

I will cite a case of mine which will at least serve to illustrate the reality of the disease. It is the case of a youth of 20 years of age, who, in consequence of a slight accident in connection with a cable car, developed a marked tremor, or rather jactation, of the right leg. He went the rounds of hospitals in various cities, becoming, with some remissions, on the whole gradually worse, and finally landed at the Hebrew Hospital, of Baltimore. When he came under my treatment his condition resembled very much that of paralysis agitans, and I so called it in a paper presented before the Medical and Chirurgical Faculty of Maryland. There was no possible reason why this youth should malingering. The case was finally cured by hypnosis, all other means having failed. It might be contended that the fact of the cure being effected by psychical means would prove the purely psychical nature of the case, but, on reflection, it appears not more unlikely that a pathological condition with an anatomical basis should be benefited by the exercise of psychic function than that a similar state of affairs in the so-called physical realm should be benefited by means of the exercise of physical functions, which, indeed, is a common occurrence. The success of the psychical treatment, therefore, by no means justifies the condition that a lesion did not exist.

DR. G. W. MCCASKEY, Fort Wayne, Ind.—It seems to me that there must necessarily be some sort of anatomic basis for the chronic functional disturbances of neurasthenia, although there are some things which appear very difficult to explain in harmony with this theory, among which may be mentioned the sudden development of symptoms in some cases. These anatomic changes are not, of course, supposed to be of a gross character, but relate to the intracellular structure of the protoplasm. Such changes may be the result of either excessive fatigue, autointoxication or traumatism, as in the cases of traumatic neurasthenia, the existence of which was pointed out long ago by Charcot. There are many elements in these cases connected with railroad injuries, the psychical ones being quite important, and I can fully corroborate the statement made that these cases, especially when concerned in litigation, practically always exaggerate their symptoms. Sometimes this is done consciously and at other times unconsciously, but always to the great detriment of the plaintiff in the eyes of the expert, the jury and the court.

DR. BARKER—It must be remembered that in all large railroad accidents there is a certain percentage of those who go on their journey and make no claim for damages, and yet who are injured seriously by shock.

DR. C. C. HERMAN, Pittsburg—One feature of these cases is that when a physician gets on the stand to testify he is put upon self-defense, as each lawyer is trying to obtain such answers from him as will strengthen his side of the case—questions of a double meaning, unanswerable until rearranged and answered separately. I think the author unnecessarily severe in some of his statements; also he seems to have little faith in either the ability or honesty of the neurologist. I have often seen faith limited by the meager knowledge of the subject. I am willing to endorse the essayist as a surgeon on the merits of his paper, but not as a neurologist.

THE CHAIRMAN—I believe that some misapprehension has arisen as regards Dr. Bevan's stand on this subject. I happen to know Dr. Bevan very well, have talked with him about the affections under consideration, and am sure he does not at all believe that these patients with traumatic neuroses or psychoses are simply simulators, exaggerators, liars and plunderers of the railroad systems. I regret that he could not remain to explain his position, but I think he did not make any statement approximating that idea in his paper. What he particularly meant was that if taken promptly after the accident, and then handled properly, the old chronic cases of traumatic neurosis, which he recognizes as a disease, would be obviated. I believe that that is a fair statement of Dr. Bevan's position as regards that particular point.

DR. CHARLES W. BURR, Philadelphia—It seems to me that a very large part of the discussion this afternoon has been used in breaking down an already open door. Certainly no one

doubts the existence of traumatic hysteria. I do not know what Dr. Bevan meant to say, but certainly the whole implication of his article was that practically hysteria was another name for fraud. That was the moral most of us drew from his paper. Of course, men may pretend to have hysteria, as men pretend to have broken legs, but the reality of the existence of the disease is beyond question.

I was in hopes that something would be said on the other side of the functional question. Most of the speakers have assumed that hysteria has an anatomic basis. There is no known anatomic basis for hysteria. If by organic disease we mean a disease that, either to the naked eye or to the microscope, will show some change in which we can say, from the state of the organs in death, without any prior history, that the patient had that or the other disease, then we must say that hysteria is not an organic disease. The most careful study will not enable any man to say post-mortem that this was a case of hysteria. So long as that is true, we are bound to say that hysteria is a functional disease.

As to prognosis, I have had one case which lasted for twelve years, although it was settled three months after the accident. The patient is now a classical picture of hysteria, and will probably so continue until death. As to the possibility of disease, at first functional, becoming organic, a year ago I made an autopsy on a woman who had been an inmate of the Philadelphia Home for Incurables for fifteen years. She was sent there fifteen years ago with a diagnosis of chronic incurable hysteria. She was paraplegic, anesthetic, and had some special sense symptoms. Many very good physicians had examined her during the years of her illness, and all agreed that she had hysteria. I watched her three months out of every year for ten years. She did not change at all. Last year she died of Bright's disease, and post-mortem there was a diffuse myelitis of the spinal cord. Did that woman start out with a functional disease thirty years ago and finally end up with the organic disease, or was the disease originally organic? Of course, I agree entirely with Dr. Sinkler as to treatment.

DR. WHARTON SINKLER—In regard to the matter of bulldozing sick people, the fact that a person may be made by strenuous effort and insistence to get up and go about does not prove that he has no organic disease. It is a well known fact that a person having an organic disease, like a brain tumor or a myelitis, may, through hypnotic suggestion, be brought to do certain things. The fact that this has been done by the method which Dr. Bevan has suggested does not prove that his cases were simply imaginary.

## PHYSICIANS AS SPEAKERS.

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*Introductory Remarks.*—The communication of thoughts by means of spoken language is an art that can not be acquired to any great degree of perfection except by long and continued practice. Some physicians are more highly gifted than others with facility of expression, and they are naturally endowed with the power of eloquence; but to none is it at all times an easy process to embody, in exact and appropriate language, the various trains of ideas that are passing through the mind. However distinct may be a physician's voice, however vivid his conceptions, he is often conscious that the phraseology at his command, particularly in public speaking, is inadequate to do them justice. He seeks in vain the words he needs, and strives ineffectually to devise forms of expression which shall faithfully portray his thoughts. He employs words and phrases either too general or too limited, too strong or too feeble, which suit neither the occasion nor the subject-matter.

It has been said that physicians seldom appear to advantage in public speaking. They are often sum-

moned to testify in courts of justice, where their resources of expression may be taxed for hours. They are frequently placed on boards of education, on committees dealing with sanitary conditions, and on the common councils of cities. In meetings of citizens they are asked for their views on propositions affecting the public health, and, if successful in their professional careers, may be associated with the faculties of medical colleges. They are also members of city, county, state and national medical associations, where debate is had on papers read and questions relating to the rights, privileges, or standing of the profession, or regulations for the management of the organizations. Yet for such positions many, otherwise qualified, are unsuited because they have neglected the study and practice of free expression. Some distinguished members of the medical profession have deplored this lack and have urged upon medical students the importance of attending to the subject.

*Voice and Pitch.*—The pitch, intensity, and amplitude of a speaker's voice have much to do with the work of the reporter, in that they will greatly expedite his work or render it extremely difficult. A physician, in addressing a convention in a large hall, may pitch his voice so low that perhaps only one-half of the members can hear distinctly what he says, and it is largely guess-work for the other half to grasp his meaning. If a reporter be reporting the proceedings of a large association, as, for instance, the American Medical Association, and the members rise and speak from various parts of the hall, the pitch of their voice will play an important rôle for good or bad. The acoustics of a hall may be perfect, but if a physician's voice is improperly pitched, he will be imperfectly heard; and, in such instances, incorrectly reported. It is an irksome task for any reporter, no matter how acute his hearing may be, to report a physician who has a low-pitched, thick voice, coupled with a mumbling mode of utterance. On the other hand, the physician who takes cognizance of acoustics and pitches his voice in a much higher key, if he articulates well, can be heard in the remotest nook or corner of a large convention hall without apparently any unusual effort. A low-pitched voice, combined with rapidity and indistinctness of utterance, will worry most reporters. A physician with a tolerably high-pitched voice may be clear and distinct in utterance, yet excessively rapid in delivery. His clear-cut sentences may flow uninterruptedly at the rate of between 160 and 190 words per minute. Such a man can be reported with comparative ease by an efficient hand. Reporters sometimes have to report physicians with imperfectly attuned voices, who speak in a go-as-you-please fashion. Their sentences are diffuse, involved, and deficient in precision. The one who tries the mettle of the reporter is the quiet, easy, fluent speaker, who speaks just loudly enough to make himself distinctly heard, and pursues the even tenor of his way without a pause, without emphasis, without anything that can check the rapidity of his utterance.

It is a pleasure to report the masters of language, of tone and gesture, who possess voices remarkable for their volume and range and their capacity to express every shade of feeling and of passion of the human soul. Deep in tone, and perhaps melodious, such voices are magical in their power of controlling the feelings of those who listen to their varying cadences and exquisite modulations. The Rev. Joseph Parker said that the late Mr. Gladstone had "a rich, round, deep, expansive, melodious, grand voice." The voice of Henry

Clay, we are told, had "an indescribable charm. It could ring out in trumpet tones, or it could plead in low, plaintive notes, which pierced and thrilled the hearer." The voice of Daniel Webster was "deep, rich, musical, flexible, and of prodigious volume and force." Mr. Lecky, in writing of O'Connell, says: "With an easy and melodious swell, his voice filled the largest building and triumphed over the wildest tumult, while, at the same time, it conveyed every inflection of feeling with the most delicate flexibility." On the other hand, Thomas Jefferson failed as a speaker simply for lack of voice. His voice became guttural and inarticulate in moments of great excitement, and the consciousness of this infirmity prevented him from risking his reputation in debate.

Wendell Phillips advised, for public speakers, a sustained conversational tone, a little elevated above the ordinary, with an effort at distinct enunciation. He advised, too, vernacular speech, even colloquial in tone.

A clear, distinct, far-reaching voice is undoubtedly a natural gift, although physicians, as speakers, can do much by training to acquire an agreeable tone. In reporting loud, excitable, inflammable speakers, I have met with difficulty at times in catching the exact words, owing to deficient enunciation or muffled syllables. Occasionally a great speech is delivered which seems to preserve in print some of the chief elements of its power; but in the vast majority of instances it is but the worthless remains which the most expert reporter can give of that which, in its utterance, so charmed or electrified the audience. Bright, Gladstone, Phillips, Clay, and other great orators understood the secret of how to pitch the voice so as to make it audible to everybody in a large hall. If the acoustic properties of a hall are good, the voice pitched in the right key will carry; if those properties are bad, the shouted words will be heard no better than if they were whispered.

As the possessor of a good, clear, penetrating voice, I may mention Dr. Dudley S. Reynolds, of Louisville, Ky., who usually takes a conspicuous part in the proceedings of the general sessions of the American Medical Association. A more powerful, rotund, far-reaching voice is rarely possessed by any public speaker. It is an organ-toned basso of unusual range and carrying power. Whenever Dr. Reynolds utters the words, "Mr. President!" in true oratorical style, in a general meeting of the Association, it is the signal for craning of necks and upturned faces. He commands attention at once. The same may be said of Dr. W. T. Bishop, of Harrisburg, Pa., who has a naso-metallic voice of wonderful carrying power. He likewise takes an active part in the general meetings of the Association, and whenever he rises to speak and the President asks him to announce his name and state, he exclaims, "Bishop, of Pennsylvania," with a trumpet ring of the voice that can be heard in the remotest nook of a large assembly hall.

The voice and manner of some speakers make those listening restless, weary and uncomfortable, even when the subject-matter of the address was valuable and of interest, the speakers themselves being usually entirely unconscious that the effect produced was so contrary to their aim. Doubtless, too, nearly all have at some time been made sensible how much of soul-stirring power may be communicated by the tones of the human voice alone, whether employed in speech or song, and I can appeal to the experience of many to witness that it is not so much in the words, however intense their

meaning, as in the tones which convey them, that the soul's utterings are clearly recognized. The possibilities and results of a good voice can not be fairly estimated; they are too far-reaching; and it requires but little thought on the subject to realize that the direct benefits accruing to the possessor of a clear, well modulated voice are incalculable. The conversion of a poor, unpleasant voice to one of rich and musical quality discovers to its owner the energy of unsuspected forces.

The disadvantage of a weak voice or of speaking habitually in a feeble manner is the not being heard at all, or with difficulty. But a more subtle and pernicious consequence is that it reacts unfavorably upon the mode of thought and expression. While speaking too low is a fatal impediment, it is detrimental to speak too loud, for the reason that the ear is pained, the attention distracted, emphasis defective or excessive, the nerves of the hearers irritated, and if the voice be in any degree strained, it will be neither sweet, soft, nor agreeable. The consonants should be articulated distinctly, but not to the neglect of the vowels, in which inhere all the best qualities of the voice as well as its carrying power.

It is said that a medium pitch should be the basis of speech. From it one may rise or fall, according to intellectual and emotional requirements. Height and depth are necessary. Beecher said, "What a speaker most needs is to strengthen his ordinary conversational voice, without giving it a hard, firm quality; that is, without destroying its flexibility and power of adaptation to every mood." It is a fine art to be able to lower one's pitch. Some scream on to the end during an animated discussion from sheer exhaustion; others spasmodically fall to a low note, but immediately forget themselves and run up to the same pitch, vociferating until out of breath.

The acoustic properties of most auditoriums or convention halls are imperfect. But these defects generally have a physical cause which admits of being guarded against by the adaptation of the speaker's position and tone. Monotony of a low-pitched voice exerts a soporific influence over an audience, which no strength of thought nor beauty of language can wholly counteract; and if there be regularly recurring minor notes, the most startling expressions lose their power. Even to those who do not sleep the sounds bear no sense. The prime object of a speaker should be to make himself understood, and to this end sense should never be sacrificed to sound. A speaker should never use more force than necessary. If requested to speak louder, he should beware of raising the pitch of his voice; by a slight increase of volume on the same key he can make anyone, whose organs of hearing are not defective, hear distinctly. The groundwork of good speaking is the tone of lively conversation.

Vivacity is not force, yet many speakers, to evoke interest, use more force, when the only means of gaining what they seek is increasing animation. Dr. Henry Mandeville gives a distinction of supreme moment between force and vivacity. He says: "We should be careful not to confound force with vivacity. Force is strength, energy; vivacity is life, animation. Force has respect to the hearer, vivacity to the subject. . . . Force, to the verge of vociferation, especially if uniform, may be associated with dullness; vivacity never; and yet there may be great vivacity in speakers who have little force. . . . Force is under the control of the will, and is measured and regulated by the judgment; vivacity depends upon the feelings and their

susceptibility of excitement from the progress of discussion. The one is therefore voluntary; the other involuntary. A speaker can command force at any time; but vivacity, if it comes at all, comes without being summoned or solicited. It appears only when the speaker begins to be interested in his subject; and as this penetrates and warms and absorbs him it grows apace independently both of judgment and volition."

The late Mr. Thomas Allen Reed, an eminent English reporter, says: "I have heard speakers laboring hard to make themselves clearly heard by a large audience, but to very little purpose; they have been speaking in their ordinary tone of voice, and straining every nerve after a distinct utterance; but their pitch has been too low. A very little elevation would have made them more audible with much less exertion. I have known speakers with extremely weak voices make themselves well heard in large rooms by simply attending to pitch and clear articulation." A loud voice may be a very indistinct one, sometimes indistinct because of the loudness. The essence of distinctness is a clear, crisp articulation. With some speakers the vowels absolutely drown the consonants, which have thus no opportunity of asserting themselves, and the result is that the hearers have but a vague conception of the words that are uttered. Audibility is not dependent on volume of sound. Many speakers are unintelligible because of loudness of voice. A peculiar effect is often produced after the first few minutes by the very loud speaker, especially if in a monotone. The auditors are delighted to hear his strong, melodious voice, but after listening for a while they become conscious of difficulty, and before he closes have lost interest. The impact upon the tympanum and upon the finer fibers within has dulled sensibility. Some speakers employ but two tones, one a low pitch, and the other a piercing shriek, which they alternate with uniformity now and again, with no regard of sense or length of the intervals. Others allow the voice to fall at the end of sentences, and occasionally on emphatic words. Those who attain high success as speakers must be heard agreeably, and, if possible, their voices should be musical. Under no circumstances should the speaker be content to allow his voice to remain rough, harsh, or grating. Many extemporizers have but one style of delivery. Their tones are the same whether they deliver a business statement, a presentation speech, a congratulatory address at a golden wedding, a witty after-dinner response, or a patriotic oration.

*Suggestions for Speakers.*—No pains, nor toil, nor time should be spared in careful preparation, in making descriptions of cases graphic and forcible, statements lucid, appeals pathetic, in filling the subject with what will both strike and stick. It is necessary that a doctor shall have a clear conception of his subject in order to instruct and convince. Vivid conception generates power. Let the divisions of subjects be clear and logical. These should be simple, natural, progressive, and thoroughly mastered. If possible, the physician should have facts, points, arguments and illustrations at his tongue's end. There is power in illustration. Let the illustrations be from recent occurrences.

*Delivery.*—The first duty of a physician in addressing an audience is to make himself heard. If he speaks very rapidly, his hearers will miss words here and there, and he fails to produce the effect intended. He should be full of his subject and impressed with its importance. He should speak deliberately, enunciate distinctly, and in a natural voice. He should express his thoughts with clearness and force. His peroration

should be a sharp, clear summary of established propositions, forced home, perhaps, by an impressive illustration. One of the cardinal virtues of good speaking, therefore, is distinctness of utterance. A speaker may be slow and deliberate, may express himself in exceptional English, and be in all other respects easy to report; but if he has not acquired the art of making himself heard, much of what he says loses its effect.

The real secret of effective delivery lies in the ability of a speaker to impress himself with his subject. He for the time becomes the standard by which all thought and feeling and sentiment of a whole assembly are measured; nor can he hope to produce in his hearers an interest greater than his own. A good speaker, as his mind becomes inflamed with unwonted activity, rises to a plane of thought and feeling of which he himself is altogether incapable in his calmer moments. His conception is sharpened and his thoughts come with a clearness and precision that leave no time for hesitation. The mind, as it were, becomes intoxicated with its own ideas. The perception of the hearer is correspondingly quickened, and the audience, catching the inspiration of the speaker, unconsciously rises with him if animated by the same spirit. Speaker and hearer have become thoroughly *en rapport*, and it may be truly said of a great assembly, "a thousand souls with but a single thought, a thousand hearts that beat as one." Ability to become deeply impressed with the subject under consideration, the power to rise to a sublime conception of it in delivery, and the faculty in a speaker of transmitting his own inspiration to his hearers is the real basis of good, effective speaking. While all physicians can never hope to attain a high type of oratory, still some may be greatly benefited by a better understanding of the principles that underlie good speaking.

One of the facts disclosed by reporting physicians for the last sixteen years is the marked tendency toward greater simplicity of expression. Involved sentences and the use of big words to say little things are not tolerated as they once were. Conciseness and condensation, as elements of style, have largely taken the place of classicism. It is not so much stateliness as incisiveness that is sought. The axiom of the modern speaker appears to be that to talk effectively one must speak tersely. The most pleasing and impressive speakers are those who understand word-history best, and who are most skilled in the nicer refinements of our vocabulary. To feel the force of all there is in their speeches we must partake of the same kind of knowledge, and hence derive the same discriminating instinct.

*Diffuseness.*—A common error among young physicians, in discussing papers read before medical societies, is a tendency to diffuseness, which may be defined as a copious use of words so arranged as to create the suspicion that a thought is somewhere concealed among them. The youthful physician, and, we regret to say, some of the older members of the profession, in debate, feel it necessary to describe ordinary things in an extraordinary way, and strive to dignify commonplace thoughts by clothing them in fulsome rhetoric. The result is a painful incongruity between the thoughts and their apparel. For instance, a young physician instead of saying that a man was thrown sideways from his carriage, breaking his leg and putting his ankle out of joint, said that "the patient was projected transversely from his vehicle, fracturing the tibia and fibula and luxating the tibiotarsal articulation."<sup>1</sup> Again, another

speaker, instead of saying that he had found a large cancer of the liver at a post-mortem examination, said that he had found "a colossal carcinomatous degeneration of the hepatic mechanism." The effect of the use of such large words is usually heightened by an overwrought, stilted delivery as unnatural as it is unnecessary. These faults can be corrected by time and experience. Simplicity is really the thing to be sought. In this connection we are reminded of an excellent story which is told of Dr. Skinner,<sup>2</sup> an eminent theologian. He was unable to use simple words in either preaching or lecturing. One Sunday he was asked to address the Sunday-School class, and consented to do so. He began his address in this wise: "The Westminster Catechism is an admirable syllabus of Christian doctrine." As soon as he had uttered those words, the superintendent intimated that the children could not understand him, whereupon he said: "Your superintendent informs me that you do not understand what I say. Let me explain: Syllabus, my dear children, is synonymous with synopsis."

*Rate of Speaking.*—The average rate of public speaking is put down in most shorthand text-books at 120 words per minute. This average is too high for the medical profession, whose members deal largely in technical terms. The rate of speaking of some of the greatest orators varies from 100 to 130 words per minute. It is said that John Bright and Gladstone, in beginning their speeches, rarely exceeded 85 words per minute, but as soon as they became interested and deeply absorbed in the subject in hand, their rate of speaking ranged all the way from 85 to 130 words per minute, and during flights of oratory they would reach 150 words per minute for a short time. Bryan, the Democratic candidate for President, in delivering an address to a large audience in this city not long since, spoke so slowly that his speech was taken verbatim by an expert typewriter operator. He did not exceed 82 words per minute. The late Colonel Ingersoll, one of America's greatest orators, spoke at the rate of 130 words per minute, and could keep it up for hours without, apparently, any strain on his voice, which was that of a sustained, animated conversational tone. My estimate of his rate of speaking is based on a lecture which I reported for a local newspaper several years ago. At that time the Colonel spoke for two hours and forty minutes. One of the most rapid speakers in the medical profession I have ever reported was the late Charles T. Parkes, professor of surgery in Rush Medical College. I reported twelve didactic lectures for him on "Fractures and Dislocations." These lectures were delivered without notes. His average rate, during a fifty-minute lecture, was 175 words per minute. Parkes belonged to the jerky, spasmodic type of speakers. Words fell from his lips in volleys, and each volley was usually preceded by a short grunt.

I append a partial tabulated statement, giving the rates of speaking of those physicians whose discussions and lectures I have repeatedly reported from time to time:

Speaker.	Rate of speaking.
Joseph M. Mathews .....	110 words per minute.
George Ben Johnston. ....	110 " " "
William E. Quine ....	115-130 " " "
D. R. Brower .....	115 " " "
F. W. McRae .....	115 " " "
Robert T. Morris .....	120 " " "
W. E. B. Davis .....	120 " " "

<sup>1</sup> Edmund Andrews: Introductory Address, JOURNAL, Vol. xxv. Nov. 2, 1895.

<sup>2</sup> James M. Buckley: Extemporaneous Oratory.

Speaker.	Rate of Speaking.
W. W. Keen .....	125 words per minute.
Rudolph Matas .....	130 " " "
Charles A. L. Reed .....	130 " " "
Arthur D. Bevan .....	130 " " "
T. J. Happel .....	135 " " "
D. A. K. Steele .....	135 " " "
Richard Douglas .....	140 " " "
Nicholas Senn .....	140 " " "
J. Henry Carstens .....	140 " " "
Howard A. Kelly .....	140 " " "
Henry M. Lyman .....	145 " " "
James F. Baldwin .....	150 " " "
J. B. Murphy .....	150 " " "
A. M. Cartledge, .....	160 " " "

Only a rough estimate can be given of the speed of any speaker, for the reason that his rate of utterance varies with the nature of the subject, his familiarity with it, etc. Senn, Carstens, Quine, Bevan, Kelly, Keen, and many others vary their rate of speaking very materially, particularly when familiar with the subject under discussion, and pressed for time.

*Logorrhea.*—Washington Irving says: "Redundancy of language is never found with deep reflection. Verbiage may indicate observation, but not thinking. He who thinks much says but little in proportion to his thoughts. He selects that language which will convey his ideas in the most explicit and direct manner. He tries to compress as much thought as possible into a few words. On the contrary, the man who talks everlastingly and promiscuously, who seems to have an exhaustless magazine of sound, crowds so many words into his thoughts that he always obscures, and very frequently conceals, them.

The free and unrestrained use of words leads to volubility, profuseness and increased rapidity of speech, and increased rapidity of speech leads to inaccuracy of expression, which sometimes renders the efforts of a speaker worthless and unavailing. The reporter in such cases is the protective shield of the speaker, and everything spoken by such men should go through a kind of reportorial refinery before it is published. A lawyer, for instance, has a good case, and has it well prepared. On the trial he examines his witnesses with a string of questions so involved, complicated and illy expressed, and the ideas sought to be conveyed to the jury are so deeply buried and hidden beneath a mountain of needless words, as to bewilder and confuse, and then he wonders why he lost his case. No one is better situated to note the disastrous effects of the inapt and ineffective use of words than the reporter. Pope expressed the matter in a few words when he said:

Words are like leaves, and where they most abound,  
Much fruit of sense beneath is rarely found.

Long sentences are fatal to clearness and force, however well constructed they may be, and should be studiously avoided.

*Precision.*—Precision is also of the utmost importance, and can only be attained by a nice discrimination in the use of words. Such words should be chosen as shall express the exact shade and quality of meaning required by the context.

*Ambiguity.*—Ambiguity is another foe to clearness. The arrangement, as well as the language, should be such that we not only may, but that we *must*, be understood. The first principle of strong oral composition demands the employment of as few words as will clearly express the thought. This rule, carefully followed, will eliminate redundancy, circumlocution, and all kindred evils

that weaken the style of many otherwise good speakers.

*Analysis and Plan of Delivery.*—Much depends upon the analysis of the subject and the plan of delivery. Many physicians, gifted with a certain eloquence of voice and manner, have a faculty of entertaining their auditors with a sort of medley in which neither plan nor purpose is apparent. They may discontinue speaking at any point, and no one would feel its incompleteness, or be in anywise disconcerted. After hearing such a speaker one is conscious of having remembered nothing in particular, and carries away no impression save that of having been pleased. With other physicians the marshaling of sentences and propositions is apparent from the beginning, and the march to a conclusion as concerted and orderly as the advancing columns of an army.

As one of the greatest elements of success in good speaking, may be mentioned careful and thorough preparation, and a clear idea of the subject to be discussed. No physician can expect to sway his hearers unless he is a perfect master of the subject in hand. In growing earnest, impressive, or in reaching for a climax, it is not necessary for him to rant or roar. Much energy is wasted by professors in lecturing to medical students in this way that might be advantageously saved. To be energetic and eloquent, it is not necessary to declaim boisterously.

Many physicians begin speaking before they know precisely what they mean to say. Others perceive things clearly, and those having this power, though of slow mind, may speak more coherently and fluently than those who, without clearness of thought, possess greater animation. The unlearned and untrained may think as clearly and deeply, within the circle of their powers, as the accomplished; and frequently, on account of freedom from abstraction or distraction produced by a multiplicity of ideas, they penetrate to the heart of a subject, and reason more shrewdly and correctly than do the educated. This is particularly true of country physicians. In discussing ordinary medical and surgical topics, they frequently surpass the average college professor in clearness of thought, command of language, ease and vigor of expression.

*Paucity of Language.*—Paucity of language is a common defect of extemporaneous speech, and a stenographic report of several speeches delivered by the same person will exhibit this defect in a mortifying manner, when, in response to the requests of those who have heard them, the orator attempts to collect them for publication. It is then difficult for him to believe his vocabulary so meager, the forms of his sentences so similar, that so many phrases often recur, and that there seems to be an irresistible tendency to use the same words, even when other words express the shade of meaning which he endeavors to communicate with greater accuracy than the familiar terms which go so trippingly over his lips. Excess of repetition in the same speech is a serious evil and sufficient to account for the lack of success which attends many who are nobly endowed in voice and figure, and not destitute of a rich and expressive vocabulary.

*Often-Recurring Phrases.*—Scattered throughout a reporter's note-book will be found such often-recurring phrases as, "Permit me to say"; "I am ready to declare"; "I am bound to maintain"; "This is a fact and nobody can deny it"; "I don't mean this"; "In addition to this I mean"; "What I mean is this"; "It seems

to me"; "It appears to me"; "One word more and I have done."

These are a few of many examples of such oft-repeated expressions. The legal and ministerial professions are as guilty as the medical profession in this regard. An old physician once said to me that whenever a man used such phrases during an impromptu speech he was "simply sparring for thought, and as filling material they came in nicely, but should never appear in print."

*Reporters Sometimes Unjustly Assailed for Inaccurate Reports.*—Occasionally a physician will severely and unjustly denounce a report of a lecture or discussion as inaccurate without stopping to think of the causes which lead to it. Inaccurate reports may be largely attributed to:

1. Noises in the room or hall in which the reporter is taking notes.
2. Indistinct utterance or imperfect enunciation on the part of the speaker himself.
3. A conversation being carried on near the reporter's table between two members, while some one is addressing the society.
4. The speaker dropping his voice at the end of sentences, the final words being inaudible or doubtfully heard.
5. Extreme hoarseness on part of the speaker.
6. Too great a distance between reporter and speaker, particularly when the latter has a voice of feeble carrying power.
7. Stifling of the speaker's voice by the noise of a car heard through open windows.
8. Sneezing or coughing during debate.
9. The slamming of doors.
10. Noises from the street during hot weather, when the windows of the hall in which a meeting is being held are open.
11. Clearing of the throat on the part of some person while another is speaking.
12. Partial, but temporary, deafness on part of the reporter induced by a cold.
13. A change in the physical and mental condition of the reporter, induced by a long siege of note-taking, the mind acting sluggishly and the muscles protesting.
14. The speaker turning his back toward the reporter.

*Physicians and Lawyers Compared.*—The art of speaking well is not confined to statesmen, jurists, and clergymen. The medical profession, like the ministerial and legal professions, has orators within its ranks. The experienced doctor strives to use the simplest and most expressive words. According to Bryce, rhetorical excellence consists in: "1. The power of finding good ideas and weaving effective arguments. 2. Skill and taste in the choice of appropriate words. 3. Readiness in producing appropriate ideas and words at short notice. 4. Weight, animation, and grace in delivery."

I have had the pleasure of reporting the utterances of several eminent lawyers from time to time, and, to speak candidly, I must confess that they were not the superiors in any sense of many of the physicians whose impromptu speeches I have reported. I shall mention three striking examples of the extemporaneous type of speakers in the medical profession, and later submit a classification.

Dr. Nicholas Senn is a fluent, forcible and impressive speaker. He has an excellent command of language. There is a richness in his diction, a copiousness,

ease, and variety in his expression which are rarely surpassed by the best extemporaneous speakers. The arrangement of his sentences in debate seems never to have been studied, yet every word falls into its proper place. He displays his ability as a debater to best advantage when under a heavy fire. On one occasion, during a spirited discussion, which was called forth by a paper which he had read, he sat with a smile on his face, listening attentively to everything that was being said, while several prominent surgeons were severely criticising the operation he had proposed; but when the time came to reply to the various criticisms that had been showered upon him, in an unassuming way he scored his opponents one after the other in a dignified but merciless manner, and showed with great clearness of statement how feeble and groundless were some of the views that had been advanced.

Dr. Charles A. L. Reed, of Cincinnati, Ohio, the President of the American Medical Association, is a splendid example of the extemporaneous speaker. As a debater he is well equipped. He is known for his elegant diction, his scholarly references, and the ornateness of his phraseology. His well-rounded sentences are marvels of construction. No matter how sudden the summons, or what the subject, a speech from him is always interesting. His rhetoric is faultless; his delivery graceful and easy.

Dr. Joseph M. Mathews, of Louisville, Ky., is an easy, graceful, fascinating, polished speaker. His style is notable for its simplicity. He can adorn any subject. Those who have had the pleasure of hearing his celebrated lecture on "The Lights and Shadows of a Doctor's Life," will recall with what eloquence, pathos, and flashes of humor he treated this subject. One minute his hearers were on the verge of shedding tears, the next convulsed with laughter, so easily and tenderly did he touch the chords of the human heart.

As examples of good extemporaneous speakers in the medical profession, men who make themselves heard, who know and feel what they say, and who can command the undivided attention of any audience. I may mention Drs. W. W. Keen, William E. Quine, G. Frank Lydston, Harold N. Moyer, J. Henry Carstens, James B. Herrick, Weller Van Hook, Arthur D. Bevan, D. R. Brower, A. M. Cartledge, J. B. Murphy, Henry M. Lyman, William A. Evans, F. W. McRae, L. S. McMurry, Dudley S. Reynolds, W. E. B. Davis, Rudolph Matas, T. J. Happel, Richard Douglas, George Ben Johnston, Lawson Tait, Joseph Eastman, Sir Thomas Grainger Stewart, William Macewen, and a host of others did space permit.

*Classification of Speakers.*—The reporter is constantly listening to speakers, good, bad and indifferent, and soon comes to recognize the qualities that cause a man to rank in one or other of those classes. He is essentially a speech-taster. It is a significant fact that speeches delivered in a quiet, deliberate way, when the speaker has a good command of sound English, and has something to say that is worth hearing, nearly always give the reader the idea that they must have been delivered with great fluency. On the other hand, the really fluent speeches, those with long sentences, each sentence containing several clauses, and sometimes one or more parentheses, give the reader of them the idea of hesitation and lack of preparation. A study of the different styles of doctors as speakers encountered during an extensive and varied reportorial experience is an education in itself, and by virtue of his vocation the reporter is compelled to study them. As there is no one more

competent to criticise physicians as speakers than the man on whom devolves the duty of reporting them, I have made an attempt to classify the speakers whose utterances I have reported from time to time in medical societies. We have the following classes:

1. The moderately slow speaker.
2. The exuberant and tempestuous speaker.
3. The musical, flowery speaker.
4. The loud, husky speaker, whose voice is somewhat indistinct.
5. The grandiloquent speaker.
6. The rapid and spasmodic speaker.
7. The excessively rapid speaker.
8. The rapid, involved and indistinct speaker.
9. The one who hurls disconnected sentences at the reporter.

10. The clear, distinct, unassuming speaker, who talks with absolute precision, with perfect grammar. He is a *rara avis*.

11. The physician who commences his speech in a deliberate, measured, distinct, far-reaching tone of voice, and who, when he becomes influenced by the magnetism of his audience and their rapt attention, gives vent to rare flights of oratory.

12. The irrepressible speaker, who does not know enough to sit down while he is down, but who monopolizes the precious time of an important convention in saying practically nothing; still, his remarks are reported, transcribed, and then, perhaps, liberally blue-penciled, or consigned by the secretary of the association or editor to the waste-basket.

13. The one who jumbles up his nominative, his accusative and his verb with such picturesque incoherence that it is almost impossible to make head or tail of what he means.

14. The physician who threads his way through a long and apparently intricate sentence, never losing the connection of the parts, and coming out at the end with absolute precision.

15. The man who does not realize that his first duty is to make himself heard.

16. The physician who never completes his sentences, but is utterly oblivious of that fact when he criticizes the report of his speech.

17. The physician who misquotes, and then blames the reporter if he has not supplied the correct quotation.

18. The foreigner, who imagines that he speaks like a native.

19. The speaker who drops his voice at the end of sentences.

20. The low, mumbling, conversational style of speaker, who indulges in a free and rapid flow of words which taxes the reporter's skill and dexterity.

21. The physician who is extremely subtle in the use of words and phrases. The shades of meaning are so delicate by the judicious selection of them that the reporter must retain the original force and color of each sentence.

22. The physician who habitually clothes his hazy ideas in loose, disjointed talk, which, if transcribed as uttered, would mar, if not ruin, his reputation.

23. The one with a slow and fatiguing mode of utterance, whose sentences are diffuse, intricate and deficient both in eloquence and precision.

24. The physician who is clear, forcible, persuasive, with an eloquence natural and direct. (This type of speaker usually spends much time in meditation and in the composition of his speeches.)

25. The physician whose speeches are notable for their subtlety of discrimination and depth of learning.

26. The physician who evolves original thoughts and whose voice and gesture emphasize living truths.

27. The eccentric physician who stifles and distorts natural eloquence. His introductory is long; divisions and subdivisions of speech are perhaps illustrated by a pointless story.

28. The physician who carefully selects his words and utters sentences that are models of syntax.

29. The man whose style is natural, easy and varied, with short clauses expressing vivid ideas.

30. The tautological physician.

31. The vivid, brilliant speaker who pours out a torrent of words, dexterously handled, and whose remarks are full of sudden turns and surprises, but are illumined by ingenious reasonings.

32. The man with a strange and unfamiliar style, whose sentences are portentously long.

33. The rapid and monotonous speaker who becomes tangled in his own sentences, and mispronounces words.

34. The physician who is known for his elegant diction, his scholarly references, and the ornateness of his phraseology.

35. The physician who stutters, speaks indistinctly, and yet is extremely technical.

36. The pompous speaker.

37. The physician who begins a sentence, but is not satisfied with its construction; he therefore draws up, makes a plunge in another direction, wanders about in a maze, and finally lands in a region of impenetrable obscurity.

38. The physician who is afflicted with that terrible malady—*cacoethes loquendi*.

The two qualities in a speaker which most delight reporter and hearers are lucidity of thought and distinct utterance. Purity of tone, clearness of enunciation, and deliberate utterance are what make public speakers heard and interesting.

## THE IDENTIFICATION OF DEXTROSE IN HUMAN URINE.\*

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(Concluded from page 683.)

Repeated filtration of the urine through animal charcoal causes retention by the latter of uric acid, urates, coloring substances, some albumin, but also of certain amounts of dextrose. Powdered animal charcoal, freed from impurities as well as possible by washing and by extraction with hydrogen chlorid, is put to the height of 3 cm. into a filter measuring 5 to 6 cm. in diameter. Twenty to 40 cm. of urine are repeatedly filtered through this layer, until the filtrate is rendered perfectly colorless. As particles of dextrose are retained by the charcoal, this should be washed three times with distilled water, and each of the three washings is examined separately. Fehling's test is then applied to the filtered urine and the washings. The advantage obtained by this procedure is obvious, still decolorized urine may

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