On aphasia, or loss of speech in cerebral disease / by Frederic Bateman, M.D.

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BY

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PART IV.

In the preceding papers I have endeavoured to review what is at present known of the clinical history of aphasia; having first ventured critically to analyse a certain number of cases recorded by independent observers in various parts of the world, I have then minutely detailed several cases which I have myself had the opportunity of personally watching.

It will be observed that the observations which I have recorded in illustration of my subject have been of the most varied character—from the typical case where the loss of speech was complete, to that where the loquelar defect was only a slight or even an occasional symptom, believing that it is only by the careful study of cases illustrative of the various forms and degrees in which derangement of the faculty of speech is observed that we can hope to throw any light upon this much disputed question—the localisation of the Faculty of Speech.

I shall now proceed to dwell upon certain abstract points suggested by the consideration of the 72 cases to which I have referred in the former parts of this essay. In the first place, it may be said that it is unwise to study aphasia as if it were a malady *per se*; it is clearly only a symptom, and not a pathological entity having a proper place in any nosological classification. Whilst fully admitting this, however, I maintain that, for the purposes of scientific inquiry, it is convenient at present to study loss of speech—as many other in-

vestigators are doing—as if it were really a morbid entity; for in many of the cases I have reported it was the sole abnormal symptom present. Besides, the faculty of articulate language is the great distinction which the Creator has made between man and the lower animals; it is one of the highest of human attributes, and there is no subject more worthy of the attention of the philosophical physician than the investigation into the causes which interfere with the proper use of this faculty. I shall, therefore, as it were under protest, and as a matter of convenience, consider aphasia under the various heads of causes, varieties, treatment, &c.

Synonyms.—Few subjects in medical philology have given rise to so much discussion as the name by which loss of the faculty of articulate language should be scientifically designated; a brief allusion, therefore, to the various names proposed cannot be omitted. The term Anaudia was used by the Greek physicians for loss of speech, and the adjective ἄναυδος is employed by Æschylus.* Alalia is used by Sauvages, Frank, and others, and Professor Lordat† in describing his own case employed the word "*Alalie*," which latter term has also been adopted by M. Jaccoud. In 1861, M. Broca, when relating to the Anatomical Society of Paris his two remarkable cases, which have since excited so much interest throughout the scientific world, used the word "*Aphémie*" (*a φημι*). This last expression has latterly given way to *Aphasia*, a word adopted by M. Trousseau, who is supported in his preference for it by no less an authority than M. Littré.‡ Other names such as Aphrasia, Aphthongia, Aphthenxia, &c., have been suggested.§ Aphasia, doubtless

* "αἰθερία κόνις με πείθει φανεῖσ',
ἄναυδος, σαφὴς, ἔτυμος ἄγγελος."
SEPTEM CONTRA THEB, V. 81.
"Yon' cloud of dust that choaks the air,
A true tho' tongueless messenger."

† "Analyse de la Parole pour servir à la théorie de divers cas d'Alalie et de Paralalie." 1843.

‡ This word occurs twice in Homer; Iliad xvii., 695; and Odyss. iv., 704; the text being precisely the same in both instances—"δὴν δέ' μιν ἀμφασίη ἐπέων λάβε;" here speechlessness from emotional causes is evidently implied.

§ Dr Popham, of Cork, considers that of all the words in the Greek language denoting modes of speech, the verb φθέγγομαι applies more than any of the others to the formation by the tongue of articulate sounds. The substantive φθεγξις is used by Hippocrates, and the privative word αφθέγξις would express an inability to enunciate syllables. He also thinks that the English word aphthenxia is as euphonious as many other derivations from the Greek.—*Dublin Quarterly Journal*, Nov., 1865.

from its simplicity and euphony, is now the favourite expression; it is the one I have selected, and in accordance with the neological phraseology of the day, I shall adopt the terms —Amnesic, Ataxic, and Epileptiform Aphasia, &c.

Definition.—The word aphasia has been used in a different sense by different authors; some, like Trousseau, Broca, Auguste Voisin, &c., limit its use to designate that condition in which the intelligence is unaffected, or at all events but slightly impaired; where thoughts are conceived by the patient, but he cannot express himself, either because he has lost the memory of words, or because he has lost the memory of the mechanical process necessary for the pronunciation of these words; or because the rupture of the means of communication between the grey matter of the brain and the organs whose co-operation is necessary to produce speech, does not allow the will to act upon them in a normal manner—the ideas are formed, but the means of communication with the external world do not exist. This definition would exclude all cases in which loss or lesion of speech was due to the alteration of the peripheral organs which co-operate for the production of sounds, as well as those in which the embarrassment of speech was attributable to a general lesion of the intelligence, such as idiotism, cretinism, deaf-mutism and the different forms of mental alienation.

I prefer, however, using the word in its strictly etymological sense—*a φασισ*—and I would thus apply it to all cases where speech is abolished or suppressed from whatsoever cause, believing that it is more convenient for the purposes of pathological research, thus to consider lesion of speech in its general and widest sense. This interpretation of the word necessitates divisions and sub-divisions in which all shades and degrees of the affection may be included, and it has enabled me, in the preceding pages, not only to admit cases where the lesion of speech was decided and more or less permanent, but also those where it appeared only as an epiphenomenon, believing, as I have before stated, that such cases may be more useful than the typical cases which are so frequently put on record.

Before alluding to any subdivision of the subject, I would, just for one moment, ask what speech is?

Speech is a complex faculty consisting of two distinct elements, one physical, somatic, and material—a movement;

the other psychical, the interior speech—the λόγος; and we must take care not to confound this inward with the outward speech or articulation, which is only a form of expression. Here I must remark that it is important not to confound the *faculty of articulate language* with the *general faculty of language*, and Professor Broca's remarks on this subject are so lucid and terse, and of such a philosophical character, that I cannot do better than transcribe them.—"There are several kinds of language; every system of signs which permits the expression of ideas in a manner more or less intelligible, more or less complete, or more or less rapid, is a language in the general sense of the word: thus speech, mimicry, dactylology, writing both hieroglyphic and phonetic, are so many kinds of language. There is a general faculty of language which presides over all these modes of expression of thought, and which may be defined—the faculty of establishing a constant relation between an idea and a sign, be this sign a sound, a gesture, a figure, or a drawing of any kind. Moreover, each kind of language necessitates the play of certain organs of emission and reception. The organs of reception are at one time the ear, at another the eye, and sometimes the touch. As to the organs of emission, they are brought into play by voluntary muscles such as those of the larynx, of the tongue, of the velum palati, of the face, of the upper limbs, &c. Every regular language, then, presupposes the integrity:—1st, of a certain number of muscles, of motor nerves which supply them, and of that part of the nervous system from which these nerves arise; 2nd, of a certain external sensorial apparatus, of the sensitive nerve which supplies it, and of that part of the central nervous system with which this nerve is connected; 3rd, of that part of the brain which presides over the general faculty of language, such as it has just been defined. The absence or abolition of this faculty renders all kinds of language impossible." *

The elementary form of language which exists from earliest infancy, and amongst all people and races, is gesture; the child points to certain objects and persons, this being a sign of recognition of something that had previously made an impression on the optic nerve—in fact a proof is given of the existence of the faculty of memory; the parent now steps in,

* "Sur le Siége de la Faculté du Langage Articulé," p. 4.

and the child is taught to connect certain objects and persons with certain conventional signs or symbols called words, and in order to effect this the auditory apparatus must concur, and speech is the result—the faculty of articulate language is for the first time roused into action.

Certain conditions, however, are indispensable for the development of articulate language:—1st, there must be integrity of thought, or at all events an idea must be conceived; or, as Mr. Dunn elegantly remarks, "must be moulded for expression in the seat of intellectual actions." 2nd, there must be a connexion between the idea conceived, and the conventional signs or symbols which constitute the verbal forms of language. 3rd, the idea being conceived and the verbal form found, there must be integrity of the commissural fibres and of the motor centres through which the volitional impulses operate in speech, and the muscles of phonation and of articulation must be able to obey the mandates of the will. 4th, it would seem that all these conditions may exist, and yet there may be aphasia or dysphasia. One of my own cases, that of Anna Maria Moore, is a good illustration of this fact; she had plenty of ideas, she knew the symbols which corresponded to them—the representative signs of her thoughts—and the muscles of phonation and of articulation were unaffected, but she seemed like an accomplished musician, who, although accustomed to perform rapid and difficult passages upon his instrument with the greatest ease and without any conscious effort, suddenly finds himself, under certain unfavourable conditions of excitement or from the abuse of alcoholic stimulants, only able to produce discordant strains—there lacks our fourth condition, the master mind, or what has lately been called *the power of co-ordination.*

The child is taught to speak, as he is taught to walk, and he only speaks because he has been taught; what he has learned to do he can forget, and aphasia may be the result of the loss of the memory of the movements necessary for the articulation of words; thus it would seem that one can become aphasic in two ways, either by losing the memory of the symbols of language, or by forgetting the mechanical movements necessary to give expression to such symbols.

Classification.—The various authors who have written on loss or lesion of speech have each adopted a different classification. I have already alluded to the three divisions of Dr.

Jules Falret; M. Jaccoud makes five;* Dr. Popham, of Cork, says that two typical forms are to be discriminated—*Lethological or Amnesic Aphasia*, and *Aneural* or *Ataxic Aphasia*; adding that to these two forms there are cognate states, between which and them it is not easy at times to draw the line of demarcation.† The idea of this division has been further amplified by Dr. William Ogle, in the admirable essay to which I have before alluded, in which he defines by the term *Amnemonic Aphasia* that form characterized by loss of the memory of words—by inability to translate ideas into symbols; but besides this, he says, a second act of memory is required, closely connected with the former, yet distinct from it. "Not only must we remember words, but we must also remember *how to say them*. The mere memory of words by itself may produce an inward repetition or mental rehearsal of a phrase, but it can do no more; for the utterance of the phrase in articulate sound this second memory is absolutely requisite." To the failure of this second memory Dr. Ogle gives the name of *Atactic Aphasia*, adding that the loss of speech is due to the want of the co-ordinating power over the muscles of articulation.‡

At the annual meeting of the British Association, held in Norwich last summer,§ Professor Broca, in proposing the adoption of a more precise terminology for expressing the various forms of defective speech, suggested the following divisions:—*Alogia*, loss of speech from defective intelligence; *Amnesia*, from defective memory of words; *Aphemia*, from a defect in the special faculty of language; and *Alalia*, from defective articulation.

Although I have found it useful to adopt the terms *Amnesic* and *Ataxic Aphasia* in the description of my own cases, I do not wish to fetter myself with any system of classification, which must, to a certain extent, be artificial; I propose, how-

* "Gazette Hebdomaire," 1864.

† "On Aphasia," p 5.

‡ St. George's Hospital Reports, Vol. 2, 1867, p 95.

§ One of the most interesting features of this meeting—at all events, to the medical profession—was the discussion which followed the reading of papers on Aphasia by Dr. Hughlings Jackson, Mr. Dunn, and M. Broca. The learned Parisian Professor, with great force and eloquence, expounded before a British audience, his own peculiar views as to the seat of speech, illustrating his remarks by a coloured diagram, and a plaster cast. A most animated debate ensued, in which Professor Hughes Bennett, Professor Humphry, Dr. Crisp, Sir Duncan Gibb, Professor Carl Vogt, and others took a part. It may be said of this discussion—*Tot homines tot sententiæ*.

ever, under the head of "*Varieties*," to mention the principal forms of the affection which are most commonly met with by the clinical observer.

Varieties.—There is a great diversity in the particular type or form in which lesion of speech may shew itself, for as it is a symptom and not a malady *per se*, we cannot expect to find the same uniformity in its manifestation as is to be met with in the description of a specific and well characterized disease; having no uniform cause, it has no regular stereotyped march, being only a secondary pathological phenomenon, the result of single or multiple organic lesions.

1.—It may differ in degree, from absolute speechlessness to various grades of imperfection in the use of the faculty of language; it may be an ephemeral and intermittent symptom, or it may be a permanent defect.

2.—Some persons have only lost the power of saying their own name (Crichton), or the names of other people; it is not uncommon to find persons whose conversation is perfect with the single exception that they cannot evoke or call up in their mind certain individuals—they lack the symbol necessary to convey the idea; it may perhaps be said that this defect is only one of the signs of senile decay—of the failing memory of elderly people; this view, however, does not furnish any explanation of the fact of the defect being limited to proper names; besides, this form occurs in others than in elderly people.

3.—In another variety the defect applies to substantives generally, as was observed in the man Sainty whose case I have myself recorded; I have also given several other instances of it in the preceding pages (Bergmann, Graves, &c.); and in many of these cases, the defect is supplied by a paraphrase, as was observed in Dr. Bergmann's case, where the patient being unable to say scissors, said *it is what we cut with.* It is indeed singular that substantives and proper names which are first acquired by memory in childhood should be sooner forgotten than verbs, adjectives, and other parts of speech which are of a much later acquisition. In noticing this peculiarity, Dr. Osborne offers as an explanation, that nouns are less frequently repeated than verbs or pre-

positions, which, being in use on every topic which can form the subject of discourse, are retained, when the names of general topics as nouns, or of individual topics as proper names, are forgotten.* In further illustration of this variety I would refer to a case reported by M. Piorry, in which an old priest, after an attack of dextral paralysis, had entirely lost the faculty of employing substantives; the manner in which he expressed himself was most curious—for instance, if he wished to ask for his hat, this unfortunate word hat failed him entirely, and he made use of verbs, pronouns and adjectives in order to render his idea. "Donnez-moi . . . ce qui se met sur la . . . mais le mot tête ne lui venait pas; il cherchait vingt fois à exprimer sa pensée, et la chose lui présentait une difficulté insurmontable."†

Perhaps one of the most curious forms in which imperfection of speech shews itself, is where the defect is limited to some particular language; thus Dr. Beattie (quoted by Dr. Scoresby Jackson) mentions the case of a gentleman, who, after a blow on the head, lost his knowledge of Greek, and did not appear to have lost anything else. Dr. S. Jackson asks—where was that gentleman's Greek deposited, that it could be blotted out by a single stroke, whilst his native language and all else remained?‡

4.—In another class we find patients substituting one word for another; thus Crichton's patient would ask for his boots when he wanted bread; the gentleman whose case was observed by Sir Thomas Watson, would say "pamphlet" for camphor; and in one of my own cases—that of C M—the patient would say "poker" when he meant the fire. In this erratic speech the defect is sometimes limited to the substitution of one letter for another, as in a case quoted by Crichton, where, after recovery from a fever, one of the first things the patient (a German) desired to have was coffee (kaffee); but instead of pronouncing the letter f, he substituted in its place a z, and therefore asked for a cat (kazze), and in every word

* "On the Loss of the Faculty of Speech." Dublin Journal of Medical Science, Nov., 1833. This, after Crichton's, is one of the earliest memoirs on our subject which have come under my notice, and contains several highly interesting and well recorded cases.

† Gazette des Hôpitaux, May 27, 1865. At the autopsy of this patient, M. Piorry found in the anterior part of the left corpus striatum three apoplectic cysts.

‡ "Edinburgh Medical Journal," February, 1867.

which had an f, he committed a similar mistake, substituting a z for it.* Dr. Popham, of Cork, cites a similar example.

5.—A certain number of aphasics use stereotyped phrases, always the same, in answer to every question—thus we have seen in one of Trousseau's cases, that the patient thus addressed, invariably replied "*n'y a pas de danger ;*" in Hasbach's case the phrase "*gerechter Gott*" was the only one at the command of the patient; others can only pronounce certain monosyllables—in one of Professor Broca's cases the word "*Tan,*" and in one of M. Charcot's the word "*Ta,*" composed the entire vocabulary of the respective patients; and in one of Dr. S. Jackson's, of Pennsylvania, we have seen that the patient who was totally deprived of articulate speech, could write only the unintelligible phrase, "*Didoes doe the doe.*" In many of these cases the play of the physiognomy shews that the sense of a question is perfectly understood by the patients; they have not lost the general faculty of language, for they understand written and articulate language when spoken by others; they preserve even the sense and the value of words, both in the auditive and graphic form; what is wanting in them is not the concurrence of the nerves and muscles engaged in phonation and articulation—for they can pronounce certain syllables spontaneously, and can sometimes repeat what is said to them—there is, however, wanting a particular faculty which we may call the faculty of articulate language; or, according to some authors, the faculty of co-ordinating the movements necessary for the production of articulate language is deficient.

A modern French philosopher, Paul Janet, mentions the case of an old priest who was incapable of pronouncing distinctly two words having any sense—c'était à peine un bégayement; if, however, an appeal was made to his verbal memory, he could recite the fable of La Fontaine, "*Le Coche et la Mouche,*" or the celebrated exordium of Father Bridaine, and this he would do with the most perfect distinctness of articulation, although he was evidently incapable of understanding a single word of what he said. In this case, says Paul Janet, the mnemonic mechanism had remained sound at

* "An Inquiry into Mental Derangement," Vol. i., p 373.

a particular point, which only required stimulation to make it act.*

6.—In another variety there is a remarkable perversion of speech; patients can articulate, but there is no connexion between the articulated sounds and the ideas which they may wish to convey. In illustration of this form, Dr. Osborne has related the history of a gentleman, who, after recovery from an attack of apoplexy, had the mortification of finding himself deprived of speech, or rather he spoke, but what he uttered was quite unintelligible, and his extraordinary jargon led to his being treated as a foreigner in the hotel at Dublin, where he stopped. In order to ascertain and place on record the peculiar imperfection of language which he exhibited, Dr. Osborne put before him an English sentence with the request that he would read it, when he read as follows :—"*An the be what in the temother of the trothotodoo to majorum or that emidrate ein einkrastai.*"†

Dr. W. T. Moore, of Dublin, has also recorded a similar case of a gentleman, aged fifty-six, who, after an attack of hemiplegia, completely lost the connexion between ideas and words. On one occasion Dr. Moore was much puzzled by the patient saying to him—"*Clean my boots.*" Finding that he was not understood, he became much excited, and cried out vehemently—"*Clean my boots by walking on them!*" At length it was ascertained that the cause of his disquietude was the shining of the candle on his face, and that the object of his unintelligible sentences was to have the curtain drawn; when this was done he appeared quite gratified. This patient slowly improved from this attack, but became a lunatic, in which state he survived for fifteen or sixteen years. In commenting on this singular case, Dr. Moore calls attention to the fact that, although there was no connexion whatever between the words used and the ideas intended to be conveyed, this patient formed complete sentences; the power of co-ordination and of articulation was perfect, and the intelligence was, to all appearance, unimpaired. For the description of cases of per-

* "Le Cervean et la Pensée par Paul Janet. Membre de l'Institut." p. 140. This highly philosophical treatise contains much original matter, and is well worthy of a careful perusal by all medical psychologists who are endeavouring to trace the connexion between thought and speech.

† Osborne, op. cit., p. 160.

verted speech, such as those just mentioned, Dr. Moore suggests the term Heterophasia.*

7.—The loss of speech may be the sole morbid symptom, or it may be accompanied by some paralytic symptom. A recent writer on nervous diseases, Dr. Wilks, has stated that pure aphasia without paralysis is uncommon.† My own observation and researches do not lead me to endorse this opinion, and amongst the 72 cases I have recorded, it will be observed that in a large number the impairment of speech was the only sign of diseased action (vide Andral, Broca, and Dr. S. Jackson, of America). One of the most remarkable instances of this variety was that recorded by Trousseau when speaking of the aphasia of his colleague, Professor Rostan. This case is of such value from the fact that the subject of it had devoted a long life to the investigation of cerebral disease, and consequently was so well qualified to appreciate, and accurately to describe the symptoms he experienced in his own person, that I shall transcribe it here.

"Dr. R——, being confined to his house from the effects of an accident, had been reading nearly all day, and had thus fatigued his brain. He was engaged in reading one of Lamartine's literary conversations, when, all on a sudden, he perceived that he imperfectly understood what he was perusing. He stopped a moment, then resumed his reading, but again experienced the same phenomenon. In his alarm, he wished to call for assistance, when, to his great astonishment, he found himself unable to speak a word. He now fancied himself the subject of apoplexy, and he immediately caused his arm and legs to execute various complex movements, and found there was no paralysis. Being alone, he rang the bell, and when his servant came, he found he could not speak a word. He moved his tongue in all directions, and was struck with the strange contrast which existed

* "Dublin Quarterly Journal of Medical Science," Vol. XL., p. 254; also Vol. XLVI., p. 487.

† "On Aphasia and the education of the Cerebro-Spinal Centres." Med. Times, January 18th, 1868—"When paralysis exists, we believe that some portion of the motor tract must be affected, and that this need not arise from a local lesion of the cortical substance; consequently it might be thought possible for hemiplegia to occur without loss of speech and *vice versa*, but I cannot find this is the case." Further on, Dr. Wilks says "believing as I do that aphasia is almost invariably found with hemiplegia." It is with great diffidence that I venture to criticise the opinion of so eminent an authority as Dr Wilks; but the above statement is so utterly at variance with my own experience, that I cannot allow it to pass unnoticed.

between the facility of movement of the vocal organs, and the impossibility of giving expression to his thoughts by speech. He now made a sign that he wished to write; but when pen and ink were brought—although he had the perfect use of his hand—he found himself quite as unable to give expression to his thoughts by writing as by speaking. On the arrival of a physician, at the end of two or three hours, Dr. R—— turned up his sleeve, pointed to the bend of the elbow, and clearly indicated that he wished to be bled. Venesection was hardly finished, when a few words could be uttered; by degrees the veil seemed to be removed, and at the end of twelve hours speech was entirely restored, or, to use Professor Trousseau's emphatic language, "*tout était rentré dans l'ordre.*"*

A striking example of aphasia without paralysis was published by M. Ange Duval in the "*Bulletin de la Société de Chirurgie*" for 1864; the subject of it being a lad five years of age, who fell from a window upon his forehead; the result of the fall being a fracture of the frontal bone on the left side. The intelligence of this child continued unaffected, and there was no paralysis, but he never uttered another articulate sound. This boy was accidentally drowned thirteen months after his fall, when an examination of the encephalon disclosed a cyst, of the size of a walnut, which was full of serum, and was evidently the result of a former contusion of the left frontal lobe; this cyst was situated principally in the *third left frontal convolution.*†

8.—The defect may be limited to the loss of articulate language only, or may extend to written language, and also to the language of signs. One of these faculties may be destroyed whilst the others remain intact. It would seem that loss of speech more commonly coincides with loss of the power of writing; this, however, is not invariably the case, and Dr. Wm. Ogle has recorded a case of dextral paralysis in which the speech was limited to the two words "yes" and "no," but the power of writing, with the left hand, remained in its integrity. Trousseau records a similar case of a man who, in

* "Clinique Médicale," tom. ij, p. 573.

† The details of this case are given at great length by M. de Font-Réaulx in his thesis for the Doctorate at the Faculty of Medicine of Paris, 1866. It seems that the localization of the faculty of speech has been a subject frequently selected of late for a thesis by graduates of the Paris Faculty. Among the most remarkable, I would mention those of M. de Font-Reaulx and of M. Carrier, both of which have furnished me with interesting matter.

coming to consult him, informed him by signs of his inability to speak, but gave him a note, written in a firm hand by himself, in which was contained a detailed account of his disorder; from this note M. Trousseau learned that some days previously he had suddenly lost consciousness, on recovery from which there was no symptom of paralysis, but he found himself unable to articulate a single word.* Dr. Ogle considers that the occasional separation of agraphia and aphasia is an argument in favour of the existence of distinct cerebral centres for the faculties concerned in speaking and writing; while the more frequent coincidence of the two would lead him to infer that these distinct centres must be closely contiguous. † The power both of speaking and writing spontaneously may be suspended, and yet the faculty of imitation may be so well developed that words can be repeated and even written without difficulty when they are pronounced by another person.‡

In reference to the language of signs and of pantomimic expression, it is more commonly unaffected. In most of the recorded cases the power of communication by signs is not mentioned at all. Lelong, the subject of one of Broca's celebrated cases, could make himself entirely understood by his expressive mimic; I have recorded the same fact in the history of my patient Sainty. Sometimes, pantomimic language, without being abolished, is wanting in precision, or is perverted, as was observed by Dr. Perroud of Lyons, whose patient would make a sign of affirmation when she meant the contrary.§

Sometimes the faculty of imitation is exaggerated to an extraordinary degree, when the phenomenon is produced which Romberg calls the "echo sign." During a recent visit to La Salpêtrière, Dr. Auguste Voisin kindly called my attention to a remarkable instance of this form then in one of the wards. The subject of it was a woman, aged 56, who

* "Clinique Médicale, tom. j., p. 615."

† St. George s Hosp. Rep., Vol. 2, 1867, p. 100.

‡ Sir Thomas Watson has kindly communicated to me the particulars of a case of dextral paralysis, with not only loss of the power of speaking and writing, but the patient had forgotten her letters, and could not pick out an s or an n in a child's alphabet. This I believe to be an unusual condition, for in most cases the symbol representing a word is recognized when put before the patient; that is when, as in Sir T. Watson's case, the intelligence is unaffected.

§ De Font-Réaulx, op. cit. p 57.

had right hemiplegia with aphasia, and who, although she never spoke, repeated all that was said—for instance, Dr. Voisin addressed her thus, "Voulez vous manger?" She said, instantly, "Voulez vous manger?" I then said to her, "Quel age avez vous?" She replied, "Quel age avez vous?" I then said to her in English, "You are a bad woman." She instantly said, "You are a bad woman." I said, "Sprechen sie Deutsch?" She retorted, "Sprechen sie Deutsch?" In the words that she thus echoed, her articulation was distinct, although the foreign phrases were not repeated by her in quite so intelligible a manner as the French. Not only did this woman echo all that was said, but she imitated every gesture of those around her. One of the pupils made a grimace; she instantly distorted her facial lineaments in precisely the same manner; another pupil made the peculiar defiant action, common in schoolboys, of putting the thumb to the nose and extending all the fingers —called in French, *pied de nez*. The patient instantly imitated this elegant performance. Just as we were leaving her bedside, a patient in an adjoining bed coughed; the cough was instantly imitated by this human parrot! In fact this singular old woman repeated everything that was said to her, whether in an interrogative form or not; and she imitated every act that was done before her, and that with the most extraordinary exactitude and precision. Dr. Winslow, under the head of *Morbid Imitation Movements of Articulation*, remarks that he has often observed this echo sign at the commencement of acute attacks of disease of the brain, particularly of inflammatory softening; this condition was observed after death in a case reported by Romberg.*

When all other forms of language are either suspended or perverted, there may still remain one, which is the same in all countries and among all people—the language of physiognomy: the aphasic may still evince pleasurable sensations by a smile, give evidence of fear by pallor of the countenance, and of shame by the blush on the forehead, "Sæpe tacens vocem, verbaque vultus habet."†

* "Diseases of the Nervous System," Dr. Sieveking's Translation. Vol. ii, p. 431.

† This language of physiognomy has not been sufficiently considered by writers on the localisation of the cerebral faculties. This subject is fully developed by M. Albert Lemoine in his philosophical treatise entitled *La Physionomie et la Parole*, Paris, 1865.

9.—There is a variety of aphasia characterised by this peculiarity—that although the subjects of the affection can articulate nothing else whatever, they can give vent to an oath, and thus, in the heat of passion or excitement, words or phrases not always correct as regards taste or ethics, are ejaculated, and which the patient is wholly unable to reproduce when the stimulus of emotion is wanting. I have already incidentally alluded to a case of Dr. Hughlings Jackson, in which the patient had recovered the power to swear, although continuing aphasic. Dr. Gairdner mentions the case of a patient in the Edinburgh Royal Infirmary whose sole means of communication with others was by signs. After a time, Dr. Gairdner noticed that the other patients believed he was shamming, and on inquiry, they gave as a reason for their opinion, that he could swear. The man shortly afterwards died suddenly, when his brain was found to be the seat of a large number of minute deposits of cancer. *

Dr. Hughlings Jackson hints that these oaths and interjectional expressions as observed in aphasic patients, may be due to reflex action, and he goes on to say: "It is quite obvious that they are not voluntary, as the patients cannot repeat the phrases. The will cannot act, but somehow an emotion, e.g., anger, gets the words passed through the convolution of language. Just as a paralysed foot will jump up when the sole is tickled, so these words start out when the mind is excited. Such ejaculations seem to have become easy of elaboration by long habit, and require but slight stimulus for perfect execution."†

10.—*Aphasia spasmodica.* Spasmodic mutism occurs in connexion with hysteria and in hypochondriasis, and may be of a more or less persistent character. Dr. Bright has recorded two cases in which the inability to speak coincided with hysterical trismus.‡ A similar case was lately under my observation, the subject of it being a girl eleven years of age, who after exposure to cold and damp, was brought to the hospital, because her mother found she was unable to speak. On examining her, it was found that there was a

* "On the Function of Articulate Speech," p. 14.

† London Hospital Reports, Vol. i, p. 454.

‡ Bright's Reports of Medical Cases, Vol. ij, part 2., p.p. 459 and 460.

forcible closure of the lower jaw, but the moment the mouth was pressed open, she could speak as before. Dr. Todd, in speaking of an analogous case, uses the word catalepsy in his description of it. Dr. Willis mentions a curious case of this kind, which he calls "paralysis spuria." His description is so quaint that I am tempted to transcribe it:—

"Curo jam nunc fœminam prudentem et probam, quæ per plures annos hujusmodi spuriæ paralysi non tantum in membris sed etiam in linguâ obnoxia fuit; hæc per tempus quoddam libere et expedite satis loquitur, post sermones tamen longos, aut illos festinanter et laboriose prolatos, illico sicut piscis obmutescens, amplius ne *gry* quidem proloqui potest, porro nec nisi post horam unam, aut alteram vocis usuram ullam recuperat."*

Having thus briefly alluded to the principal forms in which loss or lesion of the Faculty of Articulate Language is met with in practice, I propose, in the next number, to consider Aphasia in reference to its Cause, Diagnosis, Prognosis, and Treatment.

* Op. T. Willis, M.D., De Paralysi, De animâ Brutorum, cap. ix, p. 149.

(*To be continued*).