butter, and eat considerably more than the average quantity of it. Acquired idiosyncrasies, when they do occur, are usually temporary; and from this fact we may with some reason assume that the producing cause is more due to altered functional action rather than to histological change. The nervous or vascular systems may, under certain unrecognised conditions, have increased or diminished functional sensitiveness. In the case detailed, the rapidly unpleasant effects of the butter were probably due to the quick production of butyric acid caused by some excessive sensitiveness of the digestive system, which gradually becoming blunted allowed the man to resume his ordinary dietary.

The subject cannot, however, be considered with any hope of successful elucidation until pharmacology has made further onward strides—until we accurately know the normal result we cannot measure the deviation from it. But difficulties should not intimidate us; uncertainty is as natural a precursor of knowledge as is the gray dawn a forerunner of noonday light. Positiveness and assertion are the companions of ignorance. There was, no doubt, no uncertainty in medical teaching when astrology was looked upon as the guide to therapeutics, and Ficinus, Bellantius, Pirovanus, and Sir Christopher Heidon were authorities; when each might say, as the good wife of Bath confessed in Chaucer—

> "I followed aye my inclination
> By virtue of my constellation."

Paracelsus was without hesitancy when he boldly declared "that a physician without a knowledge of stars can understand neither the cause nor the cure of any disease." Yet, even in that age, Medicine did not let the lamp of truth die out, and in the darkest period of historic time she taught her votaries to love truth for itself.

ART. X.—*Expectancy as an Element in the Exaggeration of Railway Injuries, Real and Imaginary.*[a] By H. C. TWEEDY, M.D., Dubl., F.R.C.S.I.; Physician to, and formerly Lecturer on Medical Jurisprudence in, Steevens' Hospital, Dublin.

IT has been observed by Sir Walter Scott that, in travelling—"If we have found any stage particularly tedious or in an especial degree interesting, particularly short or much longer than we expected, our imaginations are so apt to exaggerate the original

[a] Read before the British Medical Association, in the Section for Psychology, Thursday, August 4, 1887.

impression that on repeating the journey we usually find that we have considerably overrated the predominating quality, and the road appears to be duller or more pleasant, shorter or more tedious, than what we expected, and, consequently, than what is the actual case. It requires a third or fourth journey to enable us to form an accurate judgment of its beauty, its length, or its other attributes." The knowledge of this powerful influence of first impressions, and the manner in which such impressions may become modified when the mind has recovered its true balance, should form the keynote of all inquiries into the complicated relations between mind and body, lest, on the one hand, we should be inclined to lay to the charge of imagination phenomena which may have a definite physical origin, or, on the other hand, to fall into the equally serious error of attributing to purely physical causes what may be the result of a disordered imagination, reacting upon a body which is, as we shall see, most susceptible of such influences.

The most obvious instances of the mutual reaction which takes place in health between mind and body may be seen in the phenomena of laughing, crying, blushing, vomiting, facial expression, &c. In each of these cases an influence from without reaching the sensorium will excite active disturbance in the cortex of the brain, as the result of which emotional impulses will stream down to the local vasomotor apparatus, the lachrymal apparatus, &c., causing in each case the visible expression of such emotions as grief, pleasure, rage, or disgust, with which we are all familiar. The mechanism by which these phenomena are brought about is very clearly and succinctly stated in the last edition of Dr. Tuke's admirable work, "The Influence of the Mind upon the Body," p. 23.

Again, sudden shock or intense mental strain is capable of producing on the body not merely vivid sensations of pain, but absolute objective results, more or less permanent in their character. As an example of the former, let me quote a remarkable case detailed by Prof. Bennett, of Edinburgh ("The Mesmeric Mania of 1851") :—

"A butcher was brought into the shop of Mr. Macfarlan, the druggist, from the market place opposite, labouring under a terrible accident. The man on trying to hook up a heavy piece of meat above his head slipped, and the sharp hook penetrated his arm, so that he himself was suspended. On being examined he was pale, almost pulseless, and expressed himself as suffering acute agony. The arm could not be moved without causing excessive pain; and, in cutting off the sleeve, he frequently cried out, yet when the arm

was exposed it was found to be quite uninjured, the hook having only traversed the sleeve of his coat."

Here there could be no question as to the acuteness of the pain and the pulseless condition of the sufferer, and yet the pain entirely arose from the mental impression of the hook having actually penetrated his arm.

But the physical consequences of shock or intense mental strain are not merely confined to subjective sensations. There are numerous instances of palpable morbid changes resulting from such causes. Take, for example, the sudden arrest of pigment formation, which results in premature blanching of the hair, from grief, fright, &c. In an interesting paper ("Revue des deux Mondes," 1872, p. 79), M. Pouchet recounts a number of instances of this remarkable change. Further instances may be found in a paper read before the Royal Society, in 1867, by the late Sir Erasmus Wilson, who adds a very typical case which I have not seen noticed elsewhere—viz., that of John Libeny, the would-be assassin of the Emperor Francis Joseph of Austria; the *Times* correspondent remarking that, when brought to the place of execution a week after his crime, his appearance was much changed, further observes that "his hair, which was black, had become nearly snow-white in the preceding forty-eight hours, and hung wildly about his head, his eyes seemed to be starting from their sockets, and his whole frame was convulsed."

Again, Dr. Carter relates the following case:—"A lady who was watching her little child at play, saw a heavy window-sash fall upon its hand, cutting off three of the fingers, and she was so much overcome by fright and distress as to be unable to render it any assistance. A surgeon was speedily obtained, who, having dressed the wounds, turned himself to the mother, whom he found seated, moaning and complaining of pains in her hand. On examination, three fingers, corresponding to those injured in the child, were discovered to be swollen and inflamed, although they had ailed nothing prior to the accident. In four and twenty hours incisions were made into them, and pus was evacuated; sloughs were afterwards discharged, and the wounds ultimately healed." ("The Pathology and Treatment of Hysteria," p. 24).

Once more, there is another very remarkable way in which the influence of the mind unon the body is manifested—that is, where the attention of the individual is fixed upon some particular object, with the expectation that certain results will follow. This attitude

of expectancy has apparently such a powerful effect on the organisation that not merely are subjective sensations produced corresponding to the expected results, but absolute motions of voluntary and involuntary muscles, tending to produce the very phenomena which were expected, and all this quite independently of any consciousness on the part of the individual that any efforts of their own were tending to produce such results. Let me give some examples of this. About forty years ago, the late Dr. Gregory, Professor of Chemistry, University of Edinburgh, was instrumental in introducing into this country the knowledge of a new and peculiar force (allied to the animal magnetism of Mesmer), to which its discoverer, Baron von Reichenbach, had given the name of "Odyle." By virtue of this "new imponderable," as it was called, it was contended that certain "sensitive" subjects were peculiarly affected by the proximity of magnets or crystals. After a magnet had been drawn along the arm of one of these subjects, strange sensations would follow, a feeling of prickings, or shootings, strange odours proceeding from it—sparks and flames issuing from its poles, and from the hands, eyes, and mouths of the operators. It was further stated that for some of these "sensitives" the magnets or crystals had so powerful an attraction as to attract them towards them without possibility of resistance.

It was, however, conclusively shown and admitted by von Reichenbach himself that when the magnet was delicately poised it never showed a tendency to be drawn towards the hand, and further that no manifestation of odylic force could be obtained save through the conscious human being; the attraction then, though real to the subject of it, was generated by the idea in the subject's own mind. The true explanation of these phenomena was given by Mr. Braid after many experimental inquiries, many of which were witnessed by Dr. William Carpenter, who thus describes what he saw:—"He (Mr. Braid) found that not only in hysterical girls but in many men and women 'of a highly concentrative and imaginative turn of mind,' though otherwise in ordinary health, it was sufficient to fix the attention on any particular form of *expectancy*—such as pricking, streaming, heat, cold, or other feelings in any part of the body over which a magnet was being drawn; luminous emanations from the poles of a magnet in the dark, in some cases even in full daylight, or the attraction of a magnet or crystal held within reach of the hand—for that expectancy to be fully realised, and conversely the same sensations were

equally produced when the subjects of them were led to believe that the same agency was being employed, although nothing whatever was really done, the same flames being seen when the magnet was concealed by shutting it in a box, or even when it was carried out of the room without the knowledge of the subject or the attraction of the magnet, for the hand being entirely governed by the idea previously suggested, positive or negative results being thus obtained at either pole, as Mr. Braid might direct." ("Mesmerism, Spiritualism," &c., 1878, p. 33.).

Interesting examples of Mr. Braid's experiments may be found in his own work, "The Power of the Mind over the Body," 1846, pp. 14, 15, 17, 20, 31.

We have all been familiar from childhood with the schoolboy's trick of holding a button suspended from a piece of string over a tumbler, when, after a time, it would begin to oscillate and strike the edge of the tumbler, giving approximately the hour of the day. This was, many years ago, proved to be the result of unconscious muscular action by M. Chevreul ("De la Baguette Divinatoire, du Pendule dit Explorateur et des Tables Tournantes," Paris, 1854). During the "Odyle" craze a modification of this "Pendule Explorateur" was constructed by a Mr. Rutter, of Brighton, under the name of "Magnetometer." This was a sort of frame mounted on a fixed stand, and having a ball suspended from its free extremity. When the finger was kept on the instrument for some time, the ball began to oscillate; but careful observation soon proved that the constancy and definite direction of the vibrations depended on the condition that the operator was watching them, and were, in fact, the result of expectancy. In proof of this Dr. Carpenter relates (*op. cit.*, p. 45) "a very amusing *exposé* of the mystery of the 'Magnetometer,' resulting from its application by Dr. Madden, a homœopathic physician at Brighton, to test the virtues of his globules, as to which he had, of course, some pre-formed conclusions of his own. The results of his first experiments entirely corresponded with his ideas of what they ought to be; for, when a globule of one medicine was taken into his disengaged hand, the suspended ball oscillated longitudinally; and when this globule was changed for another of (supposed) opposite virtues, the direction of the oscillations became transverse. Another homœopathic physician, however, was going through a similar course of experiments; and his results, while conformable to his own notions of the virtues of the globules, were by no means

accordant with those of Dr. Madden. The latter was thus led to reinvestigate the matter with a precaution he had omitted in the first instance—namely, that the globules should be placed in his hand by another person without any hint being given him of their nature. From the moment he began to work upon this plan the whole aspect of the subject was changed—globules that produced longitudinal oscillations at one time gave transverse at another, whilst globules of the most opposite remedial virtues gave no sign of difference. And thus he was soon led to the conviction, which he avowed with a candour very creditable to him, that the system he had built up had no better foundation than his own expectancy of what the results of each experiment should be; that anticipation, expressing itself unconsciously in involuntary and imperceptible movements of the finger, communicated a rhythmical vibration to the framework when the oscillations of the ball suspended from it were watched."

In the same way the mysterious forked hazel-twig, termed the Divining Rod, is nothing but another instance of expectancy guiding the muscular movements of an expert, so that (himself meanwhile unconscious of the influence under which he is acting) the twig, grasped by its two prongs, dips over the spot where water or metallic veins are to be found. The word expert is used advisedly, as, in the first place, few persons obtain any results whatever from the use of the divining rod; and the following instance will show that, even in the hands of an adept, the divining rod is useless when the individual is blindfolded, no matter how successful he may previously have been when testing its supposed virtues:—In the *Review of Medicine and Pharmacy* (New York), Sept., 1875, Dr. Beard relates—"A friend of mine, an aged clergyman of thorough integrity and fairness, has, for many years—the larger part of his natural life, I believe—enjoyed the reputation of being especially skilled in the finding of places to dig wells by means of a divining rod of witch-hazel, or the fresh branches of apple or other trees. His fame has spread far, and the accounts that are given by him and of him are, to those who think human testimony worth anything, overwhelmingly convincing. He consented to allow me to experiment with him. I found that only a few moments were required to prove that his fancied gift was a delusion, and could be explained wholly by unconscious muscular motion, the result of expectancy and coincidence. In his own yard there was known to be a stream of water running through a small pipe a few feet

below the surface. Marching over and near this, the rod continually pointed strongly downwards, and several times turned clear over. These places I marked, blindfolded him, marched him about until he knew not where he was, and took him over the same ground over and over again, and, although the rod went down a number of times, it did not once point to or near the places previously indicated."

But expectancy is capable of producing on the body more definite effects, and more lasting than those we have been considering up to the present. We are most of us familiar in hospital and private practice with the marked benefit derived from simple substances, when administered to so-called hysterical patients. Bread-pills act as strong aperients, and hypodermic injections of water produce sleep in many cases with absolute certainty. But even in persons who are not of an emotional temperament, the results apparent from expectation of cure, and combined with confidence in the means employed, and the person employing those means, are too well known to be questioned. As a curious example of this, there is no more distinct proof of the power of expectancy than the influence it undoubtedly seems to possess of causing the disappearance of *warts*. Dr. Carpenter gives two cases which occurred within his personal knowledge. In one the warts were disposed of by "counting," in the other by touching each singly with coloured water. I have myself seen several instances in which they have been completely removed by rubbing each morning with the slimy foot of a snail.

(*a.*) "In one case," says Dr. Tuke ("Influence of Mind on Body," 1884, Vol. II., p. 208), "a relative of mine had a troublesome wart on the hand, for which I made use of the usual local remedies, but without effect. After they were discontinued it remained *in statu quo* for some time, when a gentleman charmed it away in a few days."

(*b.*) The same author continues—"A surgeon informs me that some years ago his daughter had about a dozen warts on her hands. They had been there about eighteen months, and her father had applied caustic and other remedies without success. One day a gentleman called, and, in shaking hands with Miss C——, remarked upon her disfigured hand. He asked her how many she had? She replied that she did not know, but she thought about a dozen. 'Count them, will you?' said the caller, and taking out a piece of paper he solemnly took down her counting, remarking, 'You

will not be troubled with your warts after next Sunday.' Now it is a fact that by the day named the warts had disappeared, and did not return."

(*c.*) Dr. Tuke further adds (*loc. cit.*, p. 209)—"In visiting a county asylum some years ago, my attention was directed to several of the patients and nurses who were pestered with warts, and I solemnly charmed them away within a specified period. I had quite forgotten the circumstance until, on revisiting the institution a few months after, I found that my practice had been followed by the desired effect, and that I was regarded as a real benefactor." In each of these cases the assured conviction that the warts would disappear, was, no doubt, the condition on which the efficacy of the charm depended.

That the cure depends on the confident expectation of success, and not by any actual treatment involved in the charm itself, the following instance, given on the authority of Sir Walter Scott, quaintly illustrates. In his account of the trials for witchcraft, which took place in Scotland in the seventeenth century, he narrates the following:—"An eminent English judge was travelling the circuit, when an old woman was brought before him for using a spell to cure dimness of sight by hanging a clew of yarn round the neck of the patient. Marvellous things were told by the witnesses of the cures which this spell had performed on patients far beyond the reach of ordinary medicine. The poor woman made no other defence than by protesting that if there was any witchcraft in the ball of yarn, she knew nothing of it. It had been given her, she said, thirty years before by a young Oxford student for the cure of one of her own family, who, having used it with advantage, she had seen no harm in lending it for the relief of others who laboured under similar infirmity, or in accepting a small gratuity for doing so. Her defence was little attended to by the jury, but the judge was much agitated. He asked the woman where she resided when she obtained possession of this valuable relic. She gave the name of a village in which she had in former times kept a petty alehouse. He then looked at the clew very earnestly, and at length addressed the jury:—'Gentlemen,' he said, 'we are on the point of committing a great injustice to this poor old woman, and to prevent it I must publicly confess a piece of early folly which does me no honour. At the time this poor creature speaks of I was at College, leading an idle and careless life, which, had I not been given grace to correct, it must have made it highly improbable that ever I should

have attained my present situation. I chanced to remain for a day and night in this woman's alehouse without having money to discharge my reckoning. Not knowing what to do, and seeing her much occupied with a child who had weak eyes, I had the meanness to pretend that I could write out a spell that would mend her daughter's sight, if she would accept it instead of her bill. The ignorant woman readily agreed, and I scrawled some figures on a piece of parchment, and added two lines of nonsensical doggrel in ridicule of her credulity, and caused her to make it up in that clew which has so nearly cost her her life. To prove the truth of it let the yarn be unwound, and you may judge of the efficacy of the spell.' The clew was unwound accordingly, and this pithy couplet was found on the enclosed bit of parchment—

'The devil scratch out both thine eyes,
And spit into the holes likewise.'

It was evident that those who were cured by such a spell, must have been indebted to nature, with some assistance, perhaps, from imagination."

But true as it is that expectancy is capable of lending aid towards the cure of disease, it is equally certain that if, in consequence of a shock to the nervous system, or any severe mental strain, the attention be fixed upon a certain part of the body with the expectation that disease either is there or is likely to be there, the probabilities are that before long morbid symptoms will show themselves, either directly connected with the region to which the attention has been directed, or else in a general lowering of the vital powers from imperfect nutrition.

As examples of these statements, witness the fearful convulsions produced by the supposed use of sorcery among savage nations. Strange instances of this may be found in Mr. Ellis' "Polynesian Researches." In an account of the practice of sorcery in the Sandwich Islands, he describes the employment of a "tahu-tahu," or charm, by means of which an evil spirit is supposed to enter into the bodies of those against whom a grudge is entertained, and he goes on to say—"The most acute agonies and terrific distortions of the body were often experienced; the wretched sufferer appeared in a state of frantic madness, or, as they expressed it, torn by the evil spirit, while he foamed and writhed under his dreadful power."

Again, the Obeah practices in the West Indies, by predicting maladies and engendering the expectation of a particular result, often led to the production of the particular disease predicted in

those who were credulous enough to believe in the efficacy of the charm.

Dr. Tuke (*loc. cit.*, Vol. I., p. 99) draws attention to the fact that when a powerful expectation is excited, we are most likely to witness "spasm" or "convulsion." He goes on to say—"The confident assertion that a person subject to epileptic fits will have an attack has frequently proved sufficient to produce one. Madame de St. Amour attained a great reputation in France within the last half century for the power she exercised over nervous diseases. It is related that, on one occasion a young woman was brought to her, when she demanded, 'What is your complaint?' 'Epilepsy,' replied the girl. 'Then, in the name of goodness, have a fit now,' exclaimed Madame de St. Amour. The effect was instantaneous. The patient fell backwards and had a violent attack of epileptic convulsions."

Again, Romberg ("Nervous Diseases of Man," Syd. Soc., 1858, Vol. I., p. 183) quotes the case of a physician at Lyons, "who assisted in the dissection of several hydrophobic patients, and was seized with the conviction that he had been inoculated by the virus. He lost his appetite and was sleepless; when he attempted to drink he was seized with choking and spasm of the pharynx; for three days he wandered about the streets in a state of despair, till, at last, his friends succeeded in convincing him that his malady had its foundation in his mind."

Trousseau, Rush, Trolliet, and Chomel, mention similar cases, which are cited by Dr. Tuke in his valuable work just referred to. So we see not only may real disease be aggravated by expectancy, but, in many cases, ailments originating in fancy and simulating real disease may arise from the same cause.

But again, from constantly encouraging an expectation of disease the nervous system becomes so disordered as to produce definite changes in the function of nutrition. Involuntary and voluntary muscle, each glandular and secreting organ, the spinal cord, and even the brain itself, are all liable to have their functions, modified in this manner. Whether this may result from a want of balance in the antagonistic action of the sympathetic and cerebro-spinal nerves in controlling the circulation, and thus promoting or retarding chemical changes by increasing or diminishing temperature, as was argued by Claude Bernard, or whether there is, in addition—as maintanied by Ludwig, Lister, Rolleston, and others—a direct action of nerves upon glandular

tissue itself, exercising a definite influence over cells, whether pigmentary or secretory, of this we may be reasonably convinced, that mental states, such as attention, expectation, or imagination, are capable of reacting through the nervous system on the bodily functions, and that in a very marked degree.

And this is what makes it so important in railway and other accidents to be in a position to estimate how far the original shock to the system is responsible for the condition of affairs when, after the lapse of time, cases come up for trial in a court of law.

It is not within the scope of our present inquiry to enter into any pathological details regarding nervous lesions consequent upon railway accidents; and we may dismiss from our consideration all those graver forms of injury where the objective signs presented leave no doubt as to the serious nature of the case. But there is another class of cases where the primary injury has been apparently trivial, and where the symptoms complained of are mainly subjective in their character. Such are the cases that frequently end in troublesome litigation, and it becomes a matter of much importance to decide whether the symptoms presented are the result of the original lesion, whether they are merely assumed or aggravated for fraudulent purposes, or whether, without any attempt at deception on the part of the sufferer, injuries trivial in themselves may be unconsciously exaggerated and apparently productive of grave results, which are in reality the outcome of attention and expectancy, the fruits of a disordered imagination, and not at all, or but remotely, attributable to the original lesion.

Difficult as these several cases often are to distinguish, there are certain leading characteristics in each which may enable us to arrive at correct conclusions regarding them—for example, in the case of serious disease following apparently trivial injury, the symptoms will be invariably progressive in their character, some marked objective sign will sooner or later develop itself, such as paralysis, loss of electric excitability, &c., which will place the existence of morbid change beyond all doubt.

Take now cases of fictitious injury or an injury wilfully exaggerated for fraudulent purposes. Here we shall always find the existence of strong motive, usually that of cupidity, with, perhaps, an intermingling of vanity and love of notoriety. Combined with these there will be a marked want of consistency in the symptoms detailed, which will all be subjective and nothing more (unless the previous existence of disease has been dragged in to aid the impos-

ture). Pain will be complained of, but the locality of the pain will seldom correspond with the anatomical distribution of nerves. Loss of memory will be complained of, yet the circumstances of the accident will be recounted with a minuteness of detail, showing an intellectual vigour which is at least open to suspicion. This type of imposture may frequently be detected by diverting the attention of the supposed malingerer from that part of the body which is at the time the object of examination; as, for example, asking him to put out the tongue, feeling the pulse, or making a stethoscopic examination of the heart, while in the meantime pressure is being made on the spine, or the jerking of a limb is being watched. In such cases the spasm frequently ceases, and the patient no longer winces under pressure that was previously asserted to cause acute agony.

It is true that in cases of functional disorders of the nervous system, such as hysteria, muscular tremors may cease, and spinal tenderness disappear, when the attention has been diverted elsewhere; and it is also a fact that an especially cunning impostor may be on his guard, and thus elude the effort thus made to detect him; but for all that, the *ruse* may fairly be relied upon as showing with tolerable certainty that *organic* disorder does not exist.

But now let us see how is the unconscious simulation or exaggeration of disease to be distinguished from real organic lesions on the one hand, and from malingering on the other. Let us suppose a case of this kind:—A man, say, is travelling by rail, when the train, which had been proceeding at a moderate speed, runs off the road. No one is killed, but as there has been considerable oscillation and bumping, several people have been thrown down, partially stunned and generally frightened—our friend among the number; but, after a time when the passengers are permitted to proceed on their journey, he is able to join them, and perhaps even to walk home on arriving at his destination. The next day he feels stiff and sore, and consults a doctor who, probably, finding no objective signs of injury, merely recommends rest. Sympathising friends, however, begin to call and vie with each other in recounting grievous cases of railway accident, where slight injuries were followed by the most serious consequences. A solicitor is communicated with, and additional medical advice is obtained. The man is of a hypochondriacal temperament, and suggestive questions put to him by the doctors soon produce a number of subjective symptoms, such as "constant pain in the back," "fatigue of the muscles," "incapacity for mental work," "confusion of ideas," "loss of memory," &c. A heavy claim

is made on his behalf, which the railway company refuses to pay, and so the case drags on for months. Meanwhile the unfortunate man, who may be perfectly conscientious, and guiltless of any intention to defraud the company, or even to wilfully exaggerate his sensations, is kept from his ordinary employment; a constant mental strain is kept up, and from continual concentration of attention upon the supposed ailments, and the expectancy of a verdict, a state of suffering very real and very remarkable is produced, and while no organ in the body can be found to have undergone pathological change, and every muscle in the body may respond normally to the ordinary tests, we find, as Dr. Hamilton, of New York, remarks, "an emotional derangement which cannot be shammed, and a depression amounting in some cases to simple melancholia" (*loc. cit.*, p. 367), so that the haggard sufferer presents a pitiable spectacle when the day of trial comes, and is, in himself, a more moving appeal to the sympathies of a jury than the evidence of his physician or the eloquence of his advocate.

Stress has been laid upon the point that in organic disease, the result of shock, some objective sign will almost invariably be found, and that the symptoms will be more or less progressive in their character. But there is another essential point of difference between such a case as we have described and one of real organic disease; that is, in the spinal pain which is invariably complained of. "There is," says Sir James Paget (*loc. cit.*, 221), "no pain which is characteristic of real spinal disease—no manner of pain which may not be closely mimicked; but, in many cases, the nervous mimic pain has characters which are not all found together in real disease of the spine," so that, to summarise his conclusions, "raging racking pain," not confined to one particular spot, variable in its character, aggravated under the slightest touch, unattended by any fixity of the spine, increased by fatigue of any kind, may be taken as arising from nervous causes, and not from organic disease; and, "lastly, it is a sign of nervous pain alone if it has lasted many weeks or months and nothing has come of it." But, once again, in cases of supposed loss of motor power, the solution of the difficulty may often be found in the patient's dread of moving, or in his belief that he is unable to move, when there may be, at the same time, no real impairment of motor function at all. Dr. Page thus refers to this condition:—"Ask any man," says he (*loc. cit.*), "who has had a severe lumbago, whether from a sprain, from rheumatism, or from cold, if he has not, at the same

time, felt a strange sense of difficulty in moving his legs. Brisk walking becomes impossible; the effort to put one leg before the other must be unnaturally great; fatigue comes on early, and the patient complains to you that his legs feel weak, and as if he could hardly move them. Free micturition may likewise be interfered with from lack of the natural support and help which the lumbar muscles provide when this act is being performed. Constipation arises from the same cause. Thus it becomes nothing more nor less than natural for the friends to say that the patient is paralysed, and paralysed from severe injury to the spine. If we do not avoid this fallacy, and do not correctly interpret this state of things, we shall add greatly to the dread, which after railway collisions may be very real, that paralysis is going to supervene." He relates this case :—" A man who had received such injuries as we have described, and was confined to bed in consequence, needed three persons to help him out of bed every time he wanted to pass water during the day. To himself it appeared wholly unaccountable and extraordinary that, whenever he woke in the night, he could jump naturally out of bed without any help for the same purpose. It need hardly be said that the case was perfectly genuine."

But what is the outcome of all this? Plainly,—that the whole question of the assessment of damages for railway injuries should be brought to an issue; in the interests of humanity, in the interests of justice and of common morality. Of humanity—for what amount of damages can compensate an individual who has undergone suffering—genuine suffering—for months, while waiting for the precarious issue of a trial, on which he often really believes the maintenance of himself and his family for the future materially to depend, that belief being fostered by the representations of sympathising friends, by the books on railway injuries which he in all probability frequently reads, and by the conflicting opinions of the various medical men who come to examine him, and leave him in a state of uncertainty (highly injurious to him) as to whether he is or is not to recover.

It should be brought to an issue in the interests of justice—justice not only to the person injured who is, we strongly maintain, entitled to receive compensation, even to the uttermost farthing, for all injury he has received through negligence, but justice also to the railway company; and it can hardly be considered evenhanded justice that a company should be mulcted for injuries for which it

is only remotely responsible. It is, moreover, a curious fact which does not perhaps receive the attention it should, that serious accidents arising from other causes do not, as a rule, attract the same public notice, are not followed by the same exciting litigation, and are not recouped by the same substantial damages, but that it is almost always against railway companies that such proceedings are taken, partly because it has become, as it were, a matter of course to do so, and partly because they are considered what is popularly termed *a good mark*. But again, in the interests of common morality the present mode of procedure imperatively demands revision. It should not be possible that a man could obtain large compensation for injuries, which, it was alleged, left him paralysed on his back for months, when, to the personal knowledge of the writer, the same individual, during the same period, had crossed the Channel several times for commercial purposes. It should not be possible that a man should go unpunished, when, as happened some time ago, within 50 miles of Dublin, and can be fully attested, he appeared in the offices of a railway company—on crutches—assisted by several friends, and on receiving his cheque in compensation for injuries supposed to have been received, deposited his crutches on a table in the room and walked out, saying he would return for them at his convenience.

The whole system is demoralising. It is demoralising to the claimant, with his attendant retinue of doctors and lawyers, who, be they ever so honest, have an irresistible inducement to place their case in the most favourable light to the judge and jury. It is demoralising to the defendants and their staff, who have precisely the opposite aim, and whose main object it is to show up what may be really the serious effects of an accident as being exaggerated, or merely fictitious. And, moreover, it is demoralising to a jury, for not only is there invariably an unconscious sympathy with the plaintiff—a kind of unacknowledged feeling that he is poor and the company rich, that a similar accident might any day happen to one of themselves, but also they frequently forget they are engaged in trying a civil and not a criminal case, and that their function is not, as they frequently assume, to punish a company for negligence, but to compensate an individual for damage sustained. And finally, it is demoralising to all, and especially to a learned profession, to see a number of eminent medical gentlemen arrayed on opposite sides, and with one set of facts before them, drawing the most opposite conclusions from those facts, and swearing to their conclu-

sions with the utmost confidence, when, in the majority of instances, the facts before them admit only of cautious deduction, not of dogmatic assertion.

The only remedy for this unfortunate condition of things, in the present state of the law, is that, on the principle of give and take, in disputed cases the assessment of damages should be made as speedily as possible, and without litigation, not merely in the interest of the railway company, but of the patient, as the writer believes that not merely would the injury sustained be estimated with less risk of self-deception, but that recovery would be less likely to be retarded by the mental strain.

And, with a view to the amelioration of the present law, it might be suggested that independent experts ought to be employed, whose testimony would be free from the imputation of serving the side which summoned them; or else that, as in Admiralty cases, a specialist assessor should assist the court in assigning due weight to the often-conflicting medical evidence, and thus the court, instead of forming a battle-ground for opposing witnesses, or a platform from which to make impassioned appeals to impressionable juries, might be converted into a calm tribunal, where the scales of justice were more evenly balanced.

BRITISH MEDICAL SERVICE.

The following is a List of Surgeons on Probation in the Medical Department of the British Army who were successful at both the London and Netley Examinations. The Prizes are awarded for marks gained in the special subjects taught in the Army Medical School. The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown in the list which follows:—Fifty-fourth Session, July 29th, 1887. Combined marks—1. Smith, H. E. H., 6,195; 2. Gore Graham, W. P., 6,150 (gained the Montefiore Medal and prize of 20 guineas); 3. Alexander, G. F., 5,860; 4. Spong, C. S., 5,855; 5. Leishman, W. B., 5,850; 6. Woods, E. M., 5,705; 7. Thomson, J., 5,655; 8. Rawnsley, G. T., 5,460; 9. Reilly, C. W., 5,200; 10. Freeman, E. C., 5,125; 11. Trask, J. E., 5,120; 12. Crofton, W. J., 5,065; 13. Forbes, N. H., 5,065; 14. Blenkinsop, A. P., 4,975; 15. Paterson, J., 4,905; 16. Davoren, V. H. W., 4,905; 17. Wright, A., 4,900; 18. Copeland, R. J., 4,815; 19. Girvin, J., 4,780; 20. Luther, A. J., 4,725; 21. Peeke, H. S., 4,700; 22. Borrodaile, A. L., 4,600; 23. Smyth, R. H., 4,575; 24. Birt, T., 4,555; 25. Hallaran, W., 4,545.