

AN APPROACH TO THE COMMUNICATIVE NEEDS OF THE
VERY YOUNG HEARING IMPAIRED CHILD

by
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The major assignment in this paper has to do with outlining both a realistic and utopian look at the very young child with hearing deficit. The battle line in support of a normalized approach to verbal communication for these children has to do with the fact that these children - the very young hearing impaired children - are no different, model-wise, from the other children with communicative problems. The communications pathologist needs to resolve the communication pathology by basing his habilitative program on the structure of the functional servo-system that the patient brings with him, whether or not the system is totally intact. The patient's anatomical servo-system is the base on which a communications program must be built.

The Concern about the Hearing-Impaired Child

My philosophical conflict is against two well established philosophical approaches in terms of remediation or rehabilitation of the child with a severe hearing loss. These include: (1) the non-oral or non-aural approach of the manual approach to communication for young hearing impaired children, and (2) the multisensory oral-aural approach to the communicative training of such children with limited hearing.

Historically, the early conflicts in the United States over "oralism" versus "manualism" are a result of Thomas Braidwood's reluctance in England to share his oral techniques with Thomas Gallaudet, in the early 1800's. Gallaudet, in turn, was warmly welcomed by the manual French proponent, Abbe' de l'Epee. Gallaudet returned from France in the summer of 1816 with a full portfolio of sign and finger-spelling manual techniques. The first American manual school for the hearing-impaired children opened on April 15, 1817, and was known as the American Asylum for the Deaf (Bender, 1960, 127). The well known confrontation between "manualists" and "oralists" continues to the present day. Babbidge, president of the University of Connecticut, talks about the dedication

of both groups when he reported the following observation: "But these evidences of dedication (to special approaches to deaf education) gave me a vague feeling of uneasiness. I felt as though I were intruding, as though I was peeking through the shuttered windows of someone else's home... And once inside, I felt as though everyone wanted to take me aside and point out the errors of the others. My sleeves were tugged by advocates bent on telling me that all was not well within the mansion and that I as a representative of the outside world should take that message to the authorities." (Babbidge, 1967). Indeed, all is not well within the educational mansion.

There are major cracks in the foundations of the way we as communicologists may be looking at the young hearing impaired child.

Limitations of Established Approaches

Why are we concerned in 1971 with the communication problems of the child with a hearing loss? Consider the following. In April, 1965, the National Advisory Committee on the Education of the Deaf reported the following negative findings (Morton, 1965):

Less than half of the deaf children needing specialized preschool instruction are now receiving it.

The average graduate of a public residential school for the deaf-the closest thing available as "high schools" for deaf-has, in effect, an eighth grade education.

Seniors at Gallaudet College - the nations only college for the deaf - rank close to the bottom in performance on the Graduate Records Examination.

Five-sixths of deaf adults work in manual jobs (in comparison with only one-half of our hearing population).

The committee felt that these frustrations and criticisms at the (Gallaudet) college level can be traced back through the secondary, elementary, and preschool programs, with the primary problem being one of limited knowledge in the language learning process.

Suggestions for Resolution

The Committee (Morton, 1965) made a number of recommendations in order to offset maximally this identified primary

problem. These are as follows:

1. A regular procedure of detection services for early identification of children with limited hearing,
2. Adequate clinical facilities and multi-disciplinary services for diagnosis and evaluation with children with hearing losses,
3. Continuing counseling, guidance and instruction for parents of hearing impaired children,
4. The provision of hearing aids appropriate to kind and degree of hearing impairment to enable the child to make use of any residual hearing, and
5. Programs designed to facilitate language and speech preparation for children - as young as one or two years of age.

These recommendations did not constitute curricular deaf education modifications; they represented in 1965 a new approach with a professional hope that something different could and should be done.

The committee was unable to decide what type of hearing loss should be included in this kind of population. Nor did it reach an agreement on what kinds of programs would be most beneficial. They did conclude that each hearing impaired child was an individual with both talents and limitations.

In its summary report, the Committee concluded that in all types of programs there should be a constant striving for improvement in quality, and there should be an eager receptivity to research findings which could offer hope of more effective educational and communicative techniques.

Why is the Manual Approach Incomplete?

Somehow in our joint field of working with individuals with limited hearing, we seem not yet to have found that ideal system for effective communication which permits an adequate language learning process. The attack is on either the multisensory oral emphasis, the manual approach, or any combination of them. Gallaudet College uses the most eclectic approach possible by combining speech, language of signs and finger-spelling.

Philosophically, the manual method for communicative efficiency may be considered less than ideal for two reasons. First, the method is psychologically restrictive in that it forces the hearing-impaired individual into a "deaf society" with no basis for permissive contact beyond the limits of that mode of communication. If the normal hearing individual cannot fingerspell or sign, and if the manualist cannot use oral language, an effective communicative barrier is evident. Second, in their general and broadly used forms, finger spelling and, especially, sign language do not provide an ideal completeness of language syntax nor an adequate base for abstract language and associated concept development. The result is that many manual communicators reflect a paucity of word or concept meaning beyond the base of singular meaning associated with a word. Consider from our clinic file the following example. A graduate at the top of her class in a residential school for the deaf was unable to interpret the meaning of a duplicating machine manual in one of the University business offices when the manual stated: "When the ink becomes faint, refill the ink supply cartridge." To the office trainee, "faint" meant only that a person becomes unconscious; for ink to "faint," or equally incomprehensible to become "unconscious," was beyond the ability of the trainee within her limited range of definition for the word.

What are the Limitations of an Oral Multi-Sensory Approach?

In terms of a review on the inadequacies of the multi-sensory oral approach, recent research findings suggest marked errors in the basic concepts of a multisensory method. Formerly, it was our belief that if we stimulated the subject at several sensory levels, then something would get through. However, a combined sensory approach of visual, tactile and occasionally auditory, is not going to remain multisensory or resolve the communicative problem.

There are three major problems with so-called multi-sensory "oral" stimulation. Stewart, Pollack, and Downs (1964) summarize the areas of concern effectively.

1. The human system cannot effectively handle several simultaneous sensory stimuli at the same time. The attention factor of human performance to one stimulus and the equally important inhibition of other incoming stimuli will prohibit the individuals effectively using a true multisensory approach with normal-hearing or hearing-impaired children. To

illustrate, Galambos' research (1958) with cats and the mice in a glass bottle demonstrate the mutual interaction of attention and inhibition. In a quiet environment, auditory clicks were presented to the cats; consistent neural responses were graphed. When the mice were introduced into the cats' cages, the neural transmission of auditory responses ceased; when the mice were removed, the auditory responsivity again was apparent on the graphic recorder.

However well integrated they may be neurologically, normal human systems, similarly, may not be able to handle two (or more) sensory inputs at the same time. For example, audiologists frequently report on the number of times their patients close their eyes in the test booth in order to attend better to the auditory signal and inhibit any visual stimulation. This usually happens without any direction from the clinician. Consider, in addition, what happens when a sophisticated subject in an audiological research project really want to hear the signal at 5 dB or at 0 dB levels. What does he do? He closes his eyes in order to better attend to the auditory signal! When he closes his eyes, he cuts out all other stimuli so he can concentrate more effectively on the auditory signals. With yet another example, consider the way in which one listens to classical music. The description may be that of an individual sitting with his eyes closed.

Academically, the information on the reticular formation (Jasper, 1958), suggests that the primary role of the reticular activating system is that of alerting and attending to certain sensory inputs and, conversely, that of inhibiting other sensory inputs. The central arousal system picks out the most important stimulus and tunes out the others.

2. The use of a combined multisensory approach may actually reduce the efficiency of performance. Gaeth (1963) and Graunke (1959) both report findings with normal-hearing and hearing-impaired populations on learning tasks employing visual and/or auditory stimulation. In no instance did the dual-sensory method surpass performance efficiency of either one of the single sensor approaches; and in some cases, performance efficiency was reduced.

3. The most negative facet of a traditional multisensory approach is that if one sensory input system is normal and the second system is non-normal, the individual

will automatically attend to the stronger and more complete stimulus and inhibit the weaker and less complete stimulus pattern. Consider, for example, our young hearing-impaired children with normal vision under a so-called multisensory (visual plus auditory) approach; the thing that actually happens is that this child becomes a uni-sensory-visual type child. Recall Myklebust's discussion of the "visually oriented deaf child" (1954). Consider, further, cases from other centers of the child with excellent speechreading skills and poor auditory skills in spite of a flat 50-60 dB audiogram. Oyer and O'Neill (1961) summarize the problem in the following way: "a great deal of verbal emphasis is placed on a combined approach, but in actual practice, major attention is directed toward the use of only one of the sensory modalities. Auditory training is neglected with the result that lipreading becomes the major therapeutic technique---Aural rehabilitation work should be directed toward the use of this residual hearing and not towards the determination of how well the individual can do without it." The stronger, more normal sensory modality will inhibit the weaker, pathological modality. We have found that with our older hearing-impaired children who have never had amplification, the likelihood of our achieving effective audition for them is low.

Consider also, a related study on sensory deprivation. In 1947, Riesen reported that baby chimpanzees who were deprived of light for the first three months of life did not, subsequently, develop adequate vision. Conversely, a second group were raised in light for three months, then placed in darkness for the next six months, and then returned to a light environment; their visual skills rapidly returned to normal. Sensory stimulation is needed during that critical readiness period for optimal development of the specific sensory system, whether it is normal or non-normal. If a weaker system is allowed to go unstimulated because of the easier reception of another normal sensory system, then retrieval of function at a later time is not likely.

Under the guise of a broad multi-sensory approach to these young children, we may actually be teaching them the handicap of poor audition by rewarding the normal visual sensory modality and permitting the auditory sense to deteriorate from lack of stimulation.

In summary, we need to review recent research findings both within our fields and beyond, and then attempt to reach decisions about the wisdom of a traditional multi-sensory so-called "oral-aural" approach. My reluctant observation is that such an approach defeats the development of an auditorially-oriented child.

Proposal for an Aural Approach

If the manual approach and the oral-multisensory approach lead to restricted and limited communicative skill, what alternative is left? I would propose, for your consideration and evaluation, a so-called "unisensory" or completely aural/auditory approach to building communication skills in young children. Specifically, I am proposing a single sensory stimulation approach; a uni-sensory approach; an auditory uni-sensory approach; an oral-aural uni-sensory approach.

By way of overview, consider the following: "Verbal communication is learned behavior. The learning process starts very early. We have observed neonates attend to and turn their head in the direction of soft, pleasant verbal stimuli. Normal development patterns parallel maturation of the neuromuscular system and development proceeds very rapidly during the first two or three years of life. The baby learns to listen before he learns to talk. He speaks as he hears and what he hears. As learning is at peak rates during the first two or three years of life the importance of the early recognition of deviations from normal patterns of development is obvious" (Hardy, 1967).

What is the uni-sensory approach? Philosophically, the approach is based on the education or reeducation of the hearing sense. The ultimate goal is the successful integration of the child with limited hearing into a normal environment. The child must build a source of information and understanding by the development of an adequate auditory memory. Recall that Myklebust used the term "adequate hearing," he did not specify "normal hearing." (1954, P. 15). Such an aural orientation will tie this child closer to his surrounding world than has ever formerly been the case. "The child must learn to penetrate the space between himself and the formation of a foreground relationship between auditory clues, and by grasping the sound patterns which are concomitant with motion. He must learn to understand what

kind of auditory information is relevant in a given situation and which is not. He must learn to use aural stimuli for improving his language skills and for better understanding of life situations and human relationships. This is a process of integrating hearing into the hearing-impaired child's personality. It is a comprehensive habilitational program for the hearing-impaired infant and his family." (Pollack, 1970, P. 13). The emphasis is on the training of audition.

In addition to Pollack's program in Denver, Gaeth, at the Wayne State University in Detroit has also developed an auditory approach. McConnell, and his staff (Knox, 1968) at the Bill Wilkerson Hearing and Speech Center in Nashville, Tennessee, have also reported a demonstration program in early auditory education. Griffiths, (1967a, 1967b) on the west coast, has a similar program administered by the HEAR Foundation.

Basic Features of an Aural Approach

The four basic principles of such an auditory emphasis program include these:

1. The auditory sense is the most suitable perceptual modality by which a child learns speech and language. It is the only modality that does it in any kind of a "normal" way. In all of the servo-system model discussions of Fairbanks (1954), Carhart (1969), and Myklebust (1954), the "ear" with its "hearing" function constitutes the basic sensory input system.

The proponents of a uni-sensory aural approach talk about "residual hearing" not "hearing loss." The emphasis is not placed on what is gone, auditorially, but what is still remaining and capable of being trained. Basic to this orientation is the understanding that each child with limited hearing is trained with his own wearable amplification. His personalized amplification will provide him with an improved "adequacy" of hearing; aural training is undertaken with consistent amplification as its base.

2. The uni-sensory approach develops the impaired hearing modality to its fullest by focusing the attention of the child on audition.

3. The uni-sensory approach must be one which has applicability to the very young child. Ideally, the child

would begin such a problem around six months of age. Realistically, the primary readiness stages for speech and oral language occur within the first two years, not at age three or five or six, but very young (Hardy, 1967).

4. Normalcy of environmental contacts at all levels are necessary if such an approach is to succeed. There is no grouping of hearing-impaired children when they reach nursery school age; they are placed in "normal" environments so they can take advantage of the normal language stimulation from their normal-hearing peers.

Guidelines of an Aural Approach

The following eight acoupedic guidelines provide a resume of the approach:

1. The early detection of the hearing impairment is necessary.

2. The early fitting of a hearing aid is necessary in order to provide a consistent signal for the child as he attempts to work his way through his servo-system. The auditory trainers are discarded once the child has his personalized amplification. It is this consistent signal from the hearing aid on which he must build his auditory world. Whether the child is in the classroom, on the street with his father, or at grandmother's house, he must have a consistent signal of aural patterns on which to build.

3. The development of hearing perception into the personality of the child is paramount. There is no teaching of speechreading; such a visual stimulation violates the single sensory input emphasis which is basic to the approach.

4. A normal learning environment is provided for the child. Such a atmosphere is created to in which the child is bathed in sound; all training is done within the meaningful context of the child's daily activities.

5. The use of an adequate auditory feedback mechanism is essential. The normalcy route of the basic Fairbanks' servo-system is employed.

6. The development of oral language follows normal patterns. Basic to the approach is a rich input period prior to the output period.

7. The parents are first models of communication; they are the primary teachers.

8. Individualized and normal teaching is provided for each child. Normal behavioral interaction from normal contact in normal school situations is desirable. Stone, Fiedler, and Fine (1961) reported on two groups of children with limited hearing who received alternative types of early educational programs. One group was placed in a traditional multi-sensory oral deaf preschool educational program, and the other group was split up and placed in regular preschool programs. These authors found that the children in the integrated program had better speech production, better auditory perception, better personality development and better academic progress even though they were a year younger than their matched group in the traditional deaf preschool educational program.

To the uni-sensory proponents, hearing age dates from the day of fitting of the amplification. From this period, consistency of signal occurs so that the receptor segment is able to identify and transmit consistent signals to the brain. Pollack (1967) and Griffiths (1967b) consider the first year of audition as that time period of a readiness to listen. Parents do not ask normal hearing babies under one year of age to volitionally talk back to them in terms of reproducing input signals. The normal hearing child needs that first year for both auditory and neurological maturation. At the end of the first year, a normal hearing child usually has two or three identified output symbols. Similarly, the hearing-impaired child will need a time period for auditory input.

The second year of linguistic development for the normal-hearing child becomes the readiness to talk period. Pollack (1970, P. 191) reviews the normal progression of speech output as she has proposed it for a training program for the child with limited hearing.

The purpose of this review has been only to propose a fresh or renewed interest on the part of professionals in looking at hearing impaired children from a truly aural point of view. The uni-sensory approach to true aural habilitation is dependent on very early identification, very early parental guidance, very early amplification, and total exposure to

normal language stimulation. Such a program may be the key to near "normalcy" for the majority of our children with limited hearing. If such a realistic program could be developed for more very young children with limited hearing, then the school years now spent on educational rehabilitation could be spent more rewardingly on enriching the children's auditory world. Perhaps the sweeping criticisms raised by the National Advisory Committee on the Education of the Deaf would be answered positively. Perhaps, too, our limited knowledge in the language learning process in the hearing impaired child would become less limited.

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