BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1882.

SUBSCRIPTIONS to the Association for 1882 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London, Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, OCTOBER 7th, 1882.

MR. MATTHEW ARNOLD ON MEDICINE.

THE occasion of the opening of the Liverpool University College, last week, and the distribution of prizes to the medical students who had been most successful in the previous session, afforded Mr. Matthew Arnold the opportunity of making some remarks on general and medical education. Mr. Arnold is always interesting. If for nothing else, he would always command an attentive audience for his eminence as a man who has made his mark on the literature of his time. And even more than his literary claims, his eminence as an educationalist for the last quarter of a century entitles him to a respectful and attentive hearing. On the present occasion, Mr. Arnold has spoken specially to a medical audience, or, at least, has given special prominence to medical subjects before a mixed audience; and, for this additional reason, what he says demands our particular attention. In another way, indeed, he still further appeals to the medical public: for we are informed, in the address, that Mr. Arnold at one time had serious thoughts of studying medicine, and of devoting himself to the profession. We should be disposed seriously to regret that he did not carry out this intention, were it not that we fear his labours would have been much missed in the cause of education, and that we do not know anyone who could quite have filled his place. Assuredly, there would have been room for such a man in medicine. Not, perhaps, so much as a scientific observer would he have specially shone; though, in saying this, we are very far from implying that he would have been unscientific. Of scientific observers, however, there never has been any lack in the profession, and, in the generation now coming to a close, less than ever. Rather, therefore, in the work of summing up the labours of other scientific inquirers, and of joining together by the last links of imaginative genius, the various disconnected parts of scientific research, would his peculiar province have been found. Probably, never since the time of Cullen—certainly not since Schleiden and Schwann's elaboration of the cell-theory, and Virchow's adaptation of it to pathology—has such a man arisen in medicine. Had Darwin devoted his magnificent combination of accurate observation and high imaginative power to medical studies, probably medicine would have found her Newton by this time; or, possibly, an Arnold might have filled the place. But, failing the man, there remains to be considered what Mr. Arnold has said about medicine; and next, what stroke of imaginative genius is required to perfect her labours, and enable her to take her place among the positive sciences.

The central idea of the discourse is what the speaker calls lucidity. We scarcely think that the author of the phrase "sweetness and light" has been as happy on the present occasion as formerly in the choice of a term. Had he said reality, we think he would have expressed his meaning more distinctly. It is no doubt true of all professional men who desire to be masters of their art, that they must not rest satisfied with the appearances of things, but must, by all means, strive to know the reality. The theological phrases concerning "the root of the matter," and the philosophical discussions about things in themselves, are striking instances of this. And so the medical man who wishes to understand disease, and to benefit his patients, must probe through the thin veil of symptoms to reach the real substratum of pathological facts. This reality ought to be more easily attained in medicine, since the patient is himself interested in aiding the doctor to discover the truth. As no man is a hero to his valet, so none but a fool would, by sacrificing any part of the truth, attempt to impose upon his medical man. Mr. Arnold has, therefore, shown true insight in holding up lucidity as the goal of medical inquiry. To this end all medical study ought to be directed. The advice of Sir Astley Cooper, to prosecute dissections, not caring for what people may say; of John Hunter, that young medical men should not waste time in speculation, but should patiently pursue their work; of Dr. Hughlings Jackson, on a recent occasion, to obtain *post mortems* wherever practicable, are only different expressions of the same thought. If, as Mr. Arnold defines it, lucidity is "the perception of the want of truth and fitness in things, the perception that they are no longer possible, that their time is finished, that they can serve us no longer," then those medical men who really pursue this object, will be the readiest to perceive the advisability—nay, the necessity—of discarding old methods which have served their day; will be unwilling to sneer at remedial agents because they are new, or to despise theories because they have not been broached before. Similarly, they will be willing to adopt new and scientific terms, whose form expresses their meaning, and to discard old names when they tend to obscure the nature of the diseases which they symbolise. If these suggestions convey to some minds the idea of danger and of revolution, it may be replied that all such fears may be obviated by an honest effort after lucidity before they are adopted. In any case, however, an error in the direction of progress is preferable to stagnation, and, like a hypothesis waiting for verification, is often itself the means of advancement. The one safeguard against error, in the direction either of revolution or of stagnation, is to be found in a logical and philosophical training. If all medical men were possessed of this, as we hope they will be before long, there would be less danger of mistaking appearance for reality, symptoms for pathological changes, or functional derangement for structural alteration. There would also be less danger, on the one hand, of a weak trust in the strength of traditional lines, or, when the camp is struck and the forward march determined on, of being carried away by the glamour of superficially resting on too narrow an induction of facts into an advance which can end only in disorder and disaster.

If, having now considered the words of Mr. Arnold while he is still only a potential student of medicine, we were to proceed to attempt to suggest what he might have said to us had it been our lot to discuss advice of his given as a practitioner of forty years' standing, a much more difficult task would await us. It must, indeed, appear presumptuous, in the absence of the appearance of the master-mind, even to speculate on what he might have said to us, had it been our good fortune to hear him. But there are already some things fixed and determined in medical science; and these, it is certain, he would not have altered. The course, or natural history of human disease, is now well known. True, an amplification remains to be made in the direction of comparative or evolutional disease, and very likely a master-spirit would have attempted the investigation of this domain before addressing his fellow-workers. But, inasmuch as human is only a special form of general organisation, it is almost certain that any mode of action, found to be fundamental and invariable in human phenomena, will also be found to obtain in comparative pathology. Physiology has already advanced far enough to have established this truth so far as her domain is concerned. In the investigation of disease, it has been gradually realised that, if it is not sent by fate, neither does it depend, as a rule, on mysterious and obscure causes; but that, on the contrary, the most powerful causes of disease are just those agents which, because they are so universal, act on the organism continually, the air, the food, the temperature, the work, the worry—in short, the general conditions under which life is lived. A point on which such a mind would have insisted would probably have been this, that causes acting continuously do not manifest their effects by continuous results, but that the effects of long-continued causes are shown by the induction in the organism

of a series of leaps and bounds. Health itself is not a continuous progression, but a series of variations, the only difference between health and the beginnings of disease being that, in the former, the variations are within narrower limits. When disease tends to recovery, the leap towards death is less powerful than the bound towards health, but when it tends to death, the opposite is observed. Probably such a mind would have shown, in the next place, that in the domain of therapeutics, remedies follow the same law of action, and that the leap taken by the economy under the action of a remedy is always followed by the bound of reaction. He might even have suggested, or attempted to prove that, fundamentally, all actions, healthy and diseased, were referable, either actually or analogically, to the ultimate swelling and shrinking which are observed to occur in the cell, or protoplasmic mass. The next step would probably have been to show that certain remedies, by inducing swelling and shrinking, or shrinking and swelling in certain parts, were capable of combating the corresponding actions in the parts induced by what is called disease. A refinement on this step, but one which it would be absolutely necessary to take, would be the determining of the arithmetical ratios between the resistance of different organisms, and the power of remedies to modify their actions. Of this step, but a faint scintillation is observable as yet; but the positive era of medical science would have begun to dawn if some advance had been made towards realising it. A higher advance, however, even than this, and one which may possibly even obviate its necessity, would be attained if, the causes of disease being known, and their powers mathematically stated, efforts were directed to placing the organism in such conditions as would enable it to live to its full term, and so to obviate disease. In this direction, some considerable steps have already been taken, and the sanitary and preventive service of the country is the one from which, beyond all others, much is expected, and which will probably least disappoint expectation. As has been already said, at one of the addresses delivered at the opening of the various medical schools last week, "diseases are sown and reaped, like corn-crops, as the direct result of human conduct", and, therefore, a modification of human conduct, by preventing the sowing of the seed, may entirely obviate or destroy the crop. Fuller powers to sanitary authorities, with proper safeguards to liberty, will probably, therefore, be the therapeutic armamentarium of the future, and from such tools great work may reasonably be expected.

The remarks made by Lord Derby at Liverpool, and which have been heard before from his lordship, on the amount of gratuitous work demanded from doctors, are worthy of serious consideration. Space forbids our dealing with them at length, but in two essential points we must express our thorough concurrence with his remarks. We agree with him, that if it is highly creditable to the medical profession that they are always ready to give gratuitous service to the public, even at the cost of their health and life; it is scarcely so to the public, that such services should be demanded. We also feel with his lordship, that never has the profession failed as a whole to respond to the demands laid upon it, and very rarely does even the individual medical man fail when so required, even when he may feel that the exactions laid on him are unreasonable.

THE STUDENT, IN RELATION TO CONTEMPORARY MEDICAL EDUCATION.

THE large body of students who commence their medical career at the beginning of this month will, in the course of some few years' study, undergo certain tests of proficiency based on regulations which are in a state of transition, and which will, at least, not entirely apply to many of their future junior colleagues. The sceptic in questions of technical education will lay no stress on this fact, since he places no confidence in legislation, and believes that an industrious youth will succeed under all circumstances, that the artificial value set on a weak man by the possession of a diploma gained by judicious supervision and cramming, is a snare to society, and that the sooner a bad student goes to ruin the better. This kind of scepticism ignores all moral responsibility. We must not act, in policy nor in legislation, on the principles of natural selection, involving the survival of the fittest without any assistance to the weaker, from the older and wiser, against deteriorating influences. To leave the student to shift entirely for himself, is little better than the practice of exposing sickly children, not unknown in barbarous states of society. Weakly children may become strong men, inferior students may develope into sound practitioners. Much talent was wasted under the old system of "walking" London hospitals and hunting over several metropolitan schools, all at that period badly organised, for a good lecturer. The deterioration of youthful enthusiasm, and thirst for knowledge and practical work, is very serious when demonstrators adopt a clumsy or careless method of distribution of subjects in the dissecting room, hampered by a "famine," or by defects in the Anatomy Act. Hundreds of young men, apparently weak, and absolutely idle at the onset, have been made into industrious, active and competent physicians and surgeons, by the energy and good management of teachers in good medical schools. As for "giving rope" to incorrigibly idle or unprincipled students, that implies the ruin of a large number of weaker men through the force of bad example, and hospital authorities are sadly in want of legal power to eject black sheep from their folds. Whilst the sceptic is thus tolerating an evil state of affairs, there are others who place their faith in legislation as though it were a talisman. Such persons hardly believe that any good can come to students until the conjoint scheme becomes law. When it is enforced, they feel almost certain that all the present evils of neglected diligence and uncontrolled idleness, repeated rejections and unjust examinations will pass away for ever, or be completely neutralised, just as some politicians are at present actively engaged in promulgating a doctrine that all poverty and social inequality will be banished by turning the State into a universal landlord, and making rent into income-tax.

The future increase or limitation of legislation are, however, questions that affect the first year's student of 1882 only in the same sense as they concern qualified men. They will be interested in future reforms or alterations in the curricula, but they will be educated under older rules, patched up, it is true, by certain important amendments, some less than a twelvemonth old. There is now a peculiarly good chance for the medical legislator to study the practical working of medical education under its present aspects, and storing all information, to make invaluable comparisons between medical teaching ten years hence, and that now to be obtained in these isles.

Three types of the first year's student may be distinguished, if we classify on a purely educational basis. The first kind is the student who has served a legalised apprenticeship or who knows something of dispensing and prescribing through less official means. This type, once so common, is undergoing extinction. The second variety is the student from a resident university. The third is the commonest form of student at the present day, the youth almost fresh from school, who begins his technical education at his hospital.

Not without grave deliberation must the practical extinction of apprenticeship be hastened, however strongly and however justly Dr. King Chambers, Mr. Marcus Beck, and others, may have condemned the system, in the course of their introductory addresses. We must not compare the medical student of forty years ago, when apprenticeship was the rule, with his homologue of to-day, when the rudiments of medicine are first taught at a hospital. The worst features of the student of the past were mostly related to habits which he shared with his elders, and not to any evil essentially arising from apprenticeship. In the report of the Committee of Council of the British Medical Association on Medical Education, published in Janu ary 1881, this subject is carefully discussed. The opinions of a large number of hospital teachers and general practitioners were consulted by that Committee. A large proportion of the practitioners expressed their conviction that there is a want, in the education of medical students, in instruction on the art of prescribing,

and that a thorough knowledge of pharmacy is indispensably necessary to the general practitioner. Qualified men beginning practice constantly prove highly inexperienced in its routine, often to their personal discredit and to the great annoyance of partners and employers. "Lastly," said the above mentioned report, "it is argued that no inconsiderable number of recently qualified medical men have no idea of the real nature of the duties of general practitioners until they are actually engaged in practice; many of them then discover that their work is hardly that which they had anticipated." The opinions of a large proportion of past and present teachers in metropolitan and provincial schools were not in favour of a return to the system of apprenticeship "even in a modified form"; and, as most of these "past" and some of the "present" teachers had enjoyed opportunities of practical experience of apprenticeship in their youth, this objection is of great weight in any future deliberation on the question. The objections are well known, and therefore need not be here discussed at length. The student entering on his studies at a hospital after serving an apprenticeship is often not in that frame of mind most suited for hard work in the dissecting-room, and his idea of disease is apt to be associated with remedies, or with trivial subjective symptoms. "What's the good of getting up the cœliac axis?" said a student once in the dissecting-room of a London medical school, "the governor" (that is, of course, the medical practitioner to whom he had been apprenticed) "has a rattling practice, and does not know a tarsal from a carpal bone." "Bronchitis", said a young gentleman of the same type, reading an announcement of the subject of a clinical lecture nailed on a notice-board, "that's tightness of the chest, frothy expectoration turning yellow; pil. ipecac. cum scil. every night and carbonate of ammonia and tincture of senega, *quartis!*" After all, this was a very clear exposition of the precise ideas of any student who has attempted to learn practice before he has acquired any knowledge of the science of his profession. How, on the other hand, might it be, if the student served an apprenticeship after his anatomical and clinical studies? The report of the Association Committee has considered this question. "A student", we read, "before being granted his licence to practise, should work for a time under a general practitioner, or at a public institution where he has personal charge of patients at their own homes." In more than one of the introductory addresses delivered last Monday afternoon, we find an arrangement of this kind strongly advocated. One difficulty yet remains. It is not easy for examining boards to be sure of the efficiency of all organised medical schools. How can they trust, then, the value of a private practitioner's certificate, seeing that he may be most skilled in treating his patients, but not necessarily a judge of the merits of a pupil?

The university undergraduate enters a medical school with certain advantages, for he is always more or less accustomed, already, to methodical study. Taken as a whole, however, the student who has never been to any university, nor served an apprenticeship, is most favourably circumstanced when he begins his hospital studies. Love for his particular hospital is a sentiment far stronger in this than in the other two types of student. Sentiment is, in all worldly affairs, a factor that must never be left out of consideration; and this particular sentiment has proved to be of high importance in medical education. The eagerness for a good hospital pass-list is a powerful incentive to hard work. It is this question of passing examinations that will more particularly affect the student who enters his hospital this week for the first time. We will not recur to the lengthy arguments, discussed in our pages during the past summer, with regard to certain new regulations of the College of Surgeons, destined to exercise great control on the intervals of time which should or should not elapse between passing anatomical and final examinations. We shall soon see whether these regulations will be rigidly enforced, and whether they will remedy the evils of chronic studentism, without hindering the diligent, and laying unexpected responsibilities on teachers. This will be not the least interesting problem to be solved by the future destiny of the student of 1882.

THE EXAMINATIONS OF SOME OF THE ENGLISH LICENSING BODIES.

THE report lately published by the visitors of the examinations of the Medical and Surgical Corporations is most valuable. The spirit in which it is conceived, no less than the matter it contains, reflects the greatest credit on its authors. At page 58 of this report, we find the following remark: "the effect of an examination must be to guide education and study; and, secondly, that in emphasising all the good points of the various examinations inspected, the visitors have had in view the practicability of the suggestions offered as the basis of a future scheme for examinations." We believe that the future scheme for medical and surgical examinations has already been settled by the Royal Commissioners appointed to inquire into the Medical Acts, and that, before long, Parliament will confirm these recommendations. It is, however, natural to suppose that the Commissioners would not have arrived at a conclusion regarding a scheme for examinations, without having considered the subject in relation to the changes which any such scheme was likely to produce on the system of education. The truth is, that underlying the voluminous evidence, to be found in the pages of this blue book regarding the functions of the Medical Council and the Corporations, it is obvious that the majority of the Commissioners considered these subjects important, in proportion as they affect the system of medical education. The Chairman of the Commission and the Master of the Rolls were especially careful to elicit information from those witnesses who were known to have paid particular attention to the subject, as to what alterations in the present course of study they thought most necessary; and if these changes could be effected through means of the existing nineteen licensing bodies.

We are convinced that the feeling which has agitated the profession during the past fifteen years, was not excited simply because general practitioners are not adequately represented on the Medical Council. We doubt if the inequality in the examinations of our licensing authorities, great as this is evil, would have been sufficient to move the professional mind. The root of the whole matter is, that the profession are of opinion that our medical students are not properly trained for the work of their calling, and they hold the Corporations responsible for the existing state of things. Sir William Jenner spoke but too truly when he remarked (Q. 2439) "the profession as a whole has nothing to do with the Corporation, or very little. I left the College of Physicians as a Member, and I went down stairs. I asked what business I had to come again, and was told none at all; nor had I, till I was elected a Fellow. A member of the College of Surgeons may go into the library and read, and into the museum, but he has nothing to do with the management of the College of Surgeons; he has no voice in that at all, and therefore I maintain that the College of Surgeons does not represent the profession." The Corporations, however, rule absolutely over the course of study, and the examinations through which our students have to pass.

We believe, on the whole, that the scheme of the Royal Commissioners is the best that can be adopted; nevertheless, it is obvious the divisional boards they propose creating, will simply perpetuate the authority of the licensing corporations, and if any really beneficial changes are to be effected in the existing system of education, it will have to come from the controlling influence of the Central Medical Council. It is clearly, therefore, very important, not only to persist in our demand for direct representation, but also to be careful to elect strong men to the Council. We may learn something of the nature of the changes in our system of education to which the future council will probably incline, by studying the evidence of those witnesses examined by the Commissioners whose opinion must influence this Council. Dr. Acland remarks (228), "One of my reasons for wishing to have national boards is not for the sake of making these examinations more severe, but making them more reasonable. By making them more reasonable you will ensure better teaching for the real purpose which is to be had in view, namely, the making of practitioners." Dr

Acland indicates the lines upon which this improved teaching should advance (250 and 64), he remarks: "The rules of study may be well left to the educational institutions, so long as rules or methods of examination are in the hands of a controlling body which is to harmonise all. There is a middle course between extreme detail of regulation as to the number and course of lectures, and the letting go the system of certificates and regulations entirely. There is a medium course between the two, which is the right one." Sir J. Paget, on the same subject, remarks (2460), "I would hesitate in making stringent rules according to which all lecturers must act. For example, I may say generally that I think no scheme of education, however important, but that certain teachers should be left to teach in their own way. I would not have the rules too stringent. The great advantage to students is to learn how to learn, and not to learn this or that dry fact." Professor Humphry remarks (2656), "I would allow students to be educated and instructed in any school as to which there is reason to think good education is given. I do not think we can trust to examinations alone—men may be crammed up to a minimum standard." We shall not quote from the evidence of any of the other witnesses on this subject, but would refer our readers to the answers given by Messrs. C. Macnamara, Marshall, and Morris. Most of the influential witnesses examined by the Commissioners express their conviction that considerable alterations should be made in the curriculum and the examinations through which our students have to pass. They are disposed to grant greater latitude, as to how and where students acquire their knowledge of medicine and surgery in all their branches, including hygiene. They are not inclined entirely to discard lectures, but they are clearly disposed to leave these matters very much in the hands of the schools' authorities. At the same time they would demand the clearest possible evidence as to a student's having efficiently dissected and worked diligently in the wards of one or more hospitals, and lastly, of having attended courses of instruction in properly appointed physiological and pathological laboratories. In addition to evidence of a student having gone through a course of practical training of this kind, his knowledge must be tested by properly conducted examinations. But we must defer the consideration of this subject until next week.

THE inaugural address of the Midland Medical Society for the session 1882-3, will be given by Dr. Andrew Clark at Birmingham, on Wednesday evening, November 8th.

DR. SYDNEY RINGER has been appointed consulting physician to the North-west London Hospital, 18 and 20, Kentish Town Road, in conjunction with Dr. Andrew Clark.

IN consequence of the prevalence of small-pox in South Africa, the Legislative Council of Natal has passed a compulsory vaccination law. Lymph has been sent to the clergy and missionaries in the native districts, with a request that they would vaccinate the Kaffir population. A first batch of 200 on the Church lands at Bishopstowe have been vaccinated.

A COMMUNICATION has been received by the St. John's Ambulance Association, from the Chief Commissioner of the Dublin Metropolitan Police, enclosing a report from one of the surgeons to the effect that Constable Brangan, 145 A, who holds a certificate of the association, had rendered first aid in a case of gun-shot wound, and by his knowledge had probably saved the life of the injured man.

THE first meeting of the New West London Medico-Chirurgical Society will be held this (Friday) evening at the West London Hospital at 8 P.M., when Dr. Burney Yeo has consented to give an address on "The Antiseptic Treatment of Lung Diseases." The President, Dr. Hart Vinen, will also give a short introductory address. Specimens of the bacillus tuberculosis and other examples of bacteria will be exhibited.

AN inquest has been held at Keighley into the circumstances attending the death of a man named Riley, who was supposed to have died from lead-poisoning, caused by using the town's water. The West Riding analyst gave evidence as to the amount of lead absorbed by the water, which was so great as to be dangerous for domestic use. Dr. Meymott Tidy asserted that the deceased had not died from lead-poisoning, but from kidney-disease. The jury returned a verdict to the effect that the deceased had died from lead-poisoning.

THE spread of small-pox in Cape Town continues, and, according to a Reuter's telegram of September 12th, we learn that it is now spreading more among the European population than at any previous period during the outbreak. There are reported to be over one hundred cases at the small-pox hospital which are beyond the reach of recovery. From August 7th to the 6th of September, ninety-one deaths were registered; but it is thought that numbers of Malays have died, and been secretly buried at night. Provisions are being made to prevent secret burial.

MR. JOSEPH COWEN, M.P., is of opinion that there are two obstacles which the advocates of sanitary reform have had to combat, a general dislike of centralisation, and the popular dread of taxation. He shares the wholesome British prejudice against over-government. It is always emasculating, and sometimes demoralising. But over-government and centralisation are two different things. Centralisation, when it is only used to systematise, stimulate, and strengthen local authority is beneficial; but when it is made the means of multiplying functionaries, and when it concentrates in Government officials powers that should belong to the people, then centralisation becomes highly objectionable. The former gives symmetry, cohesion, and force to natural life; the latter emasculates it. But gradually, more enlightened views of taxation, its purposes and scope, were becoming entertained; and in time it will come to be acknowledged that from none of their imposts did the British people get better value than that which secured them the essentials of healthy existence.

THE PRINCESS LOUISE.

WE understand that Dr. Burnet, Physician to the Great Northern Hospital, has been specially retained to attend on H.R.H. the Princess Louise in her tour through Canada, and is now accompanying Her Royal Highness on the journey.

THE MEDICAL SOCIETIES.

THE first meeting of the Obstetrical Society took place on Wednesday last; the opening meetings of the other chief societies will be held in the following order, viz.: Hunterian, Wednesday, 11th instant; Ophthalmological, Thursday, 12th; Clinical, Friday, 13th; Medical, Monday, 16th; Pathological, Tuesday, 17th; Harveian, Thursday, 19th; and Royal Medical and Chirurgical, Tuesday, the 24th.

THE TYPHOID EPIDEMIC AT BANGOR.

THERE is not the slightest indication of any cessation in the outbreak of typhoid fever, which has now raged here for the last six months. For the week ended on Monday last, fifty-nine fresh cases were reported, and seven deaths, including two at Llandegai, which is just beyond the local board district. The relief fund for the poorer class of patients has reached £1,250, £250 of which was given by the Bishop, who has also permitted the erection in his park of the tent-hospitals. The sewers are being fumigated with hydrochloric acid.