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

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II.

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

SINCE the policies pursued in the three great University centres of London, Edinburgh, and Cambridge present distinctive features, the policy of the University of London in relation to medical education was in my last article inferentially contrasted with that of the two great Universities of Edinburgh and of Cambridge, by whose prosperity that of London has undoubtedly been most affected. The comparison with Cambridge in particular was specially invited by the original basis of the "University of London," namely, that it was:

"A Board of examiners to perform all the functions of the examiners in the Senate of Cambridge, this body to be termed the 'University of London'" (1835).

It was further invited by the additional important statute passed in 1854:

"To extend the rights enjoyed by the graduates of Oxford and Cambridge in respect to the practice of physic to the graduates of the University of London"—an act by which the degree of M.B. in the University of London became recognized as a licence to practise—and the University was placed on the same terms as other universities.

The comparison was further invited by the last Charter of the University of London (1898), by which the various medical schools in London were affiliated to the University of London and recognized as "constituent colleges" of the University, in much the same way, it is alleged, as the various colleges of Cambridge, while financially independent, are related to the University of Cambridge—but erroneously, so alleged, since in Cambridge the University provides all the laboratories and expenses required for medical education, while in London the University leaves everything to its medical schools.

COURSE OF MEDICAL EDUCATION IN THE CHIEF MEDICAL SCHOOLS, 1866-1906.

The relative positions of the three Universities in regard to the numbers of medical students on which it was possible for them to exercise their particular University educational policy can be judged from the figures available from 1866-9 onwards, given in my last article, and now reduced to five yearly averages both as regards numbers and percentages.

The curves in *Chart 1*, based on five-yearly averages, differ little (as I knew from the larger chart of forty years which I had prepared would be the case) from those given in the former chart, based on each fifth year. I have added to this chart two curves above the one for the eleven London schools—one for the London School for Women, the upper, one for various secondary schools and technical institutes, which recent policy of the Conjoint Board has recognized as places where medical students may register and take the first year of their medical studies. Whatever its object was, this policy has not been justified by success even to the secondary schools. Its net effect was to inflict further serious injury on the London hospitals, since it withdrew from them straight away (1895-99) more than one-sixth (fifty-nine yearly) of the number of students who might otherwise have entered them for their first year of study. As the result shows, these students are now registering neither in the secondary schools nor in the London hospitals, but are going elsewhere—to other university centres.

Chart 2 is the most instructive of all, since its curves are altogether independent of the numbers of students entering the profession. They represent solely the per-

centage of these students registering at the different centres. They show in a striking way that while other schools have from time to time risen or fallen as the result of each other's competition, the curve of the London schools has had an almost uniform downward course for thirty or forty years, and that this percentage decrease on their part began, and has steadily continued, even when the number of their students (*Chart 1*) was at its highest. At no period have the London schools ever materially encroached on other schools.

The following are the *eleven London Schools* referred to: Charing Cross; Guy's; King's College; London; Middlesex; St. Bartholomew's; St. George's; St. Mary's; St. Thomas's; University College; and Westminster.

Seven Provincial Universities are: University College, Bristol; Universities of Durham, Birmingham, Liverpool, Leeds, Manchester, and Sheffield.

RELATION OF THE REGISTRATION DATA TO SO-CALLED "ENTRIES" INTO THE LONDON SCHOOLS.

The figures given are the official registration data regarding "the place and date of commencement of medical study," and give information as to the place selected in the first instance by parents for their boys to enter the medical profession. They do not refer, *it must be noted*, to the actual number of students who may enter medical schools at some later period for some portion of their studies.

In other words, the work done—for example, by the London schools in medical education—must not be judged by the numbers entering for their whole curriculum of study, a subject that will be dealt with afterwards.

But the data supplied by these figures have a definite importance in connexion with the prosperity of medical education in London, for the double reason: (1) Any marked reduction in the number of students entering the medical schools of London for their whole curriculum of study must necessarily reduce the income—unlike other schools, *the only income*—available for the support of most of them; (2) their expenditure is in no way reduced by any falling off in the number of such students, since the schools have to keep the same laboratories and the same staff of lecturers as would suffice for a much larger number.

The information supplied by these data is not confined, however, to the London schools, but throws interesting light on the prosperity of medical education in other centres, and incidentally on the causes affecting the present condition of the London schools.

As stated, these registration figures do not correspond to the figures of so-called "Entries" in the London schools during the corresponding years.

These latter "Entries" include not only students entering the schools for their whole curriculum, but also students from Cambridge, Oxford, and other schools entering these schools for the later (clinical) part of their course, or for shorter courses of study.

These "Entries" returns are so unequally estimated for different hospitals and schools, and so unreliable that they have for the last year or two been discontinued. They have no official character or comparative value, such as belong to the official registration returns which relate to one class of facts, "Date and Place of Commencement of Medical Study"—as duly written out by the student himself, and certified by the official of the school.

I have tested the correctness of these registration returns in various ways, including a comparison with the above-mentioned "Entries" into the London schools, and find that their figures and curves give an accurate picture of the relative prosperity of various schools at the different periods.

Thus, the total number of "Entries" into the London schools (not including the School for Women) during the five years 1896-1900, as given by Mr. Butlin from the BRITISH MEDICAL JOURNAL returns, was 2,516. This presumably included: (1) The students registering in London for their whole curriculum; (2) those entering from Cambridge, Oxford, and other schools for their later studies; (3) those entering from secondary schools and institutes where they had originally registered and taken a portion or all of their first year of study.

The important point is that the registration returns err, if at all, on the side of excess.

But the best test of the reliability of these registration

data as a measure—the only official one—of the relative prosperity of various schools is that the variations they show in number, especially the high figure before the Nineties, and the sharp fall since 1895, exactly correspond with what is the general knowledge of all acquainted with medical education in London during these periods.

According to Mr. Butlin's figures the London "Entries" in the period 1896-1900 were 878 fewer than in the period 1879-83, an annual average falling of 175 "Entries." The total increase of provincial "Entries" during the same period was 596, an annual average increase of 120 "Entries."

TABLE I.—*London, Edinburgh, and Cambridge (Five-Yearly Averages).*

Average Number of Medical Students Registered.					Percentage of Average of Total Registered for England and Scotland.				
Period.	Average Number for England and Scotland.	London.			Edinburgh.	Cambridge.	Eleven London Schools.	Edinburgh.	Cambridge Univ.
		Eleven Schools.	Schools for Women.	Secondary Schools and Institutes.					
1866-9 ... (4 years)	775	315	—	—	76+	16	40.6	10.0	2.1
1870-74 ...	951	374	—	—	152+	20	39.3	15.9	2.1
1875-9 ...	1257	440	—	—	209+	39	35.0	16.6	3.1
1880-4 ...	1513	430	8	—	294	79	28.4	19.4	5.2
1885-9 ...	1672	430	19	1	318	97	25.7	19.0	5.7
1890-4 ...	1638	423	32	4	247	129	25.8	15.0	7.8
1895-9 ...	1432	352	36	59	234	132	24.5	16.3	9.2
1900-4 ...	1221	247	21	26	235	112	20.2	19.2	9.1
1905-6 ... (2 years)	1140	237	15	13	226	110	20.7*	19.8	9.6

* Total inclusive of School for Women, Secondary Schools, and Institutes, 23.2.

TABLE II.—*Number and Percentage of Registrations in Seven English Provincial Universities, Oxford, Glasgow, and Aberdeen.*

Period.	Average Number of Students Registered.				Percentage of Average of Total Registrations for England and Scotland.			
	Seven English Provincial Universities.	Oxford.	Glasgow.	Aberdeen.	Seven English Provincial Universities.	Oxford.	Glasgow.	Aberdeen.
1866-9 ...	—	—	70	—	—	—	9.0	—
1870-4 ...	—	—	62	—	—	—	9.6	—
1875-9 ...	—	—	115	—	—	—	9.0	—
1880-4 ...	186	—	135	75	12.2	—	8.9	4.9
1885-9 ...	208	—	157	82	12.4	—	9.2	4.9
1890-4 ...	210	22	129	72	12.8	1.3	7.8	4.3
1895-9 ...	198	29	102	55	13.8	2.0	7.1	3.9
1900-4 ...	157	21	104	66	12.8	1.7	8.5	5.4
1905-6 ...	158	23	103	39	13.8	2.0	9.3	3.4

NUMBER AND PERCENTAGE OF LONDON UNIVERSITY MATRICULATED STUDENTS IN THE TOTAL REGISTERING IN THE ELEVEN LONDON SCHOOLS.

I have had difficulty in ascertaining the number of London University matriculated students who have registered in the London medical schools for their whole period of study. I have only been able to get this information by going through the whole lists of students registered in Great Britain and Ireland from year to year. I have therefore confined this examination to every fifth year from 1870 onwards. The proportion of University matriculated students to the total number of students registering

in the 11 London schools every fifth year from 1870 onwards is given in the following table:

TABLE III.—*Number and Percentages of University and Non-University Students Registering in the Eleven London Schools, 1870-1906.*

Year.	Total Number Registering in London Schools.	Number and Percentage of Matriculated University Students Registering in Eleven London Schools.			Percentage of Non-matriculated Students Registering in Eleven London Schools.
		Number.	Percentage of London Students.	Percentage of English and Scottish Registrations.	
1870	350	43	12.2	4.8	87.6
1875	361	62	17.1	5.9	82.9
1880	476	91	19.0	5.7	81.0
1885	427	99	23.1	6.3	76.9
1890	416	123	29.5	7.6	70.5
1895	418	117	27.9	7.6	72.1
1900	253	69	27.2	5.4	72.8
1906	253	87	34.0	7.5	66.0

VARIATIONS IN THE INDIVIDUAL LONDON HOSPITALS.

The fall of about 200 in the number of students registering each year in London has been distributed among 11 schools, and represents an average fall of about 18 for each school; or, allowing for a five years or six years' course, a fall of about 100 students attending each school.

For a large university already well equipped and endowed, and with well-paid professors, this loss, however noticeable, would not materially affect the maintenance of the medical schools or of its professors. But the case is otherwise with schools absolutely unendowed and self-supporting, as most of the London schools are, and dependent on the fees of their students for their maintenance and for the salaries of their scientific teachers.

In the case of the London schools, however, the effect of the general decline in the number of London students entering for their whole course has been much greater than that above noted, for the fall has not affected them all in equal degree or at the same time.

The analyses I have prepared relating to the movements of students to and from all the London hospitals during the past forty years of their history reveal most remarkable variations in the numbers of their students at different periods, and sometimes even from year to year.

A sudden rise in one school from 50 to over 90 in one period is followed five years later by a fall to 60 or 70. In several others the fall is continuous and steady from year to year without interruption; others show variations of more or less striking character at shorter intervals.

Nor are these variations specially found in the smaller schools; on the contrary, they have affected the largest schools in even greater degree than the smaller, some of which have maintained a relatively uniform position.

There is no feature of the medical education in London which more denotes the unsatisfactory conditions under which it is now conducted than this one; none more likely, unless corrected by collective agreement and reform on the part of the hospitals, and by change in the policy of the University, to inflict a permanent and irremediable injury to the cause of medical education than this one.

RESULTS.

The final result of forty years' history is, then, the following:

Cambridge, starting lowest (2.1 per cent.) and latest (1875-85) in the race, and without the hospital facilities necessary for its students, has, as the result of a definite educational policy, steadily increased, till it now attracts nearly 10 per cent. of all English and Scottish medical students desiring to enter the medical profession. This increase has been entirely at the expense of London.

Edinburgh, starting in a better position (of already educating 10 per cent. in the University alone), with a

CHART 1.—Showing the average numbers registering (five-yearly averages).

CHART 2.—Showing the percentages of these averages to the average number of medical students registering in England and Scotland for the same period.

well-established "Edinburgh tradition" in teaching as her most valuable asset, but with teaching accommodation (in the old University) and hospital accommodation (in the old Royal Infirmary) of an inadequate character, made a remarkable sudden forward bound (1870-74) to nearly 16 per cent., increased this to over 19 per cent. in 1880-84; then, after a fall to 15 per cent. in 1890-94 (due largely, as Chart 2 shows, to the increasing competition of Cambridge and the seven English provincial university schools), recovers its loss, and ends with about 20 per cent. of the total.

London, started in by far the best position (with over 40 per cent. of the total students of England and Scotland)—with her well-established "London hospital tradition"; with no fewer than eleven hospital schools, some of them among the most famous in the world; with the encouragement and reputation at its back of the two oldest and most distinguished Royal Colleges in the world (the Royal College of Surgeons of England and the Royal College of Physicians of London); and lastly, placed in the position (by the foundation of the "University of London" in 1835, and its important statute in 1854, by which its degree was recognized, like that of Oxford and Cambridge, as a licence to practise) to offer its students a good university degree as well as a great medical education. With all these advantages in its favour, London has steadily declined (Chart 2), and now attracts to its eleven great medical schools for their complete education a little over 20 per cent. new students; or, including the London Medical School for Women, 22 per cent. Moreover, as Chart 2 shows, while other university schools have from time to time encroached on each other—notably Cambridge and the seven English provincial universities on Edinburgh and Glasgow, 1890-4 and 1895-9—and all of them on London, at no period during the past forty years has London encroached on them with the single exception (creditable to that school) of the London School for Women.

Proportion of University and Non-University Students in London and Edinburgh.

Striking as these figures are, they do not exhaust the degree of contrast between the London and Edinburgh schools, or the two Universities associated with them. For while in Edinburgh the University students have on an average contributed from 80 to 90 per cent. of the total, and have during the past 25 years contributed from 17.6 to 15 per cent. of the total number of medical students registering in England and Scotland each year, the matriculated students of the University of London registering in the 11 London schools have on an average (of each fifth year) been only about 25 per cent., varying from 12 per cent. to 34 per cent., and have only constituted from 4.8 to 7.6 of the total of the number of students registering in England and Scotland for the same year.

The average number of non-matriculated ("extramural") students in Edinburgh has thus varied from 7 to 20 per cent., the two schools—University and Extramural—supplementing each other from time to time, and keeping their total high. (See Chart 1, 1895-9.)

The average number of non-university students in London has been anything from 87 to 66 per cent. (see Table III), averaging about 78 per cent., and the two schools have together fallen to nearly half their former number, and to one-half their former percentage of the total registrations for England and Scotland.

Conclusions.

The distinctive policy of the University of Edinburgh (of not only educating her own students, but allowing a large band of "extramural" teachers to help and compete with her professors in this work) has been associated with, and been the cause of, the great influx of students to Edinburgh from 1870 onwards, and her prosperity has maintained that of a strong extramural school of teachers. University students have always constituted by far the greatest proportion of the students of Edinburgh—on an average over 90 per cent., and 15 to 17 per cent. of the total students of England and Scotland. She has held herself entirely responsible for educating and, if successful, granting her University degrees to all her students.

The even more distinctive policy of the University of London (merely examining and non-educational) has not only not been the cause of any influx of medical students to the London schools, but, on the contrary, has been

associated with a reduction of nearly one-half (200) in the number of students entering these schools for their whole curriculum, and with a great diminution in the prosperity of these schools.

Her students have always constituted a small proportion of the total number registering in these schools for their whole curriculum—only one-eighth to one-third—averaging about one-fourth (25 per cent.), and only 5 to 7 per cent. of the total for England and Scotland. She has not held herself responsible for the education of even this proportion of the London students, but has entrusted this entirely to the London schools.

The problem which all interested in medical education in London have now to face is, What is responsible for this deplorable state of matters?

Is it due to:

1. The character of the education given, or the particular inter-hospital policy followed, by the London schools.
2. The policy of the Conjoint Board.
3. The policy of the University of London.

Let it be said at once that the problem which the present condition of medical education in London presents is not one that can be settled by futile recrimination between the various bodies concerned as to which is chiefly responsible.

Still less is it the problem which—judging from recent controversy—many consider it to be—namely, whether the percentage of failures in the London University examinations have within the past two or three years been 3 or 4 per cent. above or below (50 per cent.) that in the few previous years. It is one of a totally different nature.

That problem is the great public cause of medical education in London and justice to the London student, both of them profoundly and injuriously affected by the conditions which have prevailed for thirty or forty years, and which still continue.

THE State Assembly of Wisconsin has passed a Bill forbidding the sale of tobacco in any form in persons under sixteen years of age. The Bill also prohibits the use of tobacco by such minors. The Illinois House has passed a Bill prohibiting the selling of cigarettes or cigarette papers in that State.

THE next expedition of "E. M. I.," a kind of post-graduate touring association, begins on August 7th and ends August 23rd. The party, after assembling at Nancy, will cast a medical eye on Stuttgart, Munich, Nuremberg, Carlsbad, Marienbad, Prague, Vienna, Buda-Pest, Salzburg, Gastein, Innsbruck, Zurich, and Swiss Baden, finally separating at Besançon. It seems a good deal to get through in so short a time as sixteen days, but doubtless should prove an interesting expedition. Further information can be obtained from M. Etienne Bazot, 8, Rue Francois-Millet, 16, Arrondissement, Paris.

IN PRAISE OF MR. LUPTON.—The May issue of the *Vaccination Inquirer* contains an amusing article on "Mr. Lupton's Courageous Work and the Cruel Indifference of M.P.'s." There is this pitiful and pathetic appeal to members of Parliament: "Colleagues, do not laugh at him, for he is right; he is calling your attention to a colossal fraud." This rather reminds one of the notice said to be occasionally seen out West: "Please do not shoot the pianist; he is doing his best." The article is evidently intended to encourage Mr. Lupton to pursue his "noble conduct" of the case in Parliament. Referring to him, it says: "All honour, and thanks upon thanks and thanks to him; and blessings even upon what our opponents are pleased to call his eccentricities!" One of these eccentricities consists in repeated attacks upon the honour of medical men as seen in the daily press. Another eccentricity is the mirth-provoking "rather lurid pathology," in extenuation of which the article says: "Mr. Lupton's pathology cannot be too lurid for us," . . . an admission which does credit to the *Inquirer*. Another eccentricity is the circulation among electors of guesses and home-made calculations which cannot be reasonably defended. For all these the *Vaccination Inquirer* returns its many thanks, and on them pronounces its blessings. Exception is taken to the "stereotyped official answers" which, it is alleged, are given to Mr. Lupton's questions in Parliament. The only satisfactory solution of this difficulty would appear to be the introduction of a short Bill to enable Mr. Lupton to hand in his own answers to his questions at the time when he addresses them to Ministers.