ELIMINATION OF SPEECH AND VOICE DEFECTS.*

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Permanent elimination of speech and voice defects, or speech and voice recovery, rests upon perfect co-ordination of the speech and voice apparatus, diaphragmatic breathing and absolute mind-control.

The entire speech and voice machinery of the speech defective is in a state of chaos. Similar to an engine running wild, lacking the guiding, controlling hand, will and mind of the skillful engineer.

Stuttering and stammering—I use this double term advisedly and refer you to my article in the *Cleveland Medical Journal*, December, 1911, presenting in detail the classification of each, and my reasons for so doing,—does not come from malformation of the organs, but from a wrong activity of the organs. Whatever mystery there is about stuttering and stammering comes from a lack of knowledge of physiology and psychology of speech, and also from not knowing just what *are* the wrong conditions, the wrong positions, and the wrong movements during the activity of the organs concerned. In spite of what is claimed to be known of speech, of its visibility, etc., it cannot be seen and we know not for certainty just what takes place during the speech act. The speech machinery in normal activity cannot be seen until some non-interfering way is discovered of illuminating the parts. The laryngoscope in use makes normal speech and even normal phonation impossible, so that it is of little use in solving the problems confronting the speech specialist; for speech defects are caused by the interfering action of certain muscles set into activity by wrong speech concept, or by abnormal or subnormal conditions arising from imperfect co-ordination. It may also be defined as a conflict between the voluntary and involuntary systems—using the word “System” as including the various specific systems as differentiated by medical authorities.

The way a child learns to talk is the way the speech defective must learn to talk, if he is ever to reach permanent normal speech. The brain centers and the nerve centers must be permitted to do their work uninterfered with by any conscious effort on the part of the speech sufferer.

*Read before the Section on Ophthalmology and Oto-Laryngology of the Cleveland Academy of Medicine, September 14, 1914.

Peripheral effort must be stopped: Phonation is just as much an involuntary act as deglutition. If one should set out to control the swallowing of food or drink by attempting to work a particular muscle disconnected from its associate muscles, he would fall into trouble, but his attempt would be no more fruitless and foolish than the attempt of the stutterer and stammerer to control his speaking by a similar effort.

The first step, then, is to form a right speech concept, to *know* definitely and clearly the process of speech control. In none of man's other functions is there greater proof that "mind is master of matter."

From now on, the character of the speech process and habit will be gradually reversed. Mentalizing more and mechanicalizing less.

I have made five divisions to my present plan of elimination: 1. Training speech muscles through sense of touch at speech points of contact. 2. The elimination of the monotone through inflection. 3. Diaphragmatic breath-control to eliminate throat clutch. 4. The short phrase to eliminate rapid continuous speech and to prevent the possibility of talking on a breath exhaust. 5. Permanency of new speech-habits through reading aloud and conversation.

Training speech muscles: Our work of speech reconstruction will begin with letters, then words and afterwards phrases.

I give my pupils each letter of the alphabet to make, so that I may observe how *they* make them. We find an overwhelming sympathetic muscular activity. For example: In making the "B" (a labial) which should be made with a delicate touch, or meeting of the lips, and the contact broken as quickly as possible, we find the entire power of jaw, lips, tongue and throat involved in its production.

A classification of the consonant is now presented. The linguals, L, N, D, T, S, soft C, made with the tongue—just the tip of the tongue delicately touching the hard palate as near the teeth as possible, with jaw, lips and throat in repose. The labials, M, P, B, W, made with the lips daintily and delicately touching each other, with jaw, tongue and throat in repose. The gutturals, K, Q, G, and hard C, made in throat, with lips, jaw and tongue, maintained in absolute non-activity and repose. The same exacting discipline and training is employed on the dento-labials F and V; Dento-linguals, Th; and aspirate, etc.

From now on, each speech-part involved (in making such classification) must act independently and without sympathetic action of the other parts.

Hitherto the speech defective has been in bondage to the consonants. The vowels have been slighted. In our next progressive step of elimination, the study of words, we shall reverse this. He will now slight the consonants and linger or raise on the vowels. The vowels are the melody or song of the words. In them lie not only the beauty and power of speech, but his safety.

In word-study I introduce one of the most revolutionary factors of elimination, viz: inflection and natural accents of words. When formulating my plan of elimination, I found the more I safe-guarded the pupil's work with symbols or markings of a distinctive character to represent the principles to be used, to simplify the technical phase, the more completely could they concentrate the mind on the sensations of touch of lips, teeth, tongue and throat, etc., thereby increasing the efficiency and quality of the work.

The complicated and numerous markings of the etymologists in emphasis and inflection I found too cumbersome. My classification of words must be as simple as possible. I call the word with one syllable, the inflected word. The word with two or more syllables, the accented word. Over the inflected word, I use a large V, over the accented word an inverted V, and smaller inverted v's one to each syllable. This also develops smoothness and perfection of syllabic development, mentally and in utterance. These help wonderfully in establishing deliberation and poise, and rhythmic flow, eliminating the irregular, jerky, spasmodic banging together of syllables and words, against each other.

People generally would be greatly benefited in their speech if they would take a course of such training and discipline. As a people, we should be ashamed of our speech and our speaking-voices. The same slovenliness, lack of interest and ignorance, would not be tolerated in anything else. George Eliot in commenting on English as spoken, said: "They have a pronunciation that crushes out all color from the vowels, and jams them between jostling consonants." "Language is the tool by which all knowledge is acquired," says Dr. Berle.

Breathing: Full, deep, diaphragmatic breathing is of the utmost importance to the speech defectives. This must be established to relieve the vocal cords of the imposition of breath-control and inevitable throat clutch.

Exercise: Stand erect, chest high and active, while taking in breath, expand at the waist with diaphragmatic muscles, hold the latter tightly while counting 20, slowly increase gradually to 40. The full, tight sensation in the throat at first experienced during this ex-

ercise, will pass away when the diaphragm muscles have become accustomed to their work—leaving the throat free and untrammelled.

The Monotone: Webster's unabridged definition of speech is, "A going up and down in the voice." Perhaps the most common and the largest contributing cause of all speech-defects is the monotone, yet strange to say all of the so-called guaranteed-to-cure systems of stammering schools are based upon this very defect, thereby intensifying the stammerer's condition and making him more helpless and hopeless. He cannot raise above the tone of pitch upon which he starts because of the cramped, fixed condition of the vocal cords; hence the enforced monotone.

The permanency of our new speech-habits is established through reading aloud and conversation. We have several links yet to add before we introduce conversation as the final factor in elimination.

1. Phrase analysis. Where to raise voice; where to rest voice; where to breathe. Speech-figures will be a help in deciding on which words to raise—nouns, verbs, adjectives, etc. For the want of a better term, I refer to this group as mind measurement of phrases. 2. Reading aloud with markings; reading aloud without markings; the necessity for reading aloud.

Hitherto, our principles have been studied separately. Our next step is to blend them in actual speech. To go directly into conversation at this stage would defeat our purpose. The pupil has not become familiar enough with his new speech-principles to allow mental diversion. In reading, the thoughts and words are chosen for him, enabling him to focus his entire mental concentration on his markings. He cannot now go astray. Every phrase will be perfect. This will be continued until smoothness, freedom, poise and confidence are established. Conversation antiphonally will be the beginning of the end.

Treatment of small children: It is altogether unnecessary to allow a small child to drift into a fixed habitual speech-defective condition because it has not reached the reading stage. My plan with 4, 5 and 6 year-olds proves satisfactorily. I work through picture-books and ask them to repeat after me whatever we see, and mark them in a similar way on the large card shown.

I insist, of course, that the mother, (or some one who is with the child at home) comes with the child and thoroughly understands the work to be done at home, so that in her conversations with him she uses whatever instructions may have been given to correct sluggish, awkward or weak muscles, etc., of the tongue, lips or throat.

"Precepts and rules are repulsive to a child, but happy illustration winneth him," says Tupper. To bring about exaggerated use of subnormal conditions, which the majority of small children's conditions are, I give an exercise, the appearance of a game; thus working at *the cause* unconsciously, through producing sounds rather than speech.

The value of all the practical work lies *not* in the knowledge of it, but in daily application until incorporated into new speech-habits. The question always asked, "How long will it take to cure me permanently?" will depend upon the responsiveness of the abnormal speech-conditions, on the pupil's industry, patience and perseverance. No other branch of pedagogy is compelled to change the habits of from five to fifty years' standing which are becoming daily and hourly more firmly fixed. Add to this difficulty the varied conditions and need of each individual, which demand complete mental concentration of teacher and pupil. *Therefore, treatment not founded upon this individualistic basis with adults must logically fail.*

Inflection: Hitherto, the vowels have been slighted, the consonants made too prominent and exaggerated unnecessarily and disastrously. This will now be reversed. Raise and linger on the vowels; the consonants should be daintily touched and left quickly to get to the vowels, the song and melody of the word. "Take care of the consonants and the vowels will take care of themselves." This will prove to be the most interesting work in the entire therapy of elimination.

Make the strong words carry the meaning and the unimportant words no more than they should have. I refer to the strong words as sense bearers.

This subject is one of the most vital of all. Time forbids further development.

Direct tone work: The three exercises for direct tone cannot be used safely where there is vocal derangement. Such must first be treated with indirect tone work, so delicate and varied in its scope and need it could hardly be presented here. A jack-knife in the hands of a small boy is not a good working-combination. The knowledge to use a tool is of more consequence than the possession of the tool.

The speech-specialist must be a *voice-specialist too*. He must know the principles and experiences of the use and preservation of the singing voice. Without this complete knowledge and experience it is impossible to eliminate all imperfections of voice and speech.

A boy, 11 years of age, came to us recently. He both stammered and stuttered. After a few lessons I discovered his speech trouble was caused by weak vocal cords through mouth-breathing—congenital adenoids. His cords would phonate only through force in the highest register.

The adenoids had been removed one year before. The operating physician insisted the voice and speech-trouble would pass away. The parents wisely saw the boy was gradually becoming worse and needed assistance. Many physicians do not seem to realize that custom and habit are as difficult to fight as disease. After the boy's voice had been made strong by suitable exercises and nose-breathing established it required but a few weeks to change his speech-difficulty through inflection, short phrases and avoidance of talking on exhausted breath.

Larynx: The position of the larynx must not be omitted as a factor in speech-freedom. Its low position will add resonance, good tone, and quality to the voice and prevent crowding the base of the tongue. The efforts of the stutterer and stammerer to speak, have made the up-pulling muscles overwhelmingly strong and the down-pulling too weak to act. In our student days the late Emilio Belari rightly insisted on the position of the larynx as being of the utmost importance to the development of the singing and speaking voice.

So much has been written and said about speech-defects that voice-defects have been overlooked. Weakened vocal cords make inflection, on which so much depends, an impossibility, and the monotone a certainty—and derangement of laryngeal muscles are responsible for much of the trouble which cannot be reached through the articulating machinery.

Temperament: We have hitherto dealt only with the process of defective elimination. It is just as important to take into consideration the individuality and personality, the capacity for mental concentration, and the industry and patience of the stutterer and stammerer. These traits are as varied as the speech-defects and upon the skill and tact used in handling them depends the success as largely as upon the solution of speech problems.

Nervousness is not a cause of speech- and voice-defects, else why should they become self-possessed, calm and confident when speech freedom is gained? Nervousness is a by-product of stuttering and stammering.

Did time permit, I would like to go into detail relative to interesting cases of sub-normal speech- and voice-conditions sent to me re-

cently by Dr. Kerr, Dr. Howard, Dr. Cogan and Dr. Abbott. One of the most remarkable cases I have ever had was the one sent by Dr. Abbott—a young man 17 years of age. A Boston physician and surgeon had told the mother that the boy was born without vocal cords. When I had done all I could for him the young man's brother told me he almost yelled the roof off the Lennox Building while under the influence of an anesthetic. This vocal development had been produced in eight months of daily work.

Lalaphobia: The speech-defective acquires many other defects of speaking and thinking. He may indistinctly and hurriedly develop a weak and husky voice. He may develop so much timidity or bashfulness that he becomes a sadden recluse or a startling combination of verbosity with awful grimaces. His power of attention and his readiness of thought are frequently seriously affected through multiple thought, word substitution and use of synonyms. For each of these defects there are methods of cure as precise and reliable as the melody cure.

In conclusion I cannot say too emphatically that class-work in stammering-schools always ends in failure and disappointment. They teach only tricks of waving hands or arms, snapping fingers and sing-songing the words on a monotone. Permanent speech freedom can be established in every case only through individual study and treatment.

214 Permanent Building.

New, Double Self-retaining Nasal Speculum. MAX UNGER.
Jour. A. M. A., May 16, 1914.

Unger describes and illustrates what he calls an "ideal speculum." It is made of spring wire and consists of two pairs of fenestrated blades, one pair for each nostril. The whole speculum is about 3 inches wide and about $2\frac{1}{2}$ inches high. It is small, simple and complete in dilating both the nostrils at the same time, in staying in place, and in not interfering with the operator. He says that the time of a submucous resection operation is shortened one-quarter by its use.