

The altered relations of surgery to medicine / by Sir William Stokes.

Contributors

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Royal College of Surgeons of England

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with kind regards from

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The Altered Relations of Surgery to Medicine



CAVENDISH LECTURE

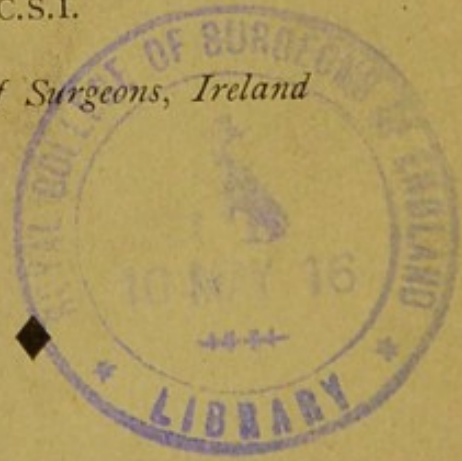
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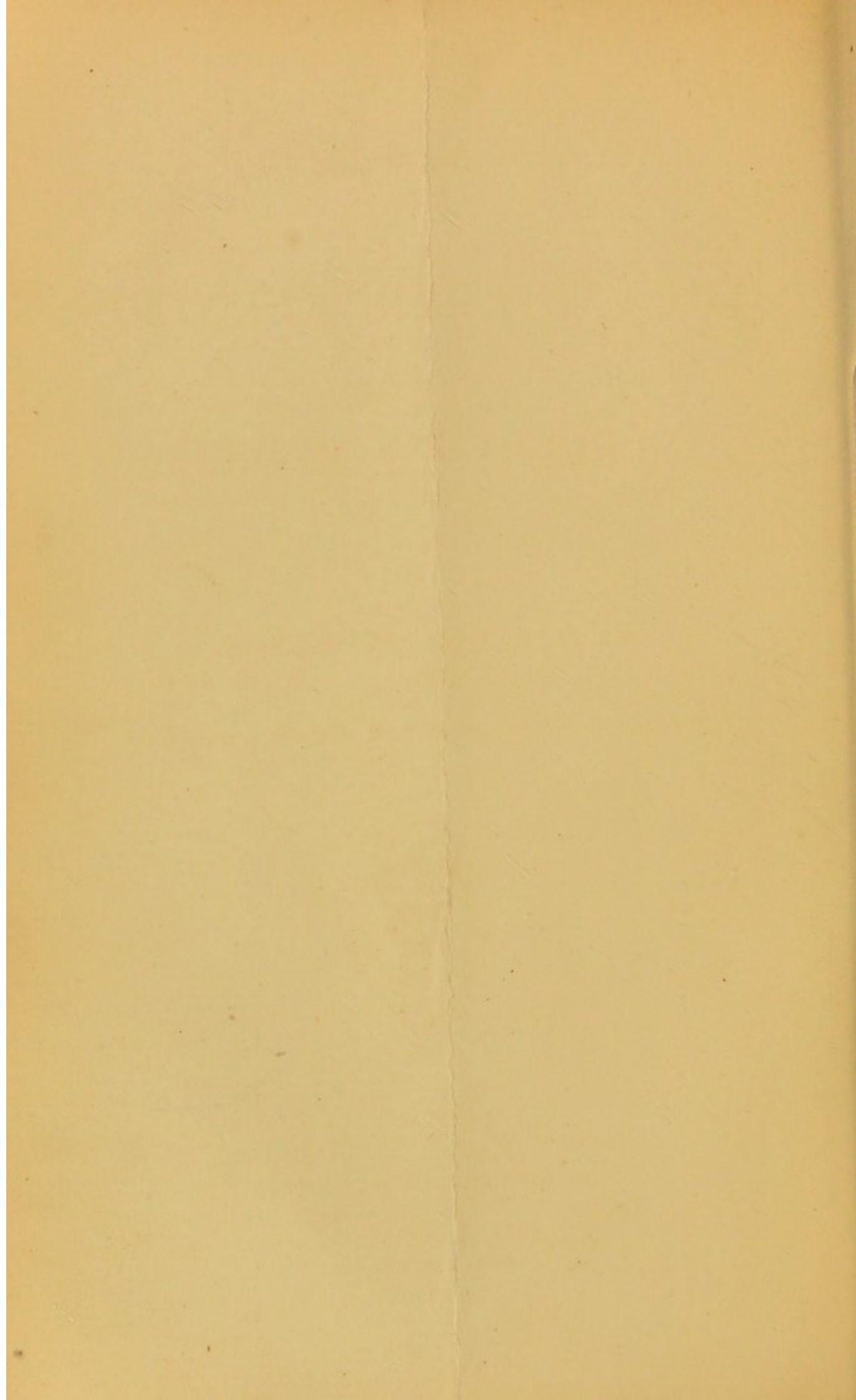
SIR WILLIAM STOKES, M.D.

CH.M. UNIV. DUBL., F.R.C.S.I.

Professor of Surgery, Royal College of Surgeons, Ireland



1888



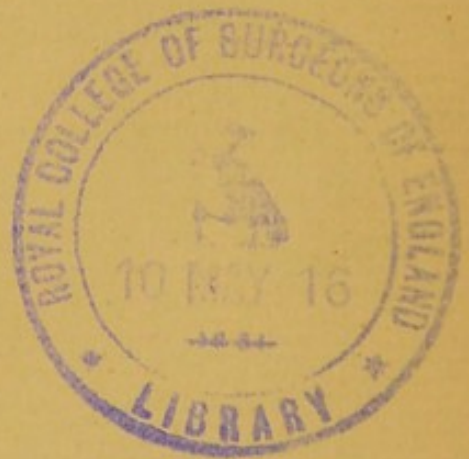
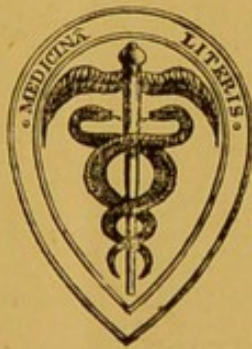
CAVENDISH LECTURE

THE ALTERED RELATIONS
OF
SURGERY TO MEDICINE

BY
SIR WILLIAM STOKES, M.D.

CH.M. UNIV. DUBL., F.R.C.S.I.

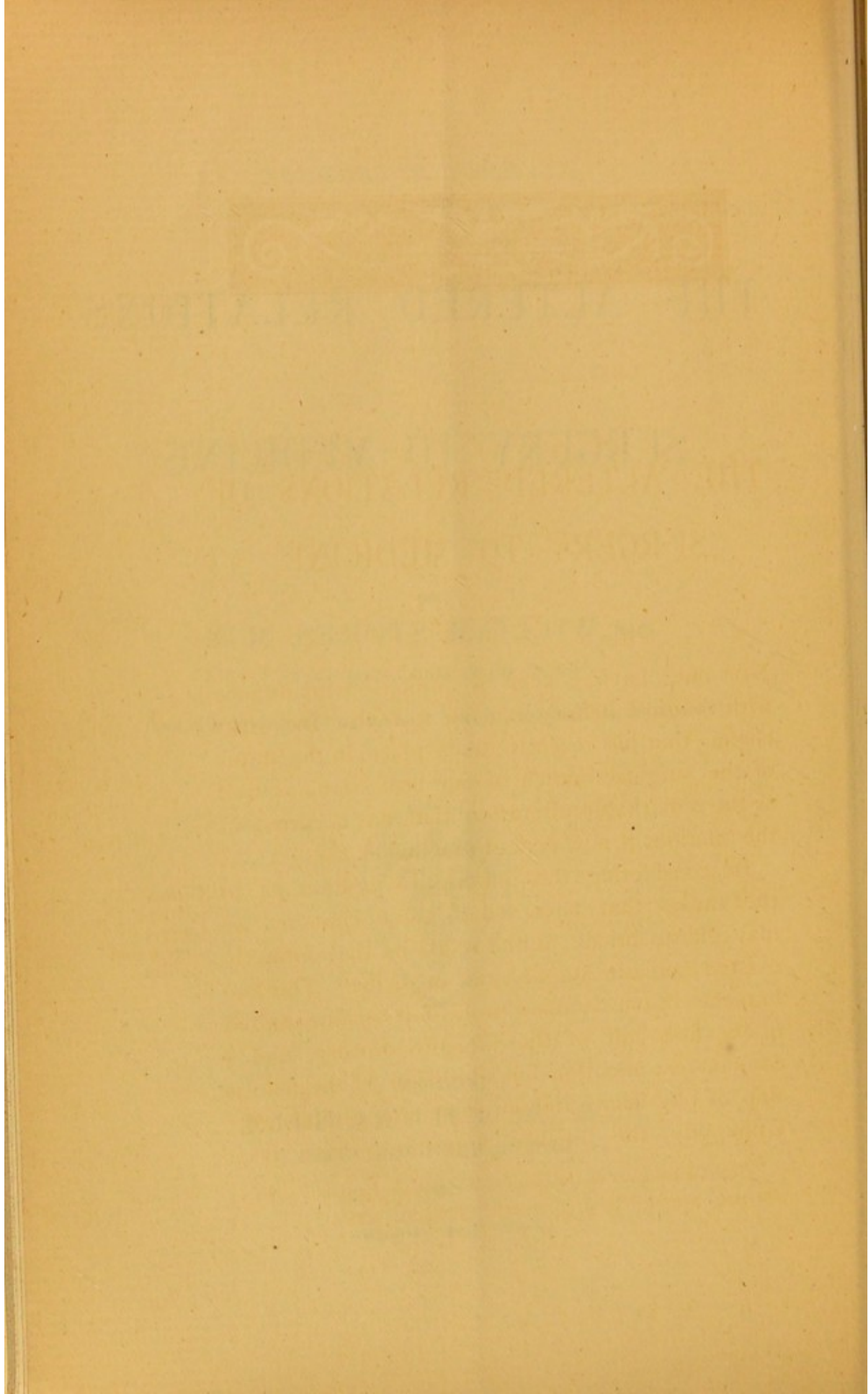
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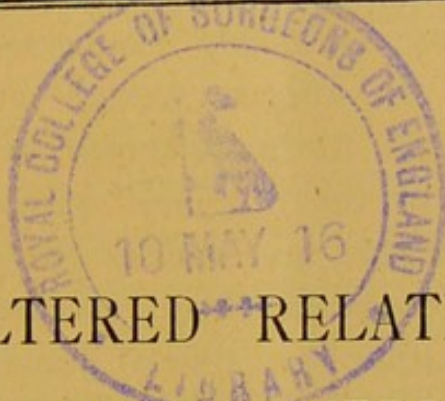


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1888

PRICE ONE SHILLING





THE ALTERED RELATIONS OF SURGERY TO MEDICINE.

NO one having even a limited acquaintance with surgical history can fail to realise the great change that has recently taken place in the status of the surgical branch of our profession, as well as the remarkable alteration that has occurred in the relations it now bears to medicine.

In considering the important question as to the causes that have led to these changes, we may glance briefly at the relations that formerly existed between surgery and medicine. The two branches of our common profession became united in the first half of the fifteenth century, and a conjoint examination for admission to the fellowship of physicians and surgeons was established.* Unhappily, the alliance appears to have been

Former relations between surgery and medicine.

* See "Memorials of the Craft of Surgery in England." From Materials compiled by J. F. South. London. 1886.

a short-lived one, and the causes that led to the rupture are not very clearly understood, but were, I believe, probably connected with the maintenance of alleged vested rights. The breach was still further widened by the subsequent fusion of the Surgeons' with the Barbers' Company. In this, however, as Sir James Paget has rightly observed, there was not any real fusion, but rather an official junction with a view to the settlement of disputes and the fixing of limitations to the duties and functions of each company.

Effects of the
junction
between the
Surgeons' and
the Barbers'
Company.

In the interests not only of the social but also of the scientific position of the surgical profession, the junction, such as it was, of these two corporations was undoubtedly a calamity, and it helped to give the physicians the vantage ground which they occupied so long, and in which they were still further strengthened by an enactment made in Elizabeth's reign prohibiting surgeons from prescribing internal medicines. As a proof that the inferior position, socially and scientifically, was maintained up to a comparatively recent period, I may mention a fact which I learned from Mr. Colles, who informed me that his father, Abraham Colles, had stated that at the commencement of his professional career in Dublin, when a consultation on any important case was held, the surgeon was not as a rule permitted to be

in the room where the physicians held their deliberations, but, after the consultation was over, he was informed whether his services would be required or not.

The junction not only kept the professions of surgery and medicine separated, but also doubtless had much to say to the long exclusion, or, at all events, feeble recognition of surgery in the academic systems of the old Universities. It had also another unfortunate result, which was, that when surgery emerged from the Cimmerian darkness in which it had been during the Middle Ages, and its teachers began to recognise the fact that in order to advance something more was to be relied on than the aphorisms of Hippocrates or the dogmas of Galen, there was little sympathy shown to them, and scientific methods of investigation were looked upon generally with suspicion, while the results of scientific research were received almost with contempt.

Although from time to time during the sixteenth and seventeenth centuries there were physicians of undoubted ability and scientific aptitude, still no serious effort apparently was made by the bulk of the profession to strike away the feeble props of the tottering and antiquated tripod on which it had so long rested—namely, empiricism, dogma, and aphorism. The result of this was that as time went on medicine as a science lost instead of gaining ground in public estimation, and often became the

Effects of too exclusive a dependence on empiricism, dogma, and aphorism.

object of satire and ridicule. Of this ample evidence may be found in the writings of many authors and philosophers of eminence, such as Voltaire, Molière, Locke, and many others in more recent times. It was doubtless from observing the faulty way in which medicine was studied and practised that Locke was induced to make the following observation:—"Were it my business to understand physic, would not the safer way be to consult Nature herself in the history of diseases and their cures, than to espouse the doctrines of the dogmatists, the methodists, or the chemists."

What was mainly relied on was clinical observation; and nothing is more remarkable in the whole history of medicine than the length of time it took before the fact dawned upon the medical mind that clinical observation, when not supplemented by other scientific methods of research, is a lamp that affords in truth but a faint and glimmering light, a shifting quicksand on which it is indeed perilous to build. They did not recognise the truth epitomised by Mill, who has well said, "Observation without experiment (supposing no aid from deduction) can ascertain sequences and coexistences, but cannot prove causation."*

The consequences of too exclusive a reliance upon methods insufficient for purposes of real

* "Logic." Vol. i., 423.

advancement have been for medicine in the past most unhappy. I allude more particularly to the foundation and advocacy of various systems which prevailed at different eras—of, for example, the dogmatists, eclectic, methodists, pneumatists, astrologers, and alchemists, and in later times to the schools of Cullen, Brown, Broussais, and Hahnemann. All these many outcomes of various phases of opinion have caused the history of medicine to be rather a “succession of cycles, barren hypotheses, and fanciful systems,” than one characterised by a slow but sure scientific progress. At rare intervals in its history brilliant meteors, no doubt, have flashed across the sky, but their light only tended to make the darkness more visible. They were too far in advance of their time to make their influence felt, and any attempt to supersede the older unreliable methods—to ring out the old and ring in the new—only met with discouragement, often with contempt. My father has often related to me how, when he was a young man and when he introduced into the Dublin school, along with Graves, the methods of physical diagnosis advocated by Laennec and Louis, he was ridiculed, satirised, and even caricatured, by his cotemporaries. I dare say a large proportion of those present here to-day recollect, as I do, hearing various instruments of precision, now in the hands of every educated practitioner, stigmatised as “toys;” and I can

Views of
Laennec on
pathological
histology.

even call to mind that a late medical colleague of my own, who rose to considerable eminence in his profession, and who, for the time he lived in, was a skilful histologist, thought it desirable to publish, at the commencement of his professional career, a *brochure* which he entitled "An Apology for the Microscope." But one of the most signal proofs of the low estimate that in former times physicians had of the employment of methods of research now universally used, may be obtained from the views on pathological histology of Laennec. He observed:—"If the causes of severe diseases are sought for in mere microscopical alterations of structure, it is impossible to avoid running into consequences the most absurd, and if ever cultivated in this spirit, pathological anatomy, as well as that of the body in a sound state, will soon fall from the rank which it holds among the physical sciences, and become a mere tissue of hypotheses founded on optical illusions and fanciful speculations, without any real benefit to medicine." An unfortunate anticipation, Dr. Hudson observed, as time and progress have proved. When men of the intellectual grasp of Laennec held such views, it is hardly to be wondered at that the rank and file among physicians continued to look unfavourably and with doubt on all such novel methods of research, and under these circumstances it is not surprising that medical therapeutics in the past, and I fear to

a certain extent also in the present, has been based too often on that flimsiest and most worthless of all foundations—fashion; a fact which doubtless suggested to the eminent French physician the sage advice he gave to his pupils, "*Employez vite ce remède pendant qu'il guérit encore!*"

In making these remarks, I trust it will not be considered that I wish in any way to cast discredit on the labours of past physicians in the advancement of medicine, knowing as I do that the very men who were thus sceptical of new methods, could always point with just pride to splendid results obtained by them from time to time.

My object is only to account for the fact that, in the last century the relations between medicine and surgery were still deficient in cordiality. Old antagonistic traditions and feelings survived, and the breach was only widened for the time by the new departure of surgery into hitherto untried methods of advance, by the renunciation of the *exclusive* reliance on mere clinical observation, and by a general widening of the area of research.

And to whom are we mainly indebted for such development? This is a question that will at once be asked. Who placed our science on the solid foundation on which it remains, and will ever rest? Who was it that tore asunder

Scientific
advancement
of surgery
due to the
labours of
J. Hunter.

the fetters with which it was bound by a blighting empiricism, and loudly sounded those clarion notes of scientific truth which have their echo still? He who occupies as a biologist a position above all rivalry, and who by the magic wand of an all-powerful intellect struck the rock from which came the living water, and evoked the dormant scientific spirit of his age—that beneficent, ever-living and never-failing spirit which, when honestly appealed to, has ever generously responded. It has been said by Malgaigne that in the Middle Ages surgery was a mere craft, that it was made an art by A. Paré and J. L. Petit, but was elevated into one of the noblest of sciences by John Hunter. Animated by no unworthy craving for worldly honour or love of gain, he lit up the dark and rugged paths of that science he loved so well, and to which he devoted his life, with a lamp which shed no borrowed light—one fashioned by ceaseless toil and illuminated by untiring genius. His one aim, the goal he ever strove for, the ambition of his life, was, in the unexplored regions of physiology, surgery, pathology, and anatomy, to unfurl the banner of truth, and, by doing so, to elevate and dignify the profession of his choice, and to render it and its sister branch of medicine one and indivisible. He was in truth—

“One of the few, Nature’s interpreters,
The few whom Genius gives as lights to shine.”

His immediate successors, many of whom were also his pupils—viz., Abernethy, Cooper, Cline, Dupuytren, Colles, and many lesser stars, all worked more or less on the same lines that he did, but not unnaturally with a bias rather towards the clinical and operative aspects of surgery and surgical pathology, than in efforts to advance it by physiological research. But the splendid work of those great surgical leaders I have mentioned cleared and prepared the way for the more complete adoption of Hunter's great principle in advancing surgery, which was, in Sir James Paget's words, that "he brought the scientific method into the study of the practice, and welded scientific knowledge with the lessons of experience." It is the recognition and adoption of this principle in the age in which we live and work, that will ever constitute one of its greatest glories. It is one which finds its embodiment in Von Langenbeck's watchword, "From physiology to surgery, and from the microscope to the resection knife." It has mainly been the cause of bringing about the altered relations of surgery to medicine, and happily shattered the barriers between them which in days gone by were such fruitful sources of mischief, and kept our profession divided, powerless, and weak.

The last and most brilliant outcome of the adoption of this principle has been the establishment of Listerian antisepticism, which has enabled

Method of work adapted by J. Hunter's successors.

Antisepticism the result of the adoption of J. Hunter's

principle in
advancing
surgery.

the surgeon to bring about not only a degree of perfection and exactness in the comparatively limited field of operative surgery in which until recently he confined himself, but also to advance much farther, and in abdominal and thoracic diseases, and, lastly, in those of the brain and spinal cord, to achieve results that until recently never could have been seriously contemplated. This signal advance into the domain of medicine has not been made in any hostile and intrusive spirit, but solely to render aid—an aid which it must be gratefully acknowledged has happily often been reciprocated.

It has been granted to but few men who have been pioneers in any of the paths of science to have during their lifetime a full recognition of their labours and discoveries, and to see the practical application to human requirements of the new knowledge they had given to the world. Harvey's great discovery met with but a limited acceptance during his lifetime, and the same might be said of other scientists, some of whom, instead of having their views accepted, were persecuted for promulgating them; but many of those who now constitute the scientific vanguard of our profession have been privileged to witness not alone the acceptance of their theories but also the almost universal recognition of the utility of the practice which has been based thereon; and operative procedures have been

undertaken and carried to a successful issue that not very long ago could never have been seriously thought of; and, lastly, a distinct advance has been made towards that goal desired by all—unity in the science of medicine.

I have already indicated the regions in which operative surgery has so largely supplemented medicine. Did time permit I would gladly dwell more in detail on what it has effected in this direction, such as the surgical treatment of pulmonary abscess, antiseptic paracentesis in pleuritic effusions, empyema, and pericardial effusion. Also in abdominal surgery, including exploratory operations in and excision of the kidney, removal of renal calculi, operations on the gall bladder, on the intestines for obstruction, excision of the pylorus and other portions of the intestinal tract for cancer, and the many operations connected with the female organs of generation.

In connection, however, with a region that, until recently, has been held to be the exclusive province of the physician, I should like to speak, very briefly. I allude to certain lesions of the brain, and the means we have at our disposal for their localisation. It is a subject of absorbing interest, and exercises largely, as you all know, the professional mind at the present day. There is no wonder that it should do so, for our anticipations as to what may eventually

Surgery of the
brain.

be done in this direction are full of hope and confidence. Having regard to the results already obtained, these are not, I feel assured, misplaced. But still cases do occur, and one of them was recently in my own practice, which strikingly brings home to us the undoubted and unhappy fact that, notwithstanding the admirable work achieved by Professors Ferrier, Yeo, Schäfer, Victor Horsley, Munk, Goltz, and others, in reference to the localisation of brain function, we must admit that we are still only on the fringe of the inquiry, so to say, and that much, very much, has yet to be done before any definiteness can be said to exist in the means at our disposal for the accurate appreciation of many of these cases. This will not, I believe, be determined with sufficient accuracy until much more light than is at present available is thrown, not only on cranio-cerebral topography, but also on the localisation of cerebral function. We are undoubtedly much nearer finality in the former than the latter, although the difficulties in the path are still extreme. The relations between the lobes and convolutions of the brain and the enveloping bones vary in different periods of life, and up to a certain age the growth and development of both do not proceed *pari passu*. The frontal eminence, as Cunningham, Topinard, and Feré have shown, overlies a different portion of the frontal lobe of the brain

Variation in the relations between the brain and its enveloping bones.

in the adult and child, and the relations between the Sylvian fissure and the squamo-parietal suture, as first noticed by Foulhouze, also vary in different periods of life. Remarkable changes in the temporo-sphenoidal lobe have also been observed both as regards its position and form, as age advances from childhood to adolescence. For example—as may be seen in these preparations—in the adult the frontal eminence corresponds to the first frontal fissure; in childhood the frontal eminence is found at some point upon the second frontal convolution, and occasionally on the third. Again, the Sylvian fissure varies in relation to the squamo-parietal suture. In the adult it may correspond to it or be placed immediately above or slightly below it, but in childhood it is always found considerably above it. The high position of the fissure in childhood appears to be due to a twofold cause—one, to the low stature, if I might so express it, of the squamous portion of the temporal bone, which afterwards grows upwards towards the fissure; and secondly, that at the earlier period of life there is relatively a much greater area of the temporo-sphenoidal lobe in relation to the vault of the cranium. This is seen when compared with the outer surface of the parietal lobe. The method of topographical localisation, when the relations are more fixed or constant, as in adult life, sug-

gested by Hare, gives for practical purposes undoubtedly the best and most accurate results.

Localisation
of function.

As regards the localisation of function, however, it is regrettable that even between very high authorities so much difference of opinion exists, and that the whole subject is consequently in such an unsettled state. Take, for example, the temporo-sphenoidal lobe. According to Professor Ferrier we have here the situations of tactile sensibility, hearing and taste, whereas Professor Schäfer holds that none of these are so placed. Again, the centre of sight has been localised by Munk and Schäfer in the occipital lobe, but Goltz has shown that this lobe can be removed without impairing vision, and that removal of the frontal lobe is attended with loss of sight.

Our clinical experience, too, at times adds largely to the difficulties we have to contend with in our endeavours to accurately appreciate the situation of cerebral lesions. I allude to cases in which we have motor disturbance without appreciable lesion to account for it, and the reverse—cases in which morbid conditions, profoundly involving the motor areas, exist without causing any motor or sensory trouble whatever. In illustration of this, I may mention the leading particulars of a few cases, and in doing so trust it will not be supposed for a moment that I wish to depreciate or detract in

the slightest degree from the great value of recent investigations in reference to the localisation of cerebral function.

The first of them that I would mention was one which was quite recently under my care in Richmond Hospital, and was of exceptional perplexity.

J. O'D., aged forty, a law clerk by occupation, and for many years of intemperate habits, was recently under my care in the Richmond Hospital. Two days previously to his admission he had been drinking to excess in a neighbouring public-house, and for making a disturbance on his way home was arrested. In the encounter which ensued with the authorities, it was said he was struck with a baton on the forehead, over the left eye. He was stunned by the blow, but soon recovered. On the second day after receiving the blow he suffered pain, which was chiefly referable to the forehead, and in the evening he became heavy and drowsy. The day following he was aphasic, and he was then brought to the hospital. On his admission, a contused wound was found over the left eyebrow, and much subconjunctival ecchymosis. When speaking, he was unable to form a complete sentence, failing generally to find the required verb. When the word he wanted was suggested to him, he at once recognised it, but was unable to repeat it. He conveyed that he

Case of
cerebral
traumatism.

could remember the word he wanted easily, but could not say it. When shown a watch he was able to tell the time accurately and without hesitation; but when asked to write a sentence he failed, and wrote some disjointed words, but was able to write his name. In the evening the aphasia was more pronounced. He could tell the name, but not the address, of his employer. He said it was the same as a Christian name. On going through a list of names, he at once recognised the one he wanted when George's-street was mentioned. There was no paralysis at this time of upper or lower extremities. Next day it was found that speech was completely lost. There was rigidity of the muscles of the jaw, and he was quite unable to open his mouth. The left fore-arm and hand were paralysed, and fingers clenched. The scapulo-humeral muscles on the left side were only slightly affected. He could grasp firmly with his right hand. The left pupil was irregularly dilated, and did not react to light. Vision was lost in it, and there was slight ptosis. When given a pencil and paper he could write his name, but very indistinctly. Patellar and plantar reflexes were well marked. The day following his condition was worse. In the evening he had an alleged rigor, which probably was a convulsive seizure. Next day all the symptoms were still more pronounced; the patient was now in a

semi-comatose state, jaws rigidly closed, his respiration blowing, accompanied by constant grinding of teeth. Throughout his condition was perfectly apyrexial.

With such a history and train of symptoms, the conclusion was unavoidable that they were produced by mechanical pressure. The patient, who had never before manifested symptoms of brain disease, had received a severe blow on the left side of his head. This was followed by progressive motor aphasia, an irregularly dilated pupil, loss of vision, sub-conjunctival ecchymosis, ptosis, blowing respiration, rigidity of the muscles of the jaw, paralysis of left fore-arm and hand, a convulsive seizure, and, lastly, coma. These symptoms seemed to clearly point to mechanical surface pressure over the left motor area, over or in the neighbourhood of Broca's convolution, followed by basic complication, as evidenced by the implication of the third and fifth pairs of nerves producing the symptoms referable to the eye and the muscles of the jaw; and, lastly, there was paralysis of the fore-arm and hand, which latter was the great difficulty in the case. The pressure, either hæmorrhagic or inflammatory, I believed primarily involved Broca's lobe, and the basic complications I considered were probably due to extension of the effusion.

Having regard to the fact that the patient

Negative
result of
necropsy.

was clearly *in extremis*, and that trephining gave him what might be termed the shadow of a chance, I operated, and removed a disc of bone, over Broca's lobe, and the result being negative I removed another a little farther back. Neither operation revealed a source of pressure. The patient died the next morning, and the result of the autopsy was as negative in its results as the operations had been. There was neither hæmorrhage nor abscess; the brain substance was whiter and harder than normal—the condition observed so often in alcoholism. The only tangible changes observed were evidence of arachnoid inflammation, which was all the more remarkable, having regard to the apyrexial condition of the patient throughout, and also a thickening and adhesion of the meninges over the upper portion of the right motor area, which presented no signs of recent development, and under which was a small patch of softening about the size of a large pea. A careful examination of the cerebral vessels failed to give evidence of the existence of embolism.

In this most remarkable and exceptional case, in which so many of the symptoms of cerebral pressure supervened on the receipt of a severe injury, it was, indeed, as surprising as it was disappointing to find that they depended on some condition independent of mechanical pressure, and it proves how far we are still, even

when the symptoms are signal and pronounced, from being able in many instances to correctly estimate the phenomena in cases of cerebral lesion, and especially in those having apparently a traumatic origin.

Dr. Bennett has drawn attention to a remarkable case of mono-crural paralysis, which was under the care of a disciple of Professor Ferrier, and the site of the supposed central lesion was carefully indicated on the skull. Subsequently the patient was under Dr. Bennett's care for epileptic seizures, which ultimately proved fatal, and which were attributed to renal disease. Having regard to the mono-crural paralysis, a careful *post-mortem* examination was made, but without discovering any evidence of a lesion either of the brain or its coverings.

Case of mono-crural paralysis, recorded by Dr. Bennett.

We have too, on the other hand, cases recorded in which there has been marked intracranial disease invading the motor zones, but without producing any motor disorder, as, for example, in the remarkable case of subarachnoid cyst recorded by Professor Cunningham.* In this case the cyst—one of exceptionally large dimensions—was limited in front by the Rolandic fissure, below by the parallel fissure, above by the intra-parietal fissure, and posteriorly it reached the occipital lobe—and yet in this case there was no evidence whatever

Case of subarachnoid cyst, recorded by Professor Cunningham.

* "Journal of Anatomy and Physiology," vol. xiii., p. 508.

of impairment of motor or sensory power. Another case, illustrative of the fact that serious lesions, involving the motor area, may exist without producing paralysis, is one recorded by Dr. Byrom Bramwell. In this a large sarcoma, growing from the dura mater, "had apparently destroyed the greater part of the motor area on the right side. So far as one could judge with the naked eye, the whole of the motor centres in the face and upper extremity were destroyed, and on microscopical examination the grey matter in this region seemed to have completely disappeared; and yet there was absolutely no paralysis."*

From these interesting, but somewhat dispiriting facts—which, unhappily, remind us of the dense mist in which we are still surrounded—let us glance at the bright side of the picture, and consider some of the cases that give us encouragement, and tend to restore confidence.

Cases of
subcranial
hæmorrhage.

The first I would allude to are four cases of subcranial hæmorrhage, which have recently occurred in Dublin, and for which the operation of trephining was performed. In all four cases the condition was correctly diagnosed, and in three of them the hæmorrhagic effusion was reached and removed, and the treatment followed by immediate relief and ultimate recovery.

* "Brit. Med. Jour.," April 21, 1888.

Two of these cases presented features of exceptional interest. In the first, which was under the care of my colleague, Mr. Thornley Stoker, the patient had sustained a fall off a cart nine days previously to the operation, and was at the time of its performance in a state of complete left hemiplegia, was comatose, and the respirations twelve per minute. The diagnosis which was made, and proved afterwards to be correct, was that hæmorrhage over the right motor area, due to laceration of the middle meningeal artery, and probably associated with fracture, had occurred and produced at first partial left paralysis, and that the increased hemiplegia which subsequently occurred was due to renewed hæmorrhage. Trephining was performed over the fissure of Rolando, and the hæmorrhagic effusion reached and successfully removed; this was promptly followed by relief, and an uninterruptedly good recovery was made. The case is of special interest in one particular, being signally illustrative of the doctrine of Ferrier, that the absence of anæsthesia is, in such cases, indicative of the lesion being limited to the motor zone, and the brachial monoplegia also pointed to this alone being implicated.

Mr. Thornley
Stoker's case.

The second case, which was under Mr. Ball's care, was one of motor aphasia, which came on after the patient had received a blow on the head with an open penknife ten days pre-

Mr. Ball's
case.

viously to his coming under observation. The cicatrix of the wound was over the squamous portion of the temporal bone. There was an absence of any paralysis of the voluntary muscles, but the aphasia was distinct and progressive—both word-blindness and word-deafness being well marked. Trephining was performed, and the wound was found to have been a penetrating one, involving both bone and dura mater, and a small subdural blood-clot was removed, which it was believed was situated in the Sylvian fissure. The recovery in this case was complete. In a third case of subcranial hæmorrhage, which Mr. Thomson has recorded, the operation of trephining and the removal of an epidural blood-clot was attended with an equally satisfactory result.

Case of
epilepsy
recorded by
Mr. K. Franks.

As a remote result of intracranial hæmorrhage, another case, which was under the care of Mr. Kendal Franks, is noteworthy. The patient was a young man, aged twenty-five, who commenced to suffer from severe epileptic seizures six years after he sustained a fall on the top of his head from a height of nine feet, and was treated by bromides continued without intermission for over a year, but without influencing the attacks, except occasionally to lengthen the interval between them. Trephining was performed, and a subdural blood-cyst, pressing on the left frontal lobe of the brain, was discovered. The

cyst was then cleared out and drained. Immunity from the seizures for three months was the result; there was then a recurrence of them, but they were much slighter than before. A second trephining was then performed, and although the result of this was negative as regards disclosing anything further to cause cerebral disturbance, the condition of the patient since the operation has been most satisfactory, and he is now apparently free from the attacks, which formerly were of such frequent occurrence.

In two cases of traumatic cerebral abscess—
one epidural and the other subdural, and both of them illustrative of the pathological fact first noticed by Dease as to the late appearance of cerebral trouble after cranial traumatism—I trephined, and in one of them the result was very remarkable. The operation was performed seven weeks after the injury, which was a blow over the left temple. At the time the operation was performed the patient was clearly *in extremis*—motor and sensory paralysis complete, and coma, following convulsive seizures, profound. On raising a disc of bone at the situation where the injury was received, no pus was to be seen, and on laying open the dura mater the result was equally negative. I then passed the needle of a hypodermic syringe into the brain substance as far as it would go, and to my great

Traumatic
cerebral
abscess.

satisfaction found, on drawing up the piston of the instrument, that I had reached the abscess. I removed an ounce and a half of pus, and then washed out the cavity with a weak carbolic solution. The relief obtained by the evacuation of the abscess was immediate, and before the patient left the operating theatre he was able to articulate distinctly. His recovery was rapid and uninterrupted, and he returned to his usual avocation, which was that of a plasterer. As regards the situation of the trephine opening, I may mention that it was three-quarters of an inch to the left of the mesial line, and an inch in front of the coronal suture. It corresponded to a point close to the junction of the supero- and meso-frontal convolution. After evacuating the contents of the abscess cavity, in order to ascertain the size and direction of the latter I passed the little finger of my left hand cautiously into it. By doing so I was able to ascertain its limitation anteriorly, laterally, and inferiorly. Externally and inferiorly its limitation must have been formed by Broca's lobe, but posteriorly and inferiorly, although I passed my little finger in as far as it was possible, the limit of the cavity was not reached, and my belief is that the abscess possibly involved the lateral ventricle.

The final outcome of this remarkable case, if disappointing, is of much interest. For nearly

nine months after the operation the patient remained perfectly well, and quite able to follow his usual avocation. It was then stated that he got a "fit," from which he recovered, and he returned the following day to his work. The morning after this he was found in bed in a state of complete insensibility, and he was then brought for the second time to hospital. Right hemiplegia was complete, and both plantar and patellar reflexes lost; his face was pale, but lips deeply cyanosed. Pulse, 160; respirations, 60; temperature, 101.8°. He had frequent convulsive seizures after he came to hospital.

Thinking it possible that the symptoms might be due to the formation of a second abscess, I reflected the flap I made originally at the trephining operation, and, on opening the dura mater, through some thickened cicatricial tissue gave exit to some bloody serum; I then passed a blunt-pointed director downwards and backwards to a distance of 5 cms., but did not reach any pus or other fluid. A director was then passed downwards and slightly forwards, when a considerable quantity of serous fluid came gushing out. From this situation I removed 3 vj. of sero-sanguineous fluid dotted with white-coloured flakes. The effect of the operation was to reduce the pulse from 150 to 100, and the temperature from 105.1° to 104.6°. The

patient, however, never rallied, and died the day following.

I might dwell on other cases of cerebral abscess illustrative of the beneficial results obtained by trephining and drainage, more particularly that published by Dr. Gowers and Mr. A. Barker, where the abscess occurred in the temporo-sphenoidal lobe, and depended on otitis media, and Dr. Greenfield's, which also depended on the same cause. Trephining and evacuation in both these cases were attended with the best results.

The operative efforts in cases of abscess, tumours, and epilepsy, of Professor Victor Horsley, Mr. Alexander, Dr. M'Ewen, Mr. Godlee, and Dr. Roberts, of Philadelphia, are such as to give the greatest encouragement and hope that in the near future we may be able to undertake the operative treatment of such cases with a confidence we cannot yet possess.

There are many points of interest connected with these remarkable operations that I have mentioned which, did time permit, I should like to dwell on. But in truth the discussion, in any minute way, of the technicalities of either the diagnosis or therapeusis of such cases seems, on an occasion like the present, hardly appropriate; such being more suitable for consideration at the ordinary meetings of your Society, where, in the scientific crucible, the golden ore

of experience and research is tested, and the pure metal, that having the genuine ring of truth in it, is elicited and refined.

From what has been said it must be conceded that surgery can no longer hold in any sense the subordinate position to medicine which she occupied so long. So far, at all events, as physical conditions are concerned, surgery has undoubtedly advanced medicine in no small degree, and in doing so accomplished much in the direction of dispelling the factitious and unreasonable division of the two branches of the profession. It has also been its safeguard against irregular and unrecognised lines of practice, for no important surgical proceeding can be based upon such, at least in the public mind.

At the same time we must acknowledge that, of late years at all events, surgery is indebted to medicine. From Prof. Ferrier's work, for example, brain surgery has to a large extent been the outcome, although without Listerian anti-septicism little of what was done could have been accomplished. One of the best instances that could be mentioned of the good results that have been obtained by the combined work of a physician and surgeon is that of Dr. C. Allbutt and Mr. Teale, of Leeds, whose researches on scrofulous cervical glands, pulmonary abscess, and other conditions existing on the boundary

Surgery no longer holds a subordinate position to medicine.

Results obtained by the combined work of a physician and surgeon.

Effects of the
fusion of
medicine and
surgery.

line—one every day increasing in breadth—between medicine and surgery, are doubtless familiar to all present. In truth, the more investigation is pursued in this direction the more likely is it that surgical possibilities in many other medical cases than those I have mentioned will become recognised. One of the immediate and most salutary consequences of this overlapping or fusion of our work has been the gaining for the profession at large of a vast increase of influence and public confidence; more, it may be safely said, than has been gained by any of the other professions in the same time, and which has been obtained not because it has mastered so many of the secrets of disease or injury, but, as an eminent living statesman has observed, “Because the world was well aware that the very highest of human abilities were addressed in ample quantity to the business of the profession, and that their abilities were addressed to it with all the zeal and all the judgment which they could expect from human capacity and assiduity in any of the pursuits of life.”

And now, what next? Are we on the threshold of unexplored regions of research, or have we arrived at the hopeless deadlock of finality that some maintain we have reached? We should reject so disheartening a suggestion, and fearlessly pursue our course, relying not

alone on biological research, but also on improvement in surgical precision and of surgery, more particularly in its operative aspects.

As regards the future progress and development of medicine it has been said by an eminent scientist, but I think unphilosophically, that present research forces on us the conclusion that in order to appreciate the etiology and prevention of disease we must 'in future rely rather on chemical than on biological investigation; but, considering, among other things, the results obtained by the recognition of parasiticism as an etiological factor in the production of disease, and the great probability of being able in the near future to recognise it as such in affections in which it has not yet been demonstrated, it is clear that we must not rely exclusively on either one or other of them, but rather to the outcome of researches in the many branches of natural science on which both medicine and surgery are based.

Future progress of medicine.

But there are other things we should do as well as not do. Among the latter, we should not yield to the tendency that exists in the present day to abandon the principle of unity of research, and to run into narrow specialistic grooves of work.

Undue extension of specialism to be avoided.

In certain branches of surgery and medicine, just as in law and other departments of human learning, specialism is doubtless not only inevit-

able but useful; but it is when there is undue extension of the principle that the harm is effected, leading, as it doubtless does, to what has been so well termed by Dr. Richardson a "centrifugal disintegration"—one which is tending to tear our science into shreds. It has been said by the apologists of specialism that what it loses in breadth it gains in depth; but it should be remembered that it is not always the deepest wells that furnish the clearest and best water; nor in mining operations is it the narrowest shafts that always lead to the purest metal.

Premature
publication
of cases.

Another error that is too often made, and which is fraught with peril to true advancement in surgery especially, is the premature publication of cases, and the danger that exists in consequence of drawing erroneous conclusions therefrom. In illustration of this I would allude, among many other examples that might be mentioned, to the records that have appeared so often of alleged successful results obtained after operations for lingual cancer. It must be admitted, by all possessing operative experience, that there are few surgical procedures that, as a rule, in their ultimate results are so disappointing as these. This disease seems, in truth, like an impregnable fortress, for ever proof against the sternest artillery of our art, an invulnerable enemy that apparently may be vanquished, but

Lingual
cancer.

never conquered. To those who give unquestioning credence to the roseate statistics, so frequently published, of the treatment of cases of lingual cancer—cases in which permanent relief is too often triumphantly stated to have been obtained—this may, perhaps, appear too discouraging a picture, but these published results are, as a rule, so distinctly opposed to my clinical experience, that on reading the records alluded to, in which success appears to be the rule and the want of it the exception, it is hard to avoid surprise and regret that so many have been found to prematurely publish records which, my belief is, are of necessity misleading. The custom of too early publication of such cases is the main factor in preventing a true estimate being formed of the value of such interference, and must tend to damage the worth of statistics as a means of establishing surgical truth.

In reference to this point, Sir James Paget's words are very applicable. He observes, speaking of what good operative surgery may do when practised with prudence in the treatment of malignant disease—"It does not do all we want; the disease returns even after complete removal of the diseased parts. All that is locally wrong may be removed, the local portion of the disease may be deemed cured, but something remains or after a time is renewed, and similar disease reappears, and in some form or

Sir J. Paget's views on operative surgery in treatment of malignant disease.

degree is usually worse than the first, and always tending towards death.”*

I hope I shall not, in making these observations, be understood as in any way depreciating operative surgery in such cases. Far from it. It sometimes cures, usually prolongs life, at all times gives relief; but in reference to cancer and its treatment it must, I fear, be confessed that as yet “we see through a glass darkly.” We have only reached a sort of halfway house on the road, beyond which we are not likely to get until many of the problems connected with the disease are elucidated, such as the relations, if any, which exist between it and other specific diseases, notably syphilis; how far we are justified in regarding it as primarily a local disease; the nature of the *materies morbi* or microbe, or whatever is the agency that develops the phenomena of cancer; and again, if the disease has a parasitic origin—and probabilities seem to point in that direction—to determine what are the circumstances which at one time render the organisms quiescent, dormant, and apparently harmless, and at another time which rouse them into dangerous activity? These, as well as many other problems, must be solved before the therapeutics of cancer can be placed on a sure and scientific basis.

Syphilis a

In connection with the all-important question

* “On Cancer and Cancerous Diseases,” p. 25.

of the origin of cancer, it has often occurred to me as remarkable that the question as to what part syphilis takes in its development has not been more frequently a subject of consideration. I confess to a growing conviction, based on a tolerably long clinical experience, that in the early life history of cancer it is not so much a direct etiological factor, so to say, but rather tends to promote a condition favourable to the development of the entity, whatever it may eventually prove to be, which plays so important a rôle in the first act of a drama which, as a rule, has so tragical a termination.

probable
factor in the
origin of
cancer.

Recently Prof. Lang, of Vienna, has drawn attention to this subject, and has given the particulars of a series of cases which illustrated the tendency to the development of carcinoma on a syphilitic base, and he alluded to similar cases recorded by Mr. J. Hutchinson and Prof. von Langenbeck. My colleague, Prof. Hamilton, has also detailed to me the history of two remarkable cases which were signally illustrative of the development of cancer occurring during the treatment for secondary syphilis, the disease appearing in the groin and running a rapidly fatal course. Did time permit I could also adduce instances illustrating the close affinity between the two diseases. I allude more particularly to cases of ulcerated lingual gummata, which ultimately presented the characters, clinical

as well as histological, of epithelioma. In reference to this subject Mr. Hutchinson observes—
 “The statistics are wholly wanting as yet which would enable us to give any confident opinion as to whether the damage the tissues receive from a syphilitic infection makes them more prone than before to take in the erratic modes of growth which constitute cancer. In the case of the tongue the association of the two is so common that it is difficult to avoid an impression that syphilis must exercise some degree of predisposing influence.”*
 Mr. C. Heath also is of opinion that one of the causes of the increase of cancer of late years—a fact noted by the Registrar-General—is the greater spread of syphilis.† If these views be ultimately endorsed—and who in the present state of our knowledge can say they can not?—how largely does it add to the imperative duty that devolves on us to make, with all the powers at our disposal, efforts to dissipate the public prejudice that exists to bringing about a re-enactment of, I trust, the temporarily laid aside Contagious Diseases Acts, and how greatly does it intensify the grave responsibilities of all who unhappily, under the baneful influence of that mischievous sentimentalism which has done so much to sap the judgment and good sense of so many men as well as women, thwart and hinder efforts which, when

Desirability
 of a re-enact-
 ment of the
 Contagious
 Diseases Acts.

* “Syphilis.” By J. Hutchinson, 1887.

† “British Med. Jour.,” April, 1888.

made, have been proved to all unprejudiced persons to be fraught with good to mankind, not merely now, but for untold ages to come.

The elimination of this dread scourge of the human race is not a national—it is a cosmopolitan question. It is one not so much for the therapist as for the statesman. “The time has come,” said Marion Sims, “when we can no longer shut our eyes to its evil influences, and we must deal with it plainly, as we deal with other great evils that affect the general health of the people. If yellow fever threatens to invade our precincts we take steps to arrest its progress at once. If cholera sounds the alarm we immediately prepare to defend ourselves against its ravages. If small-pox infects our borders we circumvent and extinguish it; but a greater scourge than yellow fever and cholera and small-pox combined is quietly installed in our midst, sapping the foundations of society, poisoning the sources of life, rendering existence miserable, and deteriorating the whole human family.”

I might adduce much, and, to unprejudiced minds, conclusive evidence as to the beneficial effects of the Acts in protected districts, not only as regards the diminution of the disease, but also in reference to the good moral effects of them, but on the present occasion I will, in connection with the former, content myself by mentioning one fact. It is mentioned in an

Remarkable
proof of the
value of the
Contagious
Diseases Acts.

able paper on this subject by my colleague, Mr. W. Thomson.* In 1874 the 50th Regiment came to Dublin, an unprotected station. It was previously for seven months at Aldershot and Colchester, protected stations. The length of time was practically the same that the regiment spent in both the protected and unprotected stations, as was also the average strength of the regiment during the two periods. The admissions per 1,000 men, while protected, for syphilis were 11·97, and while unprotected 118·81, and it should also be stated that during the first period there was the adverse influence of 13 per cent. fresh recruits, while there were no enlistments in the second. Other facts equally striking could be mentioned, proving how potent for good the Acts might be made; but the one I have adduced speaks, in my opinion, trumpet-tongued in their favour.

Partial
legislation
insufficient.

But encouraging as the results of the Acts have been, it is not from such partial legislation as that contained in them, that we can look for any great or permanent improvement. This need not be expected until statesmen and philanthropists of all nationalities shall combine in endeavouring to crush the enemy in our midst, that every day brings in its train disease, destitution, and death, not alone to the guilty but also to the guiltless, and transmits a bitter

* "Med. Press and Circ.," April 30, 1879.

inheritance of sorrow and suffering to the innocent yet unborn. And yet to the efforts made to mitigate or stamp out the disease the strongest opposition is made by those "Friends of Humanity," whose perverted notions of right and religion make them give an insensate opposition to a movement which, if carried out effectively, would put such a check on immorality and diminish so largely disease among all mankind. When we consider the suffering, blighted hopes, and loss of life that the disease unchecked carries in its wake, we cannot but realise the fact that although sentiment is a mercy, it may be one that for a nation is the most costly—and for humanity, the most cruel.

The task of dissipating many of these prejudices and errors of persons of doubtless good intentions as a rule, but of weak intellectual fibre, and which, in more than one instance, have culminated into what has become a real calamity for mankind, is one that all can undertake, no matter what their abilities or mental powers may be. If it be not possible to have a position in the scientific vanguard of our profession, much may be done in supplementing the work of those whose strength and whose work have enabled them to get there. Men of much creative genius are, as they ever have been, rare in their generation. But those without this may not the less be "true sons of their century," for it is the men of order, the men who work with method, earnest-

ness, and truth, that do the great mass of the world's work. If they have not strength to carry a votive tablet to the Temple of Truth, they can at all events assist in fixing and cementing it; and fortunate it is that such is the arrangement made by the One Perfect Workman, for it shows us the importance, nay, necessity, of mutual help which must exist so long as men's qualities, mental powers, and tastes are so diverse.

In future the relations between surgery and medicine being now so happily altered, the physician and surgeon will work in unison, the labours of the one supplementing those of the other, their mutual jealousies and differences forgotten, or relegated to the hazy traditions of a past, that has but little interest to anyone, save, perhaps, the historian or the antiquary. This union for the good purposes of mutual help will bring us increase of strength, of confidence, and hope, and assuredly prove that we are all, so to say, of the same guild, all animated by the same worthy ambition, by the same desire to "allow," as Lord Bacon said, "the spials and intelligencers of Nature to bring in their bills," and all animated by the same fair aspiration to discover, collect and replace the scattered fragments of that precious crystal of Truth, which, it has been said, fell from, and was given to us, from Heaven.