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The Speech Correctionist On The Cerebral Palsy Team

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ABOVE AND BEYOND sheer mechanics, speech is a warm, revealing act directed toward others about ourselves. Through speech we relate that which is inside to that which is outside.

Oral communication as a means of self expression in social situations is even more important to the cerebral palsied child than it is to the normal child. Obviously, the cerebral palsied child is limited in expression through games, athletics, dancing, and hobbies requiring finely coordinated movements. Speech, when and if the cerebral palsied child may acquire it with even moderate skill, becomes a means of self expression, the value of which cannot be overestimated.

The cerebral palsied child as a speech defective presents, then, a complex individual with impaired motor-sensory equipment, whose desire and need for intelligible speech is even greater than that found in the normal child. From 60% to 70% of these children need speech re-education. Perhaps 10% of this group receive the extended training necessary for the development of minimum speech intelligibility.

I

Speech corrective work with cerebral palsied children should be approached with a great deal of humility for at least three reasons:

1. The palsied child may present complications above and beyond the articulatory deviations commonly associated with cerebral palsy. The child as we see him may be aphasic, hard of hearing, a stutterer, or be defective in vision as a result of the injury which caused the palsy or as a result of later injuries or disease. All of these added complications should be considered by a suitable team consisting of at least a physician, a psychologist, a physical therapist, a teacher, and a speech correctionist, prior to and during speech training.

2. We have almost no objective research related to speech training with cerebral palsied children. We carry over on empirical bases much from our knowledge of working with other articulatory, phonotory, and rhythm disorders. We know, for example, that the normal speech-retarded child learns under a regimen of ample stimulation with speech sounds, and motivation. A considerable amount of tension exists, and should exist in such a learning situation. These assumptions immediately break down when we work with the athetoid child. Given more stimulation and motivation than he can react to, he delivers, not well-formed speech, but an 'explosion' almost as intense as that set off by the slammed door or the photographer's flash bulb. Thus, by using techniques suitable with other speech defectives, we may defeat our purpose in working with athetoids.

3. As suggested above, each category of cerebral palsy requires a different approach, and each child within that category requires modifications in technique. Whereas the athetoid

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child may not benefit by a high degree of straightforward stimulation and motivation, the ataxic child usually reacts favorably to such an approach, especially if the speech defect is slight. Generalizations are dangerous, but usually the spastic child falls between the athetoid and the ataxic as regards stimulation and motivation.

In brief, the cerebral palsied child presents a more complicated problem than most speech defectives because we must be alert to concomitant effects, such as articulation defects plus stuttering plus aphasia. Injury of the lower motor neurons does not exclude the possibility of injury elsewhere. The speech pattern of one cerebral palsied child may cause one to reflect again upon the theories of Head, Travis, and others.

We have very little research or even knowledge based upon logic which applies directly to speech work with cerebral palsied children. Finally, based upon what knowledge we have, the approach to each child must be carefully formulated in terms of the type of cerebral palsy and the particular child we have in front of us.

II

After the brief analysis and words of caution stated above, it is necessary and desirable to generalize and speak of the work done at Hillside House in direct practical terms. Some of these ideas are those of the author and no one else should be blamed if they seem impractical.

1. *Relaxation* is the cornerstone of all of our speech work. Ideally, the child should be given speech training following a session with the physical therapist. When this is not possible, the speech correctionist will relax the child in keeping with instructions from the physical therapist, or by techniques which in no way conflict with proper medical or physical therapy practices for that child. In practically all cases, the child will begin his work in a reclining position. 'Work' is hardly the word, as the attitude 'easy does it' is basic to all speech training with cerebral palsied children. Time must be allowed for spasms to subside. With relatively mature children, this is a suitable period for reviewing the aims and objectives of the last lesson, and for previewing those for the day. With young children, pleasant, easy going chatter about the trip out to the school, or about some coming event may reduce the waiting time.

2. *Easy, on-flowing vocalization* under relaxation is the next step. This varies with the child. With an athetoid child this may consist of easy repetition of a syllable such as 'pa-pa-pa-pa.' Quiet emphasis is given to 'speaking with the mouth only.' The child will frequently catch himself making extraneous movements. If good rapport and attitudes have been established, he will laugh at his insight and willingly begin over again.

The number of syllables made without extraneous movement should be recorded. When progress is noticed, the child should be so informed. Care must be exercised to insure that the child does not develop tension and anxiety as he gradually achieves success.

With the spastic child, one will more frequently work toward vocalization of a single vowel sound, for example, 'ah——,' than with repeated syllables. When this technique is used, a stopwatch serves to time the period of extended vocalization. The time is recorded and improvement noted in the record and to the child.

3. *Exercise on individual speech sounds* follows directly after step two. Tongue and lip exercises are deemphasized. In the opinion of the writer, the peripheral speech mechanism can be exercised directly with speech sounds without recourse to the usual repetoire of artificial exercises so often proposed. To adapt this point of view requires some ingenuity in developing drills to the end of exaggerating sufficiently and repeating frequently speech sounds.

By way of example, the vowel diagram presents a perfect base for exercise and speech sound development. The vowel diagram represents a visual aid which most children can understand and use, with the speech correctionist's aid, in self instruction. With older children the phonetic symbols may be used to advantage. Further, as the child 'goes around the diagram' he approaches kinesthetically insight as to minor differences in vowel production. Specifically, we may begin on the exercise basis, going from the extreme of 'ēē' to 'ōō' to 'ah.' The child looks at a large vowel diagram during the exercise. Then, the child may work from 'ēē' to 'ĭ' to 'eh' with the aim in mind of producing 'ĭ' as an intermediate position vowel which to date he has not produced. Kinesthetic and visual assistance are added to the speech sound stimulation normally used by the speech correctionist. Lip movements will be copied, or an attempt will be made to copy them if the child's eyes are directed to the lips of the correctionist.

Consonant sounds may be developed in much the same way as vowel sounds. In working towards the production of 'k,' it may be necessary to work from 'th' (unvoiced) to 't' to 'k.' Later the transition is made to 'thin,' 'tin,' 'kin.'

4. *Simple non-sense syllables and words* are next in order, with emphasis on combining consonants that are easy for the child with the vowels in the diagram. The 'ēē,' 'ōō,' 'ah' become 'bee,' 'boo,' 'bah,' and later 'beeb,' 'boob,' 'bŏb.' Following the use of extremes in the diagram, the consonants may be combined with closely related sounds (phonemes) as in 'tea,' 'tĭ,' 'tay,' 'teh,' 'ta,' to develop a sense of the fine differences in speech sound production.

5. *More difficult words and sentences* spoken slowly constitute the next step in development. 'Easy does it' is still the basis for work. The cerebral palsied child should always speak slowly during training, and in most cases should be taught that he must speak slowly after the training period is completed. Intelligibility is a primary goal. Better to always speak slowly than to be misunderstood. With most children 140 to 145 words per minute may well be considered a maximum even in the later stages of training.

6. *Transfer of learning* must be accomplished before the speech correctionist's job is completed. Up to this point all work has been accomplished during relaxation, usually with the child reclining. In most cases, a minimum of one full year of speech training will have been given. In some cases, many years of work will have been necessary.

Now the child will be taught to speak, still relaxed, in a sitting, then in a standing position. This period, during which learning is transferred, is critical. Much of what can be accomplished is a direct result of the effects of medical attention, physical therapy, and occupational therapy.

7. *The mental hygiene aspects* of speech correction should be kept in mind at all times. Any individual who is seriously handicapped in oral communication achieves great satisfaction from improvement therein. Even 'h' for 'yes,' 'abee' for 'maybe' adds significantly to refinement of emotional expression. For this reason, the writer believes that all cerebral palsied children capable of producing speech sounds should have at least a minimum of speech training. Even the cases with little hope are 'in the group' when they receive training of any kind.

Frequently children gain the impression that they will learn to speak effectively in a short period of time. Emphasis must be placed upon the pleasure arising from the task, and upon small gains, rather than upon false hopes arising from stating periods that will elapse before improvement can be shown.

Good rapport usually develops easily and is to be encouraged. The cerebral palsied child needs warmth and affection and it need not be denied him. However, the speech correctionist often spends so much time with a child that a rather strong 'transference' effect may inevitably develop, as it may with the child and the physical therapist and the occupational therapist. When 'transference' develops, it must be attenuated, especially when the worker plans to leave the child. When a psychiatrist is a member of the team, he may contribute a great deal by directing and controlling all of the mental hygiene aspects of the training program.

8. *Finally, methods, set-backs, and improvements* should be recorded in writing, and, when practicable, on phonograph recordings. Workers come and go, but the child frequently remains. In order to give continuity to the training program, the speech correctionist must know both the methods and accomplishments of his predecessor.

None of the objectives outlined above need conflict with those of the physician, the psychologist, the teacher, the physical therapist, the occupational therapist, or other members of the 'cerebral palsy team.' When specific methods may not be suitable for a given individual, the program for that child must be rationalized through conferences with the team as a whole.

WHAT IS THE 'UNSCIENTIFIC' METHOD?

Can *science* tell man what direction he should go? Yes, if man will tell scientists where he wants to go. *Should* man then do what he collectively *wants* to do? Assuredly, unless you wish to set up a higher source of wisdom and authority than man's collective experience through the ages, interpreted and supplemented by the reliable prediction of scientists as to the costs and consequences of different possible courses of action. To declare under these circumstances that man *ought to want* something else than what he does want is merely a semantic trick by which the speakers seek to invoke "ethical principles" derived from some source outside of nature, in support of what he himself wants man to want. This is also the answer to those who claim that the universities are shirking their responsibility if they do not tell man what he should want. Those who presume to set up such higher authority above and beyond the most competent appraisal of man's experience should equip themselves with more convincing credentials than they now possess, if they wish to avoid the suspicion that they are merely setting up themselves as the authority which they claim to derive from authorities outside of nature or of experience.

From *Can Science Save Us?* by George A. Lundberg. (Longmans, Green, 1947.) Page 101.