of paramount importance. Those who thus speak, seem not to know how many months, and sometimes years elapse before an artificial limb can be worn with comfort; how many means of obtaining subsistence are debarred from one so mutilated; I uphold that any length of time is well spent, which gives the patient the chance of escaping this dreadful alternative, from which, as Mr. Hussey of Oxford has shown, not only do many die, but many more never thoroughly recover.

I will conclude by describing the way in which the hamstring tendons are divided and treated, when this proceeding becomes necessary in combination with the above.

Let the patient lie horizontally on his face; an assistant grasps and extends the leg. A small sharp-pointed knife is passed to the inner side of the tendon and beneath it horizontally. As soon as it is fairly under the tendon, turn the sharp edge upwards, and divide from within outwards, *i. e.*, from the popliteal space to the skin. The biceps flexor cruris is usually the most tense, but such is not always the case. Sometimes the outer hamstring tendon alone requires division; sometimes both outer and inner. In many cases after the division, the tendon's numerous tight bands spring up when the extension is kept up. Care must be taken not to wound the popliteal vessels and nerves, should interference with them be deemed necessary. Extension generally suffices. The operation being completed, pledgets of lint are put on the wound, and fixed there by adhesive plaster. The limb is supported by a bent turned splint, and rolled from the foot upwards. It is best to allow a week to pass before any attempt at extension is made, because by proceeding too quickly, the parts of puncture may be irritated, and the treatment delayed. The chief danger consists in the division of the peroneal nerve; and such an accident has happened. It occasions the patient considerable alarm, but in the course of time the divided nerve reunites, and sensation and motion are both restored.

INSANITY.

By JOHN WATSON, M.D., Southampton.

WE are indebted to the advocates of phrenology for having of late years given an impetus to the study of insanity. It is a question, however, whether this science has not introduced some disadvantages; among which may be placed the attempts that have been made to distribute the different manifestations of this affection to different portions of the brain, in accordance with their supposed subserviency to the different groups of mental faculties; and thus further to complicate a sufficiently difficult subject. I propose in this paper (1) to adduce reasons for rejecting the view first promulgated, I believe, by the late Dr. Prichard, and adopted, under the same or some equivalent name, by most recent writers both at home and abroad—that we can have what is called moral insanity, while the intellectual powers remain unaffected; and (2) to view the entire question from a different stand-point.

1. That insanity can be anything else than an aberration of a man's intellect is a startling proposition. It would be quite as reasonable to separate such cases as exhibit sensory illusions into a distinct class under the head of sensational insanity (thus mistaking an accidental condition for the essential disease), as it is to affix the term moral insanity to those cases which exhibit particular excitement or perversion of the moral sentiments. In a proper, restricted sense, indeed, terms expressive of the cause or course of insanity are in common use, such as religious, homicidal, suicidal, puerperal, etc.; but these are merely qualifying expressions, and are not used in contradistinction to insanity of the intellect. And, in the same way, the term moral insanity, meaning the moral causes or moral consequences of insanity, would be unobjectionable. Etymologically, this phrase means either *unsoundness of morals*, which is vice, or *insane conduct*, which is simply an inseparable accompaniment of insanity, and reveals it. But, beyond the objection there is to the phrase itself, the doctrine it represents will not, I think, bear investigation. It is meant that the sentiments, the emotions, as distinguished from the intellect, are *insane*. Emotion, I submit, may be designated as warm, enthusiastic, cold, depressed, perverted, or non-existent; it may be in excess or deficiency; but to call it insane is meaningless, and, if ever conventionally allowable, cannot be permitted in scientific language. In examining the various sources whence human actions spring, we shall find them reducible to either an instinctive *impulse* or a *motive;* the first being a motion of the organism, and the last a conception of the understanding. To which class does moral insanity belong? If to the former, then it is the province of a sound intellect to restrain its irregular instincts and emotions; but if to the latter, then we have insanity, properly so called. But, again, the distinct line that exists in the mind between the operations of the understanding, and the sentiments or emotions, is entirely overlooked by the advocates of this doctrine. Our moral nature is said to consist wholly in these sentiments or emotions; thus forgetting the fact that a moral judgment invariably precedes a moral sentiment, and that they stand to each other in the relation of cause and effect. A little reflection will make this apparent. The sentiments of reverence and gratitude towards God *follow* a rational conception of his being and attributes; remorse, the judgment that we have acted basely; pity, the conception of suffering; indignation, that of injustice; and so on. "The perception", says Royer-Collard, "of the moral qualities of human actions is accompanied by an emotion of the soul that is called *sentiment*. It is a fact that, by the contemplation of a beautiful action or a noble character, at the same time that we perceive those qualities of the action and the character (perception, which is a judgment), we feel for a person a love mingled with respect, and sometimes an admiration that is full of tenderness. A bad action, a loose and perfidious character, excite a contrary perception and sentiment." (Cousin's *Lectures*, by Wight: The True, the Beautiful, and the Good. Lect. 13.)

These considerations point to the conclusion that no real distinction exists between intellectual and moral insanity, and that moral insanity necessarily implies intellectual misconception.

2. Reverting to the general question of insanity, and bearing in mind that any lengthened metaphysical details are unsuited to the pages of a strictly medical journal, I will now attempt to draw an outline of the subject, merely stating results which I assume (if need were) could be fully established.

The world of mind is revealed to each individual in his own consciousness, and an attentive examination of what passes therein will satisfy us that all its phenomena may be grouped, as is ordinarily done, under the three heads—1. Operations of the understanding; 2. Feelings; and 3. Voluntary power. A still more careful examination enables us to divide the operations of the *understanding* into two great classes—1. Intuition or spontaneity; and 2. Reflection, or the logical faculties. In its intuitional activity, the reason acts by insight, seeing "the truth as the eye does light, only by being directed toward it." (Locke's *Essay*, bk. iv, ch. 2.) Hence do we derive all universal necessary truths, and the first principles of all knowledge. (See Reid, Sir William Hamilton, and Cousin.) In its reflective activity, reason acts by reasoning (observation, deduction, and induction); and hence do we derive all relational knowledge, and the arts and sciences. The feelings also are divisible into—1. Sentiments or emotions; and 2. Sensations. Sentiment is defined as *a sensible response excited by a conception of the understanding*. Sensation, on the other hand, is excited by or through a bodily organ, and may be either an instinct or the action of one of the special senses. The will is the free power we possess of determining inward or outward activity.

As giving distinctness to what has just been written, I may be allowed to reproduce it thus:—

CONSCIOUSNESS.

1. *Understanding:*
   - *a.* Intuitional, or Spontaneity—Reason acting by Insight. Necessary truths: the Infinite: the Good: the Beautiful.
   - *b.* Logical, or Reflection—Reason acting by Reasoning. The relations of things.
2. *Feeling:*
   - *a.* Sentiment or Emotion: Love, Faith, Hope, Joy, Aspiration, Sorrow, Remorse, Awe, Veneration, etc.
   - *b.* Sensation—Instinct: The Special Senses.
3. *Will:* The Principle of Personality: a free Power of determining inward or outward actions.

Which of these classes of faculties is it, whose disorder that constitutes the essence of insanity? We exclude the *feelings*, because, as we have seen, they are instinctive tendencies which are susceptible only of differences in intensity, and insanity does not consist of intensified or destroyed feeling; and because this part of our nature is placed under the control of a will directed by a sound understanding. We exclude the *will*, because perversion of this principle constitutes, not a physical disease, but that moral disorder with which spiritualists and moralists, or legislators, alone have to do; and

we exclude that insight of the understanding which is called intuition, because it is a part of its own innate energy which depends neither on memory nor the senses, though called into activity through their exercise. There can be no difficulty, then, in admitting that the disease under consideration exists in the only other set of faculties remaining; that its *exciting cause* is disease of the material organ in which they inhere; and that its *proximate cause* is a perversion of the logical understanding, and through it a perversion also of the feelings and the will. Insanity, then, may be defined as—a dangerous misconception of one's personal relations, either persistent or with lucid intervals, and with or without illusions of the senses.

It will give more completeness to this sketch if I add, that a true conception of the understanding is an idea or belief in conformity with the nature of things, and that the class of misconceptions may be tabulated as under:—

MISCONCEPTION.

1. In matters common to all men: *Error* and *Ignorance*.
2. Peculiarities gradually acquired from circumstances: *Eccentricity*.
3. Peculiarities suddenly or recently coming on from disease: some forms of *Monomania*.
4. In which liberty is dangerous to the Individual and to Society: *Insanity*.
   - *a*. From destruction of all mental power—Dementia.
   - *b*. From general weakness of mental power; viz., inadequate conceptions, blunted emotions, and feeble will—Amentia.
   - *c*. Strongly exciting or perverting the instincts, emotions, and will—Mania, Monomania, Dipsomania, Impulsive Madness.
   - *d*. Depressing the instincts, emotions, and will—Melancholia.

TREATMENT OF DIABETES MELLITUS.

By T. INMAN, M.D., Liverpool.

IT is desirable that contributions, however small, should be made from time to time respecting any new plan of treatment proposed for severe and almost intractable diseases. As yet we have had few reports upon the practice adopted by Dr. Budd, of Bristol, in diabetic cases, although it was one eminently deserving of consideration.

I have, in my hospital experience, had four cases of diabetes mellitus under my care; two prior to the publication of Dr. Claude Bernard's researches, and the promulgation of Dr. Budd's views; and two since. Of the first two, I will only say that the patients went out of the hospital worse than when they came in, although no attempt was spared to benefit them.

The last two cases came to very different conclusions. I may, for the sake of brevity, describe both patients as being labouring men, about 40 years of age—ill for many months. The quantity of urine passed was over twenty pints daily, the specific gravity 1,045; the presence of sugar was ascertained by fermentation and other tests. Emaciation was considerable; and thirst great. Both had been under dispensary treatment before their admission. In adopting a plan of treatment I was guided by the following considerations:

1. The liver naturally produces sugar in a definite quantity. In diabetes there is an excess of sugar, and we may fairly infer that it comes from the liver. Opium has a decided effect in diminishing the bile producing or secreting function of the liver, and it is reasonable to suppose that it will reduce the sugar-forming function. Experience has long told us that no single remedy in diabetes has been so efficacious in diminishing the quantity, etc., of urine passed, as opium. Opium, therefore, should be one ingredient in the treatment.

2. Again, Bernard has shown that the liver makes sugar, no matter what is the nature of the food employed. Dr. Budd has shown that some patients, at least, may be benefited by saccharine food. But my patients did not long for sugar; and they did enjoy their ordinary food; consequently I neither restricted them to non-saccharine, or non-amylaceous diet, or prescribed unusual quantities of sugar. They were to have the ordinary full diet of the hospital, but more in quantity if they chose, either of bread, meat, or potatoes.

3. Again, it seemed to be clear that in diabetes, there was debility, implicating more or less the whole system; that there was danger of death by consumption; that the digestive powers, notwithstanding their apparent energy, must be impaired; at any rate, that opium was liable to disorder the stomach, and that it could be tolerated in larger quantity if combined with quinine.

The result of these considerations was the following prescription for a pill:

Opium, one grain; quinine, two grains; to be taken every four hours. Full house diet, with porter daily.

The effect of this was soon appa ent. The men began to improve rapidly and steadily; the urine diminished until it stood at ten pints only per day, with a specific gravity of 1,035. Commensurately with this, their strength and spirits increased, and they gained in flesh considerably. The opium never affected the head except on one occasion, when the patient, hoping to expedite his recovery, took a double dose. The bowels were habitually regular. The plan of treatment was neither varied or altered during their residence in the hospital. They remained under notice, the one about three months, the other for six weeks. Both left the house of their own accord, as they considered themselves sufficiently cured, and competent to do their ordinary work. I have seen one since he went out, and found that he continued strong, and, as he thought, well.

Of course I do not imagine that these two cases are sufficient to upset our older notions of the correct treatment of diabetes. I merely offer them as a small contribution to our general therapeutical stores.

I may just mention, as a curious fact, that one of my unsuccessful cases found that he received more benefit from a diet of raw beef than from any other thing dietetic or medicinal which he had taken; and that every new medicine did him good for about two days.

REMOVAL OF AN INVERTED UTERUS.

By J. BOWER HARRISON, M.D., Higher Broughton, Manchester.

IN the *Medical Gazette* for April 1840, I published a case of the successful removal of an inverted uterus. At the period at which the case was published, only a comparatively short time had elapsed since the performance of the operation. It may be interesting, therefore, to supply, at the present time, such particulars as I am able to collect respecting the final success of the case.

I am more especially induced to offer these particulars, as the case itself seems to have escaped the notice of many who have directed their attention to this subject. In a paper, for example, which appeared in the *Medico-Chirurgical Transactions* for 1852, on the Inversion of the Uterus, by Dr. Gregory Forbes, no allusion is made to my case, although the paper professes to contain a complete record of what has been published in relation to this disease. I must acknowledge, however, that Dr. Forbes afterwards did me the favour to write me a letter in which he regretted the omission, and expressed his wish to supply the defect by a supplementary notice.

Some time subsequent to the operation, which I related in the *Medical Gazette*, my patient left Manchester, and I unfortunately lost sight of her. This I regretted, though I had every reason to suppose that she was in good health, for my friend Mr. Crosse of Norwich wrote to me in July 1844, expressing a wish to have full particulars of the case. He says, "I have for some time been attending to the subject of *inversio uteri* (having had a successful case of removal of that organ), with a view to writing a comprehensive essay thereon. By some great oversight, I was not cognisant of your excellent case detailed in the *London Medical Gazette* of April 1840. I hope you will excuse me for putting to you the subjoined queries, in further illustration of your case," etc.* Mr. Crosse happily discovered the patient himself, for, in December of the same year, he writes me word, "I do not think I have before informed you that my particular friend Mr. Samuel Smith, Senior Surgeon to the Leeds Infirmary, has found your extra-uterine patient, and sent me full particulars about her present state. She *continues in good health*, as do several others in this country whom I have seen. The gradual method you pursued, in removing the uterus by ligature, coincides precisely with my own ideas as to the best way to do it with success."

In a letter which Mr. Crosse wrote to me in June 1845, he says, "I was lately at Leeds, and saw your extra-uterine

* The original letters are in my possession.