RIGHTS OF THE HEARING IMPAIRED

ILLINOIS ADVISORY COMMITTEE
TO THE UNITED STATES COMMISSION ON CIVIL RIGHTS

These papers presented at a community forum conducted by the Illinois Advisory Committee to the United States Commission on Civil Rights were prepared for the information and consideration of the Commission. Statements and viewpoints in the papers should not be attributed to the Advisory Committee, but only to individual participants in the forum.

A COMMUNITY FORUM **OCTOBER 1990**

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RIGHTS OF THE HEARING IMPAIRED

ILLINOIS ADVISORY COMMITTEE
TO THE UNITED STATES
COMMISSION ON CIVIL RIGHTS

LETTER OF TRANSMITTAL

Illinois Advisory Committee to the
U.S. Commission on Civil Rights

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The Illinois Advisory Committee, by unanimous vote, submits this collection of papers on civil rights legislation as it affects hearing-impaired persons and for the purpose of advising the Commission on issues related to the hearing impaired.

In cooperation with the Alexander Graham Bell Association for the Deaf and the Section on Individual Rights and Responsibilities of the American Bar Association, the Illinois Advisory Committee convened a public conference on June 30, 1986, in Chicago. Scholarly papers were presented at the conference by experts with varying perspectives on civil rights and the hearing impaired. These included educators, physicians, academicians, and legal experts.

The information provided is not to be considered a comprehensive review of issues related to the rights of the hearing impaired, but as a source of information to better understand the implications of civil rights legislation upon the lives of hearing-impaired persons. The Illinois Advisory Committee hopes the U.S. Commission on Civil Rights will publish and disseminate this document as part of the Commission's clearinghouse function.

Respectfully,

/s/

Hugh J. Schwartzberg, *Chairperson*
Illinois Advisory Committee

Illinois Advisory Committee to the U.S. Commission on Civil Rights

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(Attachments are available for view at the U.S. Commission on Civil Rights, 1121 Vermont Avenue, N.W., Washington, D.C. 20425.)

1. Letter from Madeleine Will, Assistant Secretary for Special Education and Rehabilitative Services, U.S. Department of Education
2. Resolution on Individualized Educational Programming for the Hearing Impaired (Deaf and Hard of Hearing)
3. UNISTAPS

4. "Positive Results of Minnesota Education Programs," *Congressional Record,* May 25, 1977, p. S8661.
5. "UNISTAPS," *Congressional Record,* May 25, 1977, p. S8662.
6. "Early Intervention and Development of Communication Skills for Deaf Children Using an Auditory–Verbal Approach."
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Introduction

Hugh J. Schwartzberg, Chair, Illinois Advisory Committee, U.S. Commission on Civil Rights

Civilizations are judged by their strengths and by their most powerful exemplars, but they are also judged by the way in which they treat those who are the weakest of their citizens.

In the normal course, one acquires language through one's ears, and so for millennia, even growing up within communities, the deaf child remained mute and did not acquire the power to speak, and was thereafter treated as less than human. The operative word, no longer appropriate, was "dumb."

For the deaf, if the community (and because of the rarity of this condition and the cost of its cure, *community* here means the state) does not intervene with diagnosis, amplification, training, and education, language itself is denied. And this process must begin very shortly after birth in order to be very effective.

There is, therefore, a potential claim by those physically handicapped, those hearing impaired, as against the state. A claim that the majority are bound to act so that to supply language itself in light of the probability that if the state does not so act, the potential of that human being will be destroyed by social inaction.

This claim may be grounded by revulsion against the unnecessary wasting of a potential human mind. It may be rooted in our moral queasiness at the loss of any human's reasonable potential. It may be colored by consideration of the social costs of inaction, such as the cost to the public of what may otherwise become a public charge.

This right may be claimed even in the absence of legislative action, although, in fact, much legislation does exist.

Certainly none of the rights retained by the people will blossom into fruit unless they are watered with knowledge of why they are claimed.

What are the rights of the deaf? What can the hearing impaired claim as against the unthinking or even contrary majority? What claim against the state does the hearing impaired hold as a matter or right, and what should be offered by legislative grant? Where does the law stand now?

These are the questions asked at this public forum. The scholars, practitioners, and advocates making presentations give this Committee substantial food for consideration. The quality of their papers and the importance of the subject prompt the Illinois Advisory Committee to transmit these proceedings to the U.S. Commission on Civil Rights for its consideration.

The Illinois Advisory Committee thus follows its general mandate from the Commission, and its specific directive to hold this forum. The Committee recommends to the Commission that these proceedings be published, as a contribution to the understanding of the rights of hearing-impaired persons, their rights and the dangers of discrimination that they face.

Keynote

The Meaning of "Reasonable Accommodations" and The Hearing Impaired

By William E. Castle, Ph.D.*

The topic I have been asked to address, as you see by the program, is "The Meaning of 'Reasonable Accommodations' and the Hearing Impaired." Fortunately, the program also says that my addressing this topic is to be "A State of the Art Report." There is, as far as I can tell, no easy, dictionary-like definition to provide meaning for what is referred to as "reasonable accommodations." Hopefully, therefore, my state of the art report will lend meaning or meanings to that phrase.

As my report ensues you will discover that, for the most part, I use the generic terms "hearing impaired" or "hearing impairment," which include both the deaf and the hard-of-hearing. At times, however, I use the words "deaf" and "deafness." I wish to clarify that when I do use the words "deaf" or "deafness," they are always used to refer to both *severe* and *profound* hearing impairments; they do not include reference to the hard-of-hearing.

Allow me to begin my state of the art report by saying, first of all, that a great deal has happened in recent years to impact on the rights of hearing-impaired individuals. One might say that, at least in the United States, hearing-impaired persons have never had it so good! This is, in large part, due to the fact that a great deal of Federal legislation has been put in place in the last two decades to make a difference in their lives, especially by broadening their base of options and, hopefully, their freedom of choice. The National Technical Institute for the Deaf Act was passed in 1965 to complement what occurs for the deaf at Gallaudet College. A 1968 amendment to the Vocational Educa-

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tion Act provided that 10 percent or more of the funding given to a given State be used for the handicapped. The Model Secondary School for the Deaf Act was passed in 1966. The Bureau for the Education of the Handicapped, which is now known as the Office of Special Education Programs, was established in 1967. The Captioned Files and Media for the Deaf program has been in existence for a long time and now includes considerable funding for captioned television. The Amendments to the Vocational Rehabilitation Act of 1973 (P.L. 93–112) provide for easier access for all handicapped persons to postsecondary education and a large variety of employment opportunities through its Section 504. The Education of All Handicapped Children Act (P.L. 94–142) was passed in 1976. The Interpreters for the Deaf Training Act was passed in 1978. There is now also, in the Education of the Handicapped Act, a provision for special funding for postsecondary education programs for the handicapped, four of which must be programs for the deaf. All of these Federal laws must have their impact on what happens today for hearing–impaired people and their rights.

There is no doubt that our hearing–impaired population has it better than any other such population in the world. However, we cannot afford to rest on our laurels. Our hearing impaired may have it good, but they could have it better. I will spend the major part of my time talking about how they might be even more reasonably accommodated than they currently are.

We are acutely aware that legislation is one thing; fulfillment of that legislation is another. It seems safe to say that, although our nation always has had an abiding interest in equal educational opportunity for its citizens, the fulfillment of that interest has not been something easily effected, because the makeup of our citizenry is very diverse, the educational programming among today's 50 States is also very diverse, and among the multitude of local school districts within each of those States educational programming is very diverse. Historical complications to the fulfillment process have been the peculiar history of dealing with American Indians from the beginning of colonization; the uncertainty about the role of women as citizens from the time the United States Constitution was written; the awarding of citizenship to our black population who, like their ancestors, were first here as slaves; the diversity of the Nation's immigration program; and the recent influx, legal and illegal, of Spanish–speaking Americans from Cuba, Puerto Rico, Mexico, and other countries or territories and of Asians from such places as India, Pakistan, Vietnam, Thailand, Korea, and Taiwan.

Our inability to recognize the American Indians as real citizens persists, but so do their demands for equal rights. Though women were assured the right to vote in 1920, they still strive today for an equal rights amendment to the Constitution to give fuller assurance of equal educational and employment opportunities. Though the blacks and other minority groups were assured of citizenship in 1868 and the right to vote in 1870, they have had to demand special civil rights legislation in recent years to foster equal educational, housing, and employment opportunities for themselves; and in spite of all that special legislation, they are still a far cry from where they would like to be regarding their equal rights, educational and otherwise.

We *must* heed this history and must assume that an important part of our interest today will be to have a different kind of history written for the hearing impaired who have only recently been given their legal rights to equal educational and employment opportunities.

The Education of All Handicapped Children Act of 1976, i.e., P.L. 94–142, is the one piece of legislation that has the greatest impact on what happens for hearing-impaired children and youth today. A second piece of legislation that impacts significantly on hearing-impaired youth and adults is the Vocational Rehabilitation Act of 1973. In a sense, these two pieces of legislation are the civil rights bills for hearing-impaired and other handicapped people. They, therefore, deserve and receive a great deal of our attention today, and they merit a great deal of respect for what they were designed to accomplish. It is because of them that we have heard with frequency such things as "Section 504," "equal educational opportunity," "equal access," "least restrictive alternative," "least restrictive environment," and "reasonable accommodations." At the same time, they fall short of solving some of the current and future problems affecting hearing-impaired persons.

P.L. 94–142 declares that many handicapped children do not have successful educational experiences because their handicaps go undetected, but it does not provide for programs for early detection. It does make provision for handicapped children between the ages of 3 and 21, but its mandate covers only the ages between 5 and 18. Like other handicaps, hearing impairment in children often goes undetected; it is not a visible handicap and is too often discovered later than it should be for the undertaking of very necessary early intervention. Mandating attention to children who are 5 through 18 years old is fine, but it clearly is not enough with respect to the hearing impaired, who, along with their parents, should receive special educational attention as soon as the hearing impairment is detected, preferably at birth or shortly thereafter. Our country needs to put in place as soon as it can a universal system of early detection of hearing impairment. Though the United States, in most respects, is ahead of all other nations in what it does for the hearing impaired, it lags behind some other nations in its efforts in early detection. Audiological techniques have been developed which can do what is needed, but they are not applied universally. Medical doctors, especially gynecologists, obstetricians, and pediatricians, need to be more universally aware of these techniques and see that they are applied; because the earlier hearing impairment is known, the earlier special programming and reasonable accommodations can begin. The lack of the earliest possible detection is the first strike against equal educational and employment opportunities for many hearing-impaired individuals. It is, therefore, a first strike against their civil rights.

Our country also needs to establish a universal program of early education for hearing-impaired children and their parents. For some years now, several programs for hearing-impaired children under the age of 3 and their parents, often referred to as parent/infant programs, have been in existence. Such programs are important for the adjustment on the part of both the parents and the child with respect to the problems associated with severe or profound hearing impairment. They provide a very early opportunity for parents to become involved in the educational programming and reasonable accommodations for their children. However, such programs are not available universally in our nation and they should be. The absence of such programs is frequently the second strike against equal education and employment opportunities for many hearing-impaired individuals and, therefore, a second strike against their civil rights.

The full meaning of early education includes what is done at the pre-school level for hearing-impaired children who are between the ages of 3 and 6. Over the years, specifically since World War II, our nation has done a fair job of providing pre-school educational opportunities to hearing-impaired children, especially deaf children. It is still not a universal opportunity, but it is a fairly prevalent one. Good quality pre-school education for the deaf is also not universal, because not all teachers involved are adequately trained to do the job and because important support services may often be lacking. For example, reasonable accommodations may not be available from speech pathologists, audiologists, or itinerant teachers skilled in education of the deaf and the use of manual communication if that be needed.

Further, one cannot ever say enough about the importance of the earliest possible use of amplification to optimize the use of whatever residual hearing a hearing-impaired child may have. One cannot ever say enough either about the importance of providing the earliest possible opportunity for a hearing-impaired child to learn how to speak the language of his native country; because, in the long run of that child's life, there is probably no better base for becoming mainstreamed as a productive adult in one's society and meeting the challenges of upward mobility in employment than having understandable language, both spoken and written, good speechreading skills, and the ability to make optimal use of residual hearing. Development of the written and spoken language skills of hearing-impaired children should be the focus of all early childhood intervention, using whatever communication modalities are useful or necessary.

At the same time, there is much to be said for parents of the hearing-impaired children of our country, within the context of early intervention, to interact with hearing-impaired adults, particularly with deaf adults who have good English language skills, some who are oral and some who are manual.

It was, therefore, a great pleasure to learn recently that technical amendments to P.L. 94–142 were introduced to the United States Senate on April 14 of this year which provide for an extension of that law's mandate to age 3 within 2 years and the creation of a new discretionary grant program for early intervention of handicapped children from birth through age 2. There are many of us who work with the hearing impaired that hope these Education of the Handicapped Amendments of 1986 will be passed by Congress expeditiously so that the earliest possible accommodations may be implemented for these individuals.

P.L. 94–142 seeks to provide "appropriate" educational experiences for handicapped children at the elementary and secondary levels. This is a fine intent of that legislation. However, although this law has been in place for 10 years, it is still a fact that regardless of whether they receive their elementary or secondary education from residential schools or from some format of mainstreaming, the deaf students among our hearing impaired, in general, do not have elementary and secondary attainments which equal those of their hearing peers. This fact is brought home to us resoundingly with each piece of educational attainment research done by the Office of Assessment and Demographic Studies at Gallaudet College. It is reflected also in the admissions data for students who enter Gallaudet College, the National Technical Institute for the Deaf, and other postsecondary programs for the deaf. It is a well-known fact that, in spite of all the dollars that have been spent on education for the deaf over the past 30 years, the average reading level of deaf graduates from secondary education programs remains barely over the fourth grade level. Certainly we need to ask ourselves the following questions: What is it that happens to deaf students in the preparatory program of Gallaudet College that could not happen for them in a high school college preparatory program? Why can deaf students gain math, English, and basic science skills at the National Technical Institute for the Deaf which they were not able to gain in their elementary and secondary programs? Hazarding a guess, I would say it is because the usual deaf student in an elementary or secondary program in a school for the deaf is taught by teachers of the deaf who are not teachers of elementary and secondary subject matter or content; *and* the usual deaf student in some mainstreaming format for elementary or secondary education is taught by a teacher who is qualified to teach elementary or secondary subject matters but who is *not* qualified or knowledgeable about how to teach deaf students. Thus, our usual deaf student is unexposed to a great deal of what might be called "fundamental knowledge." These dynamics, indeed, can hardly be thought of as reasonable accommodations of the deaf children's needs.

A commitment to genuine implementation of Public Law 94-142 for the elementary and secondary levels of education of the deaf will require a drastic (but positive) revision in the teacher training programs designed to train persons to teach the deaf. The Council on Education of the Deaf, as it continues to reevaluate certification standards for teachers of the deaf, must pay heed to something long overdue in our country with respect to teaching of the deaf at the pre-school, the elementary, and the secondary levels and which will be quite necessary for fulfilling the intent of Public Law 94-142; that is, the basic requirement that teachers at all three of these levels be qualified technically to teach both hearing and deaf students. I do not wish to suggest that all deaf students should thereby necessarily be taught in classes with hearing students or that deaf persons who could not teach hearing students readily should not teach at these levels. I do wish to suggest, however, that pre-school teachers of the deaf should be certifiable by State departments of education both as qualified pre-school teachers *and* as qualified teachers of the deaf; elementary teachers of the deaf should be certifiable by State departments as qualified elementary teachers *and* as qualified teachers of the deaf; and secondary teachers of the deaf must be certifiable both as secondary teachers *and* as teachers of the deaf. By whatever means possible, we must be sure that our deaf children and youth are taught by persons who are professionally trained both in the specialty of education of the deaf and in content matters and that they not be taught by special educators who are not specialists in education of the deaf. This burden of quality education is of course, the burden of professionals in the field and of State departments of education and not a burden for our Federal Government.

P.L. 94–142 stresses the fact that families of handicapped children and youth are too often forced to seek special educational services for them outside the public school system, frequently from agencies that are a great distance from their residence and frequently also at their own expense; and, hence, most people interpret the law to mean that all handicapped children should be mainstreamed in their local public school district. I believe this interpretation leads to an overly frequent phenomenon of restricting freedom of choice from among programs that are available to hearing-impaired children and youth and their parents. If implementation of Public Law 94–142 were to lead to the immediate or even eventual demise of all residential schools for the deaf, public or private, this would be a grave error, and a severe restriction of freedom of choice and, therefore, a restriction of civil rights.

I wish to carry this last point a bit further and offer some cautions about the matter of mainstreaming hearing-impaired children and youth. First, not *all* hearing-impaired persons *wish* to be mainstreamed during every aspect of their education, employment, and community living; and some may wish never to be mainstreamed. *Also,* not *all* parents of hearing-impaired children wish to have their children mainstreamed at every point of education; and some may rightfully believe that the least restrictive alternative for their child is a residential school for the deaf; and some may rightfully believe that the least restrictive alternative is a residential *oral* school for the deaf; and, therefore, today we see signs of backlash from the deaf community and from educators of the deaf against P.L. 94–142 and the way it is being interpreted. There are many voices of protest especially against what is now called *MANUAL 10,* a document which describes the principles to be used on deciding the least restrictive alternative for a given handicapped child. The manual, like P.L. 94–142, describes a continuum of alternatives which places the regular classroom on the continuum at the point of "least restrictive" and the special school at the point of "most restrictive." The backlash contention is that, for many deaf children, the special school is actually the "least restrictive."

Second, it is foolhardy to think that every school district in the United States can provide all that is needed to all handicapped children residing in that district in order for them to be properly educated. This cannot at any time be a cost effective, cost efficient way to accomplish mainstreaming. Districts must pool their resources! In some cases the pooling may have to be statewide; in other cases it may have to be on a regional basis. At the postsecondary level, namely at NTID and at some other postsecondary programs for the deaf, it is on a national basis.

When P.L. 94–142 was passed in 1976, its proponents declared that the educational needs of handicapped children were not being met adequately, and that at least 50 percent do not receive the reasonable accommodations required to assure them full equality of educational opportunity. This was true at that time, and my impression is that it still is true; and, with respect to hearing-impaired children, the percentage was higher at that time, and it continues to be so for the several reasons already cited.

When it comes to dealing with all the reasonable accommodations that are required for the hearing impaired, whether they be in residential schools or in some mode of mainstreaming, it is important to realize that reasonable accommodations require a greater prevalence of audiologists, speech pathologists, language specialists, school psychologists, and personal and career guidance counselors. For too long it has been the practice to have the classroom teacher, particularly in residential schools for the deaf, be all things to the deaf student. It is still too prevalently assumed that the classroom teacher is an authority on and a teacher of speech, language, and auditory training and is to act as counselor when necessary. In this day and age this is no longer appropriate and it probably never was.

At NTID, for instance, we know that 90 percent of the deaf students who enter our programs can profit from the use of amplification; but 80 percent of the entering students have either not been served or have not been served well by audiologists or educators, because they *do not* know how to *best* make use of amplification! In fact, nearly 35 percent of the entering students who can profit from the use of hearing aids either *do not* own aids or seldom wear the aids they do own. In addition, most of the deaf students who enter NTID have had little recent attention to the development of specific listening, auditory discrimination, or speechreading skills.

Even though the average age of the deaf students entering NTID is 19.5, and one would expect the students to be fixed in their ways, we have discovered at NTID: (1) that, with the right approaches to orientation to the hearing aid by audiologists, "nonusers" and "seldom users" alike can both be persuaded to become users; (2) that, with the right approaches by audiologists to auditory training, "poor users" of hearing aids can be taught to be "good users," "poor listeners" can be taught to be "better listeners," and "poor auditory discrimination skills" can be improved; (3) that, with an approach by audiologists to speechreading which concentrates on repetitious social interchanges *and* job-related vocabulary and language, speechreading abilities can be increased; and (4) that the regular telephone can be used by many NTID students who never expected that they could do so, *if* they are given variable formats of amplification and/or special coding systems and are taught how to use them. If these things can happen at the ages of 19 and 20, is it not a reasonable accommodation to see that they happen earlier?

The Vocational Rehabilitation Act of 1973 is still another matter. It was conceived to assure that handicapped persons, including the hearing impaired, would not be discriminated against because of their handicaps. It insists that handicapped persons who are otherwise qualified cannot be denied employment or admission into educational programs for reason of their handicaps so long as the employment or educational institution is a recipient of Federal subsidy. It also suggests strongly that employment environments, educational environments, and social environments such as theatres and churches do all that they can to provide reasonable accommodations for handicapped persons. For the deaf and the hard-of-hearing, therefore, there are many efforts today to remove significant communication barriers. Inductance loop systems, FM systems, and infrared systems are prevalent in theatres and churches for those who depend on auditory amplification. There are many captioned films, many captioned television programs, and even captioned live theatre, including opera, for the specific accommodation of hearing-impaired persons. Interpreters for the deaf, including oral, simultaneous, and American sign language interpreters, are prevalent in many social and educational environments and on television. Deaf persons also enjoy great use of telephones these days because of the multitude of teletype devices that are on the market and special techniques that have been designed for deaf persons with good speech and language to use the regular telephone.

However, there are evidences that, in spite of all the good intentions of this act, it is proving to be counterproductive in some ways, especially in the realm of postsecondary education for the deaf.

Before 1968, only 18 years ago, opportunities for the deaf in higher education were very limited at both the undergraduate and the graduate levels. Some of the most capable deaf persons over the years had entered certain colleges and universities as the only hearing-impaired persons in any of those educational environments. Since 1864 and up until the 1960s, Gallaudet College was the only postsecondary program designed primarily for deaf students. During the early 1960s New York University, University of Arizona, California State University at Northridge (CSUN), Riverside City College, Western Maryland College, and Northern Illinois University began to open their doors to deaf students at both the undergraduate and graduate levels. In 1968 the first deaf students entered the Rochester Institute of Technology (RIT) through the federally supported National Technical Institute for the Deaf (NTID). The following year the first deaf students entered Delgado Community College in New Orleans, Seattle Community College, and the Technical-Vocational Institute (TVI) in St. Paul, Minnesota, after these institutions were selected to host three regional postsecondary technical-vocational programs for the deaf which were to be partially funded by the Federal Government.

Since 1969 the doors of many other colleges and universities have opened up to deaf persons. In 1973 the first guide to college/career programs for deaf students was published, which revealed that at that time at least 27 postsecondary programs for the deaf with a total enrollment of approximately 2,300 deaf students could be identified and described together with a listing of about 150 different major areas of study.

The latest edition of *College and Career Programs for Deaf Students—1986*, prepared and published by Gallaudet and NTID and based on information collected during the fall of 1985, lists 145 institutions which at that time had programs for deaf students. Sixty-three of the programs were serving 15 or more deaf students, and the total number being served in these programs was 7,031 (5,917 full-time and 1,114 part-time).

One researcher at NTID estimates that there are 40 percent more deaf students enrolled in programs not listed in *College and Career Programs for Deaf Students—1986.* This estimate is based on a study of transfer students to NTID during the past 3 years, which shows that 40 percent of the transfers came to NTID from programs not listed in the 1986 document. If this estimate is taken at face value, it means that, in the fall of 1985, there were approximately 8,284 full-time and 1,560 part-time deaf students (a total of 9,844) enrolled in colleges and universities throughout the United States and Canada.

In the same years (i.e., between 1973 and 1986), the number of deaf students who have pursued graduate studies has shown a bold increase and the number who have obtained earned doctorates has increased as well. Most other countries in the world are awestricken by the fact that deaf persons in the United States have succeeded in becoming teachers, college professors, dentists, orthodontists, chemical engineers, medical doctors, anesthesiologists, lawyers, clinical psychologists, certified architects, rehabilitation counselors, business administrators, educational administrators, medical technologists, microbiologists, electrical engineers, mechanical engineers, industrial engineers, computer scientists, and reputed artists. Little of this would be so if it were not for the vast array of postsecondary opportunities now available to capable and interested deaf people.

What are the reasons for this vast expansion in numbers of deaf persons in postsecondary studies? There are several reasons that we are aware of, some of which are good and some of which may not be so good.

One very obvious reason, of course, is that in the fall of 1985, as was the case in 1983 and 1984 as well, the number of young deaf persons seeking to enter postsecondary programs increased dramatically because of the increased numbers of babies who were born deaf in 1964 and 1965 due to the severe rubella epidemic. By 1989 and 1990 the so-called "rubella bulge" will have been accommodated, for the most part, at the postsecondary level and, even as early as the fall of 1986, the enlarged numbers at the undergraduate level will begin to wane; and the National Center on Disease Control declares that rubella has essentially been eliminated as a cause of deafness in the United States because of the vaccine discovered in 1969. No further "rubella bulges" are expected in the future.

Other reasons for today's increased numbers of deaf persons at the postsecondary level that tend to go hand-in-hand are the following:

(1) In the last three decades in particular, community and junior colleges have sprung up all over the United States to make up for what many of our high schools have failed to provide to many of their graduates, i.e., true college preparatory work and vocational/technical education possibilities. Most of these colleges have open admissions policies, allowing any graduate from a high school the opportunity to pursue some form of postsecondary education;

(2) As was mentioned earlier, a 1968 amendment to the United States Vocational Education Act provided that 10 percent or more of the funds allocated to any given State must be set aside for the handicapped; many of these funds have been used to set up programs for the hearing impaired in community colleges, and the open admissions policies apply to the hearing impaired as well as to the hearing;

(3) As also mentioned earlier, the Vocational Rehabilitation Act of 1973 provided that no handicapped person who was otherwise qualified could be denied admission to a college or university for reason of the handicap so long as that college or university is a recipient of Federal subsidy; in some instances, therefore, the hearing impaired have become the primary means for meeting the requirements of Section 504 of the Vocational Rehabilitation Act; i.e., if you just put the hearing impaired in classes and provide them with the so-called "reasonable accommodation" of interpreters, the requirement has been met; and

(4) Besides the vocational education dollars mentioned earlier, Federal dollars have become more prevalent for supporting postsecondary programs for the hearing impaired either directly through special appropriations provided by Congress to Gallaudet College, NTID, and selected postsecondary programs for the handicapped or indirectly through support to the students by vocational rehabilitation agencies, SSI, Pell Grants, work study, and guaranteed student loans.

Thus, the numbers have grown, both the number of programs and the number of students that enroll in them.

There are some evidences that the net growth from 27 postsecondary programs for the hearing impaired to 145 in 13 years represents a proliferation of "nonquality" programs.

Many of these programs do not begin to comply with the *principles* proposed in 1973 by The Conference of Educational Administrators Serving the Deaf (CEASD). The first evidence of this fact is that only 63 programs (or 43 percent) of the 145 programs listed in *College and Career Programs for Deaf Students—1986* are granted full program descriptions; since such descriptions were provided only for those institutions "which 1) have at least 15 full-time students enrolled in the postsecondary educational program for deaf students, 2) are part of an accredited postsecondary institution, 3) have a co-ordinator of services for deaf students who devotes a minimum of 50% of his/her time to directing the program, and (4) generally comply with the principles proposed by the conference of educational administrators serving the deaf."

A second evidence is that the percentage of new students who are NTID transfers has been increasing; and the admissions/recruitment staff at NTID indicate that the transcripts of 83 percent of these students show that no credits have been earned, even though they spent an average of 1-1/2 years attending another college.

Still a third evidence is that over 39 percent of the programs listed (i.e., all those with 10 or fewer full-time deaf students) in *College and Career Programs for Deaf Students—1986* provide little or no special services to the hearing- impaired students other than interpreting and tutoring; and 18 percent of *those* programs provide no interpreters while 24 percent provide no tutoring. Among those programs that have between 11 and 20 full-time hearing-impaired students (another 22 percent of all programs), 3 percent provide no interpreting, 17 percent provide no tutoring, 29 percent provide no personal counseling from counselors who can communicate directly with hearing-impaired persons, 55 percent have no special classes for hearing-impaired students, 52 percent have no paid notetakers, and 45 percent have no vocational counselors who can communicate directly with the hearing-impaired students. Not until programs show 30 or more full-time students (i.e., 24 percent of all programs) can it be seen that 100 percent use paid interpreters, 100 percent use tutors, 90 percent have personal and vocational counselors who can communicate directly with hearing-impaired persons; even then 45 percent have no special classes for hearing-impaired students with teachers who can communicate directly with those students, have no paid notetakers, and provide no direct speech and hearing services. These data are considered by those who pulled them together to be conservative, to say the least, i.e., the situation regarding reasonable accommodations should be considered worse than these data suggest.

Lastly, a survey of the transfer students at NTID from 1980–1984 suggests that these students were disappointed in the support services they received elsewhere, and they felt that the teachers in many cases were insensitive to their needs (e.g., the teacher talked with back to class or didn't make use of mediated materials, etc.).

These data are offered because they are suggestive and not because they are absolutely accurate; and what they suggest are the following things:

(1) There is, indeed, a proliferation of postsecondary programs for the hearing impaired which are not "quality" programs. Section 504 of the Vocational Rehabilitation Act of 1973, with all its good intents, has played some tricks on us. Its insistence that hearing-impaired persons who are otherwise qualified for entry to any given postsecondary program cannot be denied entry to the program has led to an interesting irony, i.e., any postsecondary program which is *not* qualified for handling the special needs of hearing-impaired students *cannot* at this point in time *be denied* the right to admit those students. Thus, many institutions are giving it a try and failing in the process, because they do not provide the reasonable accommodations that are needed.

(2) The open or liberal admissions policies of many colleges and universities allow for many hearing-impaired persons to enter their doors who are not *truly* qualified to be there, because, lo and behold, by policy they cannot be kept out. *This may be sheer folly* in light of the fact pointed out before that, in spite of at least 30 years of trying to make it different, the average reading of secondary school-leavers who are deaf is still only at fourth grade.

(3) The propensity for State agencies to force their vocational rehabilitation counselors to insist that their clients must remain in their home State and sometimes even in their near-home community college because it is less *costly* for them to go to college is most certainly taking its toll on many young hearing-impaired people. While Public Law 94–142 *clearly* and Section 504 *more subtly* preach the gospel of "least restrictive environment" or "least restrictive alternative," many young deaf people are unduly restricted from choosing "quality" over "mediocre" programs or from having any choice at all. They are thereby denied an important civil right, and today there is a second

backlash becoming evident from educators, in particular, against proliferation of "nonquality" programs.

One other matter is worthy of attention before this state of the art report is brought to a close. The federally sponsored training programs designed to train interpreters for the hearing impaired are not required to train their students to deal with the interpreting needs of oral hearing-impaired adults who rely predominantly on their speechreading skills rather than on an understanding of sign language. These programs should be mandated to do so in order that the civil rights regarding the interpreting needs of a significant portion of our hearing-impaired population can be provided, since it is becoming increasingly clear that oral interpreters are often a reasonable accommodation to the hard-of-hearing as well as to the oral deaf community.

Thus, we see that, though the United States is the most progressive nation in the world in terms of what it does for its hearing-impaired population, it still faces some significant problems that beg for solution before it can brag that it has provided for all the civil rights of that population. As a nation, we have done well, but we still can do better.

Part I. The Right to Know

Medical, Educational, and Habilitational Needs of Hearing-Impaired Children

By Dennis G. Pappas, M.D.*

Many of the diseases that primarily affect children have been controlled by legislated criteria for preventive measures, augmented by the dissemination of educational information. Hearing loss in children has not been as fortunate. Yet, statistics have indicated that one in 700 (1) to over one in 2,000 (2,3) infants in a well-nursery have a severe to profound hearing loss. These figures may not be as impressive as some, but when considered with the potentially devastating adversities associated with this handicap, such as speech and language retardation, loss of education time, psychoneurological and psychosocial handicaps, behavioral problems, and employment prejudices, the significance of these statistics becomes more clearly defined. It must also be realized that these statistics represent infants in well-nurseries; the prevalence of hearing loss in the Neonatal Intensive Care Unit (NICU) is more impressive (4,5) and represents approximately 2 percent of these newborns. Nevertheless, awareness of the need for hearing screening as well as the special educational needs of the hearing impaired is still the exception rather than the rule, and the development of a philosophy of education and habilitation for hearing-impaired children has been slow to progress.

Screening

The purpose of screening for hearing is to detect a hearing loss prior to the time that it becomes obvious. Screening for any disorder is a task that should be accomplished rapidly,

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accurately, economically, and with little energy or resources misspent pursuing "normals." Although no diagnostic screening device will fulfill these criteria completely, over the past decade programs and procedures for screening the hearing of newborns have been developed, modified, and improved (6,7). Nevertheless, the fact is that early identification programs continue to be absent from most hospital nurseries.

Normal hearing and developmental delays can be determined in early infancy with adequate pediatric audiological testing. The following screening methods focus on viable means of detecting hearing loss in the neonate population. However, what can be achieved through any method of testing the hearing of a child is directly related to the flexibility and creativity of the audiologist and the maturity of the child.

Strategies for identification of a hearing loss at birth include high-risk factors, high-risk registry, Crib-o-gram, and auditory brainstem response (ABR).

In view of the small number of neonates in an NICU, ABR appears to offer the most potential. However, in the more populated well-nursery, the use of the Crib-o-gram, or a nonautomated, calibrated, and specific tone generator could possibly identify those missed by the High Risk Registry.

Nothing is gained by supplementing one testing method with another in an effort to confirm a hearing loss during the neonatal period, since any deficit in the hearing acuity of neonates indicated by objective screening modalities must be retested in 3 months by ABR or behavioral audiometry to differentiate transient from permanent hearing losses. However, the sooner hearing loss in children is identified, the better.

Cost must be considered, especially when well-nurseries are involved, since only a minute percentage of the population in those nurseries may be found to have a hearing loss. However, should just one infant not be identified until the age of 2 or 3 years, the cost to that infant and society in terms of habilitation, education, psychosocial stigmata, and potential adult employment opportunities is insurmountable.

Late identification of hearing impairment results in a delay in initiating a compensatory habilitational or educational program and these children suffer educationally, psychologically, and psychosocially. If a hearing loss is identified at birth and early habilitation/education instituted, such effects may be diminished to the extent that the child can realize a more normal role in society. Therefore, it is proper to provide auditory screening early in the life of all children and, the first and only opportunity to examine the entire infant population is in the newborn nursery.

Screening Followup: The effectiveness of any program to screen hearing is dependent on a well-coordinated followup program. A well-trained pediatric audiologist can determine a child's listening skills for a particular age, but followup examinations must be the responsibility of either the parents or the institution. The primary care physician must be alerted when a hearing loss has been identified in his/her patient. The awareness of the significance of a hearing loss must be increased among parents and physicians, and the efforts to educate and habilitate the impaired child must be shared between them and the appropriate educators. This may involve the hiring of competent personnel to coordinate the child's program (5) as well as specific educational programs.

The ultimate purpose of educating and habilitating hearing-impaired children is to prepare them to function as independent adults. In order to achieve this goal, they must be equipped with a high level of communication skills, and a prerequisite for this in today's society is the use of verbal language.

Without dispute, there is a critical, or sensitive, learning period for language development. To prevent compounding the already complex problems inherent in a hearing loss with additional, and possibly greater, social, educational, and psychological disadvantages, the diagnosis must be made early in the child's life.

The child's physician must assume a portion of the responsibility for any delay in this area. In many cases, habilitative measures are deterred because of the physician's failure to recognize the early signs of hearing impairment and his/her lack of awareness of the ramifications (psychological, emotional, social, and educational) of the ensuing speech and language deprivation. Another cause for delay is the scarcity of audiologists who are trained in behavioral, or objective, testing and who have the ability to identify developmental milestones in hearing in the infant or young child.

Infants who are not suspected at birth of having a severe-profound hearing loss require discerning attention by their physician, especially in the age group 6 to 8 months. Of paramount importance are the family history and the mother's observation of the child. Indeed, the accuracy of mothers who have identified their child, early in its life, as being hearing impaired, has been assessed at 25 percent (8), thus making it a high risk factor for hearing loss. Even with this early hint, there is often a long delay before the hearing loss is confirmed, and, perhaps, an even longer period before amplification is secured and habilitation initiated.

The ability to communicate is almost intuitively developed by normal children who are usually speaking intelligibly either single words or two-word sentences by the age of 18 months (9). This is not so for the child with a severe to profound hearing loss who is characterized by a developmental failure in perceptual and linguistic skills. The acquisition of receptive language by the hearing-impaired child must be undertaken at the earliest possible age, preferably by 4 months but no later than 8 months, if he/she is to benefit from optimum language development (9).

It is reprehensible that some physicians still tell the parents of their young patients to wait until the age of 4 to have their child's hearing tested; but, it is criminal if, after a child has been diagnosed as having a mild to moderate hearing loss, the physician advises the parents to wait and see how the child's speech and language skills develop before introducing habilitative intervention.

There is a need for a high index of sensitivity to the significance of early diagnosis and therapy on the part of all those playing a role in the habilitating and educating of hearing-impaired children. Since deficits in the area of communication skills occur at an early developmental age (by 3 years), it is essential that:

1. Hearing impairment in infants and children be identified early.
2. Medical evaluation for etiology and monitoring for progression of hearing loss be ongoing processes by the physician.
3. A sound philosophy and strategy of hearing aid amplification should be provided regardless of the mode of education.
4. Early educational options for the hearing impaired be designed to maximize the patient's residual hearing. (9)

The early diagnosis of SNHL, especially in the mild to moderate range is difficult for several reasons. One reason is that, although hearing losses in this range may be detected by ABR, other methods of screening are not sensitive in this range of loss. Other reasons include losses that occur following birth, during the first year of life.

Today's screening strategies are based on age and applied either at birth or when the child enters in a nursery or public school system. The age range from 3 months to 3 or 4 years has not been a target for objective screening, although screening questionnaires may be effective. The Alexander Graham Bell Society for the Deaf has proposed such a modality based on pertinent developmental data.

However, over the past 5 years, mild and moderate hearing losses in children have received an enormous amount of attention. Two of the main reasons for this are (1) the awareness of the need of amplification by hearing aids to facilitate speech and language development, and (2) the demonstration that such hearing losses in children may progress to more severe levels.

Importance of Determining the Cause of a Hearing Loss

In our eagerness to placate the acute needs of the newly diagnosed hearing-impaired child, we often overlook the significant repercussions of the specific cause of the hearing loss. This knowledge should be vigorously pursued for it could open doors to a holistic approach to remediation and unharness the possibilities of habilitative and medical intervention.

Clear examples of this would be a case of congenital hereditary hearing loss and one of hereditary delayed hearing loss. In both cases, hearing acuity is lost in the first year of life and the loss is progressive until the age of 6 years. Such children have normally heard speech for the first 6 months of their life. They may even have developed words by the age of 10 to 12 months only to have their speech and language development deteriorate thereafter because of the progressive nature of their hearing loss. These children benefit in speech and language development in an auditory-verbal program.

Other examples of the significance of knowing the cause of a hearing loss are those due to meningitis, which may require accelerated speech/language intervention and monthly audiological monitoring because of their progressive nature; those secondary to cytomegalovirus (CMV) or birth injury, both of which present the possibility of brain damage and may require specific habilitative processes; and those associated with Mondini dysplasia, in which the subsequent development of a perilabyrinthine fistula should be recognized.

Knowledge of the cause of a hearing loss gives insight to prognosis, associated problems, and habilitative/educational and medical management. It must also be realized that the progression of a hearing loss can be aborted in certain instances.

After Identification

Amplification with hearing aids should be provided immediately after a hearing loss is identified and, within 2 weeks after identification, the child and its family should be initiated into a program of habilitation that develops the child's audiological, speech, and language skills.

Hearing-impaired children with appropriate amplification can detect most sounds in the speech frequencies of 30–50 dB, although high frequency sounds ("f" or "s") might still be inaudible. Through auditory training, children with SNHL learn to develop their listening skills and they learn to listen for very soft sounds. According to Ling and Ling, (10) a child who has residual hearing through 1,000 Hz should be able to detect the majority of consonant sounds. When a child with hearing levels of 90 dB at 4,000 Hz is fitted with hearing aids that do not allow him/her to detect "s's" (an important grammatical morpheme), then the amplification provided must be reevaluated (11).

In addition to its primary function of speech detection, amplification provides other spectral information such as frequency, intensity, and duration of sound. To benefit from these suprasegmental aspects of speech, amplification must reach the speech spectrum (12), which can provide a basic tool for the physician/clinician in assessing the need for amplification in the child with mild hearing loss. When a mild SNHL is diagnosed in the infant–child years, the use of the speech spectrum may better demonstrate the phonetic implications of the hearing impairment. The decision to amplify the older child with mild SNHL, is based on the review of audiological findings, phonetic implications from the speech spectrum, consideration of the child's progress in speech/language development, and evaluation of school work performance (9).

Amplification Guidelines: The guidelines for amplification in children are different from those of adults. It has been demonstrated that even mild hearing losses can have an impact on the development of speech and, more importantly, the development of oral language (13). Consequently, any approach to hearing aid assessment in children must consider the speech, language, and vocal factors in a systematic manner. The criteria for the need of amplification in children with mild SNHL are not clearly defined. Therefore, each patient with a mild hearing impairment must be individually evaluated according to speech defects, specific language disorders, and academic performance.

Mild, and most cases of moderate, SNHL are typically diagnosed "late" or in "older" children, usually after the age of 3 years (9). Even so, it seems that speech–language factors have not been taken into account in measures of intervention. After considering the studies of Shepard et al. (14) and Karchmer and Kirwin (15), Matkin (16) estimated that approximately 50 percent of all the children with SNHL in the 26–45 dB range do not use hearing aids.

In cases of viral and infectious diseases and delayed–inherited hearing losses, progression of the hearing loss may be expected. Early diagnosis, close monitoring of the hearing thresholds, and prompt habilitation is essential in cases of progressive hearing loss; therapy must not be delayed to such a time that it results in the deterioration in speech intelligibility.

Modes of Amplification: Contemporary ear–level aids provide greater gain than their predecessors. The development of new components has produced a steady reduction in the size and improvement in the performance of these aids.

The use of binaural hearing aids for amplification in children who are hearing impaired is no longer controversial (17). The choice of binaural amplification over the other options in amplification is based on several factors (18–22), some being: (1) listening with both ears has been documented to be advantageous when listening in the presence of noise; (2) binaural summation provided by the use of two hearing aids results in an additional 3 dB of loudness; (3) binaural amplification produces an 8–24 percent increase in discrimination ability, and (4) localization skills can be developed with the use of two aids. The psychosocial advantage should not be overlooked; at any given time, one–third to one–half of the hearing aids in use by children are either nonfunctioning or malfunctioning enough to significantly distort sound (23–25) during which time the opposite aid gives functional hearing service.

Body Type vs. Ear–Level Hearing Aids: At the present time, the advantage or recommended use of body aids may represent the philosophy of the educator. In a child with profound SNHL, with a low frequency "corner" audiogram, some educators believe that use of residual hearing is best served by body aids, which offer better low–frequency output. There are also certain situations where the body aid is preferred (16), such as children with major motor defects who have limited fine manual dexterity; children with defective auricles and do not provide a placement area for postauricular aids; and children whose hearing aid evaluation show that better responses are obtained from body aids. As the child becomes older, the switch can be made to ear-level aids to reach greater gains in the higher frequencies.

Ear-level aids offer the psychological advantage of having the instrument adjacent to the organ of hearing as well as reducing the signal-to-noise ratio, since the microphone is closer to the ear. Moreover, nuisance problems such as those present by body aids (broken cords, clothing noise, cosmetic appearance, etc.) are eliminated.

In any case, it is best to evaluate each individual while wearing several ear-level and body-type hearing aids before determining the best amplification for each child.

Other Means of Amplification

Frequency Modulation (FM) Systems: This is the amplification system typically found in an educational setting. The modern FM systems are essentially binaural hearing aids with the addition of radio frequency (RF) frequency modulated transmission. The most important function of the unit is to deliver the words of the teacher at a favorable signal-to-noise (S/N) ratio.

Environmental microphones also allow the unit to serve as personal hearing aids when the FM signal is switched off. This versatility permits the reduction of signal-to-noise ratio, distance hearing, and the listening skills necessary in everyday life. Some educators have initiated the use of these instruments as the primary tool for auditory training in place of the traditional hearing aids.

Monitoring the Child with Hearing Aids: Changes in the hearing levels are commonly seen in children wearing hearing aids. Some of the causes for these deviations are faulty functioning of the hearing aids (23–26), serous otitis media, additional acquired causes (meningitis, viral infection, etc.), and progression of the hearing loss due to its etiology.

Failure to monitor the hearing levels more than once a year is pure inertness. Notwithstanding the possibility of preventing or effectively treating the cause of a progression of the hearing loss and aborting its potential damage, a mere 15 dB shift in hearing may mean the difference between hearing and not hearing speech in children with mild to severe hearing losses. Educational programs must be in a position to detect changes in hearing thresholds if adequate amplification is to be provided, and parents and educators must be able to recognize changes in aided hearing performance. The hearing should be objectively monitored with unaided and aided audiograms every 3 months following identification of the hearing loss. During periods when the hearing is unstable, weekly audiograms are recommended. If the hearing remains stable for 3 years, the period between monitorings may be extended to every 6 months. In all cases, these children should be examined whenever a change in speech performance is noticed by the parents or educators (10).

Hearing Aid Assessment: Assessing the performance of a hearing aid may be done in several ways. In the adult, a hearing aid is well-fitted when it allows them to monitor their speaking voice so that a soft quality and good speech timing may be achieved. However, such characteristics cannot be evaluated in the hearing-impaired child who has little or no speech.

After a 3-year period of therapy and amplification, the voice quality, timing (duration), rate, and rhythm will vary in a child with a severe to profound hearing loss. During this period the performance of the hearing aid should be assessed by an aided soundfield audiogram, which will evaluate the subject, the hearing aid, and the mold. Because of the limited expressive language skills in young children, discrimination scores usually cannot be elicited, especially in the presence of a severe to profound hearing loss.

Aided audiograms, as well as residual hearing levels, must be monitored.

A hearing aid analyzer should be used to measure the hearing aid output performance. This equipment will give information regarding frequency response, level of gain at each frequency and, in some cases, information on the status of the mold itself. It will also detect distortion in the aid that cannot be discerned by the examiner's ear.

There is no substitute for astute observation by the educator and parents in monitoring the hearing acuity of a hearing-impaired child and the function of his/her hearing aid. If one detects a difference in hearing and listening ability at any point, it is necessary to examine the hearing (aided and unaided), analyze the hearing aid, and examine for middle ear pathology.

Although well-documented, medically and scientifically adequate case studies implicating trauma from hearing aids are few and reflect only a small percentage (approximately 0.2 percent) of the total hearing-impaired pediatric population reported, prescription of powerful hearing aids should be determined professionally for each individual patient. There is no doubt that meticulous care should be taken in monitoring children using powerful hearing devices and to avoid improperly fitted and excessively powerful instrumentation.

Oftentimes the cause of progression in the hearing loss cannot be ascertained. Nevertheless, when one is confronted with an aided child who manifests a progression of his/her loss, the function of the middle ear must be examined, especially for the presence of negative pressure or fluid accumulation. Additional examination for medical causes of the progression including hereditary factors, viral origin of SNHL, hydrops and calcification of the cochlea with meningitis, perilymphatic fistulae, and autoimmune inner ear disease should also be undertaken. Should progression in a hearing loss be determined to be related to the hearing aid usage, it should cause a temporary threshold shift and the hearing thresholds should improve with removal of the hearing aid.

Cochlear Implant: Discussion of the use of the cochlear implant is best approached with judicious caution. At the present time, there is not enough information available to determine which device is best for which patient. This is due, at least in part, to the nature of the procedure, which does not make the device available for comparison studies. In addition, the long range ramifications are yet to be ascertained. Nevertheless, it should be clearly stated that a cochlear implant has provided limited, but significant benefits in some adults, such as the ability to recognize environmental sounds and suprasegmentals of speech.

The use of this procedure in children is still considered experimental. In any case, the cochlear implant should be considered only when there is no measurable improvement with the use of a hearing aid or aids. Amplification by aids still gives the patient more benefit than the present day cochlear implant.

Habilitation

There are several methods for training hearing-impaired children including the use of hearing alone (auditory), visual (speech reading), and the use of signs and/or finger spelling with speech (total communication). It would be foolish to assume that any one method is a panacea. Nevertheless, in today's cosmopolitan-based alacritous society the development of communication skills is imperative. Language is a prerequisite to the adequate development of these skills, and the development of speech is an invaluable asset to the hearing-impaired child.

Mainstreaming: Section 504 of the Rehabilitation Act of 1973 and Public Law 94–142, the Education for All Handicapped Children Act of 1975, focus on mainstreaming handicapped children in the educational process. Both Federal laws illustrate the awareness of Congress of the advantages of educating handicapped children with "normal" children (27), although the former relates more to postsecondary education and discrimination of handicapped students.

Simply stated, these laws require that, in order to receive Federal funds, State and local educational agencies must provide a "free and appropriate education" for all handicapped children, but parents and educators do not always see eye-to-eye on just what "appropriate education" for a handicapped child is. Unfortunately, the language of these laws is ambiguous. Tragically, for hearing-impaired children, the Supreme Court has chosen to interpret these laws to mandate facilities to educate handicapped students only to a "passing" level and not to the level at which the child's full academic potential will be realized. Their decision in *Hendrick Hudson Central School District* v. *Rowley* (1982) is an example of the Court's myopic philosophy in this regard. The only recourse at this point would seem to be a lobby to amend Public Law 94–142 in more explicit and specific language that would insure each handicapped child an education adequate to achieve his or her full potential and commensurate with the opportunity provided nonhandicapped children.

The education and habilitation of hearing-impaired children requires the cooperation of parents, educators, audiologists, physicians, speech pathologists, industrial engineers, and researchers and legislators. Unfortunately, educators of the hearing impaired are often not included in the decisionmaking process regarding the academic and habilitative placement of a hearing-impaired child. Even more regrettable, indeed inexcusable, is that, for the most part, physicians who are in the position of treating young children (pediatricians, family doctors, and ENT doctors) are not well-informed about the various habilitative methods available to their newly identified hearing-impaired patient.

Summary

There is little debate over the right of hearing-impaired children to have the opportunity to develop their potentials to the fullest degree. The argument, today, is centered on the best way to achieve this goal. The propensity to develop new programs is economically unsound and most often results in redundancies of parts of existing programs and produces confusion to those involved in the selection process, especially the parents of a hearing-impaired child.

The status of habilitating and educating the hearing-impaired child today is a montage of strong differences in philosophy associated with an apparent reluctance to join forces. There is a great need for an unbiased agency, knowledgeable in the many-faceted and correlated manifestations of physical handicaps, as well as the intricacies of special education, to evaluate the pros and cons of the existing methods of educating and habilitating hearing-impaired children. A sensible decision cannot be made by parents until they are provided with some insight, based on an agreement of general principles, into the value of a specific program of habilitating and educating their hearing-impaired child.

Alleviating the problems inherent in a hearing impairment should be a collective effort directed to intelligent social awareness of the entire issue of deaf education (28). An appalling ignorance and lack of sensitivity regarding the abilities and potential of hearing-impaired persons is displayed by far too many of those in a position to be supportive, if not innovative, including the U.S. Supreme Court (27).

Undoubtedly, legislation will be necessary if progress is to be made in the education and habilitation of hearing-impaired children. Even before this, however, the early identification of an infant with a hearing loss and prompt intervention should be a goal of all those involved in pediatric health care.

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Infant Hearing Screening: The Identification Challenge

By Judith A. Marlowe, Ph.D.[*]

Introduction: Hearing and Human Development

Hearing plays a critical and reciprocal role in human psychosocial development. Given sufficient interaction with the environment, auditory skill development triggers verbal, cognitive, and social growth, and vice versa. Contemporary studies have convincingly illustrated the infant's ability to selectively respond to environmental stimuli and to process it (Dunst, 1981; Eisenberg, 1976; Northern and Downs, 1984). Moreover, research has demonstrated that infants are capable of seeking out stimulation, molding the behavior of caregivers, and controlling their sensory input with greater competence than was previously recognized (Siqueland, 1968; Dunst, 1981; Rediehs, 1982). As a result of this emerging research, the fundamental significance of hearing in human development has been recognized by professionals in a variety of disciplines and the effects of auditory deprivation have been more fully explored.

Auditory Deprivation: Developmental Consequences

The high prevalence of hearing loss as the second most common chronic disease in the United States after arthritis has afforded numerous opportunities to observe the long-term effects of auditory deprivation upon the individual and society. The picture is bleak. At age 20, despite years of special education, the average academic achievement level of the hearing impaired is frozen at grade four. An 18 percent gap between national

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median income for the hearing impaired compared to the normally hearing population means billions of dollars lost to the national economy (Schein and Delk, 1974; Downs, 1986; Northern and Downs, 1984). In addition to the financial losses described, more than $500 million is spent annually to provide special services to children whose diminished communication skills do not permit adequate function in regular classrooms (Schein and Delk, 1974).

It is essential to investigate the anatomical basis for these educational and economic limitations. Although it has been documented that total deafness is relatively rare, occurring in fewer than 10 percent of the hearing impaired, patterns of late diagnosis compromise early periods during the maturation process which apparently are critically linked to the emergence of functional patterns. A "selective plasticity" is attributed to the auditory system during these early critical periods and even limited acoustic stimulation may be beneficial in controlling the degree of "handicap" associated with hearing loss (Fisch, 1983). Empirical studies of humans have permitted hypotheses regarding the benefit of acoustic input to be formulated, but experimental neuropsychiatric studies have contributed some especially provocative insights.

Systematic cortical ablation in animals followed by sensory stimulation of the peripheral receptors corresponding to the depopulated area of the central nervous system resulted in an "invasion" by nerve cells from adjacent areas restoring function to some degree (Van der Loos and Woolsy, 1973). The suggestion that stimulation may restore function challenges earlier beliefs that dysfunction of neural components results in permanent, irreversible dysfunction (Welsh et al., 1983; Fisch, 1983; Downs, 1981). Although similarly definitive studies with humans are out of the question, an increasing number of retrospective studies have delineated the differences between individuals with uninterrupted and presumably adequate auditory stimulation and those groups who were not auditorily stimulated on a consistent basis (Downs, 1981; Ventry, 1980; Zinkun et al., 1978; Pappas, 1985).

It is striking that documented differences are evident, not only in areas directly related to language, but also in psychological and behavioral patterns that alter many dimensions of social life including the ability to cope with emotional stress. Inattentiveness, impulsivity, irritability, and inconsistency have been observed to a greater degree accompanying significant deficits in auditory sequential memory, phonology, and syntactic complexity (Zinkus et al., 1978; Fisch, 1983; Sanger et al., 1985; Pappas, 1985; Hunter–Duvar, 1983). The emergence of a "hearing personality" is ultimately threatened by even episodic auditory deprivation (Pollack, 1970).

The relationship between intellectual maturation and the integrity of the auditory system carries with it important implications. While the jury may still be out with regard to the significance of prenatal auditory experience, there is unanimity with regard to the neonate. It matters greatly what and how an infant hears from the moment of birth. Auditory perception must be global, diurnal, and nocturnal in order to facilitate the integrated development of the child (Fisch, 1983; Wilson and Gerber, 1983; Pollack, 1970; Northern and Downs, 1984). Knowledge of the effects of the sound environments to which infants are exposed has been limited and their importance undoubtedly underestimated. Determining optimum quality and quantity criteria for early auditory stimulation has yet to be satisfactorily accomplished (Kagan, 1980; Spitz, 1965).

More certain, however, is the unfortunate pattern of sequelae linked to auditory deprivation and it is by examining the consequences of a poor auditory environment that guidelines for adequate acoustic stimulation may be suggested.

The Identification Imperative

The accumulated weight of evidence from neuroanatomical models, careful analysis of educational strategies, and behavioral profiles reveals the longitudinal and cumulative devastation of hearing loss. It is now apparent that hearing is most crucial immediately after birth and that there can be no satisfaction with identification and diagnosis delays that exceed 17–18 months as reported by Bergstrom et al. (1971) and Shah (1978). Furthermore, it is clear that the target of early identification programs should not be confined only to severe and profound hearing loss when even mild deficits are known to impose such dramatic constraints upon learning and achievement. If, in the absence of auditory stimulation, the auditory centers of the brain are underdeveloped, should not the corollary to early identification be a fierce dedication to the maximal use of residual hearing?

The identification imperative which has served as the impetus for developing infant hearing assessment programs is the product of significant social change generated by:

1. Evidence that infancy is a critical stage in psychosocial development.

2. Increased support for individuals with disabilities which stressed societal integration rather than exclusion.

3. Inquiry into the effects of sensory deprivation and the possibility of reversing the effects.

4. Technology which generated new testing techniques, improved test reliability, and increased ease of administration.

5. Innovations in flexible program design and creative human resources utilization.

Infancy and Psychosocial Development

Attitudes toward infancy and child development have changed significantly since the Enlightenment. The application of reason to biological and social phenomena and the analysis of events in order to influence and control their outcome exerted a profound impact upon childrearing practices (Wishy, 1969; Aries, 1962). A more nurturing approach to child rearing, originally motivated by religious and patriotic aspirations, paved the way for greater attention to providing optimum health and educational standards.

Attitudes Toward Disability

While prospects brightened for the future of children in general, the outlook continued to be bleak for the disabled, especially the deaf. Ignorance, superstition, and discrimination dogged their paths, limited their acceptance, and impeded any progressive efforts on their behalf (Bender 1960; Richardson, 1982). It was not until 1871 that Alexander Graham Bell suggested that early identification and more aggressive efforts to equip the deaf for oral communication would benefit not only the deaf, but society as a whole. A more positive attitude toward this group gradually began to erode the traditional belief that the hearing impaired were not fully human (Bruce, 1972). The notable success of Helen Keller, as well as newly available transportation and printed media to circulate the chronicle of her success, enlarged the impact of her victory over silence and transformed a private success into public triumph (Lash, 1980). An interest in achieving similar results for other children thus took hold in America .

A transformation of attitudes was necessary to attain this goal, however. The identification of individuals as "different," a long-established consequence of having a disability, encouraged labelling and stereotypical thinking among others. As a result, limits upon role expectations, achievement expectations, behavior, and opportunities were imposed (Altman, 1981). For more than

40 years it was suggested that these attitudes constituted the major handicap the disabled faced (Shattuck, 19 46; Buscaglia, 1981; Altman, 1981; Bender, 1970). Amid growing advocacy by professional societies and consumer groups, legislation to improve access to the resources of the public educational system was constructed and passed as The Education For All Handicapped Children Act of 1975 (P.L. 94–142) (McConnell, 1984). Significantly, it mandated the identification and evaluation of children requiring special services, as well as placement in the least restrictive environment (Northern and Downs, 1984; McConnell, 1984). As a result of its implementation, efforts to achieve educational integration of children with disabilities intensified and emphasis on treating sensory deficits early necessarily increased to facilitate this integration.

The concept of screening to detect disease in its early stages, in order to arrest its progression and ameliorate its effects, has become an accepted public health mandate as the medical care delivery system has increased its emphasis on prevention (Ferguson, 1980). Among the many conditions that merit the creation of screening programs, hearing ranks highest in yield (Downs, 1978). Incidence estimates range from 1:1,000 or 1:750 healthy newborns to 1:50 survivors of the neonatal intensive care unit (Marlowe, 1982; Northern and Downs, 1984; Salamy and Amochaev, 1984).

Despite this high incidence, hearing is not routinely included in the various assessment batteries used in hospital nurseries. Other less common metabolic conditions such as phenolkytenuria (PKU) and Maple Syrup Urine Disease, etc. are screened in every newborn although these disorders occur in 1 in 14,000 births (Downs, 1978). Further, aggressive investigation of parental suspicion of hearing loss has not been forthcoming by physicians, contributing to delays of up to 60 months in reaching a firm diagnosis and establishing habilitative programs (Simmons, 1980; Shah, 1978).

Since the emergence of pediatric audiology services and early attempts to develop acceptable testing techniques for infants, there has been a persistent effort to discover a method for reliable early diagnosis of hearing loss (Pollack, 1970; Marlowe, 1982; Northern and Downs, 1984). Historically, the elusive goal was a simple, flexible set of procedures which were broadly applicable, easily repeatable, and highly reliable in discovering significant hearing loss. Cost–effectiveness was added to these requirements as the realities of modern economics challenged a commitment to mitigating the handicapping effects of auditory deprivation (Northern and Downs, 1984).

Examination of the recognized goals for a successful public health screening program reveals that hearing identification meets every criteria. These include:

1. Sufficiently frequent occurrence and serious consequence to merit mass screening.
2. Treatment or prevention measures available that will alter the usual outcome.
3. Diagnosis and treatment facilities available.
4. Screening costs commensurate with expected benefit.
5. Valid screening test that differentiates affected from nonaffected individuals.
6. Public acceptance.

(Northern and Downs, 1984)

The remaining challenge to be met was the development of a testing technique with sufficient sensitivity and specificity that truly affected subjects will fail the test.

Although screening programs to identify school-age children with hearing disorders were well-established by 1930, slower development of infant testing techniques retarded progress in this area (Downs, 1978). The principal goal of newborn screening was to identify all hearing losses present at birth in order to begin treatment or habilitation that would facilitate the achievement of maximum function. The recognition that 60–70 percent of all severe to profound hearing losses are present at birth, or shortly thereafter, stimulated interest in hearing screening prior to discharge from the hospital nursery. It was also determined that the nursery was virtually the only location where the majority of infants could be made readily available for testing and was the optimal setting if early identification programs were to be feasible (Downs and Sterritt, 1964). Beyond agreement that early identification was recommended, there was less certainty regarding how this should be accomplished. A review of the history of infant hearing screening programs reveals a diversity of models that vary in subject, selection, testing methodology, pass–fail criteria, and followup strategies. A variety of testing models have been proposed and discarded as unreliable, too subjective, lacking in specificity, or as too expensive (Downs and Sterritt, 1964; Gerkin and Downs, 1984). Although advantages of early intervention have been recognized, the ability to implement an efficient, workable hearing screening program has remained somewhat controversial (Downs, 1982; Salamy and Amochaev, 1984).

Basically, there are three approaches to infant hearing screening. The behavioral approach relies upon a startle response elicited by a loud sound as evidence of hearing. It has been utilized since the 1950s but is limited by its inability to identify mild to moderate loss or to identify unilateral hearing deficits. Moreover, there is difficulty in controlling examiner bias (subjective differentiation) in evaluating the presence or absence of an appropriate response (Ling, 1970; Simmons, 1978; Downs, 1970; Mencher, 1977). The propensity of the newborn to habituate to subsequent stimuli has also been cited as a disadvantage (Eisenberg, 1976).

Initial enthusiasm for mass behavioral audiometric screening was dampened by the report of the Joint Committee on Newborn Screening (1970) that the results of such pioneer programs were "inconsistent and misleading," primarily due to high false positive and false negative results. Although abandoned on a larger scale, behavioral screening of high risk babies was recommended (Northern and Downs; 1978).

A promising solution to the dilemma appeared in the form of the Crib-o-gram developed at Stanford University Medical Center (Simmons, 1974). This automated screening device could easily be operated by nursery personnel or volunteers. It combined the advantage of acquiring behavioral response to sound with an avoidance of observer bias. Although promising initially, its yield of false negatives continued to reflect its sensitivity to only severe and profound hearing loss and the inability to isolate each ear for monaural testing.

Evaluation of the Crib-o-gram failed to demonstrate sufficient advantages in administration and reliability to offset its disadvantages. In recent years, the ABR overtook the Crib-o-gram as the method of choice among a number of investigators (Galambos, 1982; Durieux-Smith, 1985; Salamy, 1984; Galambos et al., 1984; Mencher, 1977; Stein, 1983; Jacobson and Morehouse, 1983; Stein, 1984; Jacobson and Hyde, 1986). The third technique, Auditory Brainstem Response (ABR) testing, relies upon computer averaging of bioelectrical activity generated with click stimuli. Relatively independent of patient state, capable of monaural testing, and sensitive to even mild hearing deficits, it has been regarded as the technique of choice by a number of authorities (Salamy and Amochaev, 1984; Galambos, 1982; Alberti, 1983; Stein, 1983; Shannon, 1984; Jacobson, 1984), but has had the disadvantage of requiring costly instrumentation and highly trained operators (Galambos, 1984; Salamy, 1984).

Still unresolved were questions regarding which infants to screen despite these advanced testing techniques (Downs, 1986; Jacobson and Hyde, 1986; Mahoney, 1986). ABR screening of the general population was considered, but concerns about cost and overreferral tempered enthusiasm for such an undertaking. Published ABR studies focused on the Level III intensive care infant (Jacobson and Morehouse, 1983; Stein et al., 1983; Cevette, 1983; Galambos et al., 1984; Salamy, 1984; Fria, 1985; Sanders et al., 1985). The reports of mass screening programs in countries where the majority of the population was served through socialized medical services contributed to skepticism regarding the feasibility of large-scale testing in the American medical care delivery system (Feinmesser and Tell, 1976; Stensland-Junker, 1974; Borkowska-Gaertig et al., 1974; Downs, 1986). Accounts of screening programs in the United States revealed a dismaying inability to follow up suspected losses (Jacobson and Hyde, 1986; Stein, 1986; Mahoney, 1986). Since the stated purpose of screening programs was the identification of those who required additional diagnostic evaluation (Northern and Downs, 1984; Stein, 1986), screening programs which freed the paid professional's time for followup and reduced the cost per test to affordable levels offered greater potential for acceptance (Gerkin and Weyland, 1984; Salamy and Weyland, 1986).

Innovative Programming—Workable Solutions

In 1979 the Infant Hearing Assessment Foundation (IHAF) was established as an outgrowth of a Telephone Pioneer service project. Its purpose was to design a workable hearing screening program to honor the memory of Alexander Graham Bell on the centennial of his invention of the telephone since Bell was, by training, an educator of the deaf (Salamy and Amochaev, 1984).

The IHAF format developed introduced a number of novel characteristics never before combined in an infant hearing identification effort. In addition to establishing a nonprofit foundation and utilizing a volunteer labor force, the IHAF designed a microprocessor based instrument that did not require operation by clinicians but could be handled by a lay person after a relatively brief period of instruction (Salamy, Somerville, Patterson, 1982). The availability of the equipment through the foundation, with no financial outlay, made the prospect of establishing an infant hearing assessment program less risky to cost conscious hospital administrations and encouraged them to consider the community service aspects of offering such services. The need for a single supervising audiologist to direct, supervise, and train the volunteers and to interpret the test results reduced their capital commitment further. Clinically, the test instruments, dedicated for the purpose of averaging evoked potentials of early brainstem origin, met the need for a state of the art protocol and hard copy data to satisfy audiological and administrative requirements which had, in the past, created some disenchantment with earlier screening procedures (Salamy, Somerville and Patterson, 1982; Salamy, Amochaev, and Somerville, 1983).

While the Infant Hearing Assessment Foundation has sponsored a unique nationwide network of 45 programs, Winter Park Memorial Hospital (WPMH), in Winter Park, Florida, was the first and, to date, only location offering the ABR screening to all infants in the well-baby and Level II Care nurseries. In contrast, other IHAF programs serve mainly neonatal intensive care units (NICU) and "risk" infants from the regular nursery.

Program Description and Administration

The infant hearing assessment program at Winter Park Memorial Hospital (WPMH) was initiated in September 1983. Although the original objective was to screen only high-risk infants, the cooperation of the professional staff, availability of sufficient volunteer personnel, and interest in exploring the feasibility and acceptability of a mass screening program led to a reformulation of the plans.

As a result, infant hearing assessment was included among the standing orders in the WPMH nursery. All parents are presented a consent form to be signed within the first 36 hours after birth.

A $25.00 charge for the service covers program materials, test interpretation, and supplies. There is no direct fee for test administration. The test is never denied to a patient who wishes to participate, but is unable to pay.

The Results 1983–1986

The era of early infant hearing assessment programs in the United States reinforced a belief that hearing screening was an exceedingly difficult and expensive activity.

An evaluation of the early data accumulated by the Winter Park Memorial Hospital Infant Hearing Assessment Program, however, has demonstrated that a volunteer-based screening program for the general population of newborns can not only survive, but also thrive.

Table 1
IHA Results in WPMH Nursery

	9/1/83-12/31/83*	1/1/84-12/31/84	1/1/85-9/30/85
NYS Census	601	1,763	1,215
IBA Screens	87 (64.39%)	1,391 (78.81%)	1,068 (87.9%)

*Services suspended for 3 weeks due to equipment malfunction.

A steady increase in parental consent to the screening was evident in 1984 and 1985. This corresponded to increased print and electronic media attention.

Although public acceptance of the program was demonstrated by the high rate of participation, there were parents who declined the service. Five common reasons were cited in declining to participate. Listed in descending order of frequency, they were:

1. Disinterested in all elective procedures (circumcision, infant pictures, etc.).
2. Access to a relative or friend in hearing-related field who would test hearing.
3. Confidence that any hearing loss would be promptly noticed by mother due to previous experience with infants.
4. Belief that visual inspection of the ears (otoscopy) performed by pediatrician verified hearing levels.
5. Belief that newborns were too young to be accurately tested.

Since program administration guidelines provided for testing all infants regardless of ability to pay, finances were never responsible for parental refusal.

Program Costs

Reliance upon volunteers figured significantly in reducing cost factors associated with establishing the program. In determining feasibility, there were only two factors: professional personnel and consumable supplies. Since the SYNAP Unit was provided by IHAF, no equipment purchase was necessary. A paid director (15 hours per week) and consumable supplies (forms, electrodes, paste, tape, paper) constituted the only expenses. To compare and contrast expenditures, Fria's (1985) account of cost determination for nonsubsidized infant screening programs was utilized. Table 2 summarizes program costs based upon the 1984 population tested and illustrated the advantage of an IHAF volunteer-based program for a community hospital such as WPMH.

Table 2
1 Year Cost Comparison IHAF Program vs. Self-Financed

	IHAF	Self-Financed
Equipment	- 0 -	$ 8,000
Staff	$20,000	44,600
Overhead	8,000	6,300
Total	$28,000	$78,900

$$\text{1984 Cost Per Test} = \frac{\text{Total Program Cost}}{\text{1,391 Tests}}$$

	IHAF	Self-Financed
1984 Cost/Test	$20.13	$56.72

"At Risk" Determination

In addition to ABR screening of participating infants, an "at risk" determination was made by the director/audiologist on the basis of the search of the medical chart completed by the volunteers. Any infant who exhibited one or more risk factors was placed in a "monitor closely" category regardless of the outcome of the nursery screening. Careful history at well-baby checks and immediate rescreen if parental suspicion became aroused were recommended to the physician. Table 3 indicates the occurrence of each risk factor established by the Joint Committee on Newborn Hearing Screening. Multiple risk factors were present in some infants accounting for the disagreement between total risk factors and number of infants.

Table 3
Risk Factors in WPMH Population

IHA Participants	387	1,391	1,068
At Risk	14 (3.61%)	95 (6.82%)	68(6.36%)
Asphyxia	3	13	14
Bacterial Infection	0	0	7
Congenital virus	4	22	6
Defects of Head & Neck	1	7	7
Elevated Bilirubin	0	0	0
Family History	8	46	33
Gram Birthweight < 1500	2	7	2

Over the entire period of this study 5.87 percent of all participating infants were found to be "at risk" for hearing loss. Northern and Downs (1984) have suggested that 2–8 percent of the general population falls in the at–risk category and this appeared to be the case in the WPMH nursery.

ABR Screening Outcome

An ongoing concern expressed by critics of ABR screening was the belief that an excessive number of false failures (false positives) jeopardized the utility of the ABR as a screening tool. In a program where trained volunteers conducted the test, the potential for an unacceptable number of false failures would, logically, appear greater. Yet, comparison with other studies which reported pass–fail percentages ranging from 5.33 percent (N=75) to 19.88 percent (N=176) obtained by professionals and technicians revealed that was not the case (Fria, 1985).

As observed in table 4, the percentage of WPMH screenings passed exceeded 85 percent from the beginning of the program. Increases in this percentage were attributed to program developments which, by 1985, provided for automatic rescreening of "inconclusive" babies prior to discharge.

Table 4
ABR Results Summarized by Year

	1983	1984	1985
Total Tests	387	1,391	1,068
Pass	333 (86.05%)	1,235 (88.79%)	1,000 (93.63%)
Inconclusive	54 (13.95%)	156 (11.21%)	68 (6.37%)

Thus, our program has demonstrated that volunteers working a 2–3 hour shift, weekly or biweekly, can adequately staff a program operating 7 days a week under the direction of a single professional. A high demand for testing has been met, yet test quality has allowed confident interpretation of more than 85 percent of the results. False results were not increased and the percentage of infants requiring followup corresponded to the results of other investigators using clinical professionals. The net result was an affordable screening program for Winter Park Hospital. The cost billed to insurance was less than the cost of a total and direct bilirubin laboratory test, a commonly ordered procedure for newborns in the nursery. Hearing screening has become an integral part of the commitment to healthy starts for every baby admitted to the nursery.

Attention to the general newborn population rather than exclusive testing of the "at risk" group suggested the benefits to be derived from screening on a larger scale. The sensitivity and specificity of the ABR screening program were not compromised by including the entire nursery population and infants not "at risk" were identified among the hearing–impaired groups. The information obtained from the screening served as effective baseline data for those infants who developed illnesses associated with hearing loss after the neonatal period. No anxiety was associated with the procedure; it was a routine aspect of nursery care along with temperature taking and hematocrits. Moreover, a provocative indication of conductive deficits suggested by delayed latencies may provide future insights helpful in targeting those infants particularly prone to middle ear effusion. In view of the reported 33 percent incidence rate for chronic middle ear disease among very young children this observed trend from our data deserves future study.

Downs (1986) asserts that:

> For the future, the ideal neonatal screening program would be one that tests every baby in the newborn nurseries, because the high-risk register will always have reduced sensitivity, despite all the efforts to make it more inclusive of all etiologies. Such testing of the entire newborn population is the face of the future for neonatal hearing screening.

The Winter Park Memorial Hospital Infant Hearing Assessment Program is a glimpse at this "face of the future" which must focus less on whether screening should be offered and why screening is important. Rather, the focus must be on when and whom to test. Increasingly, questions have arisen regarding the yield obtained by exclusive dependence upon the risk register and screening of intensive care nursery population. More authorities in the field are addressing the need for the question of mass screening to be addressed anew in light of advances made in electrophysiological testing. The validity of the ABR in contrast to behavioral testing warrants such reexamination (Eliachar, 1981; Gerkin, 1986; Downs, 1986).

The concept of infant hearing screening must progress from a recommended ideal to an established reality. Although there are no published estimates of the number of screening programs in the United States currently, they are known to be underway in only 17 States (Mahoney, 1984). Further improvements in infant hearing screening program implementation may be derived from careful study of programs already in place, as well as coordinated descriptive and experimental research conducted cooperatively among these sites. The ultimate achievement of effective infant screening programs lies ahead in an era whose changes are only now being "imaged" and planned. Naisbitt (1984) has eloquently captured the essence of this period of change between eras, in his metaphorical "time of the parenthesis" ". . .a great and yeasty time, filled with opportunity."

The prospect of discovering hearing loss in infants even before parental suspicions of absent or ambiguous responses, even before the well-known decrease in infant babbling, and long before the social and emotional consequences of hearing loss became apparent, promises to dramatically improve the outlook not only for the hearing-impaired child's eventual success in achieving full potential, but also for the prevention of hearing handicap. The delivery of highly refined services to promote confident and immediate identification essential to appropriate medical care, amplification, and auditory stimulation is more than a challenge; it is perhaps the most exciting opportunity we face.

Part II. The Right to an Education

(a) Options and Settings

Modes of Communication in Educational Settings

By Daniel Ling, Ph.D.*

Introduction

My instructions for preparation of this paper were to describe and briefly discuss (a) the three modes of communication used in educational settings, (b) the rights of children to options involving these modes and settings, and (c) the extent to which current options cater sufficiently for the needs of hearing-impaired children; in short, to present a short state-of-the art review. Such a review has limitations other than those imposed by brevity, and two of them deserve mention. On one hand, many of the research studies required to document certain aspects of the topic either have not been undertaken or have been carried out only to yield equivocal results. On the other, one is dealing with a field that is changing and must continue to change in response to the opportunities afforded by burgeoning technology. This paper, then, tentatively describes the rights of children needing services in a field that is somewhat isolated from the mainstream, one in which conflict is rife because strong traditions and convictions are constantly being challenged.

Modes of Communication

Three principal modes of communication are currently used with hearing-impaired children in educational settings: oral (spoken language) communication, total communication (sign language plus speech), and cued speech. The methods employed

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to develop communication within these modes and settings vary widely in relation to the skills and philosophies of educators and the perceived needs of the children they serve. The Rochester Method, a combination of fingerspelling and speech (Quigley, 1969) is no longer in widespread use and will not, therefore, be considered further here.

Hearing impairment may be present from birth or be acquired at a later stage. It can range in degree from an auditory defect so slight that its presence can be noticed only under certain adverse conditions, to a deficit so great that little or no sound is ever perceived as such even through the most powerful hearing aids available. On this account, and because individual differences similar to those found among normally hearing children are also present among hearing-impaired children, a variety of communication modes and educational options are required to meet hearing-impaired children's needs.

Oral communication is employed in settings where the primary goal is to develop speech reception and speech production skills that will permit children to acquire the language of the country in which they live, to learn through the use of spoken language in school, and to function later as independent adults through the use of speech communication in society-at-large. The majority of hearing-impaired children have useful residual hearing and can therefore benefit from hearing aids. Hence, in modern oral programs, most children develop their spoken language communication through their use and/or through speechreading (described in some detail below) and speech training. Recent advances in technology have led to improvements in hearing aids (Seewald, Ross, and Spiro, 1985) and the development of devices such as cochlear implants and tactile aids (Pickett and MacFarland, 1985), all of which continually enhance the opportunities for hearing-impaired children to benefit from oral education. Well-trained teachers of the deaf are able to use both modern technological aids and traditional educational strategies to develop effective oral skills even in totally deaf children.

Options within oral settings include *auditory/verbal education* in which audition alone (without speechreading) is used for part of a child's training (Ling, 1984a), *aural/oral education* in which audition is used as the primary channel in multisensory training and *visual/oral* education in which the emphasis is on speechreading as the primary means of speech reception in multisensory training (Calvert, 1976). These aspects of oral education (not necessarily so labelled) have developed as distinct entities only over the past few decades as educators in oral settings have struggled to cater for individual differences and needs among hearing-impaired children. Not all children who have been placed in oral education settings have achieved intelligible spoken language communication. Currently, children whose progress in oral settings has proven to be unsatisfactory are usually transferred to total communication or cued speech programs.

Total Communication is employed in settings where the primary goal is to establish and develop communication by using sign (manual) language and any or all other means of interacting with the child. It has been defined by the Conference of Executives of American Schools for the Deaf as "a philosophy incorporating appropriate aural, manual, and oral modes of communication in order to establish effective communication with and among the hearing impaired." The use of sign language as the primary means of communication in settings that also offer speech teaching, reading, and writing is not new. Indeed, the practice can be traced back several centuries (Bender, 1960). It first became known as "total communication" in the late 1960s and since then the term and its abbreviation (TC) have come into widespread use.

A secondary, but major, goal of TC is that hearing-impaired children should learn to use English and, in particular, to read and to write it. A great deal of thought and research in recent years has, therefore, been devoted to reaching a better understanding of how American Sign Language (ASL) and/or its derivatives might affect the acquisition of English. Such research has shown that ASL is a language in its own right, distinct from others (Bellugi, 1972); hence it has an inherent potential to conflict with the learning of English. In attempts to avoid such conflict, several sign systems have been created. The purpose of these systems is to preserve and extend what some consider to be essential similarities between sign language and English (Wilbur, 1979). Among those in common use are Signed English (Siglish), variants of Seeing Essential English (SEE), Signing Exact English and Linguistics of Visual English (LOVE). It has been assumed that, when used simultaneously in combination with spoken English, such sign systems and spoken English will be mutually reinforcing (Garretson, 1976). However, as shown in more detail below, subsequent work has not given unequivocal support to this hypothesis. Further, many educators in TC settings remain unconvinced about the possible advantages of sign systems and consider that American Sign Language is no less appropriate as the basis of everyday communication and instruction if English is taught as a second language (Wilbur, 1979).

Options within total communication settings, like those within oral and cued speech settings, are subject to growth and development as further research leads to greater knowledge and better understanding of the issues. Currently, options vary mainly according to whether American Sign Language or one of the sign systems is used, and in the amount of emphasis that is given to spoken as compared to sign language acquisition. Although differences and similarities between and among a small number of TC settings have been described (Ling, 1984b), extensive detailed analyses of the options within TC programs have not yet been undertaken. A major difficulty in evaluating total communication options is that the long-term purposes of total communication have not been defined and accepted. Such a situation allows TC programs to function without their staff being duly accountable and children to be in educational settings where they can neither succeed nor, even with the most minimal of achievements, fail.

Cued speech was invented and first reported by Cornett (1967). It is employed in settings where the goal is to clarify the content of spoken language for children who rely principally on speechreading. Such clarification is achieved through the use of hand cues that are designed to disambiguate the visible patterns of speech, for ambiguity is at the root of major problems for those who have to rely entirely on speechreading—as subsequent paragraphs show. Cued speech can be employed to provide totally or near totally deaf children with a more complete pattern of spoken language than they would otherwise be able to perceive. Since cued speech is an adjunct to speechreading, a brief exploration of the visual aspects of speech is essential to understanding why the system was developed and what is known of its possibilities and limitations.

Speechreading, or lipreading as it is sometimes called, is the process of understanding speakers by means of watching the movements of the lips, tongue, jaw, and face. The variety of cues derived from speakers may also include observations of body posture (Berger, 1972). Considerable research has been undertaken to determine the characteristics of people who can speechread well and the nature of information provided by the visible aspects of speech. Those who speechread well usually have a good knowledge of spoken language, make use of both verbal and nonverbal contexts to provide cues on the intent of the message, and are able to synthesize the partial patterns perceived into a meaningful whole. The fragmentary nature of the information provided by speechreading has long been recognized, and the various sounds that look alike (such as p, b, m; t, d, n; or k and g) under different conditions have been specified by several workers since the landmark study of the topic by Woodward and Barber (1960).

In spite of the difficulties associated with speechreading, many hearing-impaired adults communicate extremely well through using it and are better able to follow oral interpreters, individuals who silently "shadow" the message under visual conditions that are advantageous to the viewer, than many public speakers. (Access to oral interpreting is accepted as a "right" by oral hearing-impaired persons just as manual interpretation is by those who sign). It is, however, generally recognized that the most efficient speechreaders are those who can supplement the visual information available with additional input—usually with parallel information on the speech signal received through another sense modality (Montgomery, Walden, Schwartz, and Prosek, 1984). The greatest gains in performance are achieved when the information provided through the other sense modality is not simply redundant, but complementary, to the visible aspects of speech. Thus, for example, since vocalization and voice patterns (intensity, duration, and fundamental frequency) are not visible, speechreading tends to be greatly enhanced by the use of even minimal levels of low frequency audition, through which these important components of speech (which carry prosody) can usually be heard. The advantages of tactile aids are also shown most clearly when they are used to complement speechreading. Indeed, the thrust of modern research on speechreading is to determine more precisely the relative contributions of various nonvisible aspects of speech to success in the task (Breeuwer and Plomp, 1984, 1985; Grant, Ardell, Kuhl, and Sparks, 1985).

Cued speech was designed to supplement speechreading by utilizing four hand positions and eight finger configurations to differentiate speech patterns that look alike on the lips. Either hand can be used to formulate the cues, all of which are made close to the mouth of the speaker. The hand positions are used to differentiate vowels and the finger configurations, consonants. The system is not difficult to learn. An average person can become completely familiar with them (but not fluent in their use) in less than 10 hours. It has been clearly demonstrated that cued speech can permit the reception of speech at extremely high (>90 percent) levels of accuracy (see Nicholls and Ling, 1980).

Further research on the system is required but, probably more for logistical than theoretical reasons, cued speech is not (yet) in very widespread use. Because it uses hand cues it is incompatible with the simultaneous use of sign. Because it involves a manual component it has not been widely accepted as an oral method, although the writer considers it to be such. Research has, however, shown that, at least for certain totally or near totally deaf children, it is a viable alternative to more widely accepted oral procedures, a noninvasive alternative to cochlear implant surgery, and a realistic alternative to total communication. It is particularly appropriate for those who cannot, for some reason, be fitted with or benefit from a hearing aid, a cochlear implant, or a tactile device as an aid to speechreading.

Educational Settings

Many different types of educational settings exist to cater for the wide variety of children who are hearing impaired. For the most part, the range of settings is determined by the age of the children, the type and degree of their hearing impairment, the levels of their communication skills and their educational achievements. However, other factors such as the presence of additional handicaps in the population, the geographical distribution of cases, the existence (or not) of programs for the detection of hearing impairment, fluctuations in the (relatively low) incidence of hearing impairment, funding considerations, and the prevailing philosophies of educational treatment all contribute to the provision or lack of provision of educational settings. The need for a wide variety of settings to cater for the various needs of exceptional children has been very effectively addressed by Deno (1970), who proposed a "cascade" model of special educational provision ranging from noneducational service that would be appropriate for some multiply handicapped children to complete full-time integration in mainstream settings with or without support services.

In theory, any one of the three communication modes addressed here could be used in any one of the many possible types of educational settings. In practice, speech communication is most readily learned in environments where most of a child's peers use speech (e.g., day classes and mainstream settings), and sign language is most commonly, and perhaps best, fostered in segregated residential school settings where most of the children use manual communication. A distinct range of services that involve parents and enhance the development of oral skills has emerged in recent decades. These services involve the initiation of treatment in early infancy and the educational treatment of school-aged children. They are briefly highlighted prior to discussion of specific rights relating to the selection of options.

Early infancy. There has been a major thrust towards early detection and treatment over the past few decades, with the emphasis shifting towards parent-centered rather than child-centered treatment. This thrust has come about largely on two accounts. First, there has been a widespread realization that parents who are with their children most waking hours are, if given appropriate guidance, much better able to foster progress in very young children than teachers or clinicians whose schedules permit them to see the child for only a few hours a week (Ling and Ling, 1978). Second, it is now accepted that such early intervention (help during the first 3–5 years) tends to be more efficient than simply leaving the children to learn through later schooling. These findings have been shown to pertain as much to hearing-impaired children (Mencher and Gerber, 1981) as to those with normal hearing (Bronfenbrenner, 1975).

In the early years, the most important task for all children—hearing or hearing impaired—is to learn their mother tongue and integrate its use with their physical, emotional, cognitive, and social development. Of course, not all parents are willing or able to provide adequate stimulation for their children in the early years—years that many consider to be of optimal, if not of critical, importance for satisfactory all-round development as well as for natural language learning. If high levels of competence in the use of spoken language (or, indeed, any form of communication) have not been achieved prior to schooling, then competition between the development of communication skills and the acquisition of academic competence will be an inevitable feature of formal education. Thus, not only parent-centered but child-centered programs are essential for some children in this age range.

The content of some exemplary early intervention programs that offer either oral or total communication options has been provided in two books edited by Ling (1984a, 1984b). Unfortunately, early intervention options are not available in all States across North America. Early oral options are particularly scarce.

Children in the age range 5–18 will normally be expected to receive some type of formal schooling. Placement will be in elementary or secondary schools, and possibly in some form of postsecondary education, according to age. To the greatest extent possible, however, parents and family should remain concerned and involved in the education of the child, since skills that are learned in school must be carried over into everyday living, and this can best be fostered through close interaction between caregivers and schools (Gerber, 1973). Whether formal education is provided for children in special or in regular schools or classes will depend not only on the training they have received in infancy, but on the type and degree of hearing impairment and other variables mentioned above.

With the enactment of Public Law 94–142, and the adoption of similar measures in other countries, the trend towards provision of education for hearing-impaired children within regular educational settings has become increasingly common throughout the Western World (Lynas, 1986).

The Right to an Option

As indicated above, the population of hearing-impaired children is characterized by a wide range of variables that can be adequately catered for only through the provision of numerous communication and educational options. It is axiomatic that no one method or collection of methods can meet the communication and educational needs of all those who are born with or acquire significant degrees of deafness.

Others in this forum will be addressing questions relating to legal rights. Here, the focus will be on the human or moral rights of all hearing-impaired children and their parents to receive optimal (re)habilitation and educational services.

Some of the questions relating to the sufficiency of modes of communication and educational settings will be raised in notes relating to certain of the rights enumerated below.

1.0. **Rights relating to communication modes in educational settings.**

1.1. **Hearing-impaired children have a right to receive the services and devices that are necessary to promote optimal development and use of their potential for speech reception and speech production.** Note: Otological and audiological services and technological devices can do much to optimize the effective hearing levels of most hearing-impaired children. Otological services include the provision of medical and surgical treatment. Audiological services include the measurement of hearing, the selection and fitting of hearing aids, and recommendations relating to the provision of other devices (such as tactile aids or cochlear implants), and followup to ensure that children's speech reception performance is maximally enhanced by the use of such devices. Such support services should be provided regardless of the communication mode employed or the educational setting selected.

1.2. **Parents have a right to receive fully documented reports on the hearing impairment of their children with complete and impartial explanation of its implications for the choice of their children's mode of communication and most appropriate educational setting.** Note: This right implies that parents are told the facts relating to the diagnosis of their children's hearing impairments, obtain a clear explanation of their audiograms, receive sound recommendations relating to assistive devices, and are given unbiased counselling in relation to options for (re)habilitative treatment. They must be provided with a clear understanding of the likely implications of choosing a given option, and assurance of their children's access to educational settings of their choice.

It is not uncommon for professionals to withhold information on the hearing levels of children, to present incomplete information on available settings, their goals and their suitability, and to deny parents the right to place their children in what the parents consider to be the most appropriate settings. It is important for parents to be aware that their early choices will have long-term consequences for their children. It is unacceptable for professionals to denigrate one communication mode or type of educational setting with a view to inducing parents or other professionals to accept their recommendations, or to quote unsubstantiated or out-of-date notions for the purpose of imposing a bias on others' thinking. Such practices are frequently reported and are even evidenced in publications (e.g., Mindel and Vernon, 1971).

1.3. **Hearing-impaired children have a right to placement in educational settings that offer one and only one of the three major modes of communication from the time of diagnosis throughout school life.** Note: There are no oral or cued speech options available in many States. In some localities parents are refused oral options on the grounds that oral skills can be developed optimally if their children are placed within a TC setting.

An essential of oral education is that children learn and grow within environments where their peers use the highest possible quality of speech as their natural means of communication. Available evidence indicates that the simultaneous use of sign and speech does not yield such advanced spoken English skills as oral communication without sign (Geers, Moog, and Schick, 1984; Pudlas, 1985). Bornstein, Saulnier, and Hamilton (1980) found that the use of simultaneous communication modes tended to impoverish both sign presentation and intelligible speech production. Similar findings demonstrating that such simultaneous presentation impoverishes the reception and/or the production of spoken language have been published by Marmor and Pettito (1979) and Cokely and Baker (1980). Further, findings that educational achievements among a large sample of hearing-impaired children were positively correlated with the use of speech and negatively correlated with the use of sign were published by Jensema and Trybus (1978).

1.4. **Children have a right to receive instruction in educational settings that most effectively develop the modes of communication chosen for the child by the parents.** Note: The most salient effect of hearing impairment is to prevent the reception of spoken language. The influence of hearing impairment on educational achievements is secondary to its effects on communication. It follows that, if priority in special education for hearing-impaired children is given to the enhancement of their levels of communication, opportunity to benefit from instruction in any setting is also enhanced. Should the chosen mode be oral education, then spoken language must be the primary means of instruction in an educational setting where sign language is not used by either teachers or peers. Should children be placed in a regular class, then the support services that ensure the continuity of growth in speech reception, speech production, and language (spoken and written) must be provided. Should the chosen mode be cued speech, then arrangements must be made for the children to be taught in that mode and/or to have cued speech interpretation and speech instruction as support services in regular classes. Should the chosen mode be total communication, the most advanced means of developing the oral/aural skills should be employed in addition to sign language.

1.5. **No child who has the potential to learn how to communicate fluently through speech should be denied the right to achieve that potential.** Note: This right implies that no child should be placed in an educational setting that would hinder the development of spoken language. The original statement of this right has been attributed to Alexander Graham Bell. It is regarded as a fundamental principle by members of the A.G. Bell Association for the Deaf.

1.6. **Each hearing-impaired child has a right to achieve educational and communication skills at an optimal rate.** Note: Educational settings must have sufficient flexibility of programming to permit this. Should a child be making more or less progress than his/her peers, then an alternative setting and/or appropriate support services that better suits the individuals' needs should be provided.

1.7. **Hearing-impaired children have a right to an ongoing review of their performance with regard to the suitability of the chosen communication mode and educational setting.** Note: In order to ensure that each child is achieving at an optimal rate, and particularly in the early stages of education, teaching must have a diagnostic component. Factors that hinder or enhance an individual's educational achievements and communication skills can thus be clearly identified. Where hindering factors are thus found, this review would permit appropriate remedial steps to be taken to ameliorate whatever adverse condition(s) exist(s).

1.8. **Hearing-impaired children have a right to be taught by educators who are adequately prepared for the task.** Note: Teachers have the primary responsibility for ensuring optimal communication and educational development among the hearing-impaired children in their care. Demographic and other attainment related studies show, without exception, that the standards of education and communication skills generally achieved by profoundly hearing-impaired children remain abysmally low. In spite of the predictions made by the early advocates of total communication, which has now been in widespread use for more than a decade, educational standards have not generally improved and spoken language skills have actually declined as the use of sign language and sign systems has become more extensive (Luterman, 1985).

The handicap of profound deafness can be treated more effectively than at present, as demonstrated by the superior results of exemplary programs. It would, therefore, seem judicious to attempt to upgrade the qualifications of those working with hearing-impaired children and their parents. Teachers (and related professionals such as audiologists and speech/language pathologists) must, therefore, be provided with more advanced and specialized training.

There are too few teacher preparation programs that cater for the training of professionals to work with very young hearing-impaired children and their parents. Such teachers need more knowledge of audiology, speech development, parent guidance, and diagnostic teaching than is generally provided. Their duties are not bounded by the walls of a classroom nor by the hours of a normal working day.

There are also too few teacher preparation programs that provide sufficient training for their students in the optimal development of spoken language communication skills. The vast majority of teacher preparation programs emphasize the use of sign language and thus bias the field towards the provision of total communication settings. In short, in the interests of promoting improved educational achievements among hearing-impaired children, the number and quality of teacher preparation programs must be extended and their variety increased to ensure that appropriately trained personnel are available for all types of educational settings and communication modes.

1.9. **Parents have a right to choose the type of education for their children that best suits their own philosophies and the children's needs as they perceive them.** Note: This right subsumes the right of parents to place their child in an educational setting that employs the communication mode of their choice. Many State and local education authorities do not offer a full range of options because it is administratively more convenient and often less expensive to restrict the range of communication modes and educational settings they provide. Such restriction is frequently justified with the argument that the philosophy of total communication embraces oral education and, accordingly, only segregated, total communication, settings are offered. The spurious nature of this argument and the gap that exists between philosophy and practice has been illustrated by Huntingdon and Watton (1986) who show that segregated educational settings in which sign language is used tend to provide the most restricted linguistic input and establish the poorest standards of language use by hearing-impaired children. Adherence to such unsubstantiated philosophy has, nevertheless, restricted the availability of oral education settings. It has also restricted the development of settings offering cued speech. Hence many parents have reported denial of access to this mode of communication to the cued speech office of Gallaudet College. This unwarranted bias towards total communication is indicated by the number of major centers of population in which only total communication is offered. There are no major centers in which only oral education or cued speech options exist. Such a situation calls for immediate redress.

2.0. **Rights primarily relating to educational options.**

2.1. **Hearing-impaired children have the right to early and efficient diagnosis of their auditory problems so that they may benefit from early intervention programs.** Note: It has been amply demonstrated that efficient procedures can lead to detection and diagnosis of deafness in the first few months of life (Gerber and Mencher, 1978), yet programs for the early detection and diagnosis of hearing impairment are not generally available in all areas, even where there is a major concentration of population.

2.2. **Parents of young hearing-impaired children have right of access to parent-infant programs in which they can learn to serve as the primary agents in the habilitation process.** Note: Intervention involving parents and children on a one-to-one basis through the first few years of life can lead to higher levels of overall development than intervention initiated at a later stage (Ling, 1984a, 1984b; Mencher and Gerber, 1981). However, such programs are not yet available in all areas, even where the population is sufficiently large to support them with ease.

2.3 **Parents who are unable, for whatever reason, to participate in early habilitation programs as the primary agents of intervention have a right to expect child-oriented programs to be available for their hearing-impaired children.** Note: It is important to ensure that hearing-impaired children's early years are constructively used to promote their language and general development. Simply because some parents are not in a position directly to help their children to the same extent as others does not indicate that their children should be assigned to settings that employ one communication mode rather than another. Such parents may be unable to develop optimal speech communication with their children but by the same token, they are in no better a position to relate to their children through sign. This is evidenced by a study of children in TC programs by Bornstein, Saulnier, and Hamilton (1980). They found that the majority of parents in their study did not, even over a period of several years, acquire sufficient signing skill to communicate with their children at any but the most elementary levels.

2.4. **Hearing-impaired children have the right to be placed in settings that offer communication modes and education appropriate to their established needs.** Note: A wide variety of needs exists among hearing-impaired children, of which treatment according to their potential to use the auditory channel in learning may usually be considered the most important. In general, the greater children's auditory impairment, the more likely it is that they will require structured teaching in order to succeed. Thus profoundly hearing-impaired children will need more and differently oriented types of speech training than children with mild or moderate hearing levels (Ling, 1976; Calvert and Silverman, 1983). *Ceteris paribus*, the vast majority of children with hearing impairment can, with appropriate help, learn to speak intelligibly, even normally (Ling and Milne, 1981). Many who are either totally or near totally deaf have learned to communicate well through spoken language, as evidenced by the members of the Oral Deaf Adults Section of the A.G. Bell Association for the Deaf.

The presence of total or near total deafness does not indicate that sign language instruction is essential, although for certain children (e.g., some children of signing deaf parents), it may be the mode of choice. In recent years efforts have been made to specify what additional characteristics should determine recommendations relating to placement in oral or TC settings (Northern and Downs, 1984; Geers and Moog; in preparation). While it is suggested that other factors, including the parents' competence and the child's intelligence and linguistic skills, play a part, there is no agreement on how valid measures of these factors can be obtained or what weightings should apply to them. Further, those working in this area have so far neglected to consider cued speech as one of the alternatives.

2.5. **Children have the right not to be assigned to a particular educational setting simply on the basis of their hearing levels.** Note: Audiograms are charts which show how well an individual can detect sounds of different frequency and intensity. Auditory speech reception requires that sounds are not only detected, but discriminated, identified, and comprehended. These higher level functions cannot be predicted from audiograms, but have to be determined through diagnostic teaching involving auditory learning. Children may have good direction skills but fail to develop higher level auditory processing abilities. Conversely, those who suffer even total hearing loss after they have acquired language can, if given appropriate assistance, maintain their speech communication and continue to attend regular schools.

In many States children are expected to attend State schools for the deaf and communicate principally through sign if their hearing impairment exceeds a certain level. Thus, many children who have the potential to remain or to become speaking individuals able to function in a hearing society are taught to regard themselves as "deaf" and unnecessarily, unwillingly, or involuntarily become part of a deaf subculture.

2.6. **Hearing-impaired children have the right to be educated with others of a similar age in a setting that promotes interaction with their peers.** Note: Common practice suggests acceptance of the precept that, where children are taught in groups, their peers should be of a similar age. Certain conditions such as the presence of serious forms of additional handicap may, however, justify their inclusion in classes with slightly older or younger children.

2.7. **Hearing-impaired children have right of access to age-appropriate programs and materials including access to college level programs and specialist training for employment.**

2.8. **Hearing-impaired children of a given age have the right to be taught by specialist teachers and/or clinicians who have received training that allows them to respond optimally to pupils and their age-related educational and communication needs.**

2.9. **Hearing-impaired children attending regular schools as integrated pupils have a right to such support services as are necessary to maintain their optimal performance in such educational settings.** Note: Lack of support services for hearing-impaired children attending regular schools as integrated pupils is widespread. It is not uncommon for children to fail, to experience undue frustration, or to make limited progress, particularly in communication and language skills, after a period in such settings without the necessary support.

3.0. **Rights relating to educational placement in respect of factors other than communication modes and educational options.**

3.1. **Children with handicaps in addition to hearing impairment have a right to educational placement that is appropriate both for the hearing impairment and the additional handicap.** Note: The proportion of hearing-impaired children who have handicaps in addition to hearing impairment appears to have risen steadily over the past few decades. This increase is due both to the use of better diagnostic procedures that permit recognition of the additional problems and to actual increases related to the causes of hearing impairment and other disabilities. Not all hearing-impaired children with additional disabilities require special education settings. For example, children whose additional impairments do not affect communication skills may be able to function most appropriately in a special school or class for hearing-impaired children or in an integrated (regular school) setting. Similarly, not all children with additional disabilities require sign language instruction. If, for innate reasons, certain children are low performers in one communication mode, they are likely to be so in any other mode (See Tweedie and Shroyer, 1982).

3.2. **Very young hearing-impaired children and their parents have a right to early intervention programs regardless of the family's geographical location.**

3.3. **Hearing-impaired children have a right to be placed in educational settings that are least disruptive for them and their families.** Note: While there is need for residential educational settings, and recognition that such facilities may provide the most appropriate education for some children, they are not necessarily the most appropriate for the least expensive possible settings for many children who live in remote geographical areas. It is possible to provide appropriate education in many remote areas as effectively and no more expensively by providing itinerant or locally based specialist teachers for certain children. The reverse may also be true: some children who are within easy reach of certain local educational facilities may be more appropriately treated in more distant residential settings (readers are referred to the preceding presentations for further discussion of this topic).

3.4. **Hearing-impaired children have a right to appropriate special educational help regardless of the difficulties that may have been countered by local education authorities in adjusting provision to respond to fluctuations in the incidence of hearing impairment.** Note: Individualized educational instruction for certain hearing-impaired children and appropriate help for their parents are constantly jeopardized by variation in the number of children who require it. This is particularly true in areas where there are small populations. No child should be deprived of optimal educational opportunities because it is administratively inconvenient for an educational authority to provide them.

3.5. **No hearing-impaired child should be denied access to appropriate educational help simply for financial reasons.** Note: Demographic surveys (e.g., Jensema and Trybus, 1978) show that children from lower socioeconomic groups tend to have much poorer communication skills and educational achievements than children from wealthier families and that their impoverished attainments are in great part due to the limited opportunities afforded them. The cost of providing alternative options has led many education authorities to restrict the choices open to parents. The cost of providing optimal opportunities for hearing-impaired children is too often assessed on the basis of the immediate cost of education without regard to the long-term benefits of ensuring that children acquire skills that will lead to them becoming productive adults, able to contribute maximally to society rather than becoming a long-term charge to it.

Concluding Remarks

Hearing-impaired children's access to a full range of options (educational settings and communication modes) is unduly restricted in many—probably most—regions in North America. The quality of education offered to hearing-impaired children within currently available settings is inadequate as judged by the overall results of demographic studies.

Oral education and cued speech services are inadequately represented in the spectrum of current provision.

It is essential to increase the number of university programs that specialize exclusively in research and graduate teaching in oral communication for the hearing impaired. Of particular importance is that more specialist teachers be trained in work with very young hearing-impaired children and their parents.

Considerably more support is required for research on hearing impairment in children, its effects on their communication, educational, cognitive, and personal-social development, and the potential applications of technology to the process of their education.

To ensure that children are provided with better access to appropriate options, improved criteria for recommending (a) placement in particular types of educational settings and (b) the use of particular modes of communication, are essential. These not only require valid predictive measures of a child's potential, but accurate definition of the content and effectiveness of all available options relative to individual children's abilities and needs. The currently widespread practice of recommending placements on the basis of audiograms (which are often irrelevant as indicators of auditory capability and special educational needs) and/or an educational philosophy (which may be a plausible but specious indicator of practice and expectation) is unacceptable.

The informed consent of parents must be regarded as a prerequisite feature in the choice of an educational setting and the selection of a given mode of communication. Selection of particular educational options for hearing-impaired children should be primarily based on the wishes of well-informed parents.

Children defined as "hearing impaired" may differ, one from another, not simply according to the severity of the disability, but for a variety of reasons. There can, therefore, be no one simple solution to the complex range of problems it poses. The heavy personal and social burdens associated with the more profound forms of deafness may be ameliorated in different ways and to different extents through access to different educational settings and communication modes. The nature of the disability, however, is that such burdens can rarely, if ever, be entirely avoided—by the afflicted individual, his family, or by society.

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Setting for an Education: Least Restrictive Environment and Mainstreaming

By Winifred H. Northcott, Ph.D.*

> Anything less than a commitment to total integration into a hearing society is a goal that cannot be acceptable to parents of deaf children.
>
> Leo E. Connor

Blackstone, the eminent British jurist, reminds us that "a law reflects the moral sentiments of the people." Certainly the Education for All Handicapped Children's Act of 1975 (P.L. 94–142) was not conjured up and approved by Congress in splendid isolation. In retrospect, it seems a direct response to and acknowledgment of the fact that the decade of the 1970s was one of gradual national commitment to the rights of the individual. . .*every* individual.

Factors Influencing Congressional Action

Civil Rights Protesters

By 1965 students across the country were protesting non-participatory university policies which governed their lives on campus. "I am a human being. . .do not spindle, fold or mutilate," read one sign carried by a Berkeley undergraduate. A crescendo of outrage was being expressed by persons with disabilities and representatives of formal advocacy organizations on the issue of civil rights of the handicapped and the lack of equal opportunity in the areas of education, work opportunities, human services, and government benefits.

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Early Educational Intervention

Family-oriented infant and preschool programs initiated in the early 1960s had shattered the myths and stereotypes about how "the blind," "the deaf," or the physically handicapped were expected to behave or how they would fit into *traditional* segregated special education programs during the school-based years. In family-oriented preschool centers of excellence, infants and toddlers labelled "deaf" by audiogram were full-time binaural hearing aid users, where prescribed, and the systematic training of residual hearing was an integral part of their individualized programming. Group educational experience was in regular nursery schools offering peer role models and monitoring by special education personnel. An auditory-verbal (aural/oral) approach to language learning was used in 11 of 12 programs federally funded through preschool incentive grants; only one offered service through the local public school. Many learned to listen, to hear, and to speak in spontaneous conversation with well-inflected voices despite very imperfect auditory cues. Distortion was not a factor because the prelingually deaf child had no previous memory of speech. (Northcott, 1970, 1971; 72, 73, 74; McConnell, 1974; Horton, 1974; Simmons, 1974; Rister, 1975).

Affective and Instructional Support to Parents

Parents of deaf children received individual and group support in dealing with their own attitudes and feelings on having a handicapped child in the family. They learned techniques for stimulating language through auditory cues during the natural experiences of parent and child interaction in the home and neighborhood. "What can he hear?" and "What can he do?" was the focus of shared pre-school/home reporting. Parents began to take the initiative for regular classroom placement in the instance of a self-operative learner, which distorted a natural teacher/family cooperative effort and often resulted in an inhospitable school environment. "I'm willing to take him, but I've never had a deaf child before," said one primary teacher. "That makes two of us," said the mother, "I never have, either."

Parent Advocacy Coalitions

In the 1970s, parent advocacy coalitions clamored for and earned the attention of law and policymakers to add viable regular classroom placement alternatives to the segregated special class or special school. In response to the conservative plea from many teachers of the deaf, "wait one more year," deaf[1] children spoke for themselves in public forums and gave testimony to the academic and social skills which had entitled them to enter the competitive environment of a regular classroom. (Northcott, 1971b; 1973b; Pollack, 1970; Nix, 1976; Guralnick, 1978). By 1975, changes in laws governing public school operation in over one-half of the States made it increasingly clear that the commitment was to educate children with special needs ("handicapped," "disabled," "exceptional") in settings "as a part of rather than apart or separated from their nonhandicapped peers whenever possible." (Nix, 1976).

Members of the Congress were fully aware of the world leadership role enjoyed by the United States as they deliberated the objectives and content of public school education as prelude to the specific content of P.L. 94–142. It became increasingly clear that the public education system must prepare its students for active participation in world citizenship, to feel more comfortable in dealing with the natural diversity of our world, and to pursue life-long learning as insurance in the process of exploration of their own potential as independent, competent, and compassionate human beings. Clearly the blueprint for landmark legislation assuring the rights of children and youth of school age had to be based on a *difference* rather than a *deficit* model of educational intervention for all children, youth, and adults that would assure individualized educational programming and related services for those with intensive, specialized needs.

Landmark Legislation

P.L. 94–142: Education for All Handicapped Children Act of 1975

1986 marks the 10th year of application of the all-pervasive P.L. 94–142, a formula grant program through which local school districts receive monies to initiate or expand and improve programs and services for handicapped children and youth. It

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[1] During the last decade, the generic term "hearing impaired" has been used to indicate any individual with a hearing loss ranging from mild to profound; the subclassifications are "deaf" and "hard of hearing." (Ling, 1986) It is a term that is neutral in emotional content and demands review of each individual's unique characteristics in everyday communication, for further description. "He is not deaf, he's hearing impaired" is incorrect.

was a law long overdue, based on court cases and judicial decisions highlighting woeful traditions of the past—of decisions made for handicapped children and their parents without their participation; it revealed patterns of isolation and segregated placement which too often fostered dependence and taught many individuals the skills of being disabled.

Along with a set of formal procedural safeguards protecting the rights of parents as well as handicapped children themselves, Congress legislated a philosophical perspective on special education programs and services. The law stipulates that "free, appropriate public education" be provided all handicapped children, ages 3 to 21,[2] requiring State legislatures to enact new laws and each State education and local education agency (LEA) to establish formal written procedures to:

> assure that to the maximum extent appropriate, handicapped children, including children in public or private institutions or other care facilities, are educated with children who are not handicapped, and that special classes, separate schooling or other removal of handicapped children from the regular educational environment occurs only when the nature or severity of the handicap is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily.

Section 504 of the Rehabilitation Act of 1983

In 1977 the "declaration of civil rights for handicapped persons," Section 504 of the Rehabilitation Act of 1973, became law. Enacted to insure "equal opportunity" under the law, it relates primarily to employment, housing, education, social services, and health-related areas. The precise guarantee is that:

> "no otherwise qualified handicapped individual" may be:
>
> . . .excluded from the participation in, denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance or under any program or activity con-

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[2] In 1977 the U.S. Office of Education interpreted P.L. 94–142 to mean that school districts might use funds derived from this source provided priorities for all children aged 5 through 17 (now 21) had been met.

> ducted by an executive agency or by the United States Postal Service. (29 U.S.C.: 794).

Part of the regulations deal with pre-school, elementary, secondary, and post-secondary education exclusively. They mandate that auxiliary aids be provided individuals with hearing impairments, in health, welfare, and social service agencies with 15 or more employees; under the definitions, interpreters are included although the two classifications, *sign language* interpreters and *oral* interpreters for speechreaders, are not specified. Violations of the regulations carry the threat of sanctions; that is, the withholding of funds. (Tucker, 1984).

Education For All Handicapped Children Act. . .P.L. 94–142

What It Is. . . .And Isn't

In essence, P.L. 94–142 gives assurance to parents and handicapped children of school age that no matter how a child functions in daily living, there will be an appropriate educational placement for him or her in an environment which is competitive, and where the student is challenged to remain an active learner.

The burden of responsibility lies with the local school district of the child's residence to design an individually prescriptive educational program (IEP) through formal interaction of parents and a multidisciplinary team of specialists, based on the child's individual developmental, behavioral needs and not a categorical or medical label (e.g., blind, deaf, mentally handicapped). Labels are reserved for the specialists required to provide various components of a child's direct service program, including supplementary assistance. The local education agency (LEA) is expected to contract with another public school district(s) or agency for provision of services that are required in an IEP but are not available within the school district of the child's residence.

In this now mandated partnership of home–school, the parent is recognized as an authority on the uniqueness of his/her own child and the LEA personnel are acknowledged to be the specialists in one or more dimensions of child development and/or the amelioration of the condition of deafness. It is a partnership of equals. The annual performance review, development of an IEP, and reevaluations of the appropriateness of the child's current placement are governed by standardized procedural safeguards protecting parents and handicapped children. The original placement decision is jointly made by parents and the multidisciplinary team after placement options are formally described during program planning meetings, as required by law.

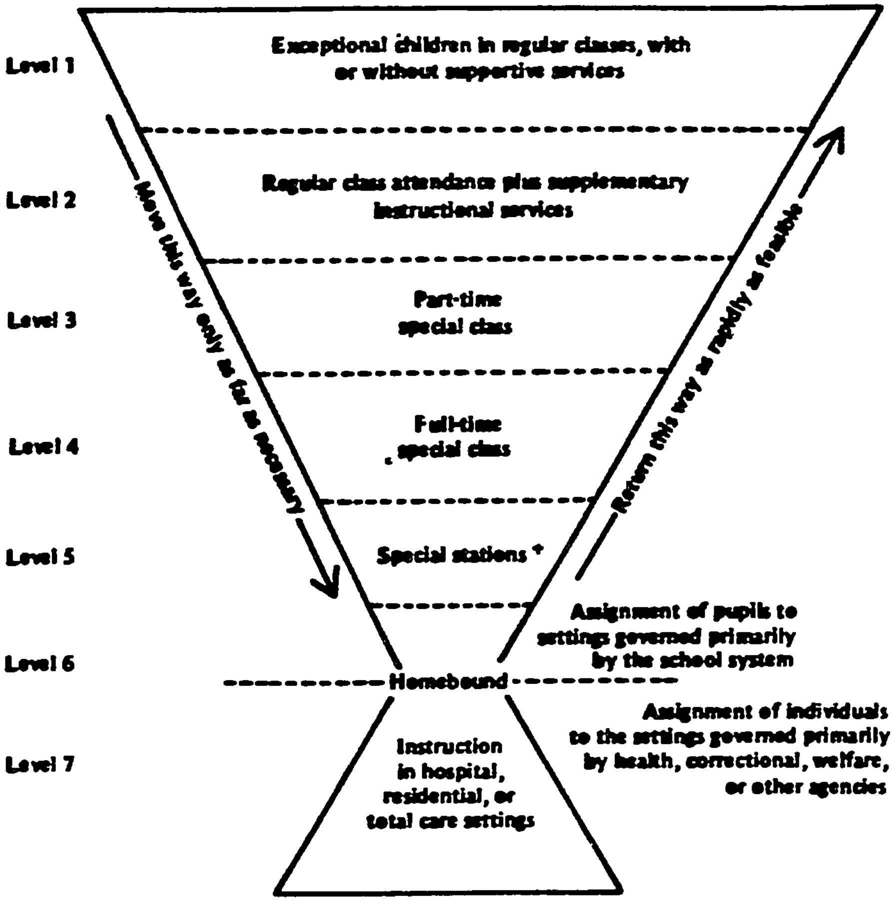
A Continuum of Educational Placement

The concept of a variety of educational settings in which hearing-impaired (deaf and hard of hearing) children and youth may be educated is not new. P.L. 94–142 rules that the IEP may be implemented by a public agency in: regular classrooms, resource rooms, special classes, separate schools, institutions, residential facilities, homebound instruction, and hospitals. (Manual 10, 1985).

In 1973 the delegate assembly of the Council for Exceptional Children adopted the Cascade System of Special Education Services (Deno, 1970) which highlighted the reciprocal nature of coexistence between general and special education. It is presented here to clarify one basic premise of P.L. 94–142, namely the heterogeneity of, in this instance, the population of school age with the medical label "deaf." It is a reminder, as ruled under P.L. 94–142, that if a placement in the neighborhood school in a regular classroom is not reasonable, a suitable setting must satisfy these requirements: as close to home as possible; appropriate chronological age of classmates; provision of maximum contact with nonhandicapped peers in nonacademic and extra curricular services and activities, as appropriate.

Temporary Harmony: The CED Resolution. By June 1976 the executive board of the Council on Education of the Deaf[3] had unanimously approved a landmark policy statement titled: *Resolution on Individualized Educational Programming for the Hearing Impaired (Deaf and Hard of Hearing)* which was reaffirmed by the executive board in December 1979. It mirrored the law and the rules governing the implementation of P.L. 94–142 in its recognition that:

The Cascade System of Special Education Service (Deno, 1970)*



* Special schools in public school systems

The range of responsive behavior of school age children to educational intervention is open testimony to the fact that no single method of instruction and/

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[3] Approved by the individual boards of directors of the member organizations; Alexander Graham Bell Association for the Deaf, Inc.; Conference of Executives of American Schools for the Deaf (CEASD); Convention of American Instructors of the Deaf (CAID), and distributed to the membership of each organization.

> or communication (*oral* or total communication) or educational setting can best serve the needs of all hearing impaired (deaf and hard of hearing) children of school age.

The continuum of alternative placements was listed as ranging from "partial or full time regular classroom placement to partial or full time educational programs offered in special classes in public/private day schools or public/private residential schools"; the "method of instruction and instructional strategies which shall be employed during the school day" were identified as components of an "appropriate individualized educational program." (Appendix A.)

It was recognized that there was "need for continuing monitoring, assessment and modification/extension of each school age child's program including method of instruction and educational setting as his/her changing personal, social and instructional needs dictate." The unspoken messages were significant: the teacher of the deaf no longer "owned" the deaf child in terms of unilateral placement decisions and the hearing- impaired student would no longer be evaluated for initial placement on the basis of a "spot, sort, label and bounce" approach based on an audiological assessment as "deaf" and "hard of hearing."

Least Restrictive Environment

The term *mainstreaming* and *normalization* do not appear in P.L. 94–142. The term "least restrictive environment" (LRE) is found in both the law and a draft of Manual 10 on LRE (August 8, 1985, U.S. Department of Education [D.O.E.]), designed by the Office of Special Education and Rehabilitation Services (OSERS) to assist the State departments of education in monitoring the enforcement of the law.

> "*Least restrictive environment*" refers to the educational environment providing the maximum appropriate interaction with non-handicapped students where education for the handicapped child can be achieved consistent with appropriate objective criteria and evaluation procedures specified in the IEP.

In personal correspondence with the author (May 16, 1986) Will wrote, "There has been a shift in the educational placement of hearing impaired and deaf children (sic) from a residential environment to less restrictive settings." In a meeting with residential school officials and others on the Gallaudet College campus, Will was reported to say that her goal is to see that all special education children are educated in regular classrooms, with all necessary related services, including resource rooms. "This is my goal, even though we may not realize it in this decade." (Weekly publication, Gallaudet staff and faculty, February 18, 1986, vol. 16 (1), page 1). . . . "If these schools lack space or services, then they must find a way to provide them. LEA programs should be strengthened to the point of being the least restrictive environment for all handicapped children." However, she said the LRE was a function of the IEP written for each individual child, and that any placement position on the continuum could be the least restrictive for a particular child. Thus, it is a misperception that a child must fail in a regular classroom before placement in a "restrictive" environment can be made; the IEP reflects the placement decision based on individual needs, Will concluded.

Educational Environments and Student Functioning: A Look at Some Data

> The complexities of modern deafness—its subleties, its gradations, its nuances—have, for all but the most general purposes, rendered the term "*deafness*" almost meaningless. It is difficult, therefore, to describe or define the "typical" deaf person. Individuals who are termed deaf may vary widely in degree of hearing loss, in age of onset of hearing loss, in methods of communication used, in their attitudes toward their deafness and in many other factors. It came to be apparent. . .that the complex nature of deafness called for a range of educational and other efforts that were equally complex.
>
> Homer Babbidge, Jr. (Report of NACED, 1967)

Coming to Terms with Terminology: Methods and Philosophies

At times, terminology gets in the way of rational thinking, based on definitions that are not universal, so that the meaning of a label cannot be generally accepted and becomes, in fact, mired in the shifting sands of time and more progressive educational practice. Babbidge, as chairman of the National Advisory Committee on Education of the Deaf, quoted from his Committee's report to the Secretary of Health, Education, and Welfare in 1966, regarding the outmoded term "*deafness.*"

Mulholland (1981) speaking on the Philosophical Bases of Oral Education at the first International Symposium on Oral Education held at Sint Michielsgestel, The Netherlands, in 1980, referred to the current emphasis placed on training the *auditory residual* in light of the technological advances in sensory aids which suggest terms reflecting use of the auditory modality: "*auditory-verbal*"; "*auditory oral*" to replace the term "*oral education*" with its highly visual-modality orientation.

The "*oral method*" is more than "the use of speech and speechreading exclusively" Connor (1986) points out, while the philosophy of *oralism* is the philosophy and practice of development of speech communication skills which include the use of residual hearing, speechreading, and speech but exclude signs and fingerspelling: "it includes auralism and tactile and other sensory input. . .involvement of parents, teachers and the deaf child's environment; utilization of technical equipment and approaches; as well as the deaf child's personality, motivation, and abilities." (Connor, p. 118.)

The *simultaneous method* of instruction, currently in use at the Kendall Demonstration Elementary School on the Gallaudet campus and in most State public residential schools in the country, combines the use of residual hearing with the simultaneous presentation of speech, fingerspelling, and signs. (Moores, 1978; *Perspectives*, 1977) under the philosophy of *total communication.*

At the 48th meeting of the Conference of Executives of American Schools for the Deaf in 1976 (Brill, 1976) the formal definition of *total communication* was officially adopted (the term was coined in 1971 by Roy Holcomb, a teacher of the deaf and profoundly deaf himself).

> Total Communication is a philosophy requiring the incorporation of appropriate aural, manual, and oral modes of communication in order to ensure effective communication with and among hearing impaired persons.

Richard Brill, president, reported that a "total of four years was spent in a nationwide study culminating in the adoption of this definition." (Brill, 1976; Gannon, 1981).

Total Communication: A Look at the Past and Present Data

The analytic review of *total communication* studies by Nix (1975) showed the absence of any true *oral* group as a control, as each was conducted in a public residential school. The fact reported by Jensema and Mullins (1974) that deaf children of deaf parents, with inherited hearing loss, have significantly lower incidence of additional educationally handicapping conditions than the illness related group may well account for the higher IQ scores exhibited by the former as reported in the early studies.

More recent studies of total communication "with its myriad of definitions and as presently carried out," have not shown the desired effects in large scale studies (Schlesinger, 1986).

- the median reading level of those leaving school continues to be low, presently at 3.5 years.
- the philosophy as translated into educational practice seems to be a deterrent to the active use of residual hearing; appropriate and consistent hearing aid usage is insufficiently stressed (Ross and Calvert, 1984; Schlesinger, 1986; Luterman and Chasin, 1981; Clarke and Ling, 1976; Kates, 1972; Ling 1974).
- in the 1970s, in the practice of the *total communication* philosophy "speech development was neglected and language development advocated." (Connor, 1986.) The opportunity to use speech without manual communication was diminished (Calvert, 1986).
- The *combined* or *simultaneous* method of instruction does not enhance academic achievement (Carson and Goetzinger, 1975; Gaeth, 1967; Northcott, 1980).

Across educational settings, there is research and empirical evidence to support the finding that children and youth cannot process two visual symbol systems at the same time. The principle of *code switching* is involved. The student looks either at the hands or lips to gain linguistic information; one becomes the primary channel for learning, the other is an alternate option used only occasionally: it becomes a kind of distracting "noise." (Carson and Goetzinger, 1975; Gaeth, 1967; Gates, 1970; Goetzinger, 1974; Goetzinger and Proud, 1975; Titus, 1978).

Parents and teachers of students using the *simultaneous* or *combined* method of communication with the same students across educational settings were asked a basic question as participants in a national questionnaire administered by the Office of Demographic Studies, Gallaudet College (Jensema and

Trybus, 19789): "Do teachers and parents use additive amounts of both speech and signs at the same time?" The collective answer was a definitive "*No.*" "When the use of speech is high, use of signs or fingerspelling is low, and vice versa. This pattern holds in all four of the communication situations studied here: parent-to-child, child-to-parent, teacher-to-student, and student-to-teacher." (p. 7.)

Bellugi (1972), in an examination of fluent sign language users, found that the rate of articulation of words was nearly double the rate for signs for each of the subjects, given the same material. When English and American Sign Language were presented as speech and signs simultaneously, the rate of articulation for speaking was considerably higher and occasionally errors from spoken English appeared in the signed version of the material being presented, or vice versa. (Northcott, 1980.) In simultaneous presentation there was an increase in the amount of time spent pausing, in comparison with the separate presentation in either modality. At this point, the total communication effect must be judged as "not proven." (Luterman, 1986; Karchmer, 1984.)

Deciding on a Mode of Communication: A Parent's Choice

The incidence of deafness among children of school age is low: .075, or 3 in 4,000 of the school-age population. The result has been an increase in regionalization of service delivery systems, and growth in the number of "co-ops" composed of several continuous public school districts. Most of these models offer a two-track service delivery system: one track for children and youth learning through the *auditory/oral* method of instruction, the other, by means of the *simultaneous* method of communication. Both maintain a variety of educational service options ranging from part- or full-time regular classroom placement with academic and speech support services, to diagnostic-prescriptive short-term classrooms as well as special classes within a neighborhood school building for nonhandicapped children. Court cases have made it very clear that the needs of a hearing-impaired child learning by means of an *auditory-verbal* method of communication cannot be met in a classroom conducted in the *simultaneous* method of instruction. (Mulholland, 1977; Gilb, 1979; Victory for oral placement, 1980.)

The position of the U.S. Department of Education related to the "form of language and communication that should be used by and with hearing-impaired and deaf children (sic)—both during their infant and early childhood years in the home and later in the school" is very clear. Assistant Secretary of the D.O.E. has written (Will, 1986):

> all advocates have expressed a common and primary goal which is the establishment of a fluent system of communication upon which a language foundation can be developed. The disagreements are with the type of language to be established and the communication methods. Each approach does include amplification and auditory training and each has stood the test of time and evaluation. Thus, there is no clear evidence of superiority of any form of communication or language input over all other for all or even most deaf children. This is one of the reasons why the Federal government does not, and should not, dictate that any particular "methodology should be exclusively used. This remains the responsibility of the parents and the educational system." (Appendix __.)

Deciding on the Native Language

Once the diagnosis of significant hearing loss has been verified and full-time hearing usage has been established, parents are faced with the momentous decision: "What shall be the 'mother tongue' for my child? What do I hope will be my child's *first* language? Do I want my child to think in *words* or in *signs*?" Native or second language communication through speech or sign language is a parental decision affecting the goals, objectives, and mode of communication at home and school during the early years. In turn, it is a major factor in educational decisions regarding placement and classroom methodology as reflected in the IEP to be followed in school-based years.

The UNESCO Experts Meeting on Education of the Deaf (1974) yielded a formal resolution that hearing-impaired children learn the language of the home as a first language. Empirical evidence and research studies of the 1960s and 1970s indicate the overwhelming majority of parents of infants elected an auditory-oral method of communication initially. Why? The Annual Survey of Hearing-Impaired Children and Youth (Rawlings, 1977) and the National Association of the Deaf survey (Schein, 1974) reveal that 91 percent of hearing-impaired children have two parents with normal hearing. An additional 6 percent have one hearing parent. The remaining 3 percent have two hearing-impaired parents, many of whom are oral.

Informed parents who are programmed to visit every known educational setting for hearing-impaired children in their region, as part of the infant-pre-school program in which their preschooler is enrolled, are able to feel comfortable with their decision about initial method of communication to be used at home and school. Today, major questions being asked by Federal (OSERS) monitors of P.L. 94–142 compliance relate to the process of presenting *options* to parents rather than the number of handicapped children being integrated into regular classrooms. Through due process, informed parents choose.

Variations Within the Special School for the Deaf

In the implementation of P.L. 94–142 the residential school is identified as a restricted environment; the least restrictive environment (LRE) is virtually synonymous with regular classroom placement. One must consider the variations in philosophy and educational practice within the generic term "residential school" before individual child placement is considered on the basis of an IEP.

Private Oral Residential Schools for the Deaf. These schools offer an oral education within a historic framework of internal consistency in goals, objectives, curricula, and evaluation for improvement of the learning environment for children. Teachers are frequently instructors at university-affiliated programs; their classrooms are often practicum stations. Enrollment figures have declined sharply from 2,458 in 1970, to less than a third of this number (783) in 1983; the number of private classes including residential and day settings in 1983 was 34, as analyzed by Davis (1986).

Public Residential Schools for the Deaf. Dr. Kathryn Meadow (1975) pointed out that the "tradition of residential schooling in State-operated schools for the deaf is important for maintenance and transmission of the deaf sub-culture, or of the feeling of belonging to a definite 'in-group'" (p. 16–17) (Luterman, 1986). The common language is sign language. The Secretary of HEW, in scanning a list of potential appointees to the newly formed National Advisory Committee on Education of the Deaf in 1965 found 26 of 35 candidates, largely superintendents, held an honorary doctorate from Gallaudet College. A prominent educator spoke of public residential school superintendents as "long on political acumen and short on administrative leadership."

Graduates of these schools accounted for 55 percent of the freshman class at NTID 3 years ago; these schools are the feeder system for Gallaudet College's undergraduate program. Children generally remained from kindergarten through 12th grade, prior to P.L. 94–142. The author, as State consultant for the deaf in a department of education, once offered assistance to a principal in returning students to their local school district. "What, take our successes away from us?" In 1984, 19 of the 36 students transferring to the State school in upper elementary and secondary levels were admitted for the single reason: "Social development."

Currently, approximately one in three hearing-impaired children and youth is enrolled in a day or residential school. Fewer deaf teachers are being employed as enrollment declines. Data drawn from a 95 percent response from schools for the deaf "indicate that the overwhelming majority. . .are being taught by total communication methodology." (Connor, 1986.) Eighty-seven percent of profoundly deaf children in these segregated environments use sign language, as do 30 percent of children with losses less than severe (71db, unaided). An additional 15.2 percent of profoundly deaf students refuse to speak. Survey data indicated a significant decrease in children who are fully or partially mainstreamed in day schools and classes, from 1980 to 1983. (Annual Survey, 1982–3.)

Federally Stipulated Post-Secondary Schools for the Deaf. In two decades the number of formal alternative special schools or programs has risen from six[4] to 102, an interesting development in light of P.L. 94–142 and the civil rights guarantees under Section 504 of the Rehabilitation act of 1973. (Ibid.) In *the first oversight hearing* ever held on Gallaudet and NTID, Subcommittee Chairman Lowell Weicker questioned the $90 million combined fiscal 1986 budgets for the two schools, averaging $20,000 per student, while other programs for the deaf based in colleges for the hearing range in cost from about $5,000 to $8,000 per pupil. "We are dealing with a system that is 120 years old—if starting today we should do it differently. The trend is towards education in non-segregated settings," testified Assistant Secre-

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[4] Gallaudet College, Washington, D.C.; National Technical Institute for the Deaf, Rochester, New York; California State U., Northridge, Calif.; Delgado Vocational Technical Junior College, New Orleans, La.; Seattle Central Community College, Wash.; St. Paul Technical Vocational Institute, St. Paul, Minn.

tary Will of OSERS. (*Education of the Handicapped*, 1985, p. 3.) Declining enrollment has led Gallaudet to open its doors this fall to four students with no hearing loss.

The Public Day School for the Deaf has been replaced in large part by intermediate district or regional programs providing itinerant teaching, speech therapy, resource rooms, and special classes within the neighborhood schools, as part of individualized support services. (Brackett and Maxon, 1986; Northcott, 1973; Ling, 1984; Nix, 1986; Luterman, 1986.)

Federally Stipulated Special Schools. Kendall Demonstration Elementary School (KDES) and the Model Secondary School for the Deaf (MSSD) are precollege programs within the Gallaudet College complex. These federally funded special schools operate under the philosophy of total communication. (Total communication at KDES, 1977.) "While mainstreaming has been established as the state of the art for educating handicapped students," Weicker commented, "Gallaudet runs segregated elementary and secondary programs which are intended to serve as models for the rest of the country." (*Education of the Handicapped*, 1985b, p. 3.)

Factors Influencing Academic Achievement

An analysis of recent research data on high performance by children and youth with severe and profound hearing loss by educators and psychologists offers information related to factors contributing to high achievement. An open-ended list would include:

- parental acceptance of the deaf child (Murphy, 1981; Luterman, 1986; Schlesinger, 1986)
- normal hearing parents or speech-using parents who are hearing impaired (Messerly and Aram, 1980; Corson, 1973)
- oral communication, personality, and linguistic competence (Pflaster, 1980; Davis, 1986; Connor, 1986; Kennedy et al, 1974, 1976)
- deaf children in "incontestably" oral programs (Quigley and Paul, 1984)
- early identification and full-time hearing aid usage; aural habilitation (Ross, 1986; Pollack, 1985;Ling, 1964; Simmons-Martin, 1972; Northcott, 1977, 1981; Beebe, Griffiths, 1967)
- a satisfying social life (Davis,1986; Luterman, 1986; Rosen, 1986)
- early auditory-oral family-oriented intervention (Rister, 1975; Simmons-Martin, 1979; Pollack, 1974; Northcott, 1977)

Assimilation in Regular Classrooms: Mainstreaming

The ability of a child or youth to speak for himself or herself and be understood by others is a fundamental human right, and a means to freedom of self-expression in an integrated society. The relatively few studies of profoundly deaf students in regular classrooms yielding data on performance show that "highly developed oral skills are required for the successful integration of hearing-impaired children." (Pflaster, 1980, p. 80.) The most critical variable in predicting assimilation in the mainstream is the development of English literacy skills "superimposed on the development of primary, verbal-language abilities." (Quigley and Paul, 1986.) "There is no inherent inability in deaf children but rather a disability in their educational system." (Connor, 1986, p. 126.) Oral deaf adults stress the importance of *values* in the ability of hearing-impaired children to communicate orally; parents believe in a strong value system supported by integration; teachers believe hearing-impaired children achieve oral success as a result of direct reinforcement of oral communication and language development from parents and teachers. (McCartney, 1986.)

Major Factors Contributing to Speech Intelligibility: Research Data and Demographic Studies

Speech Intelligibility and Hearing Loss. In general, speech intelligibility correlates with the degree of hearing loss. However, prolonged hearing aid usage and an oral educational environment correlated with intelligibility of speech at secondary and post-secondary levels in several studies. (Sims, 1979; Lane and Baker, 1974; Lane, 19796; Ogden, 1979.)

Speech Intelligibility and the Oralness of the Environment. "Speech usage and speech intelligibility often go hand in hand." (Rawlings and Jensema, 1977, p. 11.) Integrated students with profound hearing loss are more intelligible as a group than day students at residential schools; these day students as a group have greater speech intelligibility as a group than do residential students in the same schools (Jensema, Karchmer, and Trybus, 1978). At Clarke School for the Deaf, an oral private residential school, students gained in speech intelligibility scores throughout their school years; gains in speech intelligibility tend to level off at about 10 years of age in public residential and day schools and classes. (Jensema, Karchmer, and Trybus, 1978; Northcott, 1981.)

Speech Intelligibility and Hearing Aid Usage. Earlier use of hearing aids is generally correlated with higher speech intelligibility. (Ibid, 1978.)

Speech Usage and School Achievement. Other variables being equal, there are clear school achievement differences in reading scores in favor of those who use much speech and few signs. (Jensema, 1975).

Speech Usage and the Deaf Personality Stereotype. When carefully controlling criteria for 3 groups of profoundly deaf subjects, the young adult deaf group with exceptional verbal skills were found by Levine (1976) to show no personality differences from normative patterns of normally hearing young adults.

Children in integrated programs are reported to have more hearing in general than children in special classes or special schools (Karchmer and Trybus, 1977). They tend to come from families with higher income, to make greater use of binaural hearing aids (when prescribed) and increased use of speech, compared to their less economically affluent counterparts (Jensen, 1977). They have the highest number of college-educated fathers (36 percent) and a somewhat higher proportion of white children in integrated programs. The largest number of children from low-income, nonwhite families are found in day schools across the U.S. (Karchmer, 1977).

Auditory-oral graduates of pre-school programs who have severe and profound hearing losses are frequently assimilated in elementary school classes, because of the dynamic use of residual aided hearing and superiority in language usage—spoken, written, and read—compared to visual-oral children. (Hanners, 1977; Luterman, 1976; Kennedy and Northcott, 1976; Ling, 1974; Pollack, 1974; Rister, 1975).

One method for all? Hardly. One educational setting for all? P.L. 94-142 guarantees the continuum of educational settings and through the law and its rules, its procedural safeguards and monitoring system, there is greater promise of a match between a single hearing-impaired child's behavioral and academic characteristics and an educational environment in which he or she is motivated to think, to do, and to relate to learning and laughing and competing in school and in the community.

Supplementary Support Services. Two boys were comparing their collection of valentines. One boy said, "I got a valentine from my speech therapist, my academic tutor, my behavior mod teacher and my educational audiologist." The other boy looked wistful and replied, "Gee, I wish I lisped." Not all hearing-impaired children in part- or full-time regular classes need all the supplementary support services which may be mandated in an IEP for a single student and available in the local school district or through contract. The identification and availability of services, activities, and specialists accessible to hearing-impaired children and provided "to the maximum extent appropriate" with nonhandicapped children is often the vital missing link in reaching the goal of *assimilation* in the mainstream for a student deemed a suitable candidate for integration in a regular classroom.

The Politics of Deafness

The media today conveys the clear message that "deaf = sign language." A powerful national lobby for "the deaf community" repeats such themes as:

- deafness is absolute and irreversible
- sign language is the native language of the deaf
- to be integrated in regular classes is to "deny your deafness"
- deaf teenagers typically have a reading comprehension level no higher than third or fourth grade (p. 28, *Deaf Student in College*, 1979).
- A deaf peer group can be particularly valuable in preventing social isolation. (Ibid, p. 68).

Currently, the Conference of Educational Administrators Serving the Deaf (CEASD), formerly titled the Conference of Executives of American Schools for the Deaf, has circulated its formal position paper regarding the Least Restrictive Environment of P.L. 94–142. (Position Paper, 1986).

It cites the advantage of "economies of scale," "highly trained personnel," philosophical perspective on special education, important social-emotional needs of children, and the fact that P.L. 94–142 does not mandate services for children under 3 years of age as rationale for expansion of infant-parent home and school training and support groups for parents. As an *initial* environment and placement, "it is our contention that only special schools and classes for the deaf are uniquely equipped to address these needs of deaf children and their families." Sign language training and special educational information and social events would enable parents to enter a network of emotional support and skills.

The thunder and the tumult over methodology is subsiding as the new dimension of aural habilitation, technological advances, and early auditory-oral intervention is studied and applied in individualized programming for children. Will *initial placement* in infancy and the meaning of LRE divide us into "camps" once again?

The Annual Survey of Hearing-Impaired Children and Youth: Gallaudet Research Institute

Currently, the performance characteristics of hearing-impaired children in the mainstream are generally unknown, as are their demographic characteristics. The *Annual Survey of Hearing-Impaired Children and Youth* conducted by the Gallaudet Research Institute reports data from residential schools and special classes for the deaf; many of the higher performing children in regular classes were never in these programs; hence, the statistics are skewed. Those children being tested/reported are in formal programs for deaf children of "lower socio-economic status, more multiply handicapped and with the greatest hearing loss." (Luterman, 1986, p. 265.). It is from such survey findings that the myths and stereotypes about deafness are persistent and become perpetuated. Will monitors from OSERS address this incomplete system of data collection?

Summary

It is a proven fact today that the condition of profound deafness in itself does not prevent a child or youth from learning to speak for himself and being understood, of gaining mastery of academic subjects in the mainstream with classmates who have normal hearing; inadequacies in the educational system and inability of supporting family members and the immediate community make this goal a mirage for some children and youth of school age. The degree of isolation and self-containment are salient factors as well (Levine, 1976; Northcott, 1978; Jensema and Trybus, 1978).

A hundred years ago, Alexander Graham Bell, as a teacher of the deaf and a futurist, warned, "We must separate the deaf children from one another to prevent the development of a special language and scatter them among hearing children and their friends in the outside world." (Bell, 1884). Bell was personally fluent in sign language, and advocated its educational use as an alternative method of instruction only when necessary. (Northcott, 1978).

P.L. 94–142 assures a smorgasbord of program opportunities in a variety of educational environments; it is based on a *difference*, not a *deficit* model of individualized educational programming for all. Who will write the next chapters of educational rights for the hearing impaired, under the rubric of the philosophical statement inherent in the Education for All Handicapped Children Act? The retrieval terms are healthy: *appropriate, alternatives, options, interdisciplinary, parents, nonhandicapped peers;* the prognosis: GOOD. (Northcott, 1980).

A roving reporter at Gallaudet interviewed college students who were hearing impaired. "The cure of deafness: How do you feel about this great medical–technological break–through with which almost all deaf people would finally hear? What are the feelings you have on the cochlear implant?"

With the passion and fervor they can muster so easily, two sophomores were quoted:

> Student 1. "I am opposed to this technology. The heart of the deaf society will soon disappear. . .so will Gallaudet College. Sign Language is a beautiful art, and I want to keep that tradition and, it is also against God's will. If I were made hearing, I would be considered abnormal because my heart is still deaf."
>
> Student 2. "All deaf persons should have the opportunity to have the implant. It is unlikely that everyone would choose to, but those who do would be opening themselves to a larger world and everything it has to offer." (1985).

Education for independent living via independent judgments independently arrived at: the spirit of P.L. 94–142 indeed.

Appendices

- Letter, Madeleine Will, Assistant Secretary, U.S. Department of Education, Washington, D.C.

- Resolution on Individualized Educational Programming for the Hearing Impaired [Deaf and Hard of Hearing]

- Cover letter: President, Council on Education of the Deaf, Winifred Northcott, June 30, 1976

- Summary sheet: UNISTAPS* Project: A Family Oriented Noncategorical Program for Severely Handicapped Children, 0–5.

  *UNI = *Uni* versity of Minnesota
  STA = *Sta*te Department of Education
  PS = Minneapolis *P*ublic *S*chools

- Congressional Record–Senate UNISTAPS Project. May 25, 1977, (S8662) Positive Results of Minnesota Education Programs (S8661)

Interpretation of the Least Restrictive Environment for the Hearing Impaired

By Dr. Brian D. McCartney[*]

On November 29, 1975, President Gerald Ford signed the Education for All Handicapped Children Act of 1975, more commonly referred to as Public Law 94–142. The premise of this act was and continues to be to provide Federal funds to those States providing an education to handicapped children who are not receiving an education or who are receiving an inadequate education.

Within this act is the term "least restrictive environment," which according to the *Federal Register* (1976), Section 121 a. 440 General, states:

> (a) Each State education agency shall insure:
> (1) That to the maximum extent appropriate, handicapped children, including children in public or private institutions or other care facilities, are educated with children who are not handicapped, and
> (2) That special classes, separate schooling or other removal of handicapped children from the regular educational environment occurs only when the nature or severity of the handicap is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily. (p. 56991).

What does the term "least restrictive environment" mean? How can one interpret this based on the wording found in the *Federal Register?* The Council on the Education of the Deaf (1976) representing the Conference of Executives of American

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Deaf interpreted the least restrictive environment as an array of educational options "ranging from partial or full-time regular classroom placement to partial or full-time educational programs offered in special classes in public/private day schools or public/private residential schools."

Several individuals offered their viewpoints as to how they interpreted the least restrictive environment. Bonnie P. Tucker (1984) indicated that when this act was enacted Congress recognized the advantages of educating handicapped children in the mainstream and specifically provided that mainstreaming was to be the goal in the education of handicapped children wherever possible (p. 54). Gary W. Nix (1977) believed that the purpose of the least restrictive environment was "to remove unnecessary societal restrictions placed on a child and to assure that each child will receive an education that will fully serve his needs" (p. 287).

Still others interpreted the least restrictive environment as a threat to the residential schools. That is, they believed it would have a strong impact on the enrollment as well as the population composition of the various residential schools for the hearing impaired (Salem and Herward, 1978).

While these interpretations have much merit, several situations offer their own interpretations. Leslie Gilb, a profoundly deaf 5-year-old, had completed her final year at the John Tracy Clinic and her parents were exploring possible school programs for her. The school district recommended that Leslie be placed in a total communication program while her parents believed she should be in an oral program since her background at Tracy was orally based. The school district indicated that they could not provide a program which they did not have. The matter ended up in a State administrative hearing where the hearing officer decided in favor of the parents. Here the school district interpreted the least restrictive environment as an appropriate program for the deaf within their own district (Gilb, 1979).

In another real life situation, Sonny, a profoundly deaf 6-year-old, was placed at the recommendation of his school district's child study team in an auditorily handicapped class in the mornings and a regular kindergarten class in the afternoons. Sonny's parents disagreed with this placement, stating that they wished to have their son placed full time in a regular kindergarten with supportive services. The supportive services would be in the areas of speech and language and provided by certified personnel. The school district in this case interpreted the least restrictive environment as whatever they had to offer with partial mainstreaming (Mulholland and Hourihan, 1977).

In the case involving the board of education of the Hendrick Hudson Central School District and Amy Rowley, Amy and her parents requested a sign language interpreter in the regular classroom. The lower courts agreed that Amy should have an interpreter to enable her a full educational opportunity. The U.S. Supreme Court disagreed and stated that Amy was receiving the required free appropriate education as mandated by the act (Tucker, 1984). These few interpretations reveal the complexity of the least restrictive environment. As one can see, it is much more than a phrase in a particular act of Congress; it is much more than the placement of a hearing-impaired individual in a regular classroom; it is much more than the supportive services offered to the hearing impaired; it is much more than an oral or total program.

The least restrictive environment needs to be viewed from the viewpoints of those directly involved with it. It is recommended that it be viewed from four different levels, specifically, the level of the school district personnel, the level of the direct services personnel (i.e., teachers, therapists), the level of the parent, and the level of the hearing-impaired individual.

On the level of the school district personnel, these individuals need to acquire a basic understanding of hearing impairment and how it may affect an individual's life. They need to be updated periodically on the developments in the field and see how they can apply to the hearing-impaired population. Or they should have professional contact with an individual in the field of the education of the deaf who would be able to provide explanations and/or insights into hearing impairments and its ramifications. More importantly, the school district personnel need to see that the hearing impaired, as their hearing counterparts, are individuals and, therefore, may each require his/her own educational program suited to meet his/ her needs.

School district personnel need to have a general knowledge of the various programs their district has to offer to determine what is available to a hearing-impaired individual. In addition, they should be aware of those programs outside of their district which may be the least restrictive environment. These may include day programs or residential programs for the hearing impaired. By being aware, the school district personnel are able to realize the educational options available. These options may include placement of hearing-impaired children in regular classes without any support services; in regular classes with supplementary instructional support services; in regular classes part-time with some instruction in special classes; and in a resource room with several regular classes. Other options include educational environments where hearing-impaired individuals are placed totally in day schools or residential schools for the hearing impaired (Johnson, 1962; McCartney, 1984; Mulholland 1968; Pflaster, 1976).

When I was 10 years old the school district personnel recommended I be mainstreamed from a day program for the hearing impaired into a regular public school with no support services. My parents agreed I was ready for mainstreaming but did not agree with the placement. They opted for placement in a private school where the student-teacher ratio was 10 to 1, which was parallel to the student-teacher ratio in the day program for the hearing impaired.

On the level of the direct services personnel, specifically, teachers and the various therapists, these individuals need to possess a desire to work with the hearing impaired. Whether they be certified teachers of the deaf or certified subject area teachers, they are presented with the challenge of educating the hearing impaired in a number of areas. In addition to the subject at hand, they assist the hearing impaired in functioning in society to the fullest extent possible and assist society in better understanding the hearing impaired. This can be from visits to a local supermarket to conducting classes with both the hearing impaired and hearing present. Along with this willingness to teach the hearing impaired, direct services personnel need to be aware and updated on the various teaching techniques which may benefit the hearing impaired. These teaching techniques range from the use of an overhead projector as opposed to a blackboard to the use of direct experiences to reinforce the subject being covered. Often the other individuals in the classroom, be they hearing impaired or not, will benefit from these teaching techniques because the direct service personnel are more enthused with the teaching, and the multisensory approach engages the interest of more individuals.

These various teaching techniques may be obtained in numerous ways. One is through teacher resource centers where teachers share information/techniques with one another. Another is through updated courses at local colleges and universities and sometimes even through adult education centers. Still another is through the review of such journals as *The Volta Review*, *American Annals of the Deaf*, and *Perspectives*.

Direct service personnel need to be able to administer tests and interpret test results so that the hearing impaired may be appropriately compared to their hearing counterparts. The administering of tests may include extended time to complete the test and/or interpretation of a given word or thought to enable the hearing impaired to fully understand what is expected of him/her. The interpretation of test results should be done so that the hearing-impaired individual is compared to other hearing-impaired individuals as well as hearing individuals. In addition, considerations/explanations should be given to further pinpoint the strengths and/or the weaknesses of a hearing-impaired individual on a given test, since these test results are often the deciding factor in determining the placement of the hearing-impaired individual.

Teachers and therapists need to communicate consistently and openly with one another as well as with the hearing-impaired individual and his/her family. In doing so, they provide carryover from subject to subject, therapy to the classroom, and from school to home. In addition, through communication there exists a constant monitoring of the progress of the hearing-impaired individual. Should something be amiss, the process through which to correct it may be set almost immediately.

Teachers, therapists, and school district personnel may change, but the parents' role is always present (Allen, 1977). Parents of the hearing impaired face the challenge of seeing to it that their child is given the best education possible within the least restrictive environment. Consequently, they must assume an active role in their child's education. This begins with an acceptance of their child's disability and a willingness to take action. Ogden and Lipsett (1982) indicated that individuals including parents of the hearing impaired go through five stages when facing a crisis, in this case, the news that their child is hearing impaired. These are (a) shock, (b) recognition, (c) denial, (d) acknowledgment, and (e) constructive action.

As the parents enter the constructive action stage they need to be informed to the fullest extent possible on the subject of hearing impairment and its ramifications as well as the various educational options available to the hearing impaired. By taking the various courses offered—be they the correspondence courses of the Tracy Clinic, the parent education courses at the Lexington School for the Deaf—parents are providing themselves as well as those with whom they come in contact the background information necessary to pave the way for their child's education.

In addition, parents need to be familiar with the laws or have contact with a legal advocate so that they are in the best possible position on behalf of their hearing- impaired child. By being familiar with the law and its interpretations, parents are able to be actively involved in the selection of their child's educational placement.

With all the new developments in the field, it would benefit the parent to be a member of a parent organization and/or an advocacy group so that they are able to share their concerns with others in a similar position—whether it be the least restrictive environment for their child or the support services being offered. In joining such a group, parents would not feel isolated in their situation and they would be able to share experiences with others who have faced similar concerns.

In accepting their hearing-impaired child parents need to be realistic about their plans for him or her. They need to see that their child faces an unusual challenge in life and that he or she will require a great deal of support and understanding to do the best job possible. Being realistic also means being flexible so that changes may be made when necessary. One least restrictive environment may be perfect for a given period of time and then another may have to be sought.

Communicating with all persons involved with their child's life is probably one of the greatest responsibilities of the parents of the hearing impaired. Parents need to constantly be in communication with the direct service personnel to monitor their child's progress and to create the best possible learning environment. They also need to be in frequent contact with the school district personnel so that they are always aware of what is being done for and with their hearing-impaired child. And they need to be in daily communication with their hearing-impaired child to see to it that he or she is doing the best he or she is able; this communication may provide the parent and child with a strong common bond so that they may together face the challenge of establishing the least restrictive environment.

Lastly, the least restrictive environment needs to be viewed on the level of the hearing-impaired individual himself or herself. He or she needs to be aware of his/her hearing impairment and the restrictions it may place upon his/her life. As the hearing-impaired individual interacts more and more with the world and him/her, he/she must face the obstacles placed before him/her and decide upon ways to overcome them. One such obstacle for myself was my inability to define many words in the English language. I knew my hearing impairment prevented me from acquiring language as my hearing counterparts and I still was determined to overcome this somehow. My spirits were somewhat dampened as I took the SAT to enter undergraduate school. The verbal was quite low, and I honestly had no solution. Fortunately, I was accepted at a fine undergraduate school and as I reviewed the course offerings I came across the solution: Latin. I majored in Latin, and what a boost it was for me in my ability to deal with the English language.

No matter which educational setting the hearing-impaired individual is placed, he/she needs to participate as much as and as fully as possible in his world. This participation will enable him/her to grow through a wide variety of experiences and he/she will be in a position to get the most out of life if he/she is willing. Marie P. McKeown (1971), a profoundly hearing-impaired member of the Oral Deaf Adults Section of A.G. Bell, indicated that she participated in sports, took art classes, and had dancing lessons—all of which contributed to the person she is.

Perhaps one of the most important areas the hearing-impaired individuals must focus in on is communication. He/she must communicate in order to get the most of his/her situation whether it be about a given lesson with the teacher or about an event at a youth rally with some friends. In communicating, the hearing-impaired individual is providing the teacher, the parent, or the friend with feedback regarding a given situation and is then opening himself/herself up for encouragement. According to Arthur B. Simon (1971), it is this encouragement that determines the direction of the life of the hearing impaired.

The least restrictive environment is, as pointed out, most difficult to define in either words or interpretations, as there are a number from which to select. It needs to be viewed on four different levels: the level of the *school district personnel*, the level of the *direct services personnel*, the *level of the parent*, and the level of the *hearing-impaired individual*. And on each of these levels there are a number of areas to be addressed, all of which lead one to better define the least restrictive environment.

The point which needs to be stressed here is that the least restrictive environment is different for each hearing-impaired individual: all parties involved in the selection of the least restrictive environment should be flexible and open as to what will best serve the needs of the hearing-impaired individual at a particular time.

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Educational Options for Serving Hearing–Impaired Students in Rural Areas

By David F. Conway, Ed.D.*

Introduction

Providing full educational opportunities for hearing–impaired children living in rural areas poses unique problems for administrators, teachers, parents, and the children themselves. One of the problems is the lack of a consistent definition as to what constitutes rural areas. A useful, functional definition that was developed by the National Rural Research Project during a longitudinal study of rural schools and communities defines rural as follows:

> A district is considered rural when the number of inhabitants is fewer than 150 per square mile or when located in counties with 60% or more of the population living in communities no larger than 5,000 inhabitants. Districts with more than 10,000 students and those within a Standard Metropolitan Statistical Area (SMSA), as determined by the U.S. Census Bureau, are not considered rural. (Helge, 1981)

Even this definition does not fully recognize the diversity that can exist within rural areas. Helge (1984) sees this diversity as a result of an interplay between three variables: (1) population density, (2) topography/geographic location, and (3) multiplicity of other community and school district variables—including, but not limited to, administrative structure, sociocultural values, socioeconomic status, ethnic/racial groups represented, distance, financial support, etc.

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The problems raised by this lack of a consistently accepted definition and great diversity of rural areas afford individuals interested in special education unique challenges and opportunities to design and develop innovative programs to meet the needs of hearing-impaired children living in rural areas. The primary purpose of this paper is to describe various service delivery options for serving rural populations of hearing-impaired children and to weigh the viability of these options. To accomplish this task, three major interrelated issues must be addressed. These are: (1) identification of hearing-impaired children, (2) determining educational needs of identified children, and (3) delivery of needed educational and support services. The first two issues will be treated only briefly. (More detailed information on these issues is provided by other individuals addressing this forum.) The third will be discussed in detail.

Identification

One provision of P.L. 94–142, the Education of All Handicapped Children Act of 1975, was the stipulation that all States develop and implement "child find" procedures for identifying unserved and underserved handicapped children. All States have implemented and continue to refine identification and tracking systems in compliance with this mandate.

Early identification of hearing-impaired children is recognized as a key factor in providing effective educational services. Procedures which contribute to early identification include the use of high-risk registers; neonate and infant screening; increased awareness education for practicing pediatricians; and building knowledge level competencies into medical school training during internship years (see: Moores, 1982; Pollack, 1985). All of these practices have resulted in better and earlier identification of very young children with hearing problems.

Beyond these efforts aimed at the very young child, comprehensive and consistent hearing screening programs are needed from the pre-school through school leaving years. Such screening programs can identify hearing problems in children as they progress through the school system. Guidelines for establishing model screening programs schoolwide, districtwide, and/or even statewide have been promulgated by the American Speech, Language, and Hearing Association (ASHA, 1978; 1979). Many States and school districts have adopted these guidelines or fashioned hearing screening programs based on the ASHA proposals.

Any identification program, at any and all levels, is only the first step in providing services to hearing-impaired children. Identification must be complemented with a system for determining the specific needs of the identified children.

Determining Educational Needs

In most States, identification of a hearing loss is the first step in verifying that a child has a handicapping condition which will qualify for special services. Identification is followed by evaluation/assessment procedures to determine the educational and support needs of identified children. Factors which must be considered are: degree, type, and configuration of the loss; age of onset; age of identification; benefits of amplification; age at which amplified; developmental levels of the child (social, emotional, motor, psychological, communicative); achievement levels; family variables; and previous educational experiences (see: Luterman, 1986; Zieziula, 1982). In short, identification needs to be followed by multidisciplinary evaluations conducted by a team of qualified professionals.

Such team evaluations were also mandated by P.L. 94–142. As with "child find" procedures, all States have established guidelines for membership on and the functioning of such teams. Actual membership on such teams may vary from State to State and also from district to district within States. However, members of these teams can (and commonly do) include, but are not limited to, an appropriate administrator or designated representative; teacher of the hearing impaired; psychologist; audiologist; parent; child (when appropriate); and other professionals as deemed necessary.

Once children are identified and their educational needs are determined, there needs to be an array of service delivery options available for meeting the educational needs of the children. The remainder of this paper will deal with the issue of delivering educational services to hearing-impaired children in rural areas.

Service Delivery

Information on delivery of services comes from two sources: (1) general survey information on administrative structures for providing special education services in rural areas, and (2) specific information on delivering services to hearing-impaired students in rural areas. Each of these will be examined in turn.

Administrative Structure

Concern over how to provide special education services to handicapped children in rural and sparsely populated areas predates passage of P.L. 94–142 (see: Hensley, 1966; Jordan, 1966; Loveless, 1967). However, passage of P.L. 94–142 intensified the interest in and provided the impetus for increasing the quantity and quality of services provided (C.A.S.E. Research Committee, 1982). Prior to and even after the passage of P.L. 94–142 the most common administrative structure for providing special education services in rural areas was some type of cooperative or collaborative educational arrangement between and among service units (most often local or county school districts). (For an example, see: Harmon & Bowles, 1984).

Silver (1984) identified eight types of rural cooperative arrangements. She described them thusly:

> 1. Regional state agencies where administrative authority remains with the state department of education.
> 2. Formal, intermediate units.
> 3. Special school districts enabled by state legislation to provide designated specialized services in a given area.
> 4. Voluntary cooperatives with administrative authority granted by the local school districts to a new unit of administrative authority that undertakes responsibility for provision and administration of special education services.
> 5. Joint agreement cooperatives, an undertaking by two or more local school districts, to provide special education services on a regional basis with administrative authority remaining at the local level.
> 6. Satellite cooperatives where one school district provides special education administrative services to a group of neighboring school districts.
> 7. School study councils (also called school development councils), a loose confederation of local school districts under the sponsorship of a local college of education whose purpose is to solve defined educational problems existing in member schools.
> 8. Individual school districts.

Many States with sizable rural areas to serve have adopted cooperative, administrative structures. Examples of these are: (1) Area Education Agency (AEA), Iowa; (2) Cooperative Educational Service Agency (CESA), Wisconsin; (3) Educational Service

Unit (ESU), Nebraska; (4) Intermediate Unit, Pennsylvania; (5) Consulting Teacher, North Dakota, Vermont; (6) State School Satellite Programs, Kentucky; and (7) Special Education Region Resource Centers (SERRC), Ohio. These States, and others, may also have additional legislative provisions which allow school districts to establish regional programs and otherwise enter into contractual arrangements to provide special education services.

Despite the popularity of cooperative administrative and service delivery structures, they should not be regarded as the " best" choice for providing services to rural areas. Many of these service delivery systems are based on the traditional models of providing a continuum of services to handicapped students ranging from hospitals and treatment centers to regular class placements without consultation. (See any of several introductions to special education textbooks for a full description of this cascade of service options.) As Silver (1984), Helge (1984), and Kirmer, Lockwood, Hickler, and Sweeney (1984) are quick to point out, a number of factors, individually and/or in concert, must be considered in order to provide effective services to children. Critical variables, over which planners may have some control, include: financial support system (local, regional, State, Federal); district governance structure; transportation; equipment; facilities; staff; community involvement and support; parent involvement and support; staff training (preservice and inservice) plans; and interagency cooperation (Helge, 1984; Kimer, et al., 1984). Thus, it would be impossible and, according to Helge (1984), inappropriate to describe the "one" rural service delivery model. Despite the general cautions attached to cooperative/ collaborative arrangements, each of the previously cited examples has been used as the administrative structure for providing educational services to hearing-impaired students living in rural areas. Let us now turn our attention to this matter more specifically.

Serving the Hearing Impaired in Rural Areas

Knox (1983) reports on a broad-based study of rural special education programs. One focus of the study was to examine programs for low-incidence handicapped children. Included in this category were students with hearing impairments. Rural programs in the Northeast, Southeast, upper Midwest, Southwest, and Northwest participated in this study. In all, 33 school districts in 14 States were visited. These districts included intermediate school districts, cooperatives, county districts, and independent, local school districts.

For the most part, Knox's data on services to hearing-impaired students are discouraging. Of the 33 districts studied, 19 did not have services for hearing-impaired students. Seven districts reported having no hearing-impaired students in their service areas even though child count figures indicated that hearing-impaired students were residing in the service district. In some cases, these students were placed in out-of-district programs (State residential school, neighboring regional program) with little if any monitoring by the home district.

The lack of services was confounded by inadequate or nonexistent identification/screening programs. Thirty-one of the 33 districts reported percentages of hearing-impaired students of less than 0.3 percent with 16 districts reporting less than 0.1 percent. Knox states "that most of the identified students were those with severe losses" (p. 27).

Based on his data and results, Knox presented the following observations:

> 1. By and large, there is very little activity in the area of identification of hearing-impaired students. . . . Severely impaired students tend to surface without such identification procedures in place and, therefore, most of the local services are directed toward this group of youngsters. [From this, one is led to conclude that large numbers of children with less severe losses go unidentified and, thus, unserved.]
>
> 2. There do not seem to be many options available for serving hearing-impaired students in rural areas. Typically the two choices of placement for such a child is [sic] in the regular classroom (with or without support services) or placement out-of-district.
>
> 3. Services appear to be more effective in terms of availability of options and the development of identification procedures when there are regional organizations. . . . .Regional arrangements appear to facilitate these efforts.
>
> 4. Educational personnel who have been trained to work with hearing-impaired students are an endangered species in rural areas.

> 5. In a typical rural program, a speech clinician is likely to be responsible for language development programs and alternative methods of communication. Resource teachers and regular education teachers shoulder the responsibility for academic progress.
>
> 6. One frequently has the feeling that students with hearing impairments have a low priority in many of the districts. (Knox, 1983; 28–29).

Despite the less than encouraging observations of Knox, the picture is not completely negative. Effective programs which provide quality educational opportunities for hearing-impaired students in rural areas have been developed. While the regional and multidistrict cooperative administrative structures seem better able to provide a variety of educational options, many county and local school districts have also been able to develop innovative programs.

The goal of these programs is to design an educational plan that meets the needs of the students rather than to establish a program and try to fit the students to the program. Even the best programs are not entirely successful at meeting this goal, but many exciting and encouraging programs serving children from birth through 21 years are in operation.

At the infant level (0–3 years), home-based models are most prevalent. Such models (often described as parent-infant programs) stress early identification, early amplification, and early intervention provided in the home with the parents (or primary caregivers) as the first teachers. Examples of such models are: the SKI-HI program, developed in Utah and designed especially for serving hearing-impaired infants in rural areas; and the Portage Project used in rural, south-central Wisconsin.

At the pre-school level (3–5 years), hearing-impaired students enter into more formal school or center-based learning settings. These can range from classes at State or private residential schools (or satellite classes from these schools); college or university affiliated classes; hospital programs; public school classes (within the public system or contracted to private service agencies); multiagency centers; diagnostic centers. Diagnostic centers usually offer limited-length services (6–8 weeks) to determine educational needs followed by placement in a suitable setting. Some areas continue to use home-based programming in conjunction with center-based instruction at the pre-school level.

Upon reaching kindergarten age and continuing until graduation (or school leaving age) hearing-impaired children become part of the more traditional schooling process. Educational options which should exist for these hearing-impaired students ought to include:

1. Regular classroom placement with no support services.

2. Regular classroom placement with support services including any or all of the following: (a) consultant teacher of the hearing impaired; (b) speech-language therapy; (c) audiologic services; (d) tutor-notetaker; (e) peer tutor; (f) interpreter; (g) interpreter-tutor; (h) psychological/counseling services; and (i) team teaching.

3. Resource room (categorical or generic). If categorical, hearing-impaired students would be placed with a teacher of the hearing impaired for part of the day and placed in the regular class for part of the day. If generic, hearing-impaired students would spend part of the day with a resource room teacher (who may or may not be trained in hearing impairment) and with students with other handicapping conditions. Consultant services may or may not also be available.

4. Consultant/itinerant services. A teacher of the hearing impaired works with local school personnel to design educational plans and monitors progress of the students. Consultant/itinerant teacher may or may not work directly with the hearing-impaired students.

5. Contained classroom. Students would spend the majority of the school day in a self-contained setting with a teacher of the hearing impaired. Additional support services can be added on. Classes for the hearing impaired may be housed in a public school building with other regular classes or may be located in a separate facility (or wing of the building).

6. Residential school. Placement is out-of-district in a separate facility offering 24-hour care and programming.

Variations on any of these options are possible. Districts may enter into purchases of service agreements with other districts to secure these services. Distance and transportation factors may necessitate adjustments.

In some locales (e.g., Nebraska, North Dakota, Pennsylvania, Wisconsin) foster living or boarder programs have been initiated. In these programs, hearing-impaired children who otherwise would not be able to obtain needed services board with host families in areas which have the services available. Mobile units for consultant/itinerant teachers which contain instructional materials, teacher resources, and diagnostic equipment could serve as traveling resource centers or mobile classrooms. The teacher could then spend extended periods of time at each locale to be served. (Use of mobile units has been proposed in West Virginia and Kentucky.) All of these, and yet to be developed variations, should be considered as part of an array of service delivery options for providing educational opportunities to hearing-impaired students living in rural areas.

Summary

The task of providing educational options for hearing-impaired students in rural areas is dependent on a constellation of factors revolving around the child and the nature of the rural area in which s/he lives. Factors within the child include the nature, degree, type, and configuration of the hearing loss; age of onset; age of identification; age of amplification; benefits of amplification; developmental levels; achievement levels; family variables; and previous educational experiences. The nature of the rural area must be looked at in terms of the three interrelated points raised by Helge (1984)—population density, topography, and a multitude of community and school district variables. The almost limitless interaction of factors within the child and the nature of the rural area suggest that no single, " best possible" service delivery model exists.

The key to providing educational services to hearing- impaired students in rural areas is not to lock into a certain service option, but rather to develop a comprehensive plan the goal of which is to provide services to meet the individual needs of the hearing-impaired students to be served. Such plans would require procedures for early identification/screening; comprehensive diagnostic assessment/evaluation; interagency cooperative agreements; flexibility to enter into regional or multidistrict service units; access to technical/educational expertise; establishment of clear program purposes; staff training and development plans; and an open mind to trying innovative options.

This may sound like a rather "lofty" or "ideal" situation and, perhaps, it is. However, accepting less or tackling the problem with less than the ideal in mind may result in less than adequate educational services to hearing-impaired students. Rather than picture this as the ideal, it should be considered as a springboard which can lead to more innovative and productive utilization of resources and better programming for hearing-impaired students. Many rural programs, following the more common urban cascade of service options and/or developing and implementing innovative delivery options are in existence.

The challenge of providing educational options to hearing-impaired students in rural areas is one that is shared by all of us interested in the hearing impaired—by State departments of education, by legislatures, by administrators, by teachers, by parents, by the students themselves. The challenge must be met.

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Civil Rights Missing in the Education of Deaf Children

By John B. Davis[*]

My name is John B. Davis. I was born deaf in Evanston (Illinois). As a result of my background, it has been real jumbled.

I have gone to different education experiences. I spent 11 years in a strict oral environment in Chicago in the public schools, 4 years of mainstreaming, two hearing high schools with no interpreters and no notetakers, 1 year in a residential school, and 3 years at Gallaudet College, both with the use of total communication.

But most of my education stems from the Evanston library, as I was an avid reader of books at an early age.

At age 18 I entered the deaf community and started using total communication through sign language. When my school years ended I became involved in sports and club activities. I also joined the NSFD and the IAD, the Illinois Association for the Deaf.

I am speaking today about the establishment of my own school experiences, what I have learned from the experiences in the Association of the Deaf education, and on my own perspective of meeting deaf people in all walks of life, and talking with them about their school experience.

As a long-term leader of the IAD, I began to be concerned about the slow deterioration of the Illinois School for the Deaf; that deterioration is going on in other State schools also; that is the effects of P.L. 94-142 that supports mainstreaming of handicapped children in regular school classes. That bill really ruined IAD's enrollment.

The Assistant Secretary of Education (herself the mother of a Down's Syndrome child) is responsible for this legislation that

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[*] The chairman of the (Illinois) State Board of Rehabilitation, Mr. Davis is a charter member of the Chicago Club for the Deaf, has served as an officer in several organizations for the deaf in Illinois, and has been active in legislation to benefit the hearing impaired.

caused the State schools to deteriorate throughout the United States.

She slowed the process of deaf education started in 1813 with the Hopkins—with Thomas Hopkins Gallaudet establishing the first State school at Hartford, Connecticut.

Since 1975 and P.L. 94–142 the percentage of deaf children attending State schools has dropped to 30 percent, while 70 percent are attending day programs in their home communities. Each special education director operates his or her area as a fiefdom—one out of about 600 special education directors has a degree in deaf education in Illinois.

There are about 25 coordinators of hearing-impaired programs compared to about 2,500 administrators in special education, including the coordinators.

The expertise of people in deaf education just isn't being applied to the education of deaf children, yet the special education staff expect all deaf children to make complete and rapid progress side by side with their hearing peers.

Valuable communication time is lost in bus trips from home to school twice a day. At home after school, the child often has no one to play with.

State schools offer a deaf child more hours of learning by encouraging communication 12 to 15 hours a day in the cafeteria, dormitory, classroom, vocational shop, and playground.

This compares to a day school with only 7 hours and often none at home.

In most cases the child is even isolated in his own family.

It is a fantasy to expect a deaf child, after mainstreaming in school, to become normal and be swallowed in the hearing world as an adult, to marry a hearing spouse, and live happily thereafter.

No traditional school can match a State school in the services offered deaf children. These services include psychology services, audiology, speech therapy, counseling, parent education support groups, language skills development, occupational therapy, and otolaryngology services.

What is particularly disturbing is the concept of least restrictive environment that has been applied to the local neighborhood school. While the State school is seen as the most restrictive environment, local educators have joyfully accepted LRE, least restrictive environment, and have expanded their programs to absorb deaf children at the expense of State schools.

Local directors play the numbers game: the more deaf children in a program the more money they receive. Thus an administrator is very reluctant to release a child to the Illinois State School for the Deaf.

While a provision exists for parents to seek redress in the courts to overrule the decision of a director, very few parents have the determination, money, and the guts to outlast a director in the courts where cases can be postponed time and again.

To me this is a gross civil rights abuse and is at the expense of all deaf children now and in the future. Parents as taxpayers whose money helps support State schools are denied the right to enroll their deaf children in those schools. This is another civil rights abuse in taxation without representation.

We deaf people and concerned parents must work together to be more forceful in demanding that Congress and State governments change this law by removing the deaf from P.L. 94–142. Growing numbers of deaf educational professionals are ready and eager to serve in administrative positions and to be available in consultative capacities.

It is a waste of time to talk to special education directors that know nothing about deafness and are experts in doubletalk. Legislation is the best source of redress.

That is where the power is. It is our civil right to do so.

Part II. The Right to an Education (continued)

(b) Access to Education

The Right of Hearing–Impaired Children to Early Childhood Education

By Celia Warshawsky[*]

Introduction: Rights of the Hearing–Impaired Child

The topic assigned to my portion of the program is the rights of the hearing–impaired child at the earliest stages, including children from birth to 5 years of age. Before addressing the specific age of the child, I would like to share with you a list of rights for hearing–impaired children of all ages. This was compiled by Marge Klugman in honor of the International Year of the Child (1979) as a result of a joint effort of a committee representing deaf people and parents of hearing–impaired children from the Greater Los Angeles Council on Deafness and Temple Beth Solomon of the Deaf.

The Rights of the Deaf Child

The right to be himself.
The right to know his own name.
The right to communicate with his parents,
and receive love and understanding from them.
The right to express himself in the
manner in which he feels most secure.
The right to freedom from physical abuse.

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[*] Hearing impaired since birth, Ms. Warshawsky was a pioneer teacher of the deaf, and, among other honors, she was named "International Deaf Woman of the Year" by Quota International, Inc., and "Frater of the Year" by the National Fraternity of the Deaf. She passed away in July 1986.

The right to special care so that his
deafness does not become a handicap.
The right to an appropriate education
for his individual needs.
The right to make his own decisions.
The right to choose his own friends.
The right to reach his full potential
as a human being and not a weak imitation of
a "normal" child.

Recent research has shown us that the years prior to a child's fifth birthday are the most critical for learning. A child's brain growth before the age of 5 years is greater than at any other time in his life. Research has also proven the positive effects of working with the infants' families as the major agents of meeting the young child's needs to grow and develop. It is the social, emotional, and physical support from a child's family that enables him/her to maximize the intellectual potential. When the child under the age of 5 is hearing impaired, he has the same opportunity for brain development, provided he is given the requisite emotional, social, and physical support. We know that hearing impairment, per se, does not cause learning problems or problems in relating. We also know that deprivation of communication between child and primary caregiver will profoundly affect the attachment process. This, in turn, can be directly responsible for the child's failure to maximize his educational potential. When a child is hearing impaired, by nature of the sensory deprivation itself, the means of connecting with the environment is automatically different. As a result, communication between parent and hearing- impaired child may not occur at the same level as between hearing parent and hearing child. In many cases, without effective therapeutic and educational intervention with the child and family members, the hearing-impaired child in a hearing family is at very high risk for communication deprivation and subsequent problems with attachment. With proper counseling and education with the family members, the young hearing-impaired child is afforded the opportunity to learn about the same aspects of his environment that a hearing child would pick up automatically. He/she will not be isolated from learning about the aspects of his environment that depend on sound and the human voice. Adaptations are provided for him and his family that will allow him to learn as much as the hearing child through all means available to him. More important, however, is the opportunity provided through communication to establish relationships within the family.

Development of Communicative Competence and Confidence

The implication in the outline for today's program on rights during early childhood is that the access to the hearing-impaired baby's rights is through a formal program addressing both the children's needs and the families' needs. Although this type of program is a necessary vehicle in most cases, the actual access to the young, hearing-impaired child's education is not the formal program, per se; it is the child's development of *communication.* This is essential to the child's establishment of an ego identity that will enable him/her to expend energy on a lifetime of learning and relating. Since the child's access to education is through the development of communicative competence, it is essential for any early childhood program for the hearing impaired to have a thorough understanding of how the communication process is established, reinforced, maintained, and expanded in all children.

Currently, the field of the acquisition of communicative competence is making many assumptions about the development of this very complex communication process. Many specific terms have been defined for the professional and for parents that are easily demonstrated. Stages of prelinguistic communication have been described with clear examples in the following excellent references: *Teaching Functional Language, The Acquisition of Communicative Competence, Early Language Intervention,* and *Learning How to Mean.* Although these references pertain mostly to hearing children, we are learning that hearing-impaired children proceed through many of the same earlier stages, but at a different rate.

We are also beginning to assume that some of the earlier functions of language can be taught to deaf children by carefully planning and sequencing responses to their spontaneous expressive language. Often the hearing-impaired child's initial signals are visual, as well as auditory. The caretaker of the hearing-impaired baby can encourage a great deal of communication through reading, interpreting, and responding to these earlier visual clues. In some programs, it is believed that responding to earlier visual cues will discourage later development of speech and language. In other programs, the belief is that the mothers' and/or caretakers' responses to the cues will increase the child's motivation to develop a form of communication. The child will then use more communicative intent with the caretaker and will proceed at a faster pace in his learning of language and speech. His motivation will reinforce his family's feeling of confidence. An advantage of studying the early acquisition of communicative competence with the young hearing-impaired child is that the child's earlier attempts to use language for certain purposes, which seem to be universal, are automatically paired with the child's earliest meaningful speech attempts or phonologic utterances. The same is true in the case of the hearing-impaired child with no other problems.

The hearing-impaired child's earlier language attempts are in the form of eye points, body language, finger points, and gestures, frequently paired with vocalizations. The hearing child often uses language in the same way prior to his development of an extensive vocabulary of words. However, in most cases, the hearing-impaired child remains at the prelinguistic level of communication for a much longer period than the hearing child.

In summary, a knowledge of prelinguistic communication and how it develops is essential in the parent-child task of defining their relationship, as well as building the foundation for later linguistic competence. As the title of the parent-infant program implies, the parent and child play equal roles in developing the communication process. Critical to a motivation to provide the most meaningful and enjoyable experiences for the child is the parents' acceptance of the child and comfort in relating to the child.

Basic Components of Parent-Infant and Pre-School Programs

There is sometimes a great deal of apprehension and tension when a baby is born into any family. Coupled with the advent of a new baby, the realization that the child may be less than perfect introduces increased stress, shock, fear, anger, and/or guilt. The first concern in effective parent-infant intervention programs is to help the family deal with the crisis. Effective parent counseling with other parents is a way to facilitate exploration of feelings and strategies for coping. A major challenge of a quality parent program is a thorough study of parent to parent interaction coupled with a strong commitment to facilitating supportive interaction. Parents report learning a great deal from one another. Those who have had more experience and have integrated their experiences, can translate confusing concepts or terms to those whose children's hearing impairments have been recently diagnosed. Parents have the potential to be very supportive to the needs of one another in group counseling sessions, given the professional's sensitivity to individual and group dynamics.

Much has been written about the mourning process that accompanies association with a child who is not meeting parental expectations. It is important that the process be recognized, acknowledged, allowed, facilitated, and/or understood rather than pushed in any way. The uniqueness with which parents experience mourning is related to issues that are sometimes not known to them and sometimes very confusing. The individuality of each person's mourning cannot be known to the professional prior to its appearance. Although the information that might explain the individual reactions is missing, the fact of the mourning process is a very real component of parent–infant work with families of hearing-impaired children. If the parent feels respected—allowed and encouraged to express his/her feelings as they appear, the process of acceptance of the child is more likely to happen than if the parent feels pushed, misunderstood, or put off in any way.

The parents who report having gone through a painful mourning process are often the ones who strongly believe in the importance of total communication, not as a methodology of transmitting verbal information as much as a means of building trust and a meaningful relationship with their child. Often the same parents have acquired some knowledge and understanding of the deaf community. Although they may be afraid of losing their child to "a deaf world," they are also able to understand the child's need to communicate from the time of the identification of the hearing impairment. They are not particularly invested in deciding or controlling the direction of the child's future friendships or associations.

Two areas that are not frequently addressed in the literature but which are nevertheless factors in parent–infant work, as it relates to resolution of the mourning process, are (1) How the mourning process manifests itself in children who have been adventitiously deafened both at the prelinguistic and later linguistic stages of communication and language development; and (2) How the mourning process manifests itself in professionals who are not meeting their expectations of themselves with particular children or families.

A critical component in the acceptance process is a growing understanding of hearing impairment and the needs of hearing-impaired people. A way to promote this understanding is through a formal topic related parent education program. Prior to the pre-school years, parent counseling groups may help alleviate parent reported feelings of incompetence and loss of self-esteem upon learning that the child is handicapped. In a relatively short period of time between diagnosis and early intervention or even during the sometimes ongoing process of diagnosing the child's problems, families are introduced to many unfamiliar concepts. The myriad of medical, other diagnostic and educational topics and terms can be overwhelming to parents. A formal educational program will enable the parents over a period of several years to integrate all the new information.

Formal parent education programs should not be discontinued when the child enters school, but can serve as an emotional support during a potentially difficult transition for parent and child. Representative terms which parents are faced with, may include, but are not necessarily limited to the following: Audiological evaluation, hearing aid evaluation, audiologist, behavioral testing, audiogram, sensori-neural, residual hearing, degrees of hearing impairment, cochlear implant, otologist, body hearing aid, ear level aid, educational interpreters, mainstreaming, assistive devices for the deaf-telecaption decoders, light signals, telecommunication device for the deaf (TDD).

Until this point, I have emphasized the parent avenue of the parent-infant intervention process. A comprehensive educational program for the children is essential to a quality program also. All parents feel tremendous responsibility to do what is best for their baby, even though they may manifest their feelings differently. In order for families to work through the necessary emotional issues that lead to acceptance of the child's hearing impairment, the family members must have confidence in the child's educational program. Parents have dual roles, but they must be recognized as parents first and not special educators. Some programs subscribe to the parents as teachers approach for reasons of cost effectiveness; the following disadvantages to this are listed in Jan Blacher's recent publication, *Severely Handicapped Young Children and Their Families:* Parents may become more of a teacher and less of a parent; change in structure of the family system or overall family functioning is required; parents and children show more negative behavior toward one another in therapy than while playing together at home; parents' feelings of being under pressure to perform increases tension; the mourning process can contribute to a parent's desire to focus only on teaching; some parents cannot succeed in the program as a result of adjustment to the handicap taking precedence or as a result of family characteristics.

Qualifications of individuals working with children should include a thorough knowledge of how young children learn at various ages and developmental stages, as well as how the hearing impairment impacts on the young child's development. Instead of being downward extensions of the school program, early childhood programs should demonstrate a thorough understanding of the prelinguistic components of language and how they are acquired by hearing and deaf children.

At the earliest stages, the educator facilitates the development of reciprocity as described by Greenspan or Stern. She/he reinforces and encourages rudiments of conversational turntaking between mother/father and child. When the multihandicapped child has not yet developed behavioral intent, the educator facilitates exploration of objects through tactile, kinesthetic, visual, and auditory means.

In the field of formal pre-school education, it is believed that an educational philosophy is desirable in providing the most beneficial curriculum for children. The philosophy of learning must not be confused with methodology or activities. It is a clearly stated belief system about how children learn, backed by a body of knowledge and individual teacher experience. The early childhood teacher of the hearing impaired must never lose sight of the child's communication and language needs while using the chosen methodology of the program in which she/he works. She/he must also provide the children with structured adapted age appropriate activities and experiences that motivate cognitive, self-help, motor, and social/emotion development. Widely accepted curriculum models such as the Piagetian model and the developmental-interactionist model are both very adaptable with hearing-impaired children. They are both based on encouragement and reinforcement of the child's self-expression through exploration and manipulation of his environment.

In addition to the educational program, an evaluation component is necessary to monitor program progress, as well as child progress. Currently, hearing-impaired children in Illinois are seen for a full case study evaluation, including audiological, speech and language, psychological, and social work input. Although the standardized tests are sometimes applicable for the brightest children or for the children with good speech discrimination abilities, many of the standardized tests assume abilities that hearing-impaired or multihandicapped hearing-impaired children have not yet developed. Hence, the test procedure can serve to penalize some children. If the test results are not meaningful and the child has experienced a negative reaction during the testing, the diagnostic procedure can serve to reinforce the children's anxieties about unfamiliar situations. On the other hand, if the educational and diagnostic team is working together, this procedure can serve to decrease children's anxieties.

Optimum organization of parent-infant programs with regard to the children's needs would include individual sessions with parents and children together, as well as groups of children working with a teacher (and aide, if the group is over 3 in number) without the parents. While the children are together, the parents can have their counseling and/or educational program with the social worker and/or the parent educator.

Some of the considerations in setting up a program are the hearing levels, the functional speech discrimination abilities, cognitive skills, motor skills, ages, and developmental levels of the children. If the children are grouped homogeneously, they learn a lot from one another, interacting freely and spontaneously. Since peer interaction plays such an important part in a child's social development and subsequent communication development, peer facilitation and reinforcement of communication practice is a critical component of a quality early intervention program for the hearing-impaired child.

If the parent and hearing-impaired child have not worked out a healthy attachment, the child may manifest the problem in the way he handles the separation and reunion with his mother during group time. Once the problem has been identified, a highly sensitive approach to separation and reunion of mother and child coupled with group and/or individual counseling for the mother can be very helpful in facilitating the necessary attachment.

Individual sessions with parent and child can and should be geared entirely to the individual family. Whenever possible the play activities should emulate the child and family's real life experiences. A skilled parent-infant educator learns how to draw out the individual characteristics of the families in order for the process to be as amenable to carryover as is possible. For parents of children under 1 year of age, home visits are sometimes a program option. Home visits allow more input from the family's environment in choosing activities. The parent can demonstrate successfully the natural reciprocity developing because the child will be responsive to the routine that has already been established. Home visits, on the other hand, prevent the parent from coming in contact with other parents. In some cases the family's visits to programs provides the mother with an opportunity to develop a social network and support system.

A definite distinction must be made between parent-infant and pre-school programs. It is important to focus on the transition from one program to the other to the extent that the family and child internalize the change that is taking place in their lives. It may be generally assumed that with the onset of pre-school for the young hearing-impaired child, healthy reaction to being separated from the mother will follow. If healthy attachment has not been established as shown by the child's attachment behavior or by other social/emotional problems, this issue should be addressed at the pre-school level. In addition, an assumption of language level or other developmental levels higher than what the child possesses can be harmful to the child's self-esteem. Play at the pre-school level continues to be an important ingredient in children's learning. We know that adults can facilitate play, if they know how to follow the rules. Pretend play, in particular, is excellent for the hearing-impaired child in encouraging positive interaction, as well as in building cognitive and prelinguistic/linguistic skills.

In order for play to flourish, children must have a safe environment with ample space and equipment. The pre-school level is a perfect place for role playing people in their environment. Simulated kitchens, dress up clothes, toy dishes, and simulated stores, doctor's offices, etc., allow children at the pre-school level the tools they need to learn. The children practice the roles they have observed and/or imagined. The pre-school setting is an excellent environment in which to introduce adult deaf role models or older deaf children as helpers. Children at the pre-school level begin to be aware of their hearing impairments. Having older hearing-impaired people available may help build a stronger sense of identity in the child.

Current Issues

The biggest issue today regarding the rights of the parent-infant and pre-school hearing-impaired child is happening politically at the State and Federal levels. Since the mid-1960s, effective parent-infant education programs for the hearing impaired have been provided in public school programs, as well as private facilities. Pre-school education has been a standard ingredient in public school and private programs for the hearing impaired. Public school programs have not been mandated and are therefore subject to severe budget cuts, particularly since the passage of P.L. 94–142 (The Education for All Handicapped Children Act of 1975). However some of the local districts and regions have continued funding the programs at a bare bones level. The regions, local districts, and private facilities which have continued to fund the programs have been under no obligation to do so. These programs have been continued as a result of their intrinsic value to children, parents, to the educational organizations that provide the funding, and ultimately to society. The programs that have survived have proven themselves effective, in spite of rigid budget cuts in the provision of comprehensive services for families and hearing–impaired children.

The State of Illinois is currently studying comprehensive programming for *all* handicapped children and their families, from birth to 5 years of age, as a result of an initiative under P.L. 98–199 to develop a State plan. The Illinois State Board of Education is coordinating the development of the Handicapped Early Childhood State Plan through a Federal grant. Seven State agencies, including the Departments of Mental Health and Developmental Disabilities, Public Aid, Public Health, Services to Crippled Children, Children and Family Services, Department of Rehabilitation Services, and the board of education have been identified as providing services to young handicapped children and their families. Under the Early Childhood State Plan, these agencies have sent representatives to a *steering committee;* the directors of each of the agencies have designated people to serve as *task force* members. In addition, nine ad hoc regional committees (organized geographically) met throughout the State during the 1985–86 school year. Two representatives from each ad hoc committee were chosen to represent their region on an *advisory council.* One-fourth of the 20 member advisory council are parents.

In addition to the Early Childhood State Plan, a request for proposal was issued in July 1985 for the establishment of model program sites in which to study the current parent– infant population throughout the State, interagency funding patterns, and services being currently provided. Nine pilot programs were funded. By January 1989 the information gathered from the Early Childhood State Plan grant and the pilot project model sites will be compiled by the State board of education in a report to the General Assembly.

The intent of the current effort to mandate birth to 5 programs in the State of Illinois is potentially beneficial to the hearing-impaired child and his family. Since at the present time neither public nor private programs have been able to provide the comprehensive services recommended to meet the needs of this specific population, some families have been forced to participate in several different programs. Many families are receiving partial services with either inadequate counseling, education, and/or diagnostics. Although the State is looking at intragency coordination, the fact of the coordination is not as highly developed as the individual programs themselves.

The potential danger to the hearing-impaired child with regard to the upcoming mandate is that programs from birth to 5 will become noncategorical, negating the deaf child's need to be with other deaf children of his age and developmental levels. Should this happen to the hearing-impaired population as a result of complacency, lack of information, or misleading cost effective measure in the long run, it would be entirely discriminatory to the hearing-impaired child and family.

The low incidence nature of the handicap and the variables within the population innately reinforce the extreme isolation and alienation.

Most other groups of handicapped children speak and hear English and, therefore, are part of the community and culture of the hearing majority. The "mainstreaming" of these handicapped groups of children is chiefly done by creating physical access for them to enter regular programs. Physical access is not the deaf child's problem. His/her problem is the understanding of basic language/communication when once placed in a group. The family of the hearing-impaired infant and preschool child, as well as the child himself, has the right to very specialized and comprehensive services funded at an adequate level to meet the specific needs of the population.

Recommendations

(1) Mandate for free public and appropriate education from birth to 5 years of age for hearing-impaired children.

(2) Representation from the deaf community on a statewide task force in the decisionmaking.

(3) Ensure adequacy of staff through certification requirements in deaf education with all of the components, early childhood education, counseling, and administration of early childhood.

(4) Transdisciplinary team effort where all staff works together and agencies, such as medical, social/emotional, and educational also work together.
(5) Ongoing research and education in the field of deaf education—with focus on which models work best and why and how deaf babies learn language.

All of you here today are concerned about the growing number of deaf or hearing-impaired children who do not achieve or resist the educational process. Instead of trying to make the deaf child into a copy of a hearing person, we should be more concerned with helping him/her to become a well-adjusted, communicative, and successfully oriented deaf individual.

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The Right of the Young Hearing Impaired to Early Intervention

By Ellen A. Rhoades, Ed.S.*

The research basis for early intervention is *ample*. There is no doubt, whatsoever, that our efforts to improve the lives of impaired children and their families is effective. We have well known this since the pioneering works of Skeels (15), Bloom (2), Hunt (8), Kirk (9), Weilkart (14), Gray, and Klaus (10). It was these very pioneers who, between the 1930s and 1960s, gave us such data as the Iowa studies (15), the Milwaukee Project (7), and the Perry Preschool Project (14). Because of them, early intervention has been substantiated. We need *no* longer defend the "SHOULD WE?" or the "WHY?" of early intervention.

In fact, it is no longer debatable that the most successful Federal program of our generation has been, and is, *The Handicapped Children Early Education Program*—our First Chance Network. Through such federally funded programs, we know our handicapped children reap immediate and long-term gains as does our society.

Today, the right question to ask is "HOW?"—How shall we best provide early intervention?—And with what tools?

In focusing specifically on the hearing-impaired child—the prelingually deaf child, if you will—we need to review Gallaudet Research Institute's 1983 survey data (4). It indicates that the typical deaf adolescent has spent 10 years within a self-contained setting, be it a school or class for the deaf; that this deaf youth is either functionally illiterate or has a third grade reading level; that he uses sign language as a primary means of communication; and *does* not have intelligible speech. And, finally, that this costs us taxpayers between $6,000-$15,000 per 9-months school year. This survey data is based on those oral and manual deaf students identified by schools of the deaf.

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*An experienced teacher of deaf children, Ms. Rhoades is the executive director of the Auditory Educational Clinic in Atlanta, which she founded in 1977, and a children's rights advocate.

If we then review our survey data of 20 years ago (16), we shockingly observe no overall improvement for our deaf children. Yet we know early intervention programs have been implemented in the last 20 years. Does this then mean the deaf child does not significantly profit from early intervention? We all know better than to ask such a question. However, perhaps we need to delve more deeply into the "HOW?" of early intervention.

The Third Way: A Model

In 1947 most deaf children did not use amplification—when the few did, it was for only a portion of each day. However, a handful of clinicians/teachers believed the deaf could somehow learn to hear. One of them was Dr. Ciwa Griffiths who first put hearing aids on 2- and 3-year-old deaf children. This experimental program, federally funded, was a first; it initiated the practice of reverse mainstreaming, consistent and early amplification, parent involvement, and natural auditory-verbal linguistic stimulation. My brother and I were a part of this 3-year program. Short-term results of that project were published in a book entitled *Deaf Children in a Hearing World* (3). We were 2 of 12 case studies.

Around this same time, also in the 1940s, Helen Beebe in Easton, Pennsylvania, and Doreen Pollack in New York City and later in Denver, were also implementing this auditory-verbal approach to teaching deaf children basic listening skills. For years these three pioneers struggled along with the belief that the deaf can hear.

It had been considered blasphemous and ridiculous, in the early 1950s, to: (1) try putting hearing aids on babies, (2) to try binaural amplification, (3) to deprive deaf children of visual means of communication (thereby dooming them to a life of "frustration"), and (4) to mainstream deaf children into a hearing world (and, therefore, "denying them their deafness").

But their efforts were not in vain. Ever so slowly, one by one, a few more deaf children each year overcame their handicap and had learned to function as hard-of-hearing children. A few more families were helped and many costly difficulties were avoided. But, more importantly, a slight ripple effect began to occur among our profession. Programs began to include auditory training as part of their curriculum in the 1960s. And then—in the 1970s—we began to see a change in the terminology of teaching methods. This signified the impact of our pioneers. Manual communication advocates recognized their limitations and the Total Communication concept was born. Oral communication advocates also recognized their own limitations and the auditory-oral concept was born. Auditory training had come of age.

But this was not enough—the surveys coming out of Gallaudet tell us so. The auditory-verbal pioneers recognized the danger of the auditory-verbal approach being misinterpreted and so joined together to network, to advocate, to teach and, hopefully, to gain strength in numbers. They founded Auditory Verbal International (AVI), a special committee of A.G. Bell Association for the Deaf.

AVI was, and remains, committed to the right of every hearing-impaired child to become a functional member of our hearing society. We are committed to the provision of equal opportunity—to the first option of learning to listen. We do not claim that every deaf child can learn to listen well enough to use the telephone or without needing special educational services. We do, however, claim that at least 50 percent of our deaf children—if given the opportunity—can become functionally hard-of-hearing and productive taxpaying citizens.

We espouse the very basic principles of: (1) early, consistent, and effectively powered amplification, (2) one-on-one individualized auditory-verbal communication training sessions, (3) parents as our fully informed, ongoing, and active partners, (4) full mainstreaming for every preschooler, and (5) a realistically high expectation level from all involved adults that the young deaf child *can* hear. These principles mean the deaf infant is bathed in sound in all of his waking hours—as we focus on the infant's "learning to listen"—*not* learning to lipread or sign.

The pioneers recognized that auditory training cannot be maximally effective if it is merely considered to be a 30-minute daily exercise. Instead, audition—the expectation of hearing—must be a way of life. Listening skills must be integrated into the total personality development of the deaf infant—that is, if that deaf infant is to overcome his deafness and become assimilated into our regular educational programs.

The studies we have in the auditory-verbal approach are unequivocal in demonstrating that deaf children, indeed, can learn to hear and understand.

In these studies, we have "normal, natural auditory-verbal communication skills" as being the objective of our intervention. Therefore, we assess this domain with the use of evaluation instruments which have been normed and standardized with the normally hearing population. We feel the use of such normative assessment tools is more likely to give an accurate portrayal of program gains. We do not use assessment instruments standardized on the deaf population. We already know the deaf tend to fare rather badly.

Pollack's study (12) has demonstrated that, in a given year when there were 49 Ss, 95 percent of those children developed auditory–verbal communication skills.

Fifty percent of these children were successfully mainstreamed, with most of those who were in special education classes also considered to be multiply handicapped.

In a followup study of 122 former deaf clients, Pollack found 83 percent still used speech as a primary means of communication, 76 percent were mainstreamed, 41 percent were multihandicapped. Of the 10 adults in this study, 7 were college graduates, and all, but one, were gainfully employed.

When the Auditory Educational Clinic was part of the First Chance Network, we served 29 children on a weekly basis in 3 years. As was typical of a small sample size with too many assumptions being violated, our resultant data (13) was necessarily descriptive in nature. Case studies did indicate that the degree of deafness did not determine the success or appropriateness of the auditory–verbal approach for the children. We also were able to determine (17) that it cost $3,000–$4,000 per year (over a 3–5 year pre-school period) to fully assimilate a deaf child into a hearing environment.

Unfortunately, the number of children being trained through the auditory–verbal approach was not yet legion. We have small samples. We are still not accepted by the teaching profession-at-large. But, with your support and belief that our deaf children need not grow in silence, we will get larger samples. And, with the auditory–verbal approach, we *can* indeed fulfill all four primary reasons for early intervention with deaf children.

1. We *can* enhance the child's development so that he hears.
2. We *can* provide support and assistance to each pre-school child's parents.
3. We *can* enhance the child's and family's benefit to society.

and finally—

4. We *can* avoid some or all of the costly difficulties which accrue when intervention is delayed.

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Elementary and Secondary Education and the Hearing–Impaired Child

By Inez Janger[*]

About the time that P.L. 94–142 was passed, Leo Connor, then the president of the Alexander Graham Bell Association, wrote an article which described a "Bill of Rights" for deaf children. This "Bill of Rights" had five basic components.

1. Every deaf child's education must begin at birth (or at onset of deafness).
2. Every deaf child should be able to use his/her residual hearing in a functional manner.
3. Every deaf child should be able to speak intelligibly.
4. Every deaf child must have access to methods of education and amplification, from infancy, which will allow the hearing loss to be *functionally* changed.
5. Every deaf child must live and develop in the mainstream of society.

I've been asked to address specifically the elementary and secondary school years. I want to focus on the educational decisions made for deaf and hearing–impaired children and how they could, but often do not, comply with this Bill of Rights.

- A young, hard of hearing child who has already begun to develop speech at home is placed in a public school kindergarten program, out of district—self–contained, except for recess, using total communication. Her parents are told that nothing else is available despite their clear desire to have her develop speech and lipreading skills. This child quickly begins

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socializing with her deaf classmates and drops all attempts to communicate orally with the rest of the kids in school. Her oral language development begins to decline noticeably at home.

- Another child who lipreads and speaks well is mainstreamed in a regular class through sixth grade, functioning well at grade level, upon graduation to junior high school is placed in a self-contained class for the deaf. The school says he won't be able to keep up "because the school program is now departmentalized and there's no support for the academic teachers."

- Another child who is also oral and has been functioning extremely well in the mainstream through sixth grade is given a sign interpreter and grouped with several nonoral students in academic classes although there had been no request for this, nor was it in his Individual Education Plan (IEP) which is the prescriptive vehicle for special services according to a child's needs.

- A fourth child, mainstreamed throughout her education, begins to have trouble with physics. The itinerant teacher of the deaf continues to work on speech and language development. When asked to work with the physics teacher to fill in the subject matter gaps, the teacher of the deaf says it's not her role. When funding is requested for extra tutoring in physics, the parent is told the *laws* don't cover this type of assistance.

In each of these situations, the parents were able to apply common sense, political pressure, and the IEP to bring about program changes and services more consistent with their child's needs. They wouldn't accept established patterns.

- In the first case, the parent convinced her local school to place the child in a regular kindergarten in her home school and to fund an itinerant tutor to work with the child. The parent was able to show that aid was available for this service too–as long as the IEP indicated it as a need. In addition, the parent hires a private therapist to work with the child and offer ongoing counsel on school matters.

- In the next situation, the parent continued to "brow beat" the Local Committee of the Handicapped to change the IEP to allow regular classroom attendance, academic support via the Learning Disability Resource Room, and 1 hour a day of speech and language with a teacher of the deaf. The IEP now indicates that all academic subjects will be taught in regular classes using the regular school curriculum and support will be supplied to the regular classroom teacher, if requested. However, this support has turned out to be provided mainly by this practical and articulate parent, not by the school.

- The child who had a sign interpreter succeeded in getting placed in different sections of the class and uses volunteer notetakers and extra tutoring after school.

- The last case required interference by the parent with the guidance department, the principal, and the teacher. Eventually, a text was provided (none was used in class) and makeup tests for previously missed material were allowed. Without parental pushing, the school and COH would not even have been aware of the situation.

These are all success stories. These parents, who've succeeded in breaking through the red tape, have been highly articulate and sure of their objectives. They've been pushy and bothersome—they've pulled strings, heart and political—and they've been well-prepared and much more knowledgeable than anyone else involved. One can wonder in the face of this what the law has really changed. These kinds of parents have always been able to beat the system, with or without IEPs, with personal and often financial resources. They've ensured the rights of their children.

But what about the parents who can't do it—who lack the energy, money, knowledge, and time to move the bureaucracies they come up against? For parents without the resources, the stories would have ended like this.

- The 5-year-old hard of hearing child who had been speaking at home performs as if she were functionally "deaf"—unaccustomed to using her considerable residual hearing and speech. Placed in an environment with limited oral communication and lowered expectations for language development, the child performs as expected—a star among "deafer" kids—but far behind her hearing peers.

- The seventh grader who has been successfully mainstreamed through sixth grade follows the simplified curriculum of the self-contained class and does not have the background to move back into a mainstreamed eighth grade class—so he is mainstreamed into a slower moving class for kids with learning problems—and, unfortunately, also behavior problems.

- The other seventh grader bands together with the nonoral kids, learns sign, and a subsection of the hearing class is formed. All communication between the deaf kids and the teacher is through the interpreter.

- The physics student, a senior honor student, drops physics—although her math and science abilities are well into the 99th percentile range and she planned to pursue a science career.

In all four cases the schools used the Individual Education Plan (IEP) to describe what was available, not what the individual student needed. The IEP became a uniform curriculum and placement tool for any deaf child rather than a plan for the unique needs of the child at a point in time.

What Mr. Reagan had to say about the hungry and the homeless in the U.S. is also true for the hearing impaired and their parents. The services are out there to be had. But, it takes a fair amount of knowledge, drive, and luck to make them available for our children—more than it should in a reasonably civilized society.

Let me list the problems most parents still face despite 94-142, 504, improved diagnostics, and better assistive devices.

- Delayed diagnosis.
- Audiology diagnosis sole determinant for placement.
- Lack of information about legal rights.
- Lack of information about existing education options and creative combinations of options.
- Few school-based professionals knowledgeable about above options.
- Limited access to other parents with whom to share.
- Programming decisions which preclude auditory/oral/verbal development (our first story).
- Therefore, programming decisions which preclude living and developing in mainstream (hearing) society.

Of course, primary responsibility for getting services remains with the parents. They must educate themselves, but they should not encounter the kind of ignorance and bureaucratic responses that are still too characteristic of the educational and medical establishments.

Given this situation, what should we, as parents, be asking for? There are no easy answers. The task can be left to legal redress—which is where we are today. The laws exist and it's up to parents to make them work. Of course, that takes knowledge, resources, great determination, and extracts an enormous emotional toll on the whole family unit—including the hearing-impaired child. Moreover, it limits the benefits of the law and services to the very few.

Or, there can be substantial improvement in parent/child advocacy—independent, utterly professional, and nonpartisan. All professionals having contact with the child and parents must be aware of and mandated to help parents become aware of options for oral skills development, for mainstreaming, and for the varieties of services which can be and have in the past been used to help children develop to their fullest potential. There must be an ongoing flood of public information—about options, about services, about the fact that hearing-impaired children can learn to speak and lipread and live in the real world. They can go to hearing colleges, work in major corporations, be lawyers and doctors, and be elected to public office. Public information targeted at the medical community is crucial. It is, after all, the medical community where the first diagnostic contact is made. Their lack of knowledge of the potential for speech, hearing, and language development often leads to careless referrals and the provision of limited information, or worse, misinformation to parents.

When a pregnant woman goes to her obstetrician, she is bombarded with literature about babies, childrearing, and preschool education. Information about services, options, and the potential for speech lipreading and useful audition should be readily available in every obstetrician, ENT specialist, and pediatrician's offices, and the audiology clinic and hearing aid dealer's office. Parents should be bombarded with the necessary information for decisions on methods, programs, assistive devices, etc.

Who should provide this public information? Where are the advocates? Where is the funding? That's the question I leave to you. Nonprofit, voluntary advocacy agencies like A.G. Bell simply do not have the resources. Government funded agencies in our area of concern tend to have a bias and a niche or a geographic base—i.e., career training, postsecondary education. Our concern is for all parents, all locations, all ages. With the laws, knowledge, and the will, they can. Without the knowledge, the laws and advancements in services haven't changed very much for many of our children.

The Rights of Hearing–Impaired Persons to a Post–Secondary Education

By Virginia W. Stern*

In May 1977 Federal legislation was passed which dramatically altered the higher education and career opportunities for all disabled people in this country, including hearing–impaired persons. Section 504 of the Rehabilitation Act of 1973 (which was signed in 1977 and put into practice soon thereafter) stipulated that no otherwise qualified handicapped applicant could be denied admission, solely on the basis of the handicap, to the services and programs of educational institutions receiving Federal financial assistance. This included almost all the post–secondary institutions in the United States.

The simple fact is that a hearing–impaired child born in this country before 1960 had limited prospects of higher education, and then primarily in a special, segregated setting. It is true that a small number of talented deaf individuals set their goals independent of prevailing expectations and succeeding in gaining admission and graduating from the college of their choice. Some continued to graduate schools and professional credentials. But if these hearing–impaired individuals did not have a superior academic record and an extraordinary family, there was almost no one in the education community at large who would say that their goal was possible.

A hearing–impaired child born after 1960, that is turning 18 after 1978, when the 504 regulations were first implemented, lives in a different world. Today's world, under the law, offers a hearing–impaired student the same opportunity as his or her hearing peers, the same right to a higher education, the same right to individual choice on where and in what setting that education might take place. It is now considered right and

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reasonable for hearing-impaired persons to compete with those not hearing impaired. However, that right cannot be exercised without information, and the right to that knowledge must be protected.

Under the law, as it is written *and* as it is being upheld in a startling number and variety of settings, disability (and that includes hearing impairment) cannot be used to discriminate against a student in the college admissions process. Colleges and universities are required to provide any reasonable accommodation that may be necessary for a disabled student to have equal access to educational programs and services available to nondisabled students, *if* the disabled student requests them. Please note that the college is under no obligation to seek out disabled students to see if there is something they might need.

As a result of the law, and the changes it has effected in educational practice and public attitudes, a broad range of options now exists for disabled students to attend and complete courses of studies at colleges and universities throughout the country—in any field and at every level of achievement. However, for hearing-impaired students, public information and counsel given to students making choices has not caught up with reality. Thus the choice is not there for all hearing-impaired students because they are not being told about alternate paths.

We can gain some idea of the impact of the law from the statistics of the higher education community, and other ideas from anecdotes of direct experience.

The American Freshman National Norms, an annual national longitudinal study of freshmen in college, is published each year by the Cooperative Institutional Research Program (CIRP), sponsored by the American Council on Education and the School of Education of UCLA. These norms present information on the characteristics, attitudes, fields of study, expenses, and so on of the entering freshman classes. 1978 was the first year that questions about disability were introduced. In 1978, 2.7 percent of the entering freshmen classified themselves as disabled. In fall 1985 there was a three-fold increase, or 7.7 percent of the entering freshmen who were disabled. Among disabled freshmen, the percentage of hearing-impaired students remained relatively stable: in 1978, 11.0 percent of the disabled students reported themselves to be hearing-impaired; in 1985 the figure was 11.7 percent.

Where do these hearing-impaired students receive their higher education? There are many choices. The most popularly known are the federally funded programs designed specifically for hearing-impaired students: Gallaudet College in Washington, D.C., which has a student population of approximately 1,500, and the National Technical Institute for the Deaf (NTID), within the Rochester Institute of Technology, in Rochester, New York, with an enrollment of approximately 1,300 students. These are both national programs, serving students from all States. They were established before the 504 legislation with a mission of educating deaf students. In addition to providing a post-secondary education, with full support services, both institutions offer significant outreach and public information, conduct research on deaf education, train interpreters, and develop specialized curricula as well as educational technology. The Federal Government gives direct support to four other post-secondary programs specifically for deaf students. They are located in different regions of the country, with a total enrollment of about 500 students.

A resource directory, *College and Career Programs for Deaf Students* (1986), produced jointly by NTID and Gallaudet, lists 136 other post-secondary institutions in the United States which currently offer "programs" for deaf students. The definition of a "program" in this publication is that it serves at least 15 hearing-impaired students and is coordinated by a person devoting at least 50 percent time. These programs, within colleges and universities, trade and technical schools, offer a variety of support services to hearing-impaired students. The directory which lists them is a clear, well-organized document. However, the 6 federally funded programs and the 136 other programs represent only slightly more than 10 percent of the sites in the United States at which hearing-impaired students are now receiving a higher education.

The second edition of the *Directory of College Facilities and Services for the Disabled*, also published in 1986 (Oryx Press), surveys 2,300 colleges and universities throughout the country on facilities, accommodations, and special services offered disabled students. This volume lists more than 1,300 post-secondary institutions that currently serve hearing-impaired students. These schools, which are not necessarily famous for their connection with hearing-impaired students, offer a range of support services which is comparable to that offered by schools considered to have "programs." These services include oral and manual interpreters, notetakers (paid or volunteer), visual alarm systems for safety and for laboratories, TDDs, captioned television, speech therapy (free or at a fee), tutoring, counseling, career services, and accommodation for all activities and extracurricular activities offered on campus.

To put this statistic in context, one has to read it with the fact that there are 3,300 post-secondary institutions in the Nation: 2- and 4-year colleges, community colleges, universities, and proprietary schools accredited by the U.S. Department of Education. Thirteen hundred of these—one-third—are now serving the Nation's hearing-impaired students. This is impressive: Not 2; not 6; not 136. Thirteen-hundred post-secondary institutions are offering support services in response to hearing-impaired students being admitted under the law.

In order to underline this statistic with some direct communication, and bring it alive in an absolutely up-to-date fashion, the Project on Science, Technology and Disability of the American Association for the Advancement of Science (AAAS), in Washington, D.C., sent letters on June 4, 1986, to the disabled student service providers at approximately 150 post-secondary institutions, telling them about this forum this morning and asking a few questions about numbers of hearing-impaired students currently enrolled, and services offered them.

We had a fine response to this informal survey. As of last Friday, 56 service providers had responded. Almost all are providing note-takers. A large percentage are providing sign interpreters. Somewhat less, but still very many are providing oral interpreters. Almost all have TDDs and visual alarm systems. Many have several captioned televisions. And almost all offer services such as speech therapy, tutoring, counseling, and support when requested for all college activities. These are not obscure institutions. To give you an example of the sort of response we received—NYU has 30 hearing-impaired students; Boston University has 10; Mott Community College in Flint, MI has 40; Emory has 4; Purdue has 11; Oberlin has 5; Notre Dame has 12; Northeastern in Boston has 35; and UC-Berkeley has 20. We assume that not as large a percent-age of the hearing-impaired students at these schools would be profoundly deaf as the percentage enrolled at NTID and Gallaudet. However, it appeared from the comments that there was a range of hearing impairments at every school and all the students were being served in various ways. We do assume that the students were qualified to meet the admission standards of the institution as a whole.

To put somewhat more direct experience in the survey, I made a site visit to one of the institutions, the University of Minnesota, in Minneapolis-St. Paul, less than a week ago on my way to Chicago. The University of Minnesota serves 30,000 students during the semesters. Support services are being given to 600 disabled students on campus who have requested them. Forty of these students are hearing impaired. Twenty of them do not require interpreters in classes and 20 of them do. Both oral and sign interpreters are provided upon request. Bringing this information about available options back to focus on the individual hearing-impaired student of high school age, and that student's family, I would like to quote Rhona Hartman, director of the HEATH Resource Center, the National Clearinghouse on Postsecondary Education for Handicapped Individuals (a program of the American Council on Education). Ms. Hartman reports that every week the Clearinghouse receives a call from a counselor, or perhaps a parent: "I have a student who is deaf. . .where can he go to school?" This question is an inappropriate question. It cannot be answered because it makes the assumption that the decision to attend a given institution should be based on one's disability. That puts the emphasis on the status of being hearing impaired rather than the status of being an academically qualified student who happens to have a hearing impairment. It is sad to get such a question from a high school guidance counselor, who should know what the law provides.

In summary, we have a law, and the law is working. Of course it is not being complied with as fully and creatively as possible in all locations. However, many, many post-secondary institutions have benefitted from the creativity of the specialized programs for the hearing impaired, and from the experience of certain colleges who offered services before the law. They have adapted service delivery systems and brought technology into their own settings. A surprising number of hearing-impaired students are attending schools all over the country, and are receiving services.

The question remains: how widely known is this information? Do hearing-impaired students, their parents and counselors, know that these opportunities are available? When the student meets with the high school guidance counselor or vocational rehab counselor, do they have access to this information? Do the students and those who guide them understand the law? Do they understand that they can exercise their educational choices in the same way as hearing students, based on interest, academic offerings, location, family finances, and if they are qualified for entrance, the college of their choice must make all programs available? A school does not have to have a special program. It can develop services. And of course it only makes sense that the hearing-impaired student work with the college to develop those services.

We must ask the question: does the public relations network channel many students into a limited number of choices, when in fact they may have a very wide number of choices? Does the vocational rehab system in certain States favor a narrow range of options? Within colleges that offer support systems, is there a channeling of hearing-impaired students to take certain courses so that all hearing-impaired students will be conveniently grouped? Are students who request oral interpreters told they are not available because the counselor who is asked the question is not aware that this is a support option?

We must educate all our children, including our disabled children, early on to make choices. We must teach them, as they grow, to be responsible for their education and not expect others to prepare every aspect of education for them. And so information about responsibilities and about rights must reach down to those who need it and who will need it in the future. The information is not reaching far enough today.

Parents' Decisions in Education

By Bruce A. Goldstein, Esq.[*]

The opportunity for parents to participate in the decision-making process concerning their hearing-impaired child's educational environment is considerably greater than it was prior to passage of P.L. 94–142. However, parents of handicapped children in general and parents of hearing-impaired children in particular have, in many instances, found "better" still falls far short of providing their children with the educational environment and services needed to enable such children to fulfill their potential.

P.L. 94–142 is a sophisticated law designed to guarantee input into the educational process by handicapped children and their parents. It provides for due process rights to ensure adherence to the principles of a free appropriate public education in the least restrictive environment. One can understand why the promise of P.L. 94–142 has, in large part, gone unfulfilled only when one realizes that P.L. 94–142 is but a tool. As with most tools, it is a means to an end; thus, the quality of the end product is significantly dependent upon the skill of the person using the tool. Unfortunately, most parents lack the essential knowledge to enable them to participate as coequal partners with educators in devising the educational program for their handicapped child. In addition, many school districts are inconsistent and not comprehensive in the information they provide to parents. They are even more deficient in providing information concerning where parents may seek assistance.

Parents who are unassisted when they meet with a multidisciplinary team from the local school district are often placed in the role of the uneducated layman. As a result, when a parent has some reservations or tends to disagree with what is usually a cohesive front presented by the "professionals" in the

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school district, that parent is either fearful of speaking up or, if the parent does speak up, he/she is often made to feel unreasonable and ill-informed.

It is essential that accurate and comprehensive information be provided to all parents by their local school district regarding their rights and, of at least equal importance, where the parent may seek consultation and assistance. This latter need could present some problems since, in many areas, this assistance does not exist. Private attorneys are available in most large urban areas, but the labor-intensive investment which is necessary to assist parents of handicapped children puts this service beyond the affordability of many parents. Some parent groups exist in certain areas and are of some assistance to parents but, in many other areas, there is nothing. Every State is required to have a Protection and Advocacy Agency which might serve as a resource. However, they are usually overburdened with a large number of persons seeking their assistance, since they were established to serve *all* developmentally disabled individuals (in the educational area and otherwise). In addition, the quality of P&A agencies varies greatly from State to State and, in many States, is of *no* assistance to parents.

Aside from the lack of assistance necessary to enable most parents to effectively advocate for their children, there is also a dearth of training programs. Optimally, parents should be trained in the law and in interpersonal skills so as to effectively work with their school districts in preparing individual education programs (IEPs). This lack of training has resulted, in too many instances, in parents following the lead of school district officials either out of ignorance or fear.

The unfortunate impact of this lack of information and training is exacerbated when hearing-impaired children are involved. This has become, in many instances, a case of the "blind leading the blind" because many school districts and educators are uninformed or ill-informed concerning the rights, abilities, and needs of hearing-impaired individuals. It is ironic that the success of oral/aural hearing-impaired persons is at least in part at the root of the problem. A successfully integrated and assimilated hearing-impaired student and/or adult does not publicize the ability of hearing-impaired individuals to participate in the mainstream. This very act of assimilation makes the hearing-impaired person almost invisible and results in many people continuing their misperceptions and stereotyping of hearing-impaired individuals. Educators and parents need to be informed and trained concerning what *can* be done to provide appropriate education for hearing-impaired children in the least restrictive environment.

Even parents who are knowledgeable often find themselves "caught in the system" when the school district provides only one option for education of a hearing-impaired child. For instance, many school districts only provide total communication for hearing-impaired children. If a parent wishes his/her child to pursue an oral/aural program in such a school system, the child is not provided the services needed to permit him to be successful. Rather, the parent is given the Hobson's choice of either accepting a regular classroom placement with no support services or placing the child in a total communication self-contained class.

Of more recent vintage, an even more insidious option has been instituted in some school districts. This involves establishment of a "mixed" class wherein both total communication and oral/aural approaches are said to be utilized. The school district claims it is able to use sign language with those children who need it and yet the oral child sitting next to the signing child need not use sign language and can "ignore" the sign language being used in the classroom. These school district officials will tell you this is true individualization. However, this facile statement ignores some of the basic principles of oralism, including the concern that sign language, at least on a regular basis, may be taken as an easy substitute for the more difficult process of communicating with the hearing world.

The interpretation of "least restrictive environment" which has been utilized by the Federal Department of Education (and which virtually all State education agencies pursue) has offered no assistance to parents. It is a simplistic consideration of the physical setting in which the child is placed. In other words, a child in a segregated building is in a more restrictive setting than a child in a public school building and a child in a self-contained class is in a more restrictive setting than a child in a regular classroom.

Although the physical setting definition of least restrictive environment works reasonably well when dealing with most handicapping conditions, it sorely misses the point when addressing hearing-impaired children. Least restrictive environment for a hearing-impaired child (or for that matter, any child) ought to be determined in the context of the life plan for that child. If one anticipates that upon completion of a public school education, the handicapped child will be functioning in society at large (e.g., rather than being institutionalized), then the educational program for that child ought to be devised in such a manner as to enhance the ability of that child to function in the mainstream of society as an adult. For hearing-impaired children, this means that that child should, as best as possible, have the ability to communicate with hearing persons in the community at large. Thus, for those children for whom an oral/aural approach has the potential of being successful, that child should be offered that option. Failure to do so constitutes a failure to provide the child with the least restrictive environment which is appropriate to his needs.

It is thus essential that information and training be provided to both parents and educators in order that they may understand the nuances of appropriateness and least restrictive environment as applied to hearing-impaired children. Further, the U.S. Department of Education should adopt such an analysis as part of its monitoring responsibilities.

If all of the suggested actions above would come to pass, there would truly be an opportunity to provide hearing- impaired children with that which is promised by P.L. 94-142. Further, as part of the information and training process, parents and educators would also be trained in how to draft an appropriate individual education program (IEP). Although IEPs were viewed as one of the cornerstones of P.L. 94-142, IEPs remain one of the most misused and abused processes in the law. This is generally not done intentionally but rather is due to lack of understanding. An IEP should be drafted in such a manner so as to be specific enough to describe what should be occurring on a regular and almost daily basis. In addition, it should provide annual goals which are *measurable.* This is rarely done.

An example of what happens in virtually every school district may be informative. It is very common for an IEP to state that "Mary will increase her functional vocabulary" or "Johnny will increase his reading level." When one steps back and thinks about it, such "annual goals" could be applied to virtually every child in every school system. Thus by definition, they are not *Individual* Education Programs. Also, they would apply for every year starting at first grade and continuing through 12th grade. If these "annual goals" can be used so interchangeably, then they are obviously not *annual goals.*

What is required is something that is more objective and quantifiable. For instance: "Mary will use the following 30 words in spontaneous conversation 80 percent of the time"; "Johnny will increase his reading level from *X* at the present to *Y* at the end of the year." When annual goals in an IEP are drafted in such a manner, they then become the tool which enables both educators and parents to monitor the progress of the child, and the appropriateness of the program. Further, it assists all concerned in devising the next set of annual goals. The proper use of annual goals can act as a red flag and/or yard stick. When a child's program is reviewed late in the school year in anticipation of drafting the next IEP, the failure of the child to reach his annual goals can be used as part of the process to analyze what has transpired in the past and assist in devising appropriate annual goals for the next IEP. Inability to attain annual goals does not necessarily mean that the teacher has not done his or her job nor does it mean that the child has not lived up to his or her responsibilities. It may mean that the goal was too high. If that is the case, then the goal should be broken down into smaller goals (or steps) and progress should be pursued in smaller chunks. On the other hand, investigation may disclose that the nature of the program or the mode of instruction may not be quite appropriate and, with this information, a more appropriate program can be planned.

Finally, the ability of parents to access the due process rights provided in P.L. 94–142 are virtually unattainable without trained assistants. The old maxim that he who has himself for a lawyer has a fool for a client applies doubly here. If a parent represents himself, he has the double disadvantage of having an uninformed lawyer who is emotionally involved in the case at hand. I am a trial lawyer used to speaking in the courtroom and in public forums. Also, I am an attorney who does a lot of work in the area of the handicapped and in special education in particular. Thus, I do not have the disadvantage of many other parents of lacking sufficient knowledge concerning the law. However, when I am involved concerning my own hearing-impaired children, I find myself too emotionally involved to effectively advocate on their behalf. Accordingly, unless and until parents are given effective assistance from knowledgeable persons, they will continue to be unable to adequately access their due process rights.

Part II. The Right to an Education
(continued)

(c) Technology, Special Populations

A Futuristic View of Technology and the Hearing Impaired

By Richard G. Stoker, Ph.D.*

There is a profession comprised of people who call themselves "futurists." These are individuals who are paid exorbitant sums of money to tell corporations and the government what the future holds so that their planning can accommodate the expenditures of today to the needs of tomorrow. In this age, futurists wear three-piece suits and work out of impressive offices with an IBM PC on their desk, but they are really only slightly removed from their ancient brethren who wore turbans on their heads and worked out of gaily painted tents with a crystal ball on the table.

Foretelling the future can be a risky business. In ancient times, more than one soothsayer lost their head over a poor showing in battle or other field of conquest. This writer will, however, put caution aside and peer into his crystal ball. Who knows, the predictions made may be right. At the very least one might hope that his "educated guesses" prove to be informative and thought provoking.

It is logical to think that people who have had a lot of experience in one area are best prepared to tell us what is going to happen in the future (at least in the area of their expertise). My area of professional interest and expertise encompasses the

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use of technology for the hearing impaired. I have been interested in technology and in the so-called machine-man interface for at least 25 years. My initial interest was sparked by a science fiction movie which involved a robot. I convinced myself that I could build a robot, and at the age of 13 had the supreme confidence that it would take no more than a day or two (with a little help from my dad of course). That first attempt at technological design and construction took the better part of a year. It resulted in a 5-foot metal humanoid which could move forward and backward, extend his arms and light up his eyes. Beyond these basic capabilities, it had no useful function at all. I proudly entered my creation in the science fair at my school confident that I would win the first prize. I was painfully disappointed when the robot took one step forward and crashed to the ground hopelessly flailing its arms back and forth. Needless to say, the judges were *not* impressed. In spite of this initial fiasco, my early experiments led to a strong interest in the physical sciences. My initial university training was in the area of engineering and mathematics. I later received a degree in chemistry, and have since maintained a keen interest in science and technology, especially as it applies to the hearing impaired.

Make no mistake, of this there can be no doubt, I am a child of the technological age in that I owe a large part of my very being to technology. I realize this every morning when I awake to the bright lights of the sound sensitive alarm switch which turns on the floodlights in my bedroom. As I then reach for my glasses, which allow me to find my binaural, push-pull amplifier hearing aids, the impact of technology is less than soothing as I switch on the cacophony of the auditory world for another day of listening. I then pad over to the dresser to turn off my noise sensitive monitor which warns me if a fire alarm or other loud noise occurs in my apartment while I sleep. I then check my answering machine to see if any messages have been left on my TDD. As the messages tumble out of the little machine in neat rows of brightly lit letters, I marvel at the fact that this wonderful piece of equipment was not available only a few short years ago. I frequently intone a silent thanks to Dr. Robert Weitbrecht, the deaf inventor who pioneered TDD communications. What a positive affirmation of the potential for the deaf to lead the deaf! I often muse about how wonderful it will be when my telephone will have a speech-recognizing computer hooked up to it, allowing me to talk to anyone, not just those who have a TDD.

After arriving at my office, I switch on my alarm system (similar to the one at home), computer, and the TDD and watch the office lights dim as the circuits adjust to the load. One time, soon after starting at my present job, I forgot to turn the alarm off. The janitor approached me a few days later and asked me if I had noticed anything strange in my office lately. He was convinced that there were ghosts in the room because the light would start flashing at various times when he entered to clean the room. The relief on his face when I explained what the light was for was even funnier than his initial apprehension.

Later on, my interpreter comes in and I make telephone calls using an adapter that allows her to listen in to the calls and relay to me what the other person is saying. I then respond by speaking in the normal way. Most people are completely unaware that anything unusual is happening during the call. I then plug my computer into the phone system and dial up the electronic mail service at my university to see if any messages have been left since yesterday. I may compose a memo to one or more people and send it to their computer terminal using only a few keystrokes. I can then call via the telephone lines, to talk with people in my local computer club to see if anything new is on the bulletin board. If I have time, I could challenge someone to a game of chess or space wars or any of several dozen games available on the club board. I sigh and return to the reality of work and switch back to my own computer and use it to compose a letter or work on an article. I can then route it to the departmental secretary, where she proofreads it and then produces a clean typed copy for my signature.

Periodically, I attend a faculty meeting and I take my FM auditory trainer with me. I place it in the center of the meeting room, hook it up to a pressure zone microphone, which cancels out much of the extraneous noise and allows me to hear the other faculty members much better than with my hearing aids alone. And so it goes, I am surrounded by technology. I use it, suffer from its limitations, and benefit from its help.

This all started nearly 40 years ago when my father, upon learning of my deafness, said, "well. . .we'll get him a hearing aid." Not only did I get a hearing aid, but I got a lot of tender loving care and teaching from a mother who believed with all her heart that I could learn to understand and produce speech. I firmly believe that the hybrid of technology with responsible and dedicated parenting is the key to successful educational achievement by hearing-impaired children. My parents purchased one of the first popularly available recording devices, a wire recorder, with the purpose of recording my vocalizations and helping me recognize my errors and correct them. Audio tape copies of these early auditory training lessons are among my most precious possessions. As I mentioned a while ago, I am a child of the technological age.

Even as I recount the many benefits I receive from technology, I feel as the mountain climber must feel upon reaching an intermediate peak of considerable difficulty. After a surge of self–congratulatory enthusiasm engendered by the recent conquest, one must focus upon the task ahead which is at once thrilling and daunting. Thrilling because the promise of technology is such that it is almost beyond my capacity to imagine the potential benefits to the thousands of hearing–impaired children yet unborn. Daunting because I recognize the enormous obstacles, not all of them technological, remaining before us.

As an example of the nontechnological obstacles we face, let me tell you a story about a friend of mine, deaf because of a genetic condition which resulted in a progressive loss of hearing. He did not become totally or audiometrically deaf until he was approximately 30 years old. At that time, he spoke normally, was and is a good lipreader, but found the adjustment to the silence of deafness a shattering experience. He found, as some do, that the world of the manually communicating deaf was a help to him. He then became a very active part of that community for nearly 10 years. He then decided to have a cochlear implant operation. His experience with the cochlear implant has been nothing short of spectacular. He is now able to use the telephone to a limited degree. This is a miraculous example of the potential of the cochlear implant technology. I should caution, however, that few recipients are helped as spectacularly as my friend was, and that the cochlear implant should only be considered after full consideration of all of the limitations and potential pitfalls. In this case, however, the results were absolutely wonderful. My friend enjoys a freedom from the world of silence that is nothing short of miraculous. He has, however, lost nearly all of his friends in the manual deaf community. He made the mistake of telling them about how well he is able to function, thinking that everyone would want one. To his considerable surprise, not only did few of his friends want a cochlear implant, my friend was virtually shunned by the deaf community because he was now considered a hearing person and could not relate to their needs. Last year in England at the International Congress held in Manchester there were actually deaf people demonstrating against the use of cochlear implants.

I have often said to my students that if science could come up with a magic, overnight, painless cure for deafness, that many, many deaf people would not submit to having their hearing restored. It is a complex problem and reflects on how differently professionals, parents, and the different parts of the deaf community view the same issues. These obstacles may prove to be more intractable than the actual technological problems themselves.

Having made that very important caveat, I would like to predict some of the technological changes affecting the hearing impaired that are likely within our lifetime. Remember, our parents have witnessed the first feeble glides into the air at Kitty Hawk turn into the roar of rockets taking men and women into space on a regular basis. Indeed, the event has become so commonplace that this mighty technological deed is now greeted with a yawn as much as anything else.

I am often asked what I think will be the most important or most far-ranging technological development for the benefit of hearing-impaired individuals. My response to that question is quick. Without a doubt, I believe that machines that can be made to understand the acoustic patterns we call spoken language will have an incredibly far-reaching impact upon hearing-impaired individuals. I am confident that such machines are within our grasp. There is a wide application for such machines, not just for the hearing impaired. Sad as it seems, the "market" usually determines where the research and development funds are spent. There is not much of a market in technical aids for the hearing impaired. There is an enormous potential market, however, for a typewriter or word processor that will type what is said to it. Some of the best and brightest of our researchers are working on such devices backed by money from our largest corporations. These facts convince me that the breakthroughs necessary for such machines are within sight. Indeed, prototypes which imperfectly perform this feat have already been demonstrated. Imagine if you will, a time when we may equip every deaf child with a device that will render speech to him in a code sufficient for his or her comprehension. The code may be traditional orthographic transcriptions (the printed word) or it may be some derivation of Cornett's cued speech symbols. It may be some code yet uninvented. The point is that the deaf child will have an unambiguous signal representing the auditory world from an early age. Of course, a clear receptive signal does not mean that the child will necessarily develop adequate speech production abilities. There will probably always be a need to provide specialized speech instruction. One can imagine, however, systems which would tap into brain waves and generate a natural voice from a speech synthesis device if the child could not develop speech naturally, say in the case of a child with cerebral palsy combined with deafness.

To pull back for a moment from such breathtaking heights, the second most important benefit of the technological age, in my opinion, will be the development of efficient and useful communication linkages between deaf individuals and the world at large. Such links will be made possible by the wide proliferation of microcomputers as communications terminals. Linkages via the telephone lines will be the growth industry in computers over the next few years according to many experts. It is imperative that we develop ways of utilizing this access to communication by creating educational strategies which assist the hearing impaired to use their knowledge of spoken language and improve it via such communication linkages with persons having likes and dislikes and tastes similar to their own.

The microcomputer, in my opinion, will go down in history as a development comparable with the invention of writing as far as the surpassing good accruing to humankind. Writing released the human race from learning the same lessons over and over again and made it possible to share the intellect of the greatest thinkers with all of humanity. Computers will, in their turn, release a new kind of creative process, that of allowing individual intellect to soar to its highest potential. The merging of the human brain with the silicon of the computer chip is nothing short of a quantum jump in the affairs of mankind. I'm talking, of course, about a symbolic merging, not the wild kind of surgical implantation, half-man, half-machine constructions so beloved of science fiction writers. The personal computer industry has been the fastest growing new industry in the history of the world. People who point to the latest slowdowns in the industry forget that the growth rate of personal computers is still far ahead of most of our more traditional industries. The beast may be pausing for a breath of air, but it is only resting and will charge forth with a renewed vigor once problems in the industry are ironed out. People who say computers are just a fad like CB radios or hula hoops are putting their heads into the sands of time. Is the microcomputer going to be a future boon to education of hearing-impaired children? The question is not *if;* it is when. The computer is already a part of the superstructure of education and will continue to grow in importance. The course of action most appropriate to the situation is to acknowledge this and strive to put the strength of the computer to work to make the lives of hearing-impaired persons more pleasurable, more meaningful and ultimately more successful than has ever been possible on the scale I am imagining.

Microcomputers are slowly making their presence felt in the education of hearing-impaired children. I receive mail from all over the world asking me about microcomputers and their use in educating hearing-impaired children. Most of the questions I get are classifiable into five general categories which I would like to share with you.

1. What is the earliest that computer learning can be introduced, or when should I start my child on a microcomputer? Many parents are asking, for example, if their hearing-impaired pre-schoolers should be exposed to computers. Such questions are a natural and positive reaction to the tremendous pressure created by the news media and some educators regarding the use of computers in education. The simple answer is not to worry; regardless of what you do children will be exposed to computers sooner or later. For example, many pre-school programs now have computers and virtually all educational programs have at least a modest effort dedicated toward providing "computer literacy" for their students. Does this mean that parents should rush out and buy a computer for their child? If parents have some valid reasons for buying a computer for use around the home or in a home-based business, that is one thing. It is not sound reasoning, however, to think that one can go out and get a computer, buy a few programs, seat the kid down in front of it and expect the computer to teach Johnnie how to read. Most experts would agree that children should not be pushed into computing before they are ready. Such actions could turn the child off of computing entirely and have potentially serious long-term implications. The computer should be just one ingredient in the melange of activities and materials designed to provide language input and opportunities for intellectual and social growth. Ideally, the computing experience should be something that is shared between parent and child. If there is a computer available, it can become one more bond or building block in the development of intellectual and social skills.

2. How can we encourage a child to use the computer? On this point, one can compare computers and books quite effectively. Many times schools and parents act as though reading is learned through osmosis. If teachers and parents surround children with books, piling them around the child during all waking hours, yet never take the time to read to the child or share their time by reading to each other, we cannot expect reading to just occur as if by magic. Children need to see their

parents, teachers, and other children enjoying books in order to develop the attitudes which promote reading mastery. In exactly the same way, if a hearing-impaired child (or any child for that matter) does not see mom and dad and the other siblings using and enjoying the computer, he will not come to view it as a natural and pleasurable extension of his intellectual environment in spite of the considerable talents of the programmers who make up the fantastic graphics and wonderful animation antics of some of the excellent programs available.

3. Will computers accelerate the child's academic progress? No one can authoritatively say that computers will accelerate learning for a hearing-impaired child. But some other benefits have been noticed and reported in the literature. For example, computers seem to enhance self-esteem. It is thought that this happens because computers give young children a control over their environment which is often missing in their everyday experience. Other workers have documented improvements in language use and in knowledge of mathematical concepts due to microcomputer use *in conjunction with a well-developed educational program.* This last point is important because no one has yet suggested that microcomputer use in a vacuum can accelerate learning of any academic skill.

4. What computer system should we buy? In general, the question should not be *which computer,* but what software (programs) do you wish to use? In other words, purchase of a computer system should be preceded by a careful analysis of the functions the system is expected to perform. Currently the majority of programs for educational purposes tend to be available on Apple (TM) computers. The IBM PC (TM) is rapidly catching up, however, and should not be discounted when decisions to purchase are being made.

To summarize, computers should not be purchased unless a well-planned educational curriculum is available which incorporates the strengths of the microcomputer programs into a strong, teacher-based pedagogical mosaic. Successful use of the power of the microcomputer, indeed all technological devices, depends upon a solid cooperation between educational authorities, the teaching profession, and families. If the resources to enable successful microcomputer use in the schools are to be found, these parties will have to cooperate on a scale that has not been seen before.

Technology, particularly technology based on microprocessors, has the capability to expand the educational horizons of deaf children to almost unimaginable heights. We would be seriously remiss as a society if we do not vigorously pursue the potential for significant advancement presented by the technological explosions of current times. The integration of technology into the classroom and into the homes of hearing-impaired individuals is restricted by two major factors: cost and ignorance. High tech solutions are usually not inexpensive. Nontechnological barriers such as those I presented earlier are not easily overcome either. It is the responsibility of schools, parents, and government agencies to work together to bring about the technological conditions that will allow hearing-impaired individuals to take their place, without prejudice, in society at large. If our collective will is strong enough, it is a battle that can be won. If we falter, we are doomed to endlessly repeat the dismal failures of our past.

Bilingual Education and the Hearing Impaired: Mandate and Practices

By June Grant, Ph.D.*

Bilingual education and the hearing-impaired student: What are the issues here? In the case of bilingual education, we are talking about an education system for a minority group; in the case of hearing-impaired children, we are talking about students of an even smaller minority group. Even though each of these groups is a small percentage of the total population, each represents a large number of individuals, the former group increasing steadily. It is estimated that by the year 2000, there will be nearly 40 million inhabitants of the United States of non-English-speaking backgrounds (NACBE, 1981). Current estimates of the number of school-aged children from homes where languages other than English are spoken, is 4.5 million (Provenzano, 1984). Estimates of the number of deaf individuals vary according to the definition of deafness used, but the 1984-85 Annual Survey of Hearing Impaired Children and Youth reports 50,731 hearing-impaired children, 7,626 of whom are of Hispanic, American Indian, Oriental, or "other" ethnic backgrounds (Center for Assessment and Demographic Studies, 1984-85). These students comprise about 15 percent of the total population reported. Thus, this investigation is centered on a minority within a minority in each case: the hearing impaired within the non-English-speaking group, and the non-English-speaking group within the hearing-impaired group. The interface of these two groups is our concern here, and it behooves us to remember that thousands of children are the beneficiaries of the legislation, regulations, and policies that are developed and initiated in their behalf.

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Two Minority Groups

The largest non-English-speaking language group of school-aged children is the Spanish-speaking group: 2.9 million of the 4.5 (Ambert and Milendez, 1985). Because of this group's size, much of the current literature is centered on the student from the Spanish-speaking home, but the concepts and problems are generalized to all non-English-speaking students. However, it is important to remember that not all children from non-English-speaking homes are Hispanic. The 1980 census revealed that within the last decade, there has been a 71.8 percent increase in the number of Native Americans (Eskimo and Aleut), a 127.6 percent increase in Asians, and a 61 percent increase in Hispanics (Ambert and Milendez, 1985). Such large numbers of diverse minority groups can either promote bilingual/bicultural education or inhibit it depending on pressures both internal and external to the groups. In the first instance, if the group is eager to assimilate into the majority culture and adopt its language and customs, it will support bilingual education. On the other hand, if the group is resistant to assimilation and fears it will lose its own culture and language if it assimilates, it is likely to resist bilingual education. The interesting and contradictory aspect of this issue is that within the total group, there are likely to be factions supporting both sides of the issue (Cervantes, 1981; Lindfors, 1980; Padilla, undated; Payan, 1984; Rodriguez, 1981).

The pressures external to the group are more subtle. Economic, political, and social upward mobility are dependent on the ability to function in the language of the dominant culture, English (Kretschmer and Kretschmer, 1986). While the philosophical trend in education and government accepts the concept of a multicultural population, all programs promote the attainment of fluency in the dominant language (Baca and Cervantes, 1984).

The deaf community presents an interesting analogy to the above situation. Within the deaf population, there are those who advocate oral/aural education with the objective in mind that hearing-impaired persons should be able to integrate into the total population, and that they cannot achieve their potential intellectual, economic, and social capacities unless they have speech and language skills which will enable them to do so (Silverman, 1981; Silverman, et al. 1978). Opposing this group are those who feel that the deaf can lead productive and happy lives within their own culture, the "Deaf Community," and need not be proficient in oral language skills, and that those hearing persons who are truly interested in the deaf and are important to the education of the deaf can and will learn the deaf's esoteric language, the various forms of manual communication. Members of the deaf community feel secure within that culture which has its own mores, language, prohibitions, and social structure. Although the culture seems to be a "closed system" in some respects (for example, there is very little intermarriage outside the group), it is not a static culture; it does respond to various political, social, and economic pressures (Schein, 1978). This issue is aside from that of whether English or Spanish, or any other language, should be the language of instruction in the classrooms. This paper addresses the problem of acquiring a language, the most handicapping aspect of hearing impairment, no matter what the mode.

The entire concept of bilingualism, or even multilingualism, so common in Europe, should not be considered a new concept to the American population. There is a historical precedent for bilingualism in the United States. As early as 1774, the Continental Congress had its documents printed in German for the benefit of the German-speaking population; laws in New Mexico were drafted in Spanish; some Federal laws were printed in French; and all laws in the Louisiana Territory were printed in French. Moreover, these groups maintained schools where the language of instruction was that of the native tongue (Ambert and Milendez, 1985). This situation was somewhat reversed during World War I when the notion of cultural assimilation was advocated. Immigrants were expected to adopt American ways, learn English, and become acculturated in all respects (Kloss, 1977).

The pendulum appears now to have swung in the opposite direction. Perhaps due to the constantly increasing influx of non-English-speaking persons over the past several decades and the prediction that this trend has not bottomed out, the notion of a "melting pot" has, for some educators and legislators, gradually evolved into that of a "salad bowl."

The Role of Education

As a result of the cultural and linguistic pluralism in the United States, education, traditionally a highly valued American institution, has been required to respond to the fact that the population of the United States is not a monolithic mass, but instead consists of more than one culture, each with its own language and cultural heritage. Education found it necessary to respond to another realization: children do not learn in a monolithic fashion; some are handicapped, and they require special programs if they are to acquire any academic achievement. As a result of the two conditions, legislation has emerged which mandates services for children with limited English proficiency (LEP), or no English proficiency (NEP), and for children with any handicapping conditions which impede their learning. Title VII of the Elementary and Secondary Act of 1968 (P.L. 95-561), designated children with little or no English proficiency as a population that should be provided special consideration. Later amendments and litigation *(Lau* v. *Nichols)* supported the notion that these children could not participate effectively in English-speaking classes and were therefore not receiving meaningful instruction. As for the children with special needs in order to learn, P.L. 94-142, signed in 1975, and Section 504 of the Rehabilitation Act of 1973 provided that all handicapped children should receive, among other advantages, a free education in the least restrictive environment (Erickson, 1984).

Education for hearing-impaired children has a long history. As early as the 16th century, Pedro Ponce de Leon taught a hearing-impaired youth in Spain with great success according to his reports (Bender, 1981). In the United States, free education for hearing-impaired students has been in existence since the founding in 1817 of what is now the American School for the Deaf in Hartford, Connecticut. In those times, however, the controversy of what the language of instruction should be did not arise. For reasons pertinent to each situation, the chosen language was an obvious one: Spanish, sign language, whatever. The main impact that P.L. 94-142 has had on the education of hearing-impaired children is that it has placed the responsibility of the education for these children directly on individual school districts, rather than on State boards of education which generally provide funding through State legislatures rather than through local tax bases. It requires that the programs be appropriate for each individual child, and that children be placed in the least restrictive environment.

The interpretation of the least restrictive environment has been a thorny one with disagreement among administrators, educators, and parents. Some administrators and teachers have perceived the least restrictive environment as "mainstreaming," while others have perceived mainstreaming as a most restrictive situation for certain hearing-impaired children. For some of these children, to be placed in a classroom of nonhandicapped students with only a designated period or two a day for individualized instruction, is most restrictive, not least restrictive. There are some, particularly teachers who are themselves hearing impaired, who feel that if hearing-impaired students are not placed in a school exclusively for them, they are being deprived of peer relationships with other hearing-impaired students and role models of hearing-impaired adults (Rosen, 1986). In contrast, some oral educators advocate mainstreamed environments for all hearing-impaired children with losses up to 90 dB, and that all hearing-impaired children have the right to be educated in mainstream settings (Connor, 1986). Again, there is evidence of the dichotomy of thought about the assimilation or isolation of hearing-impaired individuals.

The problem is further complicated for hearing-impaired children from non-English-speaking homes, for if they have any verbal language at all, it is likely to be the language of the home, not the language of instruction. Data on the number of such students nationally are not available, but for Texas, of the 1,204 students of Hispanic American ethnic origin, 516 or 43 percent come from homes where Spanish is the language spoken. These figures take on an entirely different outlook if they are examined by regions instead of on a statewide basis. For example, in the South Texas region which includes 23 Regional Schools for the Deaf and where the concentration of Hispanics is the greatest, the percentage is almost half (45 percent), and in Laredo on the Texas-Mexican border, 100 percent of the students are of Hispanic American origin, and Spanish is the language of over 84 percent of the homes. Texas has a higher concentration of students from Spanish-speaking homes than most States, and yet it has proved difficult to provide an "appropriate" program for this group of handicapped children.

An Appropriate Program

What would constitute an appropriate program for hearing-impaired children from non-English-speaking homes that would comply with both the Bilingual Education Act and the Education for All Handicapped Children? First of all, we would need teachers who are qualified both as teachers of hearing-impaired children and as bilingual teachers. At the present time, this would mean that teachers would be required to obtain two separate certifications or endorsements. It is possible that this extra requirement might reduce the already critically small number of qualified teachers in each area.

We would need assessment instruments that are sensitive to both conditions: hearing impairment and limited or non-English proficiency. There are instruments designed particularly for students in each category, but to my knowledge, there are no instruments designed for this minority within a minority. Although there are tests with Spanish language versions, their validity and accuracy have been questioned by some (Ambert and Milendez, 1985; DeAvila and Havassy, 1974; Sabatino, et al., 1973). Moreover, typical tests to ascertain children's language dominance are intended for children who have a functioning verbal system, although perhaps with some confusion as to which language is appropriate at any particular time (James Language Dominance Test, for example). Such a test would be of no value in assessing the language dominance of most young hearing-impaired children who have little, and in some cases, no observable verbal language. Yet, P.L. 94–142 mandates that all handicapped children be provided with nondiscriminatory assessment and evaluation with no single measurement serving as the criterion for diagnosis and placement. The regulations state further that ordinary tests used for nonhandicapped children are not necessarily appropriate (*Federal Register*, August 23, 1977). Consider how valid any assessment is if the child does not understand what the task is, either because of limited language proficiency or limited language generally.

Another need would be for special materials, such as text books, workbooks, library books, records, all teaching materials in the home language of the students. In general, major publishing houses have not addressed the needs of bilingual programs (Bergin, 1980). There are now some materials designed for bilingual or English as a Second Language (ESL) programs, but these materials are intended mainly for children who have verbal symbols to represent basic concepts, although not in English. Hearing-impaired children often do not have words for many of the concepts that they have, and therefore, the materials might not be the appropriate ones for them. Much of the materials used by teachers of hearing-impaired children are teacher-made or revised commercial materials.

In order for any educational program to succeed, it must have parental and community support. The concept of parental support for handicapped children, especially hearing-impaired children, has long been advocated (Grant, 1972; Luterman, 1979; Simmons-Martin and Calvert, 1978; Tracy, 1984), and P.L. 94–142 requires parental approval, implying parental support (Bergin, 1980). The importance of parent participation in bilingual programs has been noted also (Blanco, 1977). However, the parents of minority children have traditionally been unrepresented in parent participation in school activities: educational, social, or support-type activities (Peters and Stephenson, 1979; Zigler, 1972). As noted above, there is disagreement among professionals and nonprofessionals, including parents, as to the type of program best suited for hearing-impaired children as well as disagreement as to the value of bilingual education. If the professionals disagree on these important issues, it might be difficult to garner strong parental and community support for any particular program. However, for a program to achieve success, total community support must be generated from school administrators, legislators, school boards, political action groups, local governments, the news media, and any institutions that have the power to exert public opinion.

Program Options

From the above list, one might assume that the task of providing adequate services for this very special group of students is an impossible one. However, it is our charge as educators to do so. If we examine what options there are, and what attempts are being made to resolve the difficulties, we can gain some insight into the problem and suggest some strategies.

In bilingual education, there are several philosophies as to the most advantageous approach to educating children of limited or non-English proficiency. According to definition, a bilingual program must have instruction in two languages, one of which must be English, and the study of the history and culture of the mother tongue must be included in the curriculum (U.S. Office of Education, 1971). This definition would preclude monolingual English as a second language program (ESL). In ESL programs, children receive all academic instruction in a self-contained English-speaking classroom, and are "pulled out" for a certain period of time for instruction in English. This instruction is usually a concentrated, surface structure-type program, often labeled "audio-lingual," which requires the student to repeat sentences until the syntax and phonology become "automatic" for the student. There is little attention paid to deep structure or concept development (Lindfors, 1980). Such programs are maintained because of many factors including the children's linguistic abilities, available funding, availability of qualified teachers, among other concerns (Ambert and Melendez, 1985). The success of these programs is equivocal with research reports both supporting the programs and criticizing them (The American Institutes of Research, 1978; Baker and deKanter, 1982; Swain, 1979; Willig, 1982).

Truly bilingual programs, those in which instruction is in two languages, fall along a long continuum so far as philosophies and objectives are concerned. To delineate and describe them fully is beyond the purview of this paper. In general though, they range from transitional programs to maintenance programs. In the former, the principal objective is to advance the students to the point that they can achieve academically through English instruction only. This type of program is the choice of the group that feels that assimilation into the majority culture is the goal. Normally, students are retained in such programs for a specified period of time, usually 3 years, during which time, academic subject instruction in English is introduced gradually, one subject at a time. In contrast, the aim of maintenance programs, the preferred type for the group which advocates a pluralistic education and society, is for students to learn in two languages and maintain their proficiency in both languages. Advocates of maintenance programs are concerned primarily with cognitive and affective growth which they feel is fostered by the ability to think in two languages (Baca and Cervantes, 1984; Blanco, 1977). Transitional programs are the predominant type in the United States. While there are generally no prohibitions against maintenance programs, they require a greater commitment of personnel, funding, and energy, and are therefore less prevalent (Ambert and Milendez, 1985).

Education of the hearing impaired, likewise, has a continuum of types of programs, each with a cadre of supporters with strong biases. At one pole are the oral/auralists who maintain that through oralism, hearing-impaired students can gain the skills which permit them to be mainstreamed and able to function successfully with their nonhandicapped peers (Northcott, 1981). Oralism stresses the use of residual hearing, no matter how minimal, the use of early amplification, strong parental involvement, and, of course, intensive instruction in speech (Connor, 1986).

At the other end of the continuum is exclusive manualism, the use of American Sign Language (ASL). This is the preferred language of the deaf community mentioned above, and has attained the status of a complete language in and of itself, not "an ungrammatical version of English" (Rosen, 1986, p. 246). Although this status is questioned by some (Schlesinger and Namir, 1978), it is confirmed by other researchers (Klima and

Bellugi, 1979; Stokoe, 1972; Wilbur, 1979). However, no programs ignore the teaching of English entirely, and all programs give at least lip service to the development of speech skills for hearing-impaired children (Moores, 1982).

In between these two poles lies total communication. There are a number of forms of total communication and usually they are some form of English in a manual code, as opposed to ASL, although most systems use ASL visual configurations. There are, to name a few, Manually Coded English, Seeing Essential English (SEE I), Seeing Essential English (SEE II), Signed English, and Pidgin Sign English (Quigley and Paul, 1984). In addition, some schools or districts have developed their own systems; for example, in Texas a manually coded English system entitled Preferred Signs for Instructional Purposes (Texas Education Agency, 1982) is used in all the regional schools for the deaf. It is not necessary to go into detail concerning the nuances of these various systems; suffice it to say that some form of total communication is the preferred choice of communication in most programs for hearing-impaired children in the United States (Connor, 1986). But as one can see, there is no consensus as to the "best" system. The important point here is that more often than not, one of these forms of communication is the first or "native language" of many hearing-impaired children. Its resemblance to or difference from English plays an important role in the language acquisition process of hearing-impaired children from non-English-speaking homes. For if English or ASL is the first language the child has, and the home language is neither, the child is facing a problem similar to that of the normally hearing student who has English at school and another language at home.

It is difficult to make generalizations about the appropriate programs for any hearing-impaired children, much less those from non-English-speaking homes. There are so many variables which influence a child's progress. A hearing-impaired child's success at acquiring language will depend on the degree of hearing impairment, the configuration of the loss, the age of onset of the impairment, the age at which amplification was initiated, the age of entry into a program, the parental wishes, the parental support, the child's motivation to communicate, among other influencing variables such as intelligence and socioeconomic status which correlate positively with language acquisition.

There is a great difference, however, between the two groups in that many hearing-impaired children enter programs with no appreciable verbal language. This does not mean that these children cannot communicate; many of them have highly developed communication systems (Blackwell and Fischgrund, 1984). What it means is that they have no verbal system upon which they are building verbal communication competence as the normally hearing child is in his/her home language. They (hearing-impaired children) learn a language at school, English, signed English, or ASL, and build linguistic competence on that system, but, in this case, none of these is the home language. Thus, the hearing-impaired child from a non-English-speaking home is faced with the problem of acquiring a language, whatever language, at school and acquiring another language at home. In other words, these children must, by default, become bilingual if they are to succeed at school and communicate at home.

Some time ago, I interviewed a hearing-impaired child and her parents from Laredo, a city on the Texas-Mexican border. This bright, beautiful, 5-year-old girl was gleefully demonstrating her fine writing and speech skills in English for me. The mother spoke no English, and the father spoke very little. I asked how many children were in the family, and the father told me eight. I asked if any of them spoke English, and the response was that some spoke a little. I asked what language was used at home, and the father was surprised at my asking and answered, Spanish. No one in the family signed, although the little girl was learning Preferred Signs for Instructional Purposes, the sign system used in all the Texas regional schools for the deaf. With whom was this child to communicate in her own family? This incident occurred some time ago, but the situation is not much improved now. There is no formal plan to accommodate hearing-impaired children from non-English-speaking homes in Texas although the problem at least is recognized today. Depending on the available bilingual personnel, the degree of hearing impairment the child has, and the wishes of the parents, instruction and communication in the various programs are in whatever form is most expedient. This is not to imply that the administrations, both State and local, are not sympathetic to the problem, but in the absence of an overall plan and adequately trained personnel, there is little consistency in the educational programs of these children (Archer, 1986).

Resolving the Problems

What are some possible solutions to this serious problem? If we examine the obstacles to bilingual programs for hearing-impaired children mentioned above, perhaps we can conceive at least partial solutions to the situation. The above listed requirements, qualified personnel, appropriate assessment and evaluation instruments, abundant curriculum materials, and parental and community support, were not rank ordered when listed. It would be hard to determine which of these items (and this list is not comprehensive, only representative) should be considered prime. Instead, it might be more expeditious to order the list in a logical sequence attending to what must precede what.

Community support, that is, *community* in the generic sense, is a starting point. By community, I mean all its institutions: legislatures, school districts, local governments, religious organizations, health services, news media, and parent groups, all institutions that affect the lives of our children. The legislation is already in place, and many school districts have complied to the best of their abilities. However, the legislation addresses the individual problems: children with hearing impairments and children of limited English proficiency (LEP); it does not address the combined problem that we are faced with. Moreover, many of this group of children are within yet another culture in addition: poverty, a culture in itself which has its own prohibitions and sanctions and intensifies the other issues (DeBlassie, 1976; Grant, 1983). Many hearing-impaired children from non-English-speaking homes are progressing poorly in school because of language confusions compounded by their hearing impairment which has deleterious effects on the language acquisition process. More support from other institutions such as religious organizations and the news media could add strength to the cause, but the group that can wield great power is the parents. As noted above, however, parents who, themselves, do not speak English are not likely to instigate the action required. Therefore, it is up to the others, the educators, the school administrators, and the school boards, to do what is necessary to create the environment where these children can learn and become productive citizens.

Our experience in San Antonio has been that the Mexican American parents have been most willing and cooperative so far as supporting school programs, but these parents are most often in a very low socioeconomic level and feel they have very little power over what happens to them or their children. Often they are intimidated by all professionals, politicians, and English-speaking people in general, but if they are approached in their language and encouraged to act, they can be effective promoters of adequate and appropriate educational programs for their children, and can become active participants, themselves, in the educational process of their children (Schaeffer-Dressler, 1981). In Texas, any actions or proposed actions concerning a handicapped child must be communicated to the parents in their home language, usually written, but if this is not feasible (e.g., if the parents are illiterate), other means must be used. This requirement is spelled out very clearly in the *Texas Administrative Code* (Texas Education Agency, no date). Thus, the mechanisms for parental support are in place; all that is needed is a catalyst to spur the parents into action.

The problem of qualified personnel is a big one. Ideally, we would have native speakers in all the various professional roles that impact on hearing-impaired children and their parents: teachers, audiologists, speech pathologists, school administrators, otologists, social workers, all. Lacking that ideal situation, it would be most helpful if we had even bilingual teachers. Most universities expend concerted efforts to recruit minority students. However, at Trinity University often the Mexican American students who can meet the high standards for admission to the university are very middle class, not representative of the lower socioeconomic levels, and sometimes, not even bilingual. These students are not members of the culture that most of the hearing-impaired children represent.

Students in all accredited teacher education programs become sensitized to the difficulties encountered by both handicapped children and linguistically and culturally different children; these requirements are stated in the standards of the National Council for Accreditation of Teacher Education (NCATE). In addition, teacher education programs are encouraged to have, as members of their faculties, members of minorities (*Standards for the Accreditation of Teacher Education*, 1982). However, this requirement and encouragement does not provide bilingual personnel for classrooms.

In Texas, the small cadre of bilingual professional personnel in education of the hearing impaired has been fully utilized. These few teachers and supervisors have served as interpreters and "intervenors" for non-English-speaking parents in many capacities. In addition, a concerted effort has been made to recruit bilingual paraprofessionals. This effort has been quite successful, and these personnel have proved to be very helpful in the classrooms where the teachers are monolingual; the Spanish-speaking aides have proved to be effective in parent conferencing situations as well. One factor that might increase the number of native-speaking students into preparation programs would be financial support. If we want students from the lower socioeconomic brackets, we shall have to provide financial assistance.

What are needed are programs to prepare teachers, parent/infant facilitators, supervisors, and administrators for hearing-impaired children from non-English-speaking homes. Graduates of such programs would be ideal personnel to provide services for this population. A program with this orientation would have to be situated in an area that could provide ample field experience. It is possible that a university that offers a program for teachers of the hearing impaired and one for bilingual teachers could combine its resources and provide adequate preparation for this special group. Inservice options are among other possibilities (Grant, 1984).

What about materials? As mentioned above, there are some bilingual materials available, not in great abundance, but on the market. However, much of it is not appropriate for hearing-impaired children, especially for very young children, and ideally programs start the parents and children as soon after birth as possible. In Texas, an effort is being made to develop materials, mostly materials for parents. Parts of the *Ski*Hi Curriculum Manual* (Clark and Watkins, 1985) which is the program used by parent/infant facilitators throughout the State in the regional programs, have been translated into Spanish. This translation has proved most helpful in making it possible for non-English-speaking parents to be active participants in their children's education. In addition, the *Parent Handbook* (TEA, no date) to accompany the program has a Spanish as well as an English version.

The parent/infant facilitator at the Houston Regional Day School for the Deaf is completely bilingual and a native speaker of Spanish. She has completed two preparation programs in parent/infant counseling in addition to an undergraduate program in teacher preparation as a teacher of the hearing impaired. She has translated all of the *Ski*Hi* program and conducts her counseling sessions in Spanish, English, sign language, in whatever medium the parents are most comfortable. Unfortunately, these options are not available to all hearing-impaired infants and their parents. There are other bilingual parent/infant facilitators in the State, but not enough of them, and there is the subsequent problem of the transition into monolingual English classes, which are the general rule in the pre-school, elementary, and secondary classes throughout the State (Archer, 1986). In addition to the *Ski*Hi* material, *The*

Preferred Signs for Instructional Purposes has been translated into Spanish. This version is of particular value to the few Hispanic hearing-impaired children who have some fluency in Spanish.

One project that has generated a great deal of support and some materials is the Hispanic Parent Outreach Program. It was started in Austin with the cooperation of the Catholic Diocese of Austin and the Texas School for the Deaf under the leadership of Maurine McLean (no date). She has developed sign language materials to teach American Sign Language (ASL), but using Spanish translations instead of English. She has designed materials for three levels of competencies and has programs ongoing in Austin, San Antonio, McAllen (on the Texas-Mexico border), Brownsville (also on the border), Laredo (on the border), El Paso (on the border), Fort Worth, and Corpus Christi. She is still evaluating the project, but so far the response has been very positive in terms of improving communication between parents and school and between parents and their children. In addition to her program, she has listed 248 books available on sign language materials in Spanish. Lexington School for the Deaf in Jackson Heights, New York, has the most with 123 volumes, McAllen, next with 60, the California School for the Deaf at Fremont with 15, and the Office of Curriculum and Instruction of the Philadelphia School District has 12. The other 15 schools or districts listed have two or three volumes each. A collection of 123 volumes is not too impressive, but it is a beginning.

Assessment is another issue that presents special problems for hearing-impaired children from non-English-speaking homes. Again, each group, the hearing impaired and the child of limited English proficiency (LEP), has suffered from bias in all kinds of testing situations (DeBlassie, 1980; Kopp, 1984; Oakland, 1977; Samuda, 1975; Zieziula, 1982). The same difficulties surface for each group: "The history of the assessment of hearing impaired people shares a remarkable resemblance to that of Hispanic children." (Figueroa, et al., 1984, p. 141.) For both groups, there is a wide discrepancy between their performance abilities and their verbal abilities on any standardized tests. Mean scores for these groups are in the normal range on performance scales, but scores on verbal tests show the groups to be in the mentally retarded range. Historically, this has led to the placement of Hispanic children into special education placements, and to the viewing of hearing-impaired children as generally deficient. In both cases, the language deficit or difference is the culprit. According to Figueroa, et al. (1984), there has been more progress in the assessment of bilingual students than in the area of the hearing impaired. Their recommendation is that until there are truly suitable instruments for this population, examiners must evaluate with the unique needs of each group borne in mind and use additional strategies, such as observational study, as an additional means of assessing the children. Just as we need teachers with backgrounds in education of the hearing impaired and bilingual education, we need psychologists who are sensitive to the language deficits of both the child from a non-English-speaking background and the hearing-impaired child.

Options

At present, there are not many options for placement for the children we are discussing here. The problem is intensified by the fact that each child and each family is unique. First of all, the parents' wishes must be respected. Even if the parents wish their child to retain his/her culture and acquire the home language, the school is obliged to have for one of its objectives the acquisition of English; this is inherent in all bilingual programs. In such a case, it will be necessary for the child to become at least bilingual, perhaps trilingual if ASL is part of the school curriculum. According to Blackwell and Fischgrund (1984), ". . .bilingualism is as natural a linguistic and social phenomenon as monolingualism" (p. 162), and therefore we should not fear that its achievement is not feasible for hearing-impaired children. They urge that the child's home environment and language not be ignored nor dismissed even if the child seems to have no apparent verbal language; the environment of the home will still be part of the child's life. Cummings (1979) has stated that the better the child's language competence in his/her native language, the better will be his/her competence in the second language. Cummings was not referring to hearing-impaired children, but most educators of these children strive to have them acquire language as closely as possible to the process that hearing children go through. It would be foolhardy to ignore the research that has been reported on normally hearing children.

There are two noteworthy programs that have had at least a decade of experience providing bilingual/bicultural programs for hearing-impaired children: The Projecto Oportunidad at the Rhode Island School for the Deaf and the bilingual/bicultural program at the Lexington School for the Deaf in New York. The latter was not actually initiated until 1981, and this was after 6 years of research on Cooperative Research Endeavors in the Education of the Deaf (CREED) (Lerman and Vila, 1984). Both these programs have emphasized the importance of utilizing the home culture and language, not only for improved academic achievement, but for improved relations between the homes of the students and the schools, and improved self-images for both the students and their parents (Fischgrund, 1984; Lerman, 1984). Lerman and Vila speak of the need for more bilingual personnel and "the development of a core of Hispanic parents" (p. 179), two of the requisites listed in this paper.

There is another interesting aspect to the bilingual/bicultural problem in educating hearing-impaired children. That is the deaf child of deaf parents who use ASL. This child has a language, often a highly developed one, before he/she enters a program. The same principles hold here. This child's language and culture can play a very positive role in learning English, and the research has reported that such children are accelerated in language compared to hearing-impaired children of hearing parents (Meadow, 1968). This has led some educators to promote the learning of manual communication among hearing parents of hearing-impaired children. In such cases, it has been suggested that ESL programs could prove to be the link between the first language and English for these children (Luetke-Stahlman, 1982). The problem is that less than 10 percent of the hearing-impaired population have hearing-impaired parents (Rosen, 1986), and the hearing parents of hearing-impaired children are rarely fluent enough in manual communication to provide the abundant linguistic stimulation that young children need to acquire language. Ordinarily, these parents are only beginning to acquire manual skills, and not until after the children have been identified and the parents have adjusted to the handicap. One exception would be a hearing person who has a signing, hearing- impaired relative or friend. So far as the non-English-speaking parents are concerned, educators may have trouble justifying asking the parents to learn a manual communication, any one of the several, and English.

Nevertheless, the success of the Spanish sign language classes is very encouraging so far as parent participation and enthusiasm are concerned. If this type of program brings the parents in close contact with the school and provides a meaningful means of communication between parents and children, it needs a fair trial.

We must realize that there exists a problem that won't go away; if anything, it will continue to grow larger as the influx of non-English-speaking population increases in the United States. The two programs in Rhode Island and New York need to be replicated, and their success needs to be exploited. Americans have always cherished their children and wanted the best for them. We must not neglect any segment of the population simply because there are not many of them; each child deserves to develop into the best he/she can be.

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Part III. The Right to Employment

Access to Employment and Services: A General Overview

By Robert S. Menchel*

Employment History

All people have the right to employment and job satisfaction. Work is more than merely a job. Work offers economic independence and security through earning an income. It is also linked to social status and mobility. Work also provides, through matching one's vocational interest and abilities, a major source of personal satisfaction and dignity.

In order to compare the differences in employment between hearing and hearing-impaired people a brief review of several studies of employment is given here. Ignoring early reports as irrelevant to this issue at this time and examining more recent studies over the past 20 years, we find some still relevant conclusions.

Schein and Delk (1974) reported that a high percentage of deaf males (97.1 percent in contrast to 95.1 percent of males in the general population) were employed. They also reported a high percentage although somewhat lower rate for deaf females (89.8 percent in contrast to 93.4 percent of females in the general population). However, the report did not clearly define the occupations these people were employed in except in general terms.

In a followup study in 1977, Schein (1978) showed a drop in the *number* of deaf people in the labor force to 74.8 percent for males and 47.2 percent for females.

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Boatner, Stuckless, and Moores (1964), Moores (1969) as well as Kronenberg and Blake (1966) also showed high unemployment among deaf adults in the age group of 18 to 24 years. This high rate paralleled the unemployment rate of the general population in the same age group.

Stuckless (1980) warns that all of these studies share a weakness common to numerous other studies, using *ad hoc* criteria which make reliable comparisons with other deaf population or with different groups in the general population impossible.

With the development of a standardized followup system developed by the Conference of Executives of American Schools for the Deaf in 1976 such comparison became possible. A system was developed and field tested by seven schools in 1980.

The latest data from this system indicated that in 1984 labor force participation rates for graduate respondents overall were much closer to those for the Nation than experienced last year (1983) particularly among the younger group, ages 16 to 19 years.

The fact that hearing-impaired people were still doing well in employment was further demonstrated in the 1985 study. In this study males 20 years and over had an employment rate of 73.9 percent compared to the national rate of 73.3 percent. Females 20 years and older had an even better rate of employment at 58.3 percent compared to the national average of 54.4 percent (MacLeod-Gallinger, 1985, p. 11).

The unemployment picture was both positive and negative in this year (1985) as compared to 1984. In the 18–19 age group the unemployment figure dropped from 50.0 percent to 12.7 percent compared to the national average of 19.4 percent. However, in the 20–24 age group unemployment increased from 35.5 percent to 38.4 percent, (national 10.9 percent). That for the 25–54 age group remained fairly constant at 14.7 percent (national 6.1 percent) (MacLeod-Gallinger, p. 15).

Stuckless (1980) stated that when deaf persons outside the labor force are taken into consideration, and criteria used by the Bureau of Labor Statistics are followed, the employment and unemployment rates of deaf persons within various age groups appear to parallel those of the general population fairly closely, at least among males. Unemployment for deaf females appears to be slightly higher than the general population.

The *Occupational Outlook Handbook* (1981) pointed out another factor that affects employment, not only for hearing-impaired people, but for people in general; this is as follows:

> Through the late 1960's and 1970's a number of people born during the "baby boom" entered the job market and more women sought jobs. As a result of the large number of young people who have entered the labor force in recent years, competition for many entry level jobs has been stiff and many young workers are unemployed. The educational attainment of the labor force has risen from 11.1 years of school in 1952 to 12.6 years in 1978. Many technical, craft and office occupations now require postsecondary vocational education or apprenticeship. The proportion of workers in the labor force who have completed at least four years of college has risen from 8 to 17 percent between 1952 and 1978. As a result one out of four college graduates took jobs traditionally filled by someone with less schooling (pp. 17–18).

It is obvious and important to understand that hearing-impaired people are competing in the labor market for entry level jobs with the general population and not just with other hearing-impaired people. The people they are competing with may have better education and training.

This growth in educational attainment was further emphasized in the *Occupational Outlook Handbook* (1984).

> Between 1970 and 1982, for example, the proportion of the labor force age 18 to 64 with at least 1 year of college increased from 26 to 39 percent. The increase in educational attainment reflects both the retirement of older workers, many of whom have little formal education, and the influx into the work force of young people who generally have a high level of formal education. Among workers age 25 to 34, for example, nearly all have completed 1 year of college (p. 14).

It is clearly seen in the data presented that the connection between higher unemployment rates and low level of education shows the importance of education in the job market that increasingly requires more training.

This fact that entry into the labor force today will require more training and education is supported by earlier studies (Cunningham, et al., 1972, Boatner, Stuckless, and Moores, 1964, Kronenberg and Blake, 1966) which focused on occupations of young adults and found that jobs requiring considerable experience or training were underrepresented. Even later studies still found the deaf worker underrepresented in these fields. Phillips (1975(b)) used the D.O.T. classification to compile a list of 515 job titles that deaf people held. He found that 57.8 percent fell in the "thing" job category, 38.3 percent in the "data" category, and only 3.6 percent in the "people" category, presumably because of communication requisites.

However, since 1975 the number of skilled occupations available to deaf people has probably been substantially increased by the considerable range of majors available to deaf students at the postsecondary level (Rawlings, Karchmer, DeCaro, and Egelston-Dodd, 1986).

Martin (1983) pointed out that employers were looking for qualified deaf people who have the skills that are in demand in the marketplace. These people would be found in the educational system. The fact that educated and qualified deaf people could successfully compete in the labor market is historically borne out by the entry level employment rate for deaf RIT graduates of 95 percent (NTID, 1983) in 1982–83. Other graduate followup studies (Grant and Welsh 1981; Welsh and Parker 1982; Welsh 1982; Welsh 1984; Welsh 1985) have subsequently reported employment rates consistent with the general U.S. population.

In the last two followup studies of NTID/RIT graduates (Welsh, 1984, 1985) much of the data parallels past employment trends as to rate of employment and unemployment as compared to the general population. What is of most interest in both of these reports is that in 1984, 82.4 percent of the graduates were employed in "white collar" occupations, i.e., work in either managerial/professional or technical/sales/administration support groups. In 1985 this figure was 80.0 percent. Furthermore, both reports showed that income was related to degree level.

It was also shown in both reports that unemployment dropped as degree level rose. In 1984 the unemployment rate for the diploma was 12.5 percent and 6.9 percent for bachelor. With the 1985 report these figures were 10.0 percent for certificate and 3.1 percent for bachelor. Such data indicates that NTID students as well as deaf students in other programs should be encouraged to strive for the highest degree possible.

> It is a tribute to parents, to educators, to vocational rehabilitation agencies, but most particularly to young deaf people themselves, that participation in the labor force and employment among deaf people in the labor

> force closely approximates that of the general population, the adversities of deafness notwithstanding. (Stuckless, p. 88)

Barriers to Employment

It would seem at this point that hearing-impaired people are doing as well in the labor force as the general population. However, there is still resistance on the part of employers to hire a hearing-impaired person no matter how qualified. There is a concern on the part of employees about such issues as communication, safety, insurance rates, and other real and unreal issues. Phillips (1975(a)) stated that employers' attitudes toward hiring hearing-impaired people ranged from enthusiastic about employing them to those who did not want hearing-impaired individuals in their firm. Several had never given much thought to employing hearing-impaired individuals.

Employers seemed to be unaware of any specific problems in some cases and were willing to hire a hearing-impaired individual once they were approached. Other employers lacked knowledge about union policy or regulations which would affect employment of a hearing-impaired person. Safety and creating a hazard for other workers was also a concern. Some employers had a negative experience with a hearing-impaired worker, (nonproductivity, social, or work performance problems) and were not enthusiastic about hiring another one, feeling they had tested the opportunity. Employers would often use a hearing impairment as a reason for not passing a physical examination and thus another reason for not hiring. However, it was found that with proper information many of these barriers could be overcome.

One major issue that employers expressed was on-the-job training. They felt that more time and effort was required to train a hearing-impaired person. Phillips (1975(a)) noted, however, that personnel and managers indicated a need for help in planning and conducting training programs for deaf people; that employers were not aware of such services as interpreters; were uninformed about training of deaf workers. Employers also seemed to feel that there were only certain jobs for deaf people. Those which were routine or repetitious seemed the most appropriate for deaf workers.

However, when information was provided, many employers were more than willing to provide retraining or retooling for the deaf workers. It became obvious that employers did not have much information to help them in understanding the needs of deaf workers.

There was also much stereotyping among employers as to which jobs deaf people could do. Jobs most often indicated (Phillips, 1975, p. 6(b)) were draftsman, key punch operator, printing, electric assembly job. Employers were also reluctant to employ deaf workers in certain jobs involving precision-working operations or construction. The former employers felt the job relied heavily on the ability to hear the initial contact the machine made with the material. The latter was considered too dangerous. Yet where deaf people were working and performing well the employers were willing to hire more.

> Most employers of deaf workers were satisfied with the performance of their deaf employees. Most indicated that deaf employees, like hearing employees, performed at all levels from poor to excellent. These comments seemed to reflect the feeling that the deaf worker was no different from the hearing workers and that his performance was more related to his interest, motivation, and ability to produce than to his handicap. (Phillips, p. 7(b)).

A more recent study (Bowe, et al., 1973) on barriers to employment, by the Federal Government, of hearing-impaired people reached much the same conclusion as Phillips (1975(b)). Barriers to employment may be deliberate or unintentional. Very often the barrier is created by ignorance of available support which would assist the deaf worker in performance of their tasks. However, attitudes of some supervisors who cannot believe that a deaf person can perform, with or without modifications of the job, may also create barriers to employment for deaf people.

Robert deBeck (1986) testified before the Interagency Committee on Handicapped Employees that deaf people were underemployed and underutilized in the Federal work force. He also stated that the number of handicapped employees in Federal agencies was down, and the percentage of hearing-impaired individuals in this work force was even smaller. He declared that employers were using the "communication barrier" to prevent those with hearing impairments from obtaining high level positions. There was a lack of knowledge and information on the part of supervisors and personnel specialists as stated:

> Communication with deaf applicants/employees is still lacking—supervisors, co-workers and personnel specialists still have not been well-informed or trained in dealing with specific handicaps. Although selective placement coordinators have been designated by agencies to help recruit and place handicapped employees, we have found many of these selected placement coordinators are unprepared to deal with persons who have certain disabilities, especially that of blindness and deafness. . . .most of the selective placement coordinators are not adequately trained to understand the nature of certain handicaps and accommodations for them, and their offices or services are not fully accessible (i.e. a lot of them don't even have TDD's or know sign language). (p. 7)

Providing Information

It becomes clear that employment barriers for hearing-impaired people exist because of a lack of information about deafness. The people involved in the hiring process develop their attitudes and perhaps stereotyping because they do not have accurate information about what deafness means and its impact on the workplace. Many misconceptions could be removed if the right kind of information was provided to personnel people and supervisors. Jay Rochlin and Donald Liebers (1981) made this point clear when they stated "A deaf employee's success is related to his or her supervisor's awareness and understanding of deafness" (p. 7). Bell (1981) also showed that supervisors who are knowledgeable of the development steps for introducing a hearing-impaired employee into the work team will be better prepared to help team members and the hearing-impaired employee adjust. Martin and DeCaro (1984) further stressed this point in stating that the National Center on Employment of the Deaf (NCED) prefers to analyze the needs of the employers and selectively place an NTID graduate who meets these needs. In addition NCED's position is one of working with the employers to develop an understanding and awareness of deafness so they are able to make an informed hiring decision (p. 33).

Although it seems that an informed employer may be more willing and able to hire a hearing-impaired person, it cannot be assumed that training for employers, and providing information, will solve the whole problem of barriers to employment of hearing-impaired people. However, it has been demonstrated that with the right kind of training for supervisors, providing information such as *The Hearing-Impaired Employee: An Untapped Resource* (Fritz and Smith, 1985), many of the barriers created by misunderstanding and fear can be removed. The removal of these barriers will open new opportunities for hearing-impaired people.

At present NCED, at the National Technical Institute for the Deaf, provides two training programs to meet the need for information distribution to employers. One program designed for supervisors, which is given to them before the deaf student arrives for their summer co-op work experience, is entitled *Working Together: The Manager and the Hearing Employee* (NCED, 1981). This workshop is offered at several selected sites where there are a large number of hearing-impaired NTID students who are going on co-op. It is also offered to employers on their own site. The only cost to the employer for onsite workshops is to cover the travel cost of the NCED staff. The second training program, entitled *Getting Your Job Done: An Employer Training Program* (NCED, 1980), is designed for personnel managers, EEO/AA representatives, training personnel, and other policymakers within a company.

These training programs offer information on deafness (its causes and effects) and implications for the workplace. They also offer strategies to use in interviewing and evaluating the hearing-impaired applicant. Resources for additional assistance are also provided. In addition, several papers (McCrone and Arthur, 1981; Schweitzer and Deely, 1982; Goodwin, 1985; and Casella, 1978) all offer strategies to be used by the interviewer in preparing for the hearing-impaired job candidate. This kind of information in the hands of a personnel manager can be invaluable in providing a fair and profitable interview for the hearing-impaired job candidate. A third program now in development is *Training for Trainers* (NCED, 1986) which will enable company trainers to train new supervisors and coworkers of hearing-impaired people within their company. This is a packaged program of *Working Together.*

It is clear that such training programs have been successful in providing employers the information they need and in so doing removing many of the barriers to full employment opportunities for hearing-impaired people.

Underemployment and Upward Mobility

The question of underemployment of deaf people has never been clearly answered. Christiansen and Egelston-Dodd (1982) indicate that deaf people have been employed more frequently in skilled, semi-skilled, and unskilled occupations than the general population. Deaf workers were underrepresented in professional and administrative occupations. Christiansen and Egelston-Dodd observed that:

> Deaf workers have been and continue to be underrepresented in those occupations where oral communication skills are at a premium: managers, administrators, and sales personnel. The underrepresentation is particularly unfortunate since much of the future growth in the economy, in the United States at any rate, will come in these types of positions (p. 24)—positive job performance evaluations are almost invariably correlated with limited opportunities for advancement. (p. 38)

To the contrary, Passmore's (1983) impression was that there were no reliable studies to support the claim that deaf people were underemployed. However, he did feel that if deaf workers were underemployed, then their underemployment is a serious problem for society and the hearing-impaired individual. Underemployment represents an unused national resource, that could be better utilized, and lowers the social and economic welfare of deaf people. Passmore felt that if it is a real issue it requires further study.

Some of the reasons that deaf people are underemployed can be due to employer attitudes (Phillips, 1975 (b)) and employers' perceptions of deafness as a safety hazard. Employers were reluctant to place deaf workers in supervisors' positions or even in jobs where receiving orders was important (Steffanic, 1983).

The issue of safety can be addressed by studies made by Williams (1970) who reports that deaf employees have an excellent safety record in industry. A more recent study (Menchel and Ritter, 1984) supports the fact that deaf workers have an excellent job safety record and offers accommodation suggestions for making the workplace safe for the hearing-impaired worker. Such information, when made available to employers, can help to remove the barriers to employment in areas that employers may consider dangerous for a hearing-impaired person. To quote one of the authors of the paper "I have one handicap now, I don't want another one." (p. 13)

The issue of upward mobility is an issue of underemployment. Cramatte (1968 and 1983) did not find many hearing-impaired people in management or supervisory positions. In almost all the studies (Wenakur, 1973; Rochlin and Leiber, 1981; Schein and Marcus, 1974; McArthur, 1981) communication is given as a factor for lack of upward mobility and lower income among hearing–impaired workers. Rochlin and Leiber (1981) state that:

> . . .supervisory awareness and understanding remains critical. A certain lack of this was apparent in several of the supervisor's comments about communication. The only employee rated promotable to management has a supervisor who communicates by sign and has an understanding of deafness. (p. 12)

Employers must be made aware that the hearing–impaired employee has the same capacity and motivation as a hearing employee. With some accommodations and understanding the hearing–impaired employee can overcome barriers to upward mobility. McArthur (1981) notes that interpreter services is a key factor to full participation and success in a supervisor or managerial position.

> Although over 60% of the respondents had very strong oral backgrounds with excellent lipreading ability in a one–to–one conversation and good lipreading ability in a small group setting the data shows a strong need for interpreter services within the business sector, especially when deaf professionals are included at meetings and seminars. Without these much needed services, deaf professionals will not be able to participate fully and as effectively as their hearing peers and they therefore lose out on many technical informational items that they must be aware of. (p. 30)

More and more young hearing–impaired people are rapidly branching into numerous fields. They are graduating from paraprofessional and professional technical training programs in careers such as business, computer programming and operations, engineering, allied health, and science to name a few. There will be a need for continuing efforts by business and industry to understand the communication needs of these employees. Smith (1979) showed how industry has attempted to help hearing–impaired people adapt to a hearing environment. Companies have provided everything from trained professional interpreters at meetings to sign language classes for coworkers. Some of the leaders in providing such services to hearing–

impaired employers are Tektronix, Eastman Kodak, Xerox, IBM, and others. It was noted when coworkers learned sign language and communication occurred between the hearing and hearing-impaired employees some of the negative psychological effects of deafness (i.e., isolation) were eased, and the communication is enhanced.

Levenson (1981) felt it was important for the hearing employee to demonstrate that he or she can function independently and with minimum support, thus creating the perception of a fully functioning and productive worker. Levenson further stressed the need for good "oral" communication and writing skills as important factors in upward mobility. It cannot be clearly defined what the barriers to upward mobility are. As much as hearing-impaired individuals are different in their characteristics and communication modes, employers are also different in what they deem important for upward mobility. Each job is different and what will satisfy the technical requirements for one may be quite different for another position where writing or verbal skills are more important.

Some companies are reluctant to use outside services. Also, often the use of an interpreter connotes an experience dependency, so the employer finds another way to communicate, which more often than not is by written messages. It can be said at this time that a lot of progress has been made in changing the attitudes and actions of industry toward hearing-impaired people. We cannot say that the communication needs of hearing-impaired employees have been fully met. Very often the hearing-impaired employee is isolated from the mainstream due to a lack of communication. However, initial attempts have been made and the general business sector should be made aware of these attempts.

Modifications

There has been a concern within the business sector about the hearing-impaired employee's ability to use the telephone. This has been a barrier to both initial hiring and upward mobility. Menchel (1986) states that computer technology has broken down many of the internal and external communication barriers through use of electronic mail or computer to computer link for communication. However, the day has still not arrived when everyone, both hearing and hearing impaired, has a computer for communication purposes. The telephone is still a primary means of business communication. Castle (1978) presented an overview of telephone devices and strategies to use in telephone communication; (e.g., amplifiers, use of repeated messages, code systems, listening skills). These devices and strategies have removed some of the barriers to employment and promotions for hearing-impaired employees that as late as 1976 were still entrenched.

> To a deaf person, the telephone is a constant reminder of his handicap and of his dependence upon others for its use. It also stands as an invisible barrier to his vocational advancement, for he has found from sad experience that in employment he is considered for promotion only to positions which do not require the use of the telephone. (Mortensen, 1976, p. 32)

In addition, the National Technical Institute for the Deaf has developed telephone strategies that make use of whatever residual hearing the deaf person has. (Castle, 1976a, 1976b, 1977). When this information is provided to employers there is more acceptance of a hearing-impaired person for employment. Many employers are not aware that most deaf people have some residual hearing and some can be trained to use the telephone. When it is not possible for the hearing-impaired person to use the telephone, installation of TDD's or the use of an interpreter can overcome the barrier. In some cases a coworker could handle the telephone in exchange for some extra duties performed by the hearing-impaired employee.

Bowe (1973) also states that present technology has provided modifications to electrical and other equipment so that an auditory signal can be supplemented by a visual flashing light. Alarms, machine malfunctions, and other auditory dependent signals are all easily and inexpensively either changed or supplemented by flashing lights. One of the simplest warning devices is use of the "buddy-system" when a coworker is assigned to the hearing-impaired worker to warn of an emergency. Revision of the job description can also be done to remove barriers to a hearing-impaired person performing that job. Rochlin (1981) said, "It is not how the job is done but that the end results are expected and the job gets done."

Another area where barriers need to be removed so that the hearing-impaired employee has equal opportunities to update their skills and prepare for promotion is in the area of training. Clark (1982) said that design specialists and/or trainers have fears and concerns about how to accommodate disabled people into the programs. Yet these people must confront the need and obligations to incorporate disabled individuals into their organization's training program in the most professional, sensitive, and effective way possible (p. 56). Clark offers some very helpful suggestions for trainers on the use of interpreters, overhead transparencies, and captioning of audio-visual material.

The major barrier to employment, promotion, and accommodation of the hearing-impaired person in the workplace is lack of information. There is a great deal of information available; there have been technology changes which have removed many barriers for hearing-impaired people, and more are on the way. However, if all this information, training programs, and technology do not reach the employers then the barriers will remain in place. NTID is reaching many employers; a major effort is needed to inform many more.

Career Development

Career Awareness

It would be worthless if all the barriers to employment of hearing-impaired people were removed and there were no hearing-impaired people with the skills and knowledge to fill the jobs.

Much like the barriers imposed on hiring, there are also barriers present when good career guidance is not provided to hearing-impaired adolescents. Martin (1981) stated:

> Career education for hearing-impaired children has been woefully deficient in this country, but even more tragic are the difficulties faced by deaf children who have often been isolated from the mainstream of what has been a very casual career development process for most of us. (p. 87)

To remedy this situation a working conference between the National Technical Institute for the Deaf and the Model Secondary School for the Deaf led to the National Project on Career Education (NPCE). This program, started in 1980 (Updegraff, Steffan, Bishop, and Egelston-Dodd, 1980), created a national network of inservice career education trainers to infuse career education for hearing-impaired children into their school curriculum. A spinoff of this program was the Career Awareness Summer Program (CASP) *Catch Tomorrow* (Young and Egelston-Dodd, 1984) which is a 1-week program for hearing-impaired sophomore/junior high school students. The program covers decisionmaking, career awareness, self-awareness, education awareness, and economic awareness. Students leave the program with at least one career development goal which they develop in concert with their parents who participate in the first and last days of the program. Both of these programs have had an impact on career development for hearing-impaired adolescents but much more is needed.

An outgrowth of the CASP was a new short version of the program entitled *Educational Awareness* (Stanton, Mann, O'Brien, and Young, 1985) developed and implemented by the National Technical Institute for the Deaf. This program was designed to be used in the classroom by teachers of hearing-impaired children. The purpose is to make the children aware of what they are learning in school now, their likes and dislikes, and how all of it is tied to future careers. The final part of the program presents the children with a variety of postsecondary programs where they can follow their career interests.

Hearing-impaired children have a very incomplete picture of postsecondary education and possible careers. One remedy for this is the use of role models. A role model can have a very large impact on career decisions for hearing-impaired adolescents. This was demonstrated in 1977 (Redden and Stern, 1978) when the American Association for the Advancement of Science sponsored a national role model for handicapped children. Many hearing-impaired children did not know that deaf people go to college and work in many different career areas. Parents of hearing-impaired children need information too. A program developed in 1984 (O'Brien, 1984) for parents, entitled *The Parent Career Education Workshop*, is a four-module, 1-day workshop for parents of deaf youth. The workshop is designed to promote the active involvement of parents in the career development of their deaf children. In 1985 NTID piloted a career awareness program for hearing-impaired high school juniors entitled *Explore Your Future*. This program held on the RIT/NTID campus during the summer is a mixture of fun and indepth exposure to the many career options available to hearing- youth today.

All of these programs are making a valuable contribution to the career awareness of hearing-impaired children. Teachers, counselors, and other people working with hearing-impaired children should be aware of many of the occupations in which deaf people have succeeded. Limiting the careers open to hearing-impaired children can place unnecessary barriers in their paths toward productive and rewarding lives.

Science is an area that needs particular attention. Many educators of the deaf (Fennegan, 1980; Lang, Egelston-Dodd, and Sachs, 1983; Gaven, Cain, Menchel, Rockwell, and Sharpless, 1981; Moccia, 1981; and Hadary, 1978) have all stressed the need for early exposure of the hearing-impaired child to careers in science. Furthermore, there is a tendency to continue to steer hearing-impaired females into "traditional" career areas, not engineering and science. It is time for hearing-impaired females to enter into the nontraditional career areas such as engineering and science. Egelston-Dodd (1985) has performed many studies on stereotyping by sex. The studies revealed that students who tended to stereotype jobs by sex also were highly likely to regard deafness as a limiting handicap for a worker. In all of the programs developed at NTID and in the past few years (Stanton, et. al, 1985; Young, et. al, 1984; O'Brien, 1984) both males and females have been encouraged to consider any career that interests them regardless of whether they think it is for one sex or another. Lang, et al. (1983) stressed the need for a good mathematical and science background in high school for students considering postsecondary programs. As educators, we must provide a solid foundation in elementary and high schools that will prepare these students for life in our technological age.

Employment Awareness

Herr, et. al, (1986) noted the major difficulties youth have in the transition from school to work. Among these difficulties were inadequate knowledge of the labor market and one's abilities and aptitudes, restricted occupational socialization, ineffective assessment of occupational competences, and inadequate assistance in finding work and developing work skills. Other studies (Campbell, 1972; Cretes, 1976) found similar results. There were also problems of job entry and job performance, career planning.

Many students at NTID have had no work experience at all before entering NTID. That is why the cooperative (co-op) work is so important in helping them make the transition to the world of work.

> Co-op is designed to give students the opportunity to (a) use their skills in actual work situations, (b) understand the world of work and the social interaction involved, and (c) evaluate their own ability to work. (Welsh and Seidel, 1985, p. 5)

Preparation for co-op work experience starts the first quarter of the freshmen year for all NTID students. This preparation is in the form of the course entitled *Job Search.* Using the text developed by Veatch (1982) the students are taught how to write a resume, cover letter, and followup letters and how to do a job search using appropriate resources. They develop interviewing skills and are taught what kinds of behaviors and attitudes are expected on the job. The person who teaches this course then becomes their employment advisor (EA) and works closely with the student. The role of the EA is to facilitate placement but not to have full responsibility for finding a job for the student. The EA may make telephone calls, set up interviews, work with vocational rehabilitation personnel, provide leads for the student to follow up, and provide other services and consultations.

Once the student has obtained employment, NTID solicits feedback through co-op visits and a mailed evaluation form to supervisor and student. Feedback from the evaluation (Welsh and Seidel, 1985) has generally been favorable. This information benefits NTID in two ways: by providing data on students' work performance to enable them to strengthen weak areas and by giving input regarding changes in the workplace that can be fed back into the NTID curricula.

Conclusions drawn from this feedback indicate that generally students do a good job on co-op; employers value personal/social skills very highly, particularly team work; good reading and writing skills are also important; intelligibility of speech alone is not a factor; neither GPA nor degree goals have a significant relationship to co-op performance; students seem to know where they stand with supervisors but as a group underrate themselves.

In order to overcome the barriers to employment and upward mobility, educators must provide opportunities for the development of personal/social skills in every component of a student's training. Furthermore, the importance of reading, writing, and speechreading cannot be overemphasized. These skills are highly valued by employers.

The co-op work experience is invaluable to both the employer and the hearing-impaired student. For the student, co-op can lead to a permanent job. For the employer, co-op offers a low-risk trial period to observe the hearing-impaired student on the job. Very often this co-op work experience removes the resistance to hiring a hearing-impaired person because the employer can see that the qualified and properly trained hearing-impaired person is able to perform the job. Furthermore, if employers are aware that there is a support system that they can depend on for assistance and information they are more willing to rehire these students for a second co-op and perhaps a permanent job. Grange (1986) in a co-op study showed that for the students who were visited on the job during co-op by a faculty or staff person from NTID, the rate of rehire was higher for those employers than for those who were not visited.

Permanent Employment

It becomes clear that preparation for employment, the cooperative work experience or similar experience, will benefit both the hearing-impaired job applicant and the employer. Some barriers of misunderstanding on the part of the employer can be removed by demonstrating during co-op that a hearing-impaired employee can be a qualified, productive worker. At the same time the hearing-impaired employee has the opportunity to learn on the job some of the social and personal skills so necessary in the working world for career success.

The question we must ask ourselves is, "What has been the result of all this preparation of hearing-impaired students and employers?" The answer is a definite positive but with room for improvement.

Welsh (1986) showed the following trends of employment of NTID/RIT graduates. On the plus side: most graduates are satisfied with the quality of their work; a high degree of satisfaction with the contents of their work, coworkers and supervisors; their earning was comparable to hearing peers; the occupational distribution is comparable to hearing peers; unemployment dropped, employment in managerial/professional occupations increased, and perceived quality of employment rose without degree level. On the minus side was a serious issue of less satisfaction with the chance for advancement and the way their companies treat deaf people. The unemployment rate of deaf graduates was somewhat higher than their hearing peers; and females do not do as well in the labor force as males. The last issue is one mentioned earlier, of stereotyping females into "female jobs." Steps should be taken to counsel women to enroll in programs that have traditionally been male (engineering, science, etc.).

Overall it seems that with the right preparation of the hearing-impaired person, training in areas to meet the marked needs, providing employers with information and training, many of the barriers of employment for hearing-impaired people can be and have been removed. However, what has been accomplished is but a small part of the whole problem. Much still needs to be done. Many employers need to be reached and many hearing-impaired people need training or retraining to compete successfully in today's rapidly changing job market.

Conclusion

Hearing-impaired people have made great gains in employment opportunities over the past 20 years. Many of these people have overcome employment and educational barriers on their own and have taken responsible and productive places in society. Hearing-impaired people are employed in almost every occupation we can name, from engineering to medicine, computer programming, to law, medical laboratories to architecture. There is almost no field where hearing-impaired people have not found success. It is not a question of whether a hearing-impaired person can be successful or not in these fields; the proof is there that they can. The problem many of these people faced and the one hearing-impaired people still face is resistance to entry into these fields. Again and again they must prove themselves.

Upward mobility has been a serious problem and still remains a major issue of employment success among hearing-impaired employees. It is not fair to provide an entry level position for a qualified hearing-impaired person and then offer no chance for advancement by placing barriers in their career path where there is a market demand and a long-term future. Others may need retraining to meet the needs of a changing technology. Parents must be involved and provided with good information to facilitate the career development of their hearing-impaired children. It is not all the responsibility of the employer or the hearing-impaired person to remove these barriers, but a sharing of responsibility and information.

Finally, the institutes of higher education for hearing-impaired people have a responsibility to demonstrate to the private sector through hiring and promotion of hearing-impaired people that they can be successful in all levels of employment.

The major issue here is a lack of information and training for personnel people, supervisors, managers, and coworkers. They need information about deafness, communication strategies, job modifications, and personal/social issues to help remove the barriers that prevent a hearing-impaired person from gainful employment.

At the same time the hearing-impaired individual needs good career planning at an early age, job search skills, and personal and social development so that these capable people can be productive workers who can be promoted and do an even better job.

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Hearing-Impaired People: Legal Aspects of Access to Employment and Services

By Bonnie Poitras Tucker, Attorney*

Constitutional Rights

Theoretically, the 5th and 14th amendments to the United States Constitution should provide hearing-impaired people with equal opportunities with respect to access to employment and services. The 14th amendment provides that "[n]o state shall. . .deny to any person. . .the equal protection of the laws." The fifth amendment provides that "[n]o person. . .shall be deprived of life, liberty, or property, without due process of law." The due process clause of the fifth amendment is held to imply an equal protection requirement.[1]

These constitutional protections, however, only apply where State or Federal action is at issue. The governmental action test is satisfied only when: (a) an employer or program is a State or Federal agency, subdivision, or entity; (b) a private employer or program assumes a public function, such as where a private entity maintains a public park[2] or a private company owns and maintains a town;[3] or (c) a private employer or program is in a symbiotic relationship with the government so that actions by the employer or program are deemed to be governmental actions, such as where the private employer or program directs a State-funded public library,[4] operates a restaurant in a public building

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[1] Evans v. Newton, 382 U.S. 497 (1954).

[2] Evans v. Newton, 382 U.S. 296 (1966).

[3] Marsh v. Alabama, 326 U.S. 501 (1946).

[4] Hollenbaugh v. Carnegie Free Library, 545 F.2d 382 (3d Cir. 1976).

built and maintained with public funds and devoted to a public use,[5] or administers a nonprofit Federal Headstart program.[6] The mere fact that a private employer is regulated, licensed, or funded by the State or Federal Government will not establish the requisite governmental action for purposes of invoking the equal protection provisions of the 5th or 14th amendments.[7] Thus, for example, a visually impaired registered nurse was not permitted to claim that she was discriminated against in violation of the 14th and 5th amendments by her employer, a government regulated nursing home that received government funds, because the court found that there was not a "sufficiently close nexus" between the actions of the government and the challenged conduct of the nursing home.[8]

Moreover, even if a hearing-impaired individual is able to establish that the alleged discriminatory conduct constituted the requisite governmental action, only in rare cases will it be possible for the individual to meet the stringent test for establishing a violation of his or her constitutional rights. At present, the most frequently employed test where the right to employment or services is at issue is the "rational basis test."[9] Under this test, a classification or differentiation that has the effect of discriminating against a hearing-impaired person will not violate the 5th or 14th amendments if it bears a rational relationship to a legitimate governmental interest.[10] Since the rational basis test defers strongly to governmental interests, practices challenged under this test are usually found to be constitutional. It is possible, although not likely, however, that

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[5] Burton v. Wilmington Parking Authority, 365 U.S. 715 (1961).

[6] Ginn v. Mathews, 533 F.2d 477 (9th Cir. 1976).

[7] *E.g.*, Jackson v. Metro. Edison Co., 419 U.S. 345 (1974) (privately owned and operated utility corporation which held a certificate of public convenience issued by the State held not to satisfy the governmental action test); Moose Lodge No. 107 v Irvis, 407 U.S. 163 (1972) (private club regulated by the State liquor board held not to satisfy the governmental action test).

[8] Trageser v. Libbie Rehab. Center, Inc., 590 F.2d 87, 90 (4th Cir. 1978), *cert. denied*, 442 U.S. 947 (1979).

[9] *E.g.*, Wash. Sq. Inst. for Psychotherapy & Mental Health v. N.Y. State Human Rights Appeal Bd., 108 App. Div. 2d 672, 485 N.Y.S.2d 540 (App. Div. 1985) *aff'd.* 67 N.Y.2d 699 (1986).

[10] San Antonio Indep. School Dist. v. Rodriguez, 411 U.S. 1, 40 (1973).

a newly evolving test, the "strict rationality test,"[11] may be held in the future to apply to *employment discrimination* actions filed by handicapped people. The Supreme Court has recently held that mentally disabled people do not constitute a "quasi-suspect" class for purposes of equal protection analysis,[12] and this ruling will probably be followed with respect to physically disabled people. Nevertheless, it is not inconceivable that employment may be viewed as a "quasi-fundamental interest." If so, courts would require an employer charged with violating the constitutional guarantee of equal protection to show that its "actions have a basis in fact which rationally advances an actual purpose of the legislative scheme,"[13] or that the classification or differentiation at issue be substantially related to achieving important governmental objectives.[14] Under this test, where less deference is paid to governmental interests, it will be easier for a hearing-impaired person to prove the denial of equal protection. Nevertheless, even under this more "favorable" test, an equal protection claim will usually be difficult to establish, because an employer or program will frequently be able to show that its classification rationally advances a governmental objective.

The 5th and 14th amendments also prohibit the Federal or State government from depriving any person of "life, liberty, or property, without due process of law."[15] In some States handicapped people may have a "property" interest in employment. The Supreme Court has held that property interests are created by "existing rules or understandings that stem from [a]. . .source such as state law—rules that secure certain benefits."[16] Thus, in States that have promulgated a policy of prohibiting unjustifiable employment discrimination in the public sector against handicapped persons, a hearing-impaired individual who has been discriminated against with respect to public employment must be afforded a hearing—before an unbiased examiner—to determine

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[11] *E.g.*, Frederick L. v. Thomas, 408 F. Supp. 832, 838 (E.D. Pa. 1976).

[12] City of Cleburne Living Center, 105 S. Ct. 3249 (1985).

[13] *Id.* at 835.

[14] Califano v. Goldfarb, 430 U.S. 199, 209 n.8 (1977).

[15] The 14th amendment provides that "nor shall any State deprive any person of life, liberty, or property, without due process of law." U.S. Const., amend. XIV, sec. 1.

[16] Board of Regents v. Roth, 408 U.S. 564, 577 (1972).

the constitutionality of the alleged deprivation of his or her property interest in public employment.

Additionally, a hearing-impaired person may be able to secure the benefit of "irrebuttable presumption" review. This type of review requires a court to determine whether the government has created an unconstitutional irrebuttable presumption by claiming that the mere presence of an individual's hearing impairment was conclusive evidence that the individual was not competent to perform a particular job. For example, in *Gurmankin* v. *Costanzo*[17] the court granted a blind teacher a hearing with respect to a school district's presumption that blind persons could not be competent teachers of sighted children. The court ruled that the presumption was unjustified after hearing expert testimony explaining that many blind people are able to become average or better than average teachers. In cases where the ability to hear *is* directly related to job performance, however, the result would be to the contrary.[18]

Employment: Federal Statutes

Section 501 of the Rehabilitation Act.

Section 501 of the Rehabilitation Act[19] prohibits discrimination against handicapped people by the Federal Government. Specifically, section 501 requires establishment of an Interagency Committee on Handicapped Employees, which is intended "to provide a focus. . .[on] the adequacy of hiring, placement, and advancement practices with respect to handicapped individuals, by each department, agency, and instrumentality in the executive branch of Government. . . ."[20]

Under this section, the Federal Government is prohibited from discriminating in matters of employment against *qualified* hearing-impaired individuals. A qualified hearing-impaired individual under section 501 is one "who, with or without reasonable accommodation, can perform the essential functions of the position in question without endangering the health and

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[17] 556 F.2d 184 (3d. Cir. 1977).

[18] *See, e.g.*, Coleman v. Darden, 13 Empl. Prac. Dec. 6788 (D. Colo. 1977). See generally, Comment, "The Equal Protection and Due Process Clauses; Two Means of Implementing 'Integrationism' for Handicapped Applicants for Public Employment," 27 *DePaul L. Rev.* 1169 (1978).

[19] 29 U.S.C. sec. 791.

[20] 29 U.S.C. sec. 791(a).

safety of the individual or others and who. . .(1) meets the experience and/or education requirements (which may include passing a written test) of the position in question, or (2) meets the criteria for appointment under one of the special appointing authorities for handicapped persons."[21] The key issues here are to determine what constitutes "the essential functions of the position" and to define the term "reasonable accommodations."

With respect to the latter, a Federal agency is required to make accommodations for an individual's hearing impairment "unless the agency can demonstrate that the accommodation would impose an undue hardship on the operation of its program."[22] Such a determination requires consideration of the size and nature of the agency's program and work force and the nature and cost of the accommodation.[23] The term "reasonable accommodation" is expressly defined to include "the provision of. . .interpreters,"[24] and to require job restructuring to eliminate nonessential tasks that are barriers for a hearing-impaired person (as, for example, a requirement that a medical technician answer the telephone when the secretary was away from her desk).[25] Additionally, section 501 prohibits a Federal employer from making use of an employment test or other selection criteria (such as a requirement that a prospective employee pass a hearing test) unless the employer can show that the test or selection criteria is "job-related for the position in question."[26]

It is of great significance that section 501 requires Federal employers to *affirmatively* take steps to hire, promote, or retain qualified handicapped employees. Mere nondiscrimination is not sufficient. Rather, every Federal "department, agency, or instrumentality" is required to submit an annual "affirmative action program plan for the hiring, placement, and advancement of handicapped individuals."[27]

Both administrative and court procedures are available to a hearing-impaired person who believes that he or she has been

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[21] 29 C.F.R. sec. 1613.702(f).

[22] 29 C.F.R. sec. 1613.704(a).

[23] 29 C.F.R. sec. 1613.704(c).

[24] 29 C.F.R. sec. 1613.704(b).

[25] *Id.*

[26] 29 C.F.R. sec. 1613.705(a).

[27] 29 U.S.C. 791(b).

discriminated against in violation of section 501, although administrative remedies must be exhausted prior to filing a court action. The remedies available under section 501 are the same remedies available to a person who claims discrimination based on race, sex, or religion.[28] Such remedies may include, for example, reinstatement or promotion and backpay. In addition, if a hearing-impaired person files an action in Federal district court and is the prevailing party, the court may award him or her a reasonable attorney's fee.[29]

To assist it in complying with section 501, the Federal Government has implemented special programs for handicapped applicants, including the "excepted service appointment" program.[30] Under this program a hearing-impaired applicant may be hired on a permanent basis with the Federal Government without having to take the Civil Service Examination, thereby allowing the applicant to avoid the discriminatory language barriers of the test. Notwithstanding the permanent nature of an excepted service appointee's job, however, for 2 years the excepted employee can be demoted, suspended, or fired without due process, and is denied equal rights with respect to transfer, promotion, and seniority status in the event of a reduction-in-force. After 2 years of satisfactory performance, the status of an excepted service employee may be converted from the excepted to the competitive service; if so, the hearing-impaired employee will receive equal job opportunities.[31] Moreover, at least one court has held that a qualified hearing-impaired excepted service employee who performs the same work as competitive service employees may *not* be denied equal employment rights, as such a practice violates section 501.[32]

Section 503 of the Rehabilitation Act.

Section 503 of the Rehabilitation Act[33] requires any company with a Federal contract or subcontract worth more than $2,500 to take *affirmative action* to employ and promote qualified

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[28] 29 U.S.C. sec. 794a(a).

[29] 29 U.S.C. sec. 794a(b).

[30] 5 C.F.R. 3.1.

[31] Executive Order No. 12125, 5 U.S.C. sec. 3301.

[32] Shirey v. Devine, 670 F.2d 1188 (D.C. Cir. 1982).

[33] 29 U.S.C. sec. 793.

handicapped people. Several hundred thousand private businesses are affected by this statute, which effectively prohibits discrimination with respect to "[employment], upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship."[34] Under section 503, employers are required to disseminate their affirmative action policies internally (arguably providing notices that are written at a language level the average hearing- impaired person can understand).[35] Under both sections 503 and 501 the employer's affirmative action requirement presumably includes the duty to advertise in newspapers aimed at hearing-impaired readers or with organizations comprised of hearing-impaired members, and to recruit employees from schools for hearing-impaired students.[36]

The regulations enacted pursuant to section 503 require Federal contractors to make reasonable accommodations for the "physical and mental limitations" of employees or prospective employees.[37] Reasonable accommodations under section 503 are defined as accommodations that would not cause an undue hardship to the employer's business.[38] When considering whether an accommodation would cause an undue hardship to the employer's business, it is necessary to look to such factors as the business necessity for the practice at issue and the expense of the accommodation.[39]

The lower courts are in dispute as to whether an individual, such as a hearing-impaired complainant, may bring a private action directly in Federal court against an employer who has allegedly violated section 503. Most courts, however, have held that no private right of action exists under section 503, but that a handicapped individual who believes that he or she has been discriminated against in violation of section 503 is limited to

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[34] 41 C.F.R. sec. 60-741.4(a).

[35] 41 C.F.R. sec. 60-741.6(g).

[36] 41 C.F.R. sec. 60-741.6(f).

[37] 41 C.F.R. sec. 60-741.6(d).

[38] *Id.*

[39] *Id.*

pursuing administrative remedies.[40] Whether a complainant can obtain damages against the employer is, of course, interrelated with the question of whether a private right of action exists under that section. The Supreme Court has not yet ruled on these issues.

The National Institute of Handicapped Research Grant provides a national information sharing service to furnish employers with information about job accommodations for qualified handicapped applicants. Employers may presently obtain information by calling 800-JAN-PCEH (304/293-7186 in West Virginia); handicapped individuals will be provided with access to this service at some point in the future.[41]

Section 504 of the Rehabilitation Act

Section 504 of the Rehabilitation Act[42] provides that:

> No otherwise qualified handicapped individual. . . shall, solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.[43]

The regulations promulgated pursuant to this section provide that, with respect to employment, section 504 applies to:

> (1) Recruitment, advertising, and the processing of applications for employment;

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[40] *E.g.*, Beam v. Sun Shipbuilding & Dry Dock Co., 679 F.2d 1077 (3d Cir. 1982); Davis v. United Airlines, 662 F.2d 120 (2d Cir. 1981), *cert. denied*, 456 U.S. 965 (1982); Brown v. Sibley, 650 F.2d 760 (5th Cir. 1981); Simon v. St. Louis County, 656 F.2d 316 (8th Cir. 1981), *cert. denied*, 455 U.S. 976 (1982); Fisher v. City of Tucson, 663 F.2d 861 (9th Cir. 1981), *cert. denied*, 459 U.S. 881 (1982); Simpson v. Reynolds Metals Co., 629 F.2d 1226 (7th Cir. 1980); Coleman v. Darden, 595 F.2d 533 (10th Cir.), *cert. denied*, 444 U.S. 927 (1979); Rogers v. Frito-Lay, Inc., 611 F.2d 1074 (5th Cir.), *cert. denied*, 449 U.S. 889 (1980). *See also* Meyerson v. State of Arizona, 507 F. Supp. 859 (D. Ariz. 1981), *aff'd*, 709 F.2d 1235 (9th Cir.) 1983), *vac. on other grounds*, 465 U.S. 1095 (1984).

[41] *See*, L.F. Rothstein, *Rights of Physically Handicapped Persons*, sec. 4.07, 1986 Supp. at p. 43.

[42] 29 U.S.C. sec. 794.

[43] *Id.*

> (2) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff and rehiring;
> (3) Rates of pay or any other form of compensation and change in compensation;
> (4) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;
> (5) Leaves of absence, sick leave, or any other leave;
> (6) Fringe benefits available by virtue of employment, whether or not administered by the recipient;
> (7) Selection and financial support for training, including apprenticeship, professional meetings, conferences, and other related activities, and selection of leaves of absence to pursue training;
> (8) Employer sponsored activities, including social or recreational programs; and
> (9) Any other term, condition, or privilege of employment.[44]

Under this section, employers who receive Federal financial assistance may not deny a qualified hearing-impaired person the opportunity for employment that is equal to, and as effective as, the opportunity provided to others. Similarly, employers who receive Federal financial assistance may not treat hearing-impaired people differently than others *unless* such different treatment is necessary to allow a hearing-impaired person to perform the functions of a job.[45]

The goal of section 504 is to allow a hearing-impaired person to reach the same level of achievement in his field of employment as that received by others "in the most integrated setting appropriate to the person's needs."[46] To accomplish this goal, employers receiving Federal financial assistance are prohibited from indirect discriminatory activity, such as by utilizing discriminatory selection criteria or procedures[47] or by utilizing a facility having a discriminatory effect.[48] Selection criteria that screen out hearing-impaired people cannot be used unless they are "job-related for the position in question" and alternative

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[44] 45 C.F.R. sec. 84.11(b).

[45] 45 C.F.R. sec. 84.4(b)(i-iv).

[46] 45 C.F.R. sec. 84.4(b)(2).

[47] 45 C.F.R. sec. 84.4(b)(4).

[48] 45 C.F.R. 84.4(b)(5).

criteria are not available.[49] Any employment test must reflect the applicant's job skills or attitude and *not* his hearing and/or speech impairment.[50] Any inquiry relating to an applicant's hearing impairment may only relate to the applicant's ability to perform job-related functions.[51]

1. *Otherwise qualified handicapped individual:*

The regulations promulgated pursuant to section 504 provide that, with respect to employment, an "otherwise qualified handicapped person" is one who "with reasonable accommodation, can perform the essential functions of the task in question."[52] The regulations state that an accommodation is "reasonable" if it does not cause the employer "undue hardship," when looking to the nature and size of the employer's program (including the budget), the nature of the operation (including the composition and structure of the workplace), and the type and cost of accommodation needed.[53]

In *Southwestern Community College* v. Davis,[54] however, the Supreme Court held that an "otherwise qualified handicapped person" within the meaning of section 504 must be defined as one who is qualified "in spite of," rather than "apart from," his or her hearing impairment. In *Davis* a hearing-impaired practical nurse claimed that she was rejected from Southwestern's associate degree nursing program in violation of section 504. The Supreme Court concluded that although Davis may have qualified "apart from" her handicap, she was not qualified "in spite of" her handicap because her hearing loss would prevent her from functioning sufficiently in the clinical portion of the program. Although *Davis* was decided in the context of education rather than employment, the Supreme Court's definition presumably applies in all situations involving section 504.[55]

In *Davis* the Court held that an individual cannot be presumed unqualified merely because he or she possesses a handicap. The Court also held that while a recipient of Federal

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[49] 45 C.F.R. sec. 84.13(a).

[50] 45 C.F.R. sec. 84.13(b).

[51] 45 C.F.R. sec. 84.14(a).

[52] 45 C.F.R. sec. 84.3(k)(1).

[53] 45 C.F.R. sec. 84.12(c).

[54] 442 U.S. 397 (1979).

[55] 442 U.S. at 405.

funds is not required to make "fundamental" or "substantial" modifications to its program or job to accommodate the needs of handicapped people, it is required to make "reasonable" modifications. The difficulty lies in drawing the fine line between "reasonable" and "fundamental" modifications. Since *Davis*, however, most courts have looked to two factors in deciding whether a handicapped individual is "otherwise qualified" for a particular job: whether accommodating the handicapped individual would require the recipient of Federal funds to modify the essential nature of the job, or would impose an undue burden on the recipient of Federal funds.[56]

Whether the requisite accommodation(s) to allow a hearing-impaired person to perform the functions of a particular job are "reasonable" or "unreasonable" must, of course, be decided on a case-by-case basis. Each individual determination will involve consideration of the nature and cost of the accommodation sought. Thus, the ultimate decision will rest in large part upon the state of available technology. In many cases resolution of the accommodation question will depend upon what technological devices are available to assist a hearing-impaired employee and how much it will cost the employer to purchase such assistive devices.

2. *Recipient of Federal financial assistance:*

Only recipients of "Federal financial assistance" must comply with the mandates of section 504. The term "Federal financial assistance" has been read broadly to encompass not only grants or loans of Federal money, but such factors as the lease of Federal buildings for less than fair market value or services of Federal personnel (although it has been held that neither government contracts,[57] nor tax exempt status,[58] constitute Federal financial assistance under section 504). Unfortunately, however, the United States Supreme Court recently ruled that the term "Federal financial assistance" is *not* to be read so broadly. In

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[56] Strathie v. Dept. of Transportation, 716 F.2d 227 (3d Cir. 1983); Treadwell v. Alexander, 707 F.2d 473 (11th Cir. 1983); Simon v. St. Louis County, 563 F. Supp. 76 (E.D. Mo. 1983), aff'd., 735 F.2d 1082 (8th Cir. 1984).

[57] Cook v. Budget Rent a Car Corp., 502 F. Supp. 494 (S.D.N.Y. 1980).

[58] Bachman v. Amer. Soc. of Clinical Pathologists, 577 F. Supp. 1257 (D.N.J. 1983).

U.S. Dept. of Transportation v. *Paralyzed Veterans of America*,[59] the Court held that the fact that commercial airlines benefit from Federal aid to airports and the Federal air traffic control system does *not* bring the airlines within the parameters of section 504. The Court overturned a decision by the Court of Appeals for the District of Columbia holding that section 504 covered all commercial airlines because airlines benefitted so pervasively from Federal assistance to airports; the Court held, to the converse, that only airlines that actually receive Federal financial aid are covered by the statute. This decision will severely narrow the scope of section 504 unless the statute is rewritten to define the term "Federal financial assistance" in a broad manner.

Additionally, disputes over whether an employer receives Federal financial assistance have often involved the question of whether the "purpose" of the financial assistance falls within the parameters of section 504. Several lower courts have held that section 504 only applies if an employer receives Federal financial assistance which is intended to promote employment.[60] In *Consolidated Rail Corp.* v. *Darrone*,[61] however, the Supreme Court ruled that when a handicapped person seeks relief for employment discrimination under section 504, he or she does *not* have to show that the primary objective of the Federal financial assistance received by the employer was to promote employment.

Another question with respect to the issue of Federal financial assistance is whether section 504 applies to all of an employer's programs or only those programs that directly receive Federal financial assistance. In *Grove City College* v. *Bell*,[62] the Supreme Court held that the receipt of Federal assistance by a college's financial aid program did not subject the entire college to coverage under Title IX of the Education Amendments of 1972, which prohibits sex discrimination in "any education program or activity receiving Federal financial assistance."[63] Rather, the Court held that Title IX would be applied only to the college's financial aid program, which was the specific program within the

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[59] 46 CCH S. Ct. Bull. P. B3771 (June 27, 1986).

[60] *E.g.*, Trageser v. Libbie Rehab. Center, 590 F.2d 87 (4th Cir. 1978), *cert. denied*, 442 U.S. 947 (1979); Carmi v. Metro. St. Louis Sewer Dist., 620 F.2d 672 (8th Cir.), *cert denied*, 449 U.S. 892 (1980).

[61] 465 U.S. 624 (1984).

[62] 465 U.S. 555 (1984).

[63] 20 U.S.C. sec. 1681(a).

college receiving the Federal financial assistance. The Supreme Court's analysis in *Grove City College* will probably be followed by courts deciding cases under section 504,[64] and thus the need for section 504 to be amended to remedy this problem is currently recognized.

3. *Affirmative action under section 504:*

Unlike sections 501 and 503, section 504 does not contain an affirmative action component. Section 504, therefore, does not require that employers maintain affirmative action plans. Nevertheless, employers who receive Federal financial assistance within the meaning of section 504 must undertake a self-evaluation, and, depending upon the results of that self-evaluation, must prepare voluntary or mandatory remedial plans.[65]

4. *Enforcement under section 504:*

Section 504 requires employers of 15 or more employees to adopt grievance procedures for complaint resolution[66] and to designate a person to be responsible for coordinating section 504 compliance.[67] The administrative procedures applicable to section 504 are the same as those adopted for Title VI of the Civil Rights Act of 1964;[68] within that framework, however, the procedures followed by different agencies can differ substantially.

A hearing-impaired person may choose to bypass the administrative complaint procedures under section 504 and bring a lawsuit directly in Federal court.[69] The courts generally agree that a private right of action exists under section 504. Remedies for the violation of section 504 include termination of Federal financial assistance,[70] injunctive relief,[71] and in some cases,

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[64] *E.g.*, Meyerson v. State of Arizona, 740 F.2d 684, 685 (9th Cir. 1984) (ordering the district court to decide whether the holding of Grove City College v. Bell applied to Meyerson's claim under section 504).

[65] 45 C.F.R. sec. 84.6.

[66] 45 C.F.R. sec. 84.7(b).

[67] 45 C.F.R. 84.7(a).

[68] 34 C.F.R. secs. 100.6-10, 101.1-.131.

[69] See generally Hyatt, *Litigating the Rights of Handicapped Children to an Appropriate Education: Procedures and Remedies*, 29 UCLA 1, 35-38 (1981). *See also*, Kling v. County of Los Angeles, 633 F.2d 876, 879 (9th Cir. 1980); Pushkin v. Regents of Univ. of Colo., 658 F.2d 1372, 1381 (10th Cir. 1981).

[70] *E.g.*, Pushkin v. Regents of Univ. of Colo., 658 F.2d 1372, 1381-82 (10th Cir. 1981), and cases cited therein.

damages.[72] In addition, a plaintiff who prevails on a claim under section 504 is entitled to recover the attorneys' fees and costs incurred in prosecuting the action.[73]

5. *Burden of proof in court cases under section 504:* The lower courts are in dispute with respect to the burden of proof in section 504 cases. Many courts have applied the same standard of proof as that applied in cases involving sex and race discrimination. Under that standard a plaintiff must first establish a *prima facie* case by showing that he applied for a position for which he was qualified and was rejected under circumstances indicating that he was discriminated against on the basis of an impermissible factor—such as his sex or race. The employer then has the burden of rebutting the presumption of discrimination by presenting evidence sufficient to create a factual dispute as to whether the plaintiff was denied the position for legitimate reasons, whereupon the plaintiff has the ultimate burden of proving that the reasons given were merely a pretext for discrimination.

In sex and race discrimination cases the question is whether the employer considered the impermissible factor of race or sex when refusing to employ the plaintiff. Under section 504, however, the employer is allowed to consider (and common sense requires the employer to consider) an applicant's handicap to determine whether the applicant can perform the job. Thus, the question in the usual section 504 case is not whether the employer rejected the applicant because of his handicap, but whether the employer was *justified* in rejecting the applicant because of his handicap. For this reason, the test applied in cases in which a plaintiff claims that he has been treated differently because of his race or sex should be held inapplicable to the usual section 504 case, since the focus of the two types

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[71](...continued)

[71] *See, e.g.*, Jose P. v. Ambach, 669 F.2d 865, 867 (2d Cir. 1982).

[72] *E.g.*, Gelman v. Dept. of Educ., 544 F. Supp. 651 (D. Colo. 1982) (compensatory damages, but not punitive damages, are available under section 504); Ayala v. United States, 580 F. Supp. 521 (D. Colo. 1984) (damages awarded in the form of backpay); Hutchings v. Erie City & County Library Bd. of Directors, 516 F. Supp. 1265 (W.D. Pa. 1981). *See also* Martin v. Cardinal Glennon Memorial Hosp. for Children, 599 F. Supp. 284 (D.C. Mo. 1984) (damages for humiliation, embarrassment, and mental anxiety, as well as punitive damages, are not generally allowed under section 504).

[73] 29 U.S.C. sec. 794(d).

of cases is an inapposite factor: cases involving race and sex discrimination usually focus on causation, while cases involving handicap discrimination usually focus on justification.

In recognition of this difference, a few courts have devised burdens of proof to be applied in section 504 cases that differ from the usual burden of proof in sex and race discrimination cases. In *Pushkin* v. *Regents of the University of Colorado*,[74] the Tenth Circuit Court of Appeals held that the plaintiff must establish a *prima facie* case by showing that he is handicapped within the meaning of section 504, is qualified for the job apart from his handicap, and was rejected under circumstances giving rise to the inference that his rejection was based solely on his handicap. The burden of proof then shifts to the employer to show that the plaintiff is not otherwise qualified because he cannot perform all of the duties of the job in spite of his handicap or—in other words—with the assistance of reasonable accommodations, or that the refusal to hire the plaintiff was based on reasons other than his handicap. The plaintiff is then required to present rebuttal evidence showing that the employer's reasons for rejecting the plaintiff are based on misconceptions or unfounded factual conclusions about his handicap, and that the reasons articulated for the rejection other than the handicap encompass unjustified consideration of the handicap itself.

In *Doe* v. *New York University*,[75] the Second Circuit Court of Appeals also devised its own test with respect to the burdens of proof under section 504. Unlike the 10th circuit's test, however, the second circuit's test places the ultimate burden of proof on the handicapped plaintiff to show that he is otherwise qualified, rather than on the employer to show that the plaintiff is not otherwise qualified. All the employer must do is to present evidence indicating that the applicant's handicap is relevant to his ability to perform the job. In this author's opinion, the second circuit's test is misguided. One of the purposes of section 504 is to eliminate discrimination based on stereotyped judgments concerning the capabilities of handicapped people. Thus, the burden should lie with the employer to show that it has conducted a careful and objective inquiry into the *actual* capabilities of the handicapped plaintiff and has concluded that there are *real*—not imagined—reasons why the handicapped

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[74] 658 F.2d 1372 (10th Cir. 1981).

[75] 666 F.2d 761 (2d Cir. 1981).

plaintiff is unable to perform in the job, and/or that there are *real* reasons—unrelated to the handicap—for not hiring the handicapped plaintiff. The second circuit's test defeats the true objective of section 504, since misconceptions about the capabilities of handicapped people will remain uncorrected.

6. *The issue of intent in cases arising under section 504:*

In *Alexander* v. *Choate*[76] the Supreme Court held that, given the very nature of handicapped discrimination, a handicapped plaintiff does not have to show that an employer *intentionally* discriminated against the plaintiff on the basis of handicap in order to establish that the employer violated section 504.

Some lower courts, however, although recognizing that discriminatory intent is not required under section 504, have held that considerable deference should be given to the decisions of the administrators of federally funded programs regarding the question of whether a handicapped person can perform properly in a job or program. Both the second circuit[77] and fifth circuit[78] have held that reasonable deference should be given to the decisions made by administrators of federally funded programs as long as there is no evidence of discriminatory intent towards handicapped people, or as long as it is not shown that the very purpose of the administrator's standards is to deny benefits to handicapped people. Those decisions hold that a rational or reasonable basis is sufficient for upholding an administrative employer's decision. This reasoning has the same effect as if discriminatory intent were required, since the employer's decision may be based upon the very type of erroneous assumptions about the handicapping condition or paternalistic attitudes that section 504 was intended to remedy. Deference to the decisions of an administrative employer, regardless of whether intent is at issue, defeats the purposes of section 504.

Vocational Rehabilitation Services

Title I of the Rehabilitation Act provides for Federal grants to the individual States to assist the States in providing services to prepare handicapped individuals for employment.[79] The 1978

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[76] 105 S. Ct. 712 (1985).

[77] DOE v. New York Univ., 666 F.2d 761 (2d Cir. 1981).

[78] DOE v. Region 13 Mental Health—Mental Retardation Comm'n, 704 F.2d 1402 (5th Cir. 1983).

[79] 29 U.S.C. secs. 720–750.

amendments to the Rehabilitation Act enlarged the scope of vocational rehabilitation services available to hearing- impaired people.[80] For example, the Rehabilitation Services Administration was given authority to fund 12 programs throughout the country for interpreter training,[81] to set up information and referral services for deaf people in each State;[82] and to establish a program for interpreter services for deaf persons in each State.[83]

Employment: State Statutes

The Federal laws prohibiting discrimination against handicapped people apply only to Federal employers or contractors and recipients of Federal financial assistance. Many States, however, have enacted laws that provide handicapped people with some relief from employment discrimination in the private sector. Additionally, almost all States have statutes prohibiting discrimination by employers in the public sector. These statutes may be broader than, and offer more protection than, the Federal statutes.

An analysis of the diverse State laws, many of which are relatively new and "untested," is beyond the scope of this paper. The difficulty of requiring private employers in a free enterprise system to hire handicapped employees—and to make "reasonable accommodations" for the disabilities of such employees—is obvious. Private employers are naturally concerned with safety, efficiency, and the maximization of profits. There is little uniformity among the States with respect to the question of how far they are willing to go in telling private employers who they must hire.

A hearing-impaired person who has been discriminated against by a private employer should look to the laws of the applicable State to determine: (1) whether the State's antidiscrimination laws apply to private, as well as public, employers; (2) whether the hearing-impaired individual falls within the State's definition of a handicapped person; (3) the number of employees the employer must have in order to be subject to the State law; (4) whether the State law requires the employer to

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[80] 29 U.S.C. secs. 770–791.

[81] 29 U.S.C. sec. 774(d).

[82] 29 U.S.C. sec. 775.

[83] 29 U.S.C. sec.777(e).

take steps to affirmatively recruit, hire, train, accommodate, and promote handicapped people, or whether the law merely requires nondiscrimination; and (5) the scope and breadth of the State statute. The following examples serve to illustrate the types of problems that may arise.

Under a New York statute prohibiting an employer from discriminating against disabled people, the term "disabled" was defined as an "impairment. . .limited to. . .conditions which are unrelated to the ability to engage in the activities involved in the job. . . ." Under that definition, in order to avoid compliance with the statute, the employer was only required to show that the disability of an actual or potential employee was related to his or her ability to engage in the activities of the job. Thus, in one New York case it was held that where a school bus driver had a partial loss of hearing, the employer did *not* have to show that the extent of the driver's hearing loss was such as to impair his ability to operate a school bus in order to properly refuse to allow the driver to remain employed in that capacity, since a partial loss of hearing could be related to the ability to drive a school bus. This was so even though the evidence showed that the driver's hearing loss did *not* impair his ability to operate a school bus.[84] In 1979, however, the New York law was amended to provide "that the disability must be shown to 'prevent' [the complainant] from performing in a reasonable manner the activities involved in the job or occupation sought."[85]

In a Wisconsin case, a man with only one hand was refused employment as a taxi cab driver although he had a good safety record as a cab driver and provided his own vehicle safety-modification equipment.[86] The Wisconsin statute prohibiting employment discrimination against handicapped persons provided that the employee must be able "to efficiently perform, at the

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[84] State Div. of Human Rights v. Averill Park Cent. School Dist., 59 App. Div. 2d 449, 399 N.Y.S. 2d 926, *aff'd*, 415 N.Y.S. 2d 405, 388 N.E. 2d 729 (Ct. App., 1979).

[85] McLean Trucking v. State Human Rights Appeal Bd., 80 App. Div. 2d 809, 437 N.Y.S. 2d 309, 311 Sup. 1981), citing Westinghouse Elect. Corp. v. State Division of Human Rights, 425 N.Y.S. 2d 74, 401 N.E. 2d 196 Ct. App. 1980), and referring to Executive Law sec. 292, subdivision 21.

[86] Boynton Cab Co. v. Wis. Dept. of Industry, Labor and Human Relations, 96 Wis. 2d 396, 291 N.W. 2d 850 (1980).

standards set by the employer, the duties required in that job."[87] Pursuant to that requirement, the court held that the employer did not have to show that the applicant could not perform the job safely. The court ignored evidence that the taxi driver had accommodated his own handicap by providing special safety equipment, which evidence might have shown that the accommodations surmounted safety hazards. Rather, the court held that all the employer had to show was that the applicant did not meet the standards set by the employer. The fact that the standards set by the employer were the standards set for school bus drivers and large heavy vehicles such as tractor trailers and buses (which vehicles might be unsuitable to modifications accommodating a one-handed driver) was not addressed.

In a Florida case, it was held that a blind man who was refused employment as an elementary school teacher was entitled to a period of trial appointment.[88] The Florida statute required an employer to hire a handicapped person "unless it is shown" that the handicap impairs job performance; the statute further provided that it could not be presumed that a handicapped person could not perform a particular job satisfactorily.[89] The court held that the blind teacher must be given a trial appointment because the decision to withdraw the employment offer previously made to him had been tainted by preconceptions relating to the teacher's blindness.

One final note: A hearing-impaired individual that has a cause of action for employment discrimination under both a Federal and a State statute should not let the limitations period run with respect to one statute while pursuing available remedies under the other statute. Instead, both avenues should be pursued.

Access To Services

Health, Welfare, and Social Service Programs

Section 504 of the Rehabilitation Act applies with respect to the provision of services as well as to employment and education. Any public or private agency receiving Federal financial assistance is required to make its programs and facilities, "when

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[87] Wis. Stat. Ann. sec. 111.32(5)(f) (West 1974), *repealed and re-created by* Wis. Stat. Ann. sec. 111.34 (West Supp. 1983-84).

[88] Zorick v. Tynes, 372 So.2d 133 (Fla. 1979).

[89] Fla. Stat. sec. 413.68 (1977).

viewed in [their] entirety," accessible to handicapped people.[90] With respect to hearing-impaired persons, "accessibility" may require the provision of interpreters, amplified telephones or telecommunication devices ("TDDs"), and/or visual alarm systems.

The regulations promulgated pursuant to section 504 provide that health, welfare, and social service agencies[91] with 15 or more employees are required to provide appropriate "auxiliary aids" to handicapped people; the term "auxiliary aids" is specifically defined as including the provision of interpreters and "other aids for persons with impaired hearing."[92] Even agencies without 15 employees may be required to provide auxiliary aids for hearing-impaired clients if "the provision of aids would not significantly impair the ability of the recipient to provide its benefit or services."[93] Similarly, the regulations require all hospitals receiving Federal financial assistance to "establish a procedure for effective communication with persons with impaired hearing for the purpose of providing emergency health care."[94] Unfortunately, however, the regulations do not indicate the specific procedures that are necessary to result in "effective communication."

Additionally, many Federal and State agencies have their *own* rules prohibiting discrimination against disabled persons, and many States have enacted laws prohibiting privately owned facilities that are open to the public from discriminating against handicapped people. Again, however, a discussion of these State statutes is beyond the scope of this paper.

Television

The Federal Communication Commission (FCC) requires that all emergency announcements transmitted via television (either public or commercial) be made both aurally and visually, to allow hearing-impaired viewers to receive the benefit of all emergency announcements.[95] If a television station refuses to comply with

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[90] 45 C.F.R. sec. 84.22(a).

[91] 45 C.F.R. sec. 84.52.

[92] 45 C.F.R. sec. 84.52(d)(3).

[93] 45 C.F.R. sec. 84.52(d)(2).

[94] 45 C.F.R. sec. 84.52(c).

[95] 45 C.F.R. 73.67(b).

that rule a complaint may be filed with the FCC; that complaint will be considered when the station is required to renew its broadcasting license.

The FCC requires television broadcasters to respond to the needs of the members of the community in which their television stations are viewed. Under the FCC rules, hearing-impaired people are entitled to inform a television broadcaster about the needs of the hearing-impaired community.[96] If the station determines that the hearing-impaired group is "significant" in terms of size and influence, the television station is required to respond to the group's needs.

The United States Court of Appeals for the District of Columbia ruled in 1981 that public television stations must take steps to make programs accessible to hearing-impaired people since such public stations receive Federal financial assistance and are therefore subject to the mandate of section 504, although commercial stations that do not receive Federal assistance have no such obligation.[97] The Supreme Court, however, held that with respect to licensing requirements, public stations cannot be treated any differently than commercial stations.[98] Nevertheless, the Supreme Court recognized the need for stations receiving Federal financial assistance to comply with section 504.

It seems highly unlikely that, even in those cases where television stations are required to comply with section 504, the stations will be required to close-caption all—or even most—of their programs. Given the standard enacted by the Supreme Court in *Davis*, the expense of such an accommodation would probably be held unreasonable. Advanced technology, however, such as cheaper and more efficient captioning systems, could easily change this result, as the scales used in the balancing test would tip in favor of accommodation.

Airline Transportation

The Civil Aeronautics Board ("CAB") prohibits airlines from discriminating against qualified handicapped people. Pursuant to CAB regulations, hearing-impaired people must be provided

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[96] FCC BC Docket No. 78-237, RM 2937 (1980).

[97] FCC v. Gottfried, 665 F.2d 297 (D.C. Cir. 1981), *aff'd in part and rev'd in part*, 459 U.S. 498 (1983).

[98] 459 U.S. 498 (1983).

with timely access to information about such factors as emergency procedures, flight delays, and schedule and gate changes,[99] and must be permitted to be accompanied on airplanes by hearing dogs.[100] In addition, those few airlines that receive Federal financial assistance will be subject to the mandate of section 504.

Telephones, Amplification Systems, and Smoke Alarms

Pursuant to the Telecommunications for the Disabled Act,[101] "essential telephones," which include "coin-operated telephones, telephones provided for emergency use, and other telephones frequently needed for use by persons using hearing aids," must be made reasonably accessible to hearing-impaired people, presumably via amplification or by making them compatible with hearing aids.

Further, section 502 of the Rehabilitation Act[102] created the Architectural and Transportation Barriers Compliance Board (ATBCB) to enforce the Architectural Barriers Act of 1968,[103] which requires that federally funded buildings be accessible to disabled people. With respect to hearing-impaired individuals, three items are of concern: TDDs, visual (rather than auditory) smoke and alarm systems, and amplification systems. The regulations promulgated pursuant to section 502 require the following in all newly built buildings with Federal financial assistance: (a) the installation of "listening systems" which may include—but are not limited to—"audio loops and radio frequency system[s]";[104] (b) the provision of telephones whose receivers "generate a magnetic field in the area of the receiver cap" (making them compatible with hearing aids) and have amplified volume controls;[105] and (c) the provision of visual alarms wherever audible alarms are provided.[106] There is no requirement under the section 502 regulations that federally financed buildings have

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[99] 14 C.F.R. sec. 382.12.

[100] 14 C.F.R. sec. 382.14(a).

[101] 47 U.S.C. sec. 610.

[102] 29 U.S.C. sec. 792.

[103] 42 U.S.C. sec. 4151 *et al.*

[104] 36 C.F.R. sec. 1190.250(6)(c).

[105] 36 C.F.R. sec 1190.210 (e).

[106] 36 C.F.R. sec. 1190.180.(c).

TDDs, but the absence of TDDs in federally financed buildings would presumably be found to violate section 504.

Again, as technology advances and devices such as TDDs, audio alarms, and other visual alarms become more plentiful and less expensive, the results of the balancing process will weigh more heavily in favor of the reasonableness, rather than the unreasonableness, of the accommodations sought.

State Issues

1. *State Courts:* At least 48 States have enacted statutes providing that interpreters must be appointed for deaf parties, or for deaf parties or witnesses, in State court proceedings. The scope of these statutes varies. While some apply to both deaf parties and witnesses, others apply on some judicial proceedings. Some provide that the interpreter must be certified by the State or the National Registry of Interpreters for the Deaf, Inc.; others provide that the interpreter must be approved by the deaf client and/or by the National or State Association for the Deaf, or that the interpreter must be able to readily communicate with and for deaf persons.

Some State statutes provide for the county, court, or State to pay the cost of the interpreter; some provide for the interpreter's fee to be "taxed as costs," which generally means that the losing party will pay for the interpreter; some provide that the court or State will only pay for the interpreter if the deaf person is financially unable to do so; some provide that the court shall determine who is to pay for the interpreter; some provide that the State division of rehabilitation shall pay for the interpreter. Other State statutes do not address the question of payment at all.

In addition, most States' courts receive Federal financial assistance, either from the Department of Justice or the United States Office of Revenue Sharing, and thus are required under section 504 to provide a deaf person using State court services with the assistance of an interpreter.

2. *Jury Duty:* Several States, including California, Colorado, Connecticut, Massachusetts, Maryland, Oregon, and Washington, permit hearing-impaired persons to serve as jurors, with the aid of an interpreter. California, Colorado, and Louisiana have enacted statutes that provide that no person shall be deemed to be incapable of jury service solely because of impaired hearing. Those statutes further provide, however, that the existence of a defect in auditory functions may be grounds for either party's

challenge and resultant dismissal of a prospective juror if the court determines that he or she is incapable of performing the duties of a juror in a particular action.[107]

3. *Mental Patients:* A few States, including California, Illinois, and North Dakota,[108] have enacted statutes requiring that a mental patient be informed of his or her rights in a language that the patient understands. Such statutes may be utilized to ensure a hearing-impaired person's right to an interpreter (either oral or sign language) in certain mental health situations.

4. *Insurance:* The Federal laws do not protect hearing-impaired people against discrimination by most insurance companies (which do not receive Federal financial assistance). Thus, a hearing-impaired person who has been discriminated against in matters of insurance must look to the laws of the applicable State for protection. While insurance companies are generally permitted to treat disabled people differently based on actuarial studies showing that they pose a higher risk that the companies will have to pay for damages, many States prohibit insurance companies from discriminating against handicapped people in instances when there are no such actuarial statistics, either via statute or via a regulation written by the State insurance commission. Some State laws apply to all forms of insurance; others may apply to only one form of insurance, such as car insurance or health insurance. A hearing- impaired person who believes that he or she has been discriminated against in matters of insurance should contact the applicable State insurance commission and ask whether that State prohibits insurance discrimination based on handicap.

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[107] E.g., Colo. Rev. Stat. sec. 13-71-109 (2)(c)(1981); Cal. Code Civ. Proc. secs. 198, 205, 602 (1980); La. code of Crim. Prac., Art. 401.1 (1984).

[108] Cal. Welf. & Inst. Code sec. 5325(h)(West Supp. 1980); N.D. Cent. Code sec. 2-03.1-27 (Supp. 1979); Ill. Ann. Stat. ch. 91 1/2, sec. 3-204 (Smith-Hurd Supp. 1980).

Employment of the Hearing Impaired

By Sy DuBow, Esq.*

Introduction

The most prevalent problem is underemployment. Deaf workers "quickly reach a plateau, and there they remain."[1] Automation poses special problems for deaf employees, who tend to be more heavily concentrated in the occupations where automation is making its greatest inroads:

> Everywhere we find deaf men and women of normal or above abilities operating automatic machines, performing simple assembly line operations, or otherwise occupied in unchallenging routines. This stereotype illustrates the. . .discriminating attitudes toward the deaf job applicants that are inevitable among slightly informed professionals.[2]

Employers' attitudes create the largest single barrier to employment opportunities. Employers often make stereotyped assumptions that underestimate the capabilities of handicapped people. One study indicates that the handicapped must generally be more qualified or competent than others to compensate for existing attitudes and assumptions.[3]

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[1] Stahler, *The Deaf Man and the World* 33 (1969).

[2] Sussman and Stewart, *Social and Psychological Problems of Deaf People* (1971).

[3] Richard, Triandis and Patterson, "Indices of Employer Prejudice Toward Deaf Applicants," 45 *J. Applied Psych.* 52 (1953).

Safety

Employers often unjustifiably refuse to consider handicapped people for fear that a disabled person cannot safely perform the job. Studies involving both the mentally and physically handicapped indicate that fears about safety are largely unfounded.[4]

In one case in Chicago, a deaf man was denied a job as a mechanic with the Chicago Transit Authority (CTA) for safety reasons. The deaf man had finished at the top of his class from a 1-year training program for bus mechanics sponsored by the Illinois Department of Rehabilitation. But CTA refused to hire him for the safety reason that he would be unable to hear buses honk as they pulled into the maintenance garage . After threat of a lawsuit, CTA agreed to hire him by making the simple accommodation, suggested by the deaf man, of giving him a work station facing the garage entrance. He could thus see all buses coming into the garage. This reasonable accommodation cost the employer nothing.

A Federal court of appeals decision provides help in challenging safety defenses. In *Strathie* v. *Department of Transportation*,[5] the U.S. Court of Appeals for the Third Circuit found that the district court ignored evidence in the record that an appropriate hearing aid would enable a hard of hearing person to drive a school bus without appreciable risk to the safety of bus passengers. The district court had accepted the State department of transportation's arguments supporting its ban on issuing school bus licenses to hearing aid users. The third circuit reversed the lower court opinion, since there was no factual basis in the record reasonably demonstrating that accommodating Mr. Strathie would require a modification of the essential nature of the licensing program or cause an undue burden to the department. The court of appeals pointed out that there was evidence in the record to overcome the department's safety concerns as to the hearing aid being dislodged, breaking down, being turned down, or not being able to localize sound. This evidence had to be considered in determining whether, in

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[4] Wolfe, "Disability is No Handicap at DuPont," *The Alliance Rev.* 13 (Winter 1973); Kalenick, "Myths About Hiring the Physically Handicapped," 2 *Jobs, Safety & Health* 9 (1974).

[5] 547 F. Supp. 1367 (E.D. Pa 1982), "Vacated and Remanded," 716 F.2d 227 (3d Cir. 1983).

fact, a driver wearing a stereo hearing aid would present an appreciable risk to the safety of school bus passengers.

Communication Barriers

Employers also cite communication barriers as the rationale for limiting job opportunities for deaf applicants. Communication difficulties, however, "are often exaggerated, and fairly effective substitutes for oral communication are disregarded."[6] Use of the telephone, for example, is often given as a reason not to consider a deaf applicant, although many times it is not an essential aspect of the job.

Many occupations, especially blue-collar positions, do not necessitate extensive use of the telephone. And if only occasional telephone communication is necessary, minor changes in assignment of job responsibilities can accommodate the deaf worker. For example, a coworker can assume the telephone responsibilities while the deaf worker assumes some of the hearing worker's responsibilities. If a job position requires significant telephone contact with one or two offices, a reasonable accommodation may be the installation of a telecommunication device in both offices, allowing the deaf employee to perform all job duties, including those requiring telephone communication. In supervisory positions, a secretary can answer the telephone. If a deaf person is a good lipreader and has good speech, he or she can communicate through the secretary. If the deaf person uses sign language, a secretary who knows sign language can assist in telephone conversations.

The requirement to attend various meetings or conferences is also used as an excuse not to consider deaf applicants. Reasonable accommodations, such as interpreters, can enable deaf workers to participate fully in group meetings and training sessions.

The section 504 regulations define a qualified handicapped person in the employment context as "a handicapped person who, with reasonable accommodation, can perform the essential functions of the job in question."[7]

Two central questions determine if a handicapped person is qualified for a specific position:

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[6] Crammatte, *The Formidable Peaks: A Study of Deaf People in Professional Employment* (1965).

[7] 45 C.F.R. Sec. 84.3(k)(1).

- What constitutes the essential function of the job?
- Can reasonable accommodations make it possible for a handicapped person to perform the essential functions of the job?

Essential Functions

The regulations do not define "essential functions." They must be determined on a case-by-case basis; the recipient carries the burden of showing what is essential.

The "essential functions" concept ensures that handicapped people will not be rejected simply because they have difficulty performing tasks that are only marginally related to a job. For example, a deaf person hired to be a typist should not be excluded because of difficulty using the telephone; the basic job duties involve typing. (The section 503 regulations are somewhat different. They consider a person qualified if she or he is able to do a "particular job" with reasonable accommodation.)

Reasonable Accommodations

The 504 regulations list the following as possible reasonable accommodations in employment:[8]

- Making employee facilities readily accessible to and usable by handicapped persons, such as work benches, parking facilities, telephones, lavatories and entrances.
- Job restructuring, such as reassignment of non-essential tasks.
- Part-time or modified work schedules.
- Acquisition or modification of equipment or devices.
- The provision of readers for blind employees and interpreters for deaf employees.

Reasonable accommodations for deaf people can include telecommunications devices, provision of an oscilloscope to assist deaf employees in communicating telephonically with a computer,

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[8] 45 C.F.R. Sec 84.12(b)(Section 504). The regulations for section 501 (which requires Federal agencies to establish affirmative action plans for the handicapped) and section 503 which requires the same for Federal contractors) list the same accommodations.

interpreters, and attaching a telephone amplifier for a hearing-impaired worker.

This list is not inclusive; rather, these items are intended as a guide. With advances in modern technology, handicapped employees can usually be accommodated at a low cost by providing or modifying equipment or devices.

A hearing-impaired woman had difficulty working in an office because background noise interfered with her hearing aid reception. When her desk was moved to a quieter part of the office, her hearing problem was minimized.

An employer can sometimes accommodate a hearing-impaired worker by restructuring the job. The Handbook of Employment Rights of the Handicapped provides the following example:

> [S]uppose that [a] furniture company has an opening in the administrative office for a clerk-receptionist. Marsha has a hearing impairment which makes it difficult for her to understand speech, but she is an excellent typist. She applies for the job. Analysis of the position indicates that the job responsibilities are in three categories: typing, telephone messages, and greeting visitors. The employer determines that she can accommodate Marsha's hearing limitations for the telephone responsibilities by having the telephone company install a special amplifier. Then she can restructure the job responsibilities so that Marsha can answer all of the telephone calls or do more of the typing while the other clerk greets all of the visitors.[9]

The Civil Service Reform Act of 1978 also provides reasonable accommodations for deaf Federal employees to authorizing agency heads to employ or assign persons to provide interpreting services for deaf employees.[10]

Testing and Criteria

Handicapped people are often screened out from hiring and promotion by tests or selection criteria. For example, deaf people

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[9] Hermann and Walker, *Handbook of Employment Rights for Handicapped* 13 (1978).

[10] 5 U.S.C. Sec. 5331.

might be asked to take an oral test. The examination would not predict how well a deaf person could do the particular job, but would only indicate if the deaf person heard the questions or if the tester understood the deaf person's speech.

Section 504 regulations make most oral tests illegal for deaf people because they require that tests measure the disabled individual's ability to perform the job and not the ability to see, hear, speak, or perform manual tasks, unless such skills are the factors the test is measuring.[11] The employer can provide an interpreter for the test, give a written test, or test the deaf person on work performed.

The Office of Personnel Management (OPM) specifically considers the language problems of deaf Federal employees, and excludes those parts of a test that measure English language skills. OPM then rescores the test, using a transmutation table.[12]

Medical Examinations

Deaf people are sometimes denied jobs on the basis of medical criteria that disqualify any person with a hearing loss. These blanket medical exclusions can be challenged if they are not job related. Further, the section 504 regulations allow an employer to condition offers of employment to handicapped persons on the results of medical examinations only if examinations are administered in a nondiscriminatory manner to all employees and the results are treated on a confidential basis.[13]

Training Programs

Deaf people are sometimes refused interpreters for training programs that are a prerequisite for employment or essential for job retention or advancement.

The Office of Personnel Management will provide interpreters for all deaf Federal employees participating in their training programs. The Comptroller General of the United States also provides special expenses for sign language interpreters neces-

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[11] 45 C.F.R. Sec. 84.13.

[12] Office of Personnel Management, *Handbook of Selective Placement of Persons with Physical and Mental Handicaps in Federal Civil Service Employment* 29 (Doc. 155-11-3, March 1979).

[13] 45 C.F.R. Sec. 84.14(c).

sary to enable deaf employees to participate in government training courses.

Frequently, covered private employers contract with independent groups to conduct training. If the independent group does not provide interpreters, the contract can be challenged. A recipient of Federal assistance cannot participate contractually or in other relationships with groups that discriminate against qualified handicapped people.[14]

Stereotyping of Deaf Workers

Some employers hire deaf persons only for certain jobs, like working with loud machines. The U.S. Postal Service has encouraged this hiring practice. Section 503, however, prohibits earmarking a certain job for deaf employees. Deaf workers cannot be "ghettoized" in one job category.[15]

Outreach Efforts

Sections 501 and 503 require employers to make special recruitment efforts to comply with their affirmative action responsibilities. For deaf people, this includes advertising in newspapers directed toward deaf audiences, recruiting at schools for the deaf, and advertising with deaf clubs and organizations.[16]

Section 503 also requires companies to internally disseminate their policy of affirmatively recruiting and promoting qualified handicapped workers. The notification must be written at a language level that the average deaf person can understand.[17]

Recommendations

Employment opportunities for deaf persons are severely restricted by negative employer attitudes. When deaf persons are hired, it is usually at low level jobs at low pay that have few employment protections. Even employers willing to hire deaf persons have shown a resistance to promote them. Both blue–

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[14] 45 C.F.R. Sec. 84.11(c).

[15] 41 C.F.R. Sec. 60–741.6(b). See also Hermann and Walker, supra note 9, at 33.

[16] 41 C.F.R. Sec. 60–741.b(f).

[17] 41 C.F.R. Sec. 60–741.6(g).

collar and white-collar deaf employees are continually passed over for promotions because of their deafness.

Eleven recommendations to improve the employment opportunities for deaf people are:

1. Stronger and prompt enforcement of existing State and Federal employment opportunity laws for disabled people.
2. Provision of a private right of action for handicapped applicants and employees to bring suit against companies receiving Federal contracts.
3. Passage of the Civil Rights Restoration Act to ensure coverage of civil rights laws throughout an institution.
4. Provision of equal pay and employment protection to handicapped workers hired through excepted service programs.
5. Effective monitoring of efforts of public and private employers to hire and promote qualified deaf people.
6. Provision of additional funding for vocational rehabilitation services to ensure that deaf clients receive the services necessary to achieve their vocational goals.
7. Encouragement of vocational guidance and training programs to adapt to the changing labor market. Deaf workers have traditionally been concentrated in manufacturing jobs—a sector that has seen a steady decline in jobs. The labor market, however, has been shifting to the service industry, finance, health care, computers, and high tech.
8. Establishment, on a wider scale, of handicap advisory committees within companies to advise on issues such as reasonable accommodation, training, and supervision.
9. Appointment of handicapped coordinators and EEO officers skilled in disability rights issues and individual handicaps.
10. Expansion of existing job data banks for deaf persons throughout the Nation. Two existing job data banks for deaf professionals are at Gallaudet and the National Technical Institute for the Deaf.
11. Encouragement of greater employer participation in the Job Accommodation Network (JAN) of the President's Committee on Employment of the Handicapped. Project JAN is a computerized information service storing accommodation experiences reported by employers for employees.

Practical Aspects of Access, Legislation and Policy Changes

By Howard E. Stone, Sr.[*]

Civil rights are the treasured heritage of all Americans, safeguarded by the Constitution and by the Bill of Rights. That's the *principle* involved in our discussion today. Under the heading, "The Right To Employment," I've been assigned the topic of "Practical aspects of access, legislation, and policy changes" for hearing-impaired persons. The clear implication is that there may be a gap between principle and reality. There is. If I were to attend the highly publicized celebration at the Statue of Liberty next week, I would find it communicatively inaccessible—to me, as well as to millions of people like me. There is a connection here. Implicit in the existence of barriers is the denial of fundamental rights—the right to assembly (in the case of the Statue of Liberty), the right to employment which we are discussing here, and even the right to due process—because many courtrooms are among public facilities that remain communicatively inaccessible.

Certainly, denial of access, be it physical or communications, is in violation of both the spirit and the intent of civil rights laws, particularly as they have evolved through clarifying legislation and court tests over the last 20 years. The law represents a major resource—and sometimes the court of last resort—to which handicapped people must turn if their rights are to be affirmed.

Bingo! Did you hear that word "affirmed"? Now we are getting to the practical aspects of access. *We*—the hearing-impaired people—must do the affirming. Our record in this regard is weak.

Since 1973, Congress has sought to forbid discrimination against all handicapped individuals—regardless of their ability.

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[*] Mr. Stone is the president of SHHH, the Self Help for the Hard of Hearing, a national organization that he founded in 1979. He lost his hearing at age 19 while serving in the U.S. Army. Subsequently, he served in the Central Intelligence Agency for 25 years, 17 of them abroad.

And yet, in February of this year (1986) the National Council on the Handicapped (NCH) issued a report to the Congress and the President in which the Council noted that existing civil rights laws do not cover discrimination on the basis of handicap. NCH recommended that Congress enact a new "Comprehensive law requiring equal opportunity for individuals with disabilities with broad coverage and setting clear, consistent and enforceable standards prohibiting discrimination." The law remains a tool which we hearing-impaired people must be prepared to use in asserting our rights within its framework. Without this, existing or improved legislation will mean nothing.

Access is imposed by law in two ways: by the element of equal opportunity and/or by legal provisions guaranteeing equal access to services or programs. Where can hearing-impaired people who need help in finding and holding a job go for help? Many turn to State vocational rehabilitation agencies. Even the employed person may need vocationally oriented advice or counseling to aid in advancement, to determine more personally satisfying employment, or to avoid further injury to his hearing in his present employment. Those too young to work need to coordinate their education with vocational goals and older persons who desire employment to supplement retirement income should also have advice and assistance available.

But there are many problems inherent in the nature of the population to be served. The term, "hearing-impaired," includes deaf and hard of hearing people. Typically, however, services and benefits from legislation and/or regulation have focused on deaf people. Recently, a trend has developed to include, to some extent, that population we describe as hard of hearing. In terms of ability, effectively to receive spoken communication through the auditory process, there is a fine line between profoundly deaf and severely hard of hearing persons. Intent to provide services to both immediately triples the constituency (i.e., to 2 million deaf we add over 4 million severely hard of hearing persons for a total of 6 plus million). There is talk too, of giving more recognition to the functional aspect of hearing disability in addition to the normal diagnostic and measurement of decibel loss.

Interpreting and implementing existing legislation and regulations becomes increasingly difficult as we move away from a clearly defined, far end of the spectrum of need, profound deafness—to a more complicated appraisal of functional disability which often occurs in moderate to severely hearing-impaired persons in the workplace.

Recent trends in government, academia, and in industry toward a recognition of the problems of partially deafened persons and an accompanying willingness to provide services to and make accommodation for this large population are a beginning. But it's slow going.

The hard of hearing person often has difficulty in using the telephone to set up an interview; in getting past the interviewer who can (and sometimes does) decide what the limitations of the prospective employee are (based on ignorance of what hearing impairment is and is not); in relating to the supervisor (also ignorant of the problem), whose instructions must be understood for effective performance; in acquiring the necessary tools with which to do the job (i.e., compatible telephone, assistive devices, environmental considerations, etc.); in maintaining the job after acquiring and wearing a visible hearing aid (this is particularly true of teachers); in earning promotions on an equal basis; and if travel is involved, the barriers of use of the telephone; inability to hear announcements at airports and train stations; difficulty in hearing a door knock, smoke alarm, or phone ring in hotel rooms; and the overall strain of constant attending can leave us limp at best and cost us a job at worst.

Legislation affecting all these situations already exists, but few hard of hearing persons are aware of it and even fewer employers take the initiative in addressing the problem. The size of the gap between legislation and compliance is the sum of ignorance on the part of both employer and employee. Neither can educate the other (the beginning of compliance), if they have no knowledge of the subject. In those organizations where serious efforts are being made to understand and comply with laws regarding people who are handicapped, inclusion of the "invisible condition" in their consideration has been slow to develop.

Clearly, education is the major problem. Employers must be made aware that hard of hearing people *are* covered under the same legislation that relates to people with physical handicaps. Communication access *is* on a par with physical access. The employer must be taught what problems arise in the workplace due to hearing impairment and what can be done to resolve them.

Hard of hearing people must be informed of their rights—difficult due to the size of the population, its diversity, and the cloak of anonymity worn by so many of its members. Hard of hearing people must assert their rights. No one is going to do it for them. In our society, there is no automatic implementation of law. *People* have to ensure compliance. That requires deep involvement in their own cause. Until recently, hard of hearing people did not even perceive a "cause," but they are learning. In our economic and political system, social issues usually face an uphill fight. The issue must be made highly visible and presented in a way so that persons having no experience with the problem will understand it and perceive that action is required along the lines recommended by proponents of the issue. This has always been difficult for those conditions which are invisible—first and foremost among that group is deafness. Sign language makes deafness visible. It tells the world that communications are being sent and received manually. For 100 years, organizations of and for deaf people have worked toward providing support structures, disseminating information about the civil rights of deaf people and, with varying degrees of success, have organized constituencies to participate in the process of securing those rights. Just 6 years ago this month, the only successful national organization of hard of hearing people began its struggle to organize and inform a constituency which should soon play a major role in improving the lot of *all* hearing-impaired people. That last statement implies a commitment on our part to work closely with deaf people and their organizations in pursuit of our mutual objectives.

Self Help for Hard of Hearing People (SHHH) is only 6 years old. Already, we have 12,000 dues-paying members and 6,000 more who are behind in their dues. We are embarked on an educational program through our publications, foremost of which is our journal, *Shhh*, which has an estimated 200,000 readers. We have negotiated a cooperative action plan with the Council of State Administrators of Vocational Rehabilitation, the Rehabilitation Services Administration, and the National Institute of Handicapped Research to include, specifically, services for hard of hearing people. We work closely with and on an equal basis with Gallaudet College through a joint task force set up by President Jerry Lee and myself. We have been successful in enlisting the support of professional groups in the hearing health delivery field. Our 185 chapters and groups in 43 States (we have members in all 50 States) are embarked on a national advocacy program regarding communications access for hearing-impaired people in buildings and programs (National Endowment for the Arts) which receive Federal funds. Our members are engaged at State and local levels in a variety of legislative activities.

In a national survey to determine priorities for services and research for SHHH during the next 10 years, the problem of hard of hearing and late-deafened persons who face discrimination in the labor market is being examined. We note that employers have been reluctant to depend upon the worker with impaired hearing, despite evidence that their fears are unfounded and that such an employee can be as good as, or better than, any other. The prejudice is often deep, and it is reinforced when the hard of hearing or late-deafened employee is placed in situations that exacerbate the difficulties in communication.

The problem remains large, but the framework for action is in place. By including the hard of hearing person in the interpretation of existing legislation and regulations (which has come about through policy changes in the last 6 years), we are opening a new era. The large numbers of hard of hearing people can reinforce efforts by deaf people to obtain practical means of access in the labor market–through national programs of employer/employee education, grassroots support for appropriate legislation, and increased representation on Federal and State commissions, boards, and organizations which frequently affect us directly. While our problems require different solutions in many cases, deaf and hard of hearing people in combination can begin to realize a world of equal access envisaged by the Rehabilitation Act of 1973.

Attachment

Facility Accessibility

Federal Tax Deduction

In June of 1984, Congress extended the Federal income tax deduction for the removal of architectural and transportation barriers to the handicapped and elderly.

The amended law now reads as follows:

26 U.S.C. 190 Expenditures to remove architectural and transportation barriers to the handicapped and elderly.

(a) Treatment as expenses

(1) In general.—A taxpayer may elect to treat qualified architectural and transportation barrier removal expenses which are paid or incurred by him during the taxable year as expenses which are not chargeable to capital account. The expenditures so treated shall be allowed as a deduction.

(2) An election under paragraph (1) shall be made at such time and in such manner as the Secretary prescribes by regulations.

(b) Definitions.—For purposes of this section—

(1) Architectural and transportation barrier removal expenses.—The term "architectural and transportation barrier removal expenses" means an expenditure for the purpose of making any facility or public transportation vehicle owned or leased by the taxpayer for use in connection with his trade or business more accessible to, and usable by, handicapped and elderly individuals.

(2) Qualified architectural and transportation barrier removal expense.—The term "qualified architectural and transportation barrier removal expense" means, with respect to any such facility or public transportation vehicle, an architectural or transportation barrier removal expense with respect to which the taxpayer establishes, to the satisfaction of the Secretary, that the resulting

removal of any such barrier meets the standards promulgated by the Secretary with the concurrence of the Architectural and Transportation Barriers Compliance Board and set forth in regulation prescribed by the Secretary.

(3) Handicapped individual.—The term "handicapped individual" means any individual who has a physical or mental disability (including, but not limited to, blindness or deafness) which for such individual constitutes or results in a functional limitation to employment, or who has any physical or mental impairment (including, but not limited to, a sight or hearing impairment) which substantially limits one or more major life activities or such individual.

(c) Limitation.—The deduction allowed by subsection (a) for any taxable year shall not exceed ($35,000).

(d) Application of section.—This section shall apply to—

(1) taxable years beginning after December 31, 1976, and before January 1, 1983, and

(2) taxable years beginning after December 31, 1983 and before January 1, 1986.

Architectural and Transportation Barriers Compliance Board

The ATBCB regulations appear at 36 Code of Federal Regulations Part 1190, (47 FR 33862, August 4, 1982).

Section 1190.3 Definitions.

"Assembly area" means a room or space accommodating fifty or more individuals for religious, recreational, educational, political, social or amusement purposes, or for the consumption of food and drink, and including all connected rooms or spaces with a common means of egress and ingress. Such areas as conference and meeting rooms accommodating fewer than fifty individuals are not considered assembly areas.

Section 1190.31 Accessible buildings and facilities: New construction.

Except as otherwise provided in this part, all new construction of buildings and facilities shall comply with the following minimum requirements:

(s)(2) Assembly areas with audio-amplification systems shall have a listening system complying with Section 1190.230 to assist a reasonable number of people but no fewer than two, with severe hearing loss. For assembly areas without amplification systems and or spaces used primarily as meeting and conference rooms, a permanently installed or portable listening system shall be provided. This requirement may be satisfied by use of a portable system that requires little or no installation. If portable systems are used for conference and meeting rooms, the system may serve more than one room.

Section 1190.230(c) Listening systems.
Provide listening system as required by 1190.31(s). (ANSI 4.33.6 and 4.33.7).

(1) If the listening system serves individual seats, locate such seats within 50 feet (15m) of the stage or arena. Such locations shall provide a complete view of the stage or arena. (ANSI 4.33.6)

(2) Acceptable types of listening systems include, but are not limited to, audio loops and radio frequency systems. (ANSI 4.33.7)

Technology and the Workplace

By Alan R. Post[*]

My name is Alan Post. I am a 38-year old attorney[1] with at least 20 years in the workplace in a variety of settings as a hearing-impaired person. My loss is described as moderate-severe with a nerve deafness loss from about age 2, that is about 70dB in each ear. It is a constant (or nonvarying loss) with the biggest impact in the high frequencies—ladies and children tend to be out of my zone of hearing. I like clear, distinct, low, and slow voices that give me time to lipread, if necessary, and to absorb what is being said.

I am a product of the Wauwatosa, Wisconsin—a Milwaukee suburb—and Springfield, Illinois, public schools. I have always been mainstreamed. I have business and law degrees from the University of Wisconsin at Madison.[2] My parents were my best advocates in the 1950s and 1960s, from childhood to leaving college.[3] Until the fourth grade, I functioned in a classroom with no adaptation other than being close to the front of the classroom to better see and hear the teacher and to see the blackboard. This was my first "reasonable accommodation." I still prefer to sit as close as possible to a speaker so that I can concentrate on the meaning of what is said rather than puzzling

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[*] A graduate of the University of Wisconsin Law School in Madison, Wisconsin, Mr. Post has a moderate-to-severe hearing loss. He is currently an attorney with Sorling, Northrup, Hanna, Cullen and Cochran, Ltd., in Springfield, Illinois, and has been admitted to the bar in six States.

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[2] Bachelor of Business Administration, Public Utilities and Transportation, 1970, and Juris Doctor, 1972.

[3] John W. and Catherine F. (Eviston) Post, 707 Westgate Road, Deerfield, Illinois 60015. Catherine is deceased. I have an understanding wife, Barbara, a registered nurse, Wisconsin, 1970, and three children, 11-year-old Andrew, 10-year-old Lisa (who is mobility impaired with the birth defect spina bifida, or "open spine"), and 6-year-old Dana Michael.

over the words said. My third grade teacher in Springfield said to my parents—"get this kid a hearing aid." So in 1958, at age 10, I acquired the first of many hearing aids—a Zenith body aid from a department store in Springfield. The old technique of merely sitting in the front was failing for another reason—my long distance vision was failing badly and lipreading—a naturally acquired skill (with some assistance from speech teachers in Springfield and in Wauwatosa)—was no longer functional in the absence of glasses.

My first real hearing aids, however, apart from my parents and their loud, clear, and distinct voices were headsets tied to a crystal radio set in 1954 and to a TV set in 1956. Both headsets came from a predecessor of Radio Shack—Allied Radio of Chicago. My father is an electrical engineer and he did what came natural to him in the way of jamming sound into my ears in ways that would permit me to watch TV with the rest of the family and to become as familiar with the spoken word as I could. Dad also communicated an important attitude—that where there is a will, there is a way—and that the only way to find out if a technology will work is to keep trying different things until one works as well as possible under the circumstances. One can forget that sound circumstances do vary and one must adapt to those variances.

As a high schooler, I was scared to death of public speaking and never really thought it would be possible to be an attorney.[4] I tried debate and it was a bit of a bust because of the stress of the sounds. By the eighth grade, I had acquired dual eyeglasses hearing aids as recommended by a Purdue University audiology clinic. After the first hearing aid, we tried to get the most professional and independent recommendation for the "right" hearing aid that we could.[5] As a school child and a high schooler, I cannot remember ever using the telephone without a lot of stress. I did not acquire eyeglasses hearing aids with a "T" switch until I was in college. Can you imagine—my mother used to make my dates because many of the ladies' voices used to sail

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[4] Barbara and I are 1966 graduates of Springfield, Illinois, High School, then a large urban high school with some 700 graduates in our class and over 2,400 students in the building.

[5] Medical and audiological consultations have been in connection with the University of Wisconsin at Madison, Gallaudet College in Washington, D.C., the University of Illinois, the Mayo Clinic, University of Nebraska, and private audiologists in Omaha, Minneapolis-St. Paul, and Chicago.

over my head on the phone. My approach to the ladies was to just walk up to them and talk to them on the street or at their homes without prearrangement by phone—an annoyance to some, I'm sure. One learns to be assertive when needed, and to develop an approach that works—sometimes. My communications skills rely in part on sight, so I must *see* that which I'm hearing to do it effectively.

In 1966, after high school, I entered the first of 11 distinct job situations I have been in. First, I worked in a manufacturing situation as an engineering department summer employee for the former Allis-Chalmers ("AC") bulldozer plant in Springfield.[6] My first assignment was to try to tear up new bulldozers and road graders by simply using them on a proving ground until they fell apart. This job was a loner's job and was an understandably noisy one. The advantage to the hearing loss, then, was that I had "built-in" earplugs against the noisy diesel engines. Another assignment was as file clerk and copy machine operator. This required dealing with people in a noisy office environment of copying machines in a relatively poor (hard surface) acoustical environment and was somewhat stressful. A third assignment with AC was on the evening shift working with a crew as a mechanic's helper to assemble an experimental tractor in a relatively quiet environment in an engineering lab with a friendly and helpful crew.

That fall I went to the University of Wisconsin at Madison, a college of some 35,000 students then. Some of the big lecture halls were disasters—especially with fast-talking teaching assistants, many from foreign lands. Springfield did not prepare me for foreign accents. Clearly such situations require additional technology—audio loops or a portable microphone system to supplement the room audio equipment, or different instructors with more sensitivity. Nothing was done to make the situation more accessible—I did not ask for this type of help, nor was any offered. Usually the "down front" and lip read tools were at least partial solutions, but were stressful. A professional notetaker or a friend's notes would have been helpful to fill in the blanks where necessary.

Interestingly, I became an early vocational rehabilitation client at Wisconsin. The State paid for my hearing aids by buying my in-State tuition and books. The counselor thought I was doing

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[6] Recently closed as a Fiat-Allis plant at 3000 South Sixth St., Springfield, Ill. 62704.

so well that little else was offered, such as assistive devices in the classrooms, e.g., audio loops, personal microphones, etc.

In college, I worked loner's jobs in the kitchen and in the mail room. I seldom heard the social chit-chat that went on among other students. I didn't speak up to ask to hear what was said. I think I was just assumed to be quiet, shy, and perhaps a little distant or arrogant—or something. One cannot have the warmest social relations under the circumstances, except from the closest and most understanding of friends, relatives, and colleagues. Conversations tended to be one-on-one affairs in quiet circumstances. The tavern and frathouse scenes were out for me—too noisy. The dorm was quieter and, except for close friends, I tended to keep to myself. In retrospect, an audio loop, a portable FM system, or the use of direct input conference or lapel mikes would have enhanced my social relations and, thus, my work performance in both jobs and school work at the university. There is no sensation like being in a crowd having a good time—e.g., a football or basketball game—and having the isolated feeling as if one were on an island all by one's self. The fun can be seen, but not heard, nor fully understood—whispers are off limits.

After the bulldozer plant and the school jobs, I had summer jobs as a rural letter carrier in Springfield and as a dining car cook/dishwasher on the Santa Fe Railway, based in Chicago. Both of these were jobs with plenty of movement and, particularly, the letter carrier job was a job where I could be as independent as I wanted so long as the mail was delivered when people expected or earlier—which made some of the other letter carriers mad. A delivery job in one's own car is ideal for keeping in touch on a car radio or stereo. There can be complete control of one's hearing environment. One can even add an amplified citizen's band or other mobile radio—or a cellular telephone—to keep in touch—or to be able to call for emergency assistance, if or when needed. The "reasonable accommodation" possibilities are endless. And to think deaf and hearing impaired still sometimes are not allowed to drive, particularly professionally. My eyesight and manual driving skills, for example, are so good, I have had no chargeable accidents in the 22 years I have driven. I have my own personal radar—my eyes—to spot police cars miles away by make, model, the size of tires, and the various antennas used on police cars. I have had no speeding tickets.

The job with the Santa Fe taught me to know and to grow to appreciate the black experience in America—which is in many ways not unlike my own—in the lack of understanding and acceptance by the majority. We hearing impaired have sometimes been patronized and told what was good for us until we get sick of it. Challenges faced by our black brothers and sisters and by other minority groups that have been "put down" and "put in their place" by the majority are similar.

I had many practical problems on the Santa Fe in following directions from an older black man with a South Texas accent, a combination of black dialect and Lyndon Johnson "hill country Texas" that was nearly impossible for me to penetrate. But with good will, effort, and patience by both of us, we were both eventually able to clean the kitchen by applying the right solvents in the right order by my simply reading the directions on a piece of paper. The background noise of the dining car did not help. A microphone to increase the sound of my friend Andrew's voice would have helped. The job paid well, there was travel through Texas and Arizona to San Francisco, and there were many opportunities to take pictures—a real boon to a train buff. I was so thrilled to get the job I cried. I had been turned down by numerous railroads because someone in the medical department thought I might be an unnecessary liability around moving trains with my hearing impairment. I had been a train buff since mid-high school and could see and feel trains long before I needed to hear them. Talk about being unnecessarily shut out of a job without an actual assessment of my ability to perform. Doctors, engineers, and lawyers can be awfully conservative and can be perfectionists whom those of us with things missing have a difficult time pleasing.[7]

Other jobs in college included a white-collar office job with a State agency in Madison and a job with a legislative committee chair in the Wisconsin legislature. The former involved a fair amount of contact with other people and the usual and necessary office politics—or socializing with coworkers—to be successful. The quiet, shy approach and being off the office "grapevine" made that a less than successful experience. A "reasonable accommodation" should include a sensitivity session for the "normal" people in an office and the assignment of an advocate to work with the hearing-impaired person so that he or she always has a friend or two who understands the hearing-impaired person's special needs and who can keep the office "grapevine" or "gossip line" open. The legislative job was a

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[7] Both of my grandfathers were doctors and had railroad connections.

writing and research job and involved primarily a one-on-one interaction with the boss and worked very nicely. The premium was on satisfying one boss and not a whole myriad of people who might or might not understand nor care to understand. Some might even take advantage of the partial deafness to make the person the "office weirdo" and make the silence and loneliness more difficult than usual.

The attorney jobs with the ICC in Washington, D.C., Union Pacific Railroad in Omaha, Burlington Northern Railroad in St. Paul, and Illinois Bell in Chicago were primarily office jobs and featured the highs and lows similar to my previous job experiences. It was not, however, until the spring of 1984 that I became fully tuned into what I might be missing. In Washington, Omaha, and Minneapolis I sought and obtained "better" over-the-ear hearing aids with some incremental improvements to hearing abilities. This was also partly the normal 3–4 year replacement cycle for hearing aids—with a nod to recognizable improvements in hearing aid technology. But nothing really took care of the noisy meeting, the unfamiliar accent in a tin-can meeting room, the fast speaker, the background noise of an air conditioner or heater blower in a modern office building, or other such situations that make it difficult to understand in the presence of background noise.

I had been with Illinois Bell here in Chicago about 11 months when I had come from a particularly noisy meeting with some 15 people in a "tin can"-like room—no carpets, no rugs, no sound absorbers, just lots of hard surfaces and a babble of voices going mostly at once in a myriad of dialects—one of the thrills of being a Chicagoan—but an impossible situation in which to perform as a lawyer trying to sort out the relevant facts and to give advice on the law. In frustration, I went to the chief medical officer of Illinois Bell and asked for help. As a result, I went the familiar route of ear doctor, audiologist, and hearing aid dealer, but there was a difference this time. I had some new ideas of my own, too. I had been reading about Operation Greylord and how the FBI was using electronic bugs in judges' chambers to hear talk of bribes and how one visiting downstate judge even put a listening device in his cowboy boots as an FBI mole. Such devices have great potential to help hearing-impaired persons—and can be called assistive devices. Through one means or another, a bug or microphone can be put closer to the main source of sound that needs to be heard and then transmitted back and jammed into one's ears at whatever level is comfortable, together with any base or treble adjustments—as on a stereo or car radio—as might be comfortable.

The upshot of the process in early 1984 was my acquisition of two distinct sets of assistive devices. One was a Phonic Ear FM transmitter-microphone and its companion body aid receiver with a direct-wire connection to my hearing aids (an alternate is to use a neck loop to connect to the hearing aids through the "T" switch).[8] The other set of devices are direct-wire microphones to my hearing aids, one in the form of a lapel mike and the other a little conference mike that sits on the table.[9] (See attachments A, B, and C.) These devices have proven very helpful in meetings, especially judicial and administrative hearings where lawyers jump up and yell at one another, and where there are soft-spoken witnesses and judges all of which test my normal use of hearing aids and lipreading skills to their limits and beyond, limiting my capability to think and act like a lawyer on behalf of a client.

Often, however, the judge is an older person with enough of a hearing impairment who understands the need to "wire the

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[8] The first item is Model No. HC 441T and the second is Model No. 445R. Together these two items cost $500.00 and required Phonic Ear PE 805 hearing aids (over-the-ear type) as compatible aids at $800.00 for the pair, for a total of $1,300.00 for the complete equipment package, none of which was covered by Bell's otherwise generous medical insurance plan. The devices are tied together at the bottom of the hearing aids by "direct audio input" boots, Model AS4. The devices are Swiss-made. There are other similar devices made by Telex and Oticon. Phonic Ear Inc. is located at 250 Camino Alto, Mill Valley, Calif. 94941, 415-383-4000.

These items are sometimes described as part of an FM auditory training system (or a Personal FM System) which were designed primarily to be used by classroom teachers of hearing-impaired children. I use the system as a pair of powerful directional microphones to capture sound close to the source and to increase power and sound sensitivity to voices in meetings. The devices can be used with radios and TVs (when I don't have a headset and jacks available). The body aid portion has proved useful as an emergency means of using a non-hearing aid compatible telephone without the feedback—whistling—that is typical of an over-the-ear hearing aid when something is placed close nearby, such as a telephone handset. See attachment A on Phonic For Personal FM Systems, and attachment B on the PE 805 over-the-ear hearing aid.

[9] What I have called the "lapel mike" is called a "handheld microphone" by Phonic Ear. See attachment C. Mine has been modified with a strip of velcro around the top with a little clip attached to it so that it may be attached to someone's lapel or blouse. The other device is called a "conference microphone" by Phonic Ear. See photos on attachment C.

courtroom" with whatever technology is helpful. I have also used a lipreader/interpreter so that I can always have a set of lips to see and read in a public meeting. Some of the meeting rooms in the old and new State of Illinois buildings here in Chicago are notorious for poor acoustics, noise levels, and the absence of microphones. Normal people will complain privately, but usually won't speak up to fix the situation.

There is a State of Illinois executive order[10] that requires the provision of an interpreter when requested at a State public meeting. (See attachment D.) One agency took the position that it was my employer's responsibility to modify their hearing room by paying for the interpreter because the agency had run out of funds and would not meet the terms of the Governor's order. Nothing like being in the middle of one's rights as an Illinois citizen on the one hand and those of an employee protected by Section 503 of the Federal Rehabilitation Act of 1973[11] and a Federal contractor/employer's duty to provide "reasonable accommodations" to otherwise qualified handicapped persons on the other. A simple procedural request was a very unpleasant experience. Employers are seeking to reduce costs of all kinds and the costs of reasonable accommodation and the failure of a hearing-impaired person to perform in the same manner as one with the full use of one's ears are an additional cost that result in being vulnerable to layoffs and forms of discrimination.

What should this commission do? It should recommend that the Federal Government fully back State governments and take every hearing-impaired person—and there are lots of us—and provide the attitudes and the financial means to give us full access to the workplace the same as, for example, our brothers, sisters, sons, and daughters who are mobility impaired. There need to be ramps and elevators to communication provided, assistive equipment should be provided, insurance should be mandated to cover equipment costs from qualified dispensers, and self-help groups such as SHHH and the Bell Association should be brought into the workplace and sensitivities raised. To fail to do these things results in an incredible waste of talent of

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[10] The Illinois Governor's Executive Order is Number 5. It is attachment D.

[11] Section 503 for Federal contractors is set forth at 29 U.S. Code Section 793. Section 504 is similar but governs those receiving Federal funds, primarily lower levels of government and is set forth at 29 U.S. Code Section 794.

those who are hearing impaired. Employers claiming to have affirmative action plans covering the hearing impaired but who fail to fully reach out and provide actual accommodations are just carrying on a charade. A society that fails to reach out to even the meanest and nastiest among the hearing impaired with meaningful and enforced laws to make reasonable accommodations available is just kidding itself about equal opportunity for the hearing impaired. People with communications problems are in fact "different" and they don't become any less so without some careful additional concern for their special needs. Just because the handicap can't be seen doesn't mean it's not there. It's there in the "she's a weirdo look" given by persons who fail to understand someone else's failure to understand.

There are older persons in nursing homes who are defined as senile who merely need to hear Guy Lombardo again—perhaps on a Sony Walkman portable cassette/recorder, or to see a TV screen loud and up close from one of those new pocket TV models. I'll never forget the smile on my 90-year-old grandfather's face when he heard Guy Lombardo again—and when he was able to use an amplifier on his phone to talk to his girl friend again. He wouldn't use his hearing aid, so I just gave him a portable cassette/radio and sneaked the amplifier onto the phone as an unwanted gift. But he was able to hear much better with those two assistive devices.

I'll be happy to answer any questions you might have.

Part IV. Hearing–Impaired People in Illinois

The Human Rights Act in Illinois

By Joyce E. Tucker, Esq.*

In Illinois the State law governing the rights of the hearing impaired is the Illinois Human Rights Act, as well as the fact that the State constitution itself, in section 19–R–001, prohibits discrimination against handicapped people. Illinois is one of the few States with explicit constitutional protection for disabled people.

The Illinois Human Rights Act, the act which the department of human rights administers, prohibits discrimination in employment, housing, access to financial credit and public accommodations on the basis of race, sex, color, religion, age, ancestry, marital status, unfavorable discharge from the military service, and handicap, physical and mental.

This act establishes civil rights for hearing-impaired people in the following areas: employment, housing transactions, access to public accommodations, and financial credit.

The act also expressly prohibits discrimination against people who use hearing dogs. The landlord or manager of a housing unit is restricted from adding a surcharge to a lease because of the presence of a hearing dog.

The employment coverage of the Human Rights Act is probably one of the broadest of any State's civil rights laws.

All employers, with the exception of the Federal Government, in the State of Illinois, are covered by the handicap provisions of the Human Rights Act.

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*Joyce Tucker, a lawyer, is the director of the Illinois Department of Human Rights, a position that she has held since the department was created in 1980, and a member of the Illinois Advisory Committee to the U.S. Commission on Civil Rights.

The provisions in the areas other than handicap require an employer to have 15 or more employees, but with regard to the handicapped, the law says you have one or more employees, and that covers everyone.

In addition, an employment agency cannot legally refuse to hire or refer an individual that has a hearing impairment; and no employer in the State can lawfully deny employment to a person that has a hearing impairment.

Any labor organization is prohibited from refusing to represent a person because of a hearing impairment.

Offering further protection for hearing-impaired people, the act, through its interpretive rules, requires all to provide reasonable accommodations.

Accommodations can include job restructuring, assignment of duties of a hearing-impaired employee, acquisition of equipment such as TDD, provision of sign language interpreters, and other similar actions.

Miss [Bonnie] Tucker explained, I think in quite detail, what a reasonable accommodation is, and the Illinois law tracks the Federal law.

Job applicants in Illinois have the right to require reasonable accommodations to the test procedure or other personnel processes, such as the interview. An applicant who would like a sign language interpreter for an interview can request that from the employer.

Labor organizations have to provide accommodations to the hearing-impaired members, which may mean providing an interpreter at union meetings.

In some cases, reasonable accommodations can make the difference between the hearing-impaired person being able to do a job at all.

The Human Rights Commission, the adjudicatory body under the Human Rights Act, has recently ruled that an employer must reinstate a hearing-impaired man to an alternative position and provide accommodation of a pager that has a flashing light instead of an audio signal. The employer, a hardware store, had argued that a deaf person could not work in such a capacity because when he was in the warehouse he could not be reached for work assignments.

Two things that should be stressed in regards to employment cases are that, in the State of Illinois, a charge must be filed with the department within 80 days of the alleged discriminatory event, and that necessary accommodations must have been requested by the employee or the job applicant.

Various forms of relief are available under the Human Rights Act, including reinstatement, backpay, restored benefits, cease and desist orders, as well as attorney's fees.

The Human Rights Act is a very comprehensive bit of legislation, but no one law can address all the concerns of the hearing impaired.

There are two other recent Illinois laws affecting hearing-impaired people: The first requires the State to provide TDDs for all deaf people in the State free of charge; this law must be fully implemented by 1997. The second law requires transportation centers such as Amtrack, airports, and bus stations to provide TDDs for their deaf customers.

We believe that Illinois has a good foundation in law for insuring the rights of the hearing impaired. More is needed.

The department of human rights is willing to work with others not only to broaden but to strengthen the laws governing the rights of hearing-impaired people.

We are willing to listen to your suggestions and receive your input in terms of what the State of Illinois should be doing and what the department of human rights can be doing with respect to the rights of the hearing impaired.

The Illinois Attorney General and the Hearing Impaired

By Jill Banks Wine, Esq.*

Attorney General Hartigan is unable to be here this afternoon because of responsibilities of the office. I'm honored to be here to represent him.

The concern that has brought all of you to this forum—the rights of the hearing impaired—is a concern which Attorney General Hartigan also feels strongly. As a result of his concern, the office has provided vigorous new representation for hearing-impaired persons since he became attorney general in January 1983. This representation has produced major victories—new legislation, changes of policy, and negotiated agreements that make an important difference in the lives of hearing-impaired citizens throughout the State.

Before I go over some of the office's accomplishments for hearing-impaired citizens, let me briefly explain the new direction and focus of the office under the present administration that has made these accomplishments possible.

Attorney General Hartigan, more than anyone else in the history of the office, has emphasized the attorney general's role as the lawyer for all the people of the State. By Illinois statute, the attorney general represents other offices and agencies of government and their officials. But State law also empowers the attorney general to represent the citizens of the State when their interests as a group are at stake, and our common law heritage provides for a broad interpretation of this power.

In addition to continuing and strengthening the advocacy programs begun by his predecessors for consumers, utility customers, crime victims, and the right of the people to a clean and safe environment, Attorney General Hartigan has created new

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*Ms. Banks Wine, who addressed the forum representing Attorney General Neil Hartigan, is deputy attorney general of Illinois. She previously served as general counsel for the U.S. Army and on the prosecutorial staff of the Justice Department at the time of the Watergate investigations.

divisions to expand this citizen advocacy role of the office and represent the interests of senior citizens, farmers, veterans, and disabled persons. These new divisions have been greatly aided by advisory councils the attorney general has formed to give them guidance and direction. Representatives of other State and local agencies, businesses and the professions, the academic community, and citizens' groups serve on these councils voluntarily and without pay and give the various divisions of the office the invaluable benefit of their knowledge and expertise.

The new division of the office which most directly concerns all of you here today is the Disabled Persons Advocacy Division, which the attorney general created in the spring of 1983.

Ours is the first State attorney general's office in the country to have a full-fledged division devoted solely to protecting the rights of disabled persons and investigating the legal and societal problems they face daily. The division, which is guided by two advisory councils, brings issues concerning the rights of disabled persons to the attention of the courts, the State and Federal legislatures, and the public.

I am going to concentrate here this afternoon specifically on the division's advocacy for hearing-impaired persons. First, however, I want to point out that the division's efforts over the past 3 years have resulted in important victories for Illinois citizens with all types of disabilities.

To cite just one example: at the recommendation of the division and its advisory councils, Attorney General Hartigan represented 30,000 disabled Illinois residents in a successful lawsuit against the Federal Social Security Administration. As a result, these citizens are receiving millions of dollars a year in benefits the administration had wrongfully terminated.

In order to be of the greatest possible help to hearing-impaired citizens on a daily basis, the office has acquired necessary specialized equipment and staff members have necessary specialized skills.

The main offices in Springfield and Chicago and 13 regional offices located throughout the State are equipped with TDD's.

Division staff in the Chicago office are fluent in total communication. Other staff members are aware of the obligation to provide interpreter services and are learning total communication through an inhouse program or through qualified organizations at the local level.

Staff from the Disabled Persons Advocacy Division in the Chicago office are traveling statewide this summer to provide regional office staff members with training concerning the rights of the hearing impaired. The division is working with other divisions to provide appropriate referral of hearing- impaired citizens to the various programs and services of the attorney general's office. For example, a hearing-impaired citizen with a consumer complaint or problem will be referred to the office's Consumer Protection Division, but a qualified Disabled Persons Advocacy Division staff member will remain available for interpretation and other necessary assistance.

With this system of linkage within the office and with the statewide training program, Attorney General Hartigan is determined to improve on the record of service to the hearing impaired the office has already established.

Over the past 3 years, the office has negotiated and successfully resolved numerous individual cases involving the rights of the hearing impaired. Many of these cases have centered upon the right of the hearing impaired to have interpreter services when necessary. For example, the division upheld the right to interpreter services for hearing-impaired persons involved in courtroom proceedings and in dealings with the Social Security Administration.

The division successfully defended the right of a hearing-impaired parent to have interpreter services provided by a child's school—so that the parent could participate fully in meetings concerning the child's education. The division upheld the right to interpreter services in holding employment in either the private sector or the public sector.

In one case, the division negotiated with a suburban park district to provide interpreter services for a hearing-impaired girl who wanted to play on a softball team.

The division successfully resolved a case in which a citizen was denied auto insurance on the basis of hearing impairment.

An out-of-date and unfair hearing impairment testing procedure used by a transit authority for employment applicants was changed as a result of the division's negotiations. The procedure the transit authority had been using failed to measure improvement in hearing through the use of hearing aids, and job opportunities were being foreclosed for hearing- impaired persons.

After receiving a complaint that Chicago O'Hare had only one operable TDD in the entire airport, and that it was available only during limited hours, the division entered negotiations with O'Hare officials. As a result, there are now TDDs available in all three O'Hare terminals at all hours.

When a major health insurer refused to provide coverage for a cochlear implant for a severely hearing-impaired child, the division became involved and the matter was resolved.

The attorney general and the Disabled Persons Advocacy Division have actively supported legislation benefiting the hearing impaired. During the past 3 years, we have seen important new bills in this area become Illinois law.

The Hearing Aid Consumer Protection Act created standards and enforcement procedures to prevent fraud and misinterpretation in the marketing and sale of hearing aids. Prior to the enactment of this law, Illinois was a mecca for unscrupulous hearing aid marketers and salespeople.

House Bill 984 created a public act requiring transportation facilities such as train stations, bus terminals, and airports to provide TDD's.

The Universal Telephone Service Protection Law of 1985 requires, in part, the provision of TDD's at no cost to eligible deaf and severely hearing-impaired consumers.

The attorney general's office, concerned about the Illinois Commerce Commission's proposed rule to implement this new law, is working with hearing-impaired organizations statewide to propose changes in the rule. We believe there should be a provision for an advisory council, representing the hearing-impaired community, to work with ICC staff and the State's telephone companies in developing the TDD program. We also believe there should be a voucher system, so that hearing-impaired customers can select the equipment they need and prefer rather than having to accept what is provided under a centralized distribution system. Finally, we want to assure that responsibility for the program will rest with local carriers and that existing administrative structures and procedures are utilized.

The Illinois Environmental Barriers Act, which was drafted by Attorney General Hartigan's Disabled Persons Advocacy Division, improves and expands the State's previous accessibility standards and applies to both publicly and privately owned buildings used by the public. Specific features of the new law which relate to the hearing impaired include:

1. Requirement of specialized emergency signals such as visual smoke alarms and elevator signals;
2. Requirement that public telephones must provide amplification devices for the hearing impaired;
3. Requirement that new multistory housing (in excess of four stories and 10 units) must be adaptable to the needs of

environmentally limited residents. The attorney general's Disabled Persons Advocacy Division has made extensive and detailed recommendations to the Illinois Capital Development Board, the State agency which is developing standards to implement this requirement.

Attorney General Hartigan, as the State's chief legal officer, will have the responsibility of enforcing Illinois' New Environmental Barriers Act. Considering the attorney general's record in advocating for disabled citizens over the past 3 years, it can fairly be said that this responsibility for enforcement is in good hands.

The attorney general actively supported a city of Chicago ordinance requiring visual smoke alarms in 1 out of every 50 rooms in all Chicago hotels. Under this ordinance, which was passed by the Chicago City Council last week and becomes effective January 1 of next year, hearing-impaired hotel guests will be able to request rooms equipped with visual alarms.

Attorney General Hartigan has also testified in support of a pending Chicago ordinance that would require buildings with elevators to maintain a registry of environmentally limited persons on the premises, whether living there, working, or visiting. In an emergency, fire department or other rescue personnel would know the location of persons requiring special assistance. This ordinance would also require preparation and posting of an evacuation plan which provides for the needs of environmentally limited persons.

Attorney General Hartigan and the Disabled Persons Advocacy Division are also actively supporting another bill which has been introduced in the Illinois Senate and will be voted on in the fall.

This bill would create the Illinois Comprehensive Health Insurance Act—to provide an insurance pool for persons who have been considered "high risk" by the insurance industry and who have therefore been denied coverage or offered only limited coverage or very costly coverage.

As many of you here know, persons with disabilities can experience extreme difficulty obtaining adequate and affordable coverage. The passage of the Comprehensive Health Insurance Program Act would be a long overdue solution to this problem.

Everything Attorney General Hartigan and the Disabled Persons Advocacy Division have done—and I've discussed only the highlights of the past 3 years here this afternoon—stems from a commitment to the concept of equal opportunity.

Citizens of this State with disabilities, including hearing-impaired citizens, are entitled to work, to travel, and to communicate, just like anybody else. They are entitled to feel safe, and they are entitled to enjoy the public facilities and other offerings in their communities, just like anybody else.

Over the past 3 years, the office has achieved meaningful gains for the hearing impaired and for citizens with other disabilities. In every case, what has been gained is no more than what other citizens already have.

As the division builds on what it has accomplished so far, equal opportunity will remain the central motivating factor.

Working with the two advisory councils to develop new programs and legislation, making certain that laws and programs we already have are *working*, responding to complaints and requests for help from individual citizens—the division will continue making Illinois a place where citizens with disabilities have vigorous representation in government and equal opportunity under the law.

Closing
The Future of Hearing–Impaired People

By H. Latham Breunig, Ph.D.*

It is an honor to appear before you today and a real challenge to attempt closure on this forum when I have been preceded by some 20 distinguished individuals covering a wide range of topics and whose presentations I have not previously seen. However, since most of these individuals have published material in the literature I hope to come up with something useful to you as you proceed with your very important responsibility in safeguarding the civil rights of the citizens of this key State of Illinois, particularly those with disabilities of one sort or another.

I am not sure which "hat" I am wearing here today. Over the years I have worn many, but this afternoon I would refer to only three. The oldest one of these is that of a trustee of the Clarke School for the Deaf. Later I was president of the Alexander Graham Bell Association for the Deaf for a couple of years. Finally, I now wear also the hat of member of the National Council on the Handicapped, of which I will speak in greater detail later. Needless to say, membership on the Council has enabled me to acquire a much broader overview of the disability movement than when I was concerned with the narrower perspective of hearing impairment alone.

In scanning the preliminary program sent to us, I looked for the appearance of the word "right" or "rights." Including the cover page and the section headings the words appear at least 15 times. It is interesting to note that following the keynote there are four major sections which include the Rights to Know, to an Education and to Employment. There is nothing said about the rights of a closing speaker.

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* Dr. Breunig suffered a 95 percent loss of hearing at age 7. He holds a Ph.D in chemistry and retired from Eli Lilly and Company of Indianapolis, Indiana, in 1975, after a 44-year association with the company. He has worked in many capacities on behalf of the hearing impaired, including the National Council on the Handicapped, Advisory Committee on Special Education, Smithsonian Institution, Telecommunications for the Deaf, and others.

In reading the brochure published by the United States Commission on Civil Rights, I find that you are ". . . an independent, bipartisan, factfinding agency of the executive branch. . ." Your duties include investigation of allegations, collection of information, and appraisal of Federal laws and policies with respect to discrimination because of color, race, religion, sex, age, handicap, or national origin. Why then did Congress see fit to establish the National Council on the Handicapped? Part of the reason is that your powers included enforcement of existing civil rights legislation. And, sad though it was, very few statutes on the books give any specific protection to handicapped persons. Furthermore, it seemed apparent that handicapped persons, among the last mentioned, may have been low on the totem pole. So it is a great thing that this Illinois Advisory Committee is giving attention to one of the several major disability groups.

The National Council on the Handicapped (1) has been established by Congress as an independent Federal agency, its 15 members being appointed by the President and confirmed by the Senate. The latter fact gives us the privilege of being addressed as "Honorable." We can hardly be thought of as nonpartisan, since practically all of us supported the President in his campaigns. This must be one of the reasons Senator Metzenbaum (D., Ohio) went over my disclosure statement with a fine-toothed comb.

The charges to the Council include:

—Review and evaluate all laws, policies, programs and activities concerning handicapped persons conducted by Federal Government agencies or assisted by federal funds, and assess the effectiveness of these laws, policies, programs, and activities.

—Review all Federal programs that assist handicapped persons, assess the extent to which such programs provide incentives or disincentives to community based services, promote full integration and contribute to independence and dignity of handicapped persons, and make legislative proposals for increasing incentives and eliminating disincentives.

One of the first things the present Council did was to publish a *National Policy for Persons With Disabilities* (2) in August 1983. In it we set forth a 19-point program for eliminating the barriers which so often arise in everyday life. This policy was developed from discussions with several hundred important members of the disabled community, the service provider professions, government, and the private sector. Drafting meetings were held in each of the 50 States and the District of Columbia.

The 1984 Amendments to the Rehabilitation Act of 1973 (Public Law 98–221, February 22, 1984) in addition to establishing NCH in its present form, mandated it to issue a report, due February 1, 1986, of what the Council members considered to be priority needs facing disabled persons. This report, labelled *Toward Independence* (2), was issued last January 28 and consisted of 75 pages backed up by a 600–page appendix. The relationship between the National Council and your Civil Rights Commission was explored during a visit to a meeting of the Commission last year. In a statement to the Commission, Sandra Swift Parrino, chair of the Council, pointed out that, given the limited resources of two agencies with overlapping missions, they could work together to avoid duplication of effort and conflicting positions. She mentioned that your 1983 publication, *Accommodating the Spectrum of Individual Abilities* (4), was so helpful and widely used among disability groups that copies have become scarce and difficult to obtain, and expressed the hope that the report be reprinted. Referring to the "Baby Doe" hearing being planned, she hoped that it would be taken as a "given" that disabled persons can live fruitful and productive lives, and that they are entitled to medical treatment to protect their lives and health. Mrs. Parrino also referred to a transportation hearing scheduled for 1987 and the need for handicapped persons right to a fully integrated public transportation system.

Let me digress for a moment here to consider the words "impairment," "disability," and "handicap." There is some discussion of these terms in *Accommodating the Spectrum of Individual Abilities.* Up until the last 2 years or so the term "handicap" has been imbedded in most legislation and regulations of the Federal Government as a blanket term referring to any person with a disability. Four years ago, the U.S. Office of Science and Technology issued a report entitled: *Technology and Handicapped People* (5). Included in it is a somewhat detailed consideration of the three terms. In the OTA report are the statements:

> OTA finds that the most accurately general term to use in describing a person with some type of functional limitation, given no specific background (contextual) information is "disabled." A "handicap" has to be specified within its environmental and personal contexts.

> An impairment is the physical or mental, and causal, base of a disability.
>
> Disabilities apply to generic or basic human functions: walking, grasping, hearing, excreting and so on. It is a much simpler concept and a more objectively measured one than is "handicap." The concept of a functional limitation can be placed in clearer perspective when it is divided into the basic or generic function being limited by the disability versus a socially, environmentally, and personally specified limitation, which then becomes a "handicap."
>
> Aspirations or life goals must be taken into account when defining or identifying a "handicap." But the approach to taking these into account must be based on pragmatism. . . .

The members of the Council would like nothing better than for Congress to designate us as the Federal Disability Commission.

As the National Council on the Handicapped first developed the priorities mandated by Congress it started out with a list of some 47 different topics within which recommendations to Congress might be made. Through several rounds of voting, the list was reduced to the 10 which appear in *Toward Independence:*

Equal Opportunity Laws
Employment
Disincentives to work under Social Security Laws
Prevention of Disabilities
Transportation
Housing
Community Based Services for Independent Living
Educating Children with Disabilities
Personal Assistance: Attendant Services, Readers and Interpreters
Coordination

Within these 10 topics are some 45 recommendations to Congress and the President for legislative or executive action, which were developed through several iterations by Council staff and members, and incorporated into the 600-page appendix to *Toward Independence* and summarized in the report itself. I am sure that as you scan the list of priorities you can envision their application to civil rights areas since, throughout the report, there are several references to the civil rights legislation (6), particularly Title II of the Civil Rights Act of 1964 and Title VIII of the Civil Rights Act of 1968. But you will search in vain if looking for any specific reference to the topic of today's forum, "The Rights of Hearing Impaired Persons," not even with the reference to "interpreters." The reason for this is that, on the whole, the report did not consider specific disabilities and furthermore, that hearing impairment, as a component of communication, did not survive the initial winnowing of priorities.

The Council did, however, address the subject of communication barriers as a special forum in May of this year during one of its quarterly meetings. In addition to hearing impairment, the participants in the forum considered blindness, stuttering, laryngectomy, deaf-blindness, and those with limited speech as well as the service delivery system of governmental and private programs.

Hearing Impairment

When considering the population of people with hearing impairment, it is important to recognize that there are several entities within the population. The two main classifications, to which I have referred earlier, are the "hard of hearing" persons and the "deaf" individuals. To my knowledge, as this paper is being written prior to the forum, none of the other speakers appear to address this important consideration. It is unrealistic to attempt to separate the two groups simply by means of hearing level measurement. In a way similar to the changing terminology of "handicap," there has been a recent tendency to replace the word "deaf" with the term "hearing impaired." Following the advent of modern hearing aids and their fitting to babies under 6 months of age, there has grown up a population of younger people who, in years past would have, by their audiograms, been labelled "deaf." But these people have, in most cases grown up to be functionally "hard of hearing," and tend to resent being identified as "deaf." I don't know how it started, but there is a prevalent usage today, a bastardized term "deaf and hearing impaired," in referring the two general classifications of people with hearing loss. In this context, the word "hearing impaired" actually refers to "hard of hearing" persons. In correct professional terminology, as used by the American Speech, Language and Hearing Association, and the Alexander Graham Bell Association for the Deaf, hearing loss as a whole may be spoken of as "hearing impaired" (deaf and hard of hearing). "Basically, hearing impairment is considered to be a generic term that represents the whole audiologic continuum of hearing losses without specific regard to the manner or the age of onset of the impairment." (Quigley and Paul, 1986) The dividing line between "hard of hearing" people and "deaf" people is indistinct and varies from author to author. Flexner, *et al* (7) state that "the term, 'moderately hearing impaired,' refers to a broad range of hearing loss, from 26 to 90 db HL," but they also include some individuals with "severe" hearing loss.

It is important to bear in mind that traditionally deaf and hard of hearing people, in addition to characteristics of hearing loss, also represent psychologically different groupings. The principal differentiation is that deaf people have been bonded together by the deaf culture, i.e. "the shared language, interests, traits, experiences and history of deaf people" (Rosen, 1986). On the other hand, hard of hearing individuals seem often to be loners. Within the deaf group are mostly those who have profound hearing losses, either prelingually in very early childhood or adventitiously in early or late childhood and who, until recent years, have not found hearing aids to be of great value to them. The hard-of-hearing segment of the population is much larger and is, as a rule, composed of those who incur hearing loss later in life and who make effective use of hearing aids. The loner image has begun to fade in recent years with the formation of SHHH by Rocky Stone and his cohorts. As Mr. Stone points out "In six short years, SHHH has managed to include hard of hearing people in services which were previously exclusively for deaf people." (8) This suggests that hard-of-hearing people will be acquiring civil rights which, up to now, have not been recognized and that they, too, will receive the "reasonable accommodation" which is the topic of the keynote address today. It would appear that the future of hearing-impaired people, at which I am looking in my crystal ball, will see a blurring of the distinction between deaf on the one hand and hard of hearing on the other so that society will, in fact, be talking about a hearing-impaired population without distinguishing the two groupings. How this would be handled from audiometric and sociological standpoints should be interesting.

The fact that such blurring has not yet taken place is exemplified by a recent book, *Deafness in Perspective* (9) in which Luterman has brought together perspective papers by 13 authors, all specialists in various areas of deafness. I found no reference to hard-of-hearing subjects. The book seeks an answer to the question:

> Have massive federal support, the rubella "war," and the total communication method of teaching led to significant changes in education of deaf children so that the 1985 graduates receive markedly superior preparation compared to 1965 graduates?

As Luterman himself points out, the past 20 years have been "interesting times" in the education of deaf children, and the answer to the question is too complex to be simply stated.

Luterman's book gives a broad overview of deafness in chapters headed as Perspectives In:

Otology, Audiology, Amplification, Academic Achievement, Total Communication, Oralism, Language, Speech, Clinical and Teaching Interaction, Academic Placement, The Family, Social.

On the whole, the book reaches its defined objective. My personal pique is that my name is misspelled. Since the authors of the chapter were looking backward, there are not too many opportunities to extrapolate to the future.

Otology and Audiology

It is disappointing that "The Right to Know" is barely mentioned in the chapters on otology and audiology. There seems to be no reference to high risk registers which are becoming more and more important in the screening of newborn children.

> With the increasingly elderly population, advances in hearing aid technology and professional dispensing, together with cochlear implants, utilization of hi-tech in diagnosis and rehabilitation, advances in educational audiology, and public awareness of hearing loss and its ramifications, have brought the profession of audiology to the verge of surge in growth. (Martin)

Amplification

With respect to amplification, Ross states:

> We must accomplish more in the future than we have in the past. For most of the children we work with, amplified sound can provide the brain with some of the raw material it needs to naturally evolve an auditory based communication system. Whatever the degree of residual hearing, it is their biologic birthright and should be used and depended on to whatever extent possible.

Total Communication

The chapter on total communication gives a broad overview of its development, the rationale for its use, and strongly supports it with numerous citations from studies on one kind or another. Speaking of a group of students (apparently not deaf) learning Latin in Europe, Schlesinger states "Competency and pride in bilingualism was natural to these European children, but is as yet rare here, and needs to be nurtured in deaf children as well as adults." Also introduced in this chapter is the concept of the "deaf management quotient" (DMQ) which seeks to predict in children the future of aural/oral success based upon the sum of five components. Some inconclusive reports upon the application of DMQ are given which seemed to suggest that children with a high DMQ "used more speech, less sign language, and were mainstreamed more often" and the "implications of such predictions is a monolingual situation for successful youngsters." The results suggest also that the degree of hearing loss at each of several frequencies is of crucial importance in trying to understand these findings.

Oralism

Connor, in the chapter on oralism, states "there is no inherent inability in deaf children but rather a disability in their educational system." He postulates that specific "national goals should be agreed upon during the next few years." In five such national goals are incorporated parameters of IQ, hearing loss, degree of disability, age, vocabulary, intelligibility, auditory scores, and reading achievement. He goes on to say that "advocates of each methodology should be required to define the extent of its successful operations; that is, what kind of deaf child will it guarantee will reach the appropriate national objectives?" He concludes that:

> Given the recent pace of technological advances and possible medical intervention, it may be possible for oralism to achieve for many deaf children in the future the same level of academic achievements now available to the non-handicapped.

This would, indeed, be a civil right of all hearing-impaired children: to have the fullest opportunity to develop the skills inherent in them.

Language

"The professional literature in education of the hearing impaired is replete with a common concern—the devastating effects that severe, early-onset hearing impairment have on language acquisition." Thus the Kretschmers open their chapter on language. After an exploration in depth of the language acquisition process, they conclude that:

> Perfection of speech, sign or language is secondary to the act of generating meaningful communications. . . . Perhaps it is about time to stop worrying about what hearing impaired children cannot do or have not learned about English and pay attention to what they do know about communications. Perhaps it is about time to let teachers and parents know that communicating with hearing impaired children, instead of talking at them, may lead both to the development of their communication and to our appreciation of their abilities.

Speech

"The teaching of speech to deaf children has a history of at least four centuries" writes Calvert in the chapter on speech.

> In terms of the profoundly deaf child, there has been neither a clear record of steady improvement in teaching methods nor significant breakthroughs that have either markedly reduced the level of effort or significantly increased the quality of the result for 400 years. . . . Even though some individuals and groups during the past 20 years have suggested that

> speech is not worth the effort of learning or is not appropriate as a means of communication for the ethnic deaf community, the period from 1965 to date has seen even greater efforts toward improvement than during similar periods in earlier times.

Calvert leaves to another generation the final judgment as to whether the current efforts are worthwhile but concludes that "the stage has been set for real progress. Let it begin." My crystal ball tells me that spoken language will always be the most effective key to the entry of hearing-impaired individuals into the economic, social, and cultural affairs of the world about them. Whether their speech be torturous or smooth, the capability to use it is a civil right.

Clinical and Teaching Interaction

By clinical and teaching interaction, Luterman refers to "the learning or teaching attitude that the therapist or teacher adopts toward the hearing impaired child." He compares the nature of behaviorism and humanism and their application, then leads into existentialism which postulates "that humans are free and that we are making choices all the time, even when we choose not to choose." He points out that "The deaf individual has a socially sanctioned excuse not to fully participate in this 'game of life;. . .'" and goes on to state that "the problem now becomes one of how to alter our teaching and our clinical interactions with deaf students so as to move them away from dependent and passive stances (external focus of control) into becoming more proactive, responsibility-assuming adults (internal focus of control)." Luterman also explores briefly the influence of high-tech on society and on deaf people in particular. He mentions the rise of self-help groups. He wants to "give hearing impaired children a better start in developing speech and language skills." His other thought "which permits and encourages the use of signs" to "blend the best of humanism and behaviorism in our teaching" is a shade too tolerant for this writer despite agreement that hearing-impaired adults do have the civil right to communicate as they wish.

Academic Placement

In her discussion of academic placement, Davis includes the minority rights movement in the period of 1965 to 1975 and points out that "the use of manual communication began to have a significant effect on educational programs," and reviews the literature emerging at that time. On the other hand, she states that "Some members of the deaf community have indicated to me that they view the rather sudden, widespread acceptance of sign language and the impetus it gave to serving deaf children in local school systems as a mixed blessing." She also raises the difficulties in the concept of "the least restrictive environment," which has been discussed in this forum. The National Council on the Handicapped has recommended (10) that:

> Congress should direct the Department of Education to promulgate and enforce standards for the application of the least restrictive environment requirement; such standards should clarify that the primary determinant of which educational setting is least restrictive is the educational appropriateness of the program.

In discussing mainstreamed children Davis suggests

> that the following characteristics are important to children's performance in regular classrooms: (1) good oral communications skills, (2) strong parental support, (3) average or higher intelligence, (4) personality factors (such as self-confidence), and (5) adequate support services for children with more severe hearing losses.

On the other hand, it is argued that "the least restrictive environment for deafness is one that is populated by people who are specially trained to understand deafness." She concludes that "Above all, we must keep in mind that the educational placement should not be a competitive and final act, but one designed to be evaluated constantly in light of its effects on the whole life of the child being placed."

The Family

Bodner-Johnson, in the family, trades the history of school-parent relationships and points out that although the introduction of the IEP by P.L. 94-142 has led to considerable improvement, the school is still the focus of the relationship. In general, parents have far to go in making their influence felt in order to attain the equality that is visualized, but she is optimistic about the child's right to a continuing family relationship during school years.

Deafness: A Social Perspective

Rosen has explored social changes in the deaf community in areas of consumerism, advocacy, sign language, legislation, communication technologies, interpreters, telephones, television, education, employment, the deaf culture, and being a minority within other minorities. She points out that "Continued efforts in establishing milestones and translating them into affirmative results for and with deaf people are still necessary." Much of the progress deaf people have made stems from programs and activities initiated and carried out by a paternal Federal Government during the "Great Society" of the Kennedy–Johnson presidencies. There has been a tendency to continue looking to government for answers to problems. It would appear that hearing-impaired people will, from now on, have to develop their own solutions to defining, achieving, and retaining their rights.

Educational Achievement

Quigley and Paul indicate that they believe

> Enough data have been collected over the last 70 years, particularly the last 20, for several tentative conclusions to be advanced regarding the Educational Achievement of deaf students leaving secondary level programs.

They point out pros and cons in interpreting data, and introduce cautionary remarks about trying to compare hearing with deaf populations. Their conclusion is that "the best overall educational achievement is most noticeable in select deaf students who are enrolled in indisputably comprehensive oral programs or who are integrated into regular educational programs." It appears that such students have adequate verbal-language abilities, and the authors suggest that this point bears further investigation. It would seem that it is a right for every deaf child to have an opportunity to enroll in such programs.

In an epilogue to his book, Luterman states "I believe we are on the threshold of so many marvelous things, now and in the future. At present, we appear to be on the threshold of such breakthroughs and achievements as the following":

1. Surgical improvement, if not correction, of sensorineural hearing loss via the cochlear implant.
2. Rationalization of the methodology dispute so that it does not dominate the field.
3. Better technology, and more important, the better utilization of existing technology.
4. More meaningful contribution of audiology to the education of deaf children, and better training of audiologists to meet the larger rehabilitation needs of the hearing impaired.
5. Better language teaching at all levels through the use of discourse (which also implies better training of teachers).
6. More training for teachers of the deaf in the teaching of speech so that there is universal enthusiasm for speech—and, consequently, improvement in the speech of the deaf.
7. Better training for all professionals so that they can relate to and utilize the skills of parents—a more general awareness of the importance of families.
8. Acknowledgement and acceptance of deaf adults by hearing professionals and parents as valued colleagues in planning and implementing educational and social programs for the hearing impaired.

It is good to see today the implementation of the last recommendations through the inclusion of several hearing-impaired individuals on today's program.

One very important subject not addressed by Luterman's book and other writers, possibly because it is a fairly recent topic, is prevention of hearing impairment. In its section on prevention of disabilities (11), the National Council on the Handicapped includes 12 possible sources of injury, including several which could result in genetic or adventitious hearing loss, either prelingually or postlingually. The Council recommends (11) that Congress enact a law related to prevention entitled "The Prevention of Disabilities Act." There are a number of ways hearing loss may be prevented including genetic counselling of young people, and reduction of exposure to sound such as in pop music.

Another topic not addressed by Luterman's book is the use of interpreters. Sign language interpreters have been around a long time, but it is only in the past few years that orally trained young adults, as well as older ones, have been demanding oral interpreters. As a result of this, there has been developed, a *Curriculum Guide for the Instruction of Oral Interpreting* (12).

While the certification of sign language interpreters by the National Registry of Interpreters for the Deaf has been in existence for several years, the organization seems not to be able to come to grips with the advent of oral interpreters as professionals, and certification of these proceeds slowly.

Other Considerations

Winifred Northcott, in her presidential address at the Alexander Graham Bell Association for the Deaf Convention in Houston, Texas (June 1980), entitled "Freedom through Speech: Every Child's Right," refers to the existence of a "powerful national lobby for 'the deaf community'" which has been largely responsible for propagating "Certain myths which have become familiar themes to the public and the federal legislature." They are repeated in publications and through extensive use in the media:

- Deafness is absolute and irreversible.
- Sign language is the birthright of the deaf.
- Sign language is the mother tongue, the native language of the deaf.
- The deaf belong with their own kind.
- To be integrated during the school years is to "deny your deafness."

Northcott also quotes John F. Kennedy as follows:

> The greatest enemy of the truth is very often not the lie—deliberate, contrived and dishonest—but the myth, persistent, persuasive and unrealistic.

The publication, *Legal Rights for Hearing-Impaired People* (13), gives a very broad and usually accurate overview of the rights situation at that time despite certain biases stemming from its source. It was particularly disappointing to find the following myth propagated in it: "In fact, even the best speechreaders in a one-to-one situation were found to understand only 26 percent of what was said and many bright deaf individuals grasp less than 5 percent." One wonders who those "best speechreaders" were! It is quite possible that these percentages could hold if they were given from a list of single, monosyllabic words. But most good speechreaders view a continuum of discourse and are able to fill in gaps from their own knowledge. Depending upon the facial geometry of the speaker, precision of enunciation, knowledge of the jargon and other variables, the scores may range from 5 to 95 percent comprehension. So it is obvious how damaging generalizations may be when given without a frame of reference.

It seems somewhat unfortunate that the United States Supreme Court, in the "*Rowley* Case" (14) held that handicapped children do not have a right to the best possible education that would "maximize their potential" for learning and specifically struck down the standard, used by the courts below, that handicapped children are entitled to an equal educational opportunity "commensurate with the education available for non-handicapped children."

Northcott indicates that there are so many common concerns in education of the hearing impaired "which cut across philosophies and divergent action programs" and states that "the wave of the future must be shaped through coordinated interagency and organization/institution alliance and action. Unfortunately it is a very gentle wave at the present time."

Evidence for the gentleness of this wave comes from two opposite sources within the "deaf lobby" itself. A few years ago the executive director and the president of the National Association for the Deaf visited a board of directors meeting of the Alexander Graham Bell Association for the Deaf in an attempt to persuade them that the NAD supported the right of deaf children to an oral education, and presented in evidence a printed NAD policy statement which included this information. In a Bill of Rights for Deaf people, Jerry C. Lee, president of Gallaudet College, included the following right: "The right to choose one's communication mode or language."

On the other hand, we have the Virginia Association for the Deaf passing a resolution petitioning the State department of public instruction to force the use of American sign language (ASL) in the Virginia School for the Deaf and Blind. This is a far cry from the days when the school had a program of oral education there. The other instance of schizophrenia in the deaf lobby is their attempt to persuade the Massachusetts legislature to pass a bill mandating the use of ASL in the schools for the hearing impaired in that State. And this despite the fact that

ASL has found little favor in the mainstream programs of the Nation.

Conclusion

To respond to the specific charges that were given to me, I would say:

The FUTURE OF HEARING IMPAIRED PEOPLE has already been addressed at some length, and should be increasingly salubrious if the conditions of Luterman's epilogue are fulfilled.

As for TRENDS IN THE GENERAL POPULATION, there will remain the stereotype of deaf people as manual gesticulators until more deaf youngsters, having acquired an ability to speak, interact with the world. It is unfortunate, perhaps, that this stereotype is being reinforced by the deaf lobby. As of now the verbal component of "total" communication has not significantly acquired the role that it should play. Much more needs to be done in this direction.

SERVICES AND SOURCES, it seems to me, would be enhanced if Congress and the executive branch of government implement the recommendations of the National Council on the Handicapped as spelled out in *Toward Independence*, reinforced by any additional recommendations that will result from the recent forum on communication barriers. Certain services now controlled by the "deaf lobby," such as interpreters, need to be opened up and made more receptive to other communication philosophies.

With respect to GOVERNMENT AND PRIVATE ROLES, that of the Federal Government may well diminish as a result of monetary and social constraints, and those of State and local governments become more important. Instead of "running to Washington," hearing-impaired people need to cultivate local resources. Through participation in independent living groups hearing-impaired people need to reach out and become active in community life. In this way, they will be able to make contacts with local government and with people involved in projects with industry, and reach out towards goals leading to a better quality of life.

ADVOCACY needs to be directed toward diminishing the stereotypes which lead to the separation of hearing-impaired people from the world about them. It seems to me foolish for hearing-impaired people to think that they can change the world, when it is so much easier to change themselves and adapt to the world.

As I close I believe Northcott's "wave" is beginning to become, with the assistance of civil rights advocates such as you, a little stronger. There seems to be an indication that the members of the deaf lobby are beginning to appreciate the right of every hearing-impaired child to the opportunity for an oral education if the parents so desire it. Furthermore, oral advocates are beginning to recognize, much as they might regret this, the right of deaf adults to add sign language to their communications arsenal if they so choose. One hopes, however, that hard-won speech capabilities will be retained, for this is the right of every hearing-impaired person, to communicate with the world through receptive and expressive spoken language.

Note added following presentation June 30:

It is the impression of this writer that Dr. Lucas of the Committee staff, during questioning of an earlier presenter, asked if there was any law requiring the teaching of speech to hearing-impaired children. There is such a law which is applicable—the first amendment to the United States Constitution, which guarantees freedom of speech.

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