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Gallaudet University Laurent Clerc National Deaf Education Center



A First Language: Whose Choice Is It?

Emphasis on Speech Skills

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Parents I met in Sweden and Denmark, and more and more in the United States, do understand the potential benefits and conveniences of speech skills in their child's life. But they also have come to understand some of the inherent limitations for deaf people to comfortable, unencumbered two-way spoken communication. Through their openness to learning from a variety of Deaf adults, hearing parents tend to become aware that, for even the best of lipreaders, spoken interactions further deteriorate when talking with more than one person or in a slightly noisy environment. They want their children to have a language they can "own"; to have relaxed, pleasurable conversations with others on a deep and meaningful level; and to belong to a group of people within which they are not always seen as the one who is different, deficient, or needs an interpreter. They clearly do not judge the success or failure of their child's life or education based on speech and auditory skills.

The following quote from Bouvet shows that taking into account the whole child—and the experiences of a variety of Deaf adults—may be very important when parents consider choices about spoken language as the only form of communication for their child:

In other words, speech produced without the natural feedback of sound cannot be the privileged place of self-expression and identification for deaf people that it is for hearing people....The following testimony of a 22-year-old woman helps us to understand what the deaf person must deal with in such interactions. This young, congenitally deaf woman with a hearing loss of between 80 and 90 Db, learned at a very young age to articulate so correctly that it would take someone a while to realize that she was deaf. Yet here is what she has to say about growing up:

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"In play, deafness wasn't a problem. The trouble began when relationships started to revolve around discussions and spoken exchanges. I felt excluded then because no one talked to you 'just for the pleasure of it,' but only to transmit a practical message to you....I am uncomfortable in group discussions, even in friendly get-togethers. Even if someone agrees to be the go-between—and I have lots of friends who do—he will only be able to relate the 'skeleton' of the story, which by then has lost all of its flavor. I laugh to please him, but often it's no longer funny or I haven't understood. Everything I get is in past tense, so I have no chance of responding or contributing" [Armengaud, 1979, p. 266] (Bouvet, 1990, p. 32).

A Cost-Benefit Perspective

Given what we now know about academic, career, and social success of Deaf people, a paradigm shift is in order. In settings where this has occurred, speech is seen as a complement to—not a necessary component in—a Deaf child's normal development of language and literacy (Hansen, 1990; Wallin, 1988). The importance of perfecting a child's auditory discrimination or pronunciation is viewed in the context of the whole child's development. Parents I have met in such settings place a very high value on literacy and grade-level academic achievement, and felt that time and energy put into intensive speech training must be weighed realistically against the potential benefits. Some children benefit greatly from time spent in training, in terms of usable skills. Others benefit only minimally in their prognosis for usable speech. Speech researcher James Mahshie (personal communication, June 11, 1993) characterizes this as a "cost-benefit" view of speech development and teaching: keeping the whole child's development and future functioning in mind as the critical consideration in determining how much effort is reasonable to expend (by both child and teacher) for developing speech skills.

As a bottom line, the parents I interviewed seemed to accept the possibility that—with or without intense efforts

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and long hours of practice—oral/aural skills simply may not play a primary role in their children's life. They were not willing to put learning, socialization, and language on hold or require that their child fail with spoken language before being given opportunities for exposure to Deaf adults and fully accessible visual language.

When it comes to understanding and producing spoken language, it seems investment and outcomes continue to vary greatly from child to child, whether in these countries or in the U.S. Intelligibility scores of deaf children vary considerably depending on a wide range of factors and have shown little or no improvement over many years (McGarr, 1980). Daniel Ling, one of the foremost authorities in North America on teaching speech to deaf children—and whose speech teaching methods are widely used by a large number of oral programs and by speech therapists in other educational settings—summarized studies that yielded the following conclusion:

Results of recent studies suggest that overall levels of speech intelligibility are utterly inadequate for oral communication and that typical speech errors of children attending special education for the deaf today are much the same as they were 40 years ago. Advances in acoustic phonetics, speech science, psychology, hearing aid technology, and other related fields appear to have made no significant impact on standards of speech production (Ling, 1976, p. 11).

Six years later, speech researchers Osberger and McGarr (1982) assert that, "on average, the intelligibility of profoundly hearing-impaired children's speech is very poor," citing a number of studies which show that "only about one in five words they say can be understood by a listener who is unfamiliar with the speech of this group" (p. 268).

This does not imply that we stop trying to increase our understanding of how Deaf children can best learn to speak, or that we deny them opportunities for exposure to spoken language input. Rather, these conclusions suggest that our

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approaches to deaf infants and toddlers must take into account some long-standing facts about the real possibilities for the average deaf child to develop intelligible speech and use it as a primary mode of communication for academic, social, and later for career purposes.

There is a great deal to be learned about what makes some deaf children's speech more intelligible than others, and what factors would enable us to predict whether or not a child will become an intelligible speaker, with or without amplification and intensive training. After describing numerous studies looking at various kinds of production errors deaf children tend to make, speech experts Osberger and McGarr (1982) conclude:

In summary, we have relatively little information regarding the effect of errors, or combinations of errors, on the intelligibility of hearing-impaired children's speech, nor are we able to predict reliably if a child has the potential to develop intelligible speech (p. 273).

Because of this relative inability to predict a child's potential for developing intelligible speech, choices about effort expended in the direction of structured teaching should be based on individual children's observed aptitudes, interests, and potential. Such choices must take into account the whole child. In other words, the child's timely development—linguistic, cognitive, and social—deserves center stage, rather than focusing on false hopes.

Residual Hearing

There is widespread acceptance among professionals in the United States of the premise that a child's aptitude for comprehending or producing speech cannot be predicted based on early audiograms. This is clearly explained by the classic text upon which many speech therapists still rely as a model for teaching speech. Ling (1976) equates the part of a young child's hearing that we DO know about with the shoreline of a body of water. He shows a figure in which we can see the edge of a lake or river, as well as the house and trees on the land, but we have no information about what is under the water. He states that the audiogram

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"merely indicates the dividing line between hearing and not hearing" in much the same way as the shoreline separates land from water:

From this figure, it is impossible to deduce the water's depth, warmth, or its suitability for drinking or swimming. Similarly, from an audiogram having the same "shoreline" configuration, one cannot deduce a child's ability to distinguish one frequency from another, to track formant transitions, or to judge one sound as louder or quieter than another. Nor does an audiogram indicate a child's level of tolerance for amplified sound. For these (and yet other) reasons, it is possible for several children with identical pure-tone audiograms to differ greatly in ability to use residual hearing and to discriminate speech (Ling, 1976, p. 24-25).

Ling notes that not all pure tone audiograms are reliable; audiograms of children tend to vary from one audiometric test to another for a variety of reasons (Ling and Nash, 1975). Osberger and McGarr (1982) explain that, while the degree of a child's hearing loss is an important variable, this measure alone cannot reliably predict the intelligibility of a child's speech; in fact, it was identified as only a fair predictor. Rather, they explain that it is the ability of the child to make use of the acoustic cues available to him (i.e., to recognize phonemes) that is more closely correlated with speech intelligibility than is level of hearing. This ability is something that is determined not as the result of a single test performed on an infant, but based on the child's response to and development of spoken language over a period of time.

One audiologist from the Sterck School for Deaf children in Delaware explained the widely accepted premise that neither pure-tone measures nor brain-stem testing can provide information that gives a clear prediction about usable hearing and speech until the child is well beyond the age when most children have already acquired language. Even then, tests of perception can be misleading:

While we can get information about reception

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(what the child can detect), we still don't know about perception (what the child can understand) until the child is about 4 years old. In other words, we know something about what sound is getting through, but not what the child will be able to do with it. Even then, a child's ability to identify spoken words is in some cases obscured if that child has an impoverished vocabulary. Many of the tests depend on the child's vocabulary and concept development.

In other words, at the very early ages, when most children's language learning is well underway, it is not technically possible to get an accurate picture of what sounds a deaf child can discriminate (either through behavioral or brain-stem testing), nor how the child's hearing will facilitate speech production and perception. While this fact is typically shared with parents, it is not necessarily incorporated into actual practice when decisions are made about the first language input to be provided to a deaf infant. Incorporating this information into practice would mean ensuring that each deaf child has access to visual language during the period while his or her facility for auditory language is being observed and/or facilitated.

Instead, parents in the U.S. are often encouraged to focus on speech-based approaches first, or are asked to make a choice at a time when the child is still too young to predict later aptitude for hearing and speech. Parents can undergo extreme (and unnecessary) pressure that can break families apart attempting to make a decision that will affect their deaf child's entire future—based on information that many professionals in the fields of speech and hearing agree is insufficient. Current pressures on parents in the U.S. toward choosing—as a first option—efforts to teach speech (or to talk at all times when signing in English word order) are often fueled by the following popular notion that almost all deaf children have residual hearing that could possibly be utilized toward development of speech. For parents, this statement sends a powerful—and often misleading—message: There is a good possibility your child really can hear to some extent. If you do all the "right" things, that child may also speak.

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Hearing or Feeling?

In 1963, speech researchers began to question the concept that usable residual hearing was the norm among Deaf children, according to Arne Risberg, internationally-known speech researcher at Sweden's Royal Institute of Technology. In our interview, Risberg explained his findings, which indicated that the residual hearing philosophy that has shaped much of our thinking (also here in the United States) about deaf children and speech was formed somewhat erroneously on the basis of many children's responses to feeling vibrations—rather than *hearing* sound (Risberg, Algefors, & Boberg, 1975). Their new technology was better able to sort out auditory response vs. tactile response. In other words, in regard to some of the profoundly deaf children, Risberg told me:

If you put the headphone on the ear or if you put it on the stomach that doesn't matter, you still get the same audiogram....If you don't call it hearing when it comes through tactile vibrations in the stomach, I'm not sure we should call it hearing when the same thing happens in the ear. (A. Risberg, personal communication, March 9, 1990).

Many speech and hearing professionals in the United States are familiar with the concept of vibro-tactile "hearing" (Boothroyd and Cawkwell, 1970; Erber, 1972; Nober, 1964). Ling also explains that some children "may actually hear rather than feel sound, but nevertheless may be unable to differentiate sounds auditorily" (1976, p. 290). Even assuming a reliable audiogram can be obtained, Ling explains that these children cannot be diagnosed on the basis of an audiogram. He reiterates that the child's capacity for hearing cannot be evaluated at a single moment in time, but is unveiled gradually. He advises that speech training should be considered as *diagnostic* therapy, noting that our knowledge of what the child can hear is only reliably determined over time during opportunities to observe the child's ability to differentiate speech stimuli through audition.

Despite limitations inherent in our ability to predict, many professionals continue to focus on giving parents hope by

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talking about what residual hearing is there. This well-meaning approach often has the unfortunate effect of stalling parents' efforts to provide deaf children with early access to a complete language they can acquire in a timely way.

I do not suggest we stop this process of discovering what each Deaf child will do with speech input, or even that we wait until the child can comprehend all aspects of speech practice before beginning it (as long as the child finds the process enjoyable). Rather, I suggest that whatever hopes parents attach to this notion of residual hearing be accompanied by a realistic perspective about the real outcomes and costs for even the *most* successful of deaf speakers, and that hopeful advice also be tempered with appropriate alarm that--due to our inability to predict--many children are left with *little or no access to language* during what often becomes a long-term evaluation of their potential for using spoken language.

Many professionals who advise parents of deaf infants in Sweden and Denmark now seem to agree on one major premise: Whatever the infant's level of hearing or future aptitude for speech, the fact that it is even a topic for discussion implies the child's right to early exposure to Sign Language. In other words, if the child's hearing loss was severe enough to be discovered at a young age, the child is very likely to be lacking access to at least some of the spoken signal, rendering speech a deficient language model. In other words, if the child was responding to and developing clear speech "on schedule," the parents and professionals would not even be having this discussion. Rather than setting goals for the infant or toddler that rely on mastery of the thing he or she is failing to achieve through natural processes, the alternative is to give the child a "sure thing" upon which to build. As Stockholm University linguist, Inger Ahlgren states:

Sign Language is no longer regarded as a threat to the normal development of deaf children, but rather the best possible guarantee for normal development (1989, p.1).

Deaf and hard of hearing children live in a world full of

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sounds and speech to which they may or may not have access. Since these auditory attributes are easy to find, efforts in Sweden and Denmark focus on making sure the visual part of this equation (including a language which is completely accessible regardless of hearing levels) is somehow made regularly available in the child's environment. These changes in early approach have gone a long way toward freeing parents to be parents by releasing them from impossible either-or decisions and configuring the environment to let the child's actual behavior guide considerations about language and educational placement.

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