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**An annotated bibliography of the material on stuttering written by
American authorities and published in American periodicals,
1925-1950**

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AN ANNOTATED BIBLIOGRAPHY OF THE MATERIAL ON STUTTERING
WRITTEN BY AMERICAN AUTHORITIES AND
PUBLISHED IN AMERICAN PERIODICALS
1925 - 1950

A Thesis
Presented to
the Faculty of the Department of Speech
College of the Pacific

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

by
Dorothy Brenton Van Camp
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PREFACE

The purpose of this compilation is to gather into one place reviews of all of the material written on stuttering by American authorities and published in American periodicals for the period 1925-1950. The year 1925 was chosen because it was then that speech correction was really recognized, and the first organization of people interested in such work was founded.

Many of the reviews have been copied, especially when the periodicals in which they were published were not available to the writer. In each case credit has been given to the one doing the reviewing and to the periodical in which the review appeared. When the writer has chosen only part of a published review, that fact, also, is noted. In some cases neither the periodical in which the article appeared nor a review of that article was available. Such articles have been listed separately at the ends of chapters II and III.

This bibliography is merely a compilation. No attempt has been made to classify the reviews contained herein except by the type of periodicals in which the articles appear. Neither is any attempt made at correlation between the reviews; they are merely listed alphabetically by author in each division. Judgement as to the value of

the contribution made by each article is withheld. When such judgement has been expressed in a review which is copied, it is omitted from this compilation. The object of gathering these reviews into one place is to make it possible for anyone interested in this area of speech correction to ascertain what has been published and where he may find it, not to judge the value of the material for him.

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CHAPTER I

A BRIEF HISTORY OF THE PROBLEM OF STUTTERING

Although "The Indians Have No Word for It,"¹ and probably the Hottentots and African Bushmen have none either, the ancient Egyptians did have a hieroglyph for "stuttering,"² and a cuneiform prayer for deliverance from a "thick and faltering tongue" has come to light.³ These facts lead to the conclusion that stuttering has plagued the human race whenever and wherever an advanced degree of civilization has developed. Since the disorder has been known from "the time whereof the memory of man runneth not to the contrary,"⁴ it is no wonder that theories regarding its etiology and many suggestions for therapy have developed.

Although the Egyptians had a word, there is no available evidence that they had anything else for it. Seemingly, it remained for the ancient Greeks and Romans to propound theories and therapies.

¹ Wendell Johnson, "The Indians Have No Word for It," Quarterly Journal of Speech, 30:456, 1944.

² J. Schuyler, "What is Known about Stuttering," American Mercury, 63:337, September, 1946.

³ Charles Van Riper, "Do You Stutter," Atlantic Monthly, 164:601, November, 1939.

⁴ Sir William Blackstone, from John Bartlett, Familiar Quotations, Boston: Little-Brown and Company, 1939, p. 248.

Hippocrates (c.450-357 B.C.), the father of medicine, claimed that stuttering was caused by too much black bile in the system,⁵ and he recommended the use of healing oils on the neck and throat.⁶ He claimed, also, that stutters were plagued by a chronic diarrhea, not of words, and he recommended treatment that resulted in ulcers rather than in cures.⁷ But even before the time of Hippocrates, Heroditus records, a Pythian priestess recommended that Battos, son of Polynnestos, migrate to Lybia to cure his stuttering.⁸ Aristotle (c.384-322 B.C.) apparently gave the earliest description of the symptoms of stuttering when he wrote, "Stammering is due to the dropping of some letters or syllables . . . due to want of power; for the tongue is not an efficient servant of the intelligence."⁹ His claim that this inefficiency was brought about by the faulty structure of the tongue was adhered to

⁵ Schuyler, loc. cit.

⁶ James S. Greene, "Functional Speech and Voice Disorders," Journal of Nervous and Mental Diseases, 95:299, January-June, 1942.

⁷ G. M. Klingbeil, "The Historical Background of the Modern Speech Clinic," Journal of Speech Disorders, 4:115, June, 1939.

⁸ Charles Van Riper, Speech Correction Principles and Methods, New York: Prentice-Hall, Inc., 1947, p. 316.

⁹ Aristotle, Problemata VII, Book XII, quoted by Lucille Schoolfield, "The Development of Speech Correction in America in the Nineteenth Century," Quarterly Journal of Speech, 24: 102, February, 1938.

for some two thousand years.¹⁰ About the same time that Aristotle was trying to describe the defect and locate a cause for it, a Greek actor named Satyrus was working with Demosthenes. According to Demetrius and Cicero, Demosthenes spent months training his voice, using a looking glass during his vocal exercises, and applying every power of the will to the conquest of his speech defects, the pebble being but an incidental part of the treatment.¹¹ The Roman Celsus (c.42 B.C.-37 A.D.) offered no etiological theory, but he suggested a most interesting course of treatment consisting of massaging the tongue and throat with pungent ointments, eating mustard, garlic, onions, and horseradish, vomiting, washing the head in cold water, practicing articulation, performing physical and respiratory exercises, and economizing on breath during speech.¹² And Galen (121-201 A.D.) cauterized the tongue¹³ and recommended the cutting of the nerve of the afflicted part, although there is no record that he actually performed the operation.¹⁴ By

¹⁰ Wendell Johnson, "Tongues That Learn to Stumble," Hygeia, 19:416, May 1941.

¹¹ S. O. L. Fetter, Speech and Its Defects, 1882, p. 41, quoted by Schoolfield, op. cit., p. 103.

¹² Klingbell, loc. cit.; Greene, loc. cit.; Schuyler, loc. cit.

¹³ Greene, op. cit., p. 301; Klingbell, op. cit., p. 116.

¹⁴ Gray Burdin, "The Surgical Treatment of Stammering 1840-1842," Journal of Speech Disorders, 5:43, March 1940.

the time that Augustus Caesar (63 B.C.-140 A.D.) ruled the Roman Empire, articles on stuttering were appearing in both Greek and Roman literature, and even then the authorities were not in agreement.¹⁵

So much for the ancients! The stutterer continued to be one of the great horde of handicapped people and

During the Middle Ages, handicapped individuals were given the right to live. But they were made fools and jesters. They were kept alive to bolster the egos of those in power. The handicapped person had the right to life but was denied the benefits of life. Later, as the teachings of the great religions spread the concept of the immortal soul, additional consideration was given to the handicapped. Under the impact of religious teaching and aided somewhat by a growing science of education, the first organized work for the handicapped was begun in the thirteenth century. Since that time church, education, and government have led in the insistence that the handicapped not only have a right to live but also have a right to protection and assistance.¹⁶

However, no significant contributions to the study of the handicap of stuttering were made for the next eighteen centuries.¹⁷

Such contributions as were made during all those centuries were of no great importance since they added nothing new in the realm of therapy. For example, Avicenna (980-1037), court physician in Arabia, in addition to blaming the tongue for the disorder,

¹⁵ Van Riper, "Do You Stutter?" p. 601.

¹⁶ Clarence T. Simon, "Speech Correction," English Journal, 34:142, 1945.

¹⁷ Greene. loc. cit.

held that brain or nerve lesion or spasm of the glottis could be the cause. But he still recommended only deep breathing as a therapy.¹⁸ Dr. Guy Chauliac, French surgeon to three Popes at Avignon, added the idea that too much moisture in the nerves or muscles, in addition to the affection of the tongue, might be responsible, but he, too, offered no new therapy.¹⁹ The Italian, Hieronymus Mercuriolis, (1530-1616) agreed that moisture, though not of the nerve or muscles but of the tongue or brain, might be responsible, but on the other hand, excessive dryness was just as apt to be.²⁰ He did add, however, that accidental stuttering might be caused by sudden or strong emotion which would upset the whole nervous system. This bit of theory, had it been pushed further, might have revolutionized the approach to the subject. It was a definite addition to the thinking of that period, in spite of the fact that the only therapy he suggested was the use of body and voice exercises and the avoidance of the use of alcohol.²¹ Sir Francis Bacon, on the other hand, recommended the use of wine in the treatment as he held that stuttering was due to refrigeration

¹⁸ Klingbell, loc. cit.

¹⁹ Loc. Cit.

²⁰ Loc. cit.

²¹ Alfred Appelt, Stammering and Its Permanent Cure, New York: E. P. Dutton, 1930, p. 14.

of the tongue and that wine was a warming agent.²² When, in 1608 Fabricus Hildamus treated his brother by cutting the frenum,²³ he was merely acting on the therapy advocated by Aetius of Amida, a sixth century physician to the court of Justinian of Byzantium.²⁴ During the latter part of the seventeenth century Johann Hahn and G. B. Morgagni blamed the hyoid bone for stuttering, but just what they advised doing about it is not clear.²⁵ About the same time that Hahn and Morgagni were blaming the hyoid bone, Johann Konrad Amman, a Swiss physician, claimed that stuttering was merely a vicious habit, but his therapy still dealt with the tongue.²⁶

During the eighteenth century, interest in the study of stuttering was expanded and advanced. Kustner, in 1716, still blamed the tongue,²⁷ but he brought out the first well

²² C. S. Bluemel, "Stammering as an Impediment of Thought," Journal of the American Medical Association, 96:1846, May 30, 1931.

²³ Burdin, loc. cit.

²⁴ Klingbeil, loc. cit.

²⁵ Loc. cit.

²⁶ Van Riper, Speech Correction Principles and Methods, p. 317.

²⁷ Klingbeil, loc. cit.

defined theory dealing with the weakened speech mechanism.²⁸ Sauvage (1771) placed his emphasis not upon malformation of the tongue but upon a weakened condition of the root of that organ, the soft palate, and the uvula and the immobility consequent upon such weakness.²⁹ These ideas, however, were no different from those already accepted; the blame was still laid on the speech mechanism.

Finally, men really began to search for reasons, other than malformation, for the speech mechanism's failure to perform. Moses Mendelssohn (1729-1786) was perhaps the first of this group. His belief was that the failure to function arose when there was a conflict between many ideas flowing from the brain simultaneously. He recommended as treatment reading aloud slowly with succeeding words covered until the time arrived for them to be read.³⁰ Erasmus Darwin (1731-1802), an English physician, stressed the fact that sensation or emotion, such as awe or bashfulness, caused interrupted association of the organs of speech, and he advocated constant practice on the difficult sounds with much softening of initial

²⁸ E. B. Twitmeyer, "Stammering in Relation to Hemo-Respiratory Factors," Quarterly Journal of Speech, 16:247, June, 1930.

²⁹ Appelt. loc. cit.

³⁰ Van Riper, loc. cit.

consonants.³¹ David Hartly, (1705-1759), also of England, went even further and claimed that the cause was usually nervous derangement, although imitation or palsy might be responsible.³² Then came the emphasis on nervous debility, stressed by William Cullen (1710-1790) of Scotland.³³

The early part of the nineteenth century saw merely a continuation of the interest shown in the eighteenth. In 1809, J. Watson of England claimed that the cause of stuttering was a want of coordinating power and that this "vicious habit" could be overcome by exercising the organs of speech and the strengthening of the will power.³⁴ In 1811, J. Frank laid the cause of stuttering at the door of cerebral lesion or sexual excesses. It is interesting to note that the only remedy he suggested was to exercise the voice and the speech organs.³⁵ N. Deleau (1797-1862) stressed lesion, but an organic lesion caused by incomplete cerebral action, infirm will, or deficient innervation. He recommended as treatment the education of the organs of articulation and vocalization, not by sound

³¹ Loc. cit.

³² Klingbeil, op. cit., p. 117.

³³ Loc. cit.

³⁴ Klingbeil, loc. cit.

³⁵ Ibid., p. 118

but by sight or placement.³⁶ This idea of using sight rather than sound in corrective work was carried further in the latter part of the nineteenth and even the early part of the twentieth centuries by the Bells -- father and son. Alexander Melville Bell developed the "visible alphabet," a phonetic type of presentation, and his son, Alexander Graham, popularized it in the United States. Although the system proved to be of more value in the correcting of articulation difficulties than in the treatment of stuttering, the Bells are thought to have made one of the outstanding contributions to speech correction of the nineteenth century.³⁷

J. M. G. Itard (1817) of France was the first one to formulate a system of instruction and exercises with the purpose of establishing the control of the will over the speech organs. He considered stuttering a spasmodic condition caused congenital debility of the nerves which stimulate the movement of the larynx and the tongue. He not only used medicinal remedies and gymnastics of the organs of speech, but he also placed a golden or ivory fork under the tongue in such a way as to encompass the root of the tongue on both sides. The purpose of this device was to make the tongue work in spite of the

³⁶ Ibid., p. 119.

³⁷ Schoolfield, op. cit. pp. 111-113.
Klingbell, op. cit., p. 129.

obstacle, thereby strengthening the weak organ.³⁸ In the same year, Dupuytren made a most notable departure in therapy. He sought to have his patients speak in a sing-song tone, marking certain intervals by a slight movement of the foot. Colombat has been incorrectly given credit for originating this technique.³⁹

More and more interest was being aroused by this search for the reason the speech mechanism did not work correctly and in the attempt to find a therapy which would meet the needs of the stutterer. In 1821, Dr. P. Rullier said there were two reasons: a disproportionate rate of transferring thought to the different seats of innervation, and the incapacity of the organs of speech to accomplish their task satisfactorily. In either case, however, the trouble lay in the central organ.⁴⁰ In the same year, Felix Voisen, a French doctor holding the same view, suggested that the best way to stop the hesitancy was to press the thumb against the chin when speaking.⁴¹ George Combe (1788-1859) laid the cause to irregular nervous action; he recommended diet and hygiene, cheerful society, kind treatment, and encouragement as therapy.⁴² A. J. T. Bertrand (1795-1831), although not

³⁸ Appelt, op. cit., pp. 31-32.

³⁹ Loc. cit.

⁴⁰ Klingbell, op. cit., p. 118.

⁴¹ Loc. cit.

⁴² Ibid., p. 119.

the first to suggest the value of distraction in the treatment, based his whole therapy upon the assumption that stuttering was a nervous affliction and could be cured by anything which would distract the stutterer's attention from his speech.⁴³ In 1828, J. Henry McCormac, a London physician, declared that he had an infallible cure--the using of deep inspiration and forcible expiration. He believed that stuttering occurred when one attempted to speak with nearly empty lungs.⁴⁴ And a Scotch physician, Neil Arnett, (1788-1874), attributed stuttering to a spasm of the glottis. He was convinced that stuttering would cease if the glottis were kept open. To achieve this objective, all the words in a sentence were to be joined together without pausing. Then the glottis could not close. The way to accomplish this uninterrupted speech was to add a short e sound before each word.⁴⁵ J. Muller (1801-1858) of Germany agreed that stuttering was caused by a spasm of the glottis, but he recommended the elimination of all explosive sounds as the means of keeping the glottis open.⁴⁶ In 1829, Serres d'Alais of France, himself a stutterer, claimed that stuttering occurred because the larynx was closed, prevent-

43 Loc. cit.

44 Van Riper, op. cit., p. 318.

45 Appelt, op. cit., p. 35.

46 Klingbeil, loc. cit.

ing exhalation. He recommended deep breathing with a strong enough current of expiration to break the block. He also advised separating syllables into equal intervals and exaggerating the elongation of the vowels. While this elongation was taking place, the patient was to move his arm with every syllable or every sentence, depending on how severe the blocks were.

This time beating method had been outlined by Dupuytren, and it was popularized by Colombat in France and by Klencke and Blume in Germany.⁴⁷ Each man added his own interpretation to the method, and although Colombat has often been given credit for originating the whole system, he really added little to the technique which others had developed; he merely popularized it. However, an understanding of his particular approach to the technique is of value in the history of the treatment of stuttering. The outstanding feature of his treatment consisted of the application of musical time to ordinary speech, an artificial expedient of which the ordinary speaker knows nothing. The stutrer was to speak in single syllables while moving the thumb and forefinger together in a certain definite rhythm. Later, Colombat developed a special kind of metronome for his patients to use. He also included these points from other methods: taking deep inspirations, drawing back the lips, and

⁴⁷ Appelt, op. cit., pp. 34-35

placing a silver or ivory apparatus under the tongue. His patients were not allowed to talk with anyone except Colombat himself or each other for the first two or four weeks of the treatment. Their vocal exercises began with single words, moved to a series beginning with vowels, then to a series beginning with consonants. After these words were mastered sentences were used, and finally short stories were related.

Colombat established a school and claimed to have cured five hundred of the six hundred patients he had.⁴⁸ Blume, (1841), popularizing this method in Germany, changed it in some respects but kept it essentially the same. In addition to the general type of treatment recommended by Colombat, he had his patients pronounce vowels with a deep chest tone, and when the d or t sound caused the trouble, he had them use a short e before and an h after the letter, making a sentence sound like this: "e-bharking e-dhog e-dhon't e-bhite." As the patient talked in this manner, raised his shoulders, raised one arm and lowered it slowly, and drew in his abdomen as fast as possible,⁴⁹ whether or not he stutted would be of little import; he would be attracting as much attention to himself as if he did.

No discussion of the treatment of stuttering during

⁴⁸ Ibid., pp. 36-37.

⁴⁹ Ibid., pp. 37-38.

this period would be complete without a consideration of the "American Method" developed by Dr. Yates of New York City as a means of curing his own daughter. Her tutor, Mrs. Leigh, followed Dr. Yates' directions, and apparently the girl responded to the treatment. Encouraged by Mrs. Leigh's success with his daughter and others with whom she tried the treatment, Dr. Yates opened a school for stutterers in 1825, using Mrs. Leigh's name fearing the reproach he might incur if he used his own. The school was endorsed by medical men of note, and students flocked there for treatment. Teachers were trained in the method, and some of them established their own institutions. The system finally died of its own weight, but not until after it had been sold to the Belgian government and had had wide usage, with certain alterations, in Europe as well as in America. The treatment, which for some time was guarded as a secret formula, consisted merely of pressing the tongue against the upper alveolar ridge as hard as possible, drawing a deep breath every six minutes, keeping silent for three days, then reading aloud for one hour a day to the doctor and never letting the tongue rest on the floor of the mouth. To keep the tongue in position at night, a small roll of wet linen was placed under it. The London Medical Quarterly said the results were definite but not lasting.⁵⁰ For some unexplainable reason

⁵⁰ Schoolfield, op. cit., pp. 105-108.

this method excited a phenomenal amount of attention.

Many therapists, including such men as C. Bell, Hunt, Beesal, M. Jourdant, E. Denhart, Graves, Cull, Becquerel, Thelwall, and Wyneken, whose dates ranged from about 1820 to 1868, used some variation of the time-beating, breath-regulating, vowel-inserting and elongating, word-drilling method. Their purposes in using it ranged all the way from attempting to establish the control of the will over the speech mechanism to finding a way to avoid or break up a spasm of the glottis. If distraction could be proved to be of any value in the treatment of stuttering herein lay the proof.

At the time that these methods were being employed, the mechanical cure came into vogue. Usually the mechanical gadgets were employed in conjunction with the other methods. There was nothing new about this approach; after all, Demosthenes had held pebbles in his mouth. When Itard introduced the use of the fork under the tongue and Mrs. Leigh used a roll of linen cloth, they were both striving for the same thing -- to keep that laggard tongue up where it belonged. Cannon Charles Kingsley (1818-1875), in spite of the fact that he regarded stuttering as an act of imitation, also felt that overhanging upper teeth (although that appears to be normal) might be responsible, and he recommended placing a cork between the back teeth when speaking.⁵¹ And in 1850, P. Wertzer invented

⁵¹ Van Riper, op. cit., p. 318

a lever to "keep the tongue out of the fossa behind the inferior incisors."⁵² However, it was not until the appearance of Robert Bates of Philadelphia that the use of these devices really came into their own. He developed three types: a narrow flattened tube of silver to apply to the roof of the mouth, a hollow bi-convex disk attached to a small tube which protruded from between the teeth, and a belt-like contraption to be worn around the neck. On this belt was a small metal plate which was to be placed over the larynx and adjusted to exert the proper amount of pressure by means of a small screw. Not only did he patent these contraptions and sell them for thirty-five dollars each, but he gained the endorsement of medical men on both sides of the Atlantic. In fact, a clinic was held at Jefferson Medical College in Philadelphia in 1854 for the sole purpose of giving him an opportunity to demonstrate his devices.⁵³

Another approach which must be given some consideration is the medical, although there seems to be very little written on it. Even the articles appearing in medical publications seem to deal more with the psychological than the medical side of stuttering. References to its use are scattered through the material written on other types of treatment. Like the

⁵² Klingbell, op. cit., p. 120.

⁵³ Schoolfield, op. cit., pp. 109-110.

other methods, its antecedents lay with the ancients. They, like the moderns, used it only in conjunction with other types of treatment. Hippocrates recommended massaging the throat and neck with healing oils, and Celsus suggested massaging the tongue and throat with pungent ointments and the eating of equally pungent herbs.⁵⁴ Then again, in the Fourteenth century De Chauliac advised blisters, frictions, and gargles for the tongue.⁵⁵ In the sixteenth century Sir Francis Bacon would have had the stutterer warm his refrigerated tongue with a little wine,⁵⁶ and Mercuriolis ordered a warming and parching diet, the administration of purgatives, and the use of embrocations made of honey, salt, and sage.⁵⁷ Along in the seventeenth century, Schulthess was reported to have revived the use of drugs for treatment.⁵⁸ By the nineteenth century, Woolf of Berlin recommended that almost all kinds of drugs be used,⁵⁹ and Klencke used cold sponges as well as belladonna, opium, iodide of potassium to get his patients to relax.⁶⁰

⁵⁴ Cf. Ante, pp. 2-3.

⁵⁵ Klingbell, op. cit., p. 116.

⁵⁶ Cf. ante, p. 5.

⁵⁷ Appelt, op. cit., p. 26.

⁵⁸ Loc. cit.

⁵⁹ Klingbell, op. cit., p. 132.

⁶⁰ Appelt, op. cit., p. 43.

Late in that same century, Coen of Vienna believed that it was necessary to tone up the general system of stutters and among other things he used for that purpose were tonics, sedatives, stimulants, hydro-therapy, and Swedish massage.⁶¹ Gerdtz of Germany applied tincture of alcohol, peppermint oil, and chloroform to "still the cramps of the diaphragm."⁶² Laugenback used croton oil inoculations,⁶³ and Schmalz almost discredited the whole field of speech correction work in Sweden by suggesting the use of petroleum oil embrocation for the throat.⁶⁴ Whether or not the use of electricity should be classed with medical treatment may be a question, but since it is the introduction of some element into the body for purposes of treatment, it will be mentioned here. Coen used it as part of his therapy, as did many others.⁶⁵ The outcome of the shock treatment apparently has not been as gratifying as might have been expected, or it would have received more publicity and wider usage. In fact, the use of medication has not been as widely accepted as most of the other media of treatment, but even as

⁶¹ C. Coen, "The Principles of Stuttering," The Laryngoscope, 8:75, February, 1900.

⁶² Appelt, op. cit., p. 46.

⁶³ Loc. cit.

⁶⁴ Ibid., p. 47.

⁶⁵ Ibid., p. 45.

late as 1940, Dr. F. Hogewind of the Hague reported on success from the use of various sedative types of medicine in treating stutterers. He stressed the point that medical treatment must always be accompanied by lessons in speech,⁶⁶ and all down through the ages when medicine has been used, it has been in conjunction with some other form of therapy.

If the attention gained by any of the above mentioned methods is hard to understand, harder still is the popularity enjoyed by the surgical method. Like the others, it was not really new,⁶⁷ but it was not until the nineteenth century that it rose to unprecedented heights. In 1830, Hervez de Chegoin declared that stuttering was due to an abnormal formation of the tongue, as Aristotle had taught, and that the only cure lay in the field of surgery.⁶⁸ However, it was Johann Fredrick Dieffenback, (1795-1847) a famous German surgeon, who popularized surgical treatment. He performed his first operation in January, 1841.⁶⁹ He developed three types of operation, but his "favorite type consisted of making a horizontal section at the root of the tongue, excising a triangular wedge completely

⁶⁶ F. Hogwind, "Medical Treatment of Stuttering," Journal of Speech Disorders, 5:207, September, 1940.

⁶⁷ Cf. ante, pp. 3-5-6.

⁶⁸ Appelt, op. cit., p. 15.

⁶⁹ Burdin, op. cit., pp. 44-45.

across and nearly through it, and sewing the edges together. The object was to divide the lingual muscles and thereby interrupt their innervation in order to modify or cure the muscular spasm."⁷⁰ Since no anesthetic was at that time in use, the operation was a very painful one.⁷¹ This form of therapy was used widely throughout Europe. Each doctor developed his own particular approach. For instance, Yearsley and Braid, in England, removed tonsils, snipped uvulas, severed the hypoglossal nerve, and pierced the tongue with hot needles or blistered it with embrocations of croton oil.⁷²

This fashion for curing stammering by means of operation which was rampant in the early forties . . . varied in detail. The German school . . . followed Dieffenbach; the French school . . . Velpeau; and the English school, Braid. The results, however, though some times at first somewhat encouraging, soon proved to be of merely temporary duration, and when it was shown that not 5% had received⁷³ any permanent benefit, the method was hastily abandoned.

Not, however, before hundreds of patients had undergone the treatment, and until at least a few of them had died as an after effect, or until a great deal of sentiment had been aroused by the publishing of articles condemning the procedure. This

⁷⁰ Van Riper, loc. cit.

⁷¹ Burdin op. cit., p. 46.

⁷² Sister Mary Rose Elizabeth, "What Hope is There for the Stutterer," Catholic Education Review, 31:111, February, 1933.

⁷³ Klingbell, op. cit., p. 122.

type of treatment never gained the popularity in the United States that is enjoyed in Europe, although in spite of the warning by Dr. Eduard Warren of Boston, it was practiced by a few men. Dr. A. C. Post was the first American to try it.⁷⁴ The end of the same year which had seen Dieffenbach's first operation (1841) saw also the beginning of the end of the surgical approach to the problem of stuttering,⁷⁵ although as late as 1866, Ore' of Paris was still recommending it.⁷⁶

At least as far back as the tenth century men began to realize that a relationship existed between the brain and stuttering.⁷⁷ They thought of that relationship, however, in terms of the physical or neurological: the inability of the will to control,⁷⁸ dominance of spinal over cerebral control,⁷⁹ interference with the brain message,⁸⁰ cerebral lesion,⁸¹ and so forth. Although Avicenna had held that a brain lesion

⁷⁴ Schoolfield, loc. cit., and Burin op. Cit., p. 62.

⁷⁵ Appelt, op. cit., p. 29.

⁷⁶ Klingbeil, op. cit., p. 126.

⁷⁷ Cf. ante, p. 4.

⁷⁸ Klingbeil, op. cit., p. 117.

⁷⁹ Ibid., p. 123.
Appelt, op. cit., p. 17.

⁸⁰ Ibid., p. 18.

⁸¹ Klingbeil, op. cit., p. 118.

could cause stuttering,⁸² Mercuriolis had declared that accidental stammering might be caused by sudden emotion,⁸³ Amman had laid the disorder to habit,⁸⁴ Darwin had believed that sensations or emotions such as awe or bashfulness lay back of stuttering,⁸⁵ M. Savory had thought that fear or haste were contributing factors,⁸⁶ Dr. Warren had felt that fear of stammering entrenched the hesitancy once it had appeared and led the way to the development of a habit,⁸⁷ and George Combe had suggested the need for the use of encouragement in the treatment of stuttering,⁸⁸ it was not until the latter part of the nineteenth century that the disorder was conceived to have definite psychic implications. These men led toward that conclusion, each in his own way: M. H. Rombery (1795-1873) referred to stuttering as a neurosis;⁸⁹ C. L. Merkel (1844) regarded it as a habit⁹⁰

⁸² Cf. ante, p. 4.

⁸³ Cf. ante, p. 5.

⁸⁴ Ibid., p. 6.

⁸⁵ Ibid., p. 7.

⁸⁶ Klingbell, loc. cit.

⁸⁷ Schoolfield, op. cit., p. 108.

⁸⁸ Cf. ante, p. 10.

⁸⁹ Klingbell, op. cit., p. 124.

⁹⁰ Ibid., p. 123.

resting in the psychic sphere--the will;⁹¹ Pesth Eich conceived of it as a psychological rather than a physical disturbance;⁹² M. Rosenthal (1861) thought that shock could have an influence;⁹³ Klencke (1866) felt that psychic influences should be introduced to arouse self confidence in the stutterer;⁹⁴ Thome' (1867) held that certain emotional factors upset the respiratory function and thereby produced stuttering;⁹⁵ Lehwiss (1867) felt that an abnormal psychological condition could be one of the causes of stuttering;⁹⁶ Shrank (1877) said that the will did not function because it was hampered by the emotions;⁹⁷ H. Coate thought that timidity might be the emotion responsible for the malady;⁹⁸ C. Wyneken (1890) believed that stuttering was a neurosis produced by doubt;⁹⁹ and Rudolph Denhart (1890) made his statement that stammering was induced by a psychic influence and the treatment of it must contain counteracting suggestions.¹⁰⁰

⁹¹ Appelt, op. cit., p. 20.

⁹² Klingbell, loc. cit.

⁹³ Ibid., p. 125.

⁹⁴ Appelt, op. cit., p. 42

⁹⁵ Ibid., p. 20.

⁹⁶ Klingbell, op. cit., p. 126.

⁹⁷ Appelt, op. cit., p. 23.

⁹⁸ Klingbell, op. cit., p. 127.

⁹⁹ Van Riper, loc. cit.

¹⁰⁰ Appelt, op. cit., p. 40.

Denhart was the first one to make such a definite statement of the psycho-theory--the others had merely acknowledged that there was a probability of psychic origin.¹⁰¹ None of these authorities, however, suggested the abandoning of the previously developed forms of therapy; when the list is check through, it will be found that all of them used one or more of the other types of treatment, adding to them the psychic elements they thought necessary. It was not until the advent of psychoanalysis as developed by Sigmund Freud that stuttering came to be regarded as purely psychic and approachable only through the mind. This attitude, although it began in the latter part of the nineteenth century, did not reach maturity until well into the twentieth, when stuttering came to be regarded by some authorities as a manifestation of a psycho-neurotic personality.

And so the twentieth century dawned on speech correction. European authorities had been leading the field--in fact they had practically monopolized it--and interested Americans merely followed their lead. However, as the twentieth century progressed so did speech correction in the United States, and authorities arose here who took their places beside those of Europe. By the end of World War I, if Europe still

¹⁰¹ Loc. cit.

led the field, the United States didn't know it.

There had always been a certain amount of disagreement over the theories of etiology and therapy, and the twentieth century has not seen that disagreement diminish. In fact as one reads the literature, he is impressed by the fact that the disagreement has, at times, reached the point of actual controversy. There are now a number of definitely definable theories of etiology, with as many variations as there are authorities who follow the general lines of each theory. Unfortunately, those who cling to one theory are often very uncharitable in their attitude toward anyone who holds to another. Perhaps nothing gives a clearer picture of the confusion which exists in the field than the following review of Eugene Hahn's Significant Theories and Therapies:

At last we have, within the covers of one book, the concentrated essence of discouragement for beginners in the field of speech correction. Formerly, the neophyte had to wade through masses of scattered literature before coming to the conclusion that although authorities were very authoritative, the problem of stuttering was largely unsolved. Now, in one clean-cut little book, the graduate student can spare himself library dust and yet "compare and contrast theories of stuttering" on his examinations. Twenty five (count them) authorities are represented either by their own specially prepared statements of theory and therapy or by D. Hahn's cometenent ghost writing.

In an introductory passage, Dr. Hahn points out the confusion in the points of view and dares the reader to find a common denominator if he can. An appendix of four pages describes some of the usual procedures in a college speech clinic and urges clinicians to try anything that works.

The main body of the book makes interesting through discouraging reading. These authorities are earnest and sincere and they have blindly touched the elephant. There

is truth in each presentation, but it is a partial truth, The attitudes of the authorities are frequently more interesting than their statements. Some are dogmatic; some are evangelical; some are mystic; but it is not humble authorities. The theories evidently are more significant than the therapies, if the space devoted to each is indicative. Moreover, the compendium makes very clear that although theory is largely etiological, therapy is primarily symptomatic.

What speech correction needs is a Pasteur!¹⁰²

Bender has listed fifteen classifications of theories of etiology,¹⁰³ but they can be combined into these four waste-basket classifications: Education, Neuro-physical, Neuro-psychological, and Psychoanalytical. A review of the salient points of each of these theories,¹⁰⁴ will make clear the fact that most of them stem in one way or another from the beliefs of past decades.

The Educational Theory, which includes Wendell Johnson's Semantic Theory, holds that stuttering is a bad habit originating in the nature hesitations of childhood speech and being perpetuated by penalty and fear or simply by the fact that these hesitations are referred to as stuttering.

The Neuro-physical Theory may be summarized as the

¹⁰² Charles Van Riper, Journal of Speech Disorders, 8: 390, December, 1943.

¹⁰³ James F. Bender, The Personality Structure of Stuttering, New York and Chicago: Pitman Publishing Corporation 1939, pp. 107-118.

¹⁰⁴ The information given in these explanations has been gleaned from so many sources and over so many months of reading that it is impossible to footnote them individually. The whole bibliography which follows is the source for the information.

belief that stuttering is the product of general instability of the nervous system, chemical imbalance in the body, or failure of some of the parts of the organism to function properly. Any interference with the nervous impulses may be responsible, especially when the paired musculature of speech does not receive properly timed impulses from the integrating centers of the central nervous system. It is easy to see how this theory may include such divergent interpretations as cerebral dominance, heredity, auditory and visual imagery amnesia, and traumatic inhibition.

The Neuro-Psychological Theory holds that stuttering is a symptom of a basic personality problem, of a maladjustment to the normal demands of life. The hesitations, anxieties, and fears are produced by the stutterer's environment and are considered as symptoms of the stutterer's attitude toward life.

The Psychoanalytic Theory interprets stuttering as a disorder resulting from a fixation at the oral or anal erotic stage of pregenital sexual development, and its symptoms are movements akin to those of nursing, micturition, or the expulsion of the flatus. One variation of this theory is based on Adler's interpretation rather than on Freud's. It maintains that stuttering is a symptom of a clash between the desire to speak and the desire not to speak based on a lack of maturation of the ego.

Regardless of the theory held, there are certain points on which all, or nearly all, of the authorities agree. These points are: there are definite personality maladjustments which accompany stuttering regardless of the cause; the environment in which the stutterer finds himself determines to a large degree both the number and the severity of his blocks; all stutters have moments of free speech; there are two stages of stuttering--the primary, in which the stuttering is easy and unemotional, and the secondary, in which the stuttering is accompanied by physical and psychological manifestations which mark the stutterer as "different;" there are more male than female stutterers. With this much by way of agreement, is it any wonder then "when the actual therapies now in use are scrutinized, one is impressed by the large number of similar methods used in common by the majority of speech correctionists . . . The rather curious agreement is even more evident in terms of sub-goals set up for the stutterer."¹⁰⁵ Naturally, therapeutic approach is determined by the theory of etiology. It determines the emphasis the clinician will use. For instance, those clinicians who believe in the Educational Theory will use the items of therapy which deal directly with speech production, whereas those who believe in the Neuro-psychological will bend more of their efforts toward resolving conflicts.

¹⁰⁵ Van Riper, Speech Correction, p. 329.

Either group may use both types of therapy but with different emphasis. All of the therapeutic approaches are often integrated by the believers in any of the theories except the Psychoanalytical. The followers of that theory seem to feel that they alone have the way of salvation.¹⁰⁶ They alone seem to feel that speech correction should lie entirely in the hands of a doctor--a doctor trained in psychoanalysis.¹⁰⁷ The followers of every other theory seem to feel that the trained speech correctionist has his place. Most of the followers of the various theories are willing to admit that some stutterers need psychoanalysis, but the psychanalysts do not seem willing to agree that there are any who do not need it.

However, medical men were the first ones in this country to feel that the problem of stuttering was not theirs alone. A little over thirty years ago the American Medical Association began to direct attention to the need for study of speech correction methods. A committee soon decided that it was not just a problem for the medical profession but for the home and school as well. At that time such corrective schools as were in existence were of a private nature. Pioneer studies

¹⁰⁶ Isadr Corlot, "The Psychoanalytic Conception of Stammering," The Nervous Child, 2:167, January, 1943.

¹⁰⁷ Klingbell, op. cit., p. 131.

and practices were begun in New York City. Later, public schools began to open classes for speech corrective work and to employ special speech correctionists. Minneapolis was one of the first cities to introduce speech correction into the public school program. Following World War I, the United States government introduced speech correction into the rehabilitation program for veterans.¹⁰⁸ A lack of adequately trained personnel necessarily held back any great advance in the whole field until recent years. The establishment of clinics, usually in connection with institutions of higher learning, where at the same time that speech defectives were being treated clinicians were being trained, has gone a long way toward relieving the situation.¹⁰⁹ But even now there are not enough correctionists to carry on an adequate program in the public schools of the country. The increasing interest in the work is evidenced by the fact that by 1946 twenty six states and the District of Columbia had statutes relating to the education of speech defective children, though only fifteen and the District of Columbia required special certification for speech correction teachers.¹¹⁰

¹⁰⁸ L. D. Sowers, "What is Your School Doing for the Boy Who Stutters?" American School Board Journal, 101:45, November, 1940.

¹⁰⁹ Sowers, loc. cit.

¹¹⁰ James A. Carrell, "State Certification of Speech Correctionists," Journal of Speech Disorders, 11:91, June, 1946.

Naturally, the organization most interested in the work of speech correction was the National Association of Teachers of Speech. Their interest, however, could not be confined to so narrow an area of work. As public interest in correction grew and as more speech correctionists joined the organization, more attention was given to that phase of speech work, and at the 1925 national convention, held in New York City, Mr. Robert West of the University of Wisconsin offered the following resolution:

Be it resolved that the Association favors the organization, within its groups, of semi-autonomous daughter organizations having membership limited by the qualifications appropriate to the several special arts and sciences represented in this Association.¹¹¹

The passing of this resolution opened the way to the organization of the speech correction group, and

The American Speech Correction Association was organized in New York City in December, 1925, at the annual convention of the National Association of Teachers of Speech with which this organization has always been affiliated. Its original name, The American Academy of Speech Correction, was changed to The American Society for the Study of Speech Disorders in 1927, and the present name was acquired in December 1934.

The purpose of The American Speech Correction Association as set forth in its constitution are:

1. To stimulate among educators, physicians, and others of the general public a deeper, more intelligent interest in problems of speech correction.

¹¹¹ "Secretary's minutes of the tenth annual convention of The National Association of Teachers of Speech," Quarterly Journal of Speech, 12: February, 1926.

2. To raise as rapidly as possible existing standards of practice among workers in the field of speech correction.
3. To secure public recognition of the practice of speech correction as an organized profession.
4. To furnish this new profession with responsible and authoritative leadership.
5. To make this leadership generally respected by our good works, i.e., by our scholarly research work, publicity work, and administrative skill.
6. To make membership in our organization a coveted recognition of merit and in this way to furnish workers in the field of speech correction with a powerful incentive to greater achievement.

The Association is composed of Associates and Fellows. Any reputable speech correctionist with a college education or its equivalent is eligible for election as an associate.

A Fellow is usually a pioneer or leader in the field of speech correction who has done eminent work in speech correction and obtained the Doctor's degree.¹¹²

The first president of the new Association was Max A. Goldstein, director of the Central Institute for the Deaf at St. Louis, Missouri.¹¹³ Over the years, the constitution has been changed and other classifications of members made. The membership as of 1950 was divided in Associate, Clinical, Professional, and Fellow. However, there is a movement under way to change these

¹¹² "American Speech Correction," Journal of Speech Disorders, 2:40, March, 1937.

¹¹³ Ibid., p. 41.

classifications and redefine the qualifications of each.¹¹⁴
 In 1926, there were twenty two members in the Association; by 1950, there were 1,623.¹¹⁵ These 1,623 members were working in forty five states and the District of Columbia,¹¹⁶ and in 1948 there were 124 institutions of higher learning in thirty two different states and the District of Columbia which had on their faculties members of the American Speech and Hearing Association,¹¹⁷ the Association having changed its name and constitution to include the Hearing group at its 1947 convention.¹¹⁸

Not only has the Association been interested in raising the level of speech correction work on a national scale, but it has been interested in seeing the individual states raise the requirements for certification of correctionists where there are any requirements and in seeing those states which have none pass legislation establishing them. There is a desire to see the state requirements at least as high as the minimum

¹¹⁴ "Report of the 1949 convention," Journal of Speech and Hearing Disorders, 15:87, March, 1950.

¹¹⁵ Patterns of Professional Growth, "Journal of Speech and Hearing Disorders, (supplement) 15:4, September, 1950.

¹¹⁶ Listing in Journal of Speech and Hearing Disorders, (supplement) 15:33, September, 1950.

¹¹⁷ Information taken from a file in Mr. Basye's office, no page number.

¹¹⁸ "Report of the 1947 Convention," Journal of Speech and Hearing Disorders, 13:8, March, 1948.

suggested by the Association. As late as 1946 only fifteen states and the District of Columbia issued special certificates for speech correction teachers. Requirements for this certification ranged from four hours of special work in Oklahoma and New Jersey to eighteen hours of special work in Delaware and Pennsylvania.¹¹⁹ "As they now stand, present certification practices fall far short, in so far as minimum requirements are concerned, of what the Association has set up as the desirable minimum training and experience for the speech correction teacher."¹²⁰

Over the years articles on speech correction have been published in various periodicals, but it was not until toward the end of the nineteenth century that the first American magazine devoted to the field of speech correction appeared. It was called The Voice, and E. S. Werner, himself a stutterer, began its publication in 1879. The intent of the publisher was to get into print everything he could find on the subject of stuttering. He printed translations of material written in Europe as well as those articles which were written in the United States. He not only presented all of the advances in the field, but he also attacked those elements he considered

¹¹⁹ Carrell, op. cit., pp. 92-93.

¹²⁰ Ibid., p. 95.

to be unscrupulous. In the columns of his paper appeared advertisements for speech correction institutions. The Voice continued to be published until 1910.¹²¹

By that time the medical journals had begun to be interested in printing articles on the subject also. In 1915 The National Association of Teachers of Speech changed the name of its publication from The Quarterly Journal of Public Speaking to The Quarterly Journal of Speech Education. From the time the name of the publication was changed, articles in the field of speech correction began to appear in its pages. In 1928 the name was again changed, this time to The Quarterly Journal of Speech, but the articles on speech correction have continued to appear, as well as reviews of books and articles from other periodicals.

In 1936 The Journal of Speech Disorders made its appearance as the official voice of the American Speech Correction Association. In 1948 the name was changed to The Journal of Speech and Hearing Disorders, in keeping with the action which included the Hearing group in the Association.¹²² This publication has been the medium through which the progress in the field of speech correction has been recorded. Experiments in all the areas of correction have been reported, and since

¹²¹ Schoolfield, op. cit., p. 114.

¹²² Supra, p. 32.

stuttering is one of the major areas, it has occupied a large portion of the space in the Journal as well as long hours of the time of the speech correctionist. In addition to the articles, it publishes bibliographies, reports of the conventions, membership lists, and reviews of books and articles in the field.

Through out this introduction, the word "stuttering" has been used except when a direct quotation has been given in which the word "stammering" has appeared. Most of the present day American authorities seem to feel that the two words may be used interchangeably, but if one is to judge by the practice of those same authorities, he is bound to conclude that the word "stuttering" is preferred. Until recently a distinction was made between the two words, especially in Europe, and it is still made by some authorities. Gutzmann (1895) said, "Stuttering is not, like stammering, a defect of conversation."¹²³ Other definition of the terms are given thus: "Stuttering is the inability to produce certain sounds;" and "Stammering is the repetition of the initial sound, or a forced word;"¹²⁴ "Technically, stammering is imperfect enunciation, due to lack of control over the muscles of articulation, the sound being vocalized properly;" and "Technically, stuttering is a defect

¹²³ Die Gesundheit Spflage du Sprache, p. 107, quoted Schoolfield, op. cit., p. 104.

¹²⁴ Schuyler, loc. cit.

of vocalization or giving voice to sounds, the organs being otherwise under control."¹²⁵ Time and popular usage have evidently eliminated the old distinction.

It is estimated that at the present time there are some 1,400,000 stutterers in the United States, and that one out of every one hundred school children is destined to become one.¹²⁶ Need more be said to justify the volume of material which has been written on the cause and cure of the malady? Or need more be written on the cause and cure to justify the attempt made herein to gather into one place all of the material written by American authorities and published in the periodicals of this country from the time of the founding of the American Speech Correction Association in 1925 until the end of 1950?

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¹²⁵ Webster's New International Dictionary, Springfield, Mass., G. & C. Merriam and Company, 1925, pp. 2030+2064.

¹²⁶ Van Riper, op. cit., p. 266.

CHAPTER II

ANNOTATION ON ARTICLES PUBLISHED ESPECIALLY FOR SPEECH CLINICIANS AND MEMBERS OF THE MEDICAL PROFESSION, PARTICULARLY THOSE TRAINED IN NEURO- PSYCHO- CLINICAL METHODS.

(All articles in this chapter which are marked with an asterisk (*) would be of value to the non-clinically trained person although they were written primarily for the trained person.)

A. EDUCATIONAL PERIODICALS

Ainsworth, Stanley, "Present Trends in the Treatment of Stuttering," Journal of Exceptional Children, 16:41, 1949.¹

Regardless of the specific techniques used, it seems possible to summarize stuttering therapy under five classes of goals. In a complete program these may be considered as stages of treatment; some clinicians stress one, some another, some use all simultaneously. The author lists and discusses the following goals: alteration of the basic assumption of the stutterer toward his blocks, elimination or reduction of secondary reactions, reduction of emotional reaction of stuttering, improvement of the technique of controlling the manner of stuttering.

¹ Reviewed by K. S. Wood, Journal of Speech and Hearing Disorders, 15:176, June, 1950.

Blanton, Smiley, "Speech Disorders," Mental Hygiene, 13:740,
October, 1929.

The author gives a brief review of the function of speech. He has the following to say about stuttering, which he includes in his discussion of disorders: it is an emotional difficulty; treatment should be primarily based in mental hygiene and good common sense; specific speech work should be the same type as would be given in any good public speaking class; there is a need for special speech teachers with psychiatric-social work training.

*_____, "Stuttering," Mental Hygiene, 15:271, April, 1931.

The author's last paragraph summarizes the whole article; ". . . stuttering is a difficult combination of organic, constitutional and functional factors that requires speech training such as may be used for the training of the speech and voice of non-stutterers, and that requires also a definite knowledge of mental hygiene in order that hampering emotional fixations may be resolved, these emotional problems cannot be adequately treated by good will, a kind heart, and inspirational talks. We believe that an adequate treatment of stuttering must combine physical hygiene, mental hygiene, and speech training in a unified well rounded manner."

Brown, Fredrick, W., "Personality Integration as the Essential Factor in the Permanent Cure of Stuttering," Mental Hygiene, 17:266, April, 1933.

Stuttering is the result of the lower centers taking over control from the cerebral because of the emotions produced by a given situation. At least a dozen therapies are producing satisfactory results. "Is it not probable that personality integration is the essential factor to the permanent cure of stuttering, by whatever method it is accomplished, and that various methods are successful to the extent to which they serve as useful tools in bringing about a greater degree of emotional stability in the individual stutterer. . .?"

Bryngelson, Bryng, "Psychologic Factors in the Management of the Exceptional Child," Journal of Exceptional Children, 5:65, 1938.

Problems of the stutterer are discussed. It is suggested that tonic and clonic interruptions in the breath stream are due to involuntary functioning of the nervous system and hence nothing can be done correctively. Personality deviations that characterize the stutterer may, however, be mitigated by sane teaching in which the inadequate speaker is not made more overconscious of his peculiarities

and asocial defenses. The teacher should aid the poor speaker to envision his difficulties objectively, and to make common sense adjustments to his limitations.²

Bullen, Adelaide K., "A Cross-Cultural Approach to the Problem of Stuttering," Child Development, 16:1, 1945.³

Reports indicate that there is a relatively low incidence of stuttering in other cultures. The author cites the Navajos, the Arapesh and other New Guinea tribes, and the Polar Eskimos as illustrations of this point. This article is a report of the findings of a study of sixteen stutterers and thirty non-stutterers. The non-stutterers were divided equally into three classifications, very well, average, and poorly adjusted. In all social aspects the stutterers and the poorly adjusted group rated far below the well adjusted group. The theory of the relationship between strain and stuttering seem to be borne out. The author feels that our system of education needs checking regarding the part it plays in putting strain in the child's environment.

² Reviewed by L. A. Averill, Psychological Abstracts, 8:232, April, 1934.

³ Abstracted from a review by M. C. Templin, Journal of Speech Disorders, 11:43, March, 1945.

Bullwinkle, B. A., "Methods and Outcome of Treatment of Stuttering in a Child Guidance Clinic," Smith College Studies in Social Work, 4:107, 1933.⁴

Twenty stutterers were studied as to their adjustment. The seriousness of their problems seemed to be directly related to their lack of adjustment. The prognosis depends on the above and on attendant conditions.

Chapin, Amy B., "Parent Education for Pre-School Speech Defective Children," Journal of Exceptional Children, 15:75, January, 1949.

Stuttering is included with other defects. Parents are helped by weekly meetings. Children benefit because parents' attitudes often change with contact with other people who have the same problem, and because sometimes group pressure forces parents to cooperate.

⁴ Abstracted from a review by R. H. Brown, Psychological Abstracts, 8:232, April, 1934.

Dickinson, E. D., "Educational and Emotional Adjustments of Stuttering Children," Columbia, Teachers College Contributions to Education, No. 314.⁵

Sixty one stutterers from New York City schools were paired with a control group. Eight tests were given. There was no significant difference between the two groups except on pronunciation tests. The conclusion reached was that treatment will swing from the emphasis to eradicate the neuro-pathic or psycho-pathic to a direct attack on the speech habits. The pertinent literature is summarized.

Dorsey, John M., "The Treatment of the Person Who Stutters," Mental Hygiene, 18:409, July, 1934.

Fake stuttering is the only specific therapy mentioned; the rest of the article is general. Treatment must be of the organs of speech and of the whole person. The need for cerebral dominance is stressed. Stuttering is a disorder of the person related to integration.

⁵ Abstracted from a review by R. H. Brown, Psychological Abstracts, 3:40, 1929.

Frazer, Faith, "Wake Up and Talk," Journal of Rehabilitation,
No. 2:30, 1947.⁶

This is a brief case history of a stutterer who was cured.

Johnson, Wendell, "The Influence of Stuttering on the Personality," University of Iowa Studies in Child Welfare, 5:140,
1932.⁷

The case studies of eighty stutterers, sixty one of whom were male, were studied. The stutterer doesn't react to stuttering as such but as he perceives it or defines it. When the situation changes, or his perception of it changes, attitudes and adaptations change also. The group was fairly normal in emotional and social adjustment. Personality problems are more numerous and more severe in stutterers than in non-stutterers, and the problems increase with age. Shyness, anxiety, depression and nervous instability are the stutterer's problems.

⁶ Reviewed by L. Long, Psychological Abstracts, 21:303, 1947.

⁷ Abstracted from a review by B. Wellman, Psychological Abstracts, 6:554, November, 1932.

Johnson, Wendell, "The Problem of Stuttering from the Point of View of General Semantics," Papers from the Second Annual American Congress on General Semantics, 1941, 1943.⁸

Johnson's contention, that stuttering is a semantogenic disorder of a diagogic type and that it runs in families because the tendency to diagnose non-fluency as stuttering runs in families, is based on studies conducted by Curtis Tuthill, by Dorothy Davis Tuthill, and by himself.

_____, "Research Needs in Speech Pathology," Journal of Exceptional Children, extra issue, p. 33, January, 1938.⁹

Stuttering is included in this paper. Recommendation is made for more research. "If medical practice were no more advance than speech correction, most of the common and less sensational diseases would not even have names."

⁸ Abstracted from a review by J. Anderson, Journal of Speech Disorders, 9:59, March, 1944.

⁹ Reviewed by L. A. Averill, Psychological Abstracts, 12:28, May, 1938.

Johnson, Wendell, "Stuttering in the Pre-School Child," University of Iowa Child Welfare, Pamphlet No. 37, 1934.¹⁰

At least one million stutterers are to be found in the United States. In 85 per cent of the cases stuttering began before the child was six years old. It is a failure of the speech organs to work in harmony. The most important causes are physical, interference with the development of natural handedness being the most important.

Psychological factors are not the primary causes. Personality difficulties may result. Suggestions are given for treatment.

_____, and Duke, L., "Changes in Handedness Associated with Onset and Disappearance of Stuttering: Sixteen Cases," Journal of Experimental Education, 4:112, 1935.¹¹

In this report each case is presented as an analytical study. With certain cautions the authors offer the conclusion that in the cases studied there appears to be evidence of a temporal relation between stuttering and change of handedness.

¹⁰ Reviewed by B. Wellman, Psychological Abstracts, 8:572, October, 1934.

¹¹ Reviewed by H. W. Karn, Psychological Abstracts, 10:344, June, 1936.

Johnson, Wendell, and Gardner, H., "The Auditorily and Speech Handicapped," Review of Educational Research, 14:241, 1944.¹²

This review is limited to publications appearing since the publication in 1941 of a similar list. In the section dealing with speech, in which stuttering is included, the authors cite the incidence of speech defects in school children as approximately 10 per cent. Other factors dealt with are sex, intelligence, speech correction in the public schools, college and University program.

McDowell, Elizabeth, "Educational and Emotional Adjustments of Stuttering Children," Publication, Teachers' College, Columbia, No. 314, 1923.

Stutterers from seven schools in New York city were paired with a control group and given tests for intelligence, school achievements, emotional and social adjustments, physical traits, and other speech difficulties. Differences by and large were not great enough to be statistically significant. Tables are given.

¹² Reviewed by E. H. Simmons, Journal of Speech Disorders, 10:50, March, 1945.

Ojeman, R. H., "Studies in Handedness, III: Relation of Handedness to Speech," Journal of Educational Psychology, 22: 120, February, 1931.¹³

Twenty three dextro-sinistrals were studied. Only two showed speech defects at the time tested. Four had had defects in the past. The conclusion is drawn that the danger involved in changing the handedness of a child is very slight--as far as stuttering is concerned.

Spadino, E. J., "Writing and Laterality Characteristics of Stuttering Children," Columbia University, Teachers' College Contribution to Education, No. 637, 1941.¹⁴

The author begins his paper with a summary of the investigations which have already been conducted on the phases of the work to be considered. He makes no attempt to establish any one point of view. The investigation herein reported, conducted under Robert Thorndyke, compares seventy stutterers and seventy non-stutterers as to handwriting, composition, intentional mirror writing, bimanual simultaneous drawing, laterality, mirror reading, orientation,

¹³ Abstracted from a review by G. W. Gray, Quarterly Journal of Speech, 17:439, June, 1931.

¹⁴ Abstracted from a review by E. H. Henrickson, Quarterly Journal of Speech, 28:365, October, 1942.

Steer, Max D., "The General Intelligence of College Stutterers,"
School and Society, 44:862, December, 1936.¹⁵

On the basis of intelligence tests administered, with 50
for normal, the stutterers rated 69.

Travis, L. E., "Diagnosis in Speech," Yearbook, National
Society for Studies in Education, 34:399, 1935.¹⁶

A child's speech can be examined from the point of view
of oral reading, repetitive and spontaneous speech, or
sounds imitation. Many factors have been investigated
in diagnosing stuttering--e.g., handedness, disease, here-
dity, bilingualism. Speech training for stutterers should
encourage them to develop an objective point of view and
to stutter as well as possible by the elimination of all
accessory motor movements.

¹⁵ Abstracted from a review by C. H. Voelker, Journal
of Speech Disorders, 2:184, December, 1926.

¹⁶ Abstracted from a review by P. S. deQ. Cabot, Psycho-
logical Abstracts, 10:72, January, 1936.

Voelker, C. H., "Two Surveys of Defective Speech in a Cultural College," Journal of the American Association of Collegiate Registrars, 14:39, October, 1938.¹⁷

A survey at Dartmouth College showed that stuttering comprised only 2.2 per cent of the speech defects found in two freshman classes studied.

West, Robert, "Rehabilitation of Speech," Journal of Exceptional Children, 16:165, 1950.¹⁸

Stuttering is included in this review of speech problems. The author claims that the speech correctionist and the children's worker must cooperate, sometimes in diagnosis, sometimes in therapy, sometimes in both.

Westphal, G., "An Experimental Study of Certain Motor Abilities of Stutterers," Child Development, 4:214, 1933.¹⁹

Twenty six male stutterers eight to seventeen years of age were matched with a control group. They were given

¹⁷ Unsigned review in Quarterly Journal of Speech, 25:375, April, 1938.

¹⁸ Abstracted from a review by C. G. Wells, Journal of Speech and Hearing Disorders, 15:176, June, 1950.

¹⁹ Abstracted from a review by F. D. McTeer, Psychological Abstracts, 8:55, January, 1934.

five tests, and no statistically significant differences were found, although the control group had a tendency to excel.

B. HEALTH AND MEDICAL PERIODICALS

Adamo, Carlo, "Speech Disorders Elimination," The Eye, Ear, Nose, and Throat Monthly, 19:160, July 1940.²⁰

The author declares that a speech disorder, including stuttering, cannot exist with a normal voice. He proposes restoration of the voice to normalcy as a basic speech therapy. Speech disorders are not psychological diseases.

_____, "Stammering or Stuttering and Its Elimination," The Eye, Ear, Nose, and Throat Monthly, 11:478, January, 1933.

The same idea is expressed as in the above review. The author is opposed to the use of breathing exercises. The only therapy he mentions specifically is talking in whispers.

²⁰ Unsigned review in the Quarterly Journal of Speech, 26:690, December, 1940.

Backus, Ollie, "Incidence of Stuttering among the Deaf," Annals of Otology, Rhinology, and Laryngology, 47:632, September, 1938.²¹

The data, collected from 140 schools for the deaf, is prepared in tabulated form. The conclusion is drawn that stuttering does occur among the deaf and partially deaf.

Berry, Mildred, "The Developmental History of Stuttering Children," Journal of Pediatrics, 12:209, February, 1938.²²

The author examined the medical records of 500 stuttering children as to prenatal conditions and delivery, birth weight, type of feeding, period of nursing, walking, and the initiation of intelligent speech sounds as well as their development. The two groups differ significantly only in the initiation and development of speech, leading the author to conclude that the basic cause for stuttering may be a natively inferior speech mechanism.

²¹ Abstracted from a review by Claude E. Kantner, Quarterly Journal of Speech, 25:141, February, 1939.

²² Abstracted from a review by Robert Sankin, Quarterly Journal of Speech, 24:533, October, 1938.

Berry, Mildred, "Twinning in Stuttering Families," Human Biology, 9:329, September, 1937.²³

On the basis of her examination of the records of the families of 461 stutterers and 500 non-stutterers and the investigations conducted by other people, the author decides that, since there is a tendency for twinning to occur more frequently in stutterers' families than in non-stutterers' families and since in stuttering families containing both twins and singles it is usually a twin who stutters, some hereditary factor is responsible for both twinning and stuttering and that possibly the single who stutters may be one of a set of twins the other of whom was lost in utero.

Bluemel, E. S., "Stammering as Impediment of Thought," Journal American Medical Association, 96:1846, May 30, 1931.

Stuttering is an attempt to say a word which is not clear in the mind. The contortions etc. develop from fear of stuttering. Train thought, and the speech will take care of itself. Parental cooperation is necessary.

²³ Abstracted from a review by R. Sankin, Quarterly Journal of Speech, 24:532, October, 1938.

Bluemel, C. S., "Stammering as an Impediment to Thought,"

Mind and Body, 39:8, April, 1932.

This is the same article as that on the bottom of the preceding page.

Brown, Spencer, F., "Advising Parents of Early Stutterers,"

Pediatrics, 4:170, August, 1949.

The author presents to the doctor information regarding primary stuttering and gives a summary of various studies in the field.

Bryngelson, Bryng, "Etiology and Management of Speech Disorders,"

The Journal Lancet, 60:199, May, 1940.

Stuttering is included with other disorders. Don't expect the child to outgrow the defect. The causes are hereditary, congenital, and developmental. Don't change the handedness of a stuttering child. Doctors and speech clinicians need to work together.

_____, and Clark, Thomas E., "Left-Handedness and Stuttering,"

The Journal of Heredity, 24:337, October, 1933.

Of 127 school children who stuttered, 81 per cent of them had been shifted from a natural left-handedness to a right-handedness. 75 per cent of them had relatives who stuttered.

Cobb, Stanley, "Speech Disorders and Their Treatment," Bulletin of the New York Academy of Medicine, 19:34, 1942.²⁴

This paper is a comprehensive analysis of the types of speech disorders, including stuttering, which the speech pathologist working in a neurological institute is likely to encounter. One by one each of the five levels of integration for speech in the central nervous system is taken up with regard to three aspects. The author stresses the importance of psychotherapy in the treatment of stuttering.

_____, and Cole, E. M., "Stuttering," The Physiological Review, 19:49, January, 1939.

The authors feel that stuttering is due to a lack of cerebral dominance. They present three types of therapy which are in use: the mechanistic, which unwittingly uses psychology along with speech exercises, the psychological, which usually includes some speech work, and the neurological, to establish dominance. The best therapy is to use all types when and as the patient needs them.

²⁴ Abstracted from a review by M. Fry, Journal of Speech Disorders, 8:192, June, 1943.

Cooper, Olive, A., "Relationship between Speech Disorders and Personality Defects in Children and How Stuttering May Unfavorably Affect Children's Personality Development," Journal of Pediatrics, 21:418, September, 1942.

The author claims that stuttering is symptomatic of an emotional imbalance and related to personality disorder.

The "whole child" approach is the recommended therapy.

Case histories are given.

Eustis, Richard S., "The Primary Etiology of Specific Language Disabilities," Journal of Pediatrics, 31:448, October, 1947.

The author's conclusions are based on a study of four generations of a family which showed left-handedness, ambidexterity, bodily clumsiness, and language disabilities, including stuttering. It is suggested that an inherited tendency to delayed neuro-muscular maturation is the single factor from which all the aspects may develop.

Pink, Walter H., and Bryngelson, B., "The Relation of Strabismus to Right and Left Handedness," Transactions of the American Academy of Ophthalmology and Otolaryngology, p. 247, September, 1934.

Stuttering is included in this discussion. The authors' brief presentation of the conclusion that general neural

disturbance may be responsible for strabismus as well as for speech defects is followed by a discussion by a number of authorities.

Glasner, P. J., "Nature and Treatment of Stuttering," American Journal of the Diseases of Children, 74:218, August, 1947.

Stuttering is psychogenic rather than physiogenic. The treatment should be based on the thorough examination of each case, and treatment should be started early. Cases are cited, and the development of speech and of stuttering is discussed.

Glassburg, J. A., "Is Stuttering a Medical Problem?" Archives of Otolaryngology, 11:430, April, 1930.

The author discusses stuttering and concludes that it is a medical problem, the treatment of which requires the services of the medical-speech specialist aided by the surgeon, the rhinolaryngologist, the orthodontist, the psychologist, and the trained speech teacher.

_____, "Stuttering: Causes and Cure," Archives of Otolaryngology, 5:122, February, 1927.

The author discusses definitions of etiology, diagnosis, and treatment, gives exercises to use, and makes this summary: stuttering is spastic coordination based on

mental conflict; the causes are predisposing, neuropathic constitution and exciting factors; surgical treatment should be used if there are abnormalities in the vocal passage; psychotherapy gets at the conflicts; and reeducation involves exercises. Stuttering can be cured.

Glassburg, J. A., "Stuttering and Stammering," Medical Times, New York, 57:82, March, 1929.

Same content as above article.

Gordon, M. B., "Stammering Produced by Thyroid Medication," American Journal of Medical Science, 175:350, March, 1928.

Five cases are cited to prove that thyroid medication may cause stuttering. From this fact is deduced the idea that since thyroiditis causes a general disturbance of the central nervous system, stuttering may be the product of a disturbance of that same system.

Greene, James S., "Dysphemia and Dysphonia; Cardinal Features of Three Types of Functional Syndrome: Stuttering, Aphonia, and Falsetto," Archives of Otolaryngology, 26:74, July, 1937.

Two hundred and sixty stutterers were studied and these conclusions were drawn: there is a definite stutter type; stuttering is a physical manifestation of a psychic conflict; the treatment should be medical, social,

psychiatric, and psychologic. The whole person is involved.

Greene, James S., "Psychiatric Therapy in Dysphemia, Dysphonia, Stuttering, Etc.," Annals of Otology, Rhinology, and Laryngology, 47:615, September, 1938.

The stutterer has a special kind of neurosis. It is inherited. The stutter type lacks other rhythms than speech. The treatment must include the whole person.

_____, "Speech and Voice Disorders: A Few of the Most Important Syndromes," The Connecticut State Medical Journal, 6:700, September, 1942.

Stuttering is a neurological and emotional disorder based on psycho-biologic disorder. The whole organism is involved, but there is no obvious pathology. The hereditary element points to constitutional variability, but there must be a precipitating cause to produce the malady. Therapy must work toward the reorganization of the personality.

_____, "Stutter-Type Child Speech Index of Neurotic Behavior," Journal American Medical Association, 109:187, July 17, 1937.

At National Hospital stuttering is viewed as a physical symptom of a psychic conflict. (same as above) Home relationship is very important.

Greene, James S., "Stutter-type Personality and Stuttering,"
New York State Journal of Medicine, 36:757, May 15, 1936,
 and Rehabilitation Review, 10:176, September, 1938.

The stutter-type is a chronic hesitator, coming from neuropathic stock and demonstrating neuropathic tendencies. The reason more males than females stutter is that from infancy the environment is harder on the male, the social impact is stronger. The Medical-Social clinic teaches the stuturer to act rhythmically in an organized and confident manner in all situations. It aims at the re-organization of the personality.

_____, "Stuttering--a Nervous Maladjustment, Not a Speech Defect," Journal of the Medical Society of New Jersey, 32:693, December, 1935.

Three cases are cited to prove that there is a stutter-type and that treatment is needed. (Same type material as is contained in the above articles by the same author.)

_____, "Stuttering: Psychosomatic Disorder," New York State Journal of Medicine, 42:1561, August 15, 1942.

The author uses case reports to prove his stand, which is the same as given in the above articles. This presentation is followed by a discussion.

Greene, James S., "Treatment of the Stutter Type Personality in a Medical-Social Clinic," Journal of the American Medical Association, 104:2239, June, 1935.

Same as the article on the preceding page. Group therapy is stressed.

_____, and Small, S. M., "Psychosomatic Factors in Stuttering," The Medical Clinic of North America, 29:615, May, 1944.

This article is a report of case studies and tests which support the authors' conclusions: stuttering is not a disease but a symptom of a personality disorder; physiologic changes are to be viewed as associated findings and are not etiological factors; over 65 per cent of all stutterers have a family history of stuttering, but the environment is very important; 30 to 40 per cent show emotional instability; successful treatment demands a pluralistic therapy approach.

Harms, M. Arline, and Malone, J. Y., "Hearing Acuity and Stammering," Annals of Otology, Rhinology, and Laryngology,²⁵ 48:668, September, 1939, also Journal of Speech Disorders.

A survey of ninety schools for the deaf lead to the

²⁵ Reviewed from the Quarterly Journal of Speech 26: 145, February, 1940.

conclusion that there is a close connection between loss of hearing acuity at the period of speech formation and stuttering.

Higgins, Wm. H., "Motor Aphasia, Agraphia, and Stammering Following the Use of Sulfanilamide," Virginia Medical Monthly, 67:216, April, 1940.

This article is a report of a thirty four year old, white female who had the symptoms mentioned in the title on three different occasions when the drug was administered.

Johnson, Wendell, "Stuttering: Research Findings and Their Therapeutic Implications," Journal Iowa State Medical Society, 26:464, August, 1936.

This article is a report of Johnson's research and experimentation which have led him to the following conclusions: stutters are normal in their fundamental physical and mental characteristics; they are highly ambidextrous; their intelligence is normal; stuttering is accompanied by physical disturbances; stutters do not want to stutter; stuttering occurs intermittently; therapy must build up basic physical health; it must establish unilateral dominance; it must give the stutterer confidence and teach him to accept his limitations objectively.

This presentation was followed by discussion.

Karlin, I. W., "Stuttering," Archives of Pediatrics, 63:27,
1945.²⁶

The author takes the view that stuttering is primarily a pediatric problem since it has its onset during early childhood. He touches on the theory of cerebral dominance, on a psychosomatic theory of stuttering and on various psychological and biochemical studies made. Stuttering should not be blamed for every difficulty the stuttering child has. He reports that he has used different kinds of drugs to induce relaxation with varying degrees of success.

_____, and Kennedy, L., "Stuttering Problem and Suggested Treatment," American Journal of Diseases of Children, 55:383, February, 1938.

The authors discuss others' views of the nature of stuttering; then they state their own: Stuttering is a result of a neuromuscular incoordination which is psychogenic. Treatment must be both medical and educational and must begin early. Treatment for the preschool and the school child differs. That for the preschool child centers in the home. The school child and the adult are treated about the same. An outline of treatment is given.

²⁶ Abstracted from a review by L. Wagner, Journal of Speech Disorders, 11:244, September, 1946.

Kenyon, Elmer L., "Etiology of Stammering," Illinois Medical Journal, 81:232, March, 1942.

These are the summary and conclusions made by the author: some children develop a mental image of vocal cord adduction and use it when they should be using the image of voice production; when they are taught to hold their minds on the proper image, stuttering disappears. Stutterers, between the ages of eight and twelve years can be regularly and permanently cured; therefore, the theory must be right.

_____, "The Etiology of Stammering: an Examination into Certain Recent Studies; With a Glance into the Future," Illinois Medical Journal, 79:334, April, 1941.

The author discusses various theories of etiology; his own belief is that stuttering is not a result of general psychologic or psychiatric disturbances but of specific psychophysiologic disordered action of the larynx in the production of voice and that the emotional concomitants are a result and not a cause. He says that therapy must be based on an understanding of the etiology, but he does not suggest any specific therapy.

Kenyon, Elmer L., "Peripheral Physical Inhibitions of Speech,"
Archives of Otolaryngology, 12:759, December, 1930.

When the vocal cord adduction of the purely animal function of the mechanism takes place, stuttering follows. The stammerer must learn the nature and function of the speech mechanism as part of the treatment. The physical and the psychological act on each other.

Levborg, John H., "Hypnosis--Treatment Used in a Stammerer with Marked Mental Disturbances," The Eye, Ear, Nose, and Throat Monthly, 20:56, March, 1941.

The case history of a fifty year old stammerer with paranoia is given. Little attention was paid to his stuttering; the treatment centered around his mental condition. As that cleared up so did the stuttering. The author concludes that with proper handling hypnosis could be a valuable aid to stuttering therapy.

_____, "Hypnosis, a Potent Therapy for Certain Disorders of Voice and Speech," Archives of Otolaryngology, 30:206, August, 1939.

Hypnosis is especially good for use in the treatment of stuttering as it is a form of suggestion and is good for destroying bad habits and instilling healthy mental

attitudes and motivation toward better coordination. It cuts treatment time.

Lukens, R. M., and Trumper, M., "Stammering: Clinical Studies of 150 Cases," Laryngoscope, 40:680, September, 1930.

A large number of the cases studied had nasal, pharyngeal, and laryngeal difficulties of some sort. This fact led the authors to conclude that there was a connection between poor speech and poor organs of speech.

Meyer, Bernard, C., "On the Nature of Stuttering," Medical Clinic of North America, 32:617, May, 1948.

The author gives his reasons for not believing in any of the proposed theories of etiology except the psychic. No other theory accounts for the moments of free speech. He describes the psychic condition of the stutterer and concludes that there is much amiss with the stutterer besides his stuttering; an effective therapy must be directed toward a total psychic problem.

Missildine, W. H., and Glasner, F. J., "Stuttering, a Reorientation," Journal of Pediatrics, 31:300, September, 1947.

These are the authors' conclusions: most therapists agree that stuttering is a functional or psychogenic disorder; it usually begins between two and four years of

age, the preschool stutterer is best treated through his environment; speech correction classes in school only aggravate the difficulty; school children need speech therapy, psychotherapy and environment change.

Nelson, Severina E., "Personal Contact as a Factor in the Transmission of Stuttering," Human Biology, 11:398, September, 1939.²⁷

From a study of 204 stutterers and 204 controls regarding their familial tendencies and associational factors, the author concludes that association is of slight importance in the incidence of stuttering, but that there may be some hereditary elements in it.

_____, "The Role of Heredity in Stuttering," The Journal of Pediatrics, 14:642, May, 1939.

Same as above article.

North, E. A., "Stuttering: Discussion of Cause and Treatment," The Journal of Medicine, 14:316, August, 1933.

This article is largely a presentation of Travis' theory. The author's conclusions are: left handed children should

²⁷ Abstracted from an unsigned review in Quarterly Journal of Speech 26:145, February, 1940.

not be forced to write with their right hands; stuttering is usually due to a lack of cerebral dominance. A discussion follows the presentation.

Orton, S. T., "A Physiological Theory of Reading and Stuttering in Children," New England Journal of Medicine, 199:1046, November 22, 1928.

The high incidence of speech defectives among a retarded reading group led to the conclusion that lack of cerebral dominance might be responsible for both. Cerebral dominance is explained, and the caution not to change the handedness of a stutterer is given.

Quinan, C., "Disappearance Trends of Stammering," Laryngoscope, 47:184, March, 1937.

The author had a group of stutterers write with both hands and read the same list of words several times over a period of several days. After a while the stuttering on those words stopped. Writing seemed to have no effect on the stuttering.

_____, "Kinetics of Stammering," Laryngoscope, 47:829, November, 1937.

Two girls showed marked improvement in their speech when they walked on all fours and when they wrote simultaneously

with both hands. Word lists showed disappearance trends.

Robbins, S. D., "Breath Control in Stammering," New England Journal of Medicine, 205:146, July 16, 1931.

This article outlines the training used at the Boston Stammerers' Institute and gives reasons for each exercise. The author states that stammering is of emotional origin but that it is marked by physical changes, especially in breathing and in blood circulation. Slow calm breathing lessens the brain congestion and improves the speech. A comparison is made of stutterers' and non-stutterers' breathing. In the second part of this article the author compares the stutterers' and the non-stutterers' use of vowels and consonants and suggests the training in vowel elongation. The use of suggestion and the development of personality must be part of the therapy since stuttering is primarily an emotional and mental condition.

Rowntree, Col. Leonard G., McGill, Kenneth, and Hellman, L. P., "Mental and Personality Disorders in Selective Service Registrants," Journal American Medical Association, 128: 1084, August, 11, 1945.

Psychoneurotic disorders were the most frequent types of disorders which led to rejections. The basis for more than half of these diagnosis were functional disorders

of expressive movements ---- stuttering included.

Satterfield, Val., "Psychiatric Aspects of Stammering," Missouri State Medical Association Journal, 31:112, March, 1934.

Stutterers have a neurological and psychological predisposition to stutter. There is a stutter-type personality, and the tendency to stutter runs in families. The therapy must follow the analysis of the stutterers. The author warns against using tricks because they do more harm than good.

Scripture, M. K., and Glassburg, J. A., "Stammering and Stuttering from the Medical Viewpoint," Archives of Pediatrics, 42:513, August, 1925.

According to these authors the treatment of speech disorders is primarily a medical problem rather than an educational one. Stuttering is caused by an underlying neuropathic predisposition and nervous shock. First remove the rhinolaryngological defect; then give proper breathing exercises, correct bad speech habits, and give phonetic reeducation.

Solomon, Joseph C., "Stammering and Stuttering, The Pediatrician's Responsibility," American Journal of the Diseases of Children, 45:1074, May, 1933.

This author deploras the lethargy of the medical profession toward the problem of stuttering. He discusses diagnosis and treatment and cites four cases. His conclusion is that it is the pediatrician's responsibility to recognize the conditions attendant upon the disorder and to treat the patients.

Solomon, Meyer, "Modern Conceptions of Stuttering and Stammering," Illinois Medical Journal, 47:133, February, 1925.

The author defines stuttering and stammering as a recurrent, transient inability to pronounce a word, a syllable, or a sound. After summing up all of the other conceptions and labeling them as erroneous, he presents his own "correct" psychologic conception. This conception presents stuttering as a disorder of the mind with a basis in emotional disturbance. He discusses causes of onset, nervous and mental attitudes and habits preceding the onset, and hints for treatment. This presentation was followed by a discussion.

Solomon, Meyer, "Stuttering, Its Nature and Mechanism,"

Illinois Medical Journal, 65:329, April, 1934.

After proving that the other theories couldn't be correct, the author discusses his own conception and comes to this conclusion: Stuttering is an emotional and personality disorder. It is due to emotional disequilibrium in social situations requiring speech with a consequent struggle to maintain or regain equilibrium and accidentally stumbling into stuttering which becomes a conditioned emotional response in social speech situations. This situation may be induced by stress, etc. If the stuttering continues personality disorders follow. Treatment should be based on the conception of stuttering as an emotional and personality disorder and should be bent toward the reorganization of the personality. Stuttering in the preschool child requires a study of the home.

_____, "Stuttering and Stammering--Nature, Mechanism, and Principles of Treatment," Official Bulletin, Chicago Medical Society, p. 20, July 4, 1925.

Same ideas as above.

Starr, Samuel, "Stammering: a Psychoneurosis," Rhode Island Medical Journal, 14:29, February, 1931.

Stuttering represents a regression to the infantile stage of the oral gratification of nursing. The sutterer reexperiences a former pleasurable state which he never really relinquished. Treatment only by a trained psychoanalyst.

_____, "A Symposium on Stuttering," Archives of Pediatrics, 48:533, August, 1931.

Twenty nine people presented the sensory imagery, psychotherapeutic, pedigogical, and phenomenal schools of thought regarding the etiology and treatment of stuttering.

Voelker, Chas. H., "Hummanistic Logopoedy Applied to Spasmopemia," Archives of Pediatrics, 52:342, May, 1935.

This article is really a summary of the ideas on stuttering. The author distinguishes between stammering, a complete block, and stuttering, repetition, and says that stammering is worse. Both stammering and stuttering are symptoms of spasmopemia. Sensation images are dulled in spasmopemia. The personality effects are great. He distinguishes between primary and secondary stuttering.

Voelker, Chas. H., "A New Therapy for Spasmophemia on Gestalt Principles," Archives of Pediatrics, 59:658, October, 1942.

There have been positive results with sixty three of the sixty six patients treated by the following methods: the patient is not relaxed but pepped up to high degree of psychological awareness. For drill work use the following: pronounce and write syllables simultaneously; then pronounce the word. Use rapid fire questions and answers. The emphasis of this treatment is on insight.

_____, "The Visualization Treatment of Spasmophemia," Medical Record, 142:272, September 18, 1935.²⁹

This paper discusses a psychological experiment on nine stutters. Using more than one hundred "fear" synonyms it was found that the greater the visualization of these words the more severe the stutter, until finally stammering is obtained.

²⁹ Unsigned review in Quarterly Journal of Speech, 22:331, April, 1936.

Voelker, Chas. H., and Voelker, Elsie, "spasmophilia in Dyslalia Cophotica: Case Report," Annals of Otology, Rhinology and Laryngology, 46:740, September, 1937.³⁰

The case reported is of a congenitally deaf person who stuttered. Although the paper is presented to those interested in the stuttering, it is of more value to those interested in the deaf.

Yerbury, Edgar C., "The Relation of Speech Disorders to Emotional Disturbance," Journal of Pediatrics, 21:412, September, 1942.

Cases are cited to prove that there is a relationship between speech disorders, including stuttering, and emotional disturbances. Treatment should consist of relaxation and breath and thought control. The whole child should be treated.

³⁰ Abstracted from a review in Quarterly Journal of Speech, 24:339, April, 1938.

C. NEURO- PSYCHO- PERIODICALS

Barbara, Dominik, "A Psychosomatic Approach to the Problem of Stuttering in Psychotics," American Journal of Psychiatry, 103:188. ³¹

This article is a report of a study of twenty stuttering patients, sixteen male and four female between the ages of seventeen and fifty-five, made at the Central Islip State Hospital. The author concludes that stuttering is a symptom of an underlying neurotic personality reaction, a complex syndrome and to be understood only through a psychosomatic approach and that the difference between stutterers who are neurotic and those who are psychotic is one of degree of fear of a social situation only.

Bender, James F., "The Prophylaxis of Stuttering," The Nervous Child, Special Issue, 2:181, January, 1943.

The author gives the symptomatology, pertinent facts, comparisons of stutterers and non-stutterers--those agreed on by most authorities and those disagreed on--theories of etiology, and prevention, regarding the problem of stuttering.

³¹ Abstracted from a review by T. Pollack, Journal of Speech Disorders, 12:216, June, 1947.

Bender, James P., "The Stuttering Personality," American Journal of Orthopsychiatry, 12:140, January, 1942.

The Barnreuter Personality test was given to 249 college age stutterers and 249 college age non-stutterers, all members of each group being male. The results led the author to conclude that post-pubertal male stutterers have more personality disturbances than the control group, and that they are afflicted with certain characteristic peculiarities of personality. He discusses these personality peculiarities under these headings: morphology, intelligence, and temperament, and then he states the theory of a "stutter personality."

Berman, Abraham B., and Train, George J., "A Genetic Approach to the Problem of Stammering," The Journal of Nervous and Mental Diseases, 91:590, May, 1940.³²

The development of stammering is associated with emotional instability occasioned by haste, fear, etc., sibling rivalry and other disturbances.

³² Unsigned review in Quarterly Journal of Speech, 21:640, December, 1940.

Bills, Arthur G., "The Relation of Stuttering to Mental Fatigue,"
Journal of Experimental Psychology, 17:575, August, 1934.

Twenty eight stutters and thirty non-stutterers were examined, and the author reached the conclusion that although non-stutterers fluency was more disturbed by fatigue than was that of the stutterers, stuttering might be a result of nervous exhaustion. He felt that work in rhythm would be of value to stutterers.

Blackburn, Bruce, "Voluntary Movements in Stutterers and Non-stutterers," Psychological Monographs, (41:4) No. 187:1, 1931.

Thirteen stutterers were matched with fourteen non-stutterers for this study. The author concludes: stutterers showed marked inferiority in ability to execute rhythmical, voluntary movements of midline speech structure in non-speaking situations; no significant difference exists in the voluntary movements of other structures; gross quantitative differences exist between the voluntary performances of stutterers and non-stutterers which appear to differentiate several types of stutterers.

Brown, Fredrick W., "Viewpoints on Stuttering," American Journal of Orthopsychiatry, 2:1, January, 1932.³³

This paper presents certain of the theories and practices which are widely employed in attempting to understand, to treat, and to prevent stuttering. On the basis of certain facts and principles which appear to be common to most of these theories and practices, an attempt is made to formulate a reasonable hypothesis upon which both therapeutic and prophylactic work may be based.

_____, "Stuttering: Its Neuro-Physiological Basis and Probable Causations," American Journal of Orthopsychiatry, 2:1, October, 1932.³⁴

The author holds that stuttering results from a conflict between the cortex and the optic thalamus, and complete blocking occurs when they exert equal intensity. He subordinates the importance of sidedness and believes that when stuttering follows handedness shift it is merely because of a resistance to interference with normal bodily functions and the emotional strain attendant upon such resistance.

³³ Abstracted from a review by G. W. Gray, Quarterly Journal of Speech, 18:323, April, 1932.

³⁴ Abstracted from a review by C. M. Wise, Quarterly Journal of Speech, 19:291, April, 1933.

Brown, Spencer F., "Stuttering with Relation to Word Accent and Word Position," Journal of Abnormal and Social Psychology, 33:112, January, 1938.³⁵

Thirty two stutterers were tested, and the results showed that the percentage of accented syllables in relation to which stuttering occurred was significantly greater than unaccented syllables and that accented syllables and first words in sentences require relatively greater tension and increased activity of the speech mechanism.

Bryngelson, Bryng, "A Method of Stuttering," Journal of Abnormal and Social Psychology, 30:194, July-September, 1938.³⁶

The author describes "voluntary stuttering" and tells how to use it as a method of adjusting the stutterer to his speech spasms and to enable him to gain more control over his speech.

_____, "Photophonographic Analysis of the Vocal Disturbances in Stuttering," Psychological Monographs, 43:1, 1932.

Seventeen stutterers and nine non-stutterers were used for this experiment. Each case is given briefly. The results

³⁵ Abstracted from an unsigned review in Quarterly Journal of Speech, 24:534, October, 1938.

³⁶ Abstracted from a review by C. H. Woelker, Journal of Speech Disorders, 3:264, December, 1938.

as follows: there were marked variations in form, length, and intensity of the consecutive waves of the stutterers' voices during stuttering; extreme tonal rigidity was found; a variety of isolated waves appeared; a variety of abnormal attacks of tones appeared; a variety of abnormal endings of tones was present; there appeared to be a form of vocalization on inhalation; informative sucking and snoring noises were recorded; there were pulsations in the breath stream before, between, and after the tones; non-stutterers cannot stutter successfully.

Bryngelson, Bryng, "Sidedness as an Etiological Factor in Stuttering," Journal of Genetic Psychology, 47:204, September, 1935.³⁷

Seven hundred stutterers were studied; the diagnosis was made on the basis of sidedness rather than handedness. Percentages of findings are given. The author states that stutterers are not as often like right handed persons in many types of behavior as they are like left handed individuals.

³⁷ Abstracted from a review by C. H. Voelker, Journal of Speech Disorders, 3:264, December 1938.

Bryngelson, Bryng. "A Study of Laterality of Stutterers and Normal Speakers," The Journal of Social Psychology, 11:151, February, 1940.³⁸

The object of Bryngelson's study was to ascertain the differences in the laterality of a group of stutterers and a group of non-stutterers. There were seventy eight paired subjects tested. Two items, shift of handedness and ambidexterity, showed statistically significant differences in favor of the stuttering group. It was further discovered that stutterers are not as uniformly one-sided as non-stutterers. Stuttering was found to occur four times as often in family history of stutterers as of non-stutterers.

_____, "Stuttering and Personality Development," The Nervous Child, 2:162, January, 1943.

Here is the author's own summary of the article: "I have attempted in this discussion to indicate that the personality development of the stutterer is dependant upon the type of attitude he develops out of the family and social milieu. If the earliest attitudes of the stuttering child to his environment are defensive, full of fear and anxiety,

³⁸ Abstracted from an article by V. A. Anderson, Quarterly Journal of Speech, 26:497, October, 1940.

he may distort his natural personality picture and develop a ruse behind which he will maintain a maladaptive status. If, on the other hand, he is treated with objectivity, frankness, and honesty, he will tend to adopt a wholesome attitude toward his stuttering and himself, will be able to manage his world with a balanced sportsmanship."

Case, H. W., "Therapeutic Methods in Stuttering and Stammering," Psychological Bulletin, 37:586, October, 1940.

Readjustment to environment is a necessary part of the treatment of stuttering, but it is not the only thing needed. Negative practice has been found to be an effective means of breaking the stammering; stuttering and word blocking need different types of treatment.

Clark, L. F., "The Mental Treatment of Stammering," The Psychiatric Quarterly, 8:306, 1934.

Stammering is a symptom of neurosis. There is a definite stutter-type personality. Stuttering is oral-erotic-sucking, but the stutterer is unaware of the erotic element. After the stutterer's confidence in the analyst has been established, a cure can be found by the analyst's leading his patient to see his problem and solve it.

Clark, L. P., "Psychogenesis of Confirmed Stammering," Journal of Nervous and Mental Diseases, 62:238, March, 1926.

Same ideas as those on preceding page. The author suggests the use of the phantasy method of analyzing the narcissistic neurosis.

Coriot, Isador H., "Active Therapy in the Analysis of Stammering," Psychoanalytical Review, 17:342, July, 1930.

Analysis is an attack upon the stutterer's narcissism and should be used because the amount the stutterer will gain from treatment depends on its ability to over-come the external circumstances which activate and strengthen the oral libido. In the course of the treatment deprive the stutterer of anything which substitutes for this oral gratification, e.g., smoking, especially pipe smoking, gum chewing. Make the deprivations one after the other. Resistance may follow, but the favorable effects of the treatment are in direct proportion to the amount of suffering and tension it produces, provided the tension can be resolved.

_____, "The Dynamics of Stammering," Psychoanalytic Quarterly, 2:244, 1933.

To understand the dynamic problem of stammering, it is necessary to emphasize that the damming up of the libido and its concentration on the pregenital organization finds

its most satisfying outlet in speech difficulty. To observe the stammerer attempting to talk is to see the infant struggling to obtain satisfaction at the nipple.

Copiot, I. H., "Psychoanalytic Conception of Stammering," The Nervous Child, Special issue, 2:167, January, 1943.

In this article the author presents his theory that stammering is not a speech defect but that it consists essentially of the persistence into adult life of infantile nursing activities. Psychoanalysis is necessary in the treatment.

_____, "Stammering: A Psychoanalytic Interpretation," Nervous and Mental Diseases Monograph Series, No. 47:68, 1927.³⁸

Stammering is due to a libidinal fixation at the oral erotic level; it may be regarded on the one hand as a prolongation of the infantile pleasure in sucking and on the other as a resistance to the betrayal through speech of the real nature of the source of satisfaction. The fear effect proceeds from the danger that the ego may be overwhelmed by the unsublimated libidinal tendencies. Stammerers are fundamentally limited optimistic and narcissistic. Psychoanalytic

³⁸ Abstracted from a review by R. R. Willoughby, Psychological Abstracts, 2:286, May, 1928.

treatment is peculiarly difficult on account of the latter factor, and should be directed against the oral libido primarily.

Despert, J. Louise, "Psychopathology of Stuttering," American Journal of Psychiatry, 99:881, 1943.⁴⁰

In describing the speech structures the author finds significance in their relationship to eating, digestion, and respiration. Stuttering is defined, and the two kinds are differentiated, tonic and clonic. After reviewing the various theories with regard to the etiology of stuttering, the author summarizes and analyzes the psychodynamic elements in clinical studies which she made of fifteen students. One typical case is given in detail. It is concluded that the mother's neurotic attitudes in relation to the early eating-speaking situation are very important factors in the development of stuttering in children, although other developmental phases which take place at this stage of the child's growth may be contributing factors.

⁴⁰ Abstracted from a review by A. Lapidus, Journal of Speech Disorders, 10:49, March, 1945.

Despert, J. L., "Stuttering: A Clinical Study," American Journal of Orthopsychiatry, 13:517, July, 1943.

This article is another report of the same investigation reported on the preceding page.

_____, "A Therapeutic Approach to the Problem of Stuttering in Children," The Nervous Child, Special Issue, 2:34, January, 1943.

Here is the author's own summary of the article: "Two clinical cases have been presented, illustrating a method of investigation and therapy of stuttering children. The neurotic character of stuttering has been brought out--with anxiety as a primary factor--and the influence of neurotic attitudes in the early environment. In this connection, the importance of the early speaking situation has been stressed. The need for careful dynamic study of stuttering has been pointed out, and a plan for a psychosomatic study of stuttering in children has been formulated."

_____, Kopp, Helene, Carlson, Jessie J., and Krugman, Morris, "Psychosomatic Study of Fifty Stuttering Children," (round table) American Journal of Orthopsychiatry, 16:100, January, 1946.

Despert gave the general findings of the study of fifty stutterers between the age of six and a half and fifteen years. An intensive study was made of the histories, and

each child was given certain tests. These were the findings she reported: anxiety was the most common finding; stutterers tend to have neurotic and speech difficulties in their families; neurotic mothers are a large factor; more boys stutter than girls; there is no stutter personality as such.

Kopp reported on the results of the Ozeretzky Tests; stutterers show marked motor dysfunction and lack of maturity of motor development.

Carlson reported on the Stanford-Binet Tests: Stutterers are not below normals in verbal and reading ability, but they are below in non-verbal material.

Krugman reported on the Rorschach Study: stuttering is closely associated with emotional and personality maladjustments.

Dorsey, John W., "The Psychology of the Person Who Stutters,"
The Psychoanalytic Review, 22:25, January, 1935.

Here is a summary of the main points presented by the author: to understand stuttering one must understand the original nature of the speech act and the nature of the person who stutters; the creative element in the speech act stresses the genesis of stuttering in an under-emphasis of urethral libido cathexis; the repetition-compulsion

elements in the speech act stress the maintenance of stuttering as arising from an over-emphasis of anal libido cathexis in a person of relatively under-emphasized urethral libido cathexis; when the reative characteristics function inferiorly to the tolerance and loyalty characteristics the personality presents a predisposition to stutter; more men than women stutter because the mouth assumes a more unique meaning as a creative organ for men than it does for women; most stutterers are immature in personality development because they lack genital primacy of libido cathexis.

Douglass, Leigh C., "A Study of Bilaterally Recorded Electroencephalograms in Adult Stutterers," Journal of Experimental Psychology, 32:247, March, 1943.

Twenty stutterers and twenty non-stutterers were studied at the University of Iowa to determine the relationship between certain changes in electro-cortical functioning and stuttering. The conclusion reached was that bilateral occipital blocking is significantly greater during stuttering than during the silence of either stutterers or non-stutterers, and that the interhemisphere difference in unilateral blocking during silence between stutterers and non-stutterers points to the existence of physiological differences.

Downey, June, "Types of Dextrality and Their Implications," The American Journal of Psychology, 38:317, July, 1927.

Stuttering is included in this discussion. About four pages of the fifty pages of this article are devoted to the relationship between handedness and speech defects. The conclusion that the author reaches is that when L L L's are changed in handedness they are more apt to develop speech defects than when L L R's or L R R's are changed.

Dunlap, Knight, "Stammering: Its Nature, Etiology, and Therapy," Journal of Comparative Psychology, 37:187, June, 1944.⁴¹

The author places the primary cause of stammering in the home environment. Every stammerer has a different pattern and must be treated differently. For the very young stammerer, he advocated a meat diet and no parental correction of his defect. For stammerers over twelve, he recommends "negative practice," unison and solo reading, and rhythmic beating. He also urges increased social contacts and the overcoming of worry over the defect.

⁴¹ Abstracted from a review by A. Lapidus, Journal of Speech Disorders, 10:49, March, 1945.

Eisenson, Jon, "A Note on the Perseverating Tendency in Stutterers," Journal of Genetic Psychology, 50:195, 1937.⁴²

Tests were given to matched stutterers and non-stutterers. The results indicate a greater tendency on the part of the stutterers to resist change, a greater tendency for their neurons, once excited, to persist in the original state of excitation. The hypothesis is proposed that stuttering is an indication of resistance to change, and hence a manifestation of the phenomenon of perseveration.

_____, "Some Characteristics of the Written Speech of Stutterers: I," Journal of Genetic Psychology, 50:457, 1937.⁴³

Fifteen undergraduate, male stutterers each wrote for fifteen minutes on a topic of general interest. The number of words written was taken as the "talkativeness" and the number of words crossed out as "verbal trial and error." The results indicate that the written speech of stutterers is less "talkative" than non-stutterers and more marked by trial and error. The author suggests that the stutterer's difficulty may be due to an inability to sustain coherent thought and express it verbally. This difficulty is not present in free association as Meltzer points out.

⁴² Abstracted from a review by E. Heidbreder, Psychological Abstracts, 11:629, October, 1937.

⁴³ Abstracted from a review by E. Heidbreder, Psychological Abstracts, 12:35, January, 1938.

Eisenson, Jon, and Berry, Mildred, "The Biological Aspects of Stuttering," Journal of Genetic Psychology, 61:147, September, 1942.

This is the authors' own conclusion: "The biological approach . . . seems to indicate that some stutterers may be constitutionally different persons from most normal speakers . . . In many cases it needs to be made clear whether the obtained results are the after effects or the causes of stuttering." This opinion is expressed after the authors reviewed various studies which deal with the biological aspects of stuttering, its symptomatology and etiology.

Fagan, L. B., "A Clinico-Experimental Approach to the Reeducation of the Speech of Stutterers," Psychological Monographs, 43:53, 1932.

The author reports on the study of thirty three right handed stutterers four and a half to twenty eight years of age. Their case histories were taken; they were given physical examinations, intelligence tests, personality tests, and motor lead tests; if they had been left handed, their handedness was returned to normal, in an attempt to develop unilaterality. They spoke and wrote at the same time, starting to write a little ahead of speaking--writing establishes greater motor leads. 63 per cent of the cases showed improvement. The author closes his discussion

with a report on the study of the simultaneous writing performance of 69 non-stutterers and 50 right handed stutterers. The stutterers showed a much greater tendency to mirror write, and that tendency was with the right rather than the left hand.

Fagan, L. B., "Graphic Stuttering," Psychological Monographs, 43:67, 1932.

This article is a report of the case of a twenty nine year old female stutterer of superior intelligence and normal health. When her writing was compared with that of a non-stutterer the conclusion was drawn that there was a marked relationship between her stuttering and her spastic type writing.

Fessler, Harold R., "Disturbances in Breathing During Stuttering," Psychological Monographs, 40:1, 1930.

A comparison of thirteen male stutterers and a matched group showed the following results: no significant difference in amplitude of inspiration and expiration; stutterers 52 per cent more variable in time of inspiration; stutterers 46 per cent more variable in time of expiration; speech breathing of both groups about three times more variable than non-speech breathing; average length of full breath intervals during speech greater than for non-speech breathing

for both groups; stutterers present two to five times more anomalous waves; stutterers showed about twice as many expirations interrupted by inspirations; stuttering may or may not be accompanied by tonic and clonic spasms of the breathing and laryngeal apparatus, temporal opposition of breathing curves, attempts to speak on inspiration, greatly prolonged expiration, or breaking up of normal rhythms of speech.

Proeschels, Emil, "Pathology and Therapy of Stuttering," The Nervous Child, special issue, 2:149, January, 1943.

The author discusses the symptomatology and nature of stuttering; then he describes his "chewing method" of treatment. This method, based on the likeness between chewing and speaking, has proved successful in the 16,000 cases with which he has had contact.

_____, "Survey of the Early Literature on Stuttering, Chiefly European," The Nervous Child, special issue, 2:86, January, 1943.

This article deals with the material written on the symptoms of stuttering rather than with etiology or therapy.

Gardner, W. H., "Study of the Pupillary Reflex with Special Reference to Stuttering," *Psychological Monographs*, 49:1, 1939.⁴⁴

The delicate balance between the constrictor and the dilator muscles of the pupil, which are innervated by opposing branches of the autonomic nervous system, is disarranged in the spasmophemic. The normal pupillary response to light is altered consistently in dilated diameter, the various speeds and amount of contraction, and the minimum diameter when spasms are present in spasmophemoid speech.

Glauber, Peter I., "Psychoanalytic Concepts of the Stutterer," *The Nervous Child*, special issue, 2:172, January, 1943.

The author discusses the normal psychic development of a child, claims that the background for stuttering is non-normal, and then makes this summary: "Stuttering in children is a mono-symptomatic functional disorder. The speech symptom represents the conversion of psychic conflicts into somatic form, resulting in blocking of exaggerated wishes to speak. The conflict stems from retention of early infantile forms of instinctual gratification before genital primacy is attained. Inseparable from this fact is the functioning of an ego insufficiently differentiated from

⁴⁴ Abstracted from a review by C. H. Voelker, *Journal of Speech Disorders*, 3:265, December, 1938.

the mother and characterized by strong narcissistic, exhibitionist, oral, and anal needs. On the affective side there are pervasive anxieties and aggression, especially ambivalence. Interpersonal relationships are motivated primarily by marked tendencies toward dependence in conflict with opposing, self defensive controlling tendencies expressed by means of sadomasochism. These are the conflicts which use the speech mechanism for their expressions, thereby distorting its smooth function. The severity of the disorder is judged by, and the prognosis is based on, the degree of character distortion as determined by the prominence of narcissistic or oral components in the personality."

Glauber, I. P., "The Treatment of the Functional Speech Disorders in a Medical-Social Clinic," American Journal of Orthopsychiatry, 5:388, October, 1935.

This article tells of the treatment given at Dr. Greene's clinic in New York.

Goss, Albert E., "An Experimental Investigation of an Anxiety Gradient in Stuttering," American Psychologist, 3:337, 1942.

The conclusion is drawn that stuttering is directly related to the duration of word-cue within a range of one to ten seconds.

Greene, James S., "Functional Speech and Voice Disorders,"
Journal of Nervous and Mental Diseases, 95:299, January-
June, 1942.

Based on the observation of 20,000 stutterers, the conclusion which the author reaches is that stuttering speech is a somatic manifestation of emotional disorder, based on psychobiologic variability and that it involves the whole organism. He gives a brief description of the stutter type. Therapy must be of a composite nature including medical, psychiatric, psychologic, reeducational, and social approaches.

Gregory, M. S., "Stammering as a Neurosis," Journal of Nervous and Mental Diseases, 62:371, October, 1925.

The author discusses the development of the child during the first three years with special emphasis on those elements of his development which may lead to neurosis, and he points out that stuttering may be the outgrowth of an inability to face life. This inability may be the result of heredity or environment or both with the mother playing a significant role.

Harle, M., "Dynamic Interpretation--Treatment of Acute Stuttering in Young Children" American Journal of Orthopsychiatry, 16:156, January, 1946.

This is the case study of a three year old child who improved under treatment which was based on the assumption that her disorder was an oral, anal, sexual nature.

Hawthorne, J. W., "An Attempt to Measure Certain Phases of Speech," Journal of General Psychology, 10:399, April, 1943.

The aim of this study was to devise means of rating degrees of speech difficulty in any individual. Stuttering is included. These facts were noted: in response to three questions stutterers used 50 per cent more words than non-stutterers did in making answers; no significant difference was noted between stutterers and non-stutterers in rate of spontaneous speech; no constant or significant increase in speech rate from grade one to eight was found in either stutterers or non-stutterers.

Heilpern, Elsie, "A Case of Stuttering," Psychoanalytic Quarterly, 10:95, 1941.

The author gives a history of the treatment of a twenty one year old male stutterer who met all the requirements of a psychoanalytic interpretation of his disorder. He was helped by the treatment.

Heltman, Harry, J., "Psycho-Social Phenomena of Stuttering, and Their Etiological and Therapeutic Implication," Journal of Social Psychology, 9:79, February, 1938.

"The primary concern of speech correction is the nature of speech," so says this author; then he discusses the subject as follows: stuttering is psychogenic; it is a social

trait; effective therapy must be built on social factors or stimuli which determine the variations in the mode of speech between individuals in any environment.

Herren, R. York, "The Effect of Stuttering on Voluntary Movement," Journal of Experimental Psychology, 14:239, June, 1931.

Twelve (male) stutterers and a control group were studied at the University of Iowa; and these conclusions were drawn from the study; during stuttering not only is the speech mechanism blocked but the activity of other organs, as the hands and feet, is blocked also; therefore, the indication is that stuttering is due to or causes or accompanies a general motor blocking.

———, "The Relation of Stuttering and Alcohol to Certain Tremor Rates," Journal of Experimental Psychology, 15:87, February, 1932.

Thirteen male stutterers, twenty to twenty five years of age, and six male non-stutterers, twenty three to twenty seven years of age, with varying degrees of appetite for alcohol were studied. These conclusions were reached; both stuttering and alcohol depress the tremors of a rate of eight to twelve per second; alcohol depression also causes the appearance of two new tremor rates; voluntary movement produces a greater percentage of tremor rates of 40-75 in

stutterers than in non-stutterers; tremor rates are more pronounced during stuttering than during silence.

Hildreth, Gertrude, "The Development of Training of Hand Dominance: IV, Developmental Problems Associated with Handedness," Journal of Genetic Psychology, 76:39, March, 1950.

The author reviews authorities in the field and gives a summary of facts about the relationship between a number of items, including stuttering and handedness. She has these things to say about stuttering: it is a phenomenon of childhood; it is a functional motor disorder, experts consider it a neurosis or a motor disturbance; it is a problem of child handling; it is a male disorder; it is related to hand dominance; there are few permanent cures after the child reaches twelve years of age. She makes a few suggestions for the treatment.

_____, "Manual Dominance in Nursery School Children," Pedagogical Seminary and Journal of Genetic Psychology, 72:29, March, 1948.

The author includes a brief section on stuttering and handedness at the end of her discussion. Where there is inconsistency in the child's handedness, whether it be left or right, speech difficulty may result.

Hill, Harris, "An Interbehavioral Analysis of Several Aspects of Stuttering," Journal of General Psychology, 32:289, 1945.⁴⁵

The author holds that the behavior segments of units of psychological interaction are divided into attention, perception, and consummating response. In analyzing stuttering these three elements must be considered. The stutterer's attention is often focused by fear, and his perception also often introduces fear of the consummating response. For an adequate understanding of the problem, stuttering must be looked upon as a complex of psychological phenomena, in which voluntary and volitional habit and behavior segments together with conditioning of the disrupted element.

Honig, Phoebe, "Psychodrama and the Stutterer," Sociometry, 9:175, May-August, 1947.⁴⁶

The writer reports clinical experience, using as subjects stutterers, aged sixteen to thirty five years of age, from Brooklyn College and the surrounding community. Her conclusion is that the psychodrama is of significant value in helping to bare the environmental stresses which might have precipitated the stuttering and that it is an excellent medium for adjusting the stutterer to his environment.

⁴⁵ Abstracted from a review by A. Lapidus, Journal of Speech Disorders, 10:253, September, 1945.

⁴⁶ Unsigned review in Quarterly Journal of Speech, 33:112, February, 1946.

Hunsley, Y. L., "Disintegration in the Speech Musculature of Stutterers during the Production of a Non-Vocal Temporal Pattern," Psychological Monographs, 29:32, 1937.

Twenty stutterers and twenty non-stutterers were tested at the University of Iowa. The hypothesis upon which the theory of cerebral dominance is based was in part substantiated by the results which proved that stutterers were inferior to non-stutterers in following a rhythmic pattern of clicks by biting, tongue protruding, and panting.

Ilg, F., Larned, J., and Lockwood, A., "The Three and a Half Year Old," Journal of Genetic Psychology, 75:21, 1949.⁴⁷

The authors found that as far as speech was concerned, stuttering symptoms were common among the 210 children from the upper middle class studied.

Ingebregstesen, E., "Some Experimental Contributions to the Psychology and Psychotherapy of Stutterers," American Journal of Orthopsychiatry, 6:300, October, 1936.⁴⁸

"Summing up, we may say that the developed stutterer presents the following characteristic picture of symptoms:

⁴⁷ Abstracted from a review by J. L. Bangs, Journal of Speech and Hearing Disorders, 15:180, June, 1950.

⁴⁸ Abstracted from a review by C. H. Voelker, Journal of Speech Disorders, 2:184, September, 1937.

1. Weakness of will--great suggestibility; 2. reduced attention; 3. reduced memory of languages--small storage of words; 4. logical displacement--amnesic confabulation; 5. motor amnesia; 6. stereotyped perception; 7. indolence--bluntness of effort; 8. disarrangement of motibility; 9. signs of depression; 10. repression; 11. restrictions."

Jacob, Z., "Some Suggestions on the Use of Content Symbolism,"
Rorschach Research Exchange, 8:40, 1944.⁴⁹

Six of twelve college stutterers used urogenital content references in responding to the Rorschach cards. Others gave "water" and "insect mouth" interpretations. The presence of enuresis and infantile adaptations in the clinical history of these persons may be significant in view of the psychoanalytical interpretation of enuresis as urethral eroticism and its association with stuttering. Subjects who tended to withdraw from emotional reality often gave "eye" and "mask" references and showed shock to black color. Such symbolic responses should be studied intensively and extensively.

⁴⁹ Abstracted from a review by E. M. L. Burchard,
Psychological Abstracts, 18:223, July, 1944.

Jasper, Herbert H., "A Laboratory Study of Diagnostic Indices of Bilateral Neuro-Muscular Organization in Stutterers and Normal Speakers," Psychological Monographs, 43:72, 1932.

Varying numbers of stutterers and non-stutterers were given tests which showed the following results: stutterers are more like the ambidextrous non-stutterers than they are like the left or right handed ones; (practically 100 per cent of the stutterers were ambidextrous on the test for central dominance in perception) these facts may show a connection between stuttering and lack of cerebral dominance.

_____, and Murry, E., "A Study of the Eye-Movements of Stutterers during Oral Reading," Journal of Experimental Psychology, 15:528, October, 1932.⁵⁰

The eye-movements of fifteen stutterers and fifteen non-stutterers were compared during both oral and silent reading, and these conclusions were drawn: in oral reading stutterers make more regressive movements per line and have more fixations than do non-stutterers; they show a greater difference between silent and oral reading in all quantitative measurements of eye movement; that these disturbances are coincident with and analagous to vocal

⁵⁰ Abstracted from a review by G. W. Gray, Quarterly Journal of Speech, 19:114, February, 1933.

disturbances suggests a general disequilibrium of the nervous system during stuttering; differences in types of disturbances of eye movements may possibly be used as a means of differentiating between the types of stutterers; a relative decrease in the control of the cortical over the subcortical centers is suggested by the reflex type of eye movement.

Jensen, Milton D., "A Case of Extreme Language Disability Concealed by Stuttering," Journal of Clinical Psychology, 4: 93, January, 1948. ⁵¹

The percentage of stutterers who begin stuttering volitionally to attain some goal is larger than is generally realized. A case is cited of a young woman who stuttered to avoid detection of her extreme language difficulty.

Johnson, Wendell, "The Dominant Thumb in Relation to Stuttering, Eyedness, and Handedness," American Journal of Psychology, 49:293, 1937.

After studying 227 male and 44 female stutterers, the author concludes that there is no significant relationship between the thumbness and eyedness of stutterers but that there is between the thumbness and original handedness.

⁵¹ Unsigned review in Quarterly Journal of Speech, 34: 408, October, 1948.

Johnson, Wendell, "Hand Usage and Angleboard Dextrality Quotients of Adult Stutterers and Non-Stutterers," Psychological Bulletin, 37:424, 1940, also in Journal of Experimental Psychology, 31:293, October, 1942, Aruthur King listed as coauthor.

Ninety eight stutterers, fifteen to thirty seven years of age, and seventy one non-stutterers, sixteen to twenty six years of age, were given three tests for handedness, and very little difference between the two groups was found leading to the conclusion that "it might well be that theories relating right and left handedness and ambidexterity . . . to stuttering . . . have been based in part upon an invalid assumption with regard to the nature of handedness."

_____, "The Influence of Stuttering on the Attitudes and Adaptations of Stutterers," Journal of Social Psychology, 5:415, August, 1934.

After eighty stutterers between the ages of seven and forty two were given tests, the author concludes that the emotional and special adjustment of stutterers is relatively normal and that such maladjustments as they do have are a result of the defects rather than a cause.

Johnson, W., "A Statistical Evaluation of Specified Cues Related to the Moment of Stuttering," Psychological Bulletin, 35:632, 1938.

This paper is a presentation of the author's part in a program of the American Association of Applied Psychologists. To a statistically significant degree stuttering occurred on such cues as pencil markings in the passage read, color of paper, mirrored reflection of the reader, photographs of "hard" and "easy" listeners, etc., when a passage was read by an adult stutterer.

_____, "Stutterers' Attitude Toward Stuttering," Journal of Abnormal and Social Psychology, 29:32, April-June, 1934.

Twelve stutterers between the ages of seventeen and thirty six were asked to rate fifty situations on the basis of how much embarrassment would be involved in stuttering in them. On the basis of a study of the answers, the author concludes that the stutterers own attitude toward any situation determines to a large extent his attitude toward stuttering and his embarrassment from it.

Johnson, W., and Knott, J. R., "The Moment of Stuttering," Journal of Genetic Psychology, 48:423, 1946.⁵²

"The moment of stuttering may be broken down into four rather separate configurations. There are the neurological, the precipitating psychological, the reactive psychological, and the communicative. Stuttering is the manifestation of conflict between the communicative and one or more of the other three configurations."

Kelly, George, "Some Common Factors in Reading and Speech Disabilities," Psychological Monographs, 43:175, 1932.

The conclusions which the author reached regarding stuttering were that cerebral dominance is lacking in both stuttering and reading disability independent of intelligence, and that most stutterers have a high hydrogen ion concentration.

⁵² Abstracted from a review by C. H. Voelker, Journal of Speech Disorders, 3:50, March, 1938.

Knott, J. R., and Johnson, W., "The Factor of Attention in Relation to the Moment of Stuttering," Journal of Genetic Psychology, 48:479, 1936.⁵³

"The stronger the attentional set to stuttering, the more inhibited the speech behavior; this is proportional to the degree the attentional set provokes avoidance reactions."

_____, and Tjossem, T. D., "Bilateral Electroencephalograms from Normal Speakers and Stutterers," Journal of Experimental Psychology, 32:357, April, 1934.

The authors studied twenty four stutterers at the University of Iowa clinic and fourteen from the University of Minnesota clinic and compared their findings with those made by Douglass. The conclusion that they drew was that stutterers tend to have a different lateral excitability than do non-stutterers, which fact is a support for the theory of the lack of cerebral dominance, but that the evidence did not justify accepting the theory of the lack of cerebral dominance as the only correct theory of etiology.

⁵³ Abstracted from a review by C. H. Voelker, Journal of Speech Disorders, 2:50, March, 1938.

Kopp, Helene, "The Relationship of Stuttering to Motor Disturbances," The Nervous Child, special issue, 2:107, January, 1943.

After studying 450 stutterers the author reached the conclusion that stuttering is primarily a neurologic disorder characterized by a profound disturbance of motor function.

Kriegman, L., "The Coordination of the Speech Musculature of Stutterers and Non-Stutterers," Psychological Bulletin, 39:592, 1942.

The result of a study tends to prove that there is no difference between the rate of tongue, jaw, lip, and finger movements or in the ability to produce a temporal pattern of movement between stutterers and non-stutterers; nothing is told about the study itself.

Krout, Maurice H., "Emotional Factors in the Etiology of Stammering," Journal of Abnormal and Social Psychology, 31:174, September, 1936.⁵⁴

Following the presentation of some case analyses, the author concludes that certain deep seated emotional conflicts have an etiological bearing on stammering and that

⁵⁴ Abstracted from a review by L. Thonssen, Quarterly Journal of Speech, 23:157, February, 1937.

because these conflicts persist and the individual continues to be unable to solve them, stammering must be regarded as a major type of neurosis.

Lemert, Edwin M., and Van Riper, C., "The Use of Psychodrama in the Treatment of Speech Defects," Sociometry, 7:190, May, 1940.

This presentation is not about stuttering especially. It claims that psychodrama presents a means of objectifying tensions and acts as an emotional catharsis. A few psychodrama methods are suggested.

Lewis, N. D. C., "Coriot's Stammering," Psychoanalytic Review, 15:443, October, 1928.

This article merely discusses Coriot's Stammering--a Psychoanalytic Interpretation.

Lindsley, Donald B., "Bilateral Differences in Brain Potentials from the Two Cerebral Hemispheres in Relation to Laterality and Stuttering," Journal of Experimental Psychology, 26:211, February, 1940.

An analysis of the brain potential records of forty eight right handed, eight left handed, and nine ambidextrous non-stutterers and two stutterers reveal that the stutterers and the ambidextrous non-stutterers are alike in that

the alpha waves are more often out of phase for them than for either the left or right handed non-stutterers. This interference may lead to speech difficulties.

Loebowitz-Lennerd, H, and Reisman, F., "A Cleanliness Test Devised by a Stutterer," Psychiatric Quarterly, 20:135, 1946.

This article is a presentation of the case of a twenty six year old male stutterer who developed a theory of personality development around the degree of cleanliness. The authors felt that he was a perfect illustration of the psychoanalytic theory.

Meltzer, H., "Personality Differences between Stuttering and Non-Stuttering Children as Indicated by the Rorschach Test," Journal of Psychology, 17:39, 1944.⁵⁵

Fifty stuttering school children were matched with fifty non-stuttering school children and given the tests. A real difference was shown by the tests. The stutterers showed greater synthetic mental activity but in the form of compulsive, compensatory behavior, and greater creative ability but less well balanced, with tendencies toward fantasy, withdrawal irritability and manic depression.

⁵⁵ Abstracted from a review by T. Pollack, Journal of Speech Disorders, 10:255, September, 1945.

Meltzer, H., "Talkativeness in Stuttering and Non-Stuttering Children," Journal of Genetic Psychology, 46:371, June, 1935.

After the author had studied fifty stutterers and fifty non-stutterers he concluded that stutterers talked more than non-stutterers, that is they used more needless words, that they used compensatory forms of expression, and that their language was full of verbal trial and error. He recommended that treatment should be comprehensive and integrated, that personality measurements should be adequate, that life histories should be inclusive, and that the picture of the pre-stuttering as well as the post-stuttering personality should be complete.

Meyer, Bernard, C., "Psychosomatic Aspects of Stuttering," Journal of Nervous and Mental Diseases, 101:127, 1945.⁵⁶

The author presents findings from an investigation of 116 stutterers at the National Hospital for Speech Disorders in New York City. Assertions by the author include, 1. imitation cannot be ruled out as a possible factor, 2. a complex heredity pattern may be causative, 3. the physical findings are typical of a state of tensions, 4. the stutter

⁵⁶ Abstracted from a review by K. Thorn, Journal of Speech Disorders, 10:255, September, 1945.

is regarded as a single manifestation of a general neurotic problem, 5. stuttering is viewed as the result of the conscious will to talk and the unconscious will not to. The author warns against indiscriminate attempts to cure.

Mitfessel, Milton, and Warren, Neil, "Over-Compensation by the Non-Preferred Hand in an Action Current Study of Simultaneous Movements of the Fingers," Journal of Experimental Psychology, 17:246, April, 1934.

1906 measurable action current reactions and 2555 movements for twenty three right handed, twenty two left handed, twenty dextro-sinistral non-stutterers and twenty four stutterers were recorded. These conclusions were drawn: attempted simultaneous movements began simultaneously about one fourth of the time; the average action current lead did not favor either hand; the movement leads seem as significant as action currents in relation to handedness; in both types of leads the stutterers and the ambidextrous resembled the right handed group; there is a significant difference in both leads between the left and right handed groups; the tendency for both leads to favor the hand not used in writing indicates an over compensation into the less used hand.

Morley, A., "An Analysis of Associative and Predisposing Factors in the Symptomatology of Stuttering," Psychological Monographs, 49:50, 1937.⁵⁷

Embarrassment and emotional reaction to speech difficulty seem to be expressed by the stutterer in a decreased amplitude and increased duration of breathing. The decrease of the eye movement efficiency in the stutterer seems to be a reaction to difficulty in verbalization. Therapeutic measures should include not only the neuro-physiologic but also the elements which will increase his social assets and help develop an objective attitude.

Murry, Elwood, "Dysintegration of Breathing and Eye-Movement in Stutterers during Silent Reading," Psychological Monographs, 43:216, 1932.⁵⁸

Twenty nine stutterers were paired with an equal number of non-stutterers and tests were given. These tests showed that stutterers showed greater variation on both amplitude and duration of both expiration and inspiration and that they showed more fixations and recessions in reading. The

⁵⁷ Abstracted from a review by C. H. Voelker, Journal of Speech Disorders, 3:26, December, 1938.

⁵⁸ Abstracted from a review by S. Sherman, Quarterly Journal of Speech, 19:115, February, 1933.

author concluded that stutterers were one grade below non-stutterers in comprehension and two grades below in their rate of reading.

Orton, S. T., "Stuttering," Archives of Neurology and Psychiatry, 18:671, November, 1927.

This presentation is merely an introduction to Travis' "Dysintegration of Breathing Movements During Stuttering." The author lays stuttering to a shift in handedness.

_____, "A Theory of the Neural Mechanism of Stuttering," Archives of Neurology and Psychiatry, 50:619, 1943.

This paper is the author's part in a symposium. After it is presented a discussion follows. His contention is that lack of cerebral dominance, not whether the stutterer is left or right handed, is the cause of stuttering.

_____, and Travis, L. E., "Studies in Stuttering; IV, Studies of Action Currents in Stutterers," Archives of Neurology and Psychiatry, 21:61, January, 1929.

This is the authors' summary: When currents of muscular action from both forearms are recorded during simultaneous voluntary contractions, they sometimes appear simultaneously but usually one precedes the other by a short interval. In right handed non-stutterers the action currents in the

right arm far exceed those in the left and also far exceed the simultaneous leads. In right handed stutterers more leads are found in the left arm and the simultaneous leads far exceed those of the non-stutterers.

Owen, T. V., and Stemmermann, M. G., "Electric Convulsive Therapy in Stammering," American Journal of Psychiatry, 104:410, December, 1947.

The case history of a twenty year old girl is given. The therapy included psychotherapy, speech training, and electric shock. The latter released her tensions and made psychotherapy possible. It is recommended as a means of shortening the time of treatment on very severe cases, and as a way of producing suitable atmosphere for the other two types of therapy.

Pattie, F. A., and Knight, B. B., "Why Does the Speech of Stutterers Improve in Chorus Reading?" Journal of Abnormal and Social Psychology, 39:362, 1944.⁵⁹

Experiments were made with twelve subjects and the authors reached the conclusion that the necessity for communication or the saliency of the stutterers' performance are negligible factors in the improvement shown by stutterers in choral reading.

⁵⁹ Abstracted from a review by A. Lapidus, Journal of Speech Disorders, 10:175, June, 1945.

Peacher, Captain Wm. G., "Speech Disorders in World War II,"
Journal of Nervous and Mental Diseases, 102:165, August, 1946.

Stuttering is included with other disorders of speech in this discussion. The author divides stuttering into pre- and post-induction. He says that stuttering does not necessarily arise because of the difficulty of adjusting to army life.

Pitrelli, F. R., "Psychosomatic and Rorschach Aspects of Stuttering," Psychiatric Quarterly, 22:175, April, 1948.

Case histories are given to substantiate the author's conclusion that stuttering is symptomatic of a character neurosis having genogenic, morphogenic, chemogenic, neurogenic, psychogenic, and socio-environmental factors. At the psychogenic point he leans toward the psychoanalytic view.

Quinan, Clarence, "Stammering and Left handedness; Graphic Study," Journal of Experimental Psychology, 22:90, January, 1936.

The author makes his own summary of the article. Graphic experiments are described referable to a family of three persons, dextral parents and a left handed six year old daughter who is prone to stutter. In each instance the time data obtained exhibited a curious phenomenon of progressive acceleration. The quantitative graphic time data

obtained, in seconds, showed parents were left brained and the child was right brained. As regards the parents, an initial critical period covering four days was noted wherein the factor of kinetic leadership passed from the right to the left hemisphere. Considerations advanced in regard to a kinetic relationship supposed to exist between a dead center principle and stammering--the child seemed to show dead center situation.

Rheinberger, M. B., Karlin, I. W., and Berman, A. B., "Electroencephalographic and Laterality Studies of Stuttering and Non-Stuttering Children," The Nervous Child, special issue, 2:117, January, 1943.

The study of the findings from tests administered to ten stuttering boys and ten non-stuttering boys have lead the authors to conclude that there is no statistically significant difference between the two groups.

Richardson, LaVange Hunt, "The Personality of Stutterers," Psychological Monographs, 56:1, 1944.

Thirty stutterers and a control group were given four tests and the following-conclusions were drawn; stutterers are more socially introvertive, more depressed, and less happy-go-lucky than non-stutterers; stutterers are more variable; they tend not to recognize their inner life and do not

respond impulsively to their outer environment; they are shy and introverted. One case study was given in detail.

Rotter, J. B., "The Nature and Treatment of Stuttering: a Clinical Approach," Journal of Abnormal and Social Psychology, 39:150, 1944.⁶⁰

The author gives the case histories of eight adult stutterers in detail. In every case there was some indication that the stuttering was being used as a defense mechanism. The therapy was individualized and consisted of getting the stutterer to recognize how he was using his defect, and of helping him build up a new constructive attitude.

Scarborough, H. E., "A Quantitative and Qualitative Analysis of the Electroencephalograms of Stutterers and Non-Stutterers," Journal of Experimental Psychology, 22:156, February, 1943.⁶¹

No difference was found between twenty stutterers and twenty non-stutterers.

⁶⁰ Abstracted from a review by A. Lapidus, Journal of Speech Disorders, 10:52, March, 1945.

⁶¹ Abstracted from a review by C. Van Riper, Speech Correction, Principles and Methods, p. 305.

Solomon, Meyer, "The Mechanism of Stammering and Stuttering,"

Archives of Neurology and Psychiatry, 15:668, May, 1926.

This paper was presented at the meeting of the Neurological Society, and it was followed by a discussion. The author presents his idea that stuttering is not merely a speech defect but a personality problem and that any therapy which does not consider all the factors involved is not based on fundamentals.

Spring, Wm. J., "Words and Masses: a Pictorial Contribution to the Psychology of Stammering," Psycheanalytic Quarterly, 4:244, April, 1935.

The analysis of the finger painting and conversation of a ten year old stuttering boy led to the conclusion that stuttering is a continuation of infantilism, that it is introjected, that it is phallic or urethral, that it is a genital wish expressed in oral terms.

Starr, Henry E., "Psychological Concomitants of High Alveolar Carbon Dioxide--a Psychobiochemical Study of the Etiology of Stammering," The Psychological Clinic, 17:1, March, 1928.

Almost all people with deficient breathing have a high alveolar carbon dioxide tension; 80 per cent of a group

of stutterers examined were sub-breathers. As proper breathing is taught stuttering disappears. Diet is important in the treatment.

Steer, Max D., and Johnson, W., "An Objective Study of the Relationship between Psychological Factors and the Severity of Stuttering," Journal of Abnormal and Social Psychology, 31:36, April-June, 1936.⁶²

Stuttering is worse in feared situations, e.g., a stutterer has difficulty speaking before a large audience consisting of a group of people he does not know. Some suggestive factors are mentioned which may increase the emotional content of a situation.

Strothers, C., "A Study of the Extent of Dysynergia Occurring the Stuttering Spasm," Psychological Monographs, 49:108, 1937.⁶³

"Voice and breathing abnormalities bear the highest temporal corrective relation to the overt spasm. For certain individuals, the relationship between a given type of abnormality and the overt spasm is practically perfect.

⁶² Abstracted from a review by C. H. Voelker, Journal of Speech Disorders, 3:121, June, 1937.

⁶³ Abstracted from a review by C. H. Voelker, Journal of Speech Disorders, 2:266, December, 1939.

It is possible that stuttering may occur without any detectable accompanying neuromuscular incoordination."

Tarter, Gertrude, "Reports of a Case of Stuttering as a Problem of Vocational Adjustment," Journal of Abnormal Psychology, 23:48, June, 1928.

This is a report of the adjustment brought to a veteran of World War I through the medium of Psychotherapy.

Thorpe, L. P., "Psychological Mechanism of Stammering," Journal of General Psychology, 19:97, July, 1938.⁶⁴

This paper gives a report of a study of adult stutterers. The author proceeds upon the assumption that stammering is a sign of a personality maladjustment of the neuroathenic type and that the stutterers neurotic behavior may arise out of a state of antagonism between basic egoistic and altruistic drives. A cure must include the resolving of the underlying insecurity to be effective.

⁶⁴ Abstracted from a review by V. A. Anderson, Quarterly Journal of Speech, 2:354, April, 1939.

Travis, L. E., "A Comparative Study of the Performance of Stutters and Normal Speakers in Mirror Tracing," Psychological Monographs, 39:45, 1928.

Fifty five normal speakers and forty eight stutterers were used for the experiment. These conclusions were reached: right handed stutterers are more facile with the left hand in mirror tracing, non-stutterers with the right; more right handed stutterers are left eyed than non-stutterers; non-stutterers are superior in mirror tracing with the left hand.

_____, "Dissociation of the Homologous Muscle Function in Stuttering," Archives of Neurology and Psychiatry, 31:127, January, 1934.

The author makes the following summary of this discussion: "Action currents were recorded simultaneously from the two masseter muscles during the free speech of a stutterer and of a non-stutterer. Matched groups of twenty four each were used. In general, during normal speech the action currents from the two masseter muscles were identical. During stuttering those from one masseter muscle were strikingly different from those of the other. These findings indicated a unified control by the central nervous system of the two sides of the speech mechanism during normal speech and a lack of such control during stuttering."

Travis, L. E., "Influence of the Group upon the Stutterers' Speech in Free Association," Journal of Abnormal Psychology, 23:45, April-June, 1928.

Tests were given, and the author concludes that the group operates to decrease or to interfere with the activities so far as stutterers are concerned. Alport had reported the opposite findings from an experiment with non-stutterers.

_____, "Phonographic Study of the Stutterer's Voice and Speech," University of Iowa Studies in Psychology, 9:00, 1926. 65

Travis found as a result of his study that stutterers have less variability in the pitch of a sustained tone after an emotional upheaval, non-stutterers have more.

_____, "Recent Research in Speech Pathology," Psychological Bulletin, 26:275, May, 1929.

This article is a review of the studies in speech pathology (excluding aphasia) listed chronologically under these headings: 1. surveys, 2. studies of the etiology, 3. studies on the symptomatology and nature. Stuttering is included under each heading, in fact it predominates.

65 Abstracted from a review by G. W. Gray, Quarterly Journal of Speech, 13:484, 1927.

Travis, L. E., "Recurrences of Stuttering Following Shift from Normal to Mirror Writing," Archives of Neurology and Psychiatry, 21:386, February, 1929.

This report of a case leads the author to the conclusion that the reason stuttering followed this shift was that mirror writing is a reversal of the normal visual process and brings on the same conflict in the hemispheres that hand shifting does.

_____, "Studies in Stuttering; I: Dysintegration of Breathing Movements during Stuttering," Archives of Neurology and Psychiatry, 18:673, November, 1927.

Studies were made at the University of Iowa using six stutterers and several non-stutterers. The author summarizes his study. Records of normal speech show an integration of the various units of the breathing mechanism with these characteristics: fairly close correspondence between thoracic and abdominal breathing; greater number of laryngeal than breathing movements; relatively complete independence between vertical movements; of the larynx and movements of breathing; evident rhythm of breathing, of vertical movements of the larynx, and in changes of breath pressure; disproportionate increase in duration of expiration during speech; presentation by abdomen of small in and out movements. Stutterers

show these characteristics: antagonism between thoracic and abdominal action; marked synchronism between movements of the larynx and those of the breathing apparatus; prolonged inspiration; clonic and tonic spasms of various muscles of speech production; large vertical movements of larynx during inspiration; apparent introduction of new tremor rate in the abdomen.

Travis, L. B., "Studies in Stuttering; II; Photographic Studies of Voice in Stuttering," Archives of Neurology and Psychiatry, 18:998, December, 1927.

A study of twenty stutterers and twenty non-stutterers made at the University of Iowa show that stutterers and non-stutterers differ in unemotional, propositional speech, in emotional, unemotional repetitive, and unemotional propositional speech.

_____, and Fagan, L. B., "Studies in Stuttering; III: A Study of Certain Reflexes During Stuttering," Archives of Neurology and Psychiatry, 19:1006, June, 1928.

The authors' summary of this study is; "The knee and Achilles reflexes show greater amplitude during the speech of non-stutterers than during silence; during stuttering an increase in amplitude comparable to the speaking period in non-stutterers is shown; when the stutterer is speaking normally the

amplitude of the two reflexes is less than during silence in contrast to non-stutterers; variations offered by pendant hand to an expected blow are directly comparable to these reflex variations."

Travis, L. E., and Herren, R. Y., "Studies in Stuttering; V: A Study of Simultaneous Antitropic Movements of the Hands of Stutterers," Archives of Neurology and Psychiatry, 32: 487, 1929.⁶⁶

In simultaneous abduction and adduction of the hands, right handed non-stutterers with a history of right handedness lead more frequently with the left hand; with a history of left handedness they lead about equally with either hand. Left handed non-stutterers with a history of left handedness lead more frequently with the right hand; right handed stutterers regardless of their history lead with their right hands. No significant difference was found relative to simultaneous leads. In a supplementary study of eyedness, a significantly greater number of amphiocular persons were found among right handed stutterers than any other group.

⁶⁶ Abstracted from a review by E. C. Whitman, Psychological Monographs, 2:242, 1930.

Travis, L. E., and Johnson, W., "Stuttering and the Concept of Handedness," Psychological Review, 41:534, November, 1934.

The authors review the literature on the relation between handedness and stuttering and clarify the issues which are involved in the problem. Then they draw these conclusions: change of handedness occurs with significant frequency in cases of stuttering; stutterers differ from right handed non-stutterers with respect to peripheral sidedness, showing a greater degree of left laterality and ambilaterality; there is more left handedness in the background of stutterers than of non-stutterers; the cerebral organization in stutterers is characterized by a high degree of amilaterality, in contrast to the unilaterality characteristic of non-stutterers.

Travis, L. E., and Knott, J. R., "Brain Potentials from Normal Speakers and Stutterers," Journal of Psychology, 2:137, 1936.

A total of 3533 brain potential waves from nineteen non-stutterers and seventeen stutterers were evaluated in terms of duration and amplitude, and these conclusions were reached: waves during non-stuttering speech of stutterers are slower than during speech of non-stutterers; waves during non-stuttering speech of stutterers are slower than during stuttering; there is no difference between the speech of non-stutterers and stuttering; waves are of greater

amplitude during stuttering than during speech of non-stutterers or the non-stuttering speech of stutterers; waves are longer for non-stuttering speech of stutterers than for the speech of non-stutterers.

Travis, L. E., and Lindsley, D. E., "An Action Current Study of Handedness in Relation to Stuttering," Journal of Experimental Psychology, 16:258, April, 1933.

Twenty right and twenty left handed non-stutterers and twenty three stutterers answered questions on manual activities. Their answers were believed to support the "nondominance" theory of stuttering.

Travis, L. E., and Malamud, W., "Brain Potentials from Normal Subjects, Stutterers, and Schizophrenic Patients," American Journal of Psychiatry, 93:929, January, 1937.

The findings for the non-stutterers and the stutterers were the same as those reported by Travis and Knott, see above, and no significant difference was found between the non-stutterers and the schizophrenic.

Travis, L. E., Malamud, Wm., and Thayer, Lyman, "The Relationship between Physical Habitus and Stuttering," Journal of Abnormal and Social Psychology, 29:132, July,-September, 1935.

The authors describe six types of habitus and report on experiments with fifty seven male stutterers and one hundred and twenty eight male non-stutterers. Their findings show that stutterers tend to be leptosome and leptosome-athletic in type, but that not all persons who are basically capable of stuttering will do so--whether or not they develop the disorder will depend upon injurious formative and predisposing influences.

Van Riper, C., "The Effect of Penalty upon Frequency of Stuttering Spasms," Journal of Genetic Psychology, 50:193, March, 1937.

Sixteen stutterers read the same passage six times. Usually the stuttering decreased on rereading, but when penalty was given for blocks on the fourth reading, the stuttering increased.

Van Riper, C., "Effective Devices for Minimizing Stuttering on the Reation of Symptoms," Journal of Abnormal and Social Psychology, 32:185, July-September, 1937.

Among other things, the findings from the study of a number of stutterers showed that a large part of the stutterer's handicap consists of the devices deliberately or involuntarily used to minimize the speech difficulty. They also pointed to the necessity of distinguishing between primary and secondary symptoms.

———, "The Influence of Emphatic Response on Frequency of Stuttering," Psychological Monographs, 49:244, 1937.⁶⁴

When stutterers attempted to pronounce words which had just been pronounced by a non-stutterer or by a bad stutterer, they stuttered more frequently in the latter situation. Certain stutterers seemed to stutter in the manner of the person pronouncing the words even though they had never so stuttered before. Others seemed to vary the duration of their blocks according to those of the reader. The results are attributed to the effect of the emphatic response to such stimulation.

⁶⁴ Abstracted from a review by C. H. Voelker, Journal of Speech Disorders, 3:272, December, 1938.

Van Riper, C., "A New Test of Laterality," Journal of Experimental Psychology, 17:305, April, 1943.

Thirty stutterers, forty right handed, forty left handed, and thirty ambidextrous non-stutterers were tested with a vertical drawing board, and the results showed that the stutterers were more like the ambidextrous group than like either of the other two groups.

_____, "The Quantitative Measurements of Laterality," Journal of Experimental Psychology, 18:372, June, 1935.

This paper is a report of another experiment with writing boards, the findings of which experiment led the author to conclude that stutterers were more like ambidextrous non-stutterers than they were like either right or left handed non-stutterers.

Voelker, Chas. H., "A Preliminary Investigation for a Normative Study of Fluency: A Clinical Index to the Severity of Stuttering," American Journal of Orthopsychiatry, 14:285, April, 1944.

This paper reports the differences in the types of fluency break between stutterers and non-stutterers. The former had more prolongations, syllable and word repetitions. The average non-stutterer had no syllabic repetitions per one hundred words.

Voelker, Chas. H., "Prophylactic Technic for Spasmphemia in Mongols," American Journal of Orthopsychiatry, 6:440, July, 1936.⁶⁸

"Although primary spasmphemia might be considered as almost a part of their mental and physical make up, it can be eradicated by diagnostic speech reeducation. On the other hand, the prevalence of spasmphemia in dyslogia monogolia would seem to reflect upon the nature of spasmphemia itself."

West, Robert, "Is Stuttering Abnormal?" Journal of Abnormal and Social Psychology, 31:76, April-June, 1936.⁶⁹

"Stuttering is a condition of the physiologic organism in which the muscular system, though in no way disturbed in the basic function, yet it is disabled in the acquired function of speech. . . . Speech itself is an unnatural function, at least, for a considerable group of humans, mostly males whose condition may be described not as pathological, but as dysphemio."

⁶⁸ Unsigned review in Quarterly Journal of Speech, 23: 346, April, 1937.

⁶⁹ Abstracted from a review by C. H. Voelker, Journal of Speech Disorders, 2:121, June, 1937.

West, Robert, "A Neurological Test for Stutterers," Journal of Neurology and Psychotherapy, 10:114, July, 1929.

Tests were given to sixty four adults, twenty to forty years of age, about evenly divided as to stuttering and non-stuttering. The diadokineses of the jaw and the muscle movement of the arms and hands were tested. The author concluded that lack of cortical control was the cause for the differences shown between the two groups but that stuttering may be caused by a set emotional pattern of social inadequacy. Consequently, there are two types of stutterers, and they should be treated separately and differently.

_____, "The Pathology of Stuttering," The Nervous Child, special issue, 2:96, January, 1943.

The author discusses the facts which are known about stuttering, e.g., there are more male than female stutterers, the factors which precipitate it, the role of imitation in stuttering, and reaches the conclusion that there must be precipitating causes to throw the person who is constitutionally predisposed to stutter into the disorder.

Whitman, E. C., "The Role of the Father in the Development of the Personality of the Stutterer," Psychological Bulletin, 39:476, 1942.

Thirty five male stutterers were studied. They showed that certain time relationships were responsible for the type of personality the male stutterer developed. An hypothesis is developed in which stuttering is considered as an evidence of a conflict in which the father is the cause of the boy's inability to resolve the conflict.

Wischner, George J., "An Experimental Approach to Stuttering as Learned Behavior," American Psychologist, 2:278, 1948.

The belief is set forth that stuttering behavior is a learned anxiety reaction.

Wyatt, G. L., "Stammering and Language Learning in Early Childhood," Journal of Abnormal and Social Psychology, 44:74, 1949.⁷⁰

A review of some existing theories of stuttering is followed by a discussion of the nature of language and the raising of three methodological questions by which the viewpoint is

⁷⁰ Abstracted from a review by C. R. Elliott, Journal of Speech and Hearing Disorders, 4:389, December, 1949.

expressed that in our investigation of language development and speech disturbances in children we must keep in mind three dimensions of our problem: situation of the individual child, the individual learning capacity of the child, the objective difficulties inherent in the object of learning, language itself.

D. SPEECH PERIODICALS

Abbott, James A., "Repressed Hostility as a Factor in Adult Stuttering," Journal of Speech Disorders, 12:428, December, 1942.

An unconscious feeling of guilt over repressed hostility carried an unconscious need for punishment--the stuttering was part of that punishment. The treatment consisted in bringing the hostility to the surface. Let the patient recognize it himself, and then it can be dealt with.

Ainsworth, Stanley, "Integrating Theories of Stuttering," Journal of Speech Disorders, 10:205, 1945.

The author classifies all of the theories of stuttering under these three headings: developmental, dysphemic, and neurotic. He adds that a few of the theories seem to include elements from more than one category.

Ainsworth, Stanley, "An Organized Approach to the Therapy of Stuttering," Journal of Speech Disorders, 7:325, December, 1942.

The clinician must first determine the cause of the disorder, using the three categories listed above; then he must develop a therapy on the basis of the individual need. He should use therapies from all three areas, emphasizing each as it needs to be emphasized. By developing such an approach, he can pick the best from all fields.

_____, "Studies in the Psychology of Stuttering, XII: Emphatic Breathing of Auditors while Listening to Stuttering Speech," Journal of Speech Disorders, 4:149, June, 1939.

This study of sixteen non-stutterers and four stutterers was made at the University of Iowa. It was found that the inhalations and exhalations of non-stutterers as well as of stutterers was more variable than normal when they listened to stutterers, that the variability lessened as the stutterers continued to speak, and that it was less if the listeners knew ahead of time that the speaker was to stutter.

Ammons, R., and Johnson, W., "Studies in the Psychology of Stuttering, XVIII: The Construction and Application of a Test of Aptitude toward Stuttering," Journal of Speech Disorders, 9:39, March, 1944.

A study was made at the University of Iowa of a group of townspeople, a group of freshmen, a group of stutterers, and a group of clinicians to determine the attitude toward the disorder. The towns people were least tolerant, and the clinicians were most tolerant. Both sexes were equally tolerant of male stuttering, but males were less tolerant of female stuttering than females were. If a statement in the test were worded in an objective manner it received a different answer than if it were worded in a subjective manner.

Anderson, Jeanette, and Whealdon, Mary L., "A Study of Blood Groups Distribution Among Stutterers," Journal of Speech Disorders, 6:23, March, 1941.

Fifty stutterers were studied at the University of Wisconsin and the findings were compared with the tests of some 38,000 general public made by other investigators. The object of the study was to determine if the stutterer differed from the non-stutterer in a certain protein characteristic which controls the agglutination of the red blood corpuscles. No significant difference was found.

Angell, C. S., "An Experimental Analysis of Some of the Methods of Relaxation Used in Speech," Speech Abstracts, 3:24, 1943.

This paper does not deal especially with stuttering. Fifteen college students were tested to see whether they relaxed better to music or to instruction to relax. No difference was found, and after six minutes of either music or instruction the patients were as relaxed as they ever would be.

Backus, Ollie, and Dunn, Harriet, "Intensive Group Therapy in Speech Rehabilitation," Journal of Speech Disorders, 12:39, March, 1947.

Stutterers were included in the groups. There were sixteen groups held to determine whether group therapy was effective. It proved to be.

Barber, V., "Studies in the Psychology of Stuttering, XVI: Rhythm as a Distraction in Stuttering," Journal of Speech Disorders, 5:29, March, 1940.

Eighteen stutterers were studied at the University of Iowa to determine the effectiveness of various kinds of rhythm as distractions. Bodily, speech and sensory stimulus rhythms were used. All distractions reduced the frequency of the spasms. Some types of rhythm were more effective than others. The results were about the same whether before an audience or not.

Barber, V., "Studies in the Psychology of Stuttering, XV: Chorus Reading as a Distraction in Stuttering," Journal of Speech Disorders, 4:361, December, 1939.

Eighteen stutterers were tested at the University of Iowa. The larger the number reading, the less any individual stuttered. The reason that the stuttering diminished was that the responsibility for communication decreased as the number of readers increased and the less each one could be heard. The author concluded that stuttering was neither a phonetic disturbance nor the inability to produce any given sound.

Barr, Helen, "A Quantitative Study of the Specific Phenomena Observed in Stuttering," Journal of Speech Disorders, 5:277, September, 1940.

Thirty items were selected to study in ten stutterers at the University of Iowa speech clinic. It was found that nine of these items occurred 50 per cent of the time, that the subjects showed individual differences in duration of moment, but that each showed consistency of type. In general, the items which were found the most often were in the field of respiration, phonation and articulation, and extraneous movements of the body muscles.

Bender, J. F., "Personality Traits of College Stutterers,"
Proceedings of the American Speech Correction Association,
 9:47, 1939.

The Bernreuter Personality Inventory was given to 249 Male college stutterers. The findings were compared with those from other experiments. Twenty two differences were found to exist between stutterers and non-stutterers. The author concluded that stutterers have more personality disturbances than do non-stutterers and that these disturbances follow a pattern which goes to make up the stutter type personality.

_____, "The Speech Handicapped Student as a Personal Problem in College," The Professional Discussions of American Speech Correction Association, 1935.⁷¹

The topic is presented under the following headings: finding the student with a speech handicap, analyzing the defect, providing adequate therapy, providing guidance, providing extra-curricular activities, checking programs, and experimenting. It was found that about 90 per cent of the students with speech defects were planning to go into teaching, law, and medicine.

⁷¹ Abstracted from a review by C. S. Bluemel, Quarterly Journal of Speech, 21:604, November, 1935.

Berry, Mildred F., "A Common Denominator in Twinning and Stuttering," Journal of Speech Disorders, 3:51, March, 1938.

In a study of 250 duplicate births, it was found that stuttering occurred more frequently in twinning families than in non-twinning families. Previous studies had established the existence of relationship between left handedness and twinning and between left handedness and stuttering.

Bilto, E. W., "A Comparative Study of Certain Physical Abilities in Children with Speech Defects and Normal Speech," Journal of Speech Disorders, 6:187, 1941.

The author bases his conclusion that children with speech defects have less adequate large muscle coordination, although there is no difference between them and non-stutterers in the performance of rhythmical movements except with the speech musculature, on the tests given to 180 stutterers and articulatory cases and 300 normal speakers.

Blanton, Smiley, "Helping the Speech Handicapped School Student," Journal of Speech Disorders, 1:97, December, 1936.

This paper is a brief summary of what is being done for the speech defective. Stuttering is included under the heading "Speech of Psychological Origin."

Blanton, Smiley, "The Treatment of Stuttering," Proceedings of the American Speech Correction Association, 6:23, 1936.

The author consulted nine authorities in the field of speech correction as to their belief regarding the part played by habit in the etiology and by mental hygiene in the therapy of stuttering. None of them felt that habit played a very great part, and all of them agreed on the need of mental hygiene in treatment.

Blotstein, Oliver, "Conditions Under Which Stuttering is Reduced or Absent: A Review of Literature," Journal of Speech and Hearing Disorders, 14:295, December, 1949.

This paper lists the authorities who claim that each of the following situations reduce or eliminate stuttering: reduced communicative responsibility; when listeners made the situation as easy as possible; when there is no urgency for a favorable impression; change of accustomed speech pattern; speech accompanied by bodily movement; strong or unusual stimulation; result of suggestion.

Blotstein, O., "A Rating Scale Study of Conditions Under Which Stuttering is Reduced or Absent," Journal of Speech and Hearing Disorders, 15:29, March, 1950.

The records of 204 stutterers were studied. There were over one hundred conditions reported. None of the 204

included all the items, and none of items worked for all the 204. All of the conditions reported could be grouped under six general headings.

Bloodstein, Oliver, "Hypothetical Conditions under Which Stuttering is Reduced or Absent," Journal of Speech and Hearing Disorders, 15:142, June, 1950.

This paper is a further report on the stutterers studied above. Since stuttering is an effort to avoid non-fluency, any condition which contributes to the reduction of that avoidance also contributes to the reduction of stuttering.

_____, "Studies in the Psychology of Stuttering; XIX: The Relationship between Oral Reading Rate and Severity of Stuttering," Journal of Speech Disorders, 9:161, June, 1944.

Thirty stutterers were studied at the University of Iowa to determine the rate of oral reading of stutterers and to investigate the relationship existing between this rate and the severity of stuttering. The study showed that the average stutterer was slower than the average non-stutterer. The average stutterer is faster on mono-syllabic material than on poly-syllabic. There is a high negative correlation between rate and fluency. This fact is probably due to the fact that the stutterer slows down for the words he fears.

Bluemel, C. S., "Dominant Gradient in Stammering," Quarterly Journal of Speech, 19:233, April, 1933.

The author discusses dominant gradient apart from stammering. Then he discusses it as related to speech disturbances and claims that the theory leaves too many unexplained elements to be taken seriously as a cause of stammering.

_____, "Primary and Secondary Stammering," Quarterly Journal of Speech, 18:187, April, 1932.

In this paper the author renews his attack on the ideas of cerebral dominance, handedness shift, visual lack, subconscious emotional conflict, and every other theory which does not agree with his. He believes that stammering is an impediment in thought not a speech difficulty--an auditory amnesia. He also believes that secondary stammering is practically incurable.

_____, "Stammering and Inhibitions," Journal of Speech Disorders, 5:305, 1940.

This paper presents the author's conviction that stammering is the result of inhibition. Speech is a conditioned reflex, and stammering is a partial inhibition of that reflex. This inhibition is usually due to some sort of emotional stress. Most inhibitions vary in strength, are often intermittent, and are often associated with other disturbances.

Brown, Spencer, "Influence of Grammatical Function, Phonetic Value, and Word Position of the Incidence of Stuttering," Journal of Speech Disorders, 2:207, 1937.

Stutterers appear to have their worst trouble with participial adjectives, proper names, gerunds, adjectives, adverbs, and nouns. This aspect is much more consistent than any phonetic factor.

_____, "A Further Study of Stuttering in Relation to Various Speech Sounds," Quarterly Journal of Speech, 24:390, 1938.

Thirty two stutterers were tested with a list of 700 words containing words which began with each of the vowel, consonant, and blends of the English language. Their spasms were recorded and the author concluded that the general phonetic factor of difficulty before recorded was substantiated. Individual differences are based on emotional association. Non-contextual material is easier for stutterers to read than contextual material.

_____, "The Loci of Stuttering in Speech Sequence," Journal of Speech Disorders, 10:181, September, 1945.

Thirty one stutterers read a 1,000 word selection twice, and an analysis of their blocks was made to determine whether any thing in addition to initial phonetic value, grammatical function, position of the word in the sentence, and length

of the word was present. He found that accented syllables were more difficult than unaccented and that meaningful material caused more trouble than non-meaningful.

Brown, S. F., "The Theoretical Importance of Certain Factors Influencing the Incidence of Stuttering," Journal of Speech Disorders, 3:223, December, 1938.

The author believes that there is a physiological relationship between stuttering and speech sounds, parts of speech, syllable accents, and word position. He believes also that the stuttering which occurs in relation to the conspicuousness of a word is psychological.

_____, and Hull, Henrietta C., "A Study of Some Social Attitudes of a group of Fifty Nine Stutterers," Journal of Speech Disorders, 7:323, December, 1942.

The last paragraph of this paper sums up the content:

"The results of the three paper and pencil test administered . . . in three midwestern speech clinics indicate that stutterers as a group have inferior speech attitudes . . . have had less speech experience . . . and rate significantly lower in social adjustment . . . than groups of unselected speakers to whom they were compared."

Brown, S. F., and Moren, Adelaide, "Frequency of Stuttering in Relation to Word Length in Oral Reading," Journal of Speech Disorders, 7:153, June, 1942.

Thirty two stutterers were tested at the University of Minnesota. Each one read a selection about 10,000 words long twice. It was found that more stuttering occurred on long words than on short ones.

Brown, S. F., and Shulman, Edward E., "Intramuscular Pressure in Stutterers and Non-Stutterers," Speech Monographs, 7:63, December, 1940.

A study of twenty four male and eight female adult stutterers and a control group failed to disclose any significant difference between the two groups as far as intramuscular pressure was concerned.

Bryngelson, Bryng, "Applying Hygienic Principles to Speech Problems," Quarterly Journal of Speech, 29:351, October, 1943.

The author includes stuttering in this paper. He advocates the use of neurologic treatment and the development of an objective attitude toward the malady.

Bryngleson, Bryng, "Investigation in the Etiology and Nature of Dysphemia and Its Symptom, Stuttering," Journal of Speech Disorders, 7:15, 1942.

The object of this paper is to sketch the most important research of the past decade on the nature and etiology of dysphemia. The author starts by giving a brief history of speculation in the field during the last 2000 years. Then he summarizes the conclusions drawn from laboratory studies and states the correlation between them and the clinical research. He closes his paper with the suggestion that a sane clinical program include neurologic, physiologic, sociologic, psychologic, physical, and vocational materials.

_____, "Prognosis of Stuttering," Journal of Speech Disorders, 3:121, 1938.

The absolute cure of adult stutterers is rare, that of children about 40 per cent. The qualities necessary in any stutterer, especially a secondary stutterer, to make any headway in correction are intelligence, determination, and self discipline. Environment is very important, especially in the young stutterer, and home and school cooperation are essential.

Bryngelson, Bryng, "Voluntary Stuttering," The Professional Discussions of the Ninth Annual Convention of the American Speech Correction Association, 1934.

This is the same paper as "A Method of Stuttering, Journal of Abnormal and Social Psychology--reviewed there. 30:194, July-September, 1938.

_____, and Brown, S. F., "Season of Birth of Speech Defectives in Minnesota," Journal of Speech Disorders, 4:319, December, 1939.

After the authors had studied the season of birth of 2326 stutterers, they decided that the difference between their findings and the curve of the overall birth seasons warranted further study.

Bryngelson, Bryng, and Rutherford, Bernice, "A Comparative Study of Laterality of Stutterers and Non-Stutterers," Journal of Speech Disorders, 2:15, 1937.

A study of seventy four stutterers and controls from a group of children and a study of 1327 stutterers at the University of Minnesota speech clinic lead the authors to conclude that the theory of dominant gradient is borne out. Among the children, they found four times as much ambidextrality among the stutterers, eight times as much

handedness shift, and over twice as much history of stuttering in the families.

Buckholz, C. A., "Indigenous Confidence for Stutterers," Quarterly Journal of Speech, 20:60, 1933.

To develop a basic confidence of utterance should be the prime objective of training, particularly at the beginning.

Burdin, Gray, "The Surgical Treatment of Stammering 1840-1942," Journal of Speech Disorders, 5:43, March, 1940.

This article recounts all of the types of surgery used during this period. They were developed in Europe and finally introduced into the United States.

Card, Robert E., "A Study of Allergy in Relation to Stuttering," Journal of Speech Disorders, 4:223, September, 1939.

The case histories of 104 stutterers and 104 non-stutterers were studied. Forty stutterers were given intradermal tests. On the basis of the findings that all the stutterers were allergic, there were many similarities between allergy and stuttering, and elimination diets have helped in the treatment of stuttering, the author concludes that allergies may cause stuttering because of the impairment of the central mechanism in the embryonic or later developmental stages or because of a condition of imbalance.

Carhart, Raymond, "Two Room Technique in the Treatment of Stuttering," Journal of Speech Disorders, 3:105, June, 1938.

The two room technique grew out of a suggestion by Blumel. The object of this technique is to build confidence. It works through these stages: stutterer isolated; auditor in another room; auditor in same room with stutterer. In step two the stutterer does not know when the auditor can hear. Some times this method produces good results, and some times it does not.

Carson, C., and Kantner, C. E., "The Incidence of Stuttering among White and Colored School Children," The Southern Speech Journal, 10:57, 1944.

A survey of the children in certain grade schools in Louisiana showed that the incidence of stuttering was slightly higher among the colored than among the white children and that the percentage of girls was higher.

*Chapman, Myfanwy E., "The Speech Clinician and the Classroom Teacher Cooperate in a Speech Correction Program," Journal of Speech Disorders, 7:57, March, 1942.

Stuttering is included in this presentation; in fact, it occupies most of the space. "Do's" and "Don'ts" are listed, and suggestions are made for material to read.

Clark, Ruth M., "Supplementary Technique to Use with Secondary Stutterers," Journal of Speech and Hearing Disorders, 13:131, 1948.

Mental hygiene is considered as part of the treatment for stutterers. Non-directive counselling and autobiographies are suggested as supplementary techniques in mental hygiene.

Cross, H. M., "The Motor Capacities of Stutterers," Archives of Speech, 1:112, March, 1936. ⁷²

Twenty one stutterers and thirty one right and eleven left handed non-stutterers were tested. The results showed the stutterers to be inferior to the non-stutterers in bimanual activity but not in unimanual.

Curtis, James F., "The Effect of Muscular Exercise upon Stuttering" Speech Monographs, 9:81, 1942.

Twenty one young adult stutterers were tested at the University of Iowa. Each one read the same passage three times, a week elapsing between readings. In the break during the second reading, violent physical exercise was introduced. No significant effect seemed to result although four different types of tests were administered.

⁷² Abstracted from a review by C. H. Voelker, Journal of Speech Disorders, 2:248, December, 1937.

Cyprian, Lucille, "Group Therapy for Adult Stutterers," Journal of Speech and Hearing Disorders, 13:313, 1948.

A study of fourteen male stutterers of university age revealed that group work led to better adjustments to life and to a reduction in stuttering.

Daniels, Elizabeth M., "An Analysis of the Relation between Handedness and Stuttering with Special Reference to the Orton-Travis Theory of Cerebral Dominance," Journal of Speech Disorders, 5:309, December, 1940.

Very little connection between stuttering and handedness or handedness shift was found in a study of 154 students who were entering Syracuse University. These students were stutterers, or left handed, ambidextrous, or handedness shifted people.

Davis, Dorothy, "The Relation of Repetitions in the Speech of Young Children to Certain Measures of Language Maturity and Situational Factors," Part I, Journal of Speech Disorders, 4:303, December, 1939, Parts II and III, Journal of Speech Disorders, 5:235, September, 1940.

Sixty two children between the ages of twenty four and sixty two months were investigated. The author found that all children repeat in this order--phrases, words, and syllables, that there appeared to be a decrease in the amount of

repetition with age, that tense situations increase the number of repetitions, that those who repeat syllables seem to cling to their repetitions longer, that language maturity cannot be considered an important factor.

Dow, Clyde W., "Stuttering: a Tentative Outline of an Hypothesis and Therapy," Journal of Speech Disorders, 6:40, March, 1940.

The hypothesis presented is that stuttering occurs when something interferes with the impulses, reaching the speech musculature. The therapy proposed is a drill technique whereby the old responses will be replaced by a new learned response.

Duncan, Melba H., "Clinical Use of Fiction and Biography Featuring Stuttering," Journal of Speech and Hearing Disorders, 14:139, June, 1949.

This paper suggests the use of the material suggested in the title to help objectify the disorder for the stutterer. The author gives specific suggestions as to the ways of using the material.

_____, "Home Adjustments of Stutterers Versus Non-Stutterers," Journal of Speech and Hearing Disorders, 14:255, 1949.

A study of sixty two stutterers and a control group indicated that the stutterers were less well satisfied with their homes and their parents than were the controls.

Eisenson, Jon, and Horowitz, Esther, "The Influence of Propositionality on Stuttering," Journal of Speech Disorders, 10: 193, September, 1945.

Eighteen stutterers at the Brooklyn College speech clinic and eight from the New York City College speech clinic were studied, and the authors reached the conclusion that as meaning and the responsibility to convey meaning increased so did the stuttering.

Eisenson, Jon, and Pastel, Esta, "A Study of the Perseverating Tendency in Stutterers," Quarterly Journal of Speech, 22: 626, December, 1939.

Thirty young male stutterers were matched with thirty non-stutterers and given tests to determine the perseverating tendencies. The fact that stutterers' perseveration exceeds that of the non-stutterers indicates that stutterers offer more resistance to change and are not as adaptable as non-stutterers.

Eisenson, Jon, and Wells, Charlotte, "A Study of the Influence of Communicative Responsibility in a Choral Speech Situation for Stutterers," Journal of Speech Disorders, 7:259, September, 1942.

Out of the nineteen stutterers placed in a choral reading group the quality of the speech performance decreased for

about half of them when stress was placed on the importance of communication.

Eisenson, Jon, and Winslow, C. W., "The Persevering Tendency in Stutterers in a Perceptual Function," Journal of Speech Disorders, 3:195, December, 1938.

The authors, basing their opinions on this experiment and one previously recorded (Journal of Genetic Psychology, 50:457, 1937), show that the stutterer is unable to adjust his speech mechanism to the production of the various sounds in the stream of speech.

Fagan, Leo B., "The Relation of Dextral Training to the Onset of Stuttering, a Report of Cases," Quarterly Journal of Speech, 17:73, February, 1931.

The author cites thirteen cases to prove that hand shifting may cause stuttering.

Fahmy, M., "The Theory of Habit Control and Negative Practice as a Curative Method in the Treatment of Stammering," Speech, 6:24, 1950.⁷²

The author reports the results of a study of the effectiveness of negative practice used as a corrective measure for

⁷² Abstracted from a review by J. L. Bangs, Journal of Speech and Hearing Disorders, 15:366, December, 1950.

the treatment of stammering. Eight stutterers were used for the experiment. Negative practice appeared to be helpful in those cases whose speech was characterized by either clonic or clonotonic symptoms.

Fairbanks, G., "Some Correlates of Sound Difficulty in Stuttering," Quarterly Journal of Speech, 23:67, 1937.

The findings from other investigations that more stuttering occurs on some sounds than on others is compared by the author with the data concerning the physiological difficulty involved in producing certain sounds, and the conclusion is drawn that there is a direct relationship between the two factors.

Fishman, Harold C., "A Study of the Efficacy of Negative Practice as a Corrective for Stammering," Journal of Speech Disorders, 2:67, June, 1937.

After trying negative practice with five stutterers the author found that when the stuttering consisted of repetitions the results were good, when it consisted of blocks they were poor. These facts led him to conclude that repetitions were based in habit and blocks were not.

Fletcher, J. M., "A Predisposing Cause of Stuttering," Quarterly Journal of Speech, 29:480, December, 1943.

The fact that the stutterer has only indirect control of some of the muscles involved in speech may cause stuttering.

Frankel, L. R., "The Theory of Regression," Journal of Speech Disorders, 1:107, 1936.

Stuttering indicates that the individual has regressed in his speech habits to the infantile level of separate and distinct sounds. The reeducation must begin below the level of the regression, namely it must begin with the reeducation of the breathing mechanism because the large muscles are involved at this point, and large muscle control must precede small muscle control.

Freestone, N. W., "A Brain Wave Interpretation of Stuttering," Quarterly Journal of Speech, 28:466, 1942.

The brain waves of twenty stutterers and twenty non-stutterers were compared. The comparison showed that the stutterers were functioning in a state of reduced consciousness, that they lacked cerebral dominance, and that they lacked a focus of attention. The conclusions drawn were that stutterers were neurologically different from non-stutterers and that although these differences did not cause the disorder they supplied the soil in which it might develop.

A fuller presentation of this material is given in Speech Monographs, 9:28, 1942.

Froeschels, Emil, "The Psychosomatic Approach to Speech Disorders," Journal of Speech Disorders, 10:221, September, 1942.

The author says that since stuttering is a psychological rather than a physiological defect psychosomatic treatment is necessary.

_____, "A Technique for Stutterers," Journal of Speech and Hearing Disorders, 15:336, December, 1950.

Some stutterers who do not respond to the breath chewing method of treatment will respond to the use of ventriloquism. This treatment is successful because it involves the use of a peculiar voice and a very slight movement of the lips. Speech melody should be encouraged.

Fruewald, Elizabeth, "Intelligence Rating of Severe College Stutterers Compared with that of Others Entering Universities," Journal of Speech Disorders, 1:47, July, 1936.

The author reports a study made at the Ohio State University Speech Clinic. The findings of the study led to the conclusion that the intelligence of the stutterers was definitely higher than the overall average of school.

Gifford, Mabel F., "Speech Correction Work in the San Francisco Public Schools," Quarterly Journal of Speech, 11:377, November, 1925.

This paper presents a survey of the work done since 1916. Stuttering is included as one of the defects.

Glaser, Edward M., "Possible Relationship between Stuttering and Endocrine Malfunctioning," Journal of Speech Disorders, 1:81, July, 1936.

The author questioned thirty six men who were working in the field of endocrinology and found that so far as they knew there was no significant relationship between endocrine malfunctioning and stuttering.

Glesner, Philip J., "Personality Characteristics and Emotional Problems in Stuttering under the Age of Five," Journal of Speech and Hearing Disorders, 14:135, June, 1949.

Seventy stutterers who were five years old were studied and the author concluded that when problems developed at that age it was because of a long history of over protection and pampering, or over anxiety on the part of excessively perfectionist parents.

Goldsand, J. G., "Sensory Perseveration in Stutterers and Non-Stutters," Speech Abstracts, 4:40, 1944.⁷³

Tests tend to show that stutterers are handicapped by long sensory perseveration periods. This tendency indicates a lack of ability to adjust.

Goldstein, Max A., "Practical Aspects of Speech Correction," Journal of Speech Disorders, 4:90, June, 1939.

The author touches lightly on all phases of speech correction, including stuttering. He gives a very brief history of the treatment of stuttering.

Gray, Marcella, "The X Family: A Clinical and Laboratory Study of Stuttering Family," Journal of Speech Disorders, 5:343, December, 1940.

This paper is the report of a study of the family tree. The study was designed to answer questions regarding the distribution of stutterers within a family, definite similarities or differences among stutterers, former stutterers, and non-stutterers, and the nature of the evaluation expressed by members of the family regarding stuttering. The findings tend to support the semantic theory.

⁷³ Abstracted from a review by A. T. Weaver, Journal of Speech Disorders, 9:180, June, 1944.

Greene, James S., "Stuttering: What About It?" Proceedings of the American Speech Correction Association, 1:165, 1931.⁷⁴

The author declares against the use of distractions in the treatment of stuttering. He maintains that although they may do some temporary good they do more harm than good in the long run.

Gustavson, C. G., "A Talisman and a Convalescence," Quarterly Journal of Speech, 30:465, 1944.

This paper is the story of a history teacher at Miami University. He discovered that his stuttering was a part of a picture of his shyness. He emphasizes the part the mind plays in both the cause and cure of the defect.

Hafford, Jeannette, "A Comparative Study of the Salivary pH of the Normal Speaker and Stutterers," Journal of Speech Disorders, 6:173, December, 1941.

The author's study of nineteen stutterers and a control group led her to the conclusion that there was no significant difference between the two groups, Starr's study to the contrary. (see: Starr, "Psychological Concomitants of

⁷⁴ Abstracted from a review by C. Van Riper, Speech Correction, p. 373.

High Alveolar etc.," The Psychological Clinic, 17:1, March, 1928.)

Hahn, Eugene, "A Compendium of Some Theories and Therapies of Stuttering," Quarterly Journal of Speech, 23:278, October, 1937.

The author gives a summary of the various theories and therapies in vogue at the present time.

*_____, "An Integration of Stuttering Therapies," Journal of Speech Disorders, 2:37, June, 1937.

The author maintains that much of the confusion in the field is due to the fact that each group is inclined to feel that it has the only right method and that terminology is not consistent. He points out that there are many points of agreement in the treatment pursued by the various groups of therapists even though they give different emphasis. He suggests that since different methods are effective with different people, an eclectic method should be adopted and that a committee should be appointed to synchronize the approaches.

Hahn, Eugene, "A Study of the Effect of Remedial Treatment of the Frequency of Stuttering in Oral Reading," Journal of Speech Disorders, 6:29, March, 1929.

Twenty two adult stutterers read the material presented, took treatment for three months, reread the material. The author concludes that the treatment was successful, and he makes some definite suggestions for remedial procedures.

_____, "A Study of the Relationship between Stuttering Occurrence and Phonetic Factors in Oral Reading," Journal of Speech Disorders, 7:143, June, 1942.

The author concludes that on the basis of a study of forty three stutters, the phonetic factor is not a strong influence.

_____, "A Study of the Relationship between Stuttering Occurrence and Grammatical Factors in Oral Reading," Journal of Speech Disorders, 7,329, December, 1942.

On the basis of a study of forty three stutterers, the author concludes that the grammatical factor is more consistent than the phonetic although they may be related. Meaningful words cause the most difficulty.

Hahn, E., "A Study of the Relationship between the Social Complexity of the Oral Reading Situation and the Severity of Stuttering," Journal of Speech Disorders, 5:5, March, 1940.

After testing fifty two stutterers in situations of varying complexity, the author concludes that the greater the complexity the more severe the stuttering.

Harms, M. Arline, and Malone, J. Y., "Hearing Acuity and Stammering," Journal of Speech Disorders, 4:363, 1939.

Reviewed on page 51.

Harris, W. E., "Studies in the Psychology of Stuttering, XVII: A study of the Transfer of the Adaption Effect in Stuttering," Journal of Speech Disorders, 7:209, September, 1942.

Twenty stutterers were studied at the University of Iowa to see if there would be any carry over from reading a passage until the stuttering was materially decreased to reading a similar passage and to conversation. There was a carry over in the first instance but not in the second.

Hawk, Sara Stinchfield, "Speech Defects in Handicapped Children," Journal of Speech Disorders, 1:101, December, 1936.

Stuttering is included with other defects in this discussion of the work done at the speech clinic of the Los Angeles Ortho-Pedic Hospital.

Hawk, Sara Stinchfield, "The Year 1938 in Speech Correction,"
Journal of Speech Disorders, 4:87, March, 1939.

The author gives a summary of the work done in the fields of speech correction, including stuttering. She names books and periodicals of interest to anyone who is working in the field.

Heltman, Harry J., "Contradictory Evidence in Handedness and Stuttering," Journal of Speech Disorders, 5:327, December, 1940.

The author gives a summary of the experiments conducted by other people in the field and seems to conclude that shifting handedness would be less apt to cause stuttering than trying to remain left handed in a right handed world.

_____, "Education in Speech Correction," Proceedings of the American Speech Correction Association, 6:130, March, 1938.

Stuttering is one of the defects discussed by the author. The purpose of speech correction is to aid in vocational and social adjustment. In the treatment of stuttering the seven aspects of speech which he lists must be kept in mind if the treatment is to be effective. Reeducation is the way to correction. The author warns against the use of the bizarre.

Heltman, "History of Recurrent Stuttering and Recovery in a Twenty Five Year Old Post Graduate College Student," Journal of Speech Disorders, 6:49, March, 1940.

After a "cure," speech activity is necessary if relapse is to be avoided.

Henrikson, E. H., "Simultaneously Recorded Breathing and Vocal Disturbances of Stutterers," Archives of Speech, 1:133, March, 1936.⁷⁵

The Records of the propositional speech of stutterers showed a marked absence of organized interactivity between the functioning of the breathing and voice producing mechanisms. These irregularities are listed.

Henry, L. Dell, "The Physician and the Speech Correctionist," Journal of Speech Disorders, 8:389, October, 1943.

A physician makes helpful hints about the ways the speech correctionist may interest the doctor in speech correction.

⁷⁵ Abstracted from a review by C. H. Voelker, Journal of Speech Disorders, 2:116, June, 1937.

Hill, Harris, "Stuttering, I: A Critical Review and Evaluation of Biochemical Investigations," Journal of Speech Disorders, 9:245, September, 1944.

The author reviews the findings in the field and adds this remark, "Stuttering occurs on the basis of the normal functioning of a normal neurophysical mechanism; in the case of biochemical differences no findings warrant any assumption of special metabolic or chemical agents which are casual. The phenomena of stuttering can well be explained if principles of normal behavior are adhered to without attempting to make the stutterer a unique animal in the universe."

_____, "Stuttering, II: A Review and Integration of Physiological Data," Journal of Speech Disorders, 9:289, December, 1944.

After reviewing the material, the author concludes that the common characteristics of adult stutterers are few in number, that the stutterer's difficulty in non-speech behavior may be due to heightened tonus, that stuttering consists of a startle (contraction) pattern, that these contractions occur when the individual is thrown out of psychical contact with a specific situation, and that stuttering is not a habit.

Honig, Phoebe, "The Stutterer Acts It Out," Journal of Speech Disorders, 12:105, March, 1947.

This paper is a report of the use of psychodrama as part of the treatment of twenty stutterers at the evening sessions of the speech clinic of Brooklyn College. Those who took part in the psychodrama were helped not only in the clinic but in the facing of the problems of their own environment.

Hunter, N. W., "The Incidence of Stuttering in Twinning Families," Speech Abstracts, 4:21, 1944.⁷⁶

One hundred pairs of twins were classified as monozygotic and disygotic. Investigation showed that a greater tendency toward stuttering existed among the disygotic than among the monozygotic.

Johnson, Wendell, "Certain Cues Associated with Precipitation of Stuttering," Proceedings of the American Speech Correction Association, 7:00, 1937.⁷⁷

Johnson's experiments demonstrate spasmophemia as a stimulus in the sense that once stuttering behavior has occurred it

⁷⁶ Abstracted from a review by K. Winesheim, Journal of Speech Disorders, 9:181, June, 1944.

⁷⁷ Abstracted from a review by C. H. Voelker, Quarterly Journal of Speech, 23:680, December, 1937.

may serve as a stimulus for subsequent stuttering behavior by virtue of its having been associated with specific letters, sounds, words, and other signs.

Johnson, Wendell, "The Indians Have No Word for It," part I, Quarterly Journal of Speech, 30:330, 1944, and part II, Quarterly Journal of Speech, 30:456, 1944.

In part I, the author discusses stuttering in children, in part II, in adults. Forty six stuttering children revealed that in nearly every case stuttering was semantogenic. A removal of unnecessarily high speech standards usually is all that the child needs by way of treatment. Stuttering in adults, part II, is also semantogenic, but the treatment must center on the stutterer rather than in his environment. He must be taught to face his problem and attack it. As he gains in tolerance for his defect, it decreases in severity.

_____, "An Interpretation of Stuttering," Quarterly Journal of Speech, 19:70, February, 1933.

This study of stuttering divides the disorder into pre-spasm, spasm, and post-spasm and describes the most obvious features of each phase. The author adds that many cases of stuttering could be cured simply by using the speech mechanism efficiently and that if emotion causes the malady it is because emotion acts upon the gradients responsible for speech.

*Johnson, Wendell, "An Open Letter to the Mother of a Stuttering Child," Journal of Speech and Hearing Disorders, 14:3, 1949.

The author makes a number of suggestions for dealing with a stuttering child, suggestions which will remove the tension from his environment and point the way to his recovery from the disorder.

_____, "The Role of Evaluation in Stuttering Behavior," Journal of Speech Disorders, 3:85, June, 1938.

This paper presents the author's semantic theory and gives suggestions for mental hygiene in the treatment. His approach accepts stuttering as the problem and suggests that it be attacked.

_____, "Some Semantic Aspects of Stuttering," an abstract, Proceedings of the American Speech Correction Association, 9:59, 1939.

There is confusion in the field because the terms used do not mean the same thing to everyone who uses them. The problem could be clarified not only by factual investigation but by clarification of terms.

Johnson, Wendell, "The Treatment of Stuttering," Journal of Speech Disorders, 4:170, June, 1939.

The stutterer's attitude toward himself and his disorder must be changed before anything can be done for him. He must learn not to take himself too seriously.

_____, and Ainsworth, S., "Studies in the Psychology of Stuttering, X: Constancy of the Loci Expectancy of Stuttering," Journal of Speech Disorders, 3:101, June, 1938.

Twenty adult stutterers were studied at the University of Iowa. It was found that stutterers anticipate stuttering on certain words in repeated readings of the same material. The conclusion was that the therapy must deal with expectation.

Johnson, W., and Brown, S. F., "Stuttering in Relation to Various Speech Sounds: a Correction," Quarterly Journal of Speech, 25:20, 1939.

This paper is merely a correction of some of the reported findings regarding the difficulty connected with certain speech sounds, the phonetic factor is not a strong one.

Johnson, W., and Brown, S. F., "Stuttering in Response to Various Speech Sounds," Quarterly Journal of Speech, 21:481, 1935.

The authors found after studying seventy stutterers that there was more stuttering on some sounds than on others. Generally speaking, consonants were found to be harder than vowels. The phonetically unsystematical differences in frequency lead to the conclusion that stuttering was not wholly physical. There are both physical and psychological aspects.

Johnson, W., and Colley, Wm. H., "The Relationship between Frequency and Duration of Moments of Stuttering," Journal of Speech Disorders, 10:35, March, 1945.

Twenty adult stutterers were tested in reading situations, and it was found that there was no very great correlation between frequency and duration of the moments of stuttering.

Johnson, W., and Inness, M., "Studies in the Psychology of Stuttering, XIII: A Statistical Analysis of the Adaption and Consistency Effects in Relation to Stuttering," Journal of Speech Disorders, 4:79, March, 1939.

The data on studies of three groups of stutterers were compared at the University of Iowa, and the authors concluded that stutterers adapt to word content of a passage more

than to the reading situation and that the tendency is for the loci of stuttering to remain the same.

Johnson, W., and Knott, J. R., "Studies in the Psychology of Stuttering, I: The Distribution of Moments of Stuttering in Successive Readings in the Same Material," Journal of Speech Disorders, 2:17, March, 1937.

A study of twenty one adult stutterers was made at the University of Iowa, and it was found that although the number of words stuttered decreased with successive readings of the same material, the loci of such stuttering as persisted tended to remain the same.

Johnson, W., Larson, R. P. and Knott, J. R., "Studies in the Psychology of Stuttering, III: Certain Objective Cues Related to the Precipitation of the Moment of Stuttering," Journal of Speech Disorders, 2:23, March, 1937.

Ten stutterers studied at the University of Iowa gave evidence that both general cues not associated with specific words and specific cues associated with specific words may be related to the precipitation of the moment of stuttering.

Johnson, W., and Millsaps, L., "Studies in the Psychology of Stuttering, VI: the Role of Cues Representative of Past Stuttering in the Distribution of Stuttering Moments During Oral Reading," Journal of Speech Disorders, 2:105, June, 1937.

Twenty six adult stutterers studied at the University of Iowa lead to the conclusion that stuttering may occur on other words than cue words from past stuttering but that it also occurs on those cues.

Johnson, W., and Rosen, L., "Studies in the Psychology of Stuttering, VII: Effect of Certain Changes in Speech Patterns upon Frequency of Stuttering," Journal of Speech Disorders, 2:106, June, 1937.

Eighteen stutterers studied at the University of Iowa demonstrated the fact that stuttering decreased with the change of speech pattern, probably because the change of pattern acted as a distraction.

Johnson, W., and Sihn, A., "Studies in the Psychology of Stuttering, V: Frequency of Stuttering with Expectancy of Stuttering Controlled," Journal of Speech Disorders, 2:98, June, 1937.

The University of Iowa study of twenty eight stutterers to determine if there was a tendency to expect to stutter on previously stuttered words and if there was a tendency for

unexpected stuttering on previously stuttered words revealed that stuttering occurred under both circumstances.

Johnson, W., and Solomon, A., "Studies in the Psychology of Stuttering, IV: A Quantitative Study of Expectation of Stuttering as a Process Involving a Low Degree of Consciousness," Journal of Speech Disorders, 2:95, June, 1937.

That expectation of stuttering not only functioned in relation to precipitation of moments of stuttering but that it need not operate on a highly conscious scale was the decision reached on the basis of the study of thirteen adult stutterers conducted at the University of Iowa.

Johnson, W., Sterns, Genevieve, and Warweg, Edna, "Chemical Factors and the Stuttering Spasm," Quarterly Journal of Speech, 19:409, June, 1933.

Fifteen stutterers and fifteen non-stutterers were tested for calcium, inorganic phosphorus, potassium and blood sugar. Not enough difference was found to be of any value, nor was there found any connection to exist between stuttering and tetany.

Johnson, W. et al, "A Study of the Onset and Development of Stuttering," Journal of Speech Disorders, 7:251, September, 1942.

After a study of forty six stuttering children and an equal number of controls the authors decided that although they would not discredit any other theory of etiology, they were justified in laying stress on the diagnostic aspect of causation.

Jones, Morris Val, "Leopold Treitel on Stuttering," Journal of Speech and Hearing Disorders, 13:19, March, 1948.

The author discusses the contribution made to the field by Leopold Treitel in 1894.

Karlin, Isaac W., "A Psychosomatic Theory of Stuttering," Journal of Speech Disorders, 12:319, September, 1947.

The author believes that stuttering is due to a combination of organic and psychological factors. A delay in the myelination of the speech areas of the brain is the basic cause, but the precipitating cause is undue psychological stress during this period of delayed myelinization.

Karlin, Isaac W., and Sobel, A. E., "Comparative Study of the Blood Chemistry of Stutterers and Non-Stutterers," Speech Monographs, 7:75, December, 1940.

The authors summarize the previous experiments in the same field and report on their own experiment with a dozen stutterers and a dozen matched non-stutterers. Their examination of the blood of the two groups revealed no significant difference.

Kastein, Shulamuth, "The Chewing Method of Treating Stuttering," Journal of Speech Disorders, 12:195, June, 1947.

The author discusses Froeschel's chewing method and claims that it will work except in cases of extreme psychoneurosis.

Kenyon, Elmer L., "A Critical Examination of the Foundations of the 'Recoil of the Vowel' Theory of the Cause of the Impediment of the Speech in Stammering," Journal of Speech Disorders, 5:97, June, 1940.

The author weighs this theory in the balance and finds it wanting, as it were. He does not feel that Bluemel has made an attempt to consider the symptomatology of stuttering and that is more than can be said for many of the others.

Kenyon, Elmer L., "The Etiology of Stammering," Journal of Speech Disorders, 7:97, June, 1942.

The author contends that the visualization of vocal cord adduction instead of voice production is the thing that causes stuttering and that a new method of treatment teaches the stutterer to hold his mind on the proper production of speech. If this proper use of the cords cannot be established and stuttering continues psychological effects will follow.

———, "The Etiology of Stammering, an Examination into Certain Recent Studies, with a Glance into the Future," Journal of Speech Disorders, 6:1, March, 1941.

See this same article in the Illinois Medical Journal, 79:334, April, 1941.

———, "The Etiology of Stammering: The Psychopsiologic Facts Which Concern the Production of Speech Sounds and of Stammering," Journal of Speech Disorders, 8:337, December, 1943.

This paper merely restates the author's "adduction of the vocal cords" theory.

Kimmell, M., "Studies in the Psychology of Stuttering, IX: The Nature and Effects of a Stutterer's Avoidance Reactions," Journal of Speech Disorders, 3:95, 1938.

The autobiographies of twenty nine adult stutterers were studied at the University of Iowa, and they reveal the fact that stutterers use various types of avoidance techniques and that they effect the stutterers speech aswell as his social behavior.

Klingbell, G. M., "The Historical Background of the Modern Speech Clinic," Journal of Speech Disorders, 4:115, June, 1939.

This article contains a summary of the theories of stuttering of 141 individuals from Heroditus, c. 484 B. C., to Coriot, A. D. 1915. Many types of Therapy are also stated briefly.

Knott, J. R., "A Study of Stutterers' Stuttering and Non-Stuttering Experiences on the Basis of Pleasantness and Unpleasantness," Quarterly Journal of Speech, 22:328, 1936.

Twenty eight stutterers rated their most pleasant and most unpleasant experiences. An analysis of the data disclosed the fact that their stuttering experiences, although more readily recalled, were no more pleasant or unpleasant than their non-stuttering experiences.

Knott, J. R., and Johnson, W., "An Interpretative Demonstration of Ten Observable Facts About Stuttering," Proceedings of the American Speech Correction Association, 6:150, March, 1936.

Johnson presents the first part of this paper. On the basis of himself, he claims that physical instability, mental deficiency, or psychoneuroticism are not essential to stuttering. An adequate theory must give account of conditions which are essential and sufficient to precipitate stuttering, to determine its duration, and to terminate it.

Knott presents the second part of this paper. Stuttering is psychological, based on expectancy and a desire to avoid stuttering. When the stutterer ceases to react to his stuttering the spasms cease.

_____, and Webster, M., "Studies in the Psychology of Stuttering, II: A quantitative Evaluation of Expectation of Stuttering in Relation to the Occurrence of Stuttering," Journal of Speech Disorders, 2:20, March, 1937.

That there is a definite relationship between stuttering and expectation of stuttering is established by this study of twenty two adult stutterers made at the University of Iowa.

Kepp, George A., "Metabolic Studies of Stutterers," Speech Monographs, 1:117, September, 1934.

The blood serum calcium, inorganic phosphate, potassium chloride, cholesterol, total protein, etc., of twenty three non-stutterers and forty nine stutterers were compared and the author says that the differences in them justify the conclusion that stuttering is a manifestation of a disturbed metabolism. He adds that it is not too much to hope that stuttering will some day be controlled by diet.

_____, "Treatment of Stuttering," Journal of Speech Disorders, 4:165, June, 1939.

Four quotations from the article sum up the total content. "No adult stutterers are ever cured." "If we could only agree that each point of view (re therapy) has some value for certain stutterers, that each alone is too restricted and limited to be universally accepted as the best method to use for all stutterers, we could establish a basis upon which we could formulate a system of therapy that would be acceptable to all." "To do this we would need to agree that there are many possible causes of stuttering." "If elementary school teachers did an adequate job there wouldn't be so many speech defectives."

Kosh, Z. H., "Integrated Course for Stutterers and Voice Defectives," Quarterly Journal of Speech, 12:97, 1941.

This paper presents a course offered at a girls' high school. The main emphasis of the course was on personality and school adjustment. All of the girls improved, and some of them were cured. This course is the type which could be offered in any school.

Krausz, Erwin O., "Is Stuttering Primarily a Speech Disorders?" Journal of Speech Disorders, 5:227, September, 1940.

The author differentiates between "speaking" and "talking." He says that stuttering is not a speech defect but a talking defect. It is based on "negative compulsion," and it is primarily a personality problem. The treatment must be based on clearing up the neurosis.

_____, "Stuttering--A Disease or a Personality Problems?" Proceedings of the American Speech Correction Association, 6:155, March, 1936.

The author points out that stuttering must be regarded as a symptom of a neurotic personality. When the whole problem is cleared up the stuttering takes care of itself. A stutterer is one who needs to mature.

Krout, M. H., "The Etiology and Therapy of Spastic Speech,"
Journal of Speech Disorders, 7:193, September, 1942.

The author reviews the theories of causation and the therapies for stuttering; then he states his own theory--the psycho-analytic. Treatment must reconstruct the personality on a higher plain.

Lightfoot, Charles, "Serial Identification of Colors by Stutterers," Journal of Speech and Hearing Disorders, 13:193, 1948.

Thirty stutterers and fifteen non-stutterers were tested, and the author concluded that the apparent difference in serial reaction time between the two groups was based on the stutterers' reluctance to make a mistake.

Loutit, C. M., and Halls, E. C., "Survey of the Speech Defects among Public School Children in Indiana," Journal of Speech Disorders, 1:73, September, 1936.

This paper is a report of the survey, and stuttering is included with the other defects. There is four times as much stuttering among subnormal children as among normal children. There is no significant difference between negro and white children.

McKnight, R. V., "A Self Analysis of a Case of Reading, Writing, and Speaking Disability," Archives of Speech, 1:18, March, 1936.⁷⁸

"In this paper the patient, herself, describes and analyzes her own case which was a combination of dyslexia, dysphasia, and dysphemia. It gives speech pathologists a technical study of the person who has the speech defect."

Maddox, J., "Studies in the Psychology of Stuttering, VIII: The Rate of Visual Cues in the Precipitation of Stuttering," Journal of Speech Disorders, 3:90, June, 1938.

Twenty stutterers were studied at Purdue University. The author notes that stuttering increased in a marked manner when the stutterers watched themselves speak.

Mandell, Sibyl, "The Psychology of Stuttering," Quarterly Journal of Speech, 16:200, April, 1930.

This author gives a summary of the theories of the etiology of stuttering; then she states her own--that stuttering is a symptom of a neurosis. She points out the fact that treatment must teach the stutterer to face life, to approach it with a socio-centric rather than an ego-centric view.

⁷⁸ Abstracted from a review by C. H. Veelker, Journal of Speech Disorders, 2:113, December, 1937.

Meissner, James Hyde, "The Relationship between Voluntary Non-fluency and Stuttering," Journal of Speech Disorders, 11:13, March, 1946.

A test of twenty four stutterers indicated that voluntary non-fluency reduced the amount of involuntary non-fluency in the reading of a given passage.

Metraux, Ruth W., "Auditory Memory Span for Speech Sounds of Speech Defective Children Compared with Normal Children," Journal of Speech Disorders, 7:33, March, 1942.

Although the author admits that the data herein presented is in no way conclusive, she reports that the study of thirty four speech defectives matched with thirty four non-defectives plus sixty six defectives not matched showed that speech defectives' memory was higher on vowels and that normal speakers' was higher on consonants. Stutterers were included in the group of speech defectives.

Millisen, Robert, "A Comparative Study of Stutterers, Former Stutterers, and Changed Handedness Normal Speakers, and Articulation Cases," Proceedings of the American Speech Correction Association, 6:168, March, 1936.

Children who fell into the classifications indicated in the title of this article were chosen from three schools in Pennsylvania, and a study of them led to the following

findings: more females outgrow stuttering than males; stutterers seem slightly more retarded in reading than former stutterers and more neurotic; stutterers are more retarded in reading and spelling than are normals whose handedness has been changed; they are also more neurotic and more right-handed; stuttering seems to be only one of the disabilities shown by stutterers; 40 per cent of stuttering disappears without remedial work; former stutterers show special disabilities, but they are neither as numerous nor as severe as those shown by stutterers.

Millisen, Robert, "Frequency of Stuttering with Anticipation of Stuttering Controlled," Journal of Speech Disorders, 3:207, 1938.

Stutterers are more apt to have blocks when they expect to have them than when they do not expect to, but the author challenges the psychological theory to explain why blocks sometimes do not occur when they are expected and do occur when they are not expected.

———, and Johnson, W. A., "A Comparative Study of Stutterers, Former Stutterers, and Normal Speakers Whose Handedness Has Been Changed," Archives of Speech, 1:61, 1936.

Probably the same as the article by the same name reviewed above.

Miller, E., "Intensive Objective Studies in Stuttering: Preventive and Therapeutic Indications," Proceedings of the American Speech Correction Association, 7:-- , 1937.⁷⁹

"Miller discusses the significance of the findings of the various researchers in relation to many of the so called problems concerning spasmophilia."

Moore, Charles E., "Reading and Arithmetic Abilities Associated with Speech Defects," Journal of Speech Disorders, 12:85, March, 1947.

Stuttering is included in the list of speech defects. When tests were given to speech defectives and the results were compared with the results of the same tests given to normal children no significant differences were shown.

Moore, Wilbur E., "A Conditioned Reflex Study of Stuttering," Journal of Speech Disorders, 3:163, September, 1938.

The author found by experimentation that stutterers were no different from non-stutterers in their ability to reproduce a time interval accurately in the face of a conditioned stimulus.

⁷⁹ Abstracted from a review by C. H. Voelker, Quarterly Journal of Speech, 23:37, December, 1937.

Moore, Wilbur H., "Hypnosis in a System of Therapy for Stutterers," Journal of Speech Disorders, 11:117, June, 1946.

The author describes forty cases in which hypnosis was used in the treatment of stuttering. This form of therapy can be very useful in finding out what traumatic experiences may have precipitated the disorder. It also may be used to lay the foundation for successful speech situations which will build up the self confidence of the stuturer.

Morris, D. W., "Position as a Factor of Attentional Clearness in Relation to Stuttering," Journal of Speech Disorders, 3: 141, September, 1938.

This study was planned to investigate the possibility of developing a test for the determination of native sidedness of such a validity as to permit its use in individual diagnosis. Such a test is needed for stuturers. The tests now being used are all right for group testing but not for individual diagnosis. They are explained.

_____, "A Survey of Speech Defects in Central High School, Kansas City, Missouri," Quarterly Journal of Speech, 25:262, April, 1939.

This survey included stuttering. It showed that 14 per cent of the 178 sophomores tested had defects. No difference

was found in the intelligence of this group and of the class as a whole.

Moser, Henry, "Photographic Analysis of Eye Movements during Stuttering," The Professional Discussions of the Ninth Annual Convention of the American Speech Correction Association, 1934.⁸⁰

One hundred nine individuals served as subjects--fifty six stutterers and fifty three non-stutterers. All photographs were taken with the Iowa Eye-Movement camera, which is a modified technique developed by Dodge, and permits simultaneous binocular photography of both the horizontal and the vertical eye movements. The author describes and classifies the various involuntary movements which he characterizes as disintegration.

_____, "A Qualitative Analysis of Eye-Movements during Stuttering," Journal of Speech Disorders, 3:131, September, 1939.

The author concludes that the lack of control of the eye muscles of forty two stutterers as compared with fifty six non-stutterers supports the theory of general neuro-muscular derangement as a cause of stuttering.

⁸⁰ Abstracted from a review by G. S. Bluemel, Quarterly Journal of Speech, 21:604, November, 1935.

Moskowitz, H., "Psychiatric Factors in Speech Correction, Quarterly Journal of Speech, 27:537, 1941.

The author gives a brief summary of cases cited to prove his contention that stuttering is a manifestation of an anxiety neurosis. He suggests psychoanalysis as treatment.

Nelson, S. F., Hunter, N., and Walter, M., "Stuttering in Twin Types," Journal of Speech Disorders, 10:335, 1945.

Same article review under Hunter.

Palmer, M. P., "Similarities of the Effect of Environmental Pressures on Cerebral Palsy and Stuttering," Journal of Speech Disorders, 8:155, 1943.

The author believes that with either disorder environmental pressures increase the physical signs and cause a fixation of the condition.

_____, and Gillett, Anna Mae, "Respiratory Cardiac Arrhythmia in Stuttering," Journal of Speech Disorders, 4:133, June, 1939.

The comparison of the findings of twenty one stutterers and twenty four non-stutterers led the author to conclude that the heart beats of the two groups differ significantly and when there is much difference in their respiratory rhythm the stutterers are exactly opposite to the non-stutterers.

Palmer, M. F., and Gillett, Anna Mae, "Sex Differences in the Cardiac Rhythms of Stutterers," Journal of Speech Disorders, 3:3, March, 1938.

The authors studied seven female and seventeen male stutterers and twenty eight non-stutterers, and they decided that a differing mechanism is responsible for stuttering in the two sexes in relation in heart beat.

Palmer, M. F., and Osborn, Courtney D., "A Study of Tongue Pressures of Speech Defectives and Normal Speaking Individuals," Journal of Speech Disorders, 5:133, June, 1940.

The study of one hundred and twenty eight defectives, including stutterers, and a matched group led to the conclusion that stutterers do not have as much tongue muscle strength as do non-stutterers. The authors recommend the use of exercises to strengthen the tongue muscles.

Peacher, Wm. G., and Harris, Wm. R., "Speech Disorders in World War II: VIII, Stuttering," Journal of Speech Disorders, 11:303, December, 1946.

Investigations of the records of stutterers in the army lead the authors to conclude that stutterers adjust to army life and make valuable contributions to it, but that large scale speech correction programs should be introduced if universal military training be inaugurated.

Peters, C. A., "Public Speaking: a Therapeutic Procedure in the Retraining of Stutterers," Quarterly Journal of Speech, 19:64, February, 1933.

The removal of the defect should be the chief aim. Many of the symptoms of stuttering are merely bad habit, and public speaking helps eradicate those habits.

_____, "A Study of Mirror Reading in Speech Defectives and Normal Speakers," Archives of Speech, 1:48, March, 1936.⁸¹

The facility of the stutterer in mirror reading is evidence of a lack of cerebral dominance.

Pittinger, Katherine, "A Study of the Duration of Temporal Intervals between Successive Moments of Stuttering," Journal of Speech Disorders, 5:333, December, 1940.

The study of twenty stutterers showed that stuttering is not marked ly systematic or regular in occurrence but is relatively variable and convinced the author that this variability indicates psychological or semantic rather than biological or organic determining factors.

⁸¹ Abstracted from a review by C. H. Voelker, Journal of Speech Disorders, 2:250, December, 1937.

Porter, Harriet von K., "Studies in the Psychology of Stuttering, XIV: Stuttering Phenomena in Relation to Size and Personnel of Audience," Journal of Speech Disorders, 4:323, December, 1939.

A study of thirteen stutterers at Simpson College revealed the fact that both the size of the audience and the stutterers' opinion as to whether it was a "hard" or "easy" audience had a direct influence on stuttering.

*Reid, Loren, "Some Facts about Stuttering," Journal of Speech Disorders, 11:3, March, 1946.

In the author's own words, "This discussion is a survey of the present status of our knowledge of stuttering; it embodies some known facts, some generally held ideas, and some interpretations of some controversial issues. As it emphasizes the complexity of the phenomenon, it points toward the necessity of holding a broad view about the fundamental nature of stuttering. . . . Atomic fission is simple compared with the psychological, endocrinological, biochemical, genetic, and developmental problems wrapped up in stuttering."

Richardson, LaVange Hunt, "A Personality Study of Stutterers and Non-Stutterers," Journal of Speech Disorders, 9:152, June, 1944.

Thirty stutterers and thirty non-stutterers were studied at the University of Southern California. Four tests were administered and the results indicated that stutterers are more socially introverted, more depressed, and less happy-go-lucky, than nonstutterers. The stutterers' failure to react to color in ink-blots implies a failure to respond to outside environment.

Ritzman, C. H., "A Comparative Cardiovascular and Metabolic Study of Stutterers and Non-Stutterers," Journal of Speech Disorders, 7:367, December, 1942.

Twenty nine stutterers and an equal number of controls were tested. The results showed that young adult male stutterers are normal as to heart rate, sinus arrhythmia, basal metabolic rate, and blood pressure during silence and that female stutterers show smaller mean changes in heart beat length and are more regular in the changes of heart beat length than are normals.

Robbins, S. D., "Distraction in Stuttering," Proceedings of the American Speech Correction Association, 2:103, 1932.⁸²

The author gives a very comprehensive study of the use of distraction as a device for eliminating the fear and the occurrence of stuttering and recommends its use.

_____, "Relative Attention Paid to Vowels and Consonants by Stammerers and Normal Speakers," Proceedings of the American Speech Correction Association, 6:7, March, 1936.

Eleven stutterers and eleven non-stutterers were studied in the Harvard University Psychological Laboratory. Generally speaking, stammerers found consonants harder than vowels. The suggestion is made that they be taught to think that they omit hard consonants and prolong vowels which follow them.

_____, "The Role of Rhythm in the Correction of Stammering," Journal of Speech Disorders, 21:331, June, 1935.

Artificial rhythm should be avoided because it is not found in normal speech. The rhythm of stutterers was found to be different from that of non-stutterers, and the author suggests that stutterers be led to achieve a natural rhythm.

⁸² Abstracted from a review by C. Van Riper, Speech Correction, p. 375.

Retter, J. B., "Studies in the Psychology of Stuttering, XI: Stuttering in Relation to Position in the Family," Journal of Speech Disorders, 4:143, June, 1939.

The University of Iowa sponsored the study of 522 stutters to determine whether there was any relationship between the position in the family and stuttering. It was discovered that when the familial position made adjustment to the normal demands of life difficult (as in the case of a pampered only child or a child of whom too much is expected) it also could be held responsible for the development of stuttering.

_____, "A Working Hypotheses as to the Nature and Treatment of Stuttering," Journal of Speech Disorders, 7:263, September, 1942.

Eight case histories are given with the author's interpretation of each. On the basis of these cases he draws the following conclusions: each case is a problem to be solved; no one theory can explain the causes; there is always a psychological element involved; the therapy also must be individual; it must not rely on techniques which deal only with the speech mechanism.

*Rutherford, Bernice, "Preventions and Cure of Stuttering in Primary Grades," Proceedings of the American Speech Correction Association, 2:28, 1932.⁸³

This article points out how the parents, teachers and the child himself can carry out good mental hygiene principles and thereby prevent the maladjustments which occur.

_____, "Speech Re-education for the Birth Injured," Journal of Speech Disorders, 3:199, December, 1938.

Working with spastics over a period of seven years, the author has discovered that stuttering is four times as prevalent among them as among the average run of people.

Schaubel, Howard J., and Street, Roy F., "Prostigmin and the Chronic Stutterer," Journal of Speech and Hearing Disorders, 14:143, 1949.

The authors report on the use of the drug with ten stutterers. It seemed to reduce their tensions and relieve their stuttering after it had been used for fifteen months.

⁸³ Abstracted from a review by Van Riper, Speech Correction, Principles and Methods, p. 375.

Schoolfield, L. D., "The Development of Speech Correction in America in the Nineteenth Century," Quarterly Journal of Speech, 24:101, 1938.

In this discussion, the author reviews the treatment of stuttering by mechanical devices, surgical procedures, and educational methods used in the last century.

Schuell, Hildreth, "Sex Differences in Relation to Stuttering," Part I, Journal of Speech Disorders, 11:277, December, 1946.
Part II, Journal of Speech Disorders, 12:23, March, 1947.

Part I gives a summary of the material in this field.

Part II gives a report of three studies made by the author in the South Bend, Indiana, public schools. She makes these general conclusions: the semantogenic origin of stuttering seems to be substantiated; the sex differences can be accounted for on the basis of a combination of physiological and cultural-determined factors; stuttering seems to be learned behavior.

———, "Working with Parents of Stuttering Children," Journal of Speech and Hearing Disorders, 14:251, 1949.

The speech correctionist should have at least three interviews with the parents of the children with whom he works in order to guide them in their approach to the problem.

Schultz, Donald A., "A Study of Non-Directive Counseling as Applied to Adult Stutterers," Journal of Speech Disorders, 12:421, 1947.

A group of twenty stutterers were compared with a group of 239 psychoneurotics regarding their reaction to this type of treatment. There were many similarities between the two groups, though many of the stutterers were apparently normal except for the fact that they stuttered.

Scripture, Mae K., "Pathology and Re-education of Speech Disorders," Quarterly Journal of Speech; Part I, 12:148, April, 1926.

More space was devoted to stuttering in this article than to any one other defect. Her discussion of stuttering was practically a presentation of the various approaches to the etiology and therapy, with emphasis on Adler's as the best.

Part II, Quarterly Journal of Speech, 12:167, June, 1926.

In her treatment of stuttering, in this part, the author says that the re-educational treatment must be both disciplinary and medical.

Shackson, R., "An Action Current Study of Muscle Contraction Latency with Special Reference to Latent Tetany in Stutterers," Archives of Speech, 1:87, 1936.⁸⁴

The records of twenty six stutterers and forty one non-stutterers were compared, and these findings are recorded; no significant difference between the action current--muscle thickening latencies of any of the subjects for any of the muscles studied was found; when individual muscle groups were taken separately stutterers showed only slightly shorter latency than non-stutterers; when all the muscle groups were taken together the stutterers showed significantly shorter action current-muscle thickening latencies. These findings led the author to conclude that latent tetany in stutterers is indicated.

Shaffer, George, L., "Measure of Jaw Movement and Phonation in Non-Stuttered, and Stuttered Production of Voiced and Voiceless Plosives," Speech Monographs, 7:85, December, 1940.

Ten stutterers and ten non-stutterers were tested. The tests showed that in stuttering, as compared to non-stuttering, were to be found a longer time between the initiation

⁸⁴ Abstracted from a review by C. V. Hudgins, Psychological Abstracts, 11:77, February, 1937.

of jaw movement and the initiation of phonation, a longer duration of phonation, a greater number of interruptions in phonation, a greater time between initiation of jaw movement and the first directional change of jaw movement, and a greater number of directional changes in jaw movement.

Shohare, Hide Helen, "A Contribution to the Genesis of Speech Movements and the Etiology of Stuttering," Journal of Speech Disorders, 7:29, March, 1942.

Data point to the conclusion that stuttering may result from a congenital weakness of the neuromusculature, resulting from a birth injury or disease in very early infancy. A somewhat detailed account of the nervous condition presumed to be involved is given.

Simon, Clarence T., "Complexity and Breakdown in Speech Situations," Journal of Speech Disorders, 10:199, September, 1945.

The author makes his own summary of this paper: "This paper has attempted to view suttering as a breakdown of the total speech process, a disintegration of a function. This breakdown may be occasioned by and or all factors which tend to increase the complexity of the speech situation beyond the stutterer's pwoer to integrate. Conversely, any remedial approach which will simplify the speech situation, which will reduce the complexity of the stimuli, will tend to alleviate the difficulty."

Simon, C., "Integrated Behavior in Stutterers and Non-Stutterers --a Method of Experimental Study," Proceedings of the American Speech Correction Association, 6:121, 1936.

Too great a complexity of the stimulating situation causes "breakdown" or disintegration. This condition is seen in stage fright as well as in stuttering. When tests were given to stutterers and non-stutterers, the former showed a lower point of disintegration.

Snidecor, J. C., "Why the Indians Do Not Stutter," Quarterly Journal of Speech, 33:493, December 1947.

The author interviewed 800 Indians and failed to find one pure bred Indian who stuttered. He gives the following reasons for his findings: the handedness of Indians is never changed; births are easier and accompanied by fewer injuries; during infancy little pressure is put on the child for speech; a person is never labeled a stutterer. He concludes that Indians are probably as neurotic as White men.

Solomon, Meyer, "The Psychology of Stuttering," Journal of Speech Disorders, 3:59, March, 1938.

The author summarizes his paper as follows: "From what has been said we are justified in concluding that stuttering is an emotional and personality speech disorder, showing itself in an anxiety state concerning social speaking, and in social

maladjustment of the total individual as well as in intermittent speech blocks, hesitation and repetition. "

Solomon, Meyer, "Stuttering, Emotion, and the Struggle for Equilibrium," Proceedings of the American Speech Correction Association, 6:221, March, 1936.

In addition to the ideas expressed in the above paper, the author states that the treatment of stuttering must be based on the conception of it as a personality disorder.

_____, "Stuttering as an Emotional Disorder," Proceedings of the American Speech Correction Association, 2:118, 1932.⁸⁵

The author describes the three clinical stages of stuttering, all three of which he believes to be caused by emotion. They are the basic stage of pure habit, the fear stage, and the stage of distorted personality. He suggests some principles of treatment.

_____, "Stuttering as an Emotional and Personality Disorder," Journal of Speech Disorders, 4:347, December, 1939.

The author discusses the problem of adjustment, and then applies it to stuttering.

⁸⁵ Abstracted from a review by C. Van Riper, Speech Correction, p. 311.

Steer, Max D., "A Qualitative Study of Breathing in Young Stutterers," Speech Monographs, 2:152, 1935.⁸⁶

The breathing records of child stutterers were compared with those of adults and similar characteristics were noted.

_____, "Symptomatology of Young Stutterers," Journal of Speech Disorders, 2:3, March, 1937.

This paper reports the findings of a study of sixty seven stutterers and twenty non-stutterers. From these findings the author concludes either children do not stutter or that most children stutter and adults stutterers merely show a condition of arrested maturation, or that the symptoms accepted as characteristics for stuttering do not discriminate stutterers from normals at preschool age. At the beginning of the paper he lists all of the recognized or accepted symptoms of stuttering.

Stinchfield, Sara--her work is listed under Hawks, Sara Stinchfield.

⁸⁶ Abstracted from a review by C. V. Hudgins, Psychological Abstracts, 13:267, May, 1939.

Strothers, Charles R., and Keigman, Lois S., "Diadochokinesis in Stutterers and Non-Stutterers," Journal of Speech Disorders, 8:323, December, 1943.

The reports of fifteen stutterers and fifteen non-stutterers were compared and no significant difference was found.

_____, "Rhythmokinesis in Stutterers and Non-Stutterers," Journal of Speech Disorders, 9:239, September, 1944.

No difference was found between the two groups.

Tanberg, C., "The Clinical Significance of the Symptomatology and Etiology of Stuttering," Quarterly Journal of Speech, 23:654, 1937.

The literature which describes the symptoms of stuttering is reviewed. The author feels that on the basis of this review it is safe to indicate that stuttering is an emotional disturbance with neuromuscular incoordination and not a localized interruption of speech. He feels also that clinical procedures must take into consideration predisposing, precipitating, and maintaining factors.

Templin, Mildred, "A Study of Aggressiveness in Normal and Defective Speaking College Students," Journal of Speech Disorders, 3:43, March, 1938.

An examination of seventy three speech defectives including stutterers and forty nine normal speaking individuals revealed that the more severe the defect the less aggressive the person, but that the more aggressive he was the better he cooperated in treatment.

Travis, L. E., "The Need for Stuttering," Journal of Speech Disorders, 5:193, September, 1940.

Two statements quoted from the paper summarize it. "The thesis . . . of this paper is that stuttering is a defense created with extraordinary skill and designed to prevent anxiety from developing when certain impulses of which the stutterer dares not become aware, threaten to expose themselves." "The management of stuttering can take one of two courses. It can remove the need for stuttering and consequently the stuttering itself, or it can augment the regulating and repressing forces of the organism so that the need cannot be felt."

Travis, L. E., "A Point of View in Speech Correction," Quarterly Journal of Speech, 22:57, February, 1936.

Stuttering is included in this paper. The author states that the first interest of the correctionist is in the person as a whole. He suggests the establishing of neuro-leadership and the removing of tensions as the objectives of therapy.

_____, "The Relation of Bilingualism to Stuttering," Journal of Speech Disorders, 2:185, 1937.

In a survey of the East Chicago, Indiana, schools it was found that there were significantly more stutterers among the bilingual children than among the monolinguals. The author points out, however, that this difference might be due to the difference in economic security rather than to the fact of bilingualism.

_____, and Knott, J. R., "Bilaterally Recorded Brain Potentials from Normal Speakers and Stutterers," Journal of Speech Disorders, 2:230, December, 1937.

The brain waves of seventeen stutterers and fifteen non-stutterers were recorded during both silence and speech, and the following comparisons were made: stutterers are more apt to have dissimilar waves during silence and similar waves during speech than are non-stutterers; the greater the

severity of the stuttering the less dissimilar during silence and the more out of phase during silence they were; the greater the severity the less dissimilarity was found during non-stuttering speech, and the more dissimilarity during stuttering speech; the greater the severity the more out of phaseness was found during stuttering speech.

Travis, L. E., and Tuttle, W.W., and Bender, J. F., "An Analysis of Precedence of Movement in Simultaneous Contraction of Homologous Muscle Groups," Archives of Speech, 1:170, June, 1936.

Tests of a group of right and left handed and ambidextrous non-stutterers and a group of stutterers showed that stutterers are more inclined to be ambidextrous than are either right or left handed non-stutterers.

Travis, Vera, "A Study of the Horizontal Disintegration of Breathing during Stuttering," Archives of Speech, 1:157, June, 1936.

The breathing movements of the abdomen are not the same for stutterers and non-stutterers.

Tuthill, Curtis, "A Quantitative Study of Extensional Meaning with Special Reference to Stuttering," Journal of Speech Disorders, 5:189, June, 1940.

To a certain extent stutterers' breaks are not unlike the breaks of non-stutterers.

Twitmeyer, E. B., "Stammering in Relation to Hemo-respiratory Factors," Quarterly Journal of Speech, 16:278, June, 1930.

The author hopes by combining the biochemical approach, which he explains in this paper, and the psychological evaluation to be able eventually to make possible a positive diagnosis and prognosis and an effectual speech therapy.

Van Dantzig, M., "Syllable-Tapping, a New Method for the Help of Stammerers," Journal of Speech Disorders, 5:127, June, 1940.

The author suggests rhythmic tapping with each syllable, but he admits that this method merely attacks the symptoms and does not reach the root of the defect.

Van Duse, Clarence R., "A Laterality Study of Stutterers and Non-Stutterers," Journal of Speech Disorders, 4:261, September, 1939.

A test of forty right handed stutterers and forty right handed non-stutterers convinced the author that non-stutterers had decidedly more strength in their right hand than did a stutterer and that strength in usage was the only difference between the two groups.

Van Dusen, C. R., "The Relation of the Relative Size of the Two Hands to Speech," Speech Monographs, 4:125, December, 1937.

A study of thirty four non-stutterers and thirty three stutterers led the author to conclude that if the difference in the size of the two hands is due to use, the degree of assumed superior dominance of the left cerebral hemisphere is not sufficient to cause enough difference in laterality usage to result in any significant volume difference for stutterers and non-stutterers.

Van Riper, C., "The Growth of the Stuttering Spasm," Quarterly Journal of Speech, 23:70, 1937.

The author describes the primary and secondary stages of stuttering, tells how one passes to the latter state, and suggests that treatment should remove the primary cause and treat the secondary symptoms.

———, "The Preparatory Set in Stuttering," Journal of Speech Disorders, 2:149, September, 1937.

The preparatory set determines the form the stuttering will take, change that set and effortless stuttering may be achieved.

Van Riper, C., "A Study of the Stutterers' Ability to Interrupt Stuttering Spasms," Journal of Speech Disorders, 3:117, June, 1938.

Fifteen stutterers were tested at Western State Teachers' College, Michigan, and it was found that a stutterer could interrupt his speech as easily as a non-stutterer.

_____, "A Study of the Thoracic Breathing of Stutterers during Expectancy and Occurrence of the Stuttering Spasm," Journal of Speech Disorders, 1:61, September, 1936.

This study of forty three stutterers led the author to conclude that, in spite of the fact that certain stutterers present stereotyped breathing abnormalities which are both characteristic and consistent, there was insufficient foundation to the claim that stuttering is merely a bad habit.

_____, "The Symptomatic Treatment of Stuttering," Proceedings of the American Speech Correction Association, 6:110, March, 1936.

Since a large part of the handicap of stuttering consists of the devices used to minimize speech difficulty, the author feels that part of the treatment could well consist of the destruction of those devices.

Van Riper, C., and Millisen, R., "A Study of the Predicated Duration of the Stutterers' Blocks as Related to Their Actual Duration," Journal of Speech Disorders, 4:339, December, 1939.

The authors concluded that there was a definite connection between the expected length and the actual length of blocks. They conducted separate studies.

Villareal, J. J., "Semantic Aspects of Stuttering in Non-Stutterers: Additional Data," Quarterly Journal of Speech, 31:477, December, 1945. (For the first study see Voelker.)

Two hundred and seventy one persons were studied at the University of Texas, and the findings substantiate those of Voelker, that stuttering may well be of semantic origin.

_____, "Two Aspects of Stuttering Therapy," Journal of Speech and Hearing Disorders, 15:215, September, 1950.

The author suggests dividing the problem of stuttering into "defect" and "handicap" and attacking each in the process of treatment. Such a division can help the stutterer see the reason for some of the phases of treatment which might otherwise seem meaningless.

Voelker, C. M., "On the Semantic Aspects of Stuttering in Non-Stutterers," Quarterly Journal of Speech, 28:78, February, 1942.

The author concludes on the basis of a survey of freshmen at the University of Iowa that the semantic theory of etiology has much to recommend it.

Wepman, J. M., "Familial Incidence in Stammering," Journal of Speech Disorders, 4:199, September, 1939.

The author's conclusion that stammering tends to run in families is based on a study of 250 stutterers and a matched group of non-stutterers conducted at the University of Chicago.

_____, "Is Stuttering Inherited?" The Professional Discussions of the Ninth Annual Convention of the American Speech Correction Association, 1934.

The records of 127 sutterers and 127 controls from the public schools of three different cities were studied, and the findings seem to indicate at least a possibility of inheritance.

Weller, H. C., "Vegetative Rhythm Determinative of Speech Patterns," Journal of Speech Disorders, 6:161, 1941.

On the basis of work done with 100 stutterers the author feels that the regulating of breathing rhythm can help in the treatment of stuttering.

West, Robert, "A Symposium on Stuttering," Quarterly Journal of Speech, 17:--June, 1931; also in Proceedings of the American Speech Correction Association, 1:301, 1931.

This paper is a summary of the symposium which was presented at the 1930 meeting of the Association. There were twenty nine participants. This report divides the presentations on the basis of the fields of theory and therapy. The list of the names of the participants and the titles of their papers are included.

_____, and Berry, M., and Nelson, S., "The Heredity of Stuttering," Quarterly Journal of Speech, 25:23, February, 1939.

On the basis of the study of a number of family histories, the authors decide that stuttering may be inherited, or rather the tendency to stutter may be.

West, R., and Nusbam, E., "Motor Tests for Dysphemia, Stuttering," Quarterly Journal of Speech, 25:23, November, 1939.

The authors tested sixty four cases, twenty five of whom were stutterers, and came to the conclusion that when there is no evident maladjustment on the part of the stutterer neuro-muscular sluggishness may be the cause of the disorder.

Whitten, I. E., "Therapies Used for Stuttering: A Report of the Author's Own Case," Quarterly Journal of Speech, 24:277, 1938.

The author came from a non-stuttering, right handed family. Psychiatric treatment relieved the tensions she had but failed to remove the stuttering. Following the psychiatric treatment, she used the direct attack method, and the combination of the two types of treatment led to her conquest of the disorder.

Will, Nell, "The Personality Development of a Stuttering Boy," Quarterly Journal of Speech, 30:88, 1944, and Review of General Semantics, 1:165, 1944.

This paper is a rather detailed report of the treatment of a thirteen year old boy. Following the treatment, the boy was able to make his first satisfactory school adjustment.

Wischner, George J., "Stuttering Behavior and Learning, a Preliminary Theoretical Formulation," Journal of Speech and Hearing Disorders, 15:324, December, 1950.

The major portion of this paper is occupied with the author's presentation of his theory that stuttering is a learned anxiety response.

Young, Edna Hill, "The Moto-Kinaesthetic Method of Speech Training," Journal of Speech Disorders, 5:221, September, 1940.

The author describes the method. In the portion of the paper which deals with stuttering, she says that this method is effective because it helps stabilize the sequence of movement.

(The following articles have been found listed, but they were unavailable for reviewing.)

Baumeister, E. A., "How Stutterers are Made," Journal of the American Institute of Homeopathy, 31:272, May, 1938.

Blanton, S., "The Treatment of Stuttering in the Preschool Child," Technical Papers of the American Society for the Study of Disorders of Speech, p. 122, 1932.

Brown, S. F., "An Analysis of Certain Data Concerning Loci of Stuttering from the Viewpoint of General Semantics," Papers of the American Congress of General Semantics, 2:194, 1943.

Bryngelson, B., "Treatment of Stuttering," Journal of Expression, 5:19, 1926.

Coriot, I. H., "The Nature and Analytical Treatment of Stammering," Transactions of the American Society for the Study of Disorders of Speech, p. 151, 1931.

- Kopp, G. A., "Report on Bio-Chemical Studies of the Cause of Stuttering," Speech Monographs, 1936.
- Lamant, M., "A Follow Up Study of Six Stammerers," Smith College Studies in Social Work, 15:136, 1944.
- Lampert, H., "Medical Care and Educative Methods in the Treatment of Stuttering," Archives of Psychiatry, 83:773, 1928.
- Raubeheck, L., "The Stuttering Child," Spoken Words, November, 1933.
- Rhodes, A. R., "Curing Stuttering by Psychoanalysis," Modern Psychologist, November, 1934.
- Scripture, E. W., "Neurological Consideration of Stammering," Archives of Psychiatry, 79:224, 1926.
- Scripture, M. K., and Glassburg, J. S., "Use of Breathing in the Treatment of Speech Disorders," Oralism and Auralism, p. 59, 1926.
- Travis, L. E., "A Neurological Consideration of Stuttering," Spoken Word, 1:8, 1933.
- Tuthill, D. D., "An Investigative Approach to the Problem of the Onset of Stuttering," Papers of the American Congress of General Semantics, 2:205, 1943.

CHAPTER III

ANNOTATION OF ARTICLES PUBLISHED ESPECIALLY FOR STUTTERERS, PARENTS OF STUTTERERS, EDUCATORS, AND THE GENERAL PUBLIC

(All articles in chapter II which are marked with an asterisk (*), although written especially for clinicians, could be read with profit by the same people for whom the articles reviewed in chapter III were written.)

A. EDUCATION AND SPEECH PERIODICALS

Barnard, Raymond H., "The Relation of Intelligence and Personality to Speech Disorders," Elementary School Journal, 30: 604, April, 1930.

The author feels that when the speech defect under consideration is stuttering any difference between the speech defective and the normal speaking child lies not in the realm of intelligence but of personality adjustment.

Blanton, S., and Zerler, Mary, "Helping the Child Who Stutter," National Parent Teachers Magazine, 31:14, October, 1936.¹

Stuttering is a symptom of maladjustment, and the cause generally rests in the child's emotional life. The cure

¹ Unsigned review in Psychological Abstracts, 11:272, May, 1937.

must be based on an endeavor to find the cause. To prevent stuttering the child needs the feeling of security in his home. A few cautions are given: avoid speech pressure during the speech learning period; don't call attention to the defect; consult a correctionist as soon as the disorder appears; be sure that he is not threatened or put under undue pressure at school; give him tasks within his capacity; and praise him freely for accomplishment. Prolonged infancy may be responsible for stuttering as may physical strain or excitement.

Bryngelson, Bryng, "Exploitation of Stutterers," The Journal of Education, 126:78, March, 1943.

The author summarizes the points at which the stutterer and the non-stutterer are alike and the points at which they are different. He warns against "quacks" who exploit the stutterer.

_____, "Psychological Problems in Stuttering," Mental Hygiene, 21:631, 1937.

The psychological problems are probably the outgrowth of the stuttering rather than the cause of it, but in the adult stutterer these reactions are often so deeply ingrained as to put him in the class of the "poor in mental hygiene." The author summarizes the development of fear of speech situations and describes the "stutter-type" personality. Then he suggests that therapy which should help the stutterer

establish better mental hygiene. He must learn to have a sense of humor regarding his handicap.

Bullis, H. E., "What Causes Stuttering?" National Parent-Teacher Magazine, 29:13, October, 1934.

This author claims that stutterers are made, not born. Often the blame for a child's stuttering can be laid at the door of the home. He cites cases to prove his point. He says that the only real cure lies in the realm of emotional re-adjustment, elimination of fears, etc. The first step in the treatment of stutterers is the education of the parents.

Chapin, A. B., "When a School Child Stutterers," National Parent-Teacher Magazine, 43:14, April, 1949.

"Anything in the home or school that increases tension and pressure on the child is likely to aggravate his stuttering. Teachers and parents should operate as a team on a method of building up the child's confidence and reducing tensions. Suggestions are given for parents and teachers in terms of 'do's' and 'don't's' in handling the child's problem."

Davis, Dorothy M., "Practical Speech Correction in the Public School," Elementary School Journal, 37:447, February, 1937.

Stuttering is included as one of the defects with which the public schools must deal. A specialist is needed for the

work. This paper outlines briefly the activity of the correctionist in setting up the program.

Dobbs, Mattie Mae, "An Understanding Teacher Can Help Stuttering Pupils," Texas Outlook, 32:35, June, 1948.

The underlying cause of stuttering is over-tension, a mental not a neurological condition. There isn't much time in the classroom for corrective exercises, but the understanding teacher can help the stutterer develop self confidence.

Eckelmann, Dorothy, "If Johnny Stutters," The Elementary English Review, 22:207, October, 1945.²

"The Role of the classroom teacher is more important in relation to stuttering than to any other speech disorder, and she can do much either to arrest or increase it." The writer presents a series of cases, designed to show the far-reaching effects of teacher-pupil relationships.

Emery, Theodore E., "Stuttering Can Be Eliminated," Maine Teachers' Digest, 5:65, October, 1944.³

The director of the Emery Institute urges the divorce of stuttering from "speech defectives" and presents a theory

² Unsigned review in Quarterly Journal of Speech, 32: 132, February, 1946.

³ Unsigned review in Quarterly Journal of Speech, 31: 117, February, 1945.

based on "concentration," "coordination," and "orderliness." The chief reliance of the teacher must be true understanding of the different phases of the affliction, which as time goes on will deepen into real insight.

Evans, Margaret T., "The Physical Cause of Stammering," The Journal of Education, 125:186, May, 1943.

When the operation of the speech mechanism is hindered by something wrong with the middle muscle of the tongue which extends from the tip to the epiglottis, stuttering occurs. The tongue needs exercising. Miss Ruth Mitchell has "proved" this theory, and the therapy will bring "Permanent cure."
(The quotation marks are put in by the reviewer.)

Fishel, Mamee V., "What the Elementary Teacher Can and Cannot Do in Speech Correction," Proceedings of the American Speech Correction Association, 6:89, March, 1930.

This paper consists of a series of cases showing how the teacher can cooperate with the speech correctionist in bringing about results. When the teacher has had some work in the field she has an advantage. Stuttering is included but not emphasized.

Garrison, Geraldine, "Stuttering: Its Treatment," American School Board Journal, 115:32, December, 1947.

The author gives a brief summary of the types and onset of stuttering, warns of the conditions in homes and schools which may cause it, and outlines some effective procedures in treatment. She lists some do's and don't's for parents and teachers.

Gifford, Mabel, "Speech Correction in the Elementary School," Bulletin of the California State Department of Education, 1948.⁴

Early diagnosis and treatment are needed. Suggestions are made for the classroom teacher for a program of speech correction. The speech mechanism is described. The last section of the paper deals with causes and therapy for stuttering.

Hartel, R., "Therapies for Speech Defective Cases," California Journal of Secondary Education, 25:53, 1950.⁵

This description of a program for children with speech defects includes information on the number of cases in a group, the

⁴ Abstracted from a review by J. Matthews, Psychological Abstracts, 25:479, August, 1949.

⁵ Abstracted from a review by C. G. W., Journal of Speech and Hearing Disorders, 15:176, June, 1950.

number of hours spent each week, and the type of problems given attention. The general procedure used with each group is described briefly. Stutterers are included.

Heltman, H. J., "A Practical Program of Speech Correction,"

The American School Board Journal, 90:31, June, 1938.

The author claims that if the classroom teachers were trained on the job to care for the defectives in their classes, 75 per cent of all the cases in a school could be so handled. He makes some suggestions for this on-the-job training.

_____, "Remedial Training for Speech Deviates in the Elementary School," The Elementary School Journal, p. 283, 1946.⁶

Attention is drawn to the importance of trying to discover the cause of speech hesitancy and also of differentiating between the symptoms of stuttering and speech peculiarities which have an entirely different basis. . . . As a basic principle for all speech education the author suggests that the developing speech of the child should be so directed that he never comes to look upon the act of speaking as unpleasant. Some useful techniques are given. . . . A few suggestions are given to the teacher for adapting classroom situations

⁶ Abstracted from a review by A. Secord, Journal of Speech Disorders, 11:170, June, 1946.

to the need of the stuttering child. It is not the responsibility of the elementary teacher to cure stuttering . . . but she can do much to alleviate the disorder.

Hildreth, Gertrude, "Speech Defects and Reading Disability,"

Elementary School Journal, 46:326, February, 1946.

After citing the findings of others, the author says that the child who stutters in early speech is likely to have trouble with beginning reading. She suggests a special study of speech defective--reading disability cases. Knowing who the speech defectives are makes possible the use of preventive measures in the teaching of reading. Suggestions of specific measures are given as are remedial measures.

Jensen, Milton B., "Stop Stammering!" The Nations Schools, 19:

39, May, 1937.

The author of this paper holds that the correction of stammering resolves itself into teaching new habits of speech. The effectiveness of the treatment depends on the education ability of the stutterer, and his physical structure. The author states the conclusions which are generally accepted regarding the stutterer and sums up the theories of etiology. He claims that stuttering can be cured if the patient will cooperate. His therapy has three points: teaching control of gross bodily movements, teaching the stutterer to make

sane personal evaluations, and setting a scale of rewards and punishments.

Johnson, W., "Aiding the Stuttering Pupil," School Executives Magazine, 53:314, June, 1943.

There are three reasons why a stutterer should never try to keep from stuttering: he can't help it; if he tries to keep from it, he will stutter worse; if he doesn't try not to, he'll stutter less. He needs a teacher who is understanding; a lack of understanding can ruin a stutterer. He should recite only to the extent to which it doesn't bother him to do so.

_____, "Speech Correction Fund--a Castle for a Dream," Crippled Child, 27:13, 1949.

The author reviews the social problems of the speech handicapped and calls attention to the shortage of trained speech correctionists, the need for more extensive scientific investigation, and the necessity for more research in prevention.

A brief history of the growth of the stutterers' clubs in Iowa which the eventual development of the Speech Correction Fund which is now backed by the American Speech Correction Association and the National Society for Crippled Children are given.

Johnson, W., "Students in Quandaries," National Parent-Teacher Magazine, 42:22, October, 1947.

The magazine in which this paper is published has this to say about it: "Here is the sensitive story of Henry, the boy who stuttered so badly that he was taken to the speech clinic of a large state university. Yet surprisingly enough, we find reflected in Henry's emotional history the conflicts, fears, and quandaries of nearly all human beings. Because that is so, the advice given by the author, whose job is to "undo" inner miseries and "redo" maladjusted personalities, should be taken to heart by every person who strives for successful living."

_____, "Ten Children You Should Know," National Parent-Teacher Magazine, 28:10, 1944.⁷

Ten out of every one hundred American youngsters are speech defectives, including stutterers. Every school teacher should know how to handle those she finds in her classes, but a correctionist should be hired to care for those who need special attention. It is the duty of parents and teachers to help every child develop his assets and be proud of them without being ashamed of his liabilities.

⁷ Abstracted from a review by W. Barnett, Journal of Speech Disorders, 9:282, September, 1944.

Johnston, Alice Stone, "The Child Who Stutters--Practical Advice for the Preplexed Teacher," The Grade School Teacher, 51:16, February, 1934 and Child Welfare, 25:95, October, 1930.

Stuttering is discussed as to the problem, the method of relief, the individual peculiarities, and the home treatment. Two bits of advice are given to the teacher--do not eliminate recitation for the stutterer, and take him in your stride.

Kamholtz, Janice W., "These Stutterers of Ours," High Points, 25:43, December, 1943.

The author tells of her own method of working with stutterers. She had them in small classes and sees them in personal interviews. They use relaxation exercises, breathing exercises, volunteer recitation before the class, rhythm work, phrasing, original speeches, and games. She finds that their speech improves not only in their own classes but in other classes.

Knudson, Thelma, "Oral Reciditation Problems of Stutterers," Journal of Speech, Disorders, 4:235, September, 1939.

Seventy two stutterers and fifty teachers were interviewed. The author discovered that the stutterers' attitudes toward school stemmed largely from the oral recitation experience, which usually was not good. Teachers considered themselves inadequate to cope with the stutterer. At the end of the

paper suggestions are given for the teachers. These suggestions have nothing to do with corrective work.

Knudson, Thelma, "What the Classroom Teacher Can Do For the Stutterer," Quarterly Journal of Speech, 26:207, 1940.

This paper is another report of the material reviewed above.

Lane, R. R., "Suggestions for Handling Young Stutterers," Elementary School Journal, 44:416, 1944.⁸

Correction of primary stuttering may be accomplished mainly through prevention. The teacher or parent of the stuttering child may help him adjust to his environment regardless of his speech defect by avoiding any atmosphere of tension in the home or classroom; by helping him to increase his personality assets and lessen his personality liabilities. He should always be allowed to use his natural handedness and should never be told to speak more slowly as long as he can be understood. He should be kept in good physical condition.

⁸ Abstracted from a review by D. Garber, Journal of Speech Disorders, 19:175, June, 1945.

Lima, Margaret, "Speech Defects in Children" Mental Hygiene,
11:795, October, 1927.

Stuttering is included in this summary of speech defects.
A plea for more detailed research in the field is made.
Several case histories are given, one of them of a stutterer.

Mac Learie, Elizabeth, "The Stutterer," American Teacher, 31:15,
January, 1947.

The author quotes West, Kennedy, and Carr in giving a definition of stuttering. She distinguishes between primary and secondary stuttering. She lays down the general principles for treatment, not correction, of the child. She stresses the fact that the teacher must be calm.

Milde, Vern, "The Stuttering Child, Ways in Which Any Teacher May Help Such a Pupil," The Grade Teacher, 56:14, September, 1938.

The author says that the psychological problems associated with stuttering are caused by emotional difficulties. He suggests the following points in the treatment of the stutterer: win his confidence, let him volunteer to recite, create a feeling of confidence in himself by stressing all of his good points, encourage his participation in play ground activities, confer with his parents. He should have private work.

Mims, Louise, "How to Help the Stutterer," Elementary School Journal, 40:184, November, 1939.

This article is a brief summary of the physiological approach and the relation of cerebral dominance to stuttering. She explains briefly the basis for each theory of causation.

Oberman, C. E., "Steps in Overcoming Stuttering," The Nation's Schools, part I in 30:37, July, 1942; part II in the August, 1942.

Part I -- The treatment of stuttering must vary with the state of the defect--primary or secondary--and with the mentality of the stutterer. The "whole person" approach must be used. Environmental adjustment will often cure the young stutterer.

Part II -- Fifteen assignments are suggested for the stutterer to follow. These assignments are preceded by a brief discussion of the need of an objective attitude on the part of the stutterer and a sane attitude on the part of the parents.

Reid, Loren, "The Stuttering Child in the Classroom," School and Community, 32:279, October, 1946.⁹

Reid offers four suggestions to teachers who are sure sooner or later to have a stuttering child in their classrooms.

The review of this article did not tell what the suggestions were.

Ryberg, Dorothy, "Why Speech Clinics?" Quarterly Journal of Speech, 25:269, April, 1939.

This paper was written by a high school age stutterer who attended a speech clinic at the University of Minnesota. She felt that the clinic helped the speech defect because it helped the stutterer relax and laugh at himself.

Sister Mary Rose Elizabeth, "What Hope Is There for the Stutterers?" The Catholic Education Review, 31:108, February, 1933.

The author gives a brief statement concerning the prevalence of the disorder, the theories of causation, and the history of treatment. Then she says that each case demands special treatment and that treatment should be both physical and psychic.

⁹ Unsigned review in Quarterly Journal of Speech, 33:112, February, 1947.

Sowers, Luella D., "What Is Your School Doing for the Boy Who Stammers?" The American School Board Journal, 101:44, November, 1940.

The author tells how speech correction came to be, gives some of her own experiences in the work, mentions the need for early treatment, and tells some of the things being done in some schools.

Stoddard, Clara, "A Public School Approach to Treatment of Stuttering," Journal of Speech Disorders, 4:219, September, 1939.

This author feels that every possible correction should be tried before a child is placed in a speech correction class. She lists the steps which should be taken and the outcome which should result. She stresses the point that mental hygiene is essential. Then she tells the measures which are employed in the city of Detroit.

Tauber, Abraham, "Social Problems of the Speech Defective," High Points, 22:76, September, 1940.

The author makes a plea for the protection of stutterers as well as other speech defectives from being made the object of jest or of exploitation by such men as Bogue and McFadden.

Vasche, Joseph B., "The Child Stutterer," Sierra Educational News,"
33:21, Spring, 1937.

The author discusses stuttering under these headings: What marks characterize the child who stutters?; What causes the child to stutter?; What may the classroom teacher do for the child who stutters? Cases are cited under each heading.

Van Riper, C., "To the Stutterer as He Begins His Speech Therapy,"
Journal of Speech and Hearing Disorders, 14:303, December,
1949.

The author lists the things which any stutterer should have impressed upon his mind before he starts treatment. They are: stuttering cannot be cured quickly; stuttering cannot be cured by someone else; many stutterers have little faith in themselves; you won't fail unless you don't try; you must be careful not to let the clinic become a haven; one of the major aims is to teach you to keep from being upset by your defect; you must beware of false fluency; you must attack your stuttering directly; free speech is a by-product rather than a goal of therapy; there are fourteen steps in the therapy; psychotherapy will be used as well as other types; you must learn to become a social being.

Wedberg, Conrad F., "The Stutterer Volunteers," Sierra Education News, 25:34, February, 1939.

"Primarily our concern should be with the stutterer's desire to talk normally, with only secondary emphasis upon the fulfillment of regular assignments in which speaking before a group is the major objective." Let him volunteer.

Willsea, Mary A., "The Stammerer--Whose Responsibility?" National Education Association Proceedings, 73:488, 1935.¹⁰

Miss Willsea cites the need for a fuller recognition of speech problem earlier in life . . . the kindergarten and first grades are the fields of greatest responsibility.

Woolfson, Wm. C., "The Teacher and the Stammerer," High Points, 20:35, September, 1933.

This paper is merely a communication from the author to the other teachers in the school system. He deplres the fact that more is not done for stutterers; then he reminds the teachers of their duty to report stutterers for corrective work. The speech department will send recommendations, and he lists them, to all of the teachers who have any child in this catagory.

¹⁰ Abstracted from a review by L. Thorsen, Quarterly Journal of Speech, 22:517, October, 1936.

B. HEALTH AND MEDICAL PERIODICALS

Alexander, Harvey W., "Stuttering and Semantic Environment,"
Registered Nurse, 11:34, 1948.¹¹

The author agrees with Johnson that stuttering is due to the semantic environment created by the stutterer's parents. Hesitations which are normal to childhood increase when the child must compete with adults in conversation, when he is ignored by adults, when he is criticized by his parents in a way which makes him feel inferior, when the parents make the child aware of the hesitations normal to his age, when parents fail to enlarge a child's vocabulary to match his increasing experiences.

Beckey, Ruth E., "The Children's Speech Clinic; IV," Hygeia, 19:
932, November, 1941.

The author, after stating that stuttering is a symptom of emotional maladjustment with certain definite characteristics, with no agreement regarding the cause, and with not set rules for treatment, makes some suggestions for parents regarding their handling of stuttering children.

¹¹ Abstracted from a review by F. C. Sumner, Psychological Abstracts, 28:479, August, 1949.

Belgum, David, "Stuttering," Hygeia, 22:246, 1944.¹²

A twenty one year old pre-theological student at the University of Minnesota evaluates his own experiences in learning to over-come his resistance to an objective attitude toward his stuttering.

Bender, J. F., "What the Physical Education Instructor Can Do for The Stuttering Student," Journal of Health and Physical Education, 6:16, June, 1935.

The author gives a summary of the incidence, onset, symptoms, and treatment of stuttering; then he makes the following suggestions to the physical education instructor: show a real interest in the stutterer, check him for any physical trouble, have him take relaxation exercises, get him interested in group activities.

Blattspieler, Ruth, "Stuttering Can Be a Crippling Condition," Delaware State Medical Journal, 22:253, September, 1950.

The three points that the author emphasises are that stuttering is a crippling condition because of the psychological implications, that the fact of the possibility of its prevention

¹² Abstracted from a review by M. H. Duncan, Journal of Speech Disorders, 9:364, December, 1944.

is worth considering, and that word repetition is normal in the speech development of all children.

Brown, F. W., "The Child Who Stutterers," Hygeia, 12:212, March, 1934.

This article uses case histories to show that stuttering is a "disturbance of social adjustment intimately related to the individual stutterer's personal emotional life," and influenced by physical health and environment. Then follow suggestions for parents and teachers on the handling of stutterers; a word of warning against the idea that the child will "out-grow" the disability is given.

Bryngelson, B., "Speech Problems and Speech Care," Hygeia, 13: 888, October, 1935.¹³

If a child has not established an intelligible speech pattern by the age of four, it is time to consider the matter seriously; this applies to stuttering speech. The causes of speech disorders can be classed as hereditary, congenital, and developmental. A . . . child who is defective in certain speech sounds possesses a debility either in the ear or in that part of the brain in which auditory speech patterns are recorded.

¹³ Abstracted from a review by C. H. Voelker, Journal of Speech Disorders, 3:265, December, 1938.

Obviously, one is not attacking the source of the deficiency in speech by drilling the peripheral speech muscles. Rather, one should first be sure that the hearing is intact and should then proceed to exaggerate the hearing act by stimulating the child with speech sound. After a sound has been learned, the child can practice it.

Chittenden, Gertrude E., "A Stutterer Is What You Make Him,"

Hygeia, 21:68, January, 1943.

The author describes the case of Peter, a five year old stutterer, whose parents hindered when they tried to help him; then she tells of some of the aids that are given to stutterers by speech specialists.

Dannenbert, Marion, "How Does Your Child Talk?" Hygeia, 8:141,

February, 1930.¹⁴

Defects are classified as false speech and stuttering. Most defects are initiative rather than imitative and should be corrected as soon as they are noticed. The teacher must know the proper coordination involved in speech in order to direct improvement.

¹⁴ Abstracted from a review by G. W. Gray, Quarterly Journal of Speech, 247, 1930.

Emery, T. E., "Why Stammer?" Maine Medical Journal, 28:217, September, 1937.

Only ex-stutterers are qualified to work with stutterers because they alone know what the stutterer suffers. Stuttering is not a speech defect and speech therapy merely attacks the symptoms. Cure of stuttering can be accomplished only when the stutterer wants to be cured; some of them do not want to be.

_____, "For Stammerers," Public Health Nursing, 27:108, February, 1935.

Suggestions to teachers for handling stutterers in the classroom, copied from Dr. F. L. Parry's suggestions in Mental Hygiene News of June, 1933, are given in this paper.

Glassburg, J. A., "Stuttering," American Medicine, 34:240, April, 1928.

The author's belief is that stuttering is a spastic coordination neurosis caused by mental conflict; the etiology is three fold--predisposing, exciting, and aggravating. He discusses the symptoms, the need for a full examination, and the treatment, and gives definite suggestions concerning the use of certain mechanistic types of treatment. He also lays down these rules for the stutterer to follow: before you

speaking think, visualize your words, inhale; when you speak never go back and repeat, lengthen your vowels, and speak quietly, calmly, slowly.

Glassburg, J. A., "Treatment of Stuttering," American Medicine, 38:324, August, 1932.

The author criticizes the practice of speech correction by untrained school teachers and "stutter schools." He feels that treatment should be based on an understanding of the speech mechanism. In stuttering the emotional block must be neutralized. Although stuttering is mainly a mental affliction there may be physical factors which require care.

Greene, J. S., "Correcting Speech Defects," Hygeia, 18:507, June, 1940.

The last part of this paper deals with stuttering. The author presents it as a nervous and personality problem rather than a speech problem. He describes the "stutter personality," stresses the part played by heredity, and emphasizes the importance of precipitating causes. He points out that the treatment must be directed toward the reorganization of the personality and he gives a few suggestions to parents and teachers regarding the handling of stutterers.

Greene, J. S., "Hope for the Stutterer," Hygeia, 24:120, February, 1946.¹⁵

Stuttering is a nervous affliction. Because this has not been generally understood, little has been done to help the stutterer. Dr. Greene shows the need for treatment by clinical experts under the supervision of medical specialists.

Griffeths, F., "Does Your Child Stutter?" Hygeia, 26:728, October, 1948.

A series of questions and answers intended for parents of stuttering children is given. Many suggestions for their treatment of the child are presented, and a list of clinics is included.

Jahr, Herman M., "Stuttering," Hygeia, 16:524, June, 1938.

This paper is a discussion of the causes of stuttering, with case histories given to prove the author's contention that the defect is largely psychological. It may be imitative. Shock is important in the precipitation of the disorder. The stutter type personality is discussed.

¹⁵ Unsigned review in Quarterly Journal of Speech, 32:410, October, 1946.

Johnson, Wendell, "Eighteen Years of Stuttering," Hygeia, 7:967, September, 1929.

This paper presents a study of the author's own case. He claims that stuttering affects the child physically and psychologically. He points that the stutterer should not be forced in reciting, and he lists some of the things which have served him as compensations. A list of don't's, especially for parents, is included. The paper is closed with this sentiment, "The speech defective does not want pity . . . he wants only the opportunity to make his defect less of an agony. . . ."

_____, "Million Forgotten Children," Hygeia, 15:336, April, 1937.

The author says, "The handicap of the stuttering child is as important as that of the crippled, the blind, or the deaf child, and there are more stutterers in this country than crippled, blind, and deaf combined," summarizes the little that is being done for stutterers, and makes a plea for more work and more public interest.

_____, "Tongues That Learn to Stumble," Hygeia, 19:416, May, 1941.

The author traces briefly the theory of the causes of stuttering from the physical malformation, to psychological and social maladjustment, to "learned behavior." He distinguishes

between primary and secondary stuttering. Then he presents his semantic theory.

Karlin, I. W., "Stuttering," American Journal of Nursing, 48:42, January, 1948.

The author discusses stuttering under the headings of definition, symptoms, emotional and environmental factors, etiology, treatment, and nursing responsibilities. He points out that the keynote of treatment is prevention.

Kingman, Robert, "So This Is Stammering," Medical Times and Long Island Medical Journal, 60:15, January, 1932.

This paper is an explanation, in simple, "laymen" terms, of the theory of cerebral dominance.

Lillenthal, Howard, and Jewett, Ruth, "Stuttering," Medical Record, 156:167, March, 1943.

This paper outlines the course of treatment offered by Mrs. Theodore Emory in her correspondence school for stutterers.

Paxton, D., "The Role of the Nurse in Speech Correction," Public Health Nursing, 37:183, 1945.

The author, who took post-graduate work in speech correction at Catholic University, criticizes nurses for their failure to be actively interested in the finding and correcting of

speech defects. She outlines good speech correction techniques, and suggests that the nurse help with a school survey.

Rutherford, Bernice, "Speech Therapy Suggestions for Parents," Public Health Nursing, 39:199, April, 1947.

This paper is just what the title indicates. Stuttering is included in the defects considered. The author says to take the stutterer to a clinician because of the neurological and psychological factors involved. She gives a few practical suggestions regarding the parents' attitudes toward the stutterer.

Solomon, Meyer, "How to Treat Stuttering or Stammering," Hygeia, 4:39, January, 1926.

The author divides his paper into a discussion of the nature and treatment of stuttering. He says that it is a nervous and mental disturbance characterized by blocks or repetitions. Treatment is divided into measures dealing with physical health, speech exercises, and self control. He concludes the paper by pointing out the fact that the stutterer's own efforts constitute the best treatment: there is no royal road to the cure of stuttering.

"Stuttering," Hygeia, 25:308, October, 1947.

The family history, physical, neurological, and psychiatric condition of 116 stutterers were studied, and these results were given: stuttering is nearly ten times as common in the families of stutterers as of non-stutterers; three fourths of the group had "hand dominance;" stutterers evidence a struggle between the desire to do and not to do.

"Stuttering Child," Hygeia, 14:765, August, 1936.

This paper constitutes a summary of the facts and findings regarding stammering.

"Stuttering Through Imitation," Hygeia, 17:662, July, 1939.

Children do not often stutter through imitation unless they identify themselves with the stutterer and imitate everything about their idol, including the stuttering.

Voelker, C. H., "Stuttering and Stammering, How Shall We Deal With Them?" Life and Health, the National Health Journal, 51:10, September, 1936.¹⁶

This paper attacks the lay tenet that the possession of a speech defect is just one's unfortunate lot that must be

¹⁶ Unsigned review in Quarterly Journal of Speech, 33:681, December, 1936.

borne patiently and describes the prevention of spasmodic dysphasia.

Wolfe, W. B., "Stuttering, A State of Mind," Hygeia, 6:560, October, 1928.

"Stuttering is a social phenomenon which we can understand only when we can look at the stutterer not as an isolated individual but as a member of a group into which he has never been properly initiated." Pampered children are apt to stutter. The onset of the defect is often found when the child enters school or when he enters adolescence or after he has had a severe illness. The treatment should not call attention to the speech mechanism but should train in self confidence.

C. HOUSEHOLD AND LITERARY PERIODICALS

Arthur, Julietta K., "Help for Stutterers," Parents' Magazine, 21:44, 1946.¹⁷

Advice and aids are given to parents in the psychological and educational training of the child at home. The author stresses the ten commandments for parents drawn up by the National Hospital for Speech Disorders and presents numerous

¹⁷ Abstracted from a review by R. L. Lillibridge, Journal of Speech Disorders, 12:216, June, 1947.

helpfull devices in parent-child therapy for the stutterer. She also explains how a speech defect can be recognized and labeled by the parent.

Beckey, Ruth E., "Does Your Child Have Nervous Speech?" The American Home, 33:30, March, 1945.

This is an illustrated article on the do's and don't's for the parents of a stuttering child.

Blank, Joseph P., "My Adventure in Freed Speech," Readers Digest, 52:7, May, 1948.¹⁸

"By outfacing fear, he put years of agony and humiliation behind him" sums up the article. After twenty five years of stuttering the author decided to "face himself" and won out.

Blanton, Smiley, "Why Children Stutter," Parents' Magazine, 6:26, February, 1931.

An understanding of the tensions created by a social-speech situation helps in the gaining of an understanding of the cause of stuttering. When the child has inherited the kind of nervous system which is upset by these tensions stuttering often occurs. The treatment of the defect should be based on the correct principles of child training.

¹⁸ Condensed from The Baltimore Sunday Sun.

Brigance, Wm. N., "Why Children Stutter," The Ladies' Home Journal, 52:132, October, 1935.

The author holds that the fundamental cause of stuttering is lack of cerebral dominance. He lists the precipitating causes, and adds a list of do's and don't's in handling and treating stutterers.

Bundeson, H. N., "The Child Who Stutters," The Ladies' Home Journal, 67:24, January, 1950.

The author points out that the longer stuttering continues unchecked the harder it is to treat. He gives a brief statement of the causes for stuttering and stresses the parental do's and don't's. He differentiates between primary and secondary stuttering.

_____, "Stuttering," The Ladies' Home Journal 57:74, February, 1940.

The author presents a brief discussion of the way in which the treatment of a child with a predisposition to stutter may prevent his developing into a stutterer.

Eddy, D., "Miracles at Kalamazoo," The American Magazine, 135:57, March, 1943.

This article is a description of the work done at Van Riper's speech clinic at Western Michigan College. The author makes

this comment, "His system employs the most screwball method you can imagine (direct attack), but it is actually a deft blending of physical and mental therapy, mostly mental."

Heltman, Harry J., "Why Not Leave Your Child Alone?" The Ladies' Home Journal, 63:173, April, 1946.

This article stresses the fact that there is little difference between the speech of normal children and stutterers in the early years of their speech development. He lists definite things for parents to do with a child who appears to stutter.

Higgins, Mrs. Wm. H., "We Overcame Stammering," Parents' Magazine, 9:28, September, 1934.

The author tells how the family helped a three and a half youngest child, a boy, to overcome his stammering by developing his self confidence, stressing the use of his hands, and by not mentioning the fact that he stammered.

Homes, Eugene C. (as told to Greer Williams), "I Stopped Stammering," Colliers, 70:52, August, 9, 1947.

Mr. Homes tells of his own frustrating experiences as a stammerer and of his final cure at the hands of a good clinician.

Johnson, W., "Stuttering, Its Cause and Treatment," Parent Magazine, 7:24, July, 1932.

The author gives an explanation of the theory of cerebral dominance in "layman" terms, discusses the importance of environment, deplares the superficiality of treatment which deals only with symptoms, and gives suggestions for a treatment which includes all sides of the problem.

Schuyler, Jack, "What is Known about Stuttering," The American Mercury, 63:337, September, 1946.¹⁹

Most children can be cured of stuttering. Although the prospect for cure is not so good for the adult, alleviation of the disorder can be attained at the hands of a competent clinician. A review of the symptoms, theories, and therapies is given.

Seabrook, Wm., "The Man Who Did Something About It," Reader's Digest, 31:29, October, 1937.

This article tells how Dr. J. S. Greene happened to take up speech correction work, describes the man, and tells how his therapy works.

¹⁹ Unsigned review in Quarterly Journal of Speech, 34:409, October, 1948.

Sittig, Elly, "Treatment of Stuttering," The American Mercury, 64:253, February, 1947.

This article is a reply to Schuyler's (see above). In it the author describes Froeschel's breath chewing method.

Van Riper, C., "Do You Stutter," The Atlantic Monthly, 164:501, November, 1939.²⁰

The writer, himself a stutterer, discusses the problem of this speech disorder. He begins with a historical background of its treatment, describes its symptoms, reviews some of the present day theories, explains the results of recent experiments at the University of Iowa, and offers suggestions for relief to fellow stutterers.

"We Made Our Child Stutter," Parents' Magazine, 12:33, April, 1949.

This parent lays the cause of her child's stuttering to the type of treatment he received in the home--the speech standards were set too high.

²⁰ Abstracted from a review by D. E. Puggi, Quarterly Journal of Speech, 26:144, February, 1940.

Woody, Regina J., "If Your Child Stammers," *Parents' Magazine*, 12:33, October, 1937.

The author review the suggestions regarding the treatment of the stutterer. She suggests psychoanalysis as the best treatment, but if that type of treatment is impossible the mother should see that the child gets plenty of rest, etc.

D. NEWS PERIODICALS

"The Child's Disordered Speech," Literary Digest, 84:21, February 14, 1925.

This article is a digest of Dr. Greene's statements regarding the cause and treatment of stuttering.

"Ex-Stammerers," Time, p. 31, May 16, 1938.

This article is a report of a meeting of the Kingsly Club. The membership of this club is restricted to stutterers.

Greene, James S., "Good News for Everyone Who Stutters," Literary Digest, 118:18, December, 1934.

In this article Dr. Greene states his belief that stuttering is primarily an emotional-personality problem. He describes the stutter type personality and tells of the part shock may play in bringing on the defect. The treatment at the author's hospital consists of elements which attack the problems from both the physical and the psycho-social angles.

"Halting Words," Times, 54:37, August 8, 1949.

This is another report on Dr. Greene.

McKenzie, Catherine, "Child and Parent--Stuttering," New York Times Magazine Section, p. 21, April, 14, 1940.

This article is a report of Dr. J. S. Greene's talk to the Pediatric staff of the New York Infirmary for Women and Children in which he stresses the "slow-easy" method of handling the child who stutters.

_____, "Speech Difficulties; Speech Kindergarten at the National Hospital for Speech Disorders," New York Times Magazine, p. 26, March 8, 1942.

This paper contains another report on the work at Dr. Greene's clinic.

_____, "Ways to Help the Stutterer," New York Times Magazine, p. 30, October, 14, 1945.

The author reports on the work of Adelaide Bullen. The only new thing that the work produced was the revelation that a high percentage of the mothers of the stutterers she studied were college trained.

"Shock for Stammerers," Newsweek, 31:51, April 5, 1948.

Herein is contained a report of the use of shock in the treatment of a twenty year old girl. This treatment was carried on by Drs. Thelma Owen and Margarite Stemmerman at the Owen Clinic, Huntington, West Virginia.

"Stutterers: New York Clinic Teaches Them How to Relax," Life, 20:58B, May 20, 1946.

Life visits Dr. Greene's National Hospital for Speech Disorders.

"Stutterers Under Fire," Newsweek, 23:54, December 23, 1946.

Until March 1942, the armed services refused to accept stutterers. Beginning with that date they were taken into the army. Their conduct under fire led to the conclusion that stutterers were much like normal people than they were like psychoneurotics.

"Talking: Stuttering Persons, from Kings to Children, Get Many Types of Correction," Literary Digest, 124:18, July 3, 1937.

There is no real cure for the adult stutterer, but his defect can be minimized. A list of theories and therapies as discussed briefly.

"Why the Stammerer Stammers," Literary Digest, 112:28, January 30, 1932.

This article is a summary of Carl Winkler's theory that stammering occurs because the stammerer thinks faster than he can speak. The concomitants of stammering are discussed.

"Why Stutter?" Time, 28:36, December 8, 1941.

Here is another report on Dr. Greene's hospital.

Woolf, S. J., "Slow-Easy Says the Speech Doctor," New York Times, magazine section, p. 10, November, 16, 1947.

This article is another report of an interview with Dr. J. S. Greene and a visit to his speech hospital.

E. SCIENTIFIC PERIODICALS

Bender, James, "Do You Know Someone Who Stutters?" The Scientific Monthly, 59:221, September, 1944.²¹

The characteristics and causes of stuttering are reviewed. Cases are presented in the discussion of therapy. The author advises the stutterer to consult a speech correctionist, and concludes that the problem of stuttering can be alleviated

²¹ Unsigned review in Quarterly Journal of Speech, 30:507, December, 1944.

if the stutterer will give himself the opportunity, and progressive communities will make that opportunity possible.

Bender, James, "Stuttering, a Male Handicap," Science Digest, 18:27, September, 1945.

The author gives the following reasons as having been set forth in an attempt to explain the phenomenon: men have larger obscene vocabularies, and are more afraid of using the "naughty" words; men favor diaphragmatic breathing; men have slower and less stable development of the brain centers. Then he gives a brief review of the following items: onset of stuttering, variations in stuttering, development of speech, primary and secondary stuttering, intelligence of the stutterer, possibility of cure, examples of cure by the rate of control method, and the importance of the attitude of the stutterer.

Dunlap, Knight, "A Possible Dietary Predisposition to Stammering," Science, 80:206, August 31, 1934.

Improper childhood diets, those insufficient in meat, have been found to be a predisposing factor in many cases of stammering. The author suggests psychotherapy and a diet heavy in meats as the treatment. He says, however, that this method may not work with adults.

Dunlap, Knight, "Upsetting the Fallacies About Stammering," Science Digest, 9:20, June, 1941.

In this paper the author lists reasons for stuttering, advises the use of negative practice, and recommends that no drill work at all be used with a stutterer under six years of age.

Geniesse, Hazle, "Stuttering," Science, 82:518, November, 1935.²²

In a study made at the University of Michigan it was discovered that the speech of stutterers improved when they walked on all fours. No explanation is offered, but the suggestion is made that perhaps the difference of the pressure on the upper motor neurones between the two positions is responsible.

Miller, R. D., "Cure for Stammering," Popular Science, 137:92, July, 1940.

The author gives a brief account of the work of Dr. L. E. Travis at the University of Southern California, and explains his ideas regarding the cause and cure of stuttering. He explains the working of the instruments for registering brain waves.

²² Abstracted from a review by L. Thonssen, Quarterly Journal of Speech, 22:513, October, 1936.

"Stutterers Parents Nervous," Science News Letter, 41:133, February, 1928.

Dr. Louise Despert found that stutterers' families showed a neurotic tendency. A mother's worrying over a child's failure to eat may cause stuttering as it calls attention to the mouth, and the acts of eating and speaking are being learned at the same time. Tension in one situation may lead to tension in the other.

Travis, Lee E. "Muscular Fixations of the Stutterer's Voice Under Emotion," Science, 42:207, August 28, 1925.

The author finds that stutterers have much less variability of pitch after shock than do non-stutterers.

F. OTHER PERIODICALS

Alpert, Hollis, "S-S-Stuttering Can Be Stopped," Rotarian, 74:29, February, 1949.

This article is another report on Dr. Greene's work, with special emphasis on his "group Therapy."

Armstrong, W. G., "Singing Cures Stammering," Etude, 59:521, August, 1941.

This author claims that if children were given singing lessons as young as they were able to take them there would be

very few cases of stuttering since singing teaches both proper breathing and rhythm.

"Check Stammering by Shock," Science News Letter, 53:153, February 23, 1948.

This is the report of the same case as was reported in Newsweek April 5, 1948, p. 51.

Glassburg, John A., "What Price Stuttering?" The Survey, 61:363, December, 15, 1928.

The importance of training speech defects is understood only when there is a realization of the effects of the defect.

Five examples of injury caused by stuttering are cited. Stutterers must be made to realize that "cure" is long. Treatment comes under the headings of medical, surgical, psychotherapeutic, and reeducation. In brief, speech reeducation is character building.

Michael, James, "If You Stutter," Consumers Digest, 1:52, June, 1937.²³

The author discusses the fact that the American Speech Correction Association has done much to raise the level in the

²³ Abstracted from a review by C. H. Voelker, Journal of Speech Disorder, 3:184, September, 1938.

field of speech correction work. He points out that most of the members of the Association are reputable workmen. He says that the clinics carried on in connection with universities can be depended upon to do acceptable work. He lists the clinics in which help may be secured by the stutterer.

"New Apparatus for Stammer Study," Scientific American, 145:200, September, 1931.

This article discusses the Immel Apparatus for testing coordination developed in the laboratory of the University of Michigan by Dr. R. K. Immel, dean of the School of Speech at the University of Southern California.

"Overanxious Parents May Cause Children's Stuttering," Science News Letter, 32:151, September, 4, 1937.

Johnson's contention that children stutter because their parents label their speech as stuttering is here presented.

Paul, Charlotte, "New Hope for the Stutterer," Rotarian, 73:29. October, 1948.

The author gives a brief, non-technical survey of the field of stuttering as a psyche-based defect. Emphasis is placed on the part the home plays, and cases are cited to prove her points.

"Proposing Marriage, Ideal Stuttering Starting Point," Science News Letter, 57:185, March 25, 1950 and Science Digest, 27:33, June, 1950.

Dr. Joseph Sheehan of the University of California at Los Angeles speech Clinic says that stuttering arises from a conflict between a desire to do and a desire not to do. The treatment for adults is to teach them to learn to face themselves.

Randol, Francis, "D-D-Do You S-S-Stammer?" The Nation's Business, 34:53, October, 1946.

This is the story of a man who turned his handicap into a business asset when he finally saw a lot in it he could laugh about.

"Stuttering: Believed a Case of 'Mind and Body'," Scientific American, 168:69, February, 1943.

Stuttering is an indication of hereditary emotional instability and psychomotor disorganization, but it must have a precipitating cause.

"Stuttering Cured by Hypnotism," Scientific American, 151:311, December, 1943.

Dr. Victor H. Vogel of the United States Public Health Service reports success in the use of hypnotism at Marine

Hospital in San Francisco when patients reveal the cause of their disorder under its influence. If the cause cannot be ascertained, the use of hypnotism is unsuccessful.

"Stuttering -- Was the Dictum of a Dozen Years Ago Wrong?" Scientific American, 165:28, July, 1941.

Dr. Harry J. Heltman claims that handedness shift does not have as much influence on stuttering as has been supposed. Of the 1600 students entering Syracuse University seventy seven of them had had their handedness changed, but only one of them stuttered.

"War Increases Stuttering," Science News Letter, 38:165, September, 14, 1940, and Science Digest, 8:64, November, 1940.

This article merely reports that Sara Stinchfield Hawk made a statement to the effect that war increases stuttering, at the American Speech Correction Association meeting.

"Why the Indians Do Not Stutter," Science Digest, 18:50, August, 1945.

Dr. W. Johnson believes that Indians do not stutter because Indian children are not criticized for the way they speak. He feels that white parents could learn from Indian parents at this point.

Williams T. Q., "I Used to Stutter," Forum, 98:217, November, 1937.

The author shows how, after many so-called cures had failed, his speech problem was finally corrected through psychiatric treatment.

(The following articles have been listed but were not available for reviewing:)

Booty, J. L., "Stammering is a Parent-Teacher and Not a Medical Problem," Texas Outlook, 20:17, September, 1936.

Davis, M., "Do You S-S-Stammer?" Pictorial Review, 40:22, February, 1936.

Griffiths, F., "The Teacher of Stutterers," Nebraska Education Journal, 28:330, December, 1948.

Heltman, Harry J., "The Teacher and the Stuttering Pupil," New York State Education, 21:687, June, 1934.

Johnson, W., "Stuttering," The High School Teacher, 8:3, January, 1932.

Kantner, C. E., "A Speech Correction Program," Tuscaloosa: The Southern Speech Bulletin, 3:5, November, 1937.

Richardson, F. H., "Your Child's Speech," Woman's Home Companion, 60:13, September, 1933.

Ryberg, D., "You Can Help," Minnesota Journal of Education, 19:
333, April, 1939.

"Stutterer, John: Letter to the Editor," New York Evening Post,
editorial page, July 13, 1934.

Travis, L. E., "My Present Thinking on Stuttering," Western Speech,
10:3, 1946.

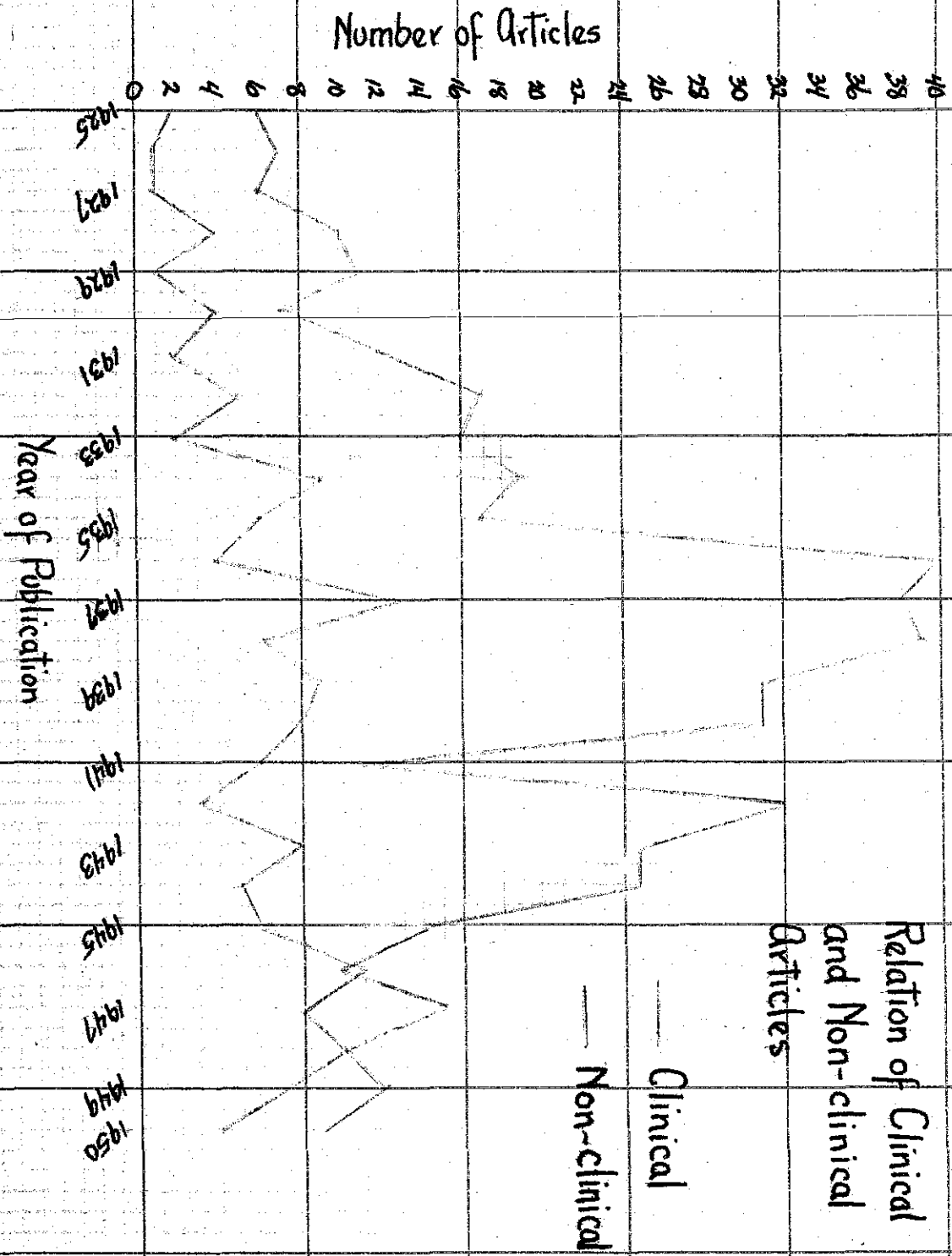
CHAPTER IV

SUMMARY AND CONCLUSIONS

This summary will be very brief; in fact, it will include only two items. First, the accompanying graph will indicate the rise and fall in the number of articles on stuttering to be written by American authorities and published in American periodicals between 1925 and 1950. Probably, there is no significance in this fluctuation, but a study of the graph will prove interesting to one who is concerned with the problem of stuttering.

Second, the words "stammer," "stammerer," and "stammering" or "stutter," "stutterer," and "stuttering" appear in the titles of these articles some 487 times. Of these times "stammer," etc., are used only eighty two times, and "stutter", etc., are used 405 times. This fact, likewise, probably is not significant, but it does indicate that there is at least one point at which there is rather general agreement in terminology among American speech correctionists.

There are one or two conclusions which one draws from the reading of so much material in one field. First, he is impressed by the fact that, in spite of all of the experiments conducted and the laboratory tests made, most of the theories of etiology and most of the therapies find their beginnings in the beliefs and practices of the past--sometimes of the "dim" past. He feels that a little knowledge of the history of the problem would keep



anyone in the middle of the twentieth century from publishing a paper entitled "Syllable-Tapping, a New Method for the Help of Stammerers,"¹ when as early as 1817 Duyupten had recommended rhythmic tapping,² and Colomot, also early in the nineteenth century, had started out his practice by having his patients speak in single syllables while moving the thumb and forefinger together in a certain rhythm and had later developed a metronome for use with stutterers.³

Second, he is amazed by the number of exactly opposite conclusions which men of seeming sincerity and integrity are able to reach from studying the same problem, as Van Riper says, "they all have touched the elephant."⁴ Travis,⁵ to take one of many, believes firmly in the lack of cerebral dominance as a casual factor in stuttering, and Bluemel⁶ feels that it leaves too many unexplained elements to be given serious consideration as a casual factor; Fishman⁷ and Peters⁸ both feel that at least

¹ M. Van Danzig, "Syllable-Tapping, A New Method for the Help of Stammerers," Journal of Speech Disorders, 5:127, June, 1940.

² Supra, p. 9.

³ Ibid., p. 12.

⁴ Supra, p. 24.

⁵ Ibid., p. 81.

⁶ Ibid., p. 92.

⁷ Ibid., p. 117.

⁸ Ibid., p. 99.

part of the phenomena of stuttering are pure habit, and Blanton⁹ surveys nine authorities and finds them all agreeing that habit plays a very small part, if any, in the phenomena, and Hill¹⁰ states flatly that stuttering is not a habit; Greene¹¹ and Bender¹² are convinced that the personality manifestations are characteristic and consistent enough to make up the so-called "stutter-type" personality, but Despert¹³ and McDowell¹⁴ claim that stutterers and non-stutterers do not differ much except that one stutters; a whole array of authorities, including such men as Fagan,¹⁵ Orton,¹⁶ Travis,¹⁷ and Downey¹⁸ are convinced that shifting handedness is dangerous, and an equally impressive array,

⁹ Ibid., p. 91.

¹⁰ Ibid., p. 105.

¹¹ Ibid., p. 141.

¹² Ibid., p. 58.

¹³ Ibid., p. 63.

¹⁴ Smiley Blanton, "The Treatment of Stuttering," Proceedings, of the American Speech Correction Association, 6:23, 1936.

¹⁵ Supra, p. 99.

¹⁶ Ibid., p. 77.

¹⁷ Ibid., p. 82.

¹⁸ Ibid., p. 64.

including such men as Bluemel,¹⁹ P. Brown,²⁰ and Heltman,²¹ are doubtful if it has any effect at all on stuttering; Barnard,²² Fruewold,²³ and Morris,²⁴ find stutterers to be at least as intelligent as non-stutterers, but Murray²⁵ and Voelker²⁶ believe stuttering to be a mark of mental inferiority. And so one could go through everything in the field of physical and neurological causation and psychiatric and mechanistic therapy. And the amazing thing about it is that many of these conclusions are based on clinical experiments and laboratory tests! One is sometimes impelled to wonder if each experimenter is not more interested in establishing his pet theory or therapy than he is in finding truth--if this query seem to be a reflection on the integrity of those concerned, so be it!

However, one feels that light seems to be shining in the darkness and signs of the morning to be appearing on the horizon when he sees the increasing number of authorities who are pointing

¹⁹ Ibid., p. 93.

²⁰ Ibid., p. 59.

²¹ Ibid., pp. 104 and 154.

²² Ibid., p. 130.

²³ Ibid., p. 100.

²⁴ Ibid., p. 115.

²⁵ Ibid., p. 77.

²⁶ Ibid., p. 86.

out the fact that more than one of the theories of etiology may contain a germ of truth, and that practically all of the therapies used have produced some good results. He feels encouraged by the attempts being made to integrate the various therapies in such a manner as to make a multiple approach the accepted one. Confusion still reigns, but at least many men are hoping for that new day when each one will mean the same thing when he uses the terminology of speech correction and when each one will concede that those who differ from him may have a point--even though it be small and obscure.

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