THE POLICY OF THE UNIVERSITY OF LONDON IN RELATION TO LONDON MEDICAL EDUCATION AND MEDICAL SCIENCE.

By WILLIAM HUNTER, M.D. Edin.,

Fellow of the Royal College of Physicians of London; Teacher in Pathology in the University of London; Recent Examiner in Medicine in the University of Glasgow; and former Research Student of the University of Cambridge; Ettles Scholar, and Gold Medallist, University of Edinburgh.

I.

IN 1898 the University of London was granted a new charter embodying many important new provisions, and its government was placed on a broad democratic basis. These provisions included an important change regarding the relation of the University to the London Medical Schools. These latter were for the first time in history affiliated to the University; their lecturers were recognized, after due approval, as teachers of the University; and granted, as members of its Medical Faculty, a share in its government.

The object of these changes was admittedly a determined attempt to make the University what is called a "Teaching University," instead of being, as it always has been, merely an examining body. This effort on its part has been powerfully aided by the "University College Transfer Act" of 1905, by which that College, with the truest regard for the interests of education and great public spirit, has transferred all its property to the University, in so doing separating its medical school from University College and keeping it independent.

The new University of London Act of 1898 came into operation in 1902, and was generally heralded as opening up fresh prospects of usefulness to the cause of education, which the University has always had so much at heart. The care bestowed by the Commissioners who laid down the basis of its new constitution, and by those who drew up its statutes, was immense. It seemed that after the vicissitudes, unusual both in number and degree even for a University, through which it had passed in its short and chequered career, since its foundation in 1835, it had at last entered upon a clearer line of policy and fresh career of activity. The number of its difficulties is reflected in the history of its origin, and in the number of the supplemental Charters it has received since the original one granted to it in 1835. In that year University College was first founded as a teaching college, and its Charter contained the following paragraph:

Another Charter will be granted to persons eminent in literature and science to act as a Board of Examiners, and to perform all the functions of the examiners in the Senate House of Cambridge, this body to be termed the "University of London."

Such was its original basis; and in spite of the various supplemental Charters it has received—in 1853, in 1858, in 1863, in 1867 (admitting women to its degrees), in 1878, and lastly in 1898 (the latter the most liberal and democratic of all)—this characteristic has not been eliminated. Five short years have passed since the new charter came into operation, and the University of London is again in the middle of a "crisis," and is even said to be "threatened with disintegration." This crisis has arisen in relation to the policy to be pursued with regard to medical education, one of the subjects which more than any other it endeavoured, for the first time in the history of medical education in London, to place on a broader and sounder basis, by inviting to its councils, and affiliating as its schools, all the Medical Schools in the metropolis. The condition of so important a branch of education as that concerned with medicine is indeed well worthy of the attention of any University. Its importance in the case of the greatest metropolis in the world is often dwelt on. Let it here be said at once, as a prelude to the considerations and conclusions which follow, that at no time in the long history of medical education in London has the equipment or teaching facilities of its Medical Schools ever approached those at present supplied by these Schools. And yet it is in connexion with the prospects and requirements of medical education in London that this "crisis" has arisen.

I propose to consider (1) how far this alarm about the state of medical education in London is justified;

(2) if justified, what factors have been at work to produce it; (3) how far it is possible, by the removal of these factors, to remedy defective conditions existing.

TESTS OF EDUCATIONAL PROSPERITY.

There are various tests by which the success and prosperity of a medical school may be judged. The test may be the *Quality* of the students educated, even if they are few in number; or it may have reference to the *Number* of students seeking entrance into the medical profession through that particular door. *Quality* alone, however great it may be, will not serve to maintain a medical school without some fair proportion in numbers. The number of students might conceivably be affected by the cheapness of the education, the lowness of the standard, and the easiness of the examinations. All these are matters on which every one can have his own opinion. I consider there is no basis for any such depreciation of large schools. As a graduate of one great University, a research worker in another, an examiner in medicine in a third, and as a teacher in a fourth, I have formed my own opinion, and it is this—that talent on the part of the teachers in imparting knowledge, and on the part of the students in receiving a high-class education, is not confined to one school or one centre of education. I have witnessed a clinical examination of a girl graduate educated in a small school, which could not have been surpassed by anything I could ever hope to see on the part of any candidate, even if he had the advantage of three university educations. She received her due reward of a university degree.

I have similarly seen a keenness in work and a brilliant clinical skill on the part of a London student—licentiate of one of the Royal Colleges—which would have qualified him to compete on equal terms with the most distinguished graduate of a university. This student, however, was deprived of the privilege of taking a university degree in the centre, London, which had been selected for him by his parents, by the accident that he had not passed the particular matriculation examination required.

The opinion that smallness of number is made up for by the quality of the education may be, and in certain cases is, not at all baseless. It is the motive which has led in the past and will lead in the future to the formation of all new medical schools. On the other hand, it is certain that increase in number of students in particular centres or schools of education is a hardship most patiently borne by those suffering from it, despite any adverse opinions regarding efficiency of the education which may be entertained by less favoured rivals.

As a matter of fact, the history of medical education during the past forty years shows that there is no real basis for the view that the flow and ebb of students to and from particular medical centres is determined by any such inferior considerations as those referred to—cheapness of education or easiness of standard.

FACTORS INFLUENCING THE ORIGINAL CHOICE OF A MEDICAL SCHOOL.

Other factors of a more important kind come into play in determining the choice of the particular medical centre to which, after full consideration of ways and means, and after consultation with their medical friends, parents eventually decide to send their boys.

Apart altogether from the above-mentioned considerations—of cost of education (of which they can judge), of standard of education (of which they can know nothing except by hearsay), or of other considerations of a social or personal character, which always deserve and receive due weight—there remains for the parents the prime consideration which eventually governs their decision—"If I decide to give my boy a medical education, how can I best further his prospects of a subsequent successful career? Can I best do so by giving him a medical qualification, which costs least, and entering him in a medical centre where living is cheap, thereby saving myself £20, £30, or £40, as the case may be, in the total cost of his medical education? Or shall I, on the other hand, at the initial sacrifice of this amount to myself, enable the boy to obtain—if not necessarily a better education, since education everywhere is now good—at least a good university education and degree such as will give him not only a good medical education but afterwards in the eyes of the public a higher medical status?"

Medical education, like other practical affairs of life, is a practical business; and must be conducted with due regard to practical considerations. And the considerations above mentioned are of an eminently practical character, which it is quite useless for anybody concerned with medical education to ignore.

This being the case, how do the educational facilities (now admittedly of a high character everywhere) and the qualifications and degrees offered to the student at the end of his career (which are not of so uniform a character) appeal to parents entering their boys into the medical profession? Through what centres or schools of medical education do they elect to enter their boys, in the belief that they may obtain a good education, and enter on their profession with every reasonable prospect of success?

REGISTRATION DATA.

The answer to this question seems to be best supplied by the official registration statistics supplied by the General Medical Council regarding "the place and date of commencement of study, as certified by an official of a university, school of medicine, or scientific institution recognized by a licensing body and approved by the Council."

Prior to December 4th, 1894, it was permissible to commence professional study by pupilage, and the number entering the medical profession may have been slightly in excess of that officially registered. The number so entering was, however, small, and in any case does not affect the accuracy of the official figures presently to be given regarding the number of students registering at the different universities and schools of the United Kingdom. Since December 3rd, 1901, registration as a student can be effected on commencement, not only at a university or school of medicine, but also at a "teaching institution where physics, chemistry, and elementary biology are taught," recognized by a licensing body and approved by the Council."

The tables and chart I now submit are based on the official statistics regarding registration of students supplied by the General Medical Council since the institution of registration of students in 1865.

The information supplied by these figures is of a definite kind. It relates to the "place and date of commencement of study" as certified by an official of the institution. It does not afford any information as to places of study which the student may have subsequently entered. It is, however, a matter of common knowledge that with the two notable exceptions of the Universities of Cambridge and Oxford, which have no hospital facilities for their students, the movement of students from one school to another (so common in Germany) is not so common in this country.

Provided he gets the educational facilities he needs and the qualifications fitted to his attainments, the student entered at a particular medical centre generally stays there till he completes his course.

Any movements that take place do not affect the chief University medical centres, such as Edinburgh, Cambridge, Glasgow, Aberdeen, since these Universities require their full curriculum to be passed before granting their degrees. But such movements do affect the numbers attending the medical schools of London.

A certain number of students come up each year from other schools to the London medical schools to work for the London University degree and the Conjoint examinations. It would be interesting to ascertain precisely what that number is.

But the chief movement is connected with the Cambridge and Oxford students. Some of these (it would be interesting to know how many) elect to take their clinical work in the great provincial universities, such as those of Manchester, Liverpool, etc.; but by far the great majority come to the London medical schools.

For the purposes of the present inquiry, the London schools are credited with receiving all the Cambridge and Oxford students for the later half of their education.

RELIABILITY OF THESE REGISTRATION DATA.

As stated, the figures here dealt with are official. But before attaching importance to them, or drawing conclusions from them, the question arises how far they can be relied on as complete.

In the first place, if they are not accurate or complete—

if they do not represent all the students entering the medical profession—it would seem to be a very misleading and purposeless task on the part of the General Medical Council to take the trouble to compile them year by year. One or two licensing corporations—including the Conjoint Board of England—decline to recognize registration as a necessary preliminary to their qualification. And it may be thought, therefore, that possibly there may be many students at the London schools in particular, working for the Conjoint Examinations who are not registered at all. If this were the case, it would absolutely stultify the whole object and meaning of the *Medical Students' Register* of the General Medical Council. It would absolutely stultify in particular the returns on that *Register* regarding the number of students registering in the London medical schools.

I consider any doubt or fear on this score as to the accuracy of these figures for the London schools as well as for other schools to be groundless—for the simple reason that it is not the Conjoint Board which is asked to make the returns of their students to the General Medical Council, but the individual schools at which the students enter.

These schools have no object whatever to gain by registering students on their roll, and not notifying the same to the Registrar of the General Medical Council. On the contrary, each school and university is only too pleased to be able to notify the students who have entered with them. It is quite immaterial to them whether one body demands registration or another body deems it unnecessary; the more students they can return, the more to the credit of their school.

The following is the information supplied by these figures as to the schools originally selected by parents for their sons entering the medical profession:

NUMBERS OF MEDICAL STUDENTS REGISTERED AS COMMENCING THEIR MEDICAL STUDIES.

LONDON, CAMBRIDGE, AND OXFORD.			
	1905.	1906.	
Number of medical students registered in London Medical Schools ...	256	253	
Number of medical students supplied with final portion of education from (1) University of Cambridge ...	107	114	
(2) University of Oxford ...	25	21	
Total ...	132	135	
GRAND TOTAL ...	388	388	
OTHER ENGLISH UNIVERSITIES.			
University of Birmingham ...	13	21	
" Liverpool ...	22	39	
" Leeds ...	20	18	
" Sheffield ...	3	3	
" Manchester ...	49	50	
" Bristol ...	12	9	
" Durham ...	27	31	
University College, Cardiff ...	14	21	
TOTAL ...	160	192	
EDINBURGH AND GLASGOW.			
Edinburgh University ...	178	174	
Two Extramural Schools ...	56	44	
Total ...	234	218	
Glasgow University ...	107	105	
Three other Schools ...	26	27	
Total ...	133	132	
GRAND TOTAL ...	367	350	
OTHER SCOTTISH UNIVERSITIES.			
University of Aberdeen ...	49	29	
" of St. Andrews ...	11	15	
" College, Dundee ...			
TOTAL ...	60	44	

UNIVERSITY OF LONDON.

The University of London supplies education to none of its medical students. It leaves that duty to the London (or other) Schools. The medical education of its London students is carried out in independent London Medical Schools, to whose equipment or upkeep the University contributes nothing; and by teachers, both scientific and clinical, to whom it pays nothing.

The position it has throughout its history occupied in relation to London medical education would be paralleled in the case of the Edinburgh School, if at the critical period in its history, 1870-80, when it made its great forward bound, the University of Edinburgh had said: "We shall make no further endeavour to provide laboratories and teachers for any of our students. We leave that inferior (*sic*) task to any teachers who choose to form small schools around us. They will do all the educational work. We shall confine ourselves to setting up a standard, and to examining and giving our degree only to those who attain that standard. We shall, however, issue our orders to these smaller schools as to the kind of laboratories they must provide and the education they must supply. Moreover, to restrict as much as possible the number of those privileged to take our degree, we stipulate that any candidate, however well qualified he may be, shall pass a matriculation examination of a totally unnecessary kind." Is it conceivable that under such a policy the University of Edinburgh would have attracted students to the number as high as 300 a year from all parts of the British Empire; or could possibly have discharged the task—in the truest sense Imperial, since for many years it was the great Colonial School—which for so many years it successfully discharged and still continues to discharge, to the advantage alike of its students, of itself, and of medical education?

The policy of the University of London might have been even more closely paralleled in the case of another great University—that of Cambridge—if at the period in its history (1875-85) when it underwent, under the stimulus and guidance of Sir George Paget, Sir George Humphry, and Sir Michael Foster, its great scientific medical development, it had adopted a policy similar to that of the University of London. Like the latter, and unlike Edinburgh University, it was already provided with great and wealthy independent Colleges and inde-

pendent teachers. It might have urged on the Colleges the necessity of creating a scientific medical school in Cambridge, and left it to each College to provide itself with costly and highly-equipped laboratories. It might have stood aloof and contented itself with laying down the standard of education, and stipulated that the ordinary matriculation examination which it deemed sufficient (and rightly so) for those desiring to enter on its course of education should not suffice for its medical degree, but must be replaced by one of a totally different kind, of a character so peculiar that if the candidate did not afterwards succeed in taking his medical degree, he could go down from the University, and claim ever afterwards the credit of having passed the Cambridge matriculation.

The policy these two great Universities did adopt was of a very different kind. They recognized that *theirs* was the duty to supply the laboratories and teachers necessary to give their students the education they deemed needful. They made no call on others to do this work; and in the result the individual Colleges (in the case of Cambridge), the Extra-academical School and teachers (in the case of the University of Edinburgh) not only prospered, but by their prosperity and zeal contributed largely to the prosperity of their Universities. Both to them and to their students their Universities played the part of Alma Mater.

EFFECTS OF UNIVERSITY POLICIES ON THE NUMBER OF STUDENTS ENTERING THROUGH THE DIFFERENT UNIVERSITY CENTRES.

The following chart and tables show the effects of the policy pursued in these three University centres (and other centres) on the relative prosperity of the Medical Schools associated with them. From this it will be seen that the proportion of students entering at the London Schools has fallen continuously from 38 per cent. in 1866 to 22 per cent. in 1906. Edinburgh University rose from

NOTE.—The figures represent the number registered in the year stated. The percentages are those of the total number of students registered for England and Scotland in that year. The figures for the London School for Women (founded 1877) are not included in the London curve, except in the last year, 1906. The number registered in 1906 in the ten "London Schools" forming the London curve was therefore 237, = 20.6 per cent., as compared with 38.1 per cent. in 1866, 34.3 per cent. in 1875, 30.4 per cent. in 1880, 27.5 per cent. in 1885, 25.7 per cent. in 1890, 27.3 per cent. in 1895, and 18.9 per cent. in 1901.

8 per cent. in 1866 to over 17 per cent. in 1880, and still stands at 15 per cent.; and Cambridge has risen from 2 per cent. in 1866 to over 4 per cent. in 1880, and to nearly 10 per cent. in 1906.

CONCLUSION.

The concern about the state and prospects of medical education in London are therefore amply justified.

Number of Students registered as having commenced Medical Study, 1865 to 1906.

	England.				Scotland.					
	London Medical Schools.	University of Cambridge.	University of Oxford.	Seven Chief Provincial Schools and Colleges.	Edinburgh.	Glasgow.	Aberdeen.	University of St. Andrews and University College, Dundee.		
1865	184	10	—	—	34	—	41			
1866	302	16	—	—	67	—	103			
1867	—	—	—	—	62	—	44			
1868	—	—	—	—	74	—	61			
1869	—	—	—	—	102	—	73			
1870	350	—	—	—	135	—	71			
1871	—	—	—	—	140	—	82			
1872	—	—	—	—	144	—	101			
1873	—	—	—	—	174	—	99			
1874	—	—	—	—	167	—	106			
1875	361	23	—	—	200	—	141			
1876	—	44	—	—	150	+ (23)	104			
1877	—	42	—	—	230	(28)	110			
1878	—	41	—	—	250	(27)	100			
1879	470	45	—	180	216	+ 70	120	—	73	
1880	476	65	—	184	277	20	135	—	80	
1881	477	76	—	204	265	24	137	—	66	
1882	377	72	—	194	282	28	131	24	77	2
1883	383	76	—	165	255	31	131	24	79	1
1884	438	107	—	186	270	22	141	10	75	—
1885	427	90	—	150	265	22	164	17	88	—
1886	439	90	—	185	230	46	137	27	56	2
1887	449	94	—	212	282	50	157	15	78	6
1888	433	103	4	226	297	35	152	31	97	7
1889	404	106	15	267	253	45	177	21	91	5
1890	416	104	7	217	244	26	143	24	80	13
1891	537	115	31	256	244	44	172	39	91	13
1892	387	130	14	178	179	30	136	27	69	23
1893	405	136	27	218	227	39	101	12	69	3
1894	372	150	33	183	154	51	96	36	53	8
1895	418	148	29	196	212	44	110	22	68	10
1896	355	132	32	193	192	45	109	31	68	12
1897	321	123	24	219	198	46	90	30	46	18
1898	356	113	22	191	155	49	92	19	32	29
1899	310	122	27	189	189	43	107	16	60	15
1900	253	130	31	178	197	28	86	16	57	19
1901	222	122	21	155	195	37	89	26	68	14
1902	218	117	14	135	209	35	132	18	75	21
1903	243	92	15	142	205	35	101	17	68	26
1904	278	99	26	161	201	29	116	7	63	13
1905	256	107	25	145	178	56	107	26	49	11
1906	253	114	21	171	174	44	105	27	29	15

¹ London Medical Schools included are: Charing Cross, Guy's, King's College, the London, the London School of Medicine for Women

(1905 6), Middlesex, St. Bartholomew's, St. George's, St. Thomas's, University College, and Westminster. Provincial Universities and Colleges included are: University College, Bristol; University of Durham, University of Birmingham, University of Liverpool, University of Leeds, University of Sheffield, University of Manchester.

NOTE.—The totals in the above table from 1879 onwards are those given in the *Medical Students' Register*. Prior to that year the entries in the different schools were not totalled, and I have had to ascertain them, in the particular years selected, by going through the names of all the students entered at the schools against which figures are given.

LITERARY NOTES.

On January 15th Fleet Surgeon W. E. Home, R.N., read on board H.M.S. *Exmouth*, the flagship of Admiral Sir A. K. Wilson, V.C., at that time Commander-in-Chief of the Channel Fleet, a paper on Edward Pellew, the first Viscount Exmouth. The narrative is a thrilling record of a career full of

Most disastrous chances,
Of moving accidents by flood and field,
Of hairbreadth 'scapes i' th' imminent deadly breach,

and of deeds of daring and heroism of all kinds. Lord Exmouth was a sailor of the Cochrane type, but, like him, while always ready to fight against the most fearful odds, he was always very careful not to throw away the lives of his men uselessly. He said himself: "I have always gone where I was sent and done what I was ordered, and any one who does as I did will get on as I have done." His principle of action is expressed in the verse of Ecclesiastes: "Whatsoever thy hand findeth to do, do it with thy might." Fleet Surgeon Home's paper, which has been reprinted in pamphlet form, might well be circulated throughout the schools and training ships which are the feeders of our navy.

We have received a reprint of a memoir of Dr. William Smith-Forbes, read by Dr. Frederick P. Henry to the Philadelphia College of Physicians on January 2nd, 1907. Dr. Forbes was born in Virginia in 1831. He was the grandson of Dr. David Forbes of Edinburgh, who married Margaret Stirling of Dumbarton, whose family is said to have in its possession a letter from Mary Queen of Scots thanking George Stirling for the successful defence of Dumbarton Castle. Dr. Smith-Forbes began the study of medicine at the University of Virginia in 1850-51, and completed his course of the Jefferson Medical College, Philadelphia, graduating in 1852. In 1853 he got an appointment in the British Military Hospital at Scutari. In recognition of his services in the Crimea he was offered a commission in the medical service of the British army, but declined it because its acceptance involved the renunciation of his citizenship in the United States. On his return to Philadelphia he opened a private school of anatomy and operative surgery. He served with credit in the American Civil War. He was Demonstrator of Anatomy in the Jefferson Medical College from 1879 to 1886, and took a leading part in securing the passage of an Anatomy Act by the State Legislature in Pennsylvania. In 1882 occurred the tragedy of Dr. Smith-Forbes's life; he was arrested for complicity in the crime of robbing the graves of a cemetery. He was triumphantly acquitted, and in 1886 he was appointed Professor of Anatomy and Clinical Surgery in the Jefferson Medical College, a position which he held till his death in December, 1905. Among his most noteworthy contributions to medical literature were a paper on the removal of stone from the bladder (1894), in which he described a new lithotrite devised by his son, Mr. John S. Forbes, a mechanical engineer, and the results of experiments on 184 vesical calculi; and one entitled "Liberation of the Ring Finger in Musicians by dividing the Accessory Tendons of the Extensor Communis Digitorum" (1898). Dr. Henry says that the epitaph of Alvaro Gomez de Castro, a Spanish mediaeval scholar,

Nemini sciens nocui
Prodesse quampluribus curavi,

might fittingly be inscribed on the tomb of William Smith-Forbes.

The April number of *Macmillan's Magazine* contains an amusing article, entitled "Aesculapius in Ireland," by Sheila Desmond. She says the ignorance of medical matters that prevails among the Irish peasantry is a source of unfailing wonder to those who come in frequent