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LISTENER REACTION TO HEARING AID WEARERS

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Rehabilitation of the adult with an acquired hearing impairment is a multifaceted process. One of the most important aspects of an aural rehabilitation program is helping a hearing handicapped person become a successful hearing aid wearer. However, even with careful audiological evaluations and hearing aid orientation programs this goal is not always achieved (Ross, 1972; Rassi and Harford, 1968). The result is that many adults with significant hearing loss are either not wearing hearing aids at all or are inconsistent users. Some of the reasons typically offered for poor hearing aid adjustment include (1) the lack of proper audiological follow-up (Rassi and Harford, 1968; Shore and Kramer, 1963), (2) inadequate hearing aid orientation programs (Ross, 1972), and (3) negative psychological effects stemming from adjusting to a hearing impairment (Niemeyer, 1970; Rousey, 1971; and Ramsdell, 1970).

One important area suggested as a barrier to successful hearing aid acceptance concerns the potential hearing aid wearer's attitude toward the consequences of wearing a hearing aid (Kodman, 1967). Rousey (1971) writes that a hearing aid "indicates that an individual has some defective part which, no matter how elegantly it is concealed . . . cannot deceive the outside world that an appliance is needed in order to make that individual whole" (p. 385). Such an attitude can result in the hearing aid wearer assuming he is being adversely perceived or stigmatized. Stigma is defined here as any condition which leads to the perception of a person as departing from normal in some negative manner.

Farina (1968) finds that some form of stigma is attached to most physical handicaps. Goffman (1963) argued that any deviation from normal

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stigmatizes the possessor and can lead to poor interpersonal interactions. Wilson, et al. (in press), in a study assessing normally hearing persons' reactions to terms denoting hearing deficiency, found that all such terms were rated as containing some degree of stigma. Additional investigations suggesting that adults with hearing losses view themselves as stigmatized include Mandl (1953), Newby (1972), and Myklebust (1960). For example, Sataloff (1966) stated that the hearing aid wearer often reports incidents of embarrassment and misery because he feels he is the recipient of frequent curious stares or that the hearing aid proclaims a weakness of which he should be ashamed.

The purpose of this study was to investigate two aspects of wearing a hearing aid. One deals with whether persons react differently to individuals wearing a hearing aid than to those who do not wear an aid. Secondly, if there are differential reactions, what forms do those reactions take in terms of attitude change and source (speaker) credibility?

METHOD

The subjects consisted of 133 male and female college students. No subject had any formal training in communication disorders.

The subjects viewed a videotaped presentation of a speech favoring capital punishment. The speaker was a middle aged adult male. The subjects were randomly assigned to one of four experimental groups:

Group A (Body Aid) viewed a videotape of the speaker wearing a body type hearing aid with the receiver and the cord visible to the subjects.

Group B (Control) consisted of the same speaker taped at the same time as condition A but from a slightly different angle so that the hearing aid was not visible (see figure 1).

Group C (Behind-the-ear Aid) viewed the speaker delivering the same message while wearing a standard behind-the-ear hearing aid positioned and visible on the left ear.

Group D (Control) viewed the same presentation as Group C except that it was taped from an angle slightly to the speaker's right so the hearing aid was not visible.

The simultaneous taping of each experimental and control group provided for greater control of interpresentational differences such as may have occurred in the Arnold (1973) study.

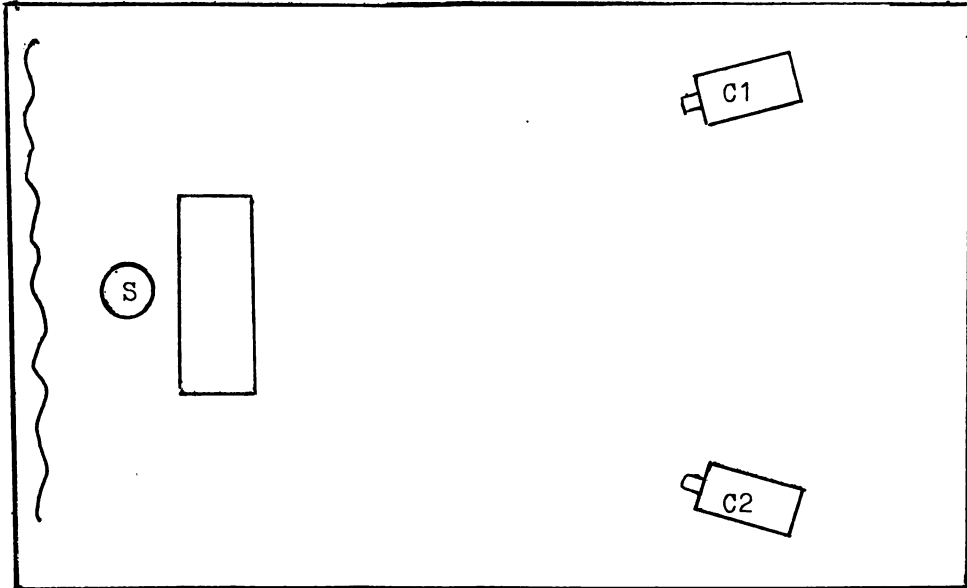
In each case only the speaker's head and neck were visible to the subjects. The videotape was played back on a 25 inch black and white television monitor to groups of 8 to 12 subjects.

In a pretest-posttest design, the subjects completed all experimental materials during one session in the following order:

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FIGURE 1.

Arrangement of the speaker and the two recording cameras for simultaneous recording of two experimental conditions.



C1 = Camera 1, used to record stimuli for Groups B and C.
C2 = Camera 2, used to record stimuli for Groups A and D.
S = Speaker position.

1. All subjects completed a pretest questionnaire on attitudes toward capital punishment.
2. They then viewed one of the four experimental videotapes.
3. The subjects then evaluated the source (speaker) of the message.
4. Finally, each subject's attitude toward capital punishment was reassessed.

MEASURING INSTRUMENTS

Pretest and posttest attitudes toward capital punishment were assessed through 10 bipolar rating scales (Osgood, et al, 1957). The 10 scales used were: Warranted-Unwarranted, Good-Bad, Positive-Negative, Fair-Unfair, Nice-Awful, Important-Unimportant, Beneficial-Harmful, Useful-Useless, Right-Wrong, and Successful-Unsuccessful. The ends of the scales were randomly reflected to minimize the effects of response set. Attitude scores were calculated by scoring each scale on a 1 to 7 basis, 7 being the most positive score, and summing across the 10 scales. Attitude change was calculated by subtracting the posttest attitude score from the pretest attitude score.

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Source credibility was measured across the three factors of credibility isolated by Berlo, Lemert, and Mertz (1969). Each subject rated the source of the message on 15 scales, 5 scales for each of the three factors—safety, qualification, and dynamism. The scales used to assess the safety dimension were: Safe-Unsafe, Just-Unjust, Kind-Cruel, Friendly-Unfriendly, and Honest-Dishonest. To assess qualification the scales used were: Trained-Untrained, Experienced-Inexperienced, Skilled-Unskilled, Qualified-Unqualified, and Informed-Uninformed. Dynamism was assessed through the following scales: Aggressive-Meek, Bold-Timid, Emphatic-Hesitant, Active-Passive, and Energetic-Tired. The positive end of each word pair is listed first. As with the attitude scales, the ends of the scales were reflected to help control response set. The scales were scored from 1 to 7 with the most favorable end being 7. The scales were summed across each dimension to obtain the subject's rating of the perceived credibility of the source.

RESULTS

Data was analyzed through the use of the two-way analysis of variance (Winer, 1971). One dimension of analysis was the presence or absence of a hearing aid. The second main dimension was the first versus the second taping. This second main effect gauged the relative success obtained in holding the two presentations constant. If the type of hearing aid is a significant factor, that information should be detected through a significant finding in the interaction term.

Attitude Change:

Analysis of the attitude change scores does not provide support for any hypothesis positing a relationship between the presence or absence of a hearing aid and interpersonal influence under the conditions present in this study. The F value for both the main effects and the interaction term were nonsignificant. The means and standard deviations for all scores are reported in table 1.

DISCUSSION

The results obtained revealed no significant differences between the body aid condition and its control condition. This result can suggest that the normally hearing subjects did not perceive the wearer of this type of hearing aid any differently than the non-hearing aid wearer in terms of the dimensions studied. However, it is important to point out that all that was seen of the body aid was the cord and receiver which fits in the ear canal. The hearing aid itself was not visible. While this is the typical body aid arrange-

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TABLE 1

Means and Standard Deviations of Subjects' Ratings
Of The Source And Topic

Concept Rated	N	Mean	S.D.
Attitude change toward capital punishment			
Body Aid (B.A.)	31	2.32	7.43
Control—B.A.	33	2.27	8.18
Behind-The-Ear Aid (B.T.E.)	31	0.55	8.22
Control—B.T.E.	38	3.47	6.79
Source Credibility Safety			
Body Aid	31	20.87*	4.90
Control—B.A.	33	21.58	6.83
B.T.E. Aid	31	20.22	4.86
Control—B.T.E.	38	19.95	3.50
Qualification			
Body Aid	31	26.26	5.89
Control—B.A.	33	28.61	5.47
B.T.E. Aid	31	20.68	7.12
Control—B.T.E.	38	22.47	6.58
Dynamism			
Body Aid	31	24.19	4.37
Control—B.A.	33	23.36	5.47
B.T.E. Aid	31	19.71	8.16
Control—B.T.E.	38	23.24	5.05

*The possible range of scores for each dimension of source credibility is from 5 (minimum credibility) to 35 (maximum credibility).

ment, it is also possible that the visible receiver and cord (seen on a speaker on a television monitor as in this study) may not have been perceived as a hearing aid, but rather as a communication arrangement many of us have become accustomed to with television commentators at political conventions and other large news events. In other words, the speaker may not have been considered to be a hearing impaired person.

Although most of the data for the behind-the-ear aid also showed no difference from its control condition, there was a significant difference in the dynamism dimension of source credibility. One explanation for this finding may lie in the fact that the behind-the-ear hearing aid is the more commonly worn apparatus by adults with acquired hearing losses and is consistently identified as a hearing aid worn by the hearing impaired adult. Consequently,

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with regard to this type of hearing aid the results support the potential users' suspicion that he will be perceived differently (less dynamic).

Source Credibility:

The data on the safety dimension of source credibility are very similar to the attitude change data in that they do not indicate any reliable difference between the hearing aid condition and the non-hearing aid condition, that is, all differences were nonsignificant.

Ratings of source qualification did produce reliable differences between the first and second trial ($F = 28.39$, $p < .001$). The aid versus no aid differences were not significant though they approach that level ($F = 3.55$, $p > .05$). The interaction term was again nonsignificant.

The dynamism dimension of credibility presents a different result. As with the qualification dimension, the inter-trial difference reached significance $F = 4.97$, $p < .05$). In this dimension, however, the interaction also produced a significant difference ($F = 4.44$, $p < .05$). It would appear that this result is produced by the closeness of the aid versus no aid scores on the first trial while there was a significant difference between the aid and no aid scores in the second trial. This latter difference is significant beyond the .05 level ($t = 2.16$). The behind-the-ear aid condition is also significantly different from the body aid condition ($t = 2.65$, $p < .05$).

On the other hand, the finding of lower ratings for the dynamism of the speaker wearing the behind-the-ear aid must be viewed in terms of the relative importance of the three dimensions of credibility studied. According to Berlo, et al. (1969) the primary judgments made by an audience concern the first two dimensions. That is, when a person judges a personal source of information, as the speaker was in this study, his first concern is with the relative safety, i.e., trustworthiness, of the source. If he believes the source is safe, he is then concerned with the qualification (knowledge level) of that person. According to Berlo, et al., the dynamism judgment serves only to magnify the safety and qualification judgments if dynamism is perceived to be high. The low rating in the area of dynamism should serve only to moderate, not significantly change, other judgments about the speaker. In that the hearing aid wearer, as viewed in this study, was not judged significantly different in the areas of safety or qualification the low dynamism rating contributes minimally to his over-all effectiveness. This conclusion is further supported by the absence of any significant difference in attitude change between the hearing aid and nonhearing aid conditions. The potential hearing aid wearer's suspicion that the simple act of wearing a hearing aid of either type used in this study renders him less effective in terms of ability to influence attitudes is not supported by the results of this study.

In conclusion, it is important to note that this study consisted of college students judging a speaker presented on a television monitor. It is not known how these judgments would differ with an in-person presentation. In

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any case, the results suggest that the stigma attached to hearing aid wearers may not be as clear cut nor as severe as has been assumed.

SUMMARY

This study was designed to assess the reaction of normally hearing listeners to the same speaker when the speaker delivers the same speech while (1) wearing a body aid, (2) wearing a behind-the-ear aid, and (3) not wearing a hearing aid. The speaker presentation was viewed via television and the listeners judged the speaker in terms of source credibility. A measure of attitude change was also taken in each condition.

The only significant differences were found between the behind-the-ear condition and its control and the behind-the-ear condition and the body aid condition. These differences were limited to the dynamism dimension of credibility. Implications of these findings were discussed.

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READINGS ON DEAFNESS. Douglas Watson, ed. New York University Deafness Research and Training Center, 80 Washington Square East, New York 10003, 1973, 138 pages, paperback, \$3.00.

The collection of articles compiled for this book of readings should be read by everyone who has contact with deafness. The readings convey the theme desired by the editor to clearly demonstrate that deaf people only ask that they be accorded their place in the community of man. The majority of the articles presented are written by professionals who are deaf. The information presented strikes at the very core of many issues that are often not understood about deafness. Whether one agrees or disagrees on the issues presented becomes insignificant when you listen to the messages presented. The development of this book is a tribute to the many deaf people who have made a place in the community of man.

Gary Austin
Northern Illinois University

SILENCE, LOVE, AND KIDS I KNOW. Linwood Smith. International Books, Washington, D.C., 1973, 36 pages, \$3.95.

If you enjoy sharing the mind of a man, you will enjoy this first book of poems by Linwood Smith. As the flyer of the book suggests, it "is a penetrating book of poems, extraordinary in lyric, beauty, and insight." You will want to read this book, not because the author has been deaf since age two (2), not because he knows the life of the ghetto, but simply because he can write. His words are comparable to rushing torrents of emotion, as well as philosophical utterances that tend to inch their way through the mind.

Interspersed throughout are insights into "Kids" and the lessons they have taught the teacher. If you read them too quickly, you may not experience the pathos and underlying note of melancholy that appears in most of the entries.

Smith writes as a man, not just as a man who is deaf. Not until the last poem, "The Dream Song of the Deaf Man" does he refer to his deafness. That is true, overtly, at least. Covertly, the lost companion, the references to waiting for that which never returns, and the urge to take back that which was stolen from him, could be interpreted as referring to sound-hearing-deafness. But to label them as such, may be to do an injustice to the enigmatic beauty of them.

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I have but one regret associated with this book. I feel that it is far too brief to reflect the full mind and moods of Mr. Smith's pen. In his poem, "For Floyd," the author encourages his student to "improve your reading, be patient, and keep cool." Mr. Smith should also continue his writing, be patient, and not just keep the faith—but share it.

I would encourage you to read it—to digest it—to experience it.

Glenn Mathews
West Virginia Division
of Vocational Rehabilitation

THE DEAF CHILD IN THE PUBLIC SCHOOLS, Lee Katz, Steve L. Mathis, III, Edward C. Merrill, Jr., The Interstate, Printers and Publishers, Inc., Danville, Illinois 61832, 1974, 113 pages, paperback.

An outstanding publication that deals in a practical, direct, and helpful way with the issues faced by parents of deaf children. As the title indicates, the major emphasis is on educational aspects of raising a deaf child. Historically parents have had to make decisions about schools and educational philosophy that affect their child's entire life without adequate information. With the publication of *The Deaf Child in the Public Schools* this is no longer true.

The book written in question and answer form is easy to read and covers the key areas about which parents need information. The authors' are rather uniquely qualified for their task. The late Mrs. Lee Katz was the parent of a deaf child and President of the International Association of Parents of the Deaf. Rev. Steve Mathis, a deaf person himself, has had extensive international experience as an educator and clergyman. Dr. Edward Merrill, President of Gallaudet College, is a nationally prominent educator with deep understanding of deafness.

Professionals in deafness should make every effort possible to assure that parents of deaf children get this book as soon as their child's hearing loss is discovered. If this were done educational decisions made about deaf children would be greatly improved and the lives of these human beings would be immeasurably enriched.

McCay Vernon
Western Maryland College

THE LANGUAGE OF LIFE. Elizabeth A. Gochnour and Theresa B. Smith. Interstate Printers & Publishers Incorporated, Danville, Illinois 61832, 405 pages, paperback.

The authors of *The Language of Life* have written a text that is needed for young adults in their preparation for post-school years.

The authors' goals are well established, the guidelines for use of the text are clearly explained, and there is enough material here, if imagination is used, to adapt to any situation. The topics chosen are realistic, but I wonder if the language is too simplistic.

The publication, of course, would best be used in a formal setting of a lengthy duration, making it more suitable to some form of education. This would take place either at a school or concurrent with vocational training.

Elia G. Nickoloff
The University of Arizona

ERRATUM

The percentage figure on line 16, page 30 of the October 1974 issue (8:2) was inadvertently reported as "approximately .024 percent." This should be changed to read "a minimum of 4.16 percent."

A *Journal* policy of identifying authors of each article was inadvertently not attended to in the previous issue (8:2 October 1974). The identifying information ordinarily appears at the bottom of the article title pages. Following is the information for each of the articles:

"The Occupational History of Urban Deaf Adults." Dr. Carol Reich is a Research Associate, Toronto, Canada, Board of Education. Dr. Peter Reich is an Assistant Professor of Psychology and Linguistics, The University of Toronto."

"The Acquisition of a First Language in a Blind-Deaf Adult: A Case Study of a Language Development in an Adult with a History of Deaf Blindness." Dr. Rees is Executive Officer, Doctoral Programs in Speech and Hearing Services, City University of New York.

Dr. Kruger is Research Director, National Center for Deaf-Blind Youths and Adults, New Hyde Park, New York.

Ms. Berstein is a Research Assistant, City University of New York.

Ms. Kramer is an Audiologist, National Center for Deaf-Blind Youths and Adults.

Ms. Bezas is a Communications Instructor, National Center for Deaf-Blind Youths and Adults.

"Improved Reading Skills for the Hearing-Impaired Young Adult." Dr. Austin is Director, Residential Program for Speech and Hearing Impaired Young Adults, Northern Illinois University, De Kalb. Ms Kirby is Instructor, Residential Program for Speech and Hearing Impaired Young Adults, Northern Illinois University.

"Marriage Counseling with Deaf Clients." Ms. Elliott is a Counselor-Therapist at Mental Health Services for the Deaf, Langley Porter Neuropsychiatric Institute, University of California, San Francisco.

"The Need for Coordinated Specialized Services for the Vocational Development and Adjustment of the Handicapped Population." Dr. Merrill is President, Gallaudet College, Washington, D.C.