

**Observations on the system of teaching clinical medicine in the University of Edinburgh; with suggestions for its improvement / [Sir James Clark].**

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*To the Medical Society  
Bodleian*

*From the author*

OBSERVATIONS  
ON THE  
SYSTEM OF TEACHING  
CLINICAL MEDICINE

IN THE  
**University of Edinburgh;**  
WITH  
SUGGESTIONS  
FOR ITS IMPROVEMENT;

HUMBLY SUBMITTED TO THE CONSIDERATION OF  
THE PATRONS AND PROFESSORS  
OF THAT INSTITUTION.

MDCCCXXVII.

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## NOTICE.

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HAVING come to the resolution of printing the following observations, I think it right to state, in this place, the circumstances which led me to write them. In the course of a long residence on the Continent, I had visited the principal medical schools in France and Italy, and had made myself acquainted, as far as my opportunities admitted, with the state of medicine and of the medical institutions in those countries. Previously to fixing myself finally in England, I was desirous of ascertaining the present state of medicine in Germany, from personal observation also; and, with this view chiefly, I passed the greater part of last summer in that country. Although during this visit, my inquiries were directed to the state of medicine and of the medical establishments in general, my attention was more especially claimed by the department of clinical instruction, which had long been a subject of much interest with me.



and of the high importance of which I had become the more convinced, the more extended had been my opportunities of observation. In the course of my inquiries, on this occasion, I was naturally led to compare the system of teaching clinical medicine in the university of Edinburgh (the only school, I believe, in Great Britain, where clinical medicine is systematically taught) with that under my observation ; and the result of the comparison was upon the whole much in favour of the German system. I conceived at the same time, that part of this system might be introduced\*into our schools with great advantage, and was better adapted to the state of society in this country than any other I had observed. On my return from the Continent in October, my attention was again strongly called to the subject, by learning, while on a short visit to Edinburgh, that a Royal Commission was at that very time engaged in an inquiry into the state of education in the Scottish universities ; and by the perusal of Dr. Thomson's enlightened observations respecting the course of medical education. In these papers by Dr. Thomson, however, although the subject of clinical



medicine was taken up and ably treated in them, I found the author's views directed rather to the manner of appointing the clinical professors than to the method of instructing the pupils; and that consequently a wide lacuna was left, which I conceived my more extended opportunities of observation, on this subject, might enable me to fill up. How far I have succeeded in my expectations is left for the readers of the following pages to decide. Respecting the contents of them, I shall only here observe, that no proposal is made which is not warranted by practical experience; and that if the writer shall be considered in any respect visionary, it can only be in his believing that what is done in other countries may be done in this, and done with a like degree of benefit to the profession of physic. On another occasion, I may, perhaps, lay before my professional brethren a more extended view of such a course of instruction as I consider requisite to a good medical education; and a critical examination of the division and arrangement of the various branches of instruction adopted in the medical schools of this and of other countries. The present brief and hurried remarks on the most important department of medical



tuition will, I trust, be received with candour, and judged more by their real merits than by the manner in which they are presented. To be useful at all, it was necessary that they should meet the eyes for which they were intended without delay ; and in arranging them it was felt, that if they did not possess intrinsic claims to attention, this could not be ensured to them by any labour of preparation, or any art of composition, however much superior to that possessed by the author.

Whatever opinion may be formed on this point, I trust that the circumstance of my having appeared before the public, but a few years since, as the defender of the Edinburgh school, in reply to an incorrect account of it published by an eminent Italian professor, will not be considered as detracting from any value which the following observations may possess, nor subject the author to the charge of inconsistency. On the occasion alluded to \*, I endeavoured to vindicate the Edin-

\* Lettera al. ch. Sig. Professore Tommasini intorno alle sue Osservazioni sulla Scuola Medico-clinica di Edimburgo. Roma, MDCCCXXII.

———— Intorno alla Literatura Medica Inglese. Roma, MDCCCXXIII.



burgh school from criticisms founded on an imperfect and partial view of it, but did not attempt to uphold the system of clinical instruction adopted there, as superior to the Italian system. I was then actuated by the same feelings towards the university of Edinburgh as at present, while venturing to point out the defects of its clinical school, and to recommend such improvements as will, if adopted, render it less obnoxious to the criticisms of foreign professors. On another point, I would beg, before concluding this preliminary notice, to make one observation: whatever remarks I may have thought it my duty to make respecting the clinical school of Edinburgh, I trust it will be distinctly understood that they in no way apply, or are intended to apply, to the present clinical professors. Most of them I have the pleasure of knowing personally; some of them were my masters, and have since honoured me with their friendship; with all of them I am well acquainted by reputation; and I can most sincerely affirm my belief, that in no university in any country are men to be found more highly qualified for teaching clinical medicine, or more



conscientiously disposed to perform the duties of clinical professors. It is the system only that I would have changed. My aim has been, to claim for Clinical Instruction, the consideration which its importance among the branches of medical education demands, and which it never has received in this country. In doing this, I thought I could not better attain my object than in addressing myself, on the present interesting occasion, to the university of Edinburgh, which has been indebted to her clinical school for much of her reputation, and from which, in an improved state, she may anticipate still more.

GENTLEMEN,

At a time when the course of study required of the candidate for a medical degree, in the University of Edinburgh, is under revision, any information that may throw even a little light on a subject of such importance as that of Medical Education, may not, it is hoped, prove unacceptable to you ; nor receive less attention because it comes from a pupil of your school, who must ever feel the warmest interest in its welfare. Considerable improvements, it appears to me, in common with many well-informed members of the profession, are necessary in the course of medical studies in the University of Edinburgh ; in order that it may keep pace with the progress of medical science ; and that the pupil may have the same opportunities of acquiring a competent knowledge of his profession, as are afforded in similar institutions of other countries.



Medical Education is a subject of the greatest importance to the public, and must be highly interesting to every medical man who has the honour and advancement of his profession at heart. To one who, like the writer of these pages, has had occasion to examine the state of education at the most eminent medical schools on the Continent, the subject is of peculiar interest ; and it is the impression made on my mind by a comparison of the state of medical instruction in other countries, with that in the first medical school of Great Britain, which has induced me, most respectfully, to submit the following observations to your earnest consideration.

It is not, however, my intention, on the present occasion, to trouble you with any remarks on the preparatory education to be required of the pupil about to commence the study of medicine, or on the extent or arrangement of the medical curriculum ; as these are subjects of such evident importance, as must severally call for and obtain your most mature deliberation. But I am most anxious to claim your serious attention to the state of *Clinical Instruction* in the University of Edinburgh ; as *this* may not, at first sight, appear so imperfect as it really is, when compared with what it might be, and even with what it is in the Medical Schools of some other countries. The de-



fects alluded to have reference as well to the period of attendance required of the pupil, as to the method of teaching this department of medicine, according to the present regulations of the university.

Of the various branches of medical education, clinical instruction is, beyond all question, the most important, and is, in truth, that to which the others are merely preparatory and subservient. It is only at the bedside of the sick, that the pupil, guided by an experienced practitioner, can make with advantage, or ought to make at all, his first acquaintance with diseases, or learn to observe them with the accuracy which they require. He may, indeed, have heard excellent descriptions of disease delivered in lecture rooms, and read much of it in books; but the impressions he receives from such sources are faint and transitory, compared with those produced by actual intercourse with the sick. Personal observation, therefore, is absolutely necessary to the right investigation and conception of the phenomena of disease; but in proportion as the first impressions produced by these are strong, is it of importance that the pupil's observation should be rightly directed. This can only be done by a well conducted system of clinical instruction. Such being indisputably the case, it is surely of the first consequence that



Clinical Medicine should be taught in the manner best calculated to convey such a share of practical information, as shall enable him on whom the honour of a medical degree is conferred, to enter the difficult path of actual practice with advantage to the public, with satisfaction and credit to himself, and with his mind accustomed to such habits of observation as shall ensure his advancing in knowledge as he advances in years. But although the truth of this will be admitted by every medical man who has turned his thoughts to the subject, and is capable of forming a correct opinion of it; it is no less true that this most important of all the branches of a physician's education, has been, and still is, very imperfectly taught in the medical schools of this country.

It is for these reasons that I am induced to call your attention, on the present occasion, more especially to the subject of *Clinical Instruction*. With this view, I shall, in the first place, lay before you some account of the systems of teaching this department of medicine, in the most esteemed medical schools on the continent; and shall then point out the parts of these, which, it appears to me, may be introduced with great advantage into the clinical school of Edinburgh. I shall afterwards take the liberty to suggest such a course of clinical instruction, as, in my humble opinion,



should form an essential and necessary part of every physician's education ; and which, if adopted by the University of Edinburgh, will enable her clinical school to bear a comparison with those of the best foreign universities.

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There are two methods of teaching clinical medicine adopted in the medical schools of the continent, and two different kinds of clinical institutions. One of these may be called the *Hospital Clinic*\* ; and the other, which is chiefly in use in Germany, is called there the *Poly-clinic* or *Ambulatory Clinic*.

In both these institutions, the system differs in some very material points from that in use at Edinburgh. The chief of these consist—1st, in the more advanced pupils having a part in the treatment of the patients ;—2dly, in the greater length of time during which the pupils are required to attend the clinical course ; and, 3dly, in the manner of appointing the clinical professors.

In the Hospital Clinic, the elder pupils are appointed to attend to certain patients, of whom they

\* I venture to adopt *clinic* as an English word, rather than to be constantly using the French term *clinique*.



may be said to have the charge, under the immediate inspection of the professor. They draw up the history of the cases under their care, and are examined on the nature of the disease by the professor, in the presence of the other pupils. They are also required to point out the symptoms which more especially characterise the disease, and serve to distinguish it from others which it most nearly resembles, and with which it might be confounded; and, finally, to give the prognosis and method of treatment\*. Those pupils continue to attend the same patients; and at every succeeding visit they examine, under the eye of the professor, the state of the symptoms, inquire into the effects of the remedies prescribed, &c. Of the whole case they keep a faithful record. If the disease should prove fatal, the attending pupil is further required to state, previously to the examination of the body, (a thing which is never omitted,) the morbid conditions which he expects to find, and what he considers to have been the cause of death.

There can be no doubt that such a method of exercising the more advanced clinical pupils is

\* At the university of Bonn, Professor Nasse divides the clinical pupils into two classes. The younger, or pathological class, are exercised on the pathology and diagnosis of the diseases only,—the second, or therapeutical class, are required to state the treatment, &c.



most advantageous to them ; and when illustrated by such clinical lectures as are given at Edinburgh, proves still more beneficial to the pupil. But though such a plan of teaching would doubtless prove equally advantageous to the pupil in this country as in Germany, France, and Italy, its introduction into the Edinburgh school would, I believe, be attended with considerable difficulties ; though its great advantages have been fully admitted in a paper written, I have reason to believe, by one of the most distinguished professors of the university\*.

The *Poly-clinic*† is in very general operation in Germany ; and at some of the universities of that country, it is almost the only one on which they depend for instructing the pupils in practical medicine, as at Goettingen and Halle. At Berlin and Bonn, it also forms an important part of the system of clinical instruction, and one of the most acute and intelligent professors that I met in Germany, told me that if he had a single ward with eight or ten patients, in addition to his Poly-clinic, he would desire nothing further for the practical instruction of his pupils.

\* Ed. Med. and Surg. Journal, Vol. xviii. p. 614.

† So called from the much greater number of patients seen at this than at the Hospital Clinic.



The Poly-clinic of the German schools resembles closely our general Dispensaries. As in them, the patients with chronic diseases, who are able to come abroad, are examined and prescribed for at the Clinical Rooms, and those labouring under acute diseases, are seen and treated at their own houses.

The pupil is first exercised in examining the patients that come to the Clinic, under the observation of the professor, and is required to state the nature of the disease, its treatment, &c., as in the Hospital Clinic. The treatment being agreed upon, the pupil writes the prescription, which is examined, modified if necessary, and signed by the professor. After a time the pupil is intrusted with the care of the out-patients. He is required to draw up an accurate history of each disease under his care, which is submitted to the inspection of the professor, as are also the reports of the progress and treatment of the case. Moreover, when he finds himself in difficulty, or the case appears to the professor to require it, the clinical assistant accompanies him to see the patient, and assists him with his advice. In urgent cases, I believe, the professor also visits the patient; and where the disease proves fatal, he superintends the examination of the body, a practice to which, on the continent, objections are very rarely made.



Each pupil writes and retains the cases of his own patients, but the whole are copied into journals, kept at the Clinical Rooms for the purpose. These form very useful records; and, indeed, afford the best materials for ascertaining many important points in statistical and topographical medicine; such as the nature and occurrence of diseases in different periods or seasons, and in different quarters of the town; their relative prevalence among the various classes of inhabitants, and the means of tracing the origin and progress of epidemics\*.

It is difficult, I think, to conceive a system more admirably calculated for communicating practical information to the pupil, or for initiating him by degrees into the nature of the responsible profession he is about to exercise: and I am not acquainted with any other method of medical

\* As examples of clinical institutions of the kind just described, I may mention that of Berlin, under the direction of Professors Hufeland, Osann, and Busse, of which several excellent reports have been published by Professors Hufeland and Osann; that of Halle, under Professor Krukenberg, who has also published annals of his clinic; two at Goettingen, under Professors Conradi and Himly, and that at Bonn, under Professor Nasse, who has published a description and report of his clinic. The whole of these are conducted with an intelligence and activity, to which I have much pleasure in bearing testimony. The Dispensaries of this country, if conducted on a similar plan, might be made valuable practical schools.



superintendence, by which more justice can be done to the sick poor, who are not objects for an hospital, or who prefer being attended at their own houses. At Goettingen, which has only a small population, I found that some of the pupils were appointed to visit the sick poor in the nearer villages.

Let us now compare the Edinburgh Clinic with those described. The patients in the wards are here visited once a day by the Professor and pupils. The cases are carefully drawn up by the physicians' clerks, and the pupils are permitted to copy them into their own case books. The successive daily reports may be added at each visit, as they are dictated at the bedside of the patient by the professor. To see and hear the professor examine and prescribe for the patients, is all that the pupil, generally speaking, has to do with them\*; and it is not always an easy matter for him to attain this limited and second-hand communication; the crowd being frequently so great as to deprive a considerable proportion of the pupils of the benefit of seeing and hearing distinctly, either the professor or his patient. There

\* It is true the pupils may, I believe, visit the patients in the clinical wards in the intervals of the visits; but were many to avail themselves of this privilege, the patients labouring under acute diseases would not benefit by the practice.



are two clinical lectures given each week, in which the professor explains the nature of the cases, the treatment, &c. These lectures form an excellent part of the clinical system of Edinburgh, and are too much neglected in the foreign universities in general. They are, however, too few in number. A patient may be received into the clinical ward, and pass through the whole course of an acute disease, before the professor has an opportunity of making any remarks on the case in these lectures; but even though made more frequent than they are, they never can, in my opinion, entirely compensate for the want of remarks on the cases, in the clinical wards, such as are made in most foreign clinics. In Edinburgh, the number of patients to be examined, in the period of time to which the visit is limited, renders it impossible to make any remarks of consequence\*.

The foregoing brief and very general view of

\* After I had written these observations, I learned that during the present session the clinical duty had been divided between two professors in office at the same time. This is certainly an improvement, in as far as it divides the pupils; but accompanied, as it is, by an increased number of patients under the charge of each professor, it renders it quite impossible that they can be examined as clinical patients ought to be examined, in the time at least to which the visit is limited; or that any remarks of consequence can be made in the wards. Nor will it be possible for the professor, I apprehend, to make such comments on the cases as they would require, in two weekly lectures.



the method of teaching clinical medicine in the foreign medical schools, and in your own university, will, I trust, be found sufficient to enable you to form a judgment on their comparative merits. The superiority of the continental system in many respects, must, I apprehend, appear to you evident.

Respecting the time also during which the pupil is required to attend to clinical medicine, the difference between the two systems is not less remarkable; and here, again, the advantage is greatly on the side of the foreign schools. According to the statuta of the Edinburgh University, six months' attendance on the clinical course, and the same length of time at any respectable hospital, is all that is required of the candidate for a medical degree. In the foreign universities, the period of attendance is much longer. At Pavia, which may be taken as an example of the practice at all the medical schools in the Austrian dominions, the pupil is required to attend the medical clinical course during four sessions, or two scholastic years. At the University of Turin, the same period is exacted; and at those of Paris and of Pisa, two full sessions. These may be taken as examples of the length of the clinical course at the continental medical schools. But this is not all: the period I have stated is requisite to qualify the pupils for taking the degree of doctor of



medicine, but does not qualify them to practise. To obtain this privilege, they must have passed a considerable time, after graduation, in some hospital; or have attended the practice of a physician. The period prescribed in Austria, in Piedmont, and in Tuscany, is two years; and in the latter country the graduate of the University of Pisa must pass the two years of probation at Florence or Siena. After the completion of the period of probation, the graduate undergoes another examination on practical medicine, and must be approved of by his examiners, before he is admitted to the *libera praxis* of his profession. In Prussia, the period of probation is not so long; but the medical graduates, after having attained the degree of doctor of medicine in any of the universities of the kingdom, are obliged to pass some months at Berlin, when the schools are in activity; and are required to give proofs of their acquaintance with practical medicine, before they are permitted to practise.

Another circumstance in which the foreign schools differ from that of Edinburgh, is in the clinical professor receiving his appointment expressly in consequence of his qualification to teach practical medicine. Though he may, and frequently does give lectures on other subjects, his duties as clinical professor are regarded as by far the



most important, and in the exercise of which he is regularly occupied during the whole academical year. At Edinburgh, on the contrary, the clinical duty appears rather a secondary consideration, and is performed by professors holding other chairs; while their being qualified to teach practical medicine, is not, I believe, made essential to their holding these chairs. And in place of being regularly occupied during the whole session in teaching clinical medicine, they have charge of that department for three months only at a time, and that after a very considerable interval. This regulation gives rise to a desultory manner of teaching this most important branch of medicine, which is more likely to suffer by such a system, than perhaps any other part of the science. The regulations of the Edinburgh school in this respect are both unfavourable to the professor, and disadvantageous to the pupil\*.

From the foregoing review it would appear, that the value of clinical instruction has been very differently estimated in this country and on the

\* The new regulation at Edinburgh, of there being two clinical professors to do duty at the same time, will obviate in some degree the last objection, as they will be more frequently in office. In some of the continental schools, two clinical professors are appointed, where one is sufficient to do the duty, and they take charge alternately, but it is during the whole academical year.



continent. In the foreign universities, generally speaking, there is no part of the physician's education watched with more jealousy ; and there is no class of professors whose appointment excites more general interest than the clinical professors, or in whose selection and nomination greater care is taken that none but such as are well qualified for the office shall obtain it. In the case of no other professor, indeed, is there required a greater combination of the rarer qualities of the physician ; and no one certainly has more important duties to perform. Upon his efforts, favoured by a judicious system, depends, in a great degree, the pupil's future progress in his profession. According to the direction which his mind receives during his clinical studies, is he, in all probability, to become an accurate observing physician or an empirical writer of prescriptions. There can be little doubt that to a defective clinical education, more than to any thing else, is to be attributed the large proportion of routine practitioners in the profession,—of men who blindly follow the beaten track of their predecessors, without knowing or inquiring whether it is right or wrong ; because, having never learned properly to observe disease for themselves, or to reason upon its phenomena, they can derive but little advantage from experience. For the truth of these remarks, I appeal to those members of the profession who have



themselves suffered from a defective medical education, and who, after groping their way for years without deriving much advantage from their experience, have, at length, acquired the power of observing disease as it must be observed to be understood. How different is their future practice, both as regards their own improvement and their patients' welfare! and how much more might they, as well as their patients, have profited by their early practice, had they enjoyed the advantages of a good clinical education! It is in a clinical course only, with the examples before him, that the professor can impress effectually upon the pupil's mind the necessity and the manner of observing minutely the symptoms of disease, in order to enable him to trace the connexion which exists between them and the morbid conditions of which they are the signs. And it is here only that the pupil can learn to distinguish the symptoms of disease from disease itself, or discriminate the signs which are merely indicative of functional derangement from those which are characteristic of organic change. Nor will the professor fail, as the examples offer, to point out the manner in which the phenomena of disease are modified by age and sex, by peculiarities of constitution, and by the existence of previous disease, either in the organ affected, or in the neighbouring organs; neither will he omit to remark the effects which



any epidemical influence reigning at the time may have, in modifying the character of the diseases under treatment,—as these are all circumstances which affect most materially the degree, the progress, and the issue of the disorder; and which require a corresponding modification of treatment. But above all, I repeat, it is his paramount duty to impress upon the pupil's mind the necessity of minute and comprehensive observation, as the surest protection against those wild theories and sweeping generalizations, which still continue to disfigure medical science, and which produce the most injurious effects on the minds of youth, by leading them aside from what I consider the only true path in which to attain sound practical knowledge.

This appears to me a brief outline of the kind of knowledge which the pupil should be taught in a well organized clinical school, and which he certainly can acquire no where else. This is a kind of knowledge, however, which he can be but imperfectly taught according to the existing regulations of the clinical school of Edinburgh, however well qualified the clinical professors may be to perform the important duties of their office, and however anxious they may be to do so.

To sum up my objections under one view:



The system of teaching clinical medicine in the university of Edinburgh appears to me defective for the following reasons :—

1st, Because the period of attendance, required of the candidate for a medical degree, is not sufficiently long to admit of his acquiring such a share of practical knowledge as every graduate ought to possess.

2nd, Because one or even two professors are not sufficient to teach clinical medicine efficiently to the number of medical pupils at present frequenting the university of Edinburgh.

3rd, Because the professor has too many patients to examine and prescribe for, during the time allotted to the clinical visit,—which ought to have for its object the instruction of the pupil, as well as the treatment of the sick.

4th, Because the clinical lectures are too few.

5th, Because the pupils have little or no opportunity of acquiring any practical experience under the direction of the professor.

6th, Because the clinical professor retains the charge of the clinical wards for too short a period at one time, and resumes it at too distant intervals\*.

These defects, I humbly conceive, may be remedied as follows : 1st, By increasing the period

\* See note to Page 14.



during which the candidate for a medical degree shall be required to attend to clinical medicine (as without sufficient time he cannot possibly acquire a knowledge of practical medicine, however fair the opportunities held out to him may be); 2ndly, By increasing the number of clinical professors in office at the same time; 3rdly, By diminishing the number of patients under the charge of each professor; 4thly, By increasing the number of clinical lectures; 5thly, By making the office of clinical professor permanent, or fixed at least for a series of years, in the same individuals; and, lastly, by instituting a practical clinic upon the principle of the poly-clinics of Germany.

To render the clinical school of Edinburgh complete, it appears to me that a practical should be added to the present hospital clinic, and two professors appointed to conduct each. The number of patients in each of the hospital clinics should, I think, be from fifteen to twenty only, as that number would be sufficient to occupy the physician during the period appropriated at Edinburgh to the clinical visit (which I believe to be restricted to one hour), and would be quite as many as the pupils could attend to with advantage\*. By restrict-

\* I cannot at this moment refer to my notes on the foreign clinics; but, as far as my memory serves me, sixteen is about the



ing the patients to the number I have stated, the physician would moreover have time, not only to examine them more thoroughly, but also to make such practical remarks to the pupils in the wards, as the immediate symptoms of the cases required. These remarks should form, in my opinion, an essential part of a clinical visit: they would be most beneficial to the pupil, and need be productive of no disadvantage to the patient,—as every judicious physician would be careful to avoid making any remarks that could produce an injurious effect upon the minds of the sick. In the clinical lectures, the cases would be more fully commented on. The number of these lectures should depend, perhaps, on the state of the patients in the clinical wards; but under no circumstances should there be fewer than three each week.

The practical clinic, in the present state of the medical school of Edinburgh, would, I believe, also afford full occupation for two clinical professors. This clinic might, I imagine, be readily supplied by medical out-patients being encouraged to attend at the Royal Infirmary, and by rooms being appropriated for the purpose of visiting

average number in the medical clinics;—frequently not so great a number as this.



them : or, on failure of this, a respectable dispensary might be advantageously converted to this use \*. The professors would require one or more assistants ; and it is to be presumed that there would be no want of proper candidates for this office among the younger physicians. It would also be well if the professors directing this clinic, had each a small ward at their disposal, into which they might transfer, for a time, such of the cases as required more minute investigation than the circumstances of out-patients admitted. And this would enable them also to illustrate more effectually, the nature and treatment of the most important diseases, or of those which might be epidemic at the time.

Such is a general view of a system of clinical instruction well adapted, I humbly conceive, to the medical school of Edinburgh, and to the state of feeling among that class of the community, in

\* If a practical Hospital clinic should be preferred to the Poly-clinic, I can see no objections to it, provided it is made an efficient one ; but the latter appears to me altogether more applicable to the Edinburgh school. Both would be better still. The Hospital clinic, during the summer session, might be made a practical one, and restricted to the more advanced pupils, (see paper referred to, in a note at p. 7). Whichever plan is adopted, a practical clinical institution I hold absolutely necessary to a good medical education.



this country, which supplies the objects of medical attendance to our hospitals and dispensaries. The incalculable advantage which it holds out to the pupil over that now in use is too evident, I think, to require that I should farther occupy your time with it. Difficulties would, no doubt, at first present themselves to the introduction of such a system; but I cannot foresee any valid objections beyond those which occur to every innovation (however evident its merits may be) on long established systems. The present clinical professors may indeed object to it, as much too laborious a duty, in addition to the duties of the other professorships which they hold in the university; and the objection would be a most reasonable one on their part. But I can see no good reason why so laborious and important a duty, as that of teaching practical medicine, should be necessarily superadded to that of the other medical chairs in the university; more especially to those which have only a distant connexion with clinical medicine, and certainly do not require practical physicians to fill them. When the medical professors of the university, especially those holding chairs nearly connected with the subject of practical medicine, have the time and inclination to take a part in the charge of the clinical course, as an equally regular and fixed duty with that of



their other professorships, they should be preferred. But it is surely to such chairs only that the duties of teaching clinical medicine should be attached, if they are attached to any. Professors might be appointed to the chair of clinical medicine who held no other, as is the case in the medical school of Paris. But whatever plan is adopted, there can be no doubt that, in order to teach clinical medicine properly, the office of clinical professor should be as fixed and regular as that of any other in the university. The most important branch of instruction in the whole medical curriculum, as far as regards the pupil, and the most difficult as respects the professor, should not surely be considered a secondary duty; nor attached to that of the other medical chairs in the university, the professors of which may or may not be qualified to teach practical medicine, and who may take upon them the duties of clinical professor or not just as suits them.

I now come to consider the period of attendance on the clinical course, to be required of the candidate for a medical degree, and the order in which it may be conducted with the greatest advantage to him. In order that the pupil shall have an opportunity of attaining such a practical knowledge of his profession as may be reasonably expected during his academical education, three



courses, each occupying a session, appear to me quite requisite : the *first* to be entirely devoted to clinical surgery ; the *second* to the medical clinic, which is at present given at Edinburgh ; and the *third* to the practical clinic.

A question may arise on the necessity of requiring a candidate for a medical degree, to devote part of his time to clinical surgery. But a little reflection will, I feel satisfied, convince every one competent to form an opinion on the subject, that it should form an essential part of a physician's education. Careful observation of the phenomena of disease, as it affects the external parts of the body where it is cognizable by the senses, is the best preparation for enabling the medical student to form correct ideas of similar morbid conditions affecting the internal organs. It is by carrying his mind from the morbid phenomena which he has seen and carefully studied, to that which he cannot see, that the physician can form just notions of the nature and progress of internal diseases ; in as far, at least, as the internal organs and textures are subject to the same morbid changes as the external parts—for example, inflammation and its various consequences, effusion, adhesion, suppuration, induration, ulceration, gangrene, and the formation of new productions, &c., which form the basis of an extensive class of in-



ternal as well as of external diseases. It is necessary, too, that he should have studied the processes employed by nature for checking the progress of diseases, and for remedying or removing them, as well as the effects of remedies upon them, where this can be seen, to enable him to treat them properly when affecting the parts of the body which fall within his province. Numerous occasions also occur in medical practice, where the physician, ignorant of surgical pathology, must feel embarrassed in his treatment, because unable to determine the real nature of the disease committed to his care. As to the propriety, therefore, of the medical pupil beginning his clinical studies with general surgical pathology, I feel assured I shall have the concurrence of every reflecting physician; and I may, I think, venture to affirm, that the physician who has made himself the most minutely acquainted with the phenomena and treatment of external diseases, will, *ceteris paribus*, make the best pathological, as well as the most scientific and successful practitioner. In some of the best medical schools of the continent, clinical as well as general surgery is made a necessary part of the physician's education.

Having attended during one complete season to clinical surgery, the student will be prepared to enter on the medical clinic in the following session.



Here he will have an opportunity of observing the phenomena of internal disease, will learn the manner of examining the patients, and have his observation directed by the professor, at the bedside of the sick, to the most important symptoms; while the nature of the cases, reasons for the treatment adopted, the prognosis, &c. will be more fully detailed in the clinical lectures. He will learn the best manner of drawing out the histories of the diseases, and of recording with accuracy their progress, the remedies prescribed, and their effects, &c., at each succeeding daily visit. To the class of pupils I am now considering, this clinic will, I think, afford quite as much instruction as the foreign clinics, where the professor is interrupted in the examination of the patient by his communications with the pupil in attendance. Much may be learned by observing the professor's manner of examining the patient, of inquiring into the symptoms, effects of remedies, &c.; and in doing this, it is of importance that nothing should be allowed to divert his attention from the patient. Nor is the period which intervenes between the visit and the clinical lecture (when not too far separated) unprofitable to the pupil, whose mind has been trained by a good previous education to reflect and reason upon what he observes.

As the surgical clinic forms the best preparation



for the course which I have just described, so will this prepare the pupil for entering, in the following session, the third or practical clinic, the nature of which I have already explained, and which, as well as each of the two preceding courses, should occupy a full session at least\*.

The period of clinical instruction which I have taken the liberty to point out, appears to me quite necessary to enable the candidate for a medical degree, to acquire a knowledge of practical medicine proportionate to the rank in his profession which he is about to assume. It is not extended over so long a period as in several of the continental schools, and it is to be recollected, moreover, that there is in this country no probationary period between the degree and free permission to

\* I am aware that there is a numerous class of candidates for medical degrees at the university of Edinburgh, many of whom have had extensive medical experience in the public service, or otherwise, and who consequently do not require such a course of clinical instruction as I have suggested. But they cannot be taken into consideration, in arranging a course of practical medicine for pupils who must be supposed ignorant, and generally are so, of the subject, on their arrival at the university. But the *Senatus Academicus* would no doubt take that circumstance into their consideration as heretofore, and grant such exemption as the class of gentlemen I allude to seemed to deserve.



practise; a period which we have seen to amount in some countries to two years.

I have now, Gentlemen, finished the observations which I have deemed it my duty to lay before you, on a very important branch of medical education; but though I have confined myself to the subject of clinical medicine, I am far from thinking that it is the only part of the medical course which requires improvement\*. I would therefore, in common with every member of the profession who has its real interests at heart, beseech you to consider well before the final arrangements are made—to avail yourselves, to the full extent, of the fair opportunity which is now afforded, of render-

\* While the system of medical education is under consideration, I beg to express a hope that some measures may be adopted for the better instruction of a class of practitioners who have, in Scotland, very often the sole charge of many valuable lives, and that under circumstances in which their ignorance is frequently the cause of the most fatal consequences. I allude to the *midwives*, whose ignorance (my information comes chiefly from the northern parts of the country) is notorious. This appears to me to form a legitimate subject of inquiry on the present occasion, and, I feel assured, requires only to be mentioned to receive the attention which it so loudly calls for. In many parts of the continent, the practitioners of this class are greatly superior to those, I believe, in any part of Great Britain, because their instruction is much more attended to.



ing the system of medical education in the university of Edinburgh equal, if not superior, to that of the best medical schools on the continent. It may be long before so favourable an occasion shall again offer; and if the present inquiry is allowed to pass over without effecting material improvements in the course of medical education in the university of Edinburgh, the consequence will, in all probability, prove not a little injurious to the future interests and reputation of your school. Upon what is done now will depend the station which the medical school of Edinburgh is to hold, for the future, among similar institutions in this country,—whether it is to stand pre-eminent as heretofore, or to be speedily surpassed by others. Recollect that what you do not, may, and most likely will be done by other medical schools, and Edinburgh will be ultimately compelled to follow in the march of improvement when she should have led; and may be reduced, perhaps, in consequence, to see her halls deserted in the department of science to which she has been indebted for her most extended celebrity.

Whatever may be the result, I feel that I should have been deficient in duty to my profession, and in gratitude to my *alma mater*, had I withheld any information, or even suggestion, that appeared to me likely to prove useful on the pre-



sent occasion ; and I am not without the hope that, in submitting to your consideration these few observations, I may be doing some service to the medical school of Edinburgh, to my profession, and to the public.

I have the honour to be,

Gentlemen,

very respectfully,

your most obedient humble servant,

JAMES CLARK, M. D.

21, George Street, Hanover Square,  
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