing aids over and over again, sometimes extending to two or three generations in one family.

We must ask, "How do these offices, staffed with personnel who on a group have fewer degrees and credentials than we do, achieve such great success in reaching out to and motivating the hard of hearing?" Their formula, I believe, can be expressed rather simply in three words: promotion, promotion, and promotion! Their approach is far from passive. It is indeed active.

What do we as audiologists do about the situation? What do we do with the realization that some senior citizen in our town, whose hearing has finally dimmed to the point of awareness, will respond to some advertising impression solidly planted there over the years from hundreds of effective messages he has received from the hearing aid industry; and in all likelihood will eventually walk into the local dealer's office for assistance without even giving us a thought?

I don't have a solution, but my inclination after being associated directly with the hearing aid industry for the past share of those years that we had better start using the word "promotion" in our daily communications. We need high level promotion that doesn't seriously violate our sense of ethics, but promotion nevertheless. If we ever hope to move out of the 60s market by the main stream of hearing loss delivery, we must become much more visible in the public eye. We need greater direct involvement in hearing aid dispensing practices. We must not remain passive in our approach or we will forever remain in the dust of the aggressive promoters who many people think are the only source of help for their hearing problem.

References

Society Member Honored by State

Sharon Graham, an active member of AAS for several years, was selected as Arkansas' nominee for the Louis D'Carlo Clinical Achievement Award. For the last 3 years, the American Speech-Language Hearing Foundation has recognized an individual whose recent accomplishments in the field have been landmark contributions. These contributions may be in one or more clinical or research.

Each year's awardee is selected by one individual who has been an outstanding achievement in recent years in a particular area. From the national individual awardee, the Foundation chooses one as the National D'Carlo Award winner. Each individual winner is honored by the American Speech-LANGUAGE Hearing Foundation, accepting the Louis D’Carlo Clinical Achievement Award.

Sharon Graham was selected as Arkansas' D’Carlo Award winner. Ms. Graham is the Research Audiologist for the Ear and Nose-Throat Clinic in Little Rock, Arkansas. In addition, she is Co-ordinator of the Cochlear Implant Investigation Project. Ms. Graham was chosen for her outstanding contributions in the area of deafness research. Her recent contributions include numerous studies, papers, and presentations specific to cochlear implantation. She has examined varying aspects of this relatively new technology, including the medical, clinical, and rehabilitative variables relative to the process. Her work has been the foundation of much of the recent advancements in the field of auditory rehabilitation and improves the treatment of this population.

Ms. Graham is truly the only professional Arkansas' selection of her as the state's 1986 Louis D'Carlo Clinical Achievement Award winner was in no way one. Ms. Graham is certainly one of the field's leading contributors. Congratulations, Sharon, on this deserved recognition!

Experience a little taste of Greece!

Join members of the AMERICAN AUDITORY SOCIETY in Detroit's famous Greektown for

DINNER AND ENTERTAINMENT at the MYKONOS SUPPERCLUB
Thursday, November 20, 7:00 p.m.  454 East Lafayette

The complete dinner includes appetizer, soup, salad, entree, wine, desert and coffee (drinks available on a cash bar basis.) Choose either tender Lamb Souvlaki (shish-ka-bob) or the Greek trio, a combination of Greek favorites including Moussaka.
Cochlear Implants in Children: A Multidisciplinary Colloquium

A colloquium on cochlear implants in children, sponsored by the Cochlear Corporation, was held February 22, 23, and 24 at Durango, Colorado. The colloquium's purpose was to establish guidelines for the implantation of cochlear implants in children. The following are the conclusions drawn from the discussions:

- The meeting brought together more than 40 experts from diverse hearing health disciplines, including otology, hearing and speech sciences, audiology, speech pathology, linguistics, stroke, psychology, and psychosocial. The selection of the participants was based on their particular interest and expertise in dealing with the deaf child, rather than on their prior experience with cochlear implants.
- Eight committees met to debate a variety of selection, patient selection, pre- and postoperative evaluation, rehabilitation and the key underpinning aspect of implant surgery: the role of children in the decision-making process. A consensus was reached based on position papers presented by the committee chairperson.

According to the colloquium participants, a team approach to management is essential; the initial consultation is of prime importance. The team should include other child specialists to enhance the well-established teams already in place for adult programs. Appropriate speech-language considerations were included at the colloquium, including school personnel, teachers, school psychologists, as well as child psychologists and social workers.

Possible conditions for young children receiving multiple cochlear implants include coexisting abnormalities, such as complete deafness, complex or congenital malformations. There were numerous comments about the role of otologic and plastic surgery, and it was pointed out that, unless a child has severe otologic or plastic surgery, such conditions do not prove to be a significant deterrent for cochlear implant surgery. The cochlear implant is a device that allows children to experience sounds that they would otherwise not hear.

Presentation of the Beltone Distinguished Teaching Award

In Audiology

American Auditory Society

Annual Meeting

November 20, 1986

The remaining concerns were that children free of motor and intellectual disabilities were needed during the critical early stages of implant research in order to establish expectations and normative data. Other cochlear implant research was to be waitlisted until more is known.

Finally, strong evidence of family support for any candidate was determined to be a primary determinant. The most positive indicators that identify strong family support include acceptance of the child's hearing status and the child's hearing aid need and the existence of an effective communication system for the child and family. In addition, family expectations should be realistic.

The cochlear implant committee favored the use of medical and postoperative evaluation. The committee developed an explicit process that included 3-day and 6-month postoperative evaluations, and made specific recommendations to guide the implementation of the protocol. Participants agreed that the success of a cochlear implantation is influenced by three major factors: the degree to which profound deafness occurred, the duration of speech-language impairments, and the degree to which deafness is evident after the development of speech-language function, which deafness is evident after the development of speech-language function, which deafness is evident after the development of speech-language function, which deafness is evident after the development of speech-language function.

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Abstracts

(Continued from Page 4)

system has been used for EOG measurements on one ear of 30 subjects with hearing normal for their age and no evidence of disease, and has been used for EOG measurements on 100 patients with a variety of inner ear disorders. Following a description of the combined transcranial and facial electromyographic system, we shall compare its frequency and transient response with that of a standard audiometric earphone. We also shall contrast the amplitude of ABR Wave I (1) produced by this system relative to a standard audiometric earphone. Next, we shall compare EOG data obtained with this system to those obtained using the traditional transcranial and facial (neck canal) electrode. Finally, we shall summarize the amplitude and latency data for the SP and AP responses in a population of patients with inner ear disease.

Intraoperative Facial Nerve Monitoring: Functional and Electrophysiologic Correlation
Paul Klenerman
Jack Karrush
Ann Arbor, Michigan

One of the most distressing complications of acoustic neuroma surgery is facial nerve paralysis. The loss of facial nerve function usually brings about functional as well as emotionally disabling sequelae of the disorder. In the past, neurosurgical procedures designed to maximize the likelihood of the correct identification of the facial nerve, the appearance of the course of the facial nerve can be greatly distorted by the tumor. In this article, techniques that provide information about the position of the facial nerve, which could be used to alert the surgeon of the possible danger. More recently, intraoperative monitoring techniques involved in monitoring facial nerve function. This allowed us to detect muscle fibers of different cranial nerves.
The electronic EMG activity is recorded differentially with two subtractivis nerve electrodes placed on the forehead and on the side of the mouth. A ground electrode is placed on the cheek. The EMG monitoring usually begins upon the injection of the intracystic auditory canal or posterior fossa. The EMG monitoring can be performed continuously on the oscilloscope of the evoked potentials monitoring system, and as acoustically as embedded in a braindissipator. We are interested in both "mechanical" stimulation as well as response evoked by intracranial electrical stimulation. We have learned that electrical stimulation measures related to various intracranial events such as irritation and suction, mechanical stimulation during tumor dissection in the vicinity of the nerve and electrical stimulation using subthreshold constant current stimulus. As a result, the study of the response of the facial nerve to the various means of stimulation and the comparison of the responses to the nerve. The facial nerve is, of course, a cranial nerve, and electrical stimulation in an attempt to map the course of the facial nerve.

Binaural Cochlear Implants: Audiological Results
Lauren S. Eisenberg
House Ear Institute
New York

This report presents audiological data on one patient receiving binaural cochlear implants. She had used a 2M House single-electrode implant in one ear for five years and a Nucleus multichannel implant in the other ear for three months. Audiological data included; waveforms binaural thresholds and a voice-to-speech threshold. The use of speech discrimination tests included; the Monosyllable/Triphon-Spondee (MTS) test, the Environmental Sounds test, the Minimal Auditory Capacities (MAC) test, and the Standard Pattern Compression (SPC) test. Each device was tested separately and the use of this battery. Binaural testing was done by combining the two channels. Ab phonemes, speech, and music were presented at the MAC level. Comparisons between each single implant of both ears revealed better scores with the Nucleus multichannel implant for the majority of tests. Binaural results were better than the Nucleus-only results for speech recognition in noise and complex auditory oddball. The results indicate that the binaural cochlear implant is a viable option for people with hearing loss.

RESULTS OF CLINICAL TRIALS WITH MULTIPLE COCHLEAR IMPLANT SYSTEMS
Ian M. Windmill, Serge A. Martinez, Michael B. Nolch, and Barbara A. Krynicki
University of Louisville
Louisville, Kentucky

Investigations comparing the efficacy of two cochlear implant systems have focused on post-implant comparisons of auditory performance and hearing thresholds. These studies demonstrate the relative strengths and weaknesses of the two devices. The results of these studies are in agreement with the inherent subject differences that include differences in age and language of deafness, and perhaps most importantly, residual neural population. Additional environmental, cultural and social factors such as program procedures, protocols or political and social changes regarding subject selection further serve to influence the results of these investigations. The cochlear implant clinical team program at the University of Louisville has provided several unique opportunities to evaluate various implant systems unconstrained by these variables. First, the program has been approved to implant two multi-channel systems (the Synchro 4-channel device and the Nucleus 24-channel device) and the program permits the evaluation of strengths and weaknesses of the implant systems, including program procedures for the stimulation of patients, and test stimuli. The results of the Nucleus system have been obtained in two sides of the system, and for one side, the Nucleus implant. Second, two patients had single-channel implant systems replaced with one of each of these systems. This has allowed direct intra-subject comparison of auditory skills with single and multi-channel implants. Additional use of these subjects included experiences in a speech-processing mode where the speech-processing effects were as follows: 1) the Nucleus speech-processing implant, 2) the Nucleus Po/Fi format, and 3) the Nucleus Po/Fi/Fi format. The purpose of this presentation will be to the implication of our experiences with two multi-channel implant systems and to provide insight into the relative merits of each system. Further, the surgical and audiological results of two patients recovering multichannel cochlear implants as replacements for single channel implants will be reported. The single patient comparison of speech processing scheme will also be presented.

COMPARATIVE RESULTS OF SPEECH DISCRIMINATION TESTS: BENEFIT OF BINAURAL USE USING TWO FEATURE EXTRACTION COCHLEAR SYSTEMS
Robert S. Johnson
Oregon Health Sciences University
Portland, Oregon

Inherent problems associated with present-day bone conduction hearing aids have greatly limited their use. Yet, there is a definite need for a means of supplying amplification to patients with hearing loss, especially those with conductive hearing losses who cannot benefit from colored-ear or conventional hearing aids. In an effort to provide the maximum possible benefit to patients with conductive hearing loss, a new multi-channel implant hearing device has been designed. The device is currently under development by two research groups, the Central Ear Research Institute in Oklahoma City and the Kessler Hearing Research Center, Cincinnati. The device, in conjunction with the Xomed Corporation in Jacksonville, Florida, and the Xomed Corporation, Inc., of Minneapolis, Minnesota, is referred to as the Xomed Audiant, utilizing an inductive coil to transmit bone-conducted sound directly to the cochlea.
The Xomed-Audiant consists of a small surface-mounted coil that is implanted subcutaneously in the temporal bone. An external coil wound around a second magnet, and a speech processor with a microphone to activate the coil. The external device is held firmly in place behind the patient's ear through the use of the two magnets. The coil produces an electromagnetic field that causes the inner ear to vibrate. This vibrational pattern provides direct stimulation of both cochleae through the bone conduction pathways.

This device was initially implanted in one of the authors (B) who has normal hearing bilaterally, and the results were positive. To date, the device has been implanted in twenty patients with conductive hearing losses at three facilities in Oklahoma City, Portland, Oregon, and Little Rock, Arkansas. Preliminary results of this study indicate that these patients have been encouraging. Two generations of processors, both body and externally, have been used: the former behind the ear device is being developed. The preliminary results obtained from these initial twenty patients will be discussed and compared to results obtained with conventional hearing aids and a bone conduction hearing aid.
Abstracts
(Continued from Page 6)

ACUTE AND LONGITUDINAL AUDITORY DESEFFITS IN SEVERELY BURNED CHILDREN TREATED WITH OTOTOIC DRUGS
James W Hall III
University of Texas Medical School
Houston, Texas
Cindy Garry
University of Texas Medical Branch
Galveston, Texas

The burn population often requires potentially ototoxic drugs in treatment of infection. Cochlear damage resulting from such conditions is an unfortunate consequence of this life-saving medical treatment. Profound ototoxicity in the acutely burn patient is extreme and it has been difficult to assess the impact of this damage in this setting. The purpose of this study was to test the effects of commonly used ototoxic drugs in vitro.

Over 2500 ABAB assessment were carried out for a series of 75 children (aged 3 months to 17 years) over 10 years. Total body surface area burn mean 42%, men. At the time of evaluation 46% had been exposed to at least one ototoxic drug. The results were: 1) No significant correlation found between ABAB and any ototoxic drug; 2) ABAB scores were significantly lower for children who had been exposed to ototoxic drugs; 3) ABAB scores were significantly lower for children who had been exposed to multiple ototoxic drugs.

All patients had a normal ABAB intensity levels down to 40 dB as the result of ototoxic drug exposure.

Upon final ABAB test and hearing evaluation, 20% of the children had a normal ABAB. However, a significant correlation between ABAB and hearing loss was found in this study. The correlation coefficient for the ABAB and hearing loss was 0.8. These results suggest that prolonged exposure to ototoxic drugs in children with severe burns can lead to significant hearing loss.

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Abstracts

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neural and systemic effects and the discontinuance of opioid drugs was documented with parotid, submental and speech auditory. Drug-related miosis was characterized by unusually poor speech intelligibility, with some patients reporting that the audiologist can play an important role in the acute and long-term management of severe burns.

CLINICAL USE OF THE AUDITORY BEHAVIOR INDEX IN INFANTS: A CASE (VRA) (MAD) was utilized under normal speech auditory test conditions. The subject observer room arrangement is presented in the paper.

RESULTS AND DISCUSSION

The auditory behavior index (ABI) is similar to that of Wilson and Moore (1978) for infants of similar age. Direct comparison of these data with those of Northrop and Dow is difficult (their data were reported in digits by telephone; their word-list data are unknown). In general, however, threshold data for speech and pure-tone stimuli were nearly (3.0 dB more sensitive than predicted by the ABI. Absence of the ABI falls into these major categories, and these are discussed in detail in the present findings. We support the use of the ABI as a model but discourage its indiscriminate clinical use in cases of global auditory dysfunction in infants. The importance of methodological considerations in the interpretation of infant auditory data for diagnostic as well as rehabilitative planning is detailed.

CENTRAL AUDITORY PROCESSES IN DISORDERS OF D IAGNOSIS AND INTERVENTION

Lewelle L. Lovett
Brenda A. Swash
James F. Jergen

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Houston, Texas

Criticized for their lack of auditory processing disorder (CAPD) in children characterized by problems for months. First, the auditory or auditory nature of the disorder is a lack of "hard" evidence, and the diagnosis is often and often concludes that this lack of evidence denies the reality of the problem. Second, the diagnostic criteria for the disorder have been considered irrelevant due to the lack of a rational intervention strategy. In the present paper, we address these two issues based on our recent experience with a comprehensive identification strategy and with intervention based primarily on enhancement of the auditory figure-ground relation.

Fourteen children, ranging in age from 3 to 13 years, were tested using four different CAPD. Diagnoses were based on a test battery of speech, word-list, tone-interval, and auditory evoked potential audiometry. Speech audiometry included a pure-tone audiometry (PTA) or the Pediatric Speech Audiometry Card (PSAC or the Pediatric Speech Audiometry Card [PSAC]) or the Pediatric Speech Audiometry Card (PSAC). Auditory evoked potential audiometry included measurement of early latency (MLR), middle latency (MLR), and late (LVEP) responses. Results showed an abnormality of abnormal auditory thresholds for children on whom auditory evoked potentials were carried out, all had normal MLRs. However, 6 had abnormal MLRs and 7 had abnormal VEPs. Only 1 of 11 children showed normal evoked potentials across the entire array of measures. Speech audiometry was abnormal in all but 2 of 13 children. All children showed abnormal results on speech audiometry, auditory evoked potential audiometry, or both.

Since the major symptom of these children and complaints from their parents were insensitiveness and distractibility in daily living, difficulties in communication, and socialization difficulties, we intervened by providing a comprehensive audiologic evaluation and that intervention to the auditory figure-ground can be successful.

THE INFLUENCE OF CHEMICALS ON VESTIBULAR INDUCED NYSTAGMUS ACTIVITY

Plattsburg State University College
SUNY
Plattsburg, New York

This study examined the effects of four mental alerting tasks on the slow phase velocity (SPV) and best frequency (BF) of caloric-induced nystagmus activity to determine the effect of each task (i.e., concentration on the degree of nystagmus suppression/release. Forty subjects were divided into four groups (i.e., control group) and stimulated four times (2/ear) in a counterbalanced order according to test ear, stimulating temperature (30° and 44°C) and alerting task.

Results demonstrated a greater SPV composite mean value for the "mathematical calculations" (21.4°) followed in order by the "reflective questioning" (19.1°), "walking/performing" (18.7°) and "caloric (17.4°) conditions. Approximately 65% of the subjects with caloric-induced nystagmus activity yielded a greater SPV level than the same subjects did to the PTA. In addition, this difference was observed in ears that were less or more stimulated by the caloric stimulation and the subsequent caloric stimulation had a decrease in the degree of concentration on the task (i.e., mathematic calculations (21.4°). Therefore, for the first time we have observed that this patient may have been some loss of the vestibular system and slight reversion.

GYCINER TEST: METHOD FOR ANALYSIS OF PURE TONE THRESHOLD SHIFTS

Barbara H. Silver
Judy A. Musser

University of Washington
Seattle, Washington

We developed a method for selecting a shift criterion and used the rationale to develop a new method for specifying the significance of threshold shifts in the GYcinER test.

The experimental data were results from patients (174) who were tested by the GYcinER test. The mean data indicated that GYcinER systematically improves hearing thresholds by 10 dB at the 4000 Hz frequency and by 20 dB at the 8000 Hz frequency. GYcinER worsens hearing at 250 Hz by 20 dB and at 4000 Hz by 10 dB. GYcinER worsens the hearing slightly at 500 Hz and has no significant effect at other frequencies.

The method we used to measure threshold shift was the average shift at 250, 500, 1000, and 2000 Hz. A shift of 5 or more was considered significant (p < 0.01) on non-Meniere's ears. This method included sensitive frequencies, excludes non-contributory frequencies, and reduces variability with averaging. The method is capable of detecting small changes for ears with nearly normal hearing and for Meniere's ears that are nearly "burnt out." The method does not require special equipment, signals, or procedures.

We compared our method to other methods and found it to be slightly better than the second best method (15dB shift at one frequency). For our method, the specificity was 1.0 and the sensitivity was 0.61. It is clear from our data that this method is appropriate for detecting Meniere's disease. It does, however, appear to separate人们对Meniere's ears from all others. The identification of the Meniere's reactive ear may be important in its own right.

RELATIONSHIPS BETWEEN PSYCHOPHYSICAL TUNING CURVES RECOGNITION SCORES, AND DEGREE OF HEARING LOSS
dot

Gary P. Jacobson
Laura W. Kretschmer

The purpose of this study was to investigate relationships between frequency resolution as measured by Psychophysical Tuning Curves (PTC's) and word recognition scores for three groups of subjects. Fourteen elderly subjects with mild to moderately severe sloping nonsensory hearing loss, seven elderly subjects with normal hearing, and ten young subjects with normal hearing were tested. The means and ranges of pure tone thresholds for the 3 groups are provided and found to be slightly better than the second best method (15dB shift at one frequency). For our method, the sensitivity was 1.0 and the specificity was 0.61. It is clear from our data that this method is appropriate for detecting Meniere's disease. It does, however, appear to separate for detecting Meniere's ears from all others. The identification of the Meniere's reactive ear may be important in its own right.
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Aural Rehabilitation Forum

Panel Discussion - Hearing Health Care for the Elderly

Editor's Note: This panel discussion represents the third article in a series of three that kicked off our Aural Rehabilitation Forum. These papers composed the program of the symposium on "Hearing and Rehabilitation" held in 1983 in Winter Park, Colorado. As with the symposium that followed, the program was organized under the direction of Ronald L. Shoen, presently general chairman of the Rehabilitation of the elderly.

Panel members included Shoen, moderator (Idaho State University and Universitas Domestica, University of Nayarit, Mexico); and viewing with Shoen, various other professionals with expertise in various aspects of hearing rehabilitation for the elderly.

Ron Schenck: Dr. Shoenly do you want to say a few words about the situation in which we find ourselves today?

MaryAnn Smith: Yes, I would be just as concerned. I feel strongly that in our society, as we go forward, we are going to see more and more problems with hearing. Our population is growing older, and we are going to see an increase in the number of elderly people who are going to need help with hearing. This is a problem that we are going to have to face in the future.

Ron Schenck: Dr. Shoenly is there anything else that you would like to add?

MaryAnn Smith: Yes, I would like to add that we need to continue to improve our understanding of hearing loss and its effects on individuals. We need to work on developing new treatments and interventions that can help people with hearing loss live their lives to the fullest.

Ron Schenck: Thank you, MaryAnn. It seems like we have come a long way in understanding hearing loss and its effects on individuals. We have a lot of work to do, but we are making progress.

Over 230 Attend 1986 Annual Meeting

The 13th annual meeting of the American Auditory Society was held November 20, 1986, in Detroit, Michigan, prior to the annual meeting of the American Academy of Audiology. The meeting, entitled "Hearing Problems of the Elderly," was well attended, with more than 230 participants. The meeting was organized by the Michigan Academy of Audiology, AAH, and the National Academy of Audiology, NAA. Sponsors for the event were the American Academy of Audiology, AAH, and the National Academy of Audiology, NAA. Sponsors for the event were the American Academy of Audiology, AAH, and the National Academy of Audiology, NAA.

See Over 230 Attend, Page 2

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Volume 11, No. 3

The Official House Organ of The American Auditory Society

Winter 1987

Tribute to AAS Member

The famous Brown Palace Hotel in Denver, Colorado, was the scene of a fabled gala fund raising event in tribute to Marion Downs, attended by more than one hundred friends and associates. The gala was the kickoff for the National Symposium on Hearing in infants held September 29-30, 1986, honoring Marion Downs for her pioneering work in the early identification of hearing loss in children. All proceeds from the National Symposium were presented to Marion Downs Children's Hearing Fund, and a check for $11,000 was presented in her behalf at the gala tribute party.

During the gala tribute, a plaque was unveiled with the name of eighteen individual benefactors who contributed substantially to the Marion Downs Children's Hearing Fund. The plaque will be permanently mounted in the Otolaryngology-Head and Neck Surgery Clinic of University of Colorado Hospital at the University of Colorado Health Science Center. The award cites Marion Downs as an outstanding clinician, teacher, and advocate.

The University of Colorado Health Science Center is soliciting donations which will be put into endowment in appreciation for the excellent contributions of Marion Downs and her lifetime efforts on behalf of children with hearing impairment. The name of Marion Downs is, of course, synonymous with pediatric audiology, and the purpose of this endowment fund is to award an annual Pediatric Audiology Fellowship to a practicing audiologist who desires additional specialty training and research opportunities in some aspect of pediatric audiology.

During her outstanding career at the University of Colorado Health Science Center, Marion Downs pioneered, developed, and evaluated techniques for testing hearing in children. She is noted internationally for her work in theories of early identification of hearing loss and in infant hearing screening. Her publications and teaching have brought worldwide attention to the importance of early identification for deafness, and have altered the medical world to the developmental problems associated with childhood deafness.

Mrs. Downs is an excellent teacher and prolific writer. No student of hearing disorders has passed through course work without being profoundly influenced by her. Thousands of patients, especially grateful for her concern and wisdom, have benefited from her devoted effort to better their lives. Marion Downs is, of course, synonymous with pediatric audiology, and the purpose of this endowment fund is to award an annual Pediatric Audiology Fellowship to a practicing audiologist who desires additional specialty training and research opportunities in some aspect of pediatric audiology.

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Dear AAS Members and Corti’s readers,

You will be interested to hear that SHARE has had remarkable progress. We now have a new feature that we believe will be beneficial to our readers. The feature is called Reprint Exchange and is designed to facilitate the sharing of information. We are in the process of launching this feature, and we are excited to see how it will be received.

SHARE is expanding its reach and influence, and we hope that our readers will find this new feature valuable. We are always looking for ways to improve our service and better serve our readers, and we believe that this new feature will help us achieve that goal.

We appreciate your support and interest in SHARE, and we look forward to hearing your feedback on this new feature.

From The Editor-

As my first year as Editor for Corti’s Organ comes to a close, I can’t help but reflect on the changes that have taken place in my life and in the world around me. I have accepted this “prestigious” post with a mix of trepidation and excitement. I have learned to deal with new responsibilities and have had to adapt to a new environment, just how to pace up and how to blog.

With each issue of Corti, it has been necessary for the Editorial Board to actively recruit new papers and articles for inclusion. Rather than push or beg or plead, I have simply reminded your subject areas that need your attention and input. Consider submitting to the Clinical Section (case studies, assessment overviews, etc.), the Equipment Review Section, the Audiolinguistics Column, the Name That Disease Column, the Audiology/AAS Trivia Column, or the Special Editions, “Corti’s 10th Anniversary.”

Now, if one of those sparks your typewriter, I have a new idea to get those creative juices flowing. A new column will be added to Corti’s Organ that will allow you to “get it off your chest.” The “What’s Bugging You?” column will serve as your soap box. Do you have a pet, quirk, philosophy or concept that you want to debate? Send it to Corti’s Organ. Counterpoints can be written as live voice vs. taped presentations for space availability. This is a new forum, so let’s see how it goes.

Virginia Berry

Editor's Note: From time to time this special feature, contributed by the AAS President, will appear in Corti’s Organ.

Prelinguistic Deafness vs. Prelingual Deafness

 achter I was a resident, “cognitive deafness” was used to describe children born deaf who were not exposed to auditory input at an early age. This is a popular concept that has been used to describe children born deaf who were not exposed to auditory input at an early age. This is a concept that has become more popular in recent years, as it has helped to explain some of the challenges that these children face as they learn to communicate. However, it is important to note that this concept is not universally accepted.

Prelinguistic deafness refers to the period of time before a child begins to develop language skills. This is a crucial period in a child’s development, as it is during this time that they begin to understand the relationship between sounds and language. Prelingual deafness, on the other hand, refers to the period of time after a child has developed basic language skills and is able to communicate.

Prelinguistic deafness is also known as “cognitive deafness,” and it is a term that is often used to describe children born deaf who were not exposed to auditory input at an early age. This is a popular concept that has been used to explain some of the challenges that these children face as they learn to communicate.

Prelingual deafness, on the other hand, refers to the period of time after a child has developed basic language skills and is able to communicate. It is important to note that this concept is not universally accepted, as it is not clear whether all children born deaf are able to develop language skills in the same way. Therefore, it is important to continue to research and understand the factors that contribute to a child’s ability to develop language skills.

In conclusion, it is important to continue to research and understand the factors that contribute to a child’s ability to develop language skills. This is a crucial area of research, as it has the potential to help us better understand the challenges that children born deaf face and how we can support them as they learn to communicate.

Virginia Berry

Over 230 Attend

Continued from Page 1

The President’s Corner

From the last section: “The invaluable presence of the handguns in the hands of both the disaffected and the disaffection seems to us to represent, as pre-adaptive behavior unique to the human species...” Be sure to read the following sequence of activities may be that it reinforce communication by means of greetings... The next section: “I love the greeting...” is printed and not present before the. I urge members of the AAS to consider using the term “prelingual deafness” instead of “deafness in the prelingual period.”

Virginia Berry

Spring Issue of Corti’s Organ will contain... Membership Directory Be sure we have your correct name & address.

1986 AAS Meeting Available on Video Tape

The entire proceedings of the 1986 convention of the American Auditory Society are now available on video tape. The video tape is approximately six hours in duration. It includes the 1986 convention and the Edward T. Borst Memorial Lecture by Joseph Hawkins entitled “The TRACES OF AGE IN THE EAR AND THE EYE.”

This year the video tape is accompanied by a complete set of documents representing the visual aids used by the presenters. The video tape is available in VHS format only. The cost is $50.00. Please allow 4-6 weeks for delivery.

Make sure to check payable to:

AMERICAN AUDITORY SOCIETY

Send order to:

Joseph S. Stekemann, Ph.D.
Joseph Hawkins & Speech Center
Eye, Ear, Nose & Throat Hospital
1455 Mississippi
New Orleans, LA 70112

The video tape should be sent to:

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1986 Editors’ Awards Announced

Each year, the Ear and Hearing Editorial Board acknowledges outstanding contributions to this publication through the presentation of the Editors Award. The purpose of this award is to recognize manuscripts that exemplify the standards of quality that the Ear and Hearing Editorial Board strives to achieve.

Manuscripts were selected on the basis of these criteria:
- the interest and timeliness of the research question
- the appropriateness of the research design and methodology
- the appropriateness of the analysis
- the clarity of the writing
- the appropriateness to the purpose of the journal

Selection of the three most outstanding articles in a volume of Ear and Hearing is not easy, as there were many worthy papers among the 60 published. Nevertheless, we were able to choose three articles which admirably represent the standards we wish to maintain.


The awards were presented at this year’s annual AAS meeting in Detroit. Prizes were given to the authors, honoring their significant contributions.

President Worthington makes presentation to Carhart speaker, Joseph E. Hawkins.

Moscicki accepts award.

Rintelmann receives acknowledgement.

Elis accepted certificate of appreciation for local Arrangements Committee.

Editors’ Award granted to Andre Durieux-Smith.

Bob Keith presents Editors’ Award.

Society honors Susanne Kos.

19th International Congress Scheduled

The International Society of Audiology will hold its 19th INTERNATIONAL CONGRESS OF AUDIOLoGY, in Jerusalem, Israel, June 6-7, 1998. Topics of the Round Table are: Hearing Administration; Associated with Systemic Diseases; Methods for Evaluation of Benefits of Hearing Aids, and Auditory Depression from Middle Ear Disease in Children. Free paper sessions on a variety of topics in audiology will be held throughout the four-day congress. For further information please contact: 19th International Congress of Audiology, P.O. Box 50096, Tel-Aviv 61660, Israel.
Executive Committee at Work and Play

The 1986 Executive Committee had their work cut out for them as they attempted to keep the ball rolling at the Aural Rehabilitation Centre. As a result, the committee members worked hard and accomplished much. The evening was at the Lands Down Restaurant on the Detroit River, and they were treated to a delightful array of tempting hors d'oeuvres and cocktails. A fine dinner followed, complete with prime rib, wine, and a sparkling view of Canada. The entire evening was just the relaxation needed by the Executive Committee after a long and productive day.

I may call it that, and Detroit is in deep trouble. For a concrete example, the Japanese came over here and had a decent product, and people bought Japanese cars because they were really better. And much ado of a Ford Mustang racing down the road is not going to help Ford products. What help Ford products is an automobile that stays together, was fit properly to begin with. I have some real problems with numbers for their own sake. I think the people who are bent on that, in the long run, will be in deep trouble.

Thayne Smellings: That, I think, is a good statement, and it reflects your orientation. However, if you were president of some hearing aid corporation, the master of numbers would be a critical issue.

John Cooper: That's not so, and the apartment have proved it, and Detroit lost their head on it.

Ron Schow: But, you see, the quality brought the numbers. It's just a different way of going after the numbers.

Thayne Smellings: That, I think, is a good statement, and it reflects your orientation. But, they are tied very closely together. If you get involved in retailing, get involved in the hearing aid industry, the mentality may be crazy, but it reflects the fact that they eat and what they wear and what they drive, and how they house themselves are all tied to income. And if they don't make the income, they don't have a certain status, or a certain form of living. Sales units and money are just that closely. We've very much a world where hearing aid offices are first business, and if they don't succeed in business, it's not a good idea to help the hundredth. But, if you're in a university setting where your income isn't necessarily determined by the growth of the product you turn out, sitting in some other office where it's tied directly to sales, then it's easier to think in a more broad context of rehabilitation and quality as opposed to quantity. It's major concern, and I honestly don't know how you get around that.

Ron Schow: I apologize in a way for bringing the numbers up. But, I heard Genny Vaughan the other day talk about 960 letters from people who need help with assistive listening devices and saying that they were very close to her. I think she means it.

See Aural Rehabilitation, Page 5.
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- DESIGNED BY PRACTICING CLINICIANS FOR PRACTICING CLINICIANS
- USER INSTALLABLE

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THE CYBERSMITH
KOS GURA OR ME
A.L.G. GURIN, M.B. D.
FOR MORE INFORMATION.
Aural Rehabilitation

Continued from Page 6

"Raise your price $100.00." And that is exactly what we did. The result is that our business is so

duct and my service is worth every dime that you are willing to pay. We are not interested in

to that price, that must indicate what you think

worth. The public tends to respond to the

the kind of client we want to serve. We are not

writing.

The whole matter of the pricing situation of

hearing aids has always been a curious thing to me. When I was with the

12 years ago, I said, "It seems a little high. Don't you

think that's excessive? Why do your people

"pay it?" They say, "Pay it for one reason: In the eye and say,

I am worth $600.00. You're not buying a piece of

electronic muscle, so to speak. You're buying

services, he'd be buying for about the

you use the hearing aid, and I will be there when

or three hours from where he lives to give him
care, that's what he's buying. He feels like he's

worth it.

Is there any way to determine a price?

I think that's several of them have

said, that people need to change their minds about

Thayer Smilieley: The price of hearing aids is

a very, very important thing. There is a segment of our

public that tends to respond to the kind of

we are not interested in. We are not

the cost of living, and they want to be able to

as they are.

They say, "No, I want to report something

This is a problem that we hear described

what our price is. In audiology

in the audiology

are people who are not used to paying

services. The first thing that

would sell a business of some kind. I think

in this way. To do that, and very much consider

our clients are going to have to be able to

the fees, and so on.

Another reason is, I think that we have a group
deal to two extremes of a con

continuum. We have agreements

with the manufacturers telling us that we have to

promote, promote, promote, selling

us how much to charge. I think

have our own conscience based on our

and so on that says, "Oh, you can't
don't, that you have to be ethical and profes

prosperous and all the things. As a result

in training our students with one side of this,

and they are out in the world and find they're

way on this side. What's really coming out

of this is that we can make a lot of money.

make it in my practice is not high visibility

prospect for the future. But I do see quite a

bit of print media with a professional ac

requirement type ad. I also do columns in
to the point where there are more

in this industry. This is a very

the world at the same time, we're not going
to have to be with us. That's why we

train students to live in a private practice

Emeline Owen: To get back to Mirmiran, it seems

to me that, as audiologists we are not practic

ally all the time in the red. Audiologists are

one of the few in my practice that are doing

communication with those dealers in

are more than those dealers. We're doing

work, and you're doing the follow-up, and you're

all these areas. I can see in the future that

Thayer has described as well.

How we work in the marketplace and still provide professional

experience, I'm wondering how you go about it

in your small town?

Miriam Henshaw: I wish I could answer your

question. I wish there was a way that we

could say something like you are a hearing

aid. When I first came to Denver about five

years ago there was only one other dealer

there. I make an effort to work with dealers in

a number of ways. For example, in terms of

referrals. Also, possibly sending students to

them for preclinical experience. But I could

not continue to do that because this dealer

wanted me to refer all the patients that

weese for hearing aid evaluations back to

him. I would not do that. So, communi

communications can be a problem.

I really don't know how to bridge the gap.

Katherine Gerik: After having gone into it

from the view, and I have a lot, the biggest

more and more audiologists who want to go

out and dispense and their biggest thing is to

understand the dealer in price. I always

back it in their assessment when they say, "I'm

physically limited, I have a hard time learning

a Ph.D. degree, and I'm better, and I'm
good," I do it. I do a pretty good job. I

charge a little. It's always such a dilemma to

ask a dealer to charge what he deserves for his

service, better fittings, rehabilitation, why

are you giving away your services? What are

making a dollar as an audiologist? I just

have problems with this.

Miriam Henshaw: I don't think there is a

thing worth doing with.

Richard Thomas accepts BHI Achievement Award from Executive Director, Joe Rizzo.

Richard Thomas for Honoring Information Efforts

Better Hearing Institute has presented its 1986 Better Hearing Achievement Award to actor Richard Thomas for his "outstanding public education efforts on behalf of Americans with hearing problems.

The award was presented by BHI executive director Joe Rizzo, who said, "Richard Thomas' efforts for the cause of better hearing have been extraordinarily and much appreciated by those who serve people with hearing loss. His television and magazine public service messages have been especially effective in spreading encouragement about available hearing aids. Louis Glazer, the institute's public relations director, said, "Richard Thomas has been an outstanding example of how a well-known public figure can help to raise the profile of hearing loss and the availability of hearing aids. Glazer added that Thomas' efforts have helped to bring attention to the serious health problems associated with hearing loss, including the potential of severe brain damage if untreated. Glazer also noted that Thomas' work has helped to break down the stigma associated with hearing loss, and has shown that people with hearing difficulties can lead fulfilling lives.

Thomas, known for his many Emmy Award-winning roles as Kimball Pop in the television series "The Waltons," will lead the Council for Better Hearing and Speakout's 1987 campaign on behalf of 25 million Americans with hearing disabilities, the most visible of which was the character of Peter Reagan, President Reagan's son, in the 1987 child's show, "The Waltons." Thomas has been a vocal advocate for the cause of cochlear implants. Thomas says, "I've been told by many of my colleagues that hearing loss is the most debilitating disability because it causes so many other problems. Thomas will bring his voice to the campaign, which will focus on the need for more public awareness about hearing loss and the availability of hearing aids. Thomas will also be seen on television commercials for the "Better Hearing Campaign" and "The Wall," which are designed to educate the public about the importance of early detection and intervention.

Thomas recently joined other famous Americans in the latest edition of BHI's "Overcome Hearing" Celebrity book, made possible by a Delta Zeneta grant. Thomas said, "I was thrilled to be a part of this project, and I hope it helps raise awareness about the importance of early detection and intervention." Thomas has been a vocal advocate for the cause of hearing loss and the importance of early detection and intervention. Thomas says, "I've been told by many of my colleagues that hearing loss is the most debilitating disability because it causes so many other problems. Thomas will bring his voice to the campaign, which will focus on the need for more public awareness about hearing loss and the availability of hearing aids. Thomas will also be seen on television commercials for the "Better Hearing Campaign" and "The Wall," which are designed to educate the public about the importance of early detection and intervention."
Retired Hearing Professional Offers

“Hearing Loss Basics”

Alex Cosale, former owner of Allied Hearing Aid Service of Santa Monica, California, now a long-time hearing loss advocate and an extremely well-versed hearing professional with over 50 years of experience, has written a brief brochure on hearing loss basics. His latest book, “Hearing Loss Basics,” is now available from his company’s website. It provides a comprehensive overview of hearing loss, its causes, and the various treatments available. The book is designed to be accessible to anyone who wants to learn more about hearing loss and how it affects people's lives.

Society Says Thank You to President

Don Worthington, Past-President of AAS, was honored in style at this year’s annual meeting held in Detroit, Michigan. In particular, he was honored by his peers and his loved ones for his years of dedication to the organization and his leadership in the field of audiology. Worthington was presented with a citation for his many years of service and dedication to the field.

Speech and Hearing Alliance For Resource Exchange

The primary purpose of SHARE is to assist in the development of new programs and activities that are related to the needs of people living with hearing and speech impairments. The organization is a non-profit, charitable organization that provides grants and support to organizations and programs that serve people with hearing and speech impairments. The organization is committed to improving the quality of life for people with hearing and speech impairments through education, advocacy, and the provision of resources.

Minutes of the American Auditory Society Executive Committee Meeting

Date: November 19, 1980
Place: Hyatt Regency Hotel, Detroit, MI
Time: 1:00 p.m.

Members Present: Virginia Berry, LaVonne Bergstrom, Patrick E. Brown, Alphonso M. Gallef, Richard S. Hayes, William L. Keith, Ph.D., and Francis A. Sennick, J.D. The meeting was called to order by the president, Don Worthington.

1. President Worthington opened the meeting at 1:00 p.m. and thanked the members of the Executive Committee for their attendance and contributions to the society. He also announced the addition of two new members to the committee: Richard S. Hayes and William L. Keith. The meeting was adjourned without further discussion.

2. The minutes of the 1980 AAS Executive Committee meeting were reviewed and approved.

3. The treasurer’s report for the period 1/8/80 to 1/8/81 was reviewed and approved. The financial status of the American Auditory Society was reported to be in excellent condition. Based on this, no increase in dues was recommended.

4. Ross Koscrow was reappointed as membership chairman. As of 6/8/80, there were 135 members. This represents an increase of 21 members since the last report. The treasurer noted that the dues were increased to $75 per year for the next fiscal year. The increase was necessary to cover the costs of the society and to support its activities.

5. Ross Koscrow was appointed as secretary-treasurer of the society. He requested that the society consider increasing the dues for the next fiscal year to $90 per year.

6. Susan Kow was appointed as Assistant Secretary-Treasurer for 1981-82.

7. Bill Rasmussen reported on the 1981 meeting. He noted that the previous year’s meeting had been successful and that the 1981 meeting would be well attended. He also offered to assist with the arrangements for the meeting.

8. The meeting concluded with the president’s remarks.

The meeting adjourned at 2:00 p.m.
International Symposium Exhibits Tennessee Hospitality

July 26-30, 1986, marked the Third International Symposium on Childhood Deafness, sponsored by the Bill Wilkerson Hearing and Speech Center and by the Division of Hearing and Speech Sciences, Vanderbilt University School of Medicine. For the last three decades this event has become a landmark in continuing education. Hosted once every ten years, this Symposium brings together a faculty of distinguished speakers in the fields of audiology and deafness.

This year’s conference, held in Nashville, dealt with the hearing impaired child and with the etiology, identification, and management of ordinary disorders. Presentations on genetic syndromes that deafen, otologic and ototoxic hazards, viral/bacterial agents, and epidemiology of hearing loss were among the Symposium’s interesting topics. Papers discussing high-risk infant assessment, behavioral evaluation techniques, acoustic immittance measurement, cochlear implant evaluation techniques, hearing aids and assistive devices, and neuropeptidergic considerations in neuro-physiologic audiometry each enhanced the conference’s exploration of new technology and instrumentation. Discussions on communication development, cognitive training, psychosocial issues, parent involvement, and language intervention strategies were only some of the topics presented which were related to management of the hearing impaired child.

The Symposium was “launched” with the W.W. Wilkerson Memorial Lecture given by Guest Speaker, Dr. Betty Caldwell of the University of Arkansas at Little Rock. Dr. Caldwell’s papers “You’ve Come a Long Way, Baby” traced changes that have occurred in the field of early childhood growth and development.

Marion Denzer, a professional who needs no introduction, served as the Banquet Speaker. Her presentation, entitled “Stalking the Hearing Gurus,” was an entertaining, light look at our profession and some of its elite. No description of the impact of this address could do it justice.

The three days in Nashville brought together over 300 participants who had occasioned, inspired, and exhorted. The 3rd International Symposium on Childhood Deafness was the perfect mixture of intellectual stimulation and social interaction, such as only the Bill Wilkerson Hearing and Speech Center and Vanderbilt University can provide. The Symposium was one of those decade-most impressive events and will long be remembered by those who attended. The Planning and Steering Committee is to be congratulated on a job well done!

(The proceedings of the Symposium will be published in text form in the near future. For information on this excellent conclusion of papers contact Fred Bose, Director of Bill Wilkerson.)

A Professional Celebration

On July 30, 1986, prior to the start of the 3rd International Symposium on Childhood Deafness, a very special event took place in Nashville. A professional tribute honoring Jay W. Sanders, P.H.D., was sponsored by the Bill Wilkerson Hearing and Speech Center and by Vanderbilt University. In celebration of Dr. Sanders’ completion of his 35th year of formidable contributions to diagnostic audiology, a one-day conference was hosted, entitled “Diagnostic Audiology: A Golden Anniversary.” This event was a series of lectures focusing on state-of-the-art practices in the field of audiology. The faculty of notable contributors to our field, who were both colleagues and friends of Dr. Sanders, presented papers covering such topics as neurodiagnostic audiometry, audiologic manifestations of acoustic tumors, acoustic reflex measurement, central auditory assessment, medical audiology controversies, and many more.

The day was topped off with a gala banquet and tribute to Dr. Sanders. Lectures videotaped presentations, and personal communications provided the opportunity to honor this respected mentor, colleague, and friend. It was truly a special day for a very special man.
Professor Roger N. Kasten Receives Teaching Award

The fifth annual Bellevue Distinguished Teaching Award in Audiology was presented to Roger N. Kasten from Wichita State University. This award was established by Bellevue Electronic Corporation in 1981 to recognize exceptional teaching in audiology. This is the only such teaching award given in the field. It is significant because, by its nature, it recognizes the future of our profession—teaching. It is one of the most important things we can do for our patients, and it's a way to keep the next generation of audiologists excited about the field.

To be eligible for this award, an educator must be nominated by a student and must have at least five years experience teaching audiology. Judging is based on a panel of ten professionals from major research and educational institutions and by one student, representing the National Student Speech-Language-Hearing Association. These judges have a difficult task because the nominations and the selection are not easy.

It was obvious from the list of nominations that the quality of education in audiology has improved in past years, and in this year, the award went to Roger Kasten.

Kasten has been affiliated with the Wichita State University since 1971. He is currently professor and director of the J. Allen and Emma O. Tabor Blue Hearing and Speech Research Laboratory at the University. He has also served as visiting professor at the University of California, San Diego, and as Director of the Speech Science and Hearing Services for the Institute of Logopedics. Dr. Kasten was a front runner at Howard and Purdue University, and has spent several years with the Veterans Administration's Central Auditory Research Laboratory. He received his bachelor's and master's degrees in speech and hearing therapy from Bowling Green State University, Ohio, and his doctorate in audiology from Northwestern University. He has been Chair of the Department of Communication Sciences and Disorders at the University of Wisconsin-Madison since 1980. He has been Chair of the Council on Communication Sciences and Disorders since 1980. In 1980, he was President of the American Speech-Language-Hearing Association.

Kasten has been known for his work in the field of audiology for many years, and has received numerous awards for his contributions to the profession. He was selected as the recipient of the 1990 Distinguished Teaching Award in Audiology by the American Audiology Society. This award recognizes outstanding teaching excellence in the field of audiology.

Kasten's work has focused on the development of new techniques and technologies for the treatment of hearing loss. He has published extensively in the field, and his work has been recognized with numerous awards and honors.

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Editorial Board Minutes
of November 30, 1986
Continued from Page 14

Board Transition:
Deborah Honeva announced her resignation from the board. Deborah has served as associate editor for four years. The board thanks her for her contributions to the development of the journal. As editor, I want to especially thank her for her help, and also the board wishes Deborah's high standards of editorial excellence.

Bassam Zinger was introduced as the newest member of the editorial board. She will assume the role of section editor of Speech Audiology beginning with Volume 8. We are fortunate to find a replacement for Deborah who has such outstanding credentials. Beginning with the next issue the section "Speech Audiology" will be retitled "Behavioral Techniques in Audiology and Otorhinology." In the late 60's the title "Speech Audiology" does not recognize the broad possibilities that exist for this section, and we hope that this expanded title acknowledges those possibilities.

Editor's Report:
We expect to receive approximately 10 manuscripts this year. Our current acceptance rate is approximately 60/40. We are currently reviewing the manuscript for publication in Number 3 (May/June) of Volume 8, 1987. For your information, I have obtained the average time between receipt of manuscript and acceptance, and also the average time between receipt and publication of manuscripts accepted for the first 3 volumes of the journal. That summary information is shown on the figure, and the breakdown of manuscript acceptance by subject category is shown on the table.

Table 1: Subjects of published manuscripts (January 1980 - Present)

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<th>Vol.</th>
<th>Acoustic/ Phys.</th>
<th>Hearing/ Speech</th>
<th>Total</th>
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<td>4</td>
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</table>

In Volume 7 No. 6 (December) 1986 issue of Ear and Hearing we will acknowledge the approximately 135 individuals who served as reviewers of manuscripts during 1986. We are grateful for their efforts. The peer review process is critical to the success of Ear and Hearing. The editorial board is continually seeking other persons who are interested in serving as peer reviewers. In view of this area, we would appreciate it if you would provide us with the names of potential reviewers.

Future Plans:
Late in 97, Ear and Hearing will publish a good supplement called "Diagnostics Audiology: A Golden Anniversary." This supplement is published in recognition of the 100th anniversary of the American Academy of Otology. It is a collection of the most influential articles published in the journal over the past century. We are particularly interested in hearing the comments of the readers. We hope that you will review the articles and provide us with your comments.

Lorne Greene takes PAS fliming break with AAO's Dr. Jerome Goldstein and BHA's Joe Rizzo.

AAO-HNS and BHI Jointly Produce TV Messages Based on Marketing Studies

Lorne Greene and his wife, Nancy, are in the news this week with their new television public service announcement. Lorne is president of the American Academy of Otolaryngology-Head and Neck Surgery and the Better Hearing Institute, which is associated with the American Academy of Otology. Their new television public service announcement is aimed at increasing public awareness of hearing loss.

Based on the results of recent BHI focus group studies and the Hearing Industry Association marketing survey, the message is designed to educate people about the importance of early detection and treatment of hearing loss.

The television PSA, which was produced by Lorne Greene, was presented at a national conference on hearing loss prevention. The message encourages people to schedule appointments with audiologists and doctors to learn more about hearing loss and its potential effects.

This is a big year for us. We have a wonderful team of experts working together to further the cause of optimal hearing. The message is an important step in our mission to reach more people with the facts about hearing loss.

Revueers' Form

I am interested in serving as a peer reviewer for the journal, Ear and Hearing. I understand the need to render thoughtful, objective reviews in a timely fashion.

Name: 
Address: 
Telephone: 
Arens: 
Profession: 

Please return to: Robert W. Ruth, Ph.D.
Ear and Hearing
M.D. 528
University of Cincinnati Medical Center
Cincinnati, Ohio 45219
Probe Microphone Systems Compared

A Comparison of Probe Microphone Systems

David A. Preves, PhD.

The recent proliferation of precise probe

hearing aid fitting approaches has made it

easy to find valid methods to validate whether

various components of a device are working

individual basis. Several of these precise

fittings, including the patient history data the

aid fitting or the "patient" with the probe is

internal to the reference microphone.

A new method presented at the 1985

measured sound pressure level via the

data in the reference microphone at 90 dB SPL

in the C-10/90 test was used to calibrate the

test, the probe microphone may not

function properly because of differences in

the test, such as the hearing aid under test

must be made with regard to the

suitable for use in conjunction with

the probe microphone. This approach

Several similar microcomputer-based

microphone systems have been introduced

in the hearing health care marketplace.

Due to the similarity and number of

appearances, selection of such a probe

microphone for clinicians has become a

difficult decision-making process. The

purposes of this brief article is to delineate the

features of several of the available

microphone systems.

Desirable Features For Probe Microphone Systems

Since most of the available probe

microphone systems are microcomputer-
based, one would expect them to have at least some of the

characteristics found in popular personal

systems. These include a convenient microcom-

puter interface, a menu-driven command struc-
ture, a graphic video terminal (CRT) for view-
ing waveforms, menu-driven command de-

and position data, and the ability of storing, recalling, and

managing data. The more features included in a

microphone system, the more powerful the system will

be, because its capability can continually be upgraded by

software changes. It can also be used for tradi-

tional Cochlear implant applications, such as

processing, acoustical, and data-base

condition recording.

In addition, a probe microphone system

should be capable of delivering a wide range of

responses and of rapidly modifying its

parameters, to allow it to adapt to a variety of

situations. The probe microphone system

should have variable input levels, both

large and small, to allow the user to select

volumes, to allow the user to select

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Probe Microphones

Continued from Page 16

The ISO 10010 is recommended as the system of choice for clinical usage.

Acoustical HA-2000

$6250 (not including E agonation pole, one disk drive, color CRT Monitor, and Impedance probe option $2000) manufactured by Auditec Corp.

This one is my favorite system of the display stand, including being built around a genuine purpose microphone (HR-3); it uses an advanced ROM-based probe microphone system designed for clinical and research purposes with waveform digitization and analysis. The system can be used in both a research and clinical setting.

The HA-2000 is recommended as the system of choice for research applications.

Free 8200

$7500 complete, plus $1850 for probe system. This is an in-air probe-hearing aid simulator with a complete 6000 series simulator system. The 6000 series is manufactured by Eton Research.

Reflex Probe 5000, hearing aid simulator. Add for PAM, then a 6000 series simulator system is included.

Free 8200

In Memory of Dr. George Lynn

Dr. George Lynn, a long time active member of the American Audiology Society, passed away on August 3, 1989, after a prolonged illness of nearly a year. He was married to the family of the Department of Audiology at Wayne State University Medical School for 21 years. Also, for the past 15 years he had held a position as a member of the Department of Neurology. Prior to joining the faculty at Wayne State University, he held faculty appointments at the University of Colorado in Boulder, at Colorado State University and then at Duke University in the Division of Otology. George Lynn was appointed to the PHD in 1962 in Northwestern University where Raymond served as his mentor and major professor.

During George Lynn’s academic career, which spanned nearly three decades, he made numerous contributions to the clinical and research literature in the field of audiology, and he published several important chapters in various textbooks. He was known for his work in the areas of neuro-otology.

Concord Organ Winter 1997

Regen Conference Produces Text

The proceedings of the 3rd Regen Conference have been organized into a text edited by M. Oline and A. A. Currey. A 1986 volume contains 22 papers presented at the Regen Conference, held in Boston, Mass., in August 1986.

This was followed by a view toward Scott Regen’s interests in hearing loss, and they discussed physiological and psychological correlates of hearing loss, innovative approaches to the medical and psychological treatment of hearing loss, and some new ideas. It is anticipated that this book will be a valuable resource for audiologists, audiologists, and researchers, providing them with an update in key areas of inquiry related to sequential hearing loss.

FANTASTIC OFFER FOR AAS MEMBERS

Academic Press is pleased to announce a special reduced subscription rate to all members of AAS for the British Journal of Audiology. This professional publication consists of four issues a year and is available to faculty members at the cost of $25.00 (excluding shipping and handling charges). There are 20 page subscriptions available.

Payment should be made in U.S. dollars by check (payable to Academic Press, Inc., London, bank draft or international money order. Credit card payment is acceptable. For further information, call the Academic Press, Inc., London, 24th-25th Floor, 11 T7X 5XW, U.K.

See Probe Microphones, Page 16

George E. Lynn

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See Probe Microphones, Page 16
Probe Microphones

The addition of probe microphones to the PE1000 hearing aid analyzer is now possible. The PE1000 analyzer utilizes a sweep function with 50, 60, 70, and 80 dB SPL. The probe microphone module is carried on a portable stand. The probe microphone is placed in the ear canal with the small ear tip. With the dual measurement, the unit is able to measure the insertion gain in the ear canal. The probe microphone is placed on the ear canal and the unit measures the insertion gain in the ear canal.

Bio-Logic Systems Corp.

Approximately $500 for the probe microphone system.

Both an add-on and a stand-alone system will be available within six months. The add-on system incorporates the two-channel transfer LT and Navigator evoked potential systems, which already have FPT capability. The stand-alone system will receive a LAN-based 128 DOS PC compatible computer with a wireless keyboard. Consequently, with either type of system, the data can be saved to floppy disk. The FPT algorithm will result in 125 Hz resolution, and there will be an "average" capability to cause desired equalization of the response curve. Two measurements will be made, and the reference microphone may be turned off optionally to permit the measurement to reach equilibrium. The reference microphone may be turned on optionally to provide the necessary measurement of the response curve. Additionally, the reference microphone may be used to measure the response curve, and it may be used to measure the insertion gain in the ear canal. The computerization of the measurement of the response curve will provide a more accurate measurement of the insertion gain in the ear canal.

Salient Features of Available Probe Microphone Systems

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<th>System</th>
<th>CRT</th>
<th>Curve Subtraction</th>
<th>Substitution Equalization</th>
<th>Pull Keybd</th>
<th>Disk Storage</th>
<th>Complex Input</th>
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<td>N</td>
</tr>
</tbody>
</table>

Bibliography

American National Standards Institute: Specifications of hearing aid characteristics, 1973-1974, Fig. 2, 1972.


Society hosts 330 attendees at annual meeting.

President Worthington says goodbye.

LaVonne Bergstrom takes over as President.
S.A.S. Goes to Sea

The 1987 Southern Audiological Society Convention will be held aboard the cruise ship, "March Gals," from September 10-13. The convention will offer ten (10) hours of continuing education presentations. Your participation in this convention can be a relevant professional update as well as a real travel bargain for you and your significant others.

The "March Gals" is a 27,000 ton ship that is registered in Panama and has an international crew and service staff. She is air-conditioned throughout with private facilities in each state-room. Inclusions for the convention will be a Welcome Aboard Party for SAS registrants, full range of entertainment, including night-labs, shows, duty free shopping, all meals and snacks, including exceptional late night buffets, gala Captain's Cocktail Party and Dinner, complimentary deck chairs, children's activities, extensive and full run of the ship's pools, spa, and disc sports. The ship will sail from Ft. Lauderdale, Florida, on Thursday, September 10 to Nassau, Bahamas, and return on Sunday, September 13, 1987. The Southern Audiological Society's ship rate for the cruise will be $260.00 per person/double occupancy for inside cabins with twin beds or $320.00 per person/double occupancy for outside cabins. The customary "rack rate" for this cruise are $460.00 and $540.00. A third or fourth person in the cabin will add $150.00 per person. These rates do not include a $22.00 port tax.

Special air fares have been negotiated for us with Eastern Airlines. Our official SAS travel agency, ABOUT TRAVEL, Inc., 1A South Semoran Blvd, Orlando, Florida, (305) 325-7494, gives credit for this. SAS attendees will receive a 6% discount off regular "V" fares or the lowest applicable fare with available seats. To receive the discount you must call Eastern's toll-free Convention Central Hotline and request 529765 rates, and you must be ticked by ABOUT TRAVEL. The Convention Central phone number is (800) 448-7022 (in Florida, (305) 649-7944).

Ernie Edwards is organizing a top-notch Professional/Technical Program to meet continuing education requirements for licensure and certification. Topics will include electrophysiological techniques for assessment of hearing and hearing aid fitting, and digital hearing aids.

For further cruise information, contact: Bob Harrasch, University of Miami, P.O. Box 01860 (856), Miami, Florida 33101. (305) 448-4545. One must be an SAS member in order to obtain these special rates.

Conference On Current Perspectives in Clinical Audiology - 1987

September 3-5, 1987
Carle Clinic Association
Urbana, IL

Topics: Cochlear Implant Candidacy, Assistive Listening Devices, Diagnosis, Rehabilitation, and Relations with the Medical Community.


CEU's applied for
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International Symposium
Page 13

ADDRESS OR NAME CHANGE ??

Ear and Hearing subscribers and AAS members should send changes to:

AAS
1966 Inwood Road
Dallas, Texas 75235

(NOT to Williams & Wilkins)
1989 AAS Meets and Eats in New Orleans

The 1989 AAS Annual Meeting will be held on Sunday, September 24th, in New Orleans, Louisi-ana. The program will begin at 8:30 a.m. with a round table discussion entitled "Newborn Auditory Screening: Then What?" Jay Hall, Program Chairman, will moderate a panel discussion by well recognized clinicians and re-searchers in the area of early identification of infant hearing impairment. Each panelist will present viewpoints on the challenges and problems of implementing hearing screening and audiological follow-up programs. Special emphasis will be given to the potential impact of federal mandates on early identification and management of hearing impaired children. Questions from the audience will be welcomed.

Football Great Mike Singletary Stars in New Television PSA

Chicago Bears' football star Mike Singletary, selected to six straight National Football League Pro Bowls, stars in a new Better Hearing Institute television public service announcement recorded possible by a special grant from Knowles Electronics, Inc. It is the first national television television transcendent.

Knowles, who personally overcame his hearing loss with hearing aids, appears in a scenario with his wife, Ella, who persuaded him to do something about his hearing problem.

"This PSA ties in with results of Institute focus groups and the Hearing Industries Association market survey showing the spouse as the major motivating force behind the hard-of-hearing person," said Richard T. Berger, BHI president.

"So our message features a situation that sponsors of hard-of-hearing persons can identify with, and one that may motivate them to encourage their spouses to seek corrective action. We sincerely appreciate Knowles' sponsorship of this important project."


\[
\text{The President's Corner}
\]

CHANGING TIMES

by Wayne J. Staab

The AAS is in the process of completing its most extensive membership mailing ever. Under the direction of John J. Schmitt, the managing editor of the American Journal of Clinical Pathology, the American Society for Clinical Pathology, and the American Association for Clinical Chemistry, the membership committee has assembled a mailing list of over 90,000 potential members from a variety of disciplines having an interest in pathology and laboratory medicine. The enthusiasm within the Organization is very high, and membership rolls are expected to be the highest in the history of the AAS.

From The Editor —

As you can see from this issue, it's time once again to add members to AAS Executive Committee. This is a particularly important event for our membership. As in previous years, some of you most outstanding members are nominated this year for Executive Committee positions. It was so exciting for me to read each member's statement regarding their affiliation with AAS and their impressions concerning the Organization's accomplishments and role.

A common theme was evident throughout the members' statements: AAS is one of the most visible and influential organizations representing our field. The cross discipline make up of our membership brings a complexity to the

Letter to the Editor —

I would like to bring to your attention a letter I recently received from John O'Brien, Jr., John is a native of Nigeria. He is currently working on a contract at the University of Port Harcourt, Nigeria. He has been working on research projects for some time in the United States. They have over 100 million people with few professionals to provide care. John is one of your readers and writes to ask about the possibility of getting your recommendations for the best medical schools in Nigeria.

Dr. Kreit,

I delayed writing because I thought that I would be able to acknowledge the tone of your response in the next issue of the newsletter. Your response was beautiful! Thank you very much for your invaluable advice through SHARE. Please express our profound gratitude to all those who made SHARE possible.

Ake Flock

Program Committee

1989 American Auditory Society Meeting

New Orleans, Louisiana

Chairman —

Herbert Hall III, Ph.D.
Division of Hearing and Speech Sciences
Columbia University College of Physicians and Surgeons Vanderbilt University Medical Center
Nashville, TN 37235
(615) 322-8289

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New Orleans, LA 70112
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(504) 487-5151

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Nashville, TN 37232
Brad Stark, Ph.D.
Diabetes Research Institute
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Yvorlin, M.S.
University of Texas Medical School
Europe, NY 77030

Ake Flock

Presented Award of Merit

Dr. Ake Flock, Professor and Chairman of the Department of Physiology, Karolinska Institute, Sweden, is the recipient of the Ake Flock Award, the highest award offered by the Association for Research in Otolaryngology for research and scholarly leadership in the field of the chemistry and structure of the inner ear.

Ake Flock, a native of Sweden, is a member of the Karolinska Institute and the National Institute for Medical Research in Sweden. He is the recipient of numerous awards and honors for his contributions to the field of hearing.

Organized by the American Auditory Society, the meeting will feature over 300 presentations by experts in the field of hearing. The program includes workshops, seminars, and poster sessions on a variety of topics, including hearing loss, hearing aids, and cochlear implants.

The meeting will take place at the New Orleans Convention Center from May 29 to June 1, 1989.

For more information, please contact:

American Auditory Society
10400 Wisconsin Avenue, Suite A
Rockville, MD 20852
(301) 892-1600

C startup, text continues...
mg/kg for patients less than 2 years old and at 25% mg/kg for patients 2 or more years of age. These doses were unable to achieve an average daily dose of 10 mg/kg. Patients were instructed to crush the tablets and administer the powder with a small amount of fruit or food admixture.

Cefadroxil (Cefadex) was administered as 10 mg/kg (200 mg for infants) 3 times a day for three equal doses. This drug was dispensed as a suspension for use during sleep.

Assessment of Outcome
Response to treatment for each patient was assessed as cure, improvement, or failure. Cure was defined as resolution of symptoms during treatment, with absence of middle ear effusion for two weeks after treatment. Improvement was defined as resolution of symptoms during treatment, but with persistence of middle ear effusion for two weeks after treatment. Failure was defined as inadequate response to a minimum of three days of treatment. Repeat tympanoscopy was considered only for patients in whom treatment failed.

Results
Sixty-four patients were studied in the trial. The distribution of patients by treatment according to age, sex, and location of infection is shown in Table 1. Comparison of the two treatment groups was comparable, except that the cefadroxil group had a greater proportion of infants between 11 months and 11 months of age.

The profile of bacterial isolates from these patients was consistent with that of previous reports (Table 2). One or two types of bacteria were isolated from specimens of effusion from 52 patients; 22 patients were found to have three or four bacteria on the day of diagnosis, and 12 patients (19%) yielded no growth by aerobic culture procedures. The predominant isolates were S pneumoniae (23 patients), 39%; H influenzae (23 patients); 36%; Moraxella catarrhalis (11 patients); 17%; and Staphylococcus aureus was isolated from one patient. Nine of the 21 isolates (43%) of H influenzae were resistant to ampicillin. Since the results from our previous 1980 study showed 64% of patients, H influenzae was isolated in 27% of patients, and no growth in 20% of patients, there was little change in the profile of pathogens of acute OME.

Of the 29 patients with bilateral acute OME, 19 had bilateral tympanic membrane perforation before treatment. The same bacteria were isolated from both ears in 17 patients (91%); in the other two cases (9%), the isolates were different. One organ was isolated from ear one and effusion from the opposite ear was sterile.

Beneficial response was achieved in 26 of 28 evaluable treatments with cefadroxil (93%) and in 16 of 19 evaluable cefotaxime-treated patients (84%). Treatment failed in five (22%) of the cefotaxime-treated patients, compared with three (10%) of those treated with cefadroxil (Table 3). Each patient who had treatment failure was young, i.e., 7 to 18 months old in the cefotaxime group and 7 to 24 months old in the cefadroxil group. In addition, H influenzae was the initial isolate from four of the five patients who had treatment failure with cefotaxime. One of the three patients who had treatment failure with cefotaxime had H influenzae in the inflammatory fluid, while the other two had both H influenzae and S pneumoniae isolated before treatment. Repeat tympanoscopy was done for three of the five patients with cefotaxime treatment failure and two of the three patients with cefotaxime treatment failure, and specimens from each contained persistent bacterial infection; therefore, although H influenzae was not a identifiable organism in 23 patients (36%) at presentation, it contributed to scores of the eight failures (88%).

The incidence of ampicillin-resistant H influenzae in cefotaxime-resistant isolates was 24% for all isolates (14.5% for the first 10 patients) (Table 3). This rate of resistance was significantly lower than the 36% resistance rate for the first 10 patients (P < 0.05). However, the rate of resistance was significantly higher than the rate in the previous study (2%).

No bacterial growth before treatment (n = 5), treated for less than three days (n = 2), and concurrent antibiotic administration (n = 3) were not significant.

| TABLE 3. Outcome of Treatment, by Group Collaborators

<table>
<thead>
<tr>
<th>Cefadroxil</th>
<th>Cefotaxime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cure</td>
<td>14 (46%)</td>
</tr>
<tr>
<td>Improvement</td>
<td>12 (41%)</td>
</tr>
<tr>
<td>Failure</td>
<td>5 (10%)</td>
</tr>
<tr>
<td>Total evaluable</td>
<td>29</td>
</tr>
<tr>
<td>Total patients</td>
<td>37</td>
</tr>
</tbody>
</table>

*Outcomes are not statistically significantly different (P < 0.05) between treatments by chi-square test.

The incidence of ampicillin-resistant H influenzae was 24% for all isolates (14.5% for the first 10 patients) (Table 3). This rate of resistance was significantly lower than the 36% resistance rate for the first 10 patients (P < 0.05). However, the rate of resistance was significantly higher than the rate in the previous study (2%).

A RO Meets in St. Petersburg Beach

The 12th Annual Medical Meeting of the American Roentgen Ray Society (ARO) was held February 5-8, 1989, in St. Petersburg Beach, Florida. The meeting was attended by more than 752 people who heard over 430 papers and viewed posters in a wide range of research topics. The meeting was highlighted by Symposium on the Cochlear Nucleus: Neural Responses to Human and Animal Psychophysics. Bipedal papers were presented on a number of topics: Sound Localization, Auditory Processing of Complex Sounds, the Efficient Systems and Vector Function, Hearing Sensation, and New Research Developments, and the Excellence in presentations made by members of the ARO Medical Meeting later that year.

A report on the use of new Implantable Cochlear and Cochlear Communication Devices (ICCDs) was presented by Dr. Joseph C. Missel of the University of California at San Diego. In addition, the incidence of acute OME was significantly lower (P < 0.05) between treatments by chi-square test.

No bacterial growth before treatment (n = 5), treated for less than three days (n = 2), and concurrent antibiotic administration (n = 3) were not significant.

| TABLE 2. Bacterial Isolates From Patients With Acute OME*

<table>
<thead>
<tr>
<th>Bacterial Isolate</th>
<th>Cefadroxil</th>
<th>Cefotaxime</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>S pneumoniae</td>
<td>14</td>
<td>8</td>
<td>22</td>
</tr>
<tr>
<td>plus H influenza</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>S pyogenes</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>S hemolytica</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>S maltophilia</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>S flavescens</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>S phoebiicola</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>S agalactiae</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>No growth</td>
<td>5</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Total Patients</td>
<td>64</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Isolates obtained from both ears in a patient are counted once in this table.

The incidence of ampicillin-resistant H influenzae was 24% for all isolates (14.5% for the first 10 patients) (Table 3). This rate of resistance was significantly lower than the 36% resistance rate for the first 10 patients (P < 0.05). However, the rate of resistance was significantly higher than the rate in the previous study (2%).

Dr. William A. Yost of the Pamun Gulf Hearing Center of Louisville, Kentucky, shared the accolade of the President's Award for outstanding research in the field of audiology. The President's Award is presented annually to an audiologist for outstanding research in the field of audiology.
Nominees For Audiology

James W. Hall, III
Ph.D.

Dr. Hall holds his Ph.D. in Audiology from Boston College of Medicine. He is currently Associate Professor and Director of Audiology, Division of Hearing and Speech Sciences and Department of Otolaryngology at the School of Medicine of Vanderbilt University.

According to Dr. Hall, "The American Auditory Society and its members have provided valuable service in the field of audiology, both in general, and to audiology in particular. Ear and Hearing is the premier scientific journal for clinical audiologists. The annual meeting of the Society regularly provides a forum for the exchange of current clinical information on hearing, hearing impairment, and management of the hearing impaired. Finally, and uniquely, membership of the American Auditory Society is open to all hearing health care professionals, including audiology, hearing science, industry, and otolaryngology. There are other organizations representing professional and political interests for each of these sectors; the American Auditory Society shares a common mission to increase knowledge of human hearing, to promote conservation and rehabilitation of the hearing impaired through research, and to increase understanding of the impact of hearing impairment on families. Each of these factors contributes to the Society's mission."
Nominees For Otolaryngology

Patrick E. Brookhouser, M.D.

Dr. Brookhouser completed his M.D. at Johns Hopkins University School of Medicine in Baltimore, Maryland. He served as Chief Resident of Otolaryngology at Johns Hopkins Hospital. He was named as Fellow in Surgery and Fellow in Otolaryngology at the University. Dr. Brookhouser is currently Director of the Boys Town National Institute for Communication Disorders in Omaha, Nebraska. In addition, he is a Fellow in Otology, and a member of the Division of Otolaryngology and Human Communication, Creighton University School of Medicine. He states: "During my service on the Executive Committee of the American Academy, I have been impressed by the Society's record of achievements, and am very excited about our potential for making future contributions to our field. As intended from its inception, the Society's annual meeting serves as a major forum for exchange of ideas among otolaryngologists, otologists, audiologists, and speech therapists, and advances the cause of hearing disorders. Founding the new National Institute for Deafness and Other Communication Disorders at NIH attests even greater importance to such creative and innovative interaction. Our journal, Ear and Hearing, has also included contributions from our members throughout the country, and we continue to provide the Society with a united voice on issues of importance to all of us.

Nominees For Industry

Nominees For Hearing Science

David J. Lilly, Ph.D.

Dr. Lilly completed his Ph.D. at the University of Pittsburgh. He is currently the Chair of the Department of Audiology at Good Samaritan Hospital and Medical Center in Portland, Oregon. According to Dr. Lilly: "In fewer than 20 years, the field of hearing science has emerged as a major association for many workers in audition. The success of our Society, in part, is due to the diverse backgrounds of our members. Indeed, the American Academy of Audiology is unique in its ability to provide a common forum for audiologists, engineers, hearing aid specialists, otolaryngologists, neurophysiologists, physicians, and psychosocialists. During (Continued on Page 3)

Margaret W. Skinner, Ph.D.

Dr. Skinner holds her Ph.D. from Washington University. She is currently a Professor and Director of Audiology at Washington University School of Medicine. Dr. Skinner states: "Since its inception 15 years ago, the American Academy of Audiology has become an extremely important, unique forum for those of us from different professional fields to exchange information and work together toward our common goal to increase knowledge of human hearing, to promote conservation of hearing, and to foster habilitation and rehabilitation (Continued on Page 4)
First Annual American Academy Of Audiology Meeting Is Overwhelming Success

by Eric Reynolds

The 1989 Annual Convention of the American Audiology Society is scheduled for New Orleans on September 24. The charge of the Local Arrangements Committee is to ensure that the convention is all put together in an effective and efficient fashion. The convention was held at the Sheraton Hotel, which was the hotel of choice for the hotel of choice for the 18th Annual Convention.

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We’ve Got You Covered!

Starkey Offers The Best Repair Value In The Industry.

Sure, there’s plenty of hearing aid repair services. But when it comes to giving you the best value for your repair dollar, nobody has you covered like Starkey All Make Repair Service.

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Starkey
ALL MAKE
REPAIR SERVICES

6700 Washington Ave. So. • Eden Prairie, MN 55344
800 328-8602 • (612) 941-6401
Nominees For Hearing Science

(Continued from Page 5)

David J. Lide, Ph.D.
this same period, our journal has become an important archival repository for manuscripts concerned with nearly every aspect of audition.

The rapid and equitable review process instituted by Ear and Hearing has resulted in a high quality publication lag for resubmitted manuscripts. Moreover, the selected topics have become required reading in many training programs. The growth and success of the American Auditory Society, and Ear and Hearing, could not have occurred without the dedication and efforts of its editor, editors, and Executive Committee. In consequence, I consider it an honor and a challenge to have been chosen by the Nominating Committee to serve as a candidate for election to the Executive Committee. If elected, I shall do my utmost to foster the continued growth of our Society in an environment that emphasizes scientific achievement and clinical excellence, while avoiding the 'professional' and political issues that have retarded the growth of so many other organizations.

(Continued from Page 5)

Margaret W. Skinner, Ph.D.
identifying areas of need for improvement. "Through the well-planned scientific sessions of the Annual Meetings and the rigorous editorial policy of Ear and Hearing, the Society has promoted excellent research, much of which has stimulated state-of-the-art delivery of clinical services in the United States, as well as in other countries. In this era of rapid technological development and an aging population, the Society has an opportunity to foster an even greater understanding of hearing impairment and to meet the need for our own population, the Society has an opportunity to foster an even greater understanding of hearing impairment and to meet the need for our own population, the Society has an opportunity to foster an even greater understanding of hearing impairment and to meet the need for our own population.

...
New Editors Take Reign Of Corti's

After 3 years as Editor-in-Chief, Susanne Greening Brown is turning over Corti's to follow AAS members Virginia Berry and Suzanne Kos. The AAS Executive Board approved this appointment at its meeting in October.

Virginia Berry has been an active member and supporter of AAS since 1976. She assisted with the planning and operation of the 2 Society Conventions held in New Orleans, her hometown. Now living in Little Rock, Arkansas, Virginia is currently the Consultant for Educational Audiology with the Arkansas Department of Education.

A graduate of Vanderbilt University, Virginia has held positions in medical audiology, supervision, university training, administration and much more. She has served on ASHA Committees and is currently the President of the Arkansas Speech and Hearing Association. Virginia brings varied experience and interests with her to this new position as Editor.

Suzanne Kos, assistant editor of Corti's, has been an integral part of the AAS since its beginning in 1974. At that time she was working at the Callier Hearing & Speech Center in Dallas while completing her MA training at North Texas State University. She participated in the founding of the AAS and has served as an executive committee member and as assistant secretary from the Society's inception to the present. At the November, 1986 meeting she took on another responsibility with the AAS Assistant Editor of the Organ, primarily handling advertising.

Mr. Kos worked at Callier Center until 1980, at which time she left to enter private practice as a dispensing audiologist. For four years she managed a branch office of a metropolitan retail organization. In October, 1984, she became self-employed, opening her own office in Austin, TX.

Thanks Suzanne Brown for a job well done. Welcome Virginia Berry and Suzanne Kos!

Second International Otology Workshop Scheduled

On April 1-5, 1986, the Second International Otology Workshop will be held in Riva del Garda, Italy. Distinguished faculty from around the world will discuss current research and trends in hearing aid technology, cochlear implants, neurology of hearing, diseases of the ear, and much more. For full program details, contact: I.C.R.S. Amgellina Via Ripamonti 129 20141 Milano, Italy

This is a great opportunity for one program not to miss!
Minutes of the Cort’s Organ Editorial Board Meeting

Members present: Virginia (Anderson) Berry, Susanne Kox, Ross Roesser

Place: Hot Springs, Arkansas

Date: September 11, 1985

The meeting began by discussing the current issues for the 1985-86 issue. The primary material for this issue will include Virginia Berry’s Carath article, minutes from the 1985 Executive Committee and Editorial Board meetings, announcements of the Editorial Board changes, and highlights and photos of that 1985 meeting. It was agreed that the issue should be mailed in the March 1986 issue.

Future issues will include advertisements. Ross Roesser agreed to have this article as her primary responsibility as the American Auditory Society President. She agreed to write a letter that will be sent to all advertising suppliers before the end of the year. Ross Roesser indicated that he would generate an advertisement, which would be used for the upcoming issue. It was agreed that the letters should be mailed by the end of the month.

One issue that will be sent to all advertising suppliers will be the advertisement of this issue, which will be sent through Susanne Kox.

The revenues generated by advertising, 25% of which will be split between the American Auditory Society and the Assistant Editor of Cort’s Organ. Virginia Berry raised the question of a formal contract of Cort’s Organ. She indicated that she would like to explore with the newspaper editor how the advertising contract could be made more effective.

It was agreed that a formal contract with the publisher would allow for better control of costs and the advertising mix. The Executive Board will be responsible for generating material that would be included in the advertising mix. The publisher will be responsible for advertising and the advertising copy will be sent to the publisher.

The need for a formal contract was raised by Ross Roesser, who indicated that a formal contract would be necessary for the publication of the journal. The Executive Board agreed to explore the possibility of a formal contract with the publisher.

The final issue discussed was the budget. There has been no specified annual budget for Cort’s. The primary reason for this is the lack of resources to support the publication of the journal. Ross Roesser indicated that she would look into the possibility of printing Cort’s in Little Rock and then distributing it to the members.

Based on this information, a budget would be generated. Ross Roesser suggested that the business meeting was adjourned.

The meeting concluded with an overview of the progress made on the current issues. Ross Roesser suggested that the next meeting be held in the fall to discuss the upcoming issues.

Ross Roesser presented an overview of the progress made on the current issues. Ross Roesser indicated that she would be available to discuss the upcoming issues at the next meeting.

Executive Committee

Levi Prendergast, M.D.
Secretary-Treasurer
Susanne Kox, M.A.
Vice President

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Working Hard on Manuscripts

Dr. Worthington reported that many otolaryngologists with whom he has been in contact seem to consider EH to be a journal just for audiologists. He would like to see more otolaryngologists become active members of AAO and submit their manuscripts to EH.

Dr. Neely suggested that speakers who present at various meetings be personally contacted with regard to the possibility of publishing their paper in EH. An incentive would be to offer publication within four months, but manuscripts would still be subject to peer review and must be appropriate for the readership. There was some discussion regarding the appropriateness of approaching these individuals for the purpose of soliciting their manuscripts. There was no objection to begin this practice.

Dr. Neely is willing to contact otolaryngologists, audiology/otology teams, and department chairpersons to solicit case studies, unusual cases, etc., since there is a lot of good, unpublished data. Dr. Neely is interested in receiving manuscripts from physiologists on such topics as SICCU monitoring, or monitoring psychoacoustics, approaches to differential diagnosis, early identification, medical aspects of congenital hearing loss, etc.

The journal philosophy was discussed. The majority of EH manuscripts are related to hearing aids/aural rehab (approx. 20/6-25/9). We would like more manuscripts dealing with diagnostic approaches and psychoacoustics of auditory pathology.

The breakdown of subscribers is:
- 500 US libraries
- 1700 members
- 600 non-members
- 125 students
- 300 overseas (mostly libraries)

Adding a new section to the journal, called Grand Rounds of Audiology or a case studies section was discussed. It was the opinion of the board not to add another section. We could devote one page to a single manuscript and have teaching value and do that through the clinical notes section.

The time element of 8-10 continued on page 5

1983 and 1984 Ear and Hearing Editor's Award

Recipients Announced

At the 1985 American Auditory Society meeting in Savannah, the 1983 and 1984 Ear and Hearing Editorial Awards were presented. The recipients were selected by the entire Editorial Board. Several papers nominated by the Board were judged according to their scholarly merit and their impact within the field. Awards were presented for both 1983 and 1984 because an Executive Committee discussion of the award's status delayed the 1983 presentation by one year.

For 1983 two papers were selected: "Auditory Brainstem Response Variability in Infants" by Janet E. Stockard, James J. Stockard, and Ronald W. Coen and "Central Correlates of Sensorineural Hearing Loss" by Richard J. Salvi, Don Hardison, Roger Hjemdahl, and William Axelson.

For 1984 three papers by the same authors on the same topic were selected by the committee: "Application of Clinical Decision Analysis to Audiological Tests" by Robert G. Turner and Donald W. Nielsen; "Clinical Performance of Audiological

1985 American Auditory Society Meeting Available Online

The 1985 annual meeting of the American Auditory Society was videotaped and will be made available to members in January 1986. Michael F. Seidenberg, Chairman of the Audiovisual Committee, provided his expertise in preparing this material for the society. A formal announcement of the availability of the videotape will be made early in 1986. Those interested in more information should contact:

Michael F. Seidenberg, Ph.D.
JoAnn Eye, Ear, Nose and Throat Hospital
145 EL Place
New Orleans, LA 70112
Minute Highlights

- Membership Up
- New Membership
- Category Approved
- New Ear & Hearing Section Editor

Appointed
- Ear & Hearing Expanded
- Video Taping Big Success

AAS Joins Council for Better Hearing & Speech Month
AAS Receives "Gift" of $45,000

Publication Materials to be Sent to Under-developed Countries
Long Range Planning Underway

Date: October 20, 1985
Place: Hyatt Regency Hotel, Atlanta, Georgia
Time: 1:15 p.m.

Members Present: LaVonne Bergstrom, F. Owen Black, Deborah Hayes, Robert W. Keith, Suzanne Kos, David L. Miller, Pam Pape, Ross J. Roesser, Michael F. Rintelen, and Don W. Worthington.


1. President Worthington opened the meeting at 1:22 p.m.

2. President Worthington welcomed the new Executive Committee members and introduced the new secretary-treasurer. These were Patrick E. Brookhouse, Alison J. Griffith, David L. Miller, John F. Hettinger, William F. Rintelen, and Laslo K. Stein.

3. The minutes from the 1984 executive meeting of the Executive Committee were reviewed and approved.

4. The Treasurer's report for the period 1/18 through 9/95 was reviewed by Ross Roesser. There were no comments.

5. Ross Roesser gave a report on the Executive Committee meeting. The 1985 membership as of 9/30/85 was 1,685. This represents approximately 130 more members than 1984. Of the 1,686 members, 1,470 (87%) are audiologists, 6 are engineers/industrial representatives, 39 (2.2%) are hearing aid specialists, 10% are physicians, and 22 (1.3%) are other.

6. A discussion was held regarding the possibility of establishing a new membership category. By opening up this membership category, it would give students and residents an incentive for joining the Society. Following the discussion, it was decided that a committee be made to create a student/resident special membership category. This motion passed. Members requesting this form of membership must be students/residents with a student/resident status verified by an official representative of their university.

7. David Lipshczk reported on the 1985 meeting. He thanked his committee members for their hard work and commitment to the AAS. A special recognition to Mike Seideman for his work. There are currently 25 members attending the meeting, 20 of whom are paperless. The meeting is being held at Wayne State University. A special dedication to LaVonne Bergstrom will be held at Wayne State University.

8. Bill Rintelen discussed the AAS for the 1986 meeting in Detroit. He said that there were 10 members appointed to the executive committee meeting. The meeting will be held at Wayne State University.

9. Chicago was chosen as the site for the 1987 meeting. Laslo Stein was voted Chairman for that meeting.

10. The Chairman of the 19th Annual International Congress of 1986, Moe Bergman, contacted Don Worthington to extend a warm welcome to the American Audiology Society. The AAS would be willing to meet in conjunction with the Congress. After discussion, a motion was made that AAS representatives would attend the annual meeting between ASHA and AAO/HNS. The motion was passed. As an alternative it was suggested that Don Worthington contact Moe Bergman to see if it would be possible to have a special session that the International Congress would attend and present papers prepared by members of the American Audiology Society.

11. Ross Roesser was appointed Secretary/Treasurer for 1987.

12. Suzanne Kos was made an ex officio member of the Executive Committee and appointed Assistant Secretary for 1987.

13. Robert Keith gave a report on Ear & Hearing. The section editors and the reviewers of manuscripts were thanked for their efforts. During 1985 a total of 85 manuscripts were submitted. An increase of 54% over 1984. With 32% of the manuscripts rejected and 15% waiting for revision, the February-June journal will be a special issue on unilateral hearing loss edited by Fred Bead. The March-April issue will include a computer software supplement. The annual AAS meeting and several letters to the editor regarding the cochlear implant supplement were discussed. The next issue will be a special issue on electrophysiology. In the May-June issue there will be an essay tutorial on testing in the surgical intensive care unit with Jay H. Forman and a mini series on neuroanatomy by Frank Musiek. The September-October issue will include discussion of a special issue on hearing loss. The special issue has been scheduled in an attempt to assist the people who are receiving manuscripts and that will help the scheduling process.

Dan Schwartz resigned as the section editor for hearing aid. Dr. Keith expressed his deep appreciation for the contribution in the past year. A new section editor has been appointed to assist with the meeting. Lou Beck was contacted and accepted the position of section editor for hearing aids beginning in January 1986.

A new reference style will be started with the January-February issue. In addition, the journal will be submitted to four other journals for abstracts. The journal will include a calendar of events and letters to the editor.

Ken Stang reported on the final condition of Ear & Hearing. He said that his company, Acute Systems, is making progress that the journal has made. 1984 paid circulation reached 2,845 subscriptions, a 15% increase over 1983. Paid circulation as of September 30, was 3,079 subscriptions. Prospects for the future are very good. The printing is excellent. The page allowance for 1985 and 1986 is 400 test pages. Member subscription price will remain the same ($32.00) for 1986, and most other prices will remain the same. The journal will generate a profit for 1985, which will be used to pay off previous deficits. With the current growth rate of the journal the accumulated deficit will be paid off by 1986 and a profit should be made, which will be split 50-50 with the American Audiology Society.

14. Joe Rizzo, Executive Director of the Better Hearing Institute, presented an update on the BHI. He indicated that he would welcome the participation of the American Audiology Society in sponsoring a public service announcement through BHI. The expected return on this announcement is $20,000.00.

15. A discussion was held on the Organ. Suzanne Brown was present at the meeting and suggested that the consideration be made to replace the organ with a different one. The discussion was adjourned.

16. Ralph Nauton gave a report on the Long Range Planning Committee. He reviewed the activities of the committee and presented the latest draft of the Long Range Planning Committee document to all members. The committee members developed the long range planning document and was used to identify and plan for new long range planning committee commitments for the Society. The concepts were supported and the committee was given assurance that they have four members on it. Ralph Nauton was appointed as the chair of the Long Range Planning Committee. He appointed a member from the Executive Committee. Other colleagues were appointed to the committee.

17. Mike Seideman gave an update on the Membership Planning Committee. During the 1985 activities three committees were conducted. A director was appointed to find out how to find AAO members and AAO/HNS participation in the Run for Better. A membership sales and marketing task force was at the display meeting at the annual meeting of AAO/HNS. After discussion was refocused on finding a way to improve the expertise and growth of the society. Mike Seideman will remain the chair of the Membership Planning Committee for 1986.

18. Suzanne Kos reported on the Executive Committee Qualifications Committee. The committee is to recommend 3 lists of members. Follow-up by a review committee. The membership committee is to accept all qualified applicants for membership (the names of those accepted will be announced at the end of the committee within the next two weeks). Suzanne Kos was reappointed as the chair of the Qualifications Committee.

19. LaVonne Bergstrom reported on the Education Committee. She indicated that Dr. Joseph Havens has been contacted and has indicated his invitation for 1986. Follow-up, this was the Executive Committee. She indicated that possible members of the committee are: E. Robert Libby, Don Worthington, and Patrick E. Brookhouse.
by ASHA, reviewed by three executive committee members from AAS and filed. The case was argued and material presented on June 3, 1985. On June 26, 1985, Fourth Circuit Court of Appeals unanimously reversed the decision of the three judge panel.

24. Don Worthington reported on the former Medical Audiology Society donation. The present president of the Medical Audiology Society had contacted Charlie Anderson as President of AAS concerning monies that had been left in their treasury that would be transferred to the American Auditory Society. However, no closure that had been made on this issue in an effort to determine where this money would be donated. President Worthington conveyed the matter to the Executive Committee for their recommendation.

25. Deborah Hayes reported on Continuing Education Units. She indicated that she had investigated CEUs from several colleges. It was clear that it would be possible to get CEUs, but the procedures were not available for the 1985 meeting. It was recommended that for the future, they call CEUs from ASHA, CME's from the AMA, and approval of the National Hearing Aid Society.

26. The possibility of having a hospitality suite at ASHA was raised by Don Worthington. He informed the Executive Committee that we should try to meet at ASHA. Don Worthington indicated he would pursue this.

27. Darell Breckmann requested time following this year's annual meeting to discuss the possibility of moving the convention into AAS building at or near the AAS meeting, that the president be authorized to delegate to the building committee or another Executive Committee member.

23. Don Worthington reported on the OSHA Hearing Conservation Amendments Case. He stated that in 1984, three judges from the Fourth Circuit Court of Appeals had vacated the OSHA Hearing Conservation Regulation. They concluded that the amendment exceeded OSHA's authority by making employers responsible for hearing conservation programs in the workplace. The Department of Labor and OSHA filed a petition with the Fourth Circuit for the Court of Appeals for the Fourth Circuit.

To support the appeals case, American Speech - Language - Hearing Association (ASHA) and the American Auditory Society (AAS), along with the American Auditory Society, Academy of Dispensing Audiology, Academy of Rehabilitation Audiology, etc., requested leave of the Court to appear as Amici Curiae.

The Amici Curiae was prepared by ASHA, reviewed by three executive committee members from AAS and filed. The case was argued and material presented on June 3, 1985. On June 26, 1985, Fourth Circuit Court of Appeals unanimously reversed the decision of the three judge panel.

Executive Committee At Work and Play

The AAS Executive Committee worked diligently toward the goal to deal with the 26 items on the agenda, each potentially deserving of a full day's attention. It is well-known to veteran committee members that a unique dining experience awaits them at the end of the meeting. They are, therefore, motivated to accomplish this formidable task within the allocated time. Clearly, the achievements and press releases hereafter are intended to inform you of the Society's accomplishments and achievements.

This year's gastronomic delight, reminiscent of a popular 1960's fad, was fondue served at Dante's Down the Hatch on the Poop Deck. Dante himself met us at the metro subway station in a sedan chair and wheeled us rather precariously to his restaurant. There socializing and dining took place in a maritime setting amid alligators, turtles, mosquitos and old sailing sloops.

Next year's dining arrangements are being solicited. Please be compensated for these arrangements.

During the meeting, Ross G. Rosener informed all that a whatsoever at AAS was raised by Don Worthington. He informed the Executive Committee that we should try to meet at ASHA. Don Worthington indicated he would pursue this. Ross G. Rosener informed all that a whatsoever at AAS was raised by Don Worthington. He informed the Executive Committee that we should try to meet at ASHA. Don Worthington indicated he would pursue this.

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Speakers

The Heartbeat of the Convention

Executive Committee at Work

Executive Committee at Ease
Meet the New Executives
Committee members
(Not Shown: David Peeves)

Runners
Hit the Pavement

Dancing at the Fabulous Fox Theater
## Applicants Approved For Membership in the American Auditory Society

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<th>Name</th>
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<td>Patricia Jones</td>
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<td>Nevada, AL</td>
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<td>Marjorie Johnson</td>
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<td>Weehawken, NJ</td>
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<td>Nili Zwejon</td>
<td>M.S.</td>
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<td>Mary Koo</td>
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<td>Elizabeth L.</td>
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<td>Theresa Malone</td>
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<td>Kim Frick</td>
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<td>Catherine Vinje</td>
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<td>Robert A.</td>
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<td>Jeanne Abramson</td>
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<td>David Albers</td>
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<td>Faustine L.</td>
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graduates must be considered as perhaps the greatest contribution made by Dr. Carhart. It has been my privilege to be acquainted with, and, in some cases, to have worked with many of these individuals. One of the first that I met was Leo Doerfler, who was at Deshon even before Dr. Carhart and who later completed his doctoral work at Northwestern. Dr. Doerfler, Director of the Audiology at U. of Pgh. for over 25 years, has in turn been an outstanding teacher and contributor to the field of audiology. I am indebted to him for reviewing and improving my comments about the Deshon era. Also at Deshon, I made the acquaintance of Francis Sinclair, later a doctoral graduate of Northwestern and Director of Audiology at Indiana University Medical Center. One of Dr. Sinclair’s duties at Deshon was to make earmold impressions using dental plaster, the standard method at that time. Much of the electronics work for Dr. Carhart at Deshon was done by the late Kenneth Stewart, who became a professor at the University of Pittsburgh. The Doerfler-Stewart test for malingerers was developed at Deshon.

It would be difficult to name all of the individuals who studied under Ray Carhart with whom I have had the good fortune to be acquainted. To mention just a few, they include Don Dues, Carl Hartford, Jim Jerger, Roger Kasten, Wayne Olsen, Tom Tillman and Laura Wilbur. Most of these have been active in standardized work.

An interesting connection that I had with Ray Carhart was that my very competent secretary for several years before I retired, Jean Owens, had done secretarial work for Ray at Deshon.

Ray Carhart’s greatest concern at Deshon Hospital, back in the forties, was to match the performance of a hearing aid to the needs of a hearing impaired individual. We have seen a great deal of progress since then, particularly in the direction of measuring the performance of an aid on a hearing aid by a person and in the direction of protocols relating the required performance of a hearing aid to an individual’s hearing characteristics. Equally important are the general technologies that have been made in hearing aid technology.

The coupler measurement of a hearing aid has proved essential, first, because it provides accurate, repeatable data on the operation of an aid and second, because the data are available on all aids sold in the U.S. as the result of FDA regulations. Thus, the coupler measurement can well be the starting point for the selection of an aid for a particular type and degree of hearing impairment.

A full description of procedures to obtain hearing aid performance data, using the stable 2cc coupler, is contained in American National Standard S3.22-1982, available from the Acoustical Society of America. A basic measurement setup for testing hearing aids is shown in Fig. 1. A loudspeaker delivers the desired sound pressure level (SPL) at the microphone opening of the hearing aid. This input SPL is accurately measured by a calibrated standard microphone placed close to the microphone opening on the aid. The output standard microphone is fed back to a compression circuit in the pure tone oscillator supplying the loudspeaker and a constant SPL at the microphone opening is maintained. The acoustic output of the hearing aid is fed to a standardized 2cc coupler via a specified tubing connection. In the case of an in-the-ear or in-the-canal, the tip of the aid or that portion into the ear canal is placed flush with the reference plane (outer cavity surface) of the 2cc coupler and the aid is sealed in place with modelling clay or similar material. Fig. 2 shows two of these coupler arrangements. The SPL developed in the coupler is then automatically recorded as a function of frequency. In addition to a basic test system such as that shown in Fig. 1, test equipment of modest size can be used to make accurate tests on most kinds of aids and to produce printouts of the data. Much more complex systems using computerized control are also employed.

It is well known that 2cc measurements, particularly those of frequency response, may not give the best indication of the results that will be obtained on a person. A better indicator of what the aid does on a person is given by its insertion gain. (or response).

**Technical portion 1**

To review the concept of insertion gain, first look at Fig. 3. A sound source is delivering a suitable constant sound pressure level $L_p$ at a test point in a non-reflective space. In Fig. 4, a head facing the source has its center at the test point. A hearing aid amplifies the sound and produces a sound pressure level $L_q$ at the ear drum. In Fig. 5, the hearing aid is removed and the sound pressure level at the ear drum is $L_q$ A plot of the results is shown in Fig. 6. The flat 60 dB SPL line shows the SPL at the test point with the head absent. The solid upper curve is the SPL produced at the ear drum when the hearing aid is present. The dashed line is the SPL at the ear drum with the ear canal open and no hearing aid present. The dotted curve shows that there is considerable amplification without the aid due primarily to ear canal resonance. The increase in SPL at the ear drum for the two conditions is the insertion gain, the amount the hearing aid really adds. Note that the effect of ear canal resonance and other factors is small at low frequencies, but very significant from 2 to 6 kHz.

The insertion gain (or response) of a hearing aid compares well with functional gain or response as measured subjectively and is a good indicator of how the hearing aid will amplify sound for the user.

Insertion gain is influenced by the direction of incidence of the sound. For standardized in situ tests, of incidence, with the sound source a meter away, is used. This corresponds roughly to the position of a person speaking directly to the listener. It is also possible to derive the insertion gain for freedom Incidence, as has been suggested by Killion and Monson (1980). This would correspond to a situation where the speaker was farther away and located in a fairly reverberant space, in addition to the direction of arrival of the sound being the position of the
hearing aid microphone sound entrance affects insertion gain.

Three methods by which the insertion gain available from a hearing aid can be found are:

1. Direct measurement of the sound pressure level in the ear canal of a person by means of a probe tube or canal microphone near the eardrum, with and without the hearing aid.

2. Measurement with and without a hearing aid on a carefully dimensioned manikin such as the Knowles KEMAR. The sound pressure level at the equivalent of the eardrum location is measured by a calibrated microphone in an ear simulator.

3. An estimated insertion gain derived by applying a correction to the standard 2cc coupler gain or response curve.

Method 3 can now be accomplished with sophisticated probe tube equipment. Its application is perhaps best suited for checking in situ performance and making adjustments after subsequent hearing aids have been selected.

Method 2 has been very successfully used for hearing aid selection by the Veterans Administration for several years. It requires expensive equipment and good expertise.

Method 3 appears to have considerable practical value, since an approximation of the corrections needed can be derived and applied to the gain or response curves supplied with every aid sold in the U.S. in accordance with FDA labeling regulations. Currently, no standardized corrections have been established, although the possibility is under consideration by standards Working Group S5-48. If such standardization were to prove feasible, manufacturers might be willing to voluntarily add an estimated insertion response curve that could make selection easier.

In addition to the use of random tests on particular hearing aids to derive an estimated insertion response, it is also possible to obtain a useful estimated correction to apply to 2cc measurement data. This is done by adding to the 2cc coupler response a head baffle correction and the 2 cc coupler-to-ear simulator correction and then subtracting the free field-to-ear transformation.

In Fig. 7 is shown a diagram of a head and sound source. The electrical input to the sound source is adjusted to produce a sound pressure level at the head baffle plane, constant with frequency, at a chosen test point where the head is absent. The SPL at the hearing aid microphone sound entrance, l1, is different than l2 because of the presence of the head. The difference (l2 - l1) is the head baffle effect.

Fig. 8 shows this effect for a typical OTE sound entrance location (at the tragus notch) and for an ITE aid with the sound entrance at the center of the filled concha. The curves are based on KEMAR measurements made by Madarassy (1974). Different corrections would be needed for in-the-canal aids or aids with different sound entrance locations.

Fig. 9 shows the estimated OTE aid in place, but with the acoustic output directed to a 2cc coupler through the identical acoustic output directed to a 2cc coupler through the identical acoustic condition used to the ear canal. An SPL Lg is developed at the 2cc coupler.

In Fig. 10, the 2cc coupler has been removed and the sound field placed in the ear canal where it generates an SPL Lg at the eardrum position. Sack and Buntaward (1971) developed an average relationship between the SPL at the eardrum of real ears and that produced in a 2cc coupler for typical hearing aid receiver and identical acoustic tube connections. Fig. 8C shows this average relationship, which is also the same as that between the free field SPL Lg and closed 2cc coupler receiver gain in the SPL at the ear canal compared to that of the 2cc coupler is L3-L2.

In addition to direct measuring L3, we can also derive a value for it by adding the various corrections to the free field SPL Lg. Thus, L3 = Lg + Lg - L2 - L2 - L2 - L2 = Lg - L2 - L2 - L2 - L2

One might assume that the useful gain of the hearing aid is simply L3-L2. However, we must take into account the natural gain of the ear as indicated in Fig. With a free field SPL Lg and no hearing aid, a sound pressure level will be produced at the eardrum. The average relationship between Lg and Lg has been carefully examined by Shaw (1974) (also Shaw and Valland, 1975). For this incidence, the curve of Fig. 8B shows this relationship. The simplified equation due to eurach and concha resonance and head effects is L2 - L2 - L2 - L2 - L2.

To get the insertion gain, this must be subtracted from the apparent gain (L3-L2-L2-L2-L2).

In rearranging terms, KG = (L3-L2-L2-L2-L2) - (L2-L2-L2-L2)

The insertion gain is then KG = 2cc coupler gain (head baffle effect plus 2cc-to-ear simulator correction) - free field-to-ear transformation.

Thus, L3 = 2cc coupler gain + KG, where KG is the sum of the last three terms above.

Calculated values for KG are shown in Fig. 12 (upper). The solid curve is for an OTE aid. The dotted curve is for an ITE aid. This curve for an OTE aid, the dotted curve is for an ITE aid. These curves show the corrections that must be applied to a 2cc coupler gain or response curve to get an estimated insertion gain or response curve.

An alternate way to look at this situation is shown in the lower curves, which are the negative of the upper curves. These show the curve shape needed, as measured using a 2cc coupler, to produce, a flat, zero gain, insertion response.

This type of curve has been termed CORFAC. For flat insertion gain by Killon and Monier (1980). It can be seen from the CORFAC curve that an OTE aid should have a substantial peak at about 2700Hz to give a smooth insertion gain curve. Less of a peak would be indicated for an ITE aid, as indicated by the dotted curve.

Preliminary calculations, requiring further confirmation, indicate that for an in-the-canal aid, KG = L3-L2-L2-L2-L2 = L3-L2-L2-L2-L2.

In conclusion, the following have been shown:

1. A method for estimating the insertion gain of a hearing aid from the known SPL at the ear canal.

2. A method for estimating the SPL at the ear canal from a 2cc coupler measurement, with the acoustic output directed to the 2cc coupler through the identical acoustic connection used to the ear canal.

3. A method for determining the free field SPL without the hearing aid, with the SPL at the eardrum, and with the SPL at the ear canal.

4. A method for determining the insertion gain of a hearing aid, with and without a hearing aid, and with the SPL at the eardrum.
shape will be almost the same as that of the 2cc coupler curve. Fig. 13 shows how the performance of an OTE aid is affected by the insertion of a 2cc coupler. The dotted curve is the aid’s 2cc gain curve. The dashed curve is the estimated insertion gain curve. The dotted curve is the same as the dashed curve, but shifted down to coincide with the 2cc gain curve at 100 Hz. The dotted line can be seen in the 2.7 kHz region. A smoother insertion gain curve would have been obtained with additional gain in this region, as measured on the 2cc coupler.

This is a point that should be remembered, because you can quickly visualize the nature of the insertion response by looking at a 2cc coupler curve and making a mental subtraction of about 10 dB in the 2.7 kHz region for an OTE aid, less for an ITE aid.

Considering the prevalence of increasing hearing loss with frequency, a flat insertion gain response would not be desired too often. Fig. 14 shows how the CORFG values can be added to a desired final insertion gain response to produce the curve shown above for an OTE aid. The lower dashed curve shows a desired insertion gain characteristic rising at 3 dB/octave. The solid curve close to it was arrived at by adding the CORFG values to the dashed line. The 2cc coupler curve is quite different than a ±3 dB/octave curve and, of course, shows the broad peaking at 2.7 kHz.

The upper dashed curve shows a desired insertion gain characteristic rising at 6 dB/octave up to 2 kHz and then remaining flat above that. The adjacent solid line shows the estimated 2cc coupler curve that would be needed to produce this.

Some precautions must be observed in predicting an estimated insertion gain or response curve from 2cc coupler data, or vice versa, as follows:

1. The correction used must be for the type of aid used so as to take into account the location of the hearing aid-microphone sound source.

2. If the desired acoustic tubing connections must be used in the case of OTE and eggshell aids, this is not a problem with ITE or ITC aids. The length, and particularly the inside diameter of tubing used in actual fitting should be the same as the tubing aid to the tip of the earmold as was used in the 2cc coupler test. In many cases, the published curves are made with 25 mm of 141 tubing followed by 18 mm of 2.5 mm diameter tube adjacent the coupler cavity. The effect of this dual tube arrangement is to enhance the 2cc coupler response by about 2.2 to 4 kHz. If the single diameter tubing is to be delivered with the aid, the 2cc gain response should be greater in this region than otherwise, or a dual diameter tubing arrangement such as a 3mm horn should be used.

3. While excellent for closed coupler tests over the usual hearing aid frequency range, the 2cc coupler is insensitive for measuring the effects of venting because it produces a sharp peak at the vent resonant frequency not present in actual ears. The corrections or offsets that have been discussed apply only to closed, unvented conditions. Venting corrections should be handled separately. Data on various types of venting are given in Katz Handbook of Clinical Audiology (2nd or 3rd edition).

It is fully recognized that variations in ear size and ear canal impedance exist from one individual to another, and that in some cases they are large. Studies made on real ear performance of hearing aids compared to 2cc coupler data have been made by Hartford (1980), Hawkins and Haskell (1982) and Hawkins and Schum (1984). While estimated insertion gain or response using the methods described in this discussion will give a better guide to the selection of an appropriate hearing aid than might be obtained using only 2cc coupler data, the need for final evaluation on an actual user remains important.

We can improve our measurement and understanding of insertion gain or response by derivation estimates from the 2cc coupler data, by the use of KEMAR measurements or by checking probe-tube measurement on an individual. However, the most exact determination of insertion gain is of little value unless we establish a definite target for what we want—and this is not so easy. A number of protocols for deriving the desired amplification and limiting have been developed and successfully applied. These protocols all aim to place the amplified signal level at some comfortable point within the dynamic range of hearing available to the hearing impaired person. Many of the systems used tend toward an amount of insertion gain roughly equal to half the pure tone hearing level over the frequency range of interest. Some of the procedures for determining suitable amplification characteristics from audiological measurements are those of Berger, Hagey, and Rane (1979), Brooks (1973), Byrnes and Tomason (1976) and McCandless and Lynggaard (1983).

The following steps might be suggested to arrive at a suitable frequency response for a hearing aid:

1. Make audiological tests, including HTL and probably MCL.

2. Using a suitable protocol, determine the insertion gain desired over the frequency range. Allow some additional reserve gain.

3. Using 2cc coupler response data with corrections applied to give an estimated insertion response, select a hearing aid or aids that appear suitable. Some protocols have an insertion gain correction built in, so the 2cc coupler, data can be examined directly.

4. Make a final in-situ check with the aid on the user by established audiological methods or perhaps by probe-tube measurements.

Of course, there are a lot of other factors to consider, such as various types of compression, limiting or signal processing that require attention as well as frequency response. It is hoped that the material presented today will add in some small way to the many basic contributions made over the years by the man we see honoring today—Raymond C. Carhart.

Thank you.
Continued from page 2
reference for more advanced professionals. In addition, all volumes of professional journals would serve as valuable resources.

The conduit for distributing these materials will be the Communication Disorders Foundation, a non-profit tax-exempt foundation. The president of this foundation is Donald A. Shumrick, M.D., the vice-president is Robert W. Keith, Ph.D. The Communicative Disorders Foundation has obtained a start-up donation to cover expenses of forwarding materials to recipients. Additional grants and donations will be solicited.

Tax-deductible gifts of books, journals, materials, or cash will be acknowledged in writing by the Communication Disorders Foundation. The acknowledgment will contain an itemized listing of books, journals, or materials donated for distribution. Suitable recipients will be forwarded materials appropriate to their needs. A stipulation of the exchange is that materials will be placed in libraries where they will be generally available to scholars.

Any donations of resources, letters of inquiry should be addressed to: Robert W. Keith, Ph.D. Professor Division of Audiology and Speech Pathology Department of Otologyngology Mall Location S25 University of Cincinnati Medical Center Cincinnati, Ohio 45267 513-872-4893

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**AMERICAN AUDITORY SOCIETY**

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**Signature of Active Member**

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