lying close beneath the subcutaneous colli, and in the same plane with the superficial parts of the sterno-mastoid. In the Hippopotamus and some other animals, a superficial hyo-mental muscle extends from the hyoid bone, or rather from the subhyoidan septum—that is, the septum in which the hyoid is formed—to the lower jaw near the symphysis. It is connected behind with the stylo-hyoid muscle; and its lateral part, attached to the side of the jaw and continuous behind, through the medium of the septum, with the posterior belly of the digastricus, forms the anterior belly of that muscle. In ourselves it is the more median portion of the hyo-mental, the portion attached near the symphysis of the jaw, which forms the anterior belly of the digastric, and which is continued, by means of the subhyoidan septum, into the hinder belly of the digastric. Thus the digastric muscle is compounded of parts of two strata—a superficial part, on the level of the external oblique, the pectoral, and the sterno-mastoid, and a deep part, on the level of the internal oblique, the sterno-hyoid, and the scaleni; and the septum, by which these two parts are retained in continuity, becomes the intermediate tendon between the two bellies and also the bond of connexion with the hyoid.*

The purpose served by the peculiar disposition of the digastric muscle appears to be the fixing of the hyoid bone and the securing a steady basis to the tongue during the opening of the mouth and during the movements of the jaw in mastication. Had it not been for the influence of the posterior belly of the digastric and the stylo-hyoid in tending to draw the hyoid upwards and backwards, and so counterpoising the influence upon that bone of the sterno- and omo-hyoid, and the genio-hyoid, the retiring angle behind the chin would have been obliterated, the tongue would have been depressed, and the various parts about the pharynx and fauces would have been displaced during the act of opening the mouth. All this, however, is avoided; and the hyoid, the larynx, and the adjacent structures are admirably poised and steadied during the movements of mastication and of opening and shutting the mouth. In the lower animals, where this retiring angle is less marked, the provision just mentioned for preventing its alteration is less needed; and the digastric, not unfrequently, runs straight from the skull to the jaw. Still, it is usually interrupted, more or less, by a non-muscular interval, which, in such cases, presents nearly or quite the ordinary appearance of an inscription or septum; proving, if such proof be required, the septal nature of the intermediate tendon in man.

THERAPEUTIC MEMORANDA.

EFFECTS OF BELLADONNA PLASTER.

I AM reminded by a notice in a recent number of the JOURNAL, of the local action of belladonna absorbed into the system, upon one eye, of a similar occurrence which fell under my own observation in the case of a lady for whom I applied a belladonna plaster over the heart. A day or two afterwards she came to me to say that she found that the sight of her left eye had become very indistinct, but the right eye was unaffected. The left pupil was much dilated, and also somewhat irregular; the right pupil was quite natural. This appearance naturally suggested to me some serious apprehensions; but, remembering the belladonna plaster, I told her to have it removed and the skin washed. The next day the pupil had regained its proper size and form, and the defect of sight was removed, and has not returned. The same suggestion had occurred to me as to some of the correspondents of the JOURNAL, that a portion of belladonna might have been accidentally brought by the hand into direct contact with the eye; but the result of particular inquiry was entirely opposed to this supposition.

Claremont, Leeds.

J. D. HEATON, M.D.

GUARANA IN SICK-HEADACHE.

IT is in the congestive forms of headache that guarana most frequently succeeds; thus it will sometimes relieve the throbbing headache of the man who "got exceeding drunk yesterday," and whose "brain is still sticking to the ceiling," with startling rapidity. In such cases, the action of the medicine may be seen, for the large injected conjunctival vessels become small by degrees and beautifully less as the drug is absorbed and the cephalalgia departs. This seems to suggest its action as being stimulant to the sympathetic system: if further trial prove this to be so, we must regard it as the opposite in action to nitrite of amyl.

S. M. BRADLEY, Manchester.

* For further particulars respecting the digastric, see *Journal of Anatomy*, vi, 324; and *Observations on Myology*.

ON

THE SCIENTIFIC VALUE OF THE LEGAL TESTS OF INSANITY.*

By J. RUSSELL REYNOLDS, M.D., F.R.S.,

Professor of the Principles and Practice of Medicine in University College, and Physician to University College Hospital; President of the Metropolitan Counties Branch of the British Medical Association; etc.

[Concluded from page 664 of number for June 22nd.]

II. I pass now to the second part of my subject—viz., the legal test of insanity that is employed when one accused of crime is defended on the ground of his being insane. On this point the legal dogma is very explicit, and consists in the knowledge of right and wrong, and of the consequences of an act or acts.

Referring to the work of Sir Oldnall Russell (*A Treatise on Crimes and Misdemeanours*, 4th edition, by C. S. Graves, Q.C., 1865), it is easy to discover the recognised doctrine of the court of justice. I find the following illustrative examples. Lord Ferrers was hung for murder, it having been urged "that it was sufficient if the party had such possession of reason as enabled him to comprehend the nature of his actions and discriminate between moral good and evil" (p. 15). Parkes, for entering the French service, was condemned, although weak from a child, because it could not be shown that he "did not really know right from wrong". Bowler, an epileptic maniac and melancholiac, was sentenced on the same grounds. In the case of the King v. Offord, Lord Lyndhurst said the question was, "did he know that he was committing an offence against the laws of God and Nature". Again, in the prosecution of Oxford, Lord Denman said, "If some controlling disease was, in truth, the acting power within him which he could not resist, then he will not be responsible"; but the same learned judge goes on to say to the jury, the question is "whether he was labouring under that species of insanity which satisfies you that he was quite unaware of the nature, character, and consequences of the act he was committing; or, in other words, whether he was under the influence of a diseased mind, and was really unconscious at the time he was committing the act that it was a crime" (p. 17.) Still further, let me quote the questions put to the learned judges on the acquittal, by the Lords, of M'Naghten.

"Q. I. What is the law respecting alleged crimes committed by persons afflicted with insane delusion in respect of one or more particular subjects or persons; as, for instance, when, at the time of the commission of the alleged crime, the accused knew he was acting contrary to law, but did the act complained of with a view, under the influence of insane delusion, of redressing or revenging some supposed grievance or injury, or of producing some supposed public benefit?"

"A. I. Assuming that your lordships' inquiries are confined to those persons who labour under such partial delusions only, and are not in other respects insane, we are of opinion that, notwithstanding the accused did the act complained of with a view, under the influence of insane delusion, of redressing or revenging some supposed grievance or injury, or of producing some public benefit, he is nevertheless punishable, according to the nature of the crime committed, if he knew at the time of committing such crime that he was acting contrary to law, by which expression we understand your lordships to mean the law of the land.

"Q. II. What are the proper questions to be submitted to the jury where a person alleged to be afflicted with insane delusion respecting one or more particular subjects or persons, is charged with the commission of a crime (murder, for example), and insanity is set up as a defence?"

"Q. III. In what terms ought the question to be left to the jury as to the prisoner's state of mind at the time when the act was committed?"

"A. II and III. As these two questions appear to us to be more conveniently answered together, we submit our opinion to be, that the jury ought to be told in all cases that every man is to be presumed to be sane, and to possess a sufficient degree of reason to be responsible for his crimes, until the contrary be proved to their satisfaction; and that to establish a defence on the ground of insanity it must be clearly proved that, at the time of committing the act, the accused was labouring under such a defect of reason, from disease of the mind, as not to know the nature and quality of the act he was doing, or, if he did know it, that he did not know he was doing what was wrong."

With regard to this test, I may say, and most emphatically, that it is utterly untrustworthy, because untrue to the obvious facts of Nature.

* Read before the Metropolitan Counties Branch, June 5th.

There are thousands of undoubted lunatics in our asylums and elsewhere who know the difference between right and wrong as well as we do; who know the consequences of their actions as well as we do; and there are among these a large number whose pain and torment—whose actual disease, indeed—exists in a morbid exaggeration of the sense of right and wrong, as applied to themselves, to their conduct in the present and the past.

It does not seem to me that a very obvious distinction has, in our courts of law, been always drawn between two things which differ widely; viz., the condition of the moral sense in itself, and the faculty for its correct and special application to special acts. There may be the keenest *feeling* with regard to right and wrong in the general; the most earnest wish to do the one, and to avoid the other; and yet an utter perversion of *idea* with regard to particular courses of conduct. There may, on the other hand, be a callousness and general indifference on the weightier matters of the law—*i.e.*, there may be no general exaltation of the sense; while there is a positively morbid exaggeration of self-reproach in regard of petty details of conduct, which may be spoken of as “the tithes on mint, anise, and cummin.” Sane people differ widely from one another in both directions. The general moral sense is keen in some, and only quite painlessly sharp in others; and the special applications of such moral sense as sane people possess lead them often into eccentricities, punctilious performances, or practical dishonesty. It would seem, indeed, to be sometimes true that sane people torment themselves with trying tests on worthless matters; attach importance to this observance or to that; lay down for themselves and others rules which they cannot keep; sniff out the wickedness of others when their conduct fails to keep the line that has been drawn; and yet these very folks lie and cheat, and do shabby and dirty things which chance to lie outside the charmed circle that they have so richly cultivated. There are others—and “all honourable men,” as well as sane—whose moral sense is no burden to them; who walk or even canter through life never troubled by a suspicion of themselves; never over-anxious about general principles; dealing leniently with those who err, wondering at the scrupulous, and only vexed when roughly taken to task about some really unconsidered “impropriety.” Differences like these, with which all are familiar in the sane, are to be encountered in those who are insane. We find lunatics ranging from the one to the other extreme in regard of the attention which they pay to their own moral sense, and in regard of the acuteness of that sense. There are to be found, at the lowest level, those in whom the notion of right and wrong seems to be blunted or extinguished, who do shameful things, and utter shameful words without one atom of the sense of shame; there are others whose moral sense is so perverted that all which sane people reverence as right they openly ignore, and much that is by sane people held as wrong they defend and do. But, there are others, undoubtedly insane, suffering from real mental disease, who present as strong a contrast to them as it is possible to find in human nature—those whose moral sense has been quickened into morbid activity, and who torment themselves with its application to their actions and words; and, not only so, but with regard to their thoughts and feelings and motives in the present; and still further, with regard to their conduct or wishes or motives ten, twenty, or thirty years ago. Their sense of moral obligation is morbidly, sometimes almost insufferably, keen; and their malady consists in this exaggerated intensity of that healthy function.

With regard to the detailed application of the sense of right and wrong to particular acts, words, thoughts, motives, or feelings, there are endless diversities to be found in lunatics; some troubles may be but the result of the exaggeration of the moral sense—*i.e.*, they may be in conformity, in regard of kind, with the persuasions of those who are sane. The lunatic is troubled to a degree that the sane man would not be with regard to this or that; but the sane man would agree with the insane that he was right in his apprehension of the nature or quality of his conduct, while he would differ from him in his appreciation of its quantitative value. That which is morbid is the exaggeration of the sense of right and wrong, and not its absence. Those who have seen much of lunacy know how terrible is this morbid awakening of conscience in those whose brains have become diseased—those who, after years of apparently spotless life, become the prey of tormenting reproaches, often with regard to past thoughts and acts, about which sane people would never feel a trouble or a pang.

Between the two extremes—*i.e.*, between the lunatic who has lost his moral sense, and the lunatic whose torment exists in its exaggeration—there are to be found illustrations of every degree of change, both in quantity and quality; and with such facts before us—facts which any one might verify for himself by a visit to any one of our large lunatic asylums, it is simply monstrous that the “knowledge of the difference between right and wrong” should be made the test of

insanity. The lunatic knows the difference as well as we do, and often feels it much more keenly; and it is this feeling which often drives him to despair or to some fearful act, which the sane man, with easier conscience, would have avoided.

This leads me to say a few words upon the subject of morbid “impulse.” I take it that almost every sane person has, at some time or another, felt disposed, moved, or impelled to do or say something which he has avoided either doing or saying by a moment's reflection. Further, that sometimes the impulse has been of but momentary duration, and easily set aside; and that sometimes it has lasted longer, and has had to be overcome by an effort and an act. It may be that the disposition was to jump off a bridge, to run against an express train, to drink a liniment marked in red letters “poison,” to knock some one down, or to break this or that which he knew to be of value. Now, with regard to such momentary impulses, those who have felt them will acknowledge that they often are quite unconsidered, have no relation to the knowledge of, or facts of, right and wrong, and that the impulse has sprung up suddenly, and often as the result of some such impression on the senses as those I have mentioned. Again, is it not well known that people reputedly sane do sometimes act upon impulses of this kind, and do or say things in an unconsidered manner, or, as we often say, “impulsive” manner, which they afterwards regret, and that deeply, but which they may repeat and regret, time after time, without being able to explain their conduct to others or to themselves? Similar impulses occur in those who are the subjects of disease; and they not unfrequently result in suicide, or homicide, or some other crime. An unstable condition of the nervous centres allows action upon impulse, starting from sensation, which a better state of nerve-nutrition would have enabled the individual to resist; but it is difficult to draw the line between the sane and insane in such cases, and it is quite impossible to accept the legal definition of a knowledge between right and wrong, and of the consequences of actions. The knowledge may be as accurate in the insane as in the sane; the desire to do the right and avoid the wrong may be as keen in the one as in the other, but the power to resist is absent in the one and present in the other. In that want of power lies the true evidence and fact of disordered brain, and not in the knowledge which may be present as to this or that. The lunatic may weep, with bitter regret, over that which he has done; the sane man often says nothing, or only laughs at his escape from the edge of the precipice, from throwing himself over which, by some strong effort, he had managed to escape. I admit that some lunatics, after acting upon impulse of the kind now mentioned, show no regret, no sense of the nature of their conduct; but I must affirm that there are others whose conduct has been of this impulsive kind, who can give no explanation of its motives, and who repent of their misdeeds with a bitterness that can find no expression in words.

Under such circumstances, it is worse than idle—it is scientifically and morally wrong—to apply the legal test of knowledge; each case can only be judged upon its individual merits; and all those varied considerations—to which I have already alluded—which lead the physician to a diagnosis of the condition of his patient must be taken into the account before he or any one can pronounce upon the sanity or insanity of the accused; or upon the presence and degree of the responsibility which attaches to the act he has committed. Let me reiterate that, it is not the presence or absence of knowledge about actions, but the presence or absence of power to do them or resist them which is a sign of sanity or insanity of mind.

III. I now approach the question of mental *capacity* in its legal and medical aspects, and with regard to it will adopt the method already followed, of in the first place stating the legal dogmata so far as I can gather them, and then of examining their scientific value. The question may be stated thus: What is the test of mental unsoundness to be applied to individuals with regard to whom insanity is urged, for the purpose of either, on the one hand, depriving them of the power or relieving them of the burden of the disposition of property, or, on the other hand, of setting aside such dispositions, testamentary or other, that they may have made? With regard to many persons, there may be no difficulty whatever. The sanity of the majority is unquestioned; the insanity of others is undoubted. But such cases rarely become the objects of legal inquiry. It is the doubtful, the intermediate cases, that give rise to questioning and dispute; and by such cases the nature, criteria, and capacity of those who are recognised as “partially insane” become the objects for investigation. What are the tests of partial insanity? and what are the legal relationships of the so-called “partially insane”? By the terms they have used and the actions they have taken, both professions—the legal and the medical—have admitted generally the existence of partial insanity; and it is our business to inquire whether they are right, and how far they are right.

Leonard Shelford says: “A lunatic is properly one who has lucid

intervals, sometimes enjoying his senses, and sometimes not" (p. 4, *op. cit.*). Again: "The law recognises partial insanity; and in civil cases this partial insanity, if existing at the time the act is done, if there be no clear lucid interval, invalidates the act, though not directly connected with the act itself; but in criminal acts it does not excuse from responsibility, unless the insanity is proved to be the very cause of the act" (p. 44). The Lord Chief Justice Cockburn, in the case of *Banks v. Goodfellow*, July 6th, 1870 (*Law Reports, Court of Queen's Bench*, vol. v, p. 571) gives, as the judgment of the Court, the following statement. "If the testator, at the time of making the will, was of capacity to make the will, as defined by the Chief Justice, the existence of mental disease, if latent, so as to leave him free from the consciousness and influence of delusion, there having been a total absence of all connexion between the delusion and the will, would not overthrow the will. . . . We are of opinion that a jury should be told . . . that the existence of a delusion compatible with the retention of the general powers and faculties of the mind will not be sufficient to overthrow the will, unless it were such as was calculated to influence the testator in making it." Lord Hale, in speaking of partial insanity, and of those who were melancholic, said that those "who, for the most part, discover their defect in excessive griefs and fears, are yet not wholly destitute of the use of reason. . . . and this partial insanity seems not to excuse them in the committing of any capital offence" (Sir W. O. Russell, *op. cit.*, p. 14.)

These quotations are, I think, sufficient to show—1. That partial insanity is recognised by the law; 2. That the responsibility, as well as capacity, of the partially insane persons varies; 3. That the presence or degree of responsibility is subject to two different kinds of tests—(a) the quality of the act performed, viz., the civil or criminal character of the act in dispute, and (b) the discoverable connexion between the alleged proof of insanity and the particular act in question; and 4. That in the one class of case—the civil—the relation between delusion and the act is allowed to exert some influence; whereas in the other—the criminal—it is ignored.

This is not the time, nor perhaps am I the proper person, to discuss the logical or equitable character of some of these distinctions. It is not my purpose to enter upon the ethical question of the difference between capacity for civil and responsibility for criminal acts, although I think it would not be wrong in me to state my own conviction that any form of disease which should be allowed to deprive a man of liberty and disposing power in regard to property, should be admitted to excuse him from the responsibility for a criminal act. It seems to me illogical that a man should, for example, by reason of disease, be prevented from excluding from the benefits of his will a relative who has been unkind to him, and whom he may sincerely hate; and that he should yet be liable for penalties if he knocked down that obnoxious relative when he chanced to come into his presence for the purpose of cajoling or of intimidating him into doing this or that. Such person is deprived of the power of dealing with his relative by fair means, and is punished when he adopts the foul. If he be punishable for the one, he ought to be allowed to exercise the other power. If, by reason of disease, he be deprived of the latter, he ought to be held, by reason of disease, to be irresponsible for the former.

But, to return to the first point mentioned—viz., the existence of so-called "partial insanity"—let me ask what is meant by this expression, and how far the expression is warranted by facts. I have already quoted the legal dogma that the term "lunatic means every insane person, and every person being an idiot or lunatic of unsound mind" (*Shelford*, p. 6, 8 and 9 *Vict.*, cap. 100, sec. 114, cap. 126, sec. 84); and upon this point we, as medical practitioners, feel a very grave difficulty. There are many diseases of the brain which involve the mental functions; impair the memory; weaken the judgment; diminish the capacity for exertion; blunt or exaggerate the emotions, or alter the capacity for their control; and interfere with the faculty of expression by either spoken or written word; and yet it could not be said that such persons were either lunatic or, in its popular acceptation, of unsound mind. Their brains are weakened or diseased, but they fall short of the legal tests of insanity. They exhibit no delusion; they know the difference between right and wrong; they are aware of the consequences of their actions; and they are quite capable of doing certain things, but, by reason of disease, are quite incapable of others. There is a definite amount of mental exertion that they may make, not only without injury, but with advantage to themselves; but their capacity is limited, and there would be danger in their attempts to pass beyond the limits which their disease has fixed. On certain simple matters, such as the ordering of their dinners or the disposal of some property in the funds to near relatives, they may be as clear in thought and as correct in intention as any sane person in this room; but, supposing that, outside his own small and simple affairs, one thus afflicted has the misfor-

tune to be executor to a large estate, trustee of a bank, or to be in some way responsible for the complicated affairs of others, it might be unsafe, and indeed perilous to him, to attempt to enter upon their consideration, and also absolutely ruinous to others for his judgment to have been made the basis of action. Now it sometimes happens that such cases become the subjects of legal inquiry; and I have heard very strong expressions used by learned counsel with regard to the qualifications and *morale* of a physician who should say that a man was quite fit for the one duty and quite unfit for the other. It seems to be impossible, according to the present state of the law, to relieve a man from responsibility without stating that he is of "unsound mind"; and such relief has sometimes been obtained by such enforced statement, but it has been obtained in spite of the protest of the physician as to the phrase, and for the simple purpose of securing the patient against work for which he was obviously incompetent, and the attempt to enter upon which would have endangered reason, or life, or both. But the injustice that may attend such most sensible and justifiable relief from work is great; for the man is thereby deprived, or may be deprived, of the power of doing anything which shall have a legal force and sanction. In order to save a man with diseased heart, let me say, for the sake of example and analogy, from running a three-mile race or climbing a mountain, the physician has to certify that he is of unsound heart, which may be understood to mean that he is incapable of any act; and, in doing so, it may turn out hereafter that his judgment, his motives, and sometimes even his word, are called in question, because he allowed such a person to walk gently on the level, or even to rise from bed. When cases of this sort arise—and they have often arisen, and are still likely to do so—it is obvious that no general line can be drawn, nor test adopted; but that each case must be judged by itself, and upon its own merits; and that it would be scientifically absurd and morally wrong to deprive a man of all power because he is deprived by disease of some. This is one of the simplest questions, medically considered, which can require the advice of the physician; but it is one often fraught with much difficulty, in consequence of the legal requirements for its management; and it becomes not unfrequently the subject of protracted legal investigation.

But the question of so-called "partial insanity" often takes another form. A man is said to have a delusion upon one point, and to be sane upon all others; and he is held responsible for any criminal act, responsible for civil acts which have no direct relation to his delusion, and irresponsible for those which have such relation. Upon the last point, I take it, we do not differ from the legal profession; but upon each of the others we must join issue, because of the view we entertain with regard to the relation of this partial insanity or monomania.

These, I think, we may lay down as general principles of medical science: 1. That, except as the result of a local injury, the man who has "anything the matter with him" is of unsound health; 2. That the most narrowly localised expressions of disease are often but the indicia of wide-spread or deeply rooted constitutional disorder; 3. That there is no constant relation between the amount of local mischief and the degree of general disturbance; and 4. That, although we may be able to understand and express the relations between them in some instances, we are unable to account for them in others. The phenomena of mental disturbance form no exception to, but rather examples of, the truth of these four general propositions: 1. The man who has any insane delusion, be it ever so small or harmless, is a man of unsound mind; 2. He whose apparent mental disturbance is limited within a narrow field, exhibits so frequently the evidence of other and wider ranges of nervous malady—sometimes in intellectual or moral function, sometimes in those of sensation or of emotion, sometimes in the state of his physical health—that we are compelled to regard the man as of unsound mind and the subject of grave disease; 3. Sometimes we may observe a distinct and direct relation between the often expressed delusion and the words or acts of the individual; but, 4. Often no such relation can be discovered by the operation of our own healthy minds; and yet we are warranted in inferring, from the facts that come before us, that there was a relation which no sane mind could have anticipated.

This being the case, we demur to the dogma that I have quoted, of the relation between delusion and the act under question. We say that the man's mind is unsound, and that it is sometimes impossible to determine whether or no that unsoundness bore directly or indirectly upon his conduct; and that the principle of basing the validity of a document or disposition upon the discovery of such relationship is unscientific and unjust. It is an insane mind with which we have to deal, and it would be unscientific and absurd to apply to that insane mind the laws of thought which we recognise in the sane. A healthy mind cannot see or foresee the relation which may exist in an un-

healthy mind between a delusion—a monomania—and an act; and yet it may exist, and have been the cause of that act. If we admit the existence of unsoundness of mind to any degree—and, *à fortiori*, to such degree as to give rise to a definite delusion—it is most unphilosophical to apply to that mind, in their entirety, the laws which regulate our own thoughts and motives of appreciable relationship between this thought and that. It is admitting the existence of a sound and unsound mind in the same individual, and using the former to explain the movements of the latter. I use the term “individual” advisedly, because I do not think that we can in such way, or in any such way as the legal doctrine admits and sanctions, recognise the mind of a man as susceptible of division and subdivision.

The view that I take of so-called “partial insanity” may perhaps be rendered more apparent by an illustration or analogy from disease of the heart. I select a well known malady, aortic regurgitation—the failure of one or more aortic valves to close, and by their closure to prevent the reflux of blood from the great vessels into the left ventricle. This condition may exist alone; that is to say, the muscular substance of the heart may be healthy; the action of the other three sets of valves may be perfect; the pulse may be regular; the person so circumstanced may be unaware of his malady; he may feel no discomfort of any kind; he may live to the ordinary term of life; he may die of some affection totally unconnected with his heart-disease. The valvular state may be recognised by its special sound, or by the condition of the pulse; but it often happens that it is discovered accidentally by the physician in examining for the purpose of life-assurance, or on account of some ailment quite unconnected with the heart, such as dyspepsia or a common “cold”, which may chance to bring the individual under observation. There is a partial unsoundness or insanity of the heart, the effects of which may vary widely; they may be *nil*, or they may be such as to render life most miserable, inducing in some attacks of anginal suffering, in others dropsy, in others hæmorrhage. We may explain some of these consequences; we may foresee them; may guard against certain sources of danger; may relieve some forms of distress. But, although the individual with this aortic mischief may live to fourscore years, his life is not insurable for an hour. It is just one of those forms of heart-disease which frequently terminate suddenly, unexpectedly, and without apparent provocation. At any moment the machinery may break down; there is a sudden faintness, a gasp, and all is over. If we were questioned about such case, and the capacities and probable future of the individual, we might reply: “Although he seems well, there is a definite partial disease of the heart. It may lead to this or that; it may be followed by a long series of troubles that shall wear life out; it may go on for many years, and occasion no inconvenience, or it may be fatal at any moment; and why it should be so we cannot always tell.” Sometimes we may trace the connexion between the chronic or sudden troubles that arise, but often they are inexplicable; and I do not know that ever it has been distinctly shown why a mechanical impediment of this particular kind, which is borne so well for many years in spite of work and carelessness, should sometimes come to so abrupt an end.

The man with monomania is somewhat similarly placed. For many years he may go on performing his various mental functions, and filling his place in business or society; he may, to the ordinary observer, display nothing that is wrong; but still there lies the disease, ready to declare itself at any moment, sometimes in a manner that may be connected with the particular delusion, but as often in some other and unexplained direction. The heart is partially unsound in the one case, the brain is partially unsound in the other; but the man is diseased or unsound in both instances, and has not, and cannot have, the full capacities or responsibilities of one who is free from either ailment. The simple fact of the partiality or limitation of the evil is of little moment in estimating the capacity of the patient. With regard to the one, life is uncertain at every turn; and, with regard to the other, reason is insecure at every moment. And so subtle are the relations between each malady and its possible results, that it would be presumption to pretend to predict their course; and it would be monstrous to assert either the presence or absence of direct relation between the malady and certain events that may have happened. Sometimes the relation may be plain enough, but often it is such that we must, with regard to it, confess our present ignorance. The doctrine, the legal position with regard to “partial insanity,” requires revision, for it is out of harmony with what we know of disease.

I have thus endeavoured to shew that the legal tests of insanity are at variance with the facts of science: 1. That the general notion of the value of delusion is unsatisfactory, because delusion may be absent, and because, when present, its value varies from extreme to extreme; 2. That the test of the knowledge of right and wrong, and of the consequences of actions, is again untrustworthy, because it may exist in

the lunatic, and exist to an exaggerated degree, and because its application to particular acts is of character varying in the insane as it does in the sane; 3. That the doctrine with regard to partial insanity is untenable, because there is no such thing as a sound and unsound mind coexisting in the same individual, and because it is impossible to determine the limits of disturbance which may be occasioned by what we term a localised or partial ailment.

The final object of this paper is to propose some mode of remedying the evils which at present exist; and that which occurs to me to promise the best results is to inaugurate a conference between the medical and legal professions upon this matter, with the purpose of taking such steps as may be thought most conducive to the end in view. It is not my wish to forestall anything that such conference might adopt as desirable; but I may be allowed to suggest that the following points should be considered.

1. The arrival at a better definition of insanity generally.
 2. A revision of the tests of insanity; (a) that based upon the existence of delusion; (b) that turning upon the knowledge of right and wrong, and of the consequences of actions.
 3. An examination, in all its bearings, of the doctrine of partial insanity, and its responsibilities.
 4. A revision of the distinction between responsibility for criminal acts and capacity for civil acts.
 5. An inquiry into the mode of dealing with those whose mental condition is impaired, but who are not, in the popular sense of the word, “insane”.
 6. An examination of the possibility of dealing with those bordering upon insanity, as at present recognised.
 7. A determination of the mode to be adopted in dealing with cases, both civil and criminal, when insanity is alleged as a plea of innocence, or as a bar to disposing power.
 8. The possibility and desirability of doing away with the present mode of investigation in a court of law; viz., by the calling of skilled witnesses on different sides.
 9. The possibility or desirability of a court or of a commission to report on all cases of impending legislative inquiry, in regard of those who are alleged to be insane.
- I cannot but believe that, if the legal and medical professions were to meet upon this matter in a friendly manner, and with a common object—not as they do when they are called upon to determine the merits of this or that particular case which may or might be brought before them, but to aim at some general principles of consideration and of action which should be applicable to all cases—the result would be the discovery of some mode of remedying or of diminishing the evils which now exist, and of enabling them in the future to attain in practice that which is the common object set before each of them in theory—viz., the discovery of truth.

NOTES ON SOME POINTS IN PREVENTIVE MEDICINE.*

By C. G. WHEELHOUSE, F.R.C.S., Surgeon to the General Infirmary, Leeds.

[MR. WHEELHOUSE, after thanking the members of the Branch for electing him President, commented briefly on the importance of taking every few years—in accordance with the advice of Sir W. Jenner in his address on Medicine at a General Meeting of the Association—a review of the progress of medicine. He regarded the present age as essentially one of progress, especially in medicine; but at the same time there were failings, of which Therapeutics afforded an example. He then proceeded to speak especially of Preventive or Public Medicine.]

This, gentlemen, is one of the channels into which I would wish to lead your thoughts; and I am well assured that, if I can only induce you to think deeply on the subject, to consider how vastly more numerous are the illnesses which you could prevent than those which you are able to cure, the few minutes I am occupying will not have been badly spent. It will bring to your minds the whole subjects of drainage, of ventilation, of water-supply, of overcrowded dwellings and schools, of impure and unwholesome feeding, of ill-assorted marriages, and finally of the two other great subjects on which I have asked your permission to say a few words.

Now, let me put a question to the whole of this assembly; let me ask each one of you individually, what, in your opinion, as medical men, are the greatest curses and scourges of our race in the present

* Part of the President's Address delivered at the annual meeting of the Yorkshire Branch, June 1872.