

association is not original but acquired, and is clearly the result of nothing but his education.

We are thus led to believe that the process of reasoning in the brute is specifically different from that in man. In the former it is objective or concrete; the different links in the chain of ratiocination being, as it were, apparent to the senses, and every link being also made mnemonic by the presence of the real object. In man how different! With him the actual presence of the object reasoned upon is not at all necessary. He can reason not only on things, but on their qualities and abstract relations. He can reason analytically or synthetically—from cause to effect or from effect to cause. He can reason in the concrete, and at the same time give abstract reasons for the truth of his conclusions; or he can reason in the abstract, and give concrete proofs of the correctness of the process. He can theorise reality by figures, written characters, or articulate speech; or demonstrate his theorems by axiomatic and abstract ideas.

If we are correct in the above statements in reference to the two facts of consciousness, Reason and Sensation, it must follow as a corollary that the third element, *Will*, comes under the same limitations. Without taking into consideration the probability of an animal having moral will, I would just remark that if the other faculties are limited to objective expression, so the will of the brute can come into play only in presence of the object, only during the force of an appetite, feeling, or desire. Sir William Hamilton tells us that will, which is in its essence *effort*, becomes appetite when controlling feeling, and *purpose* when controlling *intelligence*. Animals no doubt exercise volition in carrying out the accomplishment of their feelings, appetites, and desires; but it is only man who can carry out any *sustained purpose*, and he does this not more from the controlling power of intelligence than from the peculiar and special nature of his *will*.

Such is the old psychology—the psychology so much despised by a certain section of the scientific men of the present day. It may be, as Mr. Spalding suggests, a popular superstition with only the semblance of science; but to me it has all the legendary force of age on its side, as well as the good, honest ring of *truth*.

Rothwell, Northamptonshire.

CONVALESCENCE IN TYPHOID FEVER.

By F. BRITTAN, M.D., &c.,

SENIOR PHYSICIAN TO THE BRISTOL ROYAL INFIRMARY.

IN THE LANCET of July 5th appeared a letter from Dr. Latham on "Convalescence in Typhoid Fever," *apropos* of a case under my care in the Bristol Royal Infirmary, a report of which was published in THE LANCET of June 28th by our able house-surgeon, Dr. Smith. Dr. Latham uses the case "as having an important bearing on the question—When is a patient convalescent from an attack of typhoid fever?" The only satisfactory answer to which he states to be, "after the morning and evening temperatures, and especially the latter, on at least two successive days have remained between 98° and 99°." In connexion with the convalescence he also adds: "It is only after the evening temperature has remained on at least two successive days below 99° that we can be sure that the ulcers have healed, and that solid food may be given without risk." Dr. Latham desires further information as to the relations of my case to the "rule" he has thus laid down, and appeals to clinical observers for information whether their experience has confirmed or negated it.

Regarding the "convalescence" and the "healing of the ulcers" in typhoid fever as, for our present purpose at all events, pretty nearly synonymous terms, it will be allowed, I think, that few more important questions arise to the practitioner than that so decidedly answered by Dr. Latham. After watching through the long and anxious course of the disease, when we see our patient emaciated, weak, and exhausted—when we hear him begging for food, and we long to pour in the supplies for his renovation,—it would indeed be a comfort, instead of cautiously and anxiously weighing

symptoms and indications not to be invariably even collectively trusted, to have a definite rule for our guidance, and to settle the question by the infallible degrees on a scale. I shall endeavour, therefore, in reply to Dr. Latham's request, to show how my case reported, and my experience generally, affect his rule.

First, with regard to the case reported, it was singularly free from any characteristic features of typhoid both in history and progress. The patient ascribed his illness to a chill from having been exposed whilst very wet; then he had a severe cold, but continued at his work for eight days. On his admission he appeared to be suffering rather from a fevered condition than from specific disease. There was no diarrhoea throughout, no spots, no abdominal tenderness, no great prostration, nor delirium; pulse and temperature up to the day before his death very moderate—the former not exceeding 100, the latter 100·7°. On the fourth day after admission his evening temperature was 99·6°, on the fifth 99·2, on the sixth 99°; at the same time he was asking for food and begging to be allowed to leave his bed, feeling so well that, as he said, there was nothing the matter with him; yet three days afterwards, not having taken any solid food whatever since his admission, he was seized with pain and collapse, and died with peritonitis from perforating ulcers. In this case, though it might, I think, be a question whether a temperature so close to 99° for three evenings is not as fair an indication as one of exactly 99° for two evenings, still, in strict precision, Dr. Latham's rule, it may be argued, held good, and the boy's temperature may be said to have been ·2° over the 99° because the ulcers were yet unhealed.

As to my experience on this question generally, I have quoted from a number of records a few which bear immediately upon it, taking of course only such as would appear to negative the rule; and my sense of the importance of the question must be my apology if I do so somewhat fully.

CASE 1.—T. C——, a boy aged fourteen, admitted on the 18th of April with well-marked typhoid fever. On the 19th his evening temperature was 105°; so also on the 28th. On May 2nd it fell to 100°, and remained between 100° and 98° to the 13th. Then, on the 14th, 15th, 16th, and 17th, it ranged between 97° and 98°. On the 17th he was allowed a little fowl. On the 18th his temperature had risen to 99°, on the 20th to 100°, and the fowl was at once discontinued; but the rise went on to the 22nd, when it reached 103·6°. From this point it gradually went down to 99° on the 31st, and remained between 98° and 99° on the 1st, 2nd, and 3rd of June. It then rapidly rose again to 101° on the 4th, owing, as I afterwards found, to his eating something surreptitiously introduced by the friends who visited him. On the 7th it dropped again to 98°, and he steadily improved. It will be thus seen that on two occasions his temperature rose, and with the rise all the symptoms were aggravated, in consequence of taking solid food, though the temperature night and morning had been in the first instance for five and in the second for three days below 99°.

CASE 2.—S. P——, a girl eighteen years of age, had marked typhoid, with an unusual quantity and succession of spots. Her temperature rose from 100° when first seen, to 105°. On the eighteenth day it fell to 99·6°, rising at night to 100°. On the nineteenth, twentieth, and twenty-first days it remained between 98° and 99°, and she seemed convalescing rapidly. On the twenty-second day, however, in the evening it rose to 104°, and remained between that point and 102° for five days, when it again fell to the normal degree.

CASE 3.—W. H——, a boy aged thirteen, had marked typhoid, with a temperature ranging for seven days up to 104°. On the twenty-eighth day it fell to 98°. On the thirtieth and thirty-first days it was 98° in the morning and 99° in the evening. On the thirty-second day it was 98° morning and evening. On the thirty-third day it was 97·4° in the morning and 98° in the evening. He had some fowl, and on the thirty-fourth day his temperature rose, and he had melæna.

CASE 4.—J. H——. On the seventh day the temperature reached 105·6°. On the tenth day it was 106°. On the nineteenth day it had fallen to 100°. On the morning and evening of the thirty-fifth day it was 99°. On the thirty-sixth day, morning and evening, it was 98°; and on the thirty-seventh day it fell to 97·6°. An attack of melæna now occurred, and it rose at once to 103°. In five days it

again fell to 97.4°, and for five days ranged between 97.4° and 98.4°. Then *melæna* set in again for four days, with sudden rise to over 100°.

CASE 5.—E. S.—, a girl of nineteen, had marked typhoid with spots. On the twentieth day the temperature had risen to 105°. On the twenty-second day she passed blood in her motions, which throughout were very frequent. On the twenty-seventh day the temperature had fallen to 99° in the morning and 100° in the evening. For the next six days it remained below 99°; in fact, for the last three days it never exceeded 98°. It then rose again, ranging between 99° and 103° for nine days, when for two successive evenings it stood at 98.6°; yet two days afterwards she died.

I could easily supplement these cases, but, unless they be taken as "the exceptions that prove the rule," they must be quite sufficient. In any case they show that an evening temperature of below 99° for two, or even three, or even five consecutive evenings is no trustworthy indication that real convalescence has taken place, or that the ulcers are so far healed that there is no danger of recurrent *melæna*, or that we may in confidence and with safety give solid food.

It would indeed be a great boon to us if such a rule could be established, though to be of any use as a guide it must be infallible, or it would be obviously pernicious in the extreme. But I can hardly see how we can hope in these cases to be able ever to lay down a fixed rule when all we are dealing with is so variable—the phases of the disease itself, the different idiosyncrasies of patients, and the consequent varieties of ways in which they are secondarily affected by the morbid poison.

It may be true, and would, I believe, be an excellent caution if it were made a rule, that solid food should never be given until the patient's temperature has been normal for two days; though for myself, regarding the immense importance of the point, I would rather let him starve on for three or four more than run the least risk of the grave consequences I have seen follow too great haste in the matter. But to the converse—the rule laid down by Dr. Latham—I far prefer as my guide the experienced judgment which takes in all points, the state of tongue, of skin, of pulse, of bowels, and, perhaps more than either, the general aspect of the patient, as well as the temperature, remembering that two or three days' delay can do no great harm, whilst a few hours' precipitation may prolong the disease for days, or cost the patient his life.

Victoria-square West, Clifton.

ON THE OPERATION FOR RUPTURE OF THE PERINEUM AND PROLAPSE OF THE WOMB.

By JAMES FOWLER, F.S.A.,

SURGEON TO THE WAKEFIELD HOSPITAL AND DISPENSARY.

THERE is a singular description of an ideal labour in the "Summa Theologiæ" of St. Thomas Aquinas, where the parturition of Eve in the garden of Paradise is described with the minuteness of a Flemish painter. The female parts of generation are described as painlessly relaxing on the descent of the head of the child, to the size of which they exactly accommodate themselves; and then, after the birth, as contracting, with an altogether incomparable elasticity and perfection, to their original and normal state. The apocryphal gospel "De Nativitate Mariæ et de Infantia Salvatoris" describes in like manner how a midwife found and demonstrated the Blessed Virgin to be a virgin after the birth of our Saviour; the foreshadowing of the later doctrine of a virgin immaculate, as innocent and perfect as Eve before the fall, and hence subject to the same conditions as those described by the angelic doctor. To these ideal representations many labours do, as we know, to a greater or less extent approximate; labours in which, as Sir Thomas Browne remarks, the curse which God pronounced upon the female sex is removed; but, as a rule, these charming pictures contrast cruelly with our daily experience.

To say nothing of the comparative difficulty of even ordinary labour; when the vaginal orifice is small and unyielding, the head of the child large or extensively ossified, or the presentation and birth otherwise abnormal, even with the greatest skill and attention, laceration of the perineum is a common accident—in some cases it is inevitable; and lacerations of the whole length of the perineum, even though not involving the rectum, if not, as frequently, a source of distress and misery at once, are at least liable at any time to become so. Besides the inconvenience and discomfort incident to the patient herself, and the prolapsus, rectocele, or cystocele, which are almost sure sooner or later to follow, and which furnish so large a proportion of our hospital cases, the attachments of the constrictor vaginae and other muscles of the perineum being torn through, the normal conditions for proper intercourse no longer exist. Accordingly, it is now generally admitted that ruptures of the perineum should be dealt with at once, on the completion of labour, or at least as soon after as practicable. For several years this has been my own practice, and with the best results. I have brought the edges of the wound together by means of deep quill and superficial sutures; kept the bowels confined as long as necessary; drawn off the urine regularly with a catheter; kept the patient on a water pillow; had the vagina daily washed out with water and disinfectants; and have been rewarded by always having had union follow—a union the strength of which has in several cases been tried by subsequent labour, and remained firm and elastic. A perineum will, I know, sometimes give way in subsequent labour, however carefully repaired. A lady, not at that time a patient of mine, whose perineum was ruptured in her first confinement, was operated upon in London ten weeks afterwards, in consequence of the great suffering which ensued, by one of the most distinguished surgeon-accoucheurs then living; but four years afterwards, notwithstanding every precaution, it gave way during her next labour. I brought the wound together in the usual manner at once, and secured capital union, avoiding in that manner all the inconvenience and trouble she had previously experienced; but there has been no labour since to test the strength of the parts.

A perineum, again, though apparently well repaired and remaining good through after labours, will not always prevent subsequent prolapse of the womb; relaxation of the vagina and ligaments of the womb, perhaps, ensuing long after the operation has been performed. In some cases, possibly, the removal of mucous membrane may not have been as free as it well might have been; in others the union may not have been carried sufficiently high. But from whatever cause the failure of the operation may have arisen, the fact that there has been a failure at all has repeatedly been urged as a practical objection against its performance. It is in order to show, on the other hand, what complete relief may be afforded by a judicious operation, that I give notes of the following case.

J. R.—, aged fifty-six, was confined for the fourth and last time eighteen years ago. She had a slow labour. The child was very large, and instruments were sent for; but before they arrived, all was over naturally. She felt afterwards unusual pain and tenderness of the perineum, and had much scalding in making water. At the end of a fortnight, however, she got up, and did not at once feel much inconvenience. Fourteen years ago she ceased to menstruate. Eight years afterwards she began to have great pain in the back on standing, with occasional bearing-down; and four years later, on lifting a recently filled water-filter, "felt something give way in her inside," and the womb appeared externally. Since then she has been unable to keep it up either with pessaries or any other contrivance. She has had to give up washing; has been unable even to iron a shirt; has not been able to stand during the singing of a hymn in a place of worship; has been unable to walk more than a quarter of a mile at once at the furthest; for weeks together has often been unable to get out of the house at all; has suffered almost constantly from leucorrhœa; has often been faint, and sick, and off her food; and, more than all, has had to suffer the domestic misery and distress arising from such a state of things.

Such was her history when she came into our hospital on the 3rd of April, 1871. Her countenance was blanched and expressive of great anxiety. On making an examination,