The early careers of Glasgow medical graduates in the second half of the nineteenth century

Thesis

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THE EARLY CAREERS OF GLASGOW MEDICAL GRADUATES IN THE SECOND HALF OF THE NINETEENTH CENTURY

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ABSTRACT

The thesis studies the immediate post-graduate experience of doctors graduating from Glasgow medical school in the second half of the nineteenth century. The study uses *Medical Directories* and census records and, for a few individuals, other relevant records; it also compares these graduates with those who obtained a licence from the Royal College of Physicians and Surgeons of Glasgow to see whether there were significant differences in their career experiences. Those graduating in the years 1856, 1876 and 1896 were selected to give a spread over the period of significant professional and educational developments. They also have the advantage that census records were available at the end of the first five years following graduation.

The main findings relate to the overall Scottishness of the graduates and to the effect of changes to medical education and regulation. The vast majority of the graduates came from Scotland, in particular from Glasgow and its adjacent area, and sought work there. The changes in medical education and regulation, in particular the 1858 Medical Act, resulted in graduates starting study later and studying for a shorter period; later they obtained fewer additional basic qualifications and the 1876 group moved less frequently, apparently because of less competition. The study also showed the importance of family support in the early years. The licentiates, on the other hand, showed a similar pattern of work, but came

from all over the United Kingdom. They came to Glasgow to obtain a qualification and did not always study there.

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CONTENTS

INTRODUCTION

The object of this thesis is to study the early careers of medical practitioners - three groups of graduates of the medical school of the University of Glasgow and a group of licentiates of the Faculty of Physicians and Surgeons of Glasgow - in the second half of the 19th century. The study will seek to determine whether there was a pattern or patterns to that period of their careers. The findings will also be compared with related studies to see whether or not they confirm the results of those studies.

The early careers of Glasgow medical graduates during this period have been chosen for study because little is known about this time in their careers. For the purpose of the thesis the early careers are taken to be the first five years following graduation - an arbitrary period, but one which is sufficiently long to give an indication of their early experience of the practice of medicine and of the kind of career which they appeared to be attempting to pursue. Other studies have tended to concentrate on life-long careers and to focus on those who became general practitioners; this study looks at all graduates, whichever branch of the profession they entered. I also chose to study these graduates because several members of my family studied at the Glasgow medical school in the 19th century and I have used information about them to help illustrate the context of the study.

The main focus of the thesis will be the graduates of the Glasgow medical school of 1876. Glasgow was chosen as having a large medical school with a high proportion of students coming from within Scotland, thus giving a more truly Scottish picture than Edinburgh, which had a high proportion of students from outside Scotland. The reasons for selecting the year 1876 are that it is at a sufficient period after the 1858 Medical Act for the impact of this legislation to become clear, that it is at a mid point in the second half of the century and that the graduates can be followed up in the 1881 census, the details of which are easily available. The 1876 graduates will be compared with those of 1856 and a sample of those of 1896. The year 1856 has been chosen as being before the 1858 Act and therefore a comparison can be made with the period following it; graduates can be followed up in the 1861 census. The year 1896 has been chosen because it has the advantage of including a few of the first women medical graduates of the university and the graduates can be followed up in the 1901 census. A comparison will also be made with a sample of those obtaining a license from the Faculty of Physicians and Surgeons of Glasgow in 1876 to see whether there is a significantly different pattern of early career.

The most relevant of the studies related to the thesis is Ann Crowther and Marguerite Dupree "The Invisible General Practitioner: The Careers of Scottish Medical Students in the Late 19th Century"[1]. They used

Medical Directories and obituaries to build up a picture of the life-long careers of Edinburgh and Glasgow medical graduates, who first matriculated in the years centred on 1871. They found that a large proportion - more than a third in the case of Glasgow graduates who became general practitioners - went into short-term hospital appointments. They state that the great majority settled in practice early in life; they underline the problems of setting up in practice without connections. However their main findings are based on the obituaries, which are likely to be of those practitioners who were more successful.

Other studies which are relevant are Dupree and Crowther "A Profile of the Medical Profession in Scotland in the Early Twentieth Century: The Medical Directory as a Historical Source"[2], which sheds light on the medical profession as a whole in a slightly later period, Anne Digby *Making a Medical Living - Doctors and Patients in the English Market for Medicine*[3], which, although covering all aspects of English general practice, paid especial attention to its economic aspects, and her *The Evolution of British General Practice*[4], which covers the whole of Britain, but pays less attention to the establishing of a general practice.

Other forms of literature are useful in providing a background to the study. The work of Arthur Conan Doyle is particularly interesting in this respect. He trained at Edinburgh medical school and qualified in

1881. He wrote of his early career in his *Memories and Adventures*[5] and in his fictional *The Stark Munro Letters*[6], and many of his other works of fiction refer to medical practice at that time. Other potentially useful works tend to be from the early part of the century or to be of medical student life rather than the doctors' earlier careers, when it is likely that they did not have the time or inclination to keep a diary.

The source of information principally used in this study is the *Medical Directory* and the census returns. These will be supplemented by some further information from university records and, in the case of a few selected graduates, by some more detailed information gathered locally where they practised. The *Medical Directory* is being used as the main source of information about doctors' careers; it was updated annually using returns from individual practitioners and is the publication which gives information on medical practitioners' careers. The census data give information at a fixed point on graduates' domestic and social situations; this information was not used by Crowther and Dupree or Digby. The university records, in particular those on matriculation, give information about graduates' fathers and their occupations, as well as graduates' place of birth. The more detailed information on selected graduates supplements these others by using local data from Post Office directories and available records of local organisations; the minutes of Boards of Guardians

give a particularly detailed insight into the lives of those doctors who worked for them.

Previous studies have not provided detailed information about early experience of medical practice, but rather a more general picture. Detailed information on early careers is not as readily available as that of later experience, since in the early years, especially the first year or two following graduation, there was little recorded. Graduates were seeking to become established and, apart from some junior hospital posts, many did not hold positions alongside their general practice. Detailed study of *Medical Directories* gives a picture of graduates' early appointments, their membership of medical societies and any articles which they had published; it also indicates how mobile they were. Analysis of census data at the end of the first five years shows the graduates' domestic situation and what influence members of their families had in helping them to become established. The thesis will attempt to confirm the Scottishness of the graduates not only in their origins but also in their early work. It will seek to show how changes in education and professional regulation changed their development, to discover how dependent the graduates were on their families in their early careers and to compare these findings with the experience of licentiates. It will also test if it is possible to predict, from graduates' early careers, whether they would achieve particular success or fame in their later careers.

This study mainly uses different material to that of previous studies, i.e. Crowther and Dupree and Digby, who looked at the whole careers of general practitioners. The early careers are a largely unknown period, likely to be significantly different from the later periods. They were very important and formative for the graduates; their whole subsequent careers largely depended on what sort of start they made. What they did in those early years was influenced by changes in the profession and medical education, and the study will show the effect of these influences.

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The Medical Profession

Those graduating from the Glasgow medical school in the second half of the 19th century entered a profession which had undergone major changes and continued to experience radical change. The 19th century saw the emergence of the professions as clearly defined occupational groups. Before that time there were the old professions of the church, the law, medicine and the armed services: but in practice medical practitioners were part of the entrepreneurial middle class, in effect small businessmen. By the second half of the century the medical profession, together with the other new professions such as dentists and pharmacists, had become separate entities, with state recognition and increased status. Their numbers had increased substantiallly; between 1841 and 1881 those in professional occupations trebled in number. By the end of the century they had become organised and differentiated themselves from the business class[1].

The rise of the professions was clearly linked to the increase in the middle classes. By the second half of the century these latter provided the majority of the entrants to the professions. Whereas earlier the old professions had drawn on the ranks of gentlemen, they now came largely from the increasing number of the middle classes. These classes were also able to afford the

attentions of the professions, who competed to provide their services

The increase in numbers in the professions took place in the rest of Europe and the United States as well. Digby has suggested that the growth in numbers was caused by the demographic transition to smaller families, allowing an investment in a more prolonged education by middle-class parents. She also draws attention to the fact that the professions became over-crowded, as an increasing number of practitioners competed for a limited number of middle-class patients. Many of the poor remained unable to afford the services of medical men. Competition in the professions was mainly in urban areas; there was also almost blanket opposition to the entry of women[2].

In the 19th century the medical profession itself underwent major changes. These changes were brought about partly by the development of medical knowledge, partly by the growth of the population and the rise in demand for medical care, especially by the middle classes, and partly by the profession's own organisations: educational establishments, licensing bodies and professional societies. Throughout the century there was much competition within the profession and also with those on the fringes. At the start of the century the status of the profession, apart from that of the elite physicians, was low, although the status of surgeons was not as low in Scotland. However by the end of the century medicine had

become respectable. During this time a cohesiveness had developed within the profession, so that, although there were still some internal rivalries, medical practitioners had greater solidarity, meeting in societies and clubs, such as the British Medical Association and the Medical Chirurgical Society of Glasgow, to protect their position in society and to pursue their interests.

The change in the different categories of medical practitioner was the most significant change of the century for the profession. At the beginning of the century there had been in England and Wales broadly three categories based on the mediaeval guild system: physicians, surgeons and apothecaries. By the end of the century the apothecaries had died out. There was by then an elite consisting of physicians and surgeons, based in hospitals, as well as academics, and the main body of the profession, who worked as general practitioners, their income supplemented by a variety of employment with local government, insurance companies and private firms. A further change towards the end of the century was the admission of women into medicine.

By the middle of the century, when this study starts, the concept of the general practitioner was well established, as a combination of the surgeon and apothecary, usually having the qualifications of the licensing bodies of both. In his study of two thousand medical men in London and the provinces in 1847, Irvine Loudon counted 1533 general practitioners[3]. The problem

at this time was that of an perceived over-production of doctors. It is difficult to determine the numbers in the profession. Loudon calculated that in 1851 there was a ratio of of medical practitioners to population of 1 to 934 in England and Wales and of 1 to 419 in London[4]. However elsewhere a figure of 1 to 1,205 for the years 1850-1 is quoted for Britain[5]. In addition, though, competing with the general practitioners, there were many others practising different forms of fringe medicine. Loudon calculated that there were two druggists or chemists for every three medical practitioners[6]. There were a variety of quacks, travelling healers and bone-setters. Many of the poor could not afford the attention of qualified medical practitioners and resorted to the unqualified practitioners or self-diagnosed folk remedies.

In this situation the status of the medical practitioner was low[7]. He was regarded as a tradesman, not a professional. The profession was in a double bind, in that the low social background of its members prevented their status from rising, while the low status of the profession discouraged the sons of good families from entering it[8]. Local directories of the time listed members of the clergy with the local gentry, but no other professions. A quote from that time was "Doctors and solicitors might be invited to garden parties, never, of course, to lunch or dinner"[9]. Small things, like whether the doctor sent an annual bill or was paid in cash, or whether he accepted club practice or not, were important

to social standing[10]. Doctors aspired to the status of solicitors, but did not always achieve this[11].

Another major change between the middle and the end of the century was the passing of the 1858 Medical Act. This set down the qualifications required to be considered a medical practitioner. The General Medical Council was created to oversee the working of the Act and a *Medical Register* of those qualified under the Act was published annually. One result of the Act was to reduce the number of medical practitioners. The ratio of practitioners to population in England and Wales decreased from 1 to 1,392 in 1861 to 1 to 1,721 in 1881[12]. Another result was to give those qualified a greater feeling of solidarity and there was an increase in the number of medical clubs and societies, as well as in the membership of the medical practitioners' 'trade union', the British Medical Association; this increased its membership from 2,000 in 1867 to 17,000 in 1898[13].

Another development was the increase in the amount of part-time employment for practitioners. The Poor Law institutions, responsible for welfare provision, created employment for many; the burgeoning of industry brought work for firms as company doctors, as well as for insurance companies. There was also a significant growth in clubs and mutual societies providing medical cover for their members, requiring the employment of medical practitioners to service them.

The situation at the end of the century was of a

unified profession regulated more formally. Medical discoveries had given the profession more tools to prevent and treat disease and thus opened up more forms of medical practice. This was perhaps the reason why numbers in the profession increased towards the end of the century, so that by 1901 in Britain the ratio of medical practitioners to population had fallen to 1 to 1,574[14]. By the end of the century many general practitioners were accepted figures within their communities[15]. For many middle-class families they were trusted friends, although for the working classes they were merely somone to whose services they were entitled through membership of a friendly society or a sick club. Medicine had become a stable and rewarding career and its status had grown significantly. The relationship between the patient and doctor had subtly changed, so that the latter was now looked upon as someone with authority and not just as someone to be paid for his services[16].

In Scotland the medical profession was in some respects similar and in others different to that in the United Kingdom generally. There were no apothecaries as such, rather surgeons who combined the role of apothecary, and the Apothecaries Act, which required all practitioners in England and Wales who precribed drugs to have the licence of the Society of Apothecaries, did not apply. The overproduction of doctors was most acute in Scotland, with huge numbers of students studying in Edinburgh and Glasgow, and many of those Scots who studied at Scottish

medical schools left the country after qualifying. Nevertheless the distribution of doctors in Scotland was uneven and many parts of rural Scotland had none; the population in these areas depended on unqualified practitioners and on clergy and teachers who had learned some elementary medicine. Overall numbers of practitioners at the middle of the century were similar to England and Wales - 1 to 959 of the population[17]; although Margaret Lamb gives the number in Glasgow as much lower - 1 to 1,400[18]. In Scotland in 1851 there was not such a high proportion of druggists as in England and Wales - two to every five practitioners[19], which meant that more practitioners made up their own medicines.

The pattern of reduction in the number of doctors with the introduction of the Medical Act was repeated in Scotland - in Glasgow the ratio of doctors per population fell from 1 to 1,400 in 1851 to 1 to 2,000 in 1871 and then increased to a figure of 1 to 1,300 in 1901[20]. A feature of the medical profession in Scotland was that it was attractive as an avenue of individual social mobility, as a route by which a poor, but bright, lad could build a career[21]. Fees at medical schools were low compared with those in England and there was relative ease of access to training. However this did not mean that a high proportion came from working class families. Nor was it true that many Scottish medical students came from within the medical profession, as is sometimes considered the case[22].

Medical Education

All medical schools faced major changes in the second half of the nineteenth century through the passing of the 1858 Medical Act, subsequent regulation by the General Medical Council and the changing pattern of training. Medical education as a whole changed radically during the nineteenth century. The apprenticeship system, which had been the basic training for most practitioners, died out, to be replaced by education in medical schools and universities. The pupil/master relationship was therefore replaced by class teaching, and clinical training came to take place not at the patient's home bedside, but in the lecture room and on the hospital ward. Many of the new schools of medicine were private concerns, which were created in competition with the university medical schools and these were a particular feature of Scottish medical education.

The arrangements for recognising practitioners and validating their training changed too. In the early part of the century licences to practice were only given by the Royal Colleges and by the Society of Apothecaries. By the end of the century those granting licences were governed by statute and consisted of the universities as well as the old corporations. Scottish medical education underwent major changes as well. The universities, in particular Edinburgh and Glasgow, earlier in the century

had been pre-eminent sources of medical education, not just for Scotland, but for the whole United Kingdom. By the end of the century they were just some of a number of institutions for medical education throughout the country, including Scottish private medical schools. A complicating factor was that some establishments provided training only, such as the extra-mural schools, some provided qualifications only, such as the Royal Colleges, while others provided both education and qualifications, like the universities.

Informal training: Apprenticeship and pupillage

In the early part of the 19th century training for medicine was largely through the apprenticeship system; university teaching was mainly for those who wanted to be physicians, although this was less true for Scottish universities, which gave a much broader medical education and received many more students than their English counterparts. A full apprenticeship lasted five years and was the subject of a formal agreement between the medical practitioner and his pupil. For some, such training was a preliminary to studying medicine more formally. The diary of Thomas Wright gives a vivid portrait of the life of an apprentice in Newcastle in the 1820s. He paid £150 to be apprenticed and enrolled as a pupil at a local hospital, where he attended ward rounds. He was allowed to attend lectures elsewhere for one

session of his apprenticeship and went to Edinburgh for this purpose. On completion he went to London to train formally as a doctor[23].

This style of training survived into the late 19th century as pupillage. This took the form of attachment to a hospital surgeon as a pupil or working as an unqualified assistant to a general practitioner. This was seen as a cheaper form of medical education for those wishing to enter medicine than attendance at medical school or college and gave employment at the same time as receiving training, thus providing a good grounding in clinical practice[24]. Another medical student writing in the 1860s described the advantage of spending a year or more apprenticed to a surgeon before studying medicine - he would have picked up the use of some common medicines and learned some anatomy[25]. An illustration of the type of opportunity that was available can be seen from the following advertisement in *The Times* in January, 1860: "MEDICAL - a MD, MRCS and LSA with three public appointments wishes for a PUPIL. The advertiser pledges himself to make his education such as will qualify him, at the end of his pupillage, for deriving the full advantage from hospital attendance and lectures".

These forms of training died out during the second half of the century. In Digby's study of general practitioners, from 1849-59 21% of them trained by apprenticeship, from 1860-79 11% and from 1880-1899 1%[26];

apprenticeship was abolished altogether in 1892[27]. As the apprenticeship/pupillage system began to die out, apprentices were increasingly attending medical schools to gain theoretical knowledge to supplement their practical experience.

Formal training: university and other medical schools

During the second half of the nineteenth century medical schools became the principal institutions of medical education. As medicine developed as a profession with an increasing base of scientific knowledge, the need for this knowledge to be given formally to students by those equipped to do so became acknowledged, and instruction in the various subjects which became the basis of modern medicine came to be given in the classroom rather than at the bedside. The number of universities with medical faculties increased and hospitals set up their own medical schools; private medical schools were also established, especially in Scotland, where they were known as extra-mural schools. The syllabus became increasingly standardised following the 1858 Medical Act and the creation of the General Medical Council to regulate medical education. The effect of the change towards group teaching, in place of the individual teaching by apothecaries, was to create a sense of group identity amongst the students, which gave the profession greater solidarity and cohesion[28].

In the first half of the century the Scottish universities, in particular Edinburgh and Glasgow, were the leading medical schools, in terms of numbers and also perhaps in the quality of teaching; from 1800 to 1850 7,989 of 8,291 graduate British medical practitioners came from Scottish universities[29]. The position gradually changed as the numbers at London medical schools increased and new schools were founded in the English provinces. However, between 1871 and 1880 21% of new medical students in the United Kingdom were still studying at Edinburgh and Glasgow, compared with 28% in London as a whole and 20% in the provinces (It is not clear where the other 31% came from)[30].

The main form of teaching was that of lectures by professors who collected fees from the students. This was supplemented by attendance at hospital for the teaching of clinical medicine and surgery. However throughout the century and later, many students followed courses at two or more institutions and could sit examinations at any of them. This resulted in considerable mobility of students, both within Scotland and the United Kingdom[31]. The Medical Act did not remove the possibility of mobility in medical education. However it did introduce a preliminary examination in humanities as a requirement for entry into medical education and a further requirement that at least one year out of the four years' study be spent at the university awarding the degree[32]. The content of the

course was prescribed in detail and students had to attain the age of 21 before medical degrees could be conferred. Attendance for at least two years on medical and surgical wards of a hospital was also required[33]. In 1892, under the 1889 Medical Act, the course was extended to five years and attendance at hospital to three years[34]. Students worked as clerks and dressers for physicians and surgeons to gain further training. Subsequently on graduation they aspired to obtain junior hospital posts in their teaching hospitals to gain further experience.

Licensing

In the middle of the nineteenth century there were three kinds of institution in the United Kingdom which provided formal qualifications in medicine: those universities with medical schools, the Royal Colleges and the Society of Apothecaries. These institutions set their own standards and were able to license whomsoever they chose. The Society's exams for example only covered medical subjects and so were not a full qualification for someone wanting to set up in general practice. Many doctors combined the licence of the Society of Apothecaries with membership of the Royal College of Surgeons as qualification to work as a general practitioner[35]. After several attempts and in spite of opposition from the Colleges, the Medical Act was passed in 1858, which gave to the General Medical Council the

responsibility of laying down standards of medical education. All those wishing to study medicine had to register with the Council, which, at the conclusion of their studies after the necessary standard had been reached, entered their name on its register. This had the effect of raising standards and of eliminating the practice of granting a degree on payment of a fee and the provision of testimonials, which was allowed in some Scottish universities, such as St Andrews[36].

The overall effect of the 1858 Act was to make clear who was qualified to practise medicine, although quacks and fringe practitioners continued to work provided they did not claim to be doctors. University medical degrees were seen as adequate qualifications and few graduates sought to obtain licences. Scottish university qualifications came to be recognised in England. The qualification of the Society of Apothecaries became less important, as more universities offered training in medicine and more students chose to train at universities. At university medical schools the degree of M.D. became replaced by parallel degrees in medicine and surgery as basic qualifications. However increasingly fewer candidates were taking the examinations of the medical institutions.

Scottish medical education and licensing

In Scotland informal training took place by

apprenticeship to surgeon-apothecaries. These were similar to their English counterparts, but were more broadly trained, with the ability to dispense drugs, and were, like them, an early kind of general practitioner[37]. As in England, this form of training was gradually replaced by more formal kinds of training. This was available at the seven institutions in Scotland which provided qualifications in medicine: five universities (Edinburgh, Glasgow, St. Andrews and Marischal and King's Colleges at Aberdeen) and two professional bodies (the Royal College of Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow). Edinburgh was the most popular of the universities with 207 students on average admitted per year between 1871 and 1880, compared with 121 at Glasgow[38], but there were also the extra-mural schools and private teachers, so that the total numbers of students were even greater. However the numbers of those studying bore little relation to those who completed the course and graduated. This was because there was little selectivity for entering courses of medicine (there was no matriculation examination as at English universities) and many attended classes with no intention of completing the course (they were known as "occasional auditors"[39]). One of the reasons for the large number of medical students in Scotland was the low fees charged, especially by the extra-mural schools[40]. It was also possible for an able but poor individual to obtain the

backing of parishioners who would pay for his medical training, so long as he returned to work in the parish[41]. Students could supplement their income by taking jobs during vacation. Conan Doyle's first vacation work brought no remuneration, but for his second job he was paid £2 per month and later in his training he worked as a surgeon on a whaler, for which he was paid £2:10:0, plus 3/. per ton oil money[42]!

Medical education became gradually open to women in the second half of the nineteenth century; Scottish schools were among the first to open their doors to women students. In Glasgow Queen Margaret College admitted women medical students in 1889-90; the first women graduated in Glasgow in 1894. There were initially problems in women gaining hospital experience; in Glasgow this was provided at the turn of the century at the Royal Infirmary.

Licensing arrangements in Scotland were the same as in England and Wales, apart from the fact that the 1815 Apothecaries Act did not apply. The requirements of the Act meant however that in the middle of the 19th century Scottish graduates coming to England to practise technically had to meet the Society's requirements and it was prepared to prosecute those who failed to observe them. Scottish practitioners therefore were advised to conceal their qualifications and outside London it was often possible to practise without a licence[43]. Scottish

medical schools produced more doctors than were needed to practise in Scotland and so many came to England. These met a further problem when they wanted to take a post as medical officer with a Board of Guardians providing medical services to the poor. Authorities in England had two main reservations about Scottish qualifications. One was the granting of degrees by some Scottish universities without an examination; they were suspicious about the merits of the degrees. The second was the question whether Scottish qualifications covered both surgery and medicine, since some only graduated with a MD or CM. This latter reservation was particularly expressed by the Poor Law Board, the body which oversaw the operation of the Poor Law through Boards of Guardians, later replaced by the Local Government Board. This should have been resolved by the 1858 Medical Act, but questions were still being raised in 1859[44]. For example, the appointment of Dr Donald MacKeith to a post with the Ticehurst Board of Guardians was only approved after an exchange of letters with the Poor Law Board; later Dr William MacKeith obtained a LRCP in order to receive a post with the same board, as he only held a CM[45].

Glasgow University Medical School

The start of the teaching of medicine at the University of Glasgow dates from 1714, when a chair of medicine was established. It failed to develop to the

extent that the Edinburgh school did because of opposition from the Faculty of Physicians and Surgeons (which became the Royal College of Physicians and Surgeons), who felt that they alone should supervise the training of physicians in Glasgow, and because it lacked a sizeable hospital in which to provide practical teaching[46]. Until the 1858 Medical Act there were no matriculation examinations for entry into the medical school and in some cases there was even no requirement to matriculate at all; matriculation was only required once during a course. Following the Act every student had to matriculate every year during which he studied for part of the year at the university. The numbers of students increased substantially during the first half of the 19th century, so that by 1860 they had reached 311; the figure stayed at this level for 10 to 15 years, but by 1882 to 1886 it averaged 692 and by 1891 it had reached 820[47]. By contrast, the numbers actually graduating in those years were 46 in 1860, an average of 90 between 1882 and 1886 and 104 in 1891[48]. James Bradley, Ann Crowther and Marguerite Dupree give a figure of 30% of Glasgow medical students failing to gain a medical qualification in their sample of students studying around 1871[49].

Glasgow University medical school was known as a paticularly Scottish medical school - a high proportion of its students came from within Scotland[50]. Crowther and Dupree give a percentage of 69% to 83% matriculating in

1871, depending on which branch of the profession they went into. By contrast at Edinburgh the percentage of Scottish students ranged from 30% to 52%. The average age of students first matriculating at Glasgow at that time was 20.7 years, compared with that at Edinburgh of 19.8. The social origins of students are difficult to determine because of the ambiguity of some descriptions of their fathers' professions in the matriculation records. In Crowther and Dupree's study 18% came from the old professions, i.e. the church, the law, medicine and the services, of whom nearly 10% were doctors. Some 9% were working class, so the majority came from middle or lower middle class backgrounds[51].

The cost of studying at Glasgow University medical school was in the mid-range of fees; a minimum cost must have been at least £90 per year, with an overall cost for a degree exceeding £300[52]. This was considerably less than the cost of studying at some London medical schools, but more than some extra-mural schools, where the quality as well as the cost of study might be low[53]. There were a limited number of scholarships and bursaries. Students would also have to find living expenses, plus books and equipment; these would be reduced if the student lived at home, which was the case in about half of Glasgow students[54].

In the early years of the 19th century clinical teaching took place at the Royal Infirmary, but the

facilities there became inadequate and a new hospital, the Western Infirmary, was built in Gilmorehill and opened in 1874, to which the majority of clinical teaching was transferred.

Faculty of Physicians and Surgeons of Glasgow

The Faculty of Physicians and Surgeons of Glasgow was set up, like the other medical corporations, to protect the interests of its members and to maintain standards. It was granted a charter in 1599 and given authority over the practice of medicine covering an area, considerably larger than Glasgow, in the west of Scotland. One of the roles of the Faculty was to set examinations for those who wished to obtain its licence to practise. At the beginning of the 19th century the Faculty had a bitter battle with the university over its exclusive privilege to license the practice of surgery in Glasgow and the adjacent area, which it won. However in fact the monopoly was difficult to police and fines for breaching it could be easily paid. Moreover the Faculty put so much energy into trying to maintain its position that it failed to look outward, as the Royal College of Surgeons of Edinburgh did, to see how it could offer its qualifications outside Glasgow[55]. In addition to its other controls, the Faculty also exercised the right of approving the appointment of clinical teachers.

Following the passing of the 1858 Medical Act, the

Faculty combined with the Royal College of Physicians of Edinburgh to draw up a double qualification embracing both medicine and surgery, even though the Faculty had maintained that its licence covered both; the change was in large part to meet the requirements of the Army and Navy Boards and the Poor Law Commissioners, which required both medical and surgical qualifications[56]. The qualification became known as the Conjoint Diploma and the requirements were prescribed in detail, including a period of study of at least 45 months after registration as a medical student; examinations were held four times a year. As with the university qualification set periods of attendance at hospital were required, as well as instruction in practical pharmacy and vaccination. In 1884 the Faculty combined with both Edinburgh colleges to offer a triple qualification. Those taking the examinations came from all over the United Kingdom, and in some cases beyond, and had studied at a very wide variety of institutions. Fees for the College's examinations were very reasonable by the standards of the day; in 1862 the cost was only £10 for surgery and £16 for a double diploma of Physician and Surgeon[57], but by 1894 the fee for the triple qualification was £30.

Other medical schools

The extra-mural schools provided an alternative for medical students to the university and many of those

obtaining the Faculty's licence studied at one of them. Among them by far the largest was Anderson's College (or University, as it was called from 1828 to 1877). By the middle of the nineteenth century Anderson's offered the full range of medical lectures and it was considered that it "offered medical teaching equal in quality to that of the University"[58]. An advantage of Anderson's courses was that they were cheaper than those at the university[59] and by the middle of the century more students were enrolling at Anderson's than at the university[60]. Many of those graduating at Anderson's moreover took the Faculty's examinations[61]; the university refused to accept Anderson's certificate as valid[62]. Anderson's attempted to get degree-granting powers in 1877, but failed[63]. Anderson's College subsequently became the University of Strathclyde, although the medical school, along with the other extra-mural schools, was absorbed into the university in 1947[64].

Glasgow's other extra-mural schools included St Mungo's College, also known as the Royal Infirmary School, because it was based at the old Royal Infirmary site, which was founded in 1876, and Queen Margaret College, a college for women, which established a medical school in 1890[65].

Opportunities for Work

The graduates studied in this thesis enjoyed an ever increasing range of work opportunities. For the vast majority the likely choice would ultimately be general practice, together with one or more supplementary forms of employment. These included working for Poor Law institutions, for friendly societies and other medical clubs, for insurance societies and for industrial organisations of different kinds. The full time alternatives to general practice were mainly hospital work, the armed services, local government or medical education. As a precursor to these full time careers, many graduates held junior hospital posts to extend their education; others held temporary posts in general practice or in the merchant navy.

Naturally the graduates would have given thought to what they would do following graduation while they were still studying. Many worked during their vacations in a variety of temporary posts, the majority as an unqualified assistant in a general practice. This gave them an insight into, and experience of, that form of practice. Students received advice from their medical school teachers; what we know of this is mostly in the printed addresses given to graduates by senior teachers. These were often exhortations on principles and were short on practical advice. A common theme was the importance of patience in setting up in practice; one address quoted the saying: "All things come to him who waits"[66]. Other

advice was the desirability of obtaining a hospital appointment initially and also the advantage of obtaining an M.D. (a further qualification, following the 1858 Medical Act, obtained by writing a thesis)[67]. An article in the student magazine on the professional prospects of medicine was rather more specific than the graduation addresses. It listed different methods of setting up in practice, including the possibility of taking up an assistantship and suggested Poor Law appointments as a form of supplementary income. It recommended that the graduate should obtain some kind of experience, either in hospital or in private practice, before setting up on his own[68].

On graduation there was then the difficult task of earning a living. A few joined a father or other relative in a family practice, one or two others did not need to find paid employment and a few chose not to practise, their interests lying in some other field of study[69]. For some there was short term work in a hospital as a junior doctor, but when this was completed they had, like the others, to find some longer term employment. The first year or two were the hardest for the new graduates. The majority eventually went into general practice, but setting up was hard; in most places there was stiff competition for patients, and so income was inadequate. To supplement this, most practitioners took on forms of part-time employment, but there was fierce competition for these posts, too[70].

Finding employment was not easy, except for those few who went into a family general practice or were offered a post in a hospital associated with their medical school. Word of mouth would have played a large part, with former graduates and medical school staff informing new graduates of possible openings and recommending them to general practitioners and organisations employing doctors. Advertisements also played a large part, mainly in the medical press, such as *The Lancet* and the *British Medical Journal*, but national papers, such as *The Times, The Scotsman* and the *Glasgow Herald* also carried such notices; these papers also carried advertisements for the sale of practices. Some general practitioners used agents to find new partners, for the sale of a practice or to find locums.

Junior hospital posts

Junior hospital appointments were a preliminary to a doctor's career. They were not a requirement for full qualification as they are now, so not all graduates held these posts. However they were seen as desirable for experience and the prestige which they carried for a future career and also for the possibility of making links with the local community; a guide to the medical profession for students and junior practitioners published in 1885 suggested that a House Surgeon post was preferable to that of House Physician on the grounds that many common conditions fell within the sphere of surgery[71]. The

appointments were usually for six months with sometimes an extension for a further six months. They carried the title of 'Resident Medical Officer' or 'House Surgeon' and were usually paid at the rate of £50 to £100 per annum, with full board provided. Sometimes the doctors were required to carry out further duties, such as dispensing. Many of these posts would be filled internally; an excerpt from an advertisement in *The Lancet* of November 25th, 1882 gives an idea of what was required and offered. Candidates "must be Surgically qualified, registered, and unmarried. Salary £80 per annum, with board, residence and washing". The doctors were usually called 'residents', as they were accommodated in the hospital, often on the wards on which they worked, and were on call all the time. It is likely that the numbers of graduates holding junior hospital posts increased during the second half of the century. Crowther and Dupree, from information in obituaries of those who graduated around 1870, say that one third of future general practitioners from their Glasgow cohort went into short term hospital appointments[72]. They consider this an under-counting, although the obituaries will have been of more prestigious graduates and therefore there would be likely to be a higher proportion obtaining such appointments. These posts are not to be confused with those of 'Assistant Surgeon' or 'Assistant Physician', which were held by more experienced practitioners.

General practice

The majority of graduates went into general practice. They did so because this was the accepted way for most doctors of making a living - there were few full-time posts. The issue for the newly qualified practitioner was how he was to become established; was he going to set up in practice straightaway, either by himself or in partnership with one or more others, or was he going to gain experience as an assistant first?

The guide for students suggested that it was advisable to take an assistantship in private practice for a short time[73]. Digby sets out four reasons for taking up an assistantship. They were:

(a) to build up capital in order to buy a partnership
(b) to help decide whether to go into general practice
(c) to select by trial and error what kind of general practice to go into
(d) to gain practical experience.[74]

It is estimated that in the mid 19th century in England and Wales there were 3,000 to 4,000 medical assistants, i.e. one in every four of five practices[75]; sadly we have no statistics on the number of assistants in Scotland.

Medical assistants could be employed for outdoor work (visiting patients at home), or indoor (seeing patients in a surgery), or a combination of the two. A typical advertisement for such a post from *The Lancet* of September 25th, 1880 was "Wanted, qualified assistant, to visit, dispense and keep books. Light work in Midwifery,

but must be experienced. Terms £120 per annum, with furnished house in conjunction with surgery". Medical assistants were often employed when the general practitioner had a public appointment, so as to leave him more free to do this work[76]. They were a form of cheap labour, with the assistant assigned to hum-drum duties; in 1889 their pay is quoted as ranging from £80 to £140 per annum, though this was a relatively comfortable living in comparison with what other professionals received at the start of their careers. However sometimes a medical assistant might be engaged with a view to subsequent partnership, although the students guide suggests that there needed to be a clear understanding about the conditions and prospects[77]. The student magazine also mentions the possibility of partnership with one of the doctors' daughters[78]!

Quite frequently a general practitioner employed unqualified assistants and the *British Medical Journal* and *The Lancet* carried many advertisements for these posts, which would often be filled by medical students or those who had failed to pass their medical exams. A notice in the advertisement in *The Lancet* of May 9th, 1896 makes it clear that the General Medical Council did not approve of unqualified assistants taking on independent responsibilities. It is not clear whether the duties of the two kinds of assistant were very different. Reference was sometimes made in advertisements to the need of applicants to be temperate and well behaved, suggesting

that they wanted to ensure that the candidates were respectable and that this was not always the case.

Digby describes three ways of starting in general practice: "A practice could be acquired by purchase, partnership or by squatting; all three were problematic"[79]. Squatting meant setting up in practice in an area where there were already doctors in competition with them. The social stigma associated with squatting can be illustrated by the fact that, when Dr William MacKeith arrived and set up practice in a new town, none of the other doctors' wives called on his wife[80]. What it came down to was whether the graduate could earn sufficient money to support himself and any others dependent on him. To purchase a practice from someone who was retiring was the best option. The medical journals of the day carried many advertisements of practices for sale, some placed by individual doctors, some by agencies acting on behalf of retiring doctors. The advertisements indicated how much income the practices generated and gave details of local circumstances, i.e. whether the practice was unopposed, which was highly desirable, and whether there were any appointments which went with the practice. The following typical example appeared in *The Lancet* on August, 28th, 1880:

"For immediate Disposal, on very easy terms, a well-established unopposed Country PRACTICE in a pleasant mining and agricultural village. Income about £300, which might be easily doubled. Appointments £130. Little

nightwork, and practice easily worked. Good house, with garden, stabling, &, at very low rent. Satisfactory reasons for relinquishing - Address, Surgeon, W.R.Robinson, Esq., Hardshaw-street, St. Helen's" Of course there was no certainty that the patients of the retiring doctor would stay with the new doctor, so that income was not guaranteed.

The student guide said that practices could be bought for a year to a year and a half's purchase, i.e. the annual income expected from the practice; it suggested that purchasers should check the financial side of the practice very carefully. It said that a partnership might be safer and more desirable, because it gave flexibility, but again it was important to check out prospective partners[81]. Advertisements were placed in the medical journals, too, for partners, also often using agencies. The following from *The Lancet* of May 9th, 1896 gives an idea of the kind of work involved: "Partner wanted in Devon - Share estimated at £300 a year. Premium £600. Would suit a young well qualified man, married or single, determined to work, and with some private means. Practice increasing. Clubs and insurance appointments and general middle-class patients. Visits from 2s 6d., and extra for country journeys. Very little midwifery. Pleasant market town near favourite seaside resorts. Expenses small. Opportunities for hunting, fishing, or boating". The article in the student magazine quoted previously suggested that the purchase of partnerships was not common

in Scotland, though. These relationships were not without difficulty; partners could be difficult to work with and friction could occur[82].

The most risky of the options was that of the graduate setting up in practice by himself. Choosing the right location was crucial, in particular where competition was acute. Conan Doyle's fictional Stark Munro describes how he set out to determine scientifically the best place to practise when he arrived in Southsea. He bought a map and marked on it the location of existing doctors' practices. He established where there might be an opening and set up practice there[83]. The best arrangement was to find somewhere where one could practise unopposed; this would often be in the country, although this could involve much travelling[84]. Archer describes a country practice at the turn of the century in a village which had never had a doctor before. With the squire and the vicar he was one of the three prominent people in the village and became much respected for standing up for the poor[85]. An alternative way of setting up unopposed was to take advantage of suburban expansion and find a new suburb which did not yet have a doctor[86]. Loudon considers that for prosperity a general practitioner needed 15 to 20 visits per day, efficient pharmacy and a minimum of bad debts. The level at which fees were charged was crucial and doctors who were in competition strove to keep them low to attract patients. Medicines constituted the largest part of income, followed by charges for visits and

extra procedures[87].

Practice income varied. The two examples quoted above had an estimated income of £300. These were both country practices and were probably at the lower end of the scale. Advertisements in *The Lancet* for August 28th, 1880 give a range of incomes from £300 to £1,500 per year. Figures given by Digby for the period 1877 to 1909 show that just over half of practitioners earned between £400 and £799[88]; these would probably include income from appointments. However her estimates for gross income for practitioners in the years one to five after qualifying for 1878 were £400-£500 gross and only £300 net[89]; this income would have been sufficient to employ one or two servants, but not to support a more extravagant life-style. Income from Scottish practices would probably have been lower, especially in country practices where there was much poverty and Poor Law appointments were poorly paid.

For someone setting up in practice there were a number of stages, through all or some of which he might go. On arriving in a district he might first stay as a lodger, then later rent premises and run his practice with the help of a member of his family. The next stage might be to employ a housekeeper when income was sufficient to cover the cost. Finally the doctor may have married, purchased his own property and run the practice with the assistance of his wife and servants. Conan Doyle was helped when he was setting up in practice by his young

brother[90] and there are many other recorded instances of family help. For example, Dr Alexander MacKeith had an older sister come to help him, when he was setting up in practice; when she died, a younger sister took her place. Similarly, his brother, John, also had a sister keep house for him. Dr William MacKeith stayed as a lodger when he moved to Buchlyvie around 1850; he subsequently rented premises there and married[91].

Wives played a very important role in the practice, comparable to a contemporary practice manager. Among the work she might do were:

(a) Keep house, including look after the assistants

(b) Dispense

(c) Keep the books

(d) Act as receptionist

As time went on a wealthy practice might employ a dispenser, receptionist, book-keeper, coachman and a boy to deliver medicines[92].

The key to establishing oneself in general practice was to build up a reputation in the district and to play a leading role in the life of the community. In his *Stark Munro Letters* Conan Doyle's alter ego says "Do not think that practice will come to you. You must go to it"[93]. This involved being active in the community, taking on as many of the local appointments as possible and preferably having a monopoly of them, thereby establishing the practitioner's own territory[94]. Such appointments were very important in supplementing the graduate's income.

There are a number of sources which confirm this practice. Of Dupree and Crowther's cohort nearly 60% had two or more appointments[95]. Digby says that before 1880 around two out of three practitioners held an appointment of some kind, rising in the succeeding thirty years to seven out of ten[96]. Lamb gives a percentage of doctors holding a public appointment in Glasgow as rising from 30% in 1851 to 65% in 1901[97].

Poor Law

One type of appointment which was often taken by practitioners, especially when they were trying to establish themselves, was that of medical officer for a Poor Law district or parish. The arrangements for the Poor Law were administered in England and Wales by a Board of Guardians for a union of parishes; these were divided into districts, for each of which a medical officer was employed to provide medical services to the poor. In Scotland there were parochial boards, which could, but were not obliged to, appoint a medical officer for the parish. Doctors were quite ambivalent towards these posts. On one hand they provided a useful supplement to their income and were a way of becoming known within the district or parish. On the other, they were poorly paid and the work was strictly controlled by the Boards; the sick poor could only be attended to on the instructions of the Board's Relieving Officer. The salary depended on the size of the district or parish and the numbers of the

population; in the early part of the period it could be as little as £6 per annum. In most cases the doctor was expected to provide medicines out of his salary; for instance, in 1897 Dr Alexander MacKeith applied for an increase in salary from the Barnstable Board of Guardians, saying that he spent £30 out of his salary of £70 on medicines[98]. There could also be extra payments for midwifery and fracture cases and for certifying lunatics. In many instances the post was combined with that of Public Vaccinator, for which extra payment was made; these were based on the distance of the person being vaccinated from the residence of the vaccinator and could be quite significant, amounting to more than the salary. In addition there were posts of medical officer for the infirmaries of poorhouses. These posts were often full time, especially in England, where the poorhouses, and therefore also their infirmaries, were larger than those in Scotland[99].

The arrangements for the Poor Law were highly bureaucratic and restrictive. On a national basis they were overseen by the Poor Law Board, later the Local Government Board, in England and Wales, and by the Board of Supervision in Scotland. Boards of Guardians had to seek permission on many detailed matters from them. The chief responsibility of the guardians seemed to be to keep expenditure down and thus keep rates low, and they were therefore often seen as parsimonious. As a result the poor were badly served. Dr James Thorold Rogers wrote of

his frustration as a workhouse medical officer. He was in continual dispute with his Board over improvements to the infirmary, which were needed. He was involved in the formation in 1848 of an association of Poor Law medical officers to press for improvements in Poor Law medical services[100].

Although after 1842 it was no longer possible to invite tenders from doctors for Poor Law medical services, there was still much competition for the posts and doctors often tried to hold on to them to prevent new doctors coming into their district[101]. Those appointed had to live within the district, unless exemption was obtained from the Poor Law Board. In country districts there could be much travelling involved along poor country roads and tracks; for example, Dr Alexander MacKeith reported to his Board of Guardians that, out of 286 patients, a considerable number lived over three miles away[102]. For the guidance of Boards, the duties of District Medical Officers were laid down in the Local Government Manual[103]. The restrictions on the medical officers were such that there were often disputes about whether they should have attended a pauper or not. Arrangements in Scotland were less prescriptive than in England, in particular unemployment did not confer auutomatic entitlement to parochial relief, nor was there a statutory duty to appoint medical officers. The result was that, without powers of enforcement by the Board of Supervision, parochial boards, with whom responsibility lay, sometimes

failed to make proper arrangements, and doctors were often forced, out of charity, to look after the poor without payment[104].

Friendly societies

Friendly societies or clubs were another good source of income for doctors seeking to establish themselves. "Friendly societies pioneered medical contracts based on contract services and group coverage. Charging small monthly or quarterly fees, which members paid when they were sick and well, the club accumulated enough money to hire a surgeon on retainer, paying usually for attendance and medicines[105]". Dupree and Crowther say that these societies were not as well developed in Scotland as they were in England[106], but Hamilton claims that by 1892 there were 1,320 of them with 280,000 members[107]. The advantage to a doctor seeking to become established is that the friendly societies paid a regular salary and that he might be called to see a member of the family who was not insured. In some districts family clubs were organised by doctors to cater for non-workers[108], although later many friendly societies covered families as well[109]. As for the Poor Law posts, competition was great, because of an over supply of practitioners, and the societies managed to pay low rates[110]. In the hierarchy of forms of part-time employment, friendly societies paid more than private dispensaries and Poor Law unions, but less than private

patients, but the advantage of working for the societies was that they paid promptly, whereas private patients were often reluctant payers[111]. There was often tension between doctors and societies about who got the best deal[112] - doctors often felt that society members could afford to see them privately[113], and there might sometimes be pressure on a doctor to certify a member's return to work earlier than he felt right[114]. Doctors sometimes delegated their society work to assistants, with the result that care was not as good[115]. However by the end of the century, because of greater knowledge and effectiveness of medicine, doctors had greater bargaining power and the spirit of independence of the societies diminished[116].

Industrial posts

A further local source of employment was that of medical officer posts for industrial concerns. The most common of these were posts in collieries, but medical officers were employed by a variety of organisations, including railway companies, the Post Office, steamship companies, quarries and in various branches of central government. An advertisement in the *British Medical Journal* on January 11th, 1902 sought a Medical Officer for Derwent Valley Water Board, which was developing a Workmen's Village, which was to grow to house a thousand people. This was to be an almost full time post, although the person appointed was to be allowed private practice

with certain limitations. An indication of the competitiveness which could exist for local posts was the correspondance in a local newspaper about the appointment of a medical officer for a quarry. There was a dispute as to whether a local doctor had applied for the post or not, as shown by a letter from him:

> "In your issue of the 4th instant, there is a paragraph under the heading 'Medical Officer', in which it is stated "Drs Clarkson and Lumsden offered their services, Dr Clarkson was appointed". This statement that I offered my services is pure invention and as similar paragraphs appeared in your paper to my disadvantage, in which the facts have not been fairly stated, I am under the necessity of asking your insertion of this letter, that the truth may be known to the public".

The rate per worker was an issue in this, as illustrated by a letter from the secretary

> "Sir, In justice to Dr Lumsden I feel called upon to contradict a statement made by Dr Clarkson to the Draymans Field Stone Quarries. I proposed Dr Lumsden at 3s per member, of my own free agency, and at the desire of some of my fellow labourers: but without the authority or knowledge of Dr Lumsden. Dr Clarkson offered his services at 3s 4d per member, having reduced it 1s, this little fact he omitted to state."

The process seems to have been a bidding war, which Dr Lumsden won by someone offering the lowest bid on his behalf. The strength of the feeling in the correspondance indicates the competitive spirit which existed[117].

Insurance work

Posts with insurance companies were a good source of income. These companies employed medical practitioners mainly on a piecework basis to examine candidates for life insurance and paid according to the size of the policy. In 1911 16% of practitioners listing a current appointment in Scotland were medical officers, referees or examiners for one or more life assurance companies[118]. A few years earlier a lecturer at a medical school told his students: "the work is honourable, it is a good introduction to practice and there is no trouble about getting your fee. The fact of being appointed is a good thing for your reputation"[119].

Other posts

Another source of part-time employment was that of hospital doctor. These were posts, largely with voluntary hospitals, and were honorary appointments, where doctors were engaged to visit to see patients on wards, in an out-patient clinic or dispensary. These posts were usually designated 'Assistant Surgeon' or 'Assistant Physician' for more junior appointments and 'Surgeon' or 'Physician' for the more senior ones. They were usually filled by

doctors with some experience and were therefore less likely to be held by newly qualified graduates. The same was probably true for posts in medical education.

In addition to these part-time posts there were a limited number of full-time public appointments. These included posts of medical officer of health for local government councils and medical superintendants of poorhouse infirmaries or asylums. Again these posts were usually filled by more senior members of the profession and in some cases required a higher qualification; these posts were also seen as a way into local private and hospital practice[120]. However the larger institutions sometimes appointed assistant medical officers and these posts could be filled by more junior practitioners, as illustrated by an advertisement in *The Lancet* of November 25th, 1882:

"Chelsea - Election of Assistant Medical Officer - The Guardians of the Poor of Chelsea will on Wednesday, the 29th instant elect an ASSISTANT MEDICAL OFFICER for the Infirmary and Workhouse, at a salary of £100 a year, with furnished apartments in the Infirmary, rations, washing, coals, and gas. The person appointed will be required to devote his whole time to the duties of his office. Candidates must be duly registered and must possess the qualifications required by the Local Government Board."

The services

There were also other career choices open to

graduates. These were practice in the armed services, the merchant navy, the Indian Civil Service and in civilian practice abroad. Of these, work as a ship's doctor in the merchant navy was likely to be a temporary appointment and was often taken by graduates soon after graduation, giving them a chance to see the world before settling down. The student guide suggested such posts could lead to useful connections (this applied to posts on passenger ships), but that graduates should not stay in them for too long for fear of becoming lazy and debauched[121]! Of Digby's cohort between 1880 and 1900 the percentage taking up posts as ship's surgeon was ten[122].

The importance of military medical service is seen in Lankford's statement that all branches of the service constituted a tenth of the total medical profession during the mid Victorian period[123]. He states that the attraction of the service was due to the limited appointments available for Irish and Scottish graduates, in particular for those who did not have the capital or the connections to set up in private practice[124]. Scottish graduates formed a high proportion of the army medical service, for whom its modest attractions were a guaranteed salary, a captive patient clientele and a pension[125]. A substantial number of Scottish graduates, especially from Edinburgh, went abroad to practise[126]. The reasons for doing this were similar to those for joining the armed services. The main difference appears to have been that the decision to enter military medical

service was usually made immediately on graduation, whereas that to go into civilian practice abroad was not taken until after some years of practice, or after attempts to set up in private practice in the United Kingdom had failed.

Scotland

So far the discussion has been about the prospects for employment in England, Wales and Scotland generally. There were few distinctive features of practice in Scotland. Private practice was the main form of employment and the various kinds of part-time employment were all present in Scotland. Some differences have already been mentioned - the different Poor Law arrangements and the high proportion of Scottish graduates entering military medical service. In addition to those going into this latter form of practice, large numbers of Scottish graduates went into practice in England and Wales and abroad. This was chiefly because there were more graduates than opportunities for work, although there were places in the Highlands without doctors; in fact only one third of Scottish graduates succeeded in establishing a practice in Scotland[127]. Some of those who went to England to practise had come from England to study and so might have been expected to return, but there were a large number of native Scots who went to England as well. A high proportion of those who went set up practice in the North of England, and *The Scotsman* and *Glasgow Herald*

carried advertisements for medical assistant posts in that part of England. Digby quotes a figure of quarter to just over a third of Scottish graduates going to practise in Northern England during the period of her study, although her definition of Northern England covers an area north of a line from the Severn to the Wash[128]. Places of practice in Scotland had been to a certain extent determined by the monopoly of the Royal College of Physicians and Surgeons of Glasgow of practice in Glasgow and western Scotland, but by the middle of the century this control had diminished.

By the end of the century there was an increasing number of opportunities for employment, but also an increasing number of medical practitioners competing for them. The higher status of the medical profession did not signify an easier life, but there was clearly the potential to make a living from private practice with the burgeoning middle classes and from the multiplicity of appointments available. There was also an increasing minority of full time posts, mainly with local and central government.

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2. SOURCES AND METHODS

The Medical Directory

The principal source of information about the early careers of medical graduates is the *Medical Directory*. The *Directory* is the only source of information about the posts which the graduates held, the societies to which they belonged and the articles which they wrote. The *Directory* has been widely used by medical historians[1] and by the medical profession[2]. It has its limitations, as it contains only information submitted by the doctors themselves, but it was considered very reliable[3]. It is the one national record of doctors' early careers and can only be supplemented by records of individual doctors, such as job applications, testimonials and curriculum vitae, except in rare instances where an individual or an institution has compiled such information[4].

The *Medical Directory* is a private publication of the firm, J & A Churchill. It was first published in 1845 and for the first two years only covered London. From 1847 to 1851 it covered London and the provinces; only from 1852 was Scotland included. Within the *Directory* there were separate sections for London, the provinces and Scotland, as well as sections for doctors practising in Ireland, those resident abroad, practitioners in the Army and Navy and those in the Indian medical service, together with brief obituaries of those who had died in the

preceding year. Other useful information contained in the *Directory* were lists of doctors according to their place of practice and details of medical officers of health of local councils and of doctors working for Poor Law Boards of Guardians.

Before 1858 the information contained in the *Directory* was not always accurate and the coverage was not as comprehensive or as reliable as that after 1858; for example, William McKiech was listed in 1852 as W.McKeogh and in 1856 as John McKiech - his name was only correct in the 1859 edition. Information in the earliest *Medical Directories* appear to have been compiled using lists prepared by the Society of Apothecaries and the Royal Colleges. Later, circulars were sent out each year in August, to be returned by the end of October. In that earlier period the publishers marked with an asterisk those doctors who had not replied to their circular and included a supplemental list of those who had made no return at all or were practising without qualification. They asked for help in expunging those who were unqualified from the *Directory*.

The first *Medical Directory* following the passing of the 1858 Medical Act, that of 1859, had a short supplemental list of qualified practitioners, but by 1861 there was no longer such a list, and those practitioners in Scotland and Ireland who were not registered were omitted. However those in London and the provinces who were not registered or had made no return were marked with

an asterisk. The difference in treatment between those in Scotland and Ireland and those in London and the provinces was possibly because of difficulties in completing the registration of the latter. A few years later those in London and the provinces who had not registered were no longer listed and all those who had made no return continued to be marked with an asterisk. There were also those against whom was recorded 'address uncommunicated', meaning presumably that they had completed the circular, but had not entered an address for reasons of confidentiality or impermanency of residence. However Dupree and Crowther record that in 1911, only 3 per cent of practitioners had not returned a circular during the previous five years[5].

The amount of information contained in the entries varied greatly. A practitioner could choose whether or not to put in information about himself. A successful practitioner may have several lines detailing both past and present appointments, membership of societies and publications; many practitioners' entries contain no more than their qualifications and address. This does not mean that they held no appointments or were members of no societies, but rather that they chose not to have them recorded. Dupree and Crowther however stress the fact that "the *Directory* was...the only piece of advertising open to reputable members of the profession"[6], because other forms of advertising were forbidden. It was therefore in the best interests of doctors to make use of

the *Directory* to make known their achievements, although this will have been largely circulated only amongst their fellows. Therefore the record of further degrees and qualifications, as well as of appointments, is likely to be fairly full, as graduates would have wanted to show themselves in a good light. The other particular feature of the entries, which Dupree and Crowther also note, is that the *Directory* does not list general practice as a post or occupation[7]. The assumption is that all practitioners were in general practice, unless the appointments listed were clearly full-time ones. Moreover, many of the posts which the graduates recorded were those which are known to have been held by medical practitioners in addition to their work in general practice. However a practitioner listed with no appointments may have been no longer in practice or retired. A disadvantage of the information contained in the *Medical Directory* is that it does not record the dates of the appointments held. It is possible to make deductions from studying consecutive *Directories* to see when entries of particular appointments start and finish, but this is not an infallible guide, as practitioners sometimes did not always record new appointments when they happened.

The editions of the *Medical Directory* used for the research were those of the first six years following qualification, e.g. for the 1856 graduates, the editions of 1857 to 1862. This takes into consideration that the

information is already some months out of date between when it is submitted and when it appears in print. Entries were searched in all sections of the *Directory* and, apart from those who died soon after qualifying, in only four instances were no entries found in any of the six years, and those appear from university records to have been graduates who went abroad immediately following qualification.

The entries in the *Medical Directory* of the newly graduated have some special features. One of these is that there is sometimes a complete absence from the *Directory*. For the first year following qualification there were only three entries for the 20 1856 graduates and for subsequent cohorts there were complete omissions for one third to one fifth of those completing their studies; for the next year or two there were also further significant omissions. There may be a number of reasons for this. The graduates may not have found employment and therefore had nothing to enter in the *Directory*. They may have found temporary employment, but considered that it did not merit recording. They may have found employment, but did not have the time, or consider it desirable, to submit an entry. They may have given up medical practice because of the difficulty in finding employment. There is the possibility that they held a post for a short time between editions of the *Directory*. There appear to have been no entries for practitioners until they had returned a completed circular. Thereafter, when they did not

complete a circular, their last entry was repeated.

The information about the early careers of graduates is sometimes sparse. In some cases information is given in subsequent editions of the *Directory* about posts held earlier. Where there was no entry in early editions, a check was made in the *Medical Register* to see whether the graduate had in fact registered and where they were living.

The Census Returns

The census returns are used in the study to give a picture of the graduates' social and family situation at the end of the first five years following their graduation. The years for which the returns are used are 1861, 1881 and 1901, thus giving an even spread of data during the second half of the 19th century.

The full census was first carried out in 1841 and took place every ten years thereafter. The year 1861 was chosen as the first year a census was taken, for which there were *Medical Directories* available for the preceding five years. The twenty year intervals after that enables a comparison to be made, with the 1881 census of 1876 graduates being the main focus.

Copies of the returns for the 1861 census are available for Scotland in the General Register Office in Edinburgh and for England and Wales at the Family History Centre of the Public Record Office; they are also available for regions of Scotland and counties in England and Wales in local archives. In most instances the returns are not indexed and have to be searched without tracing aid, which makes it difficult sometimes to find an individual. The 1881 census has been fully computerised by the Church of the Latter Day Saints and can be searched on a CD Rom using any information about a person. The data appear to have been reliably transcribed and the programme is an easy and useful way of tracing an individual at that date. The 1901 census data, which

became available at the beginning of 2002, has been provided on-line by the Public Record Office and the General Register Office for Scotland in conjunction with private firms, and can be accessed by the general public, with the possibility of down-loading those sections which are required on payment of a fee. There are not likely to be any problems with the accuracy of this data.

The data recorded for the censuses varied slightly from one census to another, but it mainly consisted of the following:

The parish or district in which the dwelling was located

The address (but often no number in the street was given)

The names of the residents on the date of the census

Their relationship to the head of the household

Their age

Their occupations, if any

Their marital status, and

Their place of birth

The information in the census can be used to confirm the address given in the *Medical Directory* at that time to check on graduates' movements. More importantly, it gives a picture of their social and family status. It shows whether the graduate had set up a household of their own, was living with their parents or was boarding or lodging. The size of the household gives an idea of the graduate's social standing, i.e. how many servants he employed; an interesting comparison can be made of who is running the

household for the graduate: female relative, housekeeper or wife. The census also shows whether the graduate is himself living at the house of, and assisting, a more senior doctor, or whether he has some kind of assistant himself. A further indication of the graduate's status could be judged by his neighbours, to show whether he is living amongst people of some social standing or whether he cannot afford to live in the better part of his district.

There are a number of problems with the census data. The main one is that in a number of cases there is no apparent record of a graduate in the census. This usually appears to be because he has left the country, but in a few cases it probably means that the graduate was not living where he would be expected to be living according to the *Medical Directory*, and the search has failed to trace him. Another one is that it is not clear from the occupation listed which kind of medicine the graduate is practising. Members of the medical profession were variously described as 'medical practitioner', 'physician' or 'surgeon' or both, 'general (medical) practitioner', 'medical doctor' or by their degree; these were often used interchangeably and in most cases the assumption is that they were working as a general practitioner. The information on place of birth can be of help in tracing a graduate's origins, but, with censuses in England, the place of birth of those born in Scotland is merely given as that country without further detail. A piece of

information absent from census data is whether a dwelling recorded is owned, rented or otherwise, by the head or other member of the household. This can only be verified by reference to property records.

Other Sources

Medical Register

The *Medical Register* is the publication of the General Medical Council (GMC), the official body which is responsible for the registration of all medical practitioners in the United Kingdom. The GMC was set up by the Medical Act of 1858, and the *Medical Register* has been published since 1859 as the record of all those who are officially registered with the Council. At the beginning there were branch councils in Scotland and Ireland, which dealt with the registration of practitioners in those countries. There was a problem initially in dealing with a mass of applications, particularly in England, before the start date of 1st January, 1859, and as a result the date of registration in England had to be put back to 1st July, 1859.

The particulars listed in the *Register* are the name and address of the medical practitioners, the qualifications which they have obtained which entitle them to register and the date of their first registration. The *Medical Register* holds no information on practitioners' higher degrees or other qualifications, nor on posts held. The practitioners' names remain on the *Register* for the rest of their lives, unless they are struck off as a result of disciplinary proceedings taken by the Council or if they fail to answer a letter addressed to them within six

months; because of this latter requirement, practitioners are urged to notify the Council of changes of address. The *Register* is an accurate record of the practitioners' qualifications, since the Council requires proof of these before registration.

The *Medical Register* has been used in the study to check graduates' addresses where there is no record of them in the *Medical Directory*; it can also be used to check their basic qualifications. An interesting feature of the graduates' entries in the *Medical Register* is that some appear to cease to have a record in it, even though they appear to be continuing to practise - this happened mostly in the case of those who went into the services or worked abroad.

University records

The University of Glasgow records which have been studied for the research are:

(a) Matriculation records

(b) Graduation records

(c) General Council register

(d) Register of marriage of graduates

The matriculation records before the 1858 Medical Act differ from those after the Act. Before, students were only required to matriculate if they wished to graduate, although exceptions were sometimes made for medical graduates; students only had to matriculate once at any

point during their study. After 1858, a student was required to matriculate once every year during which they studied for all or part of the year at the university. The matriculation records also differ in the information which they contain. Before 1858 they record the age of the student, his place of birth and the year of study; after 1858 the name of the student's father, as well as his profession, is given.

Graduation records merely contain, under the date of graduation, the graduate's full name and country of origin (in Latin). The General Council of the university was composed of all graduates; its register, which only exists from the academic year 1859-60, contains such information on their current addresses as they notified the university. The register of marriage was held for women graduates and only relates, for the purposes of the study, to the year 1896, since there were no women graduates in 1856 and 1876; it lists the place of marriage, the graduate's husband's name and occupation and their current address.

The matriculation albums were the records of most use in the research in giving personal information not recorded in the *Medical Directory*. The register of marriages was also used; other records were checked for verification.

Records of the Faculty of Physicians and Surgeons of Glasgow

The only record of those to whom the College gave

licences is a register of licentiates, listed according to the year in which they were granted a licence to practise. This information included the licentiate's name, age, place of birth, present place of residence, where educated, together with the date of issue and the licentiate's signature. This register has been used to select licentiates for study.

Local Directories

Throughout the nineteenth century a variety of local directories were published to give information for personal and commercial purposes. One of the main publishers of these directories was the Post Office, while others were produced by private publishing companies. These directories were often produced for towns and cities, although some were published for whole counties. The information which they contained usually included basic data about the town or area, with lists of council and other official bodies. There were also lists of residents, both recorded alphabetically and by street, as well as lists of different professions and trades. These directories can be a useful source for checking where a practitioner was living at a particular time, although there is a disadvantage in that some directories were not published annually, but at certain intervals.

Newspapers

A source of information for some of the graduates who have been studied in detail is local newspapers. Where a graduate was living in the country or in a small town, it is possible to find references to them in a local newspaper, either about their social or professional activities. This is not possible for graduates living in large towns or cities, because there is not the same level of local coverage of activities. For the former category, though, newspapers can be a good source of local news, especially about controversies and special events in which the graduate were involved.

Records of Boards of Guardians

The records of Boards of Guardians in England and Wales and of parochial boards in Scotland, which oversaw the administration of the Poor Law, are a rich source of information about the medical practitioners who worked for them. In particular the minutes of meetings of the boards record in detail their decisions, which appear to have been required for the approval of every detailed working of the Poor Law. There are also sometimes records of disputes between the boards and medical practitioners and between medical practitioners themselves. These records have been used both for studying individuals in the cohorts and also for the context of the study.

Methods

The graduates selected for study are the 56 who completed the medical course at the University of Glasgow in 1876, all those who completed in 1856 (20) and a number matching that out of a total of 88 who completed in 1896; in addition, approximately half (every other) of those who obtained the licence of the Faculty of Physicians and Surgeons of Glasgow in 1876 (28) have been chosen, sufficient to make a comparison between graduates and licentiates (see table below). As stated in the Introduction, the graduating years have been chosen as being significant dates at a time of change for the profession. The year 1876 has been chosen as being at the mid point of the second half of the century; moreover it is possible to find where the graduates were practising at the end of the first five years by tracing them in the 1881 census. The 1856 graduates have been chosen as being the first batch whom it is possible to find both in the *Medical Directory* and in a census, i.e. in 1861; they are a smaller group compared with other years around that time. The 1896 graduates have been randomly selected, taking every fifth graduate, except that all five women graduates in that year have been included, in order to try and find whether their early careers had any significant features.

Numbers of graduates and licentiates studied

Numbers of graduates and licentiates studied

	General study	Detailed study
1856 medical graduates	20	2
1876 medical graduates	56	3
1896 medical graduates	20	1
1876 licentiates	28	-

The data about the graduates and licentiates has been analysed to try and find whether there are any patterns to their early careers. The *Medical Directory* entries and the census records are the main sources of information - the *Medical Directory* on the graduates' professional life and the census data on their position in society and their family connections. These have been supplemented by university records, chiefly matriculation data, to give information on graduates' origins and study, and by the *Medical Register*, to try and fill holes in the *Medical Directory* entries. Detailed studies have been made of a few graduates, three from 1876 and two from 1856 and one male graduate from 1896. Two from the 1876 group and one each from the 1856 and 1896 groups were selected as being, on the basis of the first five years, typical of the group; one each from the 1856 and 1876 groups were selected as being atypical on the basis of their early careers. The purpose was to try to find more information on their first five years' experience following graduation by looking at a wider range of records; also, by comparing these records with those of their later careers, an

attempt has been made to see whether an unusual or successful first five years is carried through into the graduates' remaining careers. A comparison has been made between the 1876 graduates, the main cohort, with those from 1856 and 1896 and with the 1876 licentiates, to see whether there were differences in the pattern of their first five years.

Four main areas have been selected for study; these are:

(a) Origins and education

The study looks at the origins and education of the graduates. The matriculation records give their place of birth and their father's profession, and these have been studied to determine where the graduates came from and out of which social classes they were drawn. The matriculation records also give an indication of how long the graduates studied at the university and the *Medical Directory* records other degrees and qualifications, which they obtained, both primary qualifications and higher degrees.

(b) Mobility

The *Medical Directory* entries show how geographically mobile the graduates were during the first five years following graduation. They do not always show the full extent of their mobility, since in the first year or two there are sometimes no entries. The entries show

whether the movement of the graduates was within the same town or area, within the same country or whether the graduate moved into another country. It is not possible, on the whole, to say why graduates moved as they did, but the study can show whether graduates moved to, and worked in, the same area as a result of their earlier association.

(c) Professional life

The *Medical Directory* is the source of information on graduates' professional lives. The *Directory* shows what they had achieved during the first five years from the point of view of the profession, i.e. prestigious appointments, involvement in medical societies, articles published, as well as how well they were established professionally locally, i.e. number of local appointments. The study looks also at how the graduates developed their professional career over the first five years.

(d) Family and social connections

The study looks at a variety of family connections in the graduates' early careers. The record of the profession of the father show how many followed their father into medicine. Census records show how many graduates joined their father in practising medicine, as well as whether there were other members of the family who also practised medicine or had a related profession. Census records also show which members of the family were

living with the graduate and in particular whether one of them appeared to be keeping house for him and thus supporting him in his early practice. Another aspect of the family which it would have been interesting to study is the extent to which family connections influenced where the graduate practised, i.e. whether there were other members of the family living in the neighbourhood, but that would require a very exhaustive study of census records.

The records show how well established the graduates were after five years, both by their addresses, as well as, potentially, by their neighbours, and also by the make-up of their households. A graduate with a household of several servants has obviously achieved greater success than one who is living as a lodger. The detailed studies also shed light on the graduates' position in society. Newspaper accounts show graduates' involvement in the community, and poor law records give an indication of how graduates in this employment were viewed by the Boards of Guardians.

References

1. See, for example, Loudon, "Two Thousand Medical Men"; *Medical Care*.

2. Dupree and Crowther, "A Profile", pp.209 and 212.

3. Ibid., p.212, n.14.

4. In the 1980s David Hamilton, with the assistance of Neil McLean, started compiling a Glasgow Medical Practitioners Database, using *GPO Directories, Medical Directories and Medical Registers*. It was intended that it would cover the period 1850-1940, but it got no further than the 1860s before it was abandoned. It is held in the Greater Glasgow Health Board Archives.

5. Dupree and Crowther, "A Profile", p.213.

6. Ibid., p.215.

7. Ibid., p.216.

3. THE GRADUATES AND LICENTIATES STUDIED

The 1856 graduates

The year 1856 was a time in the early Victorian era of industrial expansion and population growth. The Crimean War had not long come to an end. There were mixed feelings about the war - national pride in some military achievements, tempered with dismay at many unnecessary deaths caused by disease. The Indian Mutiny also took place during the first five years following the 1856 graduation. There was pride too in industrial achievements and new inventions, including in surgery (although Lister's use of antiseptic techniques was still ten years away). However there was a price to pay for industrial progress, with many people living in cramped and unhygienic accommodation.

Glasgow reflected these trends; it was a time of industrial expansion and population growth. In 1861, five years after the 1856 graduation, the population of Glasgow was 395,000, nearly double that of 1831[1]; it was already being called the 'Second City of the Empire'. A large proportion of this increase came from Irish immigrants, with a peak in the late 1840s due to the failure of the potato crop. Cotton was still the main industry, but there were others, including ship-building, which was just starting to grow. The growth of population and industry had a similar detrimental effect on the housing and health of many of the Glasgow population as the rest of the

United Kingdom.

In 1856 there were 20 medical graduates out of a total of 57 graduates for the university as a whole, although the average around that time was about 30 a year[2]. By contrast, the number of medical graduates at Edinburgh was around twice that number at the time[3]. Lectures at the University took place at the University's buildings in the High Street, with clinical instruction at the Royal Infirmary[4]; the degree awarded was a Doctor of Medicine (M.D.), although the examinations also had a surgical component. The course lasted four years, including two years' hospital practice; those studying elsewhere for part of the course had to spend at least a year at the university before taking the exams.

Origins and education

The graduates came mostly from within Scotland and studied at the medical school for varying lengths of time. Before 1858 it was not compulsory for all medical students to matriculate and therefore these matriculation records are not complete[5]. However all but five of the graduates of this year did matriculate and therefore it is possible to learn where they were born: nine of the fifteen in Scotland, five in Ireland and one in Austria. This shows a clear majority from the home country, with a significant proportion from Ireland because of the connection of immigrants coming from that country[6]. It is interesting to note that there was not a single graduate

from England; at that time English students tended to go to Edinburgh[7]. These early matriculation records do not give information about the graduates' fathers.

The length of period of study is interesting. The matriculation records, for the final year, 1855-56, were examined; these give the number of previous matriculations and there is also a date given when matriculation first took place. This gives a very varied picture. The earliest matriculation was in 1842, which was when the student, Robert Orr, was ten years old (this unlikely piece of information is supported by the fact that Dr Donald MacKeith first matriculated at the age of 12); the oldest was 31. Age therefore was no bar to starting study. It is clear that many of the students did not matriculate each year; this fits with the picture of students studying in at least two or more places[8]. Another reason for students not matriculating each year could be that they needed to take time out of their studies to work in order to earn money to pay for their lecture fees. The number of matriculations is also interesting, ranging from eight to one (the latter student had already obtained the licence of the Faculty). Of the 15 who did matriculate the average length of study was 5½ years. The age at graduation varied from 20 to 31, with an average age of 22.8. There is no information about where the graduates studied, apart from the University of Glasgow. However the *Medical Directory* does give information about other qualifications. This shows that two of them graduated

with an M.A. a few years before obtaining the M.D., and three others had obtained a medical qualification before their Glasgow M.D. Of these, two had obtained Irish qualifications about ten years previously and two the licence of the Faculty a few years earlier. A further interesting fact about their training and qualifications is that nine of the graduates obtained licences from one of the medical institutions in the same year as graduating or soon after - six from the Royal College of Surgeons of Edinburgh and three from the Glasgow Faculty; four of those who went into the services took the Edinburgh licence. This suggests that the Glasgow M.D. was not seen in some places as a sufficient qualification and that it needed to be supplemented by a further qualification in surgery. Three of the Irish graduates also obtained the Licence in Midwifery from Dublin.

Mobility

The key aspect of the early careers of these graduates is their attempts to obtain employment and to start to establish themselves in a career in medicine following graduation. The records for the 1856 graduates are frustratingly unclear on this. As stated earlier, the early entries in the *Medical Directory* are sparse or non-existent. This may mean a number of things. The graduates may not have found employment and therefore had nothing to enter in the *Directory*. They may have found temporary employment, but considered that it did not merit

recording. They may have found employment, but did not have the time, or consider it desirable, to submit an entry. A further complication is the inadequacy of the census records. In a number of cases there appears to be no record in the census at the address where one would expect there to be according to the *Medical Directory* records. The most straightforward entries are for those graduates who went into the services, even though exactly where they were serving at any point in time is not usually known.

From the records it would appear that these 1856 graduates were not very mobile, because in most cases only one address is given for the five year period. That is not to say that they did not reside at more than one address, but that they only gave the one address for their entries in the *Directory* for the reasons given above. Of the two who did move within the United Kingdom, both moved twice: Asher Asher moved from the northern outskirts of Glasgow to central Glasgow and then to London, and John MacGregor moved from Oban on the west coast to Ullapool further north and then to Lancashire. The moves at the end of the five year period are perhaps significant, in both cases being moves of a considerable distance, perhaps in an attempt to make a more permanent settlement. The other graduate who moved significantly was John Wolfe, of Austrian origin, who went to work on Garibaldi's staff in Italy and was Paris correspondent for *The Lancet* for a time.

In a few cases two addresses are given at the same time. This would appear to be when the doctor was practising at one address and living at another - in some cases the *Directory* entry explicitly says this. In one case the home address was in a pleasant residential area on the outskirts of Glasgow and the work address in the centre. In the other cases however work and home addresses were close by in the centre of Glasgow. This was possibly because these doctors had a branch surgery. A further point about addresses is that sometimes an address is given to which post can be sent, then forwarded. This is particularly the case where someone is working away from home temporarily. It is therefore misleading in giving a false sense of a settled existence.

Information about the careers of those who joined the armed services will be given in the section on professional life. Here it is interesting to note that they all appear to have gone straight into the services without prior movement into any other medical occupation. Where the date of enrolment is given in the *Medical Directory*, it is in every case in the year of graduation, and in one case actually before the date of graduation. This would suggest that they had decided to go into the services well before graduation, possibly through some recruitment at the university.

Professional life

The main occupations of the graduates during the

first five years were general practice and medical work in the armed and civil services. Of the 20 graduates, John Boyd and Edward Reid died during the first five years following graduation, one at the end of the year, the other three years later. Of the remaining 18 graduates it is likely that a majority - eleven of them - went into private practice. The reason why it is not possible to say this categorically is that the *Medical Directory* does not record private practice, whereas other forms of employment are usually given. There is therefore an assumption that someone is in private practice, if there is no other indication. However there is the possibility that that person is no longer practising as a doctor, in which case however he is not likely to have an entry in the *Medical Directory*. The census records are not always helpful either, as some doctors describe themselves as 'surgeon', 'doctor of medicine' or 'physician'; in only one case does a doctor describe himself as 'general practitioner'. This does not mean that the others are not in private or general practice, but merely that is not how they describe themselves. The absence of fifteen of the graduates from the census records makes it harder to establish a picture. One of those with a record in the census described himself as 'physician and dentist' and had a brother living with him who was described as a 'mechanical dentist', suggesting that he combined medicine and dentistry. Another interesting point is that in a number of cases where a doctor is not recorded in the

census as living at the address given in the *Medical Directory*, another doctor is recorded as living there, suggesting that the premises had a continuous use for medical practice.

Apart from the majority presumed working in private practice, the next largest group of graduates, seven, went into the army, royal or merchant navy and the Indian medical service. They do not appear in the census and there is little record of them in the *Medical Directories*. For three of the seven in this group there is a record in special publications: one in the *Roll of the Indian Medical Service* and two in the *Medical Officers of the British Army* (these two latter also served in India)[9]. In all three cases they were appointed initially to the most junior post of Assistant Surgeon and served either on the general staff or in a brigade; two of them are recorded as having served in the Indian Mutiny. Of the four others, three served in the Royal Navy, for which no directory entry could be found, and one in the Merchant Navy. It is not clear what the requirements were for entry on the *Medical Register* for those working in the services - some had entries, while others seem not to have bothered to register.

In order to try and establish whether the high proportion of graduates going into military and overseas service was unusual, a check was made of the numbers in the previous and following years. In 1855 11 of the 30 graduates went into such service, a similar proportion to

1856, and in 1857 there were five out of 28, a smaller proportion. What is also interesting to note is that, whereas in 1856 only three went to work in practice abroad (two in Ireland and one to the West Indies), in 1855 four went to work in Ireland and two in Canada and in 1857 six went to work abroad (four to Australia, one to New Zealand and one to Ireland). The large proportion of graduates entering the services at this time was largely the result of competition in the years leading up to the 1858 Medical Act; the proportion of Scottish graduates entering the Army reduced from just under a fifth in 1860 to an eighth in 1880[10].

Few of the 11 graduates assumed to be in private practice in the United Kingdom held posts. Four of them held hospital appointments (three in Glasgow and one in Dublin) during the first five years following graduation. Two of the graduates obtained Poor Law medical officer posts during the period, one in Scotland and one in England, both after two or three years. Further appointments were those of surgeon for a local iron works, two of medical officer for a local council, another of medical referee for an insurance company and that of senior surgeon of Garibaldi's staff and Inspector of Military Hospitals of the Italian Army! Five graduates did not list any appointments; the remaining graduates averaged about two posts each.

Four graduates recorded membership of medical societies; these included a local medical society, a

surgical and obstetric society and a clinical pathology society - one became president during the period. These were local clinical societies, not prestigious national ones. This low figure suggests that they were not a very clubbable group.

Family and social connections

Only five of the graduates could be traced in the 1861 census; this was because a high proportion either went into the services, went abroad or died. It is not therefore possible to find much information on their family and social circumstances.

The census records two graduates, Andrew Buchanan and George Rainy, at the same address as their fathers, who were also doctors. In both instances the father was a professor at the university, although in the case of Andrew Buchanan, both father and son were described as general practitioners and were presumably practising together. There is also a graduate, Ebenezer Dowie, whose eldest son is recorded as being a medical student - a further instance of a son following in his father's footsteps and making a total of three out of five records in the census with a father and son connection. The other evidence of a family connection is that of Robert Orr, whom Innes Addison records as having a father and brother both being doctors[11].

As far as the involvement of family in the lives of the graduates is concerned, all five were living with

members of family - in two cases with a wife and children and in three with a parent or parents. In the two households where the graduate was married, one had two servants and the other none. It is not possible to make many deductions from so small a sample, but the support of parents or wife was obviously important to the graduates in the running of their practices.

Two graduates were chosen for study in detail. Asher Asher was selected as typical on the basis of an early career in Glasgow, followed by a move to London at the end of the first five years. However a chance find in the *Journal of Medical Biography*[12] revealed that he was a prominent worker for the Jewish community, initially in Glasgow, but more particularly for the Jewish poor in London. He was born in Glasgow in 1837; his father was in the fur trade. At medical school he won several class prizes and graduated with an MD in 1856; he took the Edinburgh College of Surgeon's licence in the same year. He worked as a medical officer in a parish in North Glasgow at a fee of £15 per annum and lived in the area until 1859, when he moved to the centre of the city. This was maybe because he had been appointed Honorary Secretary of the Glasgow Hebrew Society, in addition to holding the post of medical officer of the Glasgow Hebrew Philanthropic Society. He also undertook some private work. When he moved to London in 1862, he joined another Jewish practitioner in the East End and began to be

heavily involved, through the Jewish Board of Guardians, with the delivery of health services to the Jewish poor. He continued this involvement in Jewish medical relief work until 1873, when the work was wound up; about this time he moved to the centre of London. He continued with philanthropic work within the Jewish community until his death in 1889. It is not clear whether he married and no record could be found for him in the 1861 census.

A graduate who appeared to be atypical, John Wolfe, had a very varied early career. He came from Austria and, although he gave an address in Glasgow during the first five years, he appears to have spent most, if not all, of the period abroad. The *Medical Directory* records him, in the 1862 edition, as being 'Late Sen. Surg. Garibaldi's Staff and Insp. Milit. Hosps. Italian Army; Late Paris Special Correspondent Lancet'. From papers held at the Royal College of Physicians and Surgeons of Glasgow, it appears that he also was a medical practitioner in Salonica for two and a half years and subsequently worked in a clinic in Paris. Testimonials written for him show that his work in both places was much appreciated[13]. No entry for him has been found in the 1861 census, but according to the *Medical Directory* he moved to Montrose in 1862 and around this time he became Ophthalmic Surgeon at Aberdeen Royal Infirmary and Lecturer in Ophthalmic Surgery at Aberdeen Medical School. In 1867 he became a Fellow of the Royal College of Surgeons of Edinburgh and moved to Glasgow to become Professor of Ophthalmology at

the university, where he founded the Glasgow Ophthalmic Institute, and was consulting ophthalmologist to the Royal Infirmary. He emigrated to Australia, where he worked as surgeon-oculist to the Governor of Victoria. He retired to Glasgow and died there in 1904. From his obituary and will it appears that he married and had three children, including a daughter, who became doctors.

To sum up, the information about the 1856 graduates is rather sparse. Only five could be traced in the 1861 census and for several there is little information in the *Medical Directories*. They were very varied, both in their backgrounds and in the types of medical practice in which they engaged. They came predominantly from within Scotland, although a significant number were from Ireland. From what data exists it appears that they did not move much during the first five years following graduation. The majority seem to have gone into general practice, although a significant proportion went into the services. It is not possible to build up a picture of their family and social life from the five graduates in the census.

The 1876 Graduates

1876 was a time of continued industrial development and commercial expansion for the United Kingdom. It was a time of peace, when the country was not involved in military disputes anywhere in the world, although some people felt concern for the Russo-Turkish War and three of this cohort of graduates worked as doctors in it. Glasgow shared in the general prosperity and continued to grow; in 1881, by the end of the first five years following the 1876 graduation, it had a population of 511,000, an increase of nearly 30% over that of twenty years previously[14]. The big change for the university and the medical school had been the move from the High Street to Gilmorehill and the consequent construction of the Western Infirmary, where most of the clinical teaching took place, instead of at the Royal Infirmary, where it had been previously carried out. Joseph Lister worked at the university from 1860 to 1869 and developed his antiseptic techniques there.

In 1876 there were 56 graduates from the medical school, out of a total of 206 graduates from the university as a whole. The year saw the start of a period of growth at the university and at the medical school. In the previous year there had been 43 medical graduates and 156 at the university in total; during the rest of the century the total number of graduates increased to over 400, with medical graduates averaging over 100. 34 of the 1876 medical graduates completed their course in April and

20 in July, being the two main occasions in the year when the third and final Professional Examinations were held; two completed in November, presumably having had to resit a subject. Students had to have studied medicine for at least four years, of which a minimum of one year had to be at the university.

Origins and education

The graduates came mainly from Scottish middle class homes, studying mostly for four or five years at the university and graduating at about the age of 25. The place of birth given in the matriculation records for the graduates confirms Glasgow's reputation as a predominantly Scottish university[15]. 43 of the 56 graduates were born in Scotland, of whom 30 were born in the counties of the west of Scotland: Lanarkshire, Ayrshire, Renfrewshire and Dumbartonshire. These were the counties traditionally associated with Glasgow and were those in which the Faculty of Physicians and Surgeons had originally the sole right to grant to practise[16]. Of the remaining 13 graduates, nearly half (6) were born in Wales, showing a small, but significant, link with that country.

The matriculation records also in most cases give the profession or employment of the graduates' fathers. In the case of 15 of the graduates, none is given. Of the remaining 41, six had fathers who were either a surgeon or a physician, six were sons of the clergy and seven were sons of manual workers. Of the remaining 22 fathers, the

majority were in commerce or managers. These are very similar figures to those found by Crowther and Dupree and show that there was neither a high proportion of graduates from medical families, nor from working class backgrounds[17].

The approximate age on graduation of the 1876 graduates can be calculated from the age given in the last matriculation records for the students (in most cases for the final year, 1875-76). A breakdown of those ages is shown in the table below:

Age of 1876 Glasgow medical graduates on final matriculation

20 - 3
21 - 9
22 - 8
23 - 10
24 - 11
25 - 2
26 - 3
27 - 3
28 - 1
29 - 3
30 - 2
37 - 1

These figures show that the majority were in their early twenties, 41 of them between the ages of 20 and 24; the overall average was just under 24. The actual age on graduation will have been therefore approximately one year later, giving an average on graduation of about 25. The 37 year old, James Callender, was one of the three graduates who matriculated nine times (see table below).

These figures relate also to the number of times the

graduates matriculated, i.e. registered for study at the university - a table of those figures is shown below:

Number of matriculation years of 1876 Glasgow medical graduates

1 - 1
3 - 2
4 - 28
5 - 14
6 - 4
9 - 3
Not known - 4

Those who matriculated most times were probably the students who had difficulty in passing their examinations. At that time the minimum period of study was four years, but those who registered fewer times than four would have studied elsewhere for the other years. The fact that a large proportion (42) had registered for four or five years suggests that a majority of the graduates studied only at the University of Glasgow. Subtracting these four or five years from the average age on graduation (25) gives a figure of 20 to 21 at first matriculation, which fits with Crowther and Dupree's cohort of Glasgow students, whose average age on first matriculation was 20.7[18]. The main other places of study are likely to have been the extra-mural schools of Glasgow, but may also have included other university medical schools. Three of the graduates record having studied elsewhere: in Paris, Vienna and Dublin - not a significant number, suggesting that Glasgow graduates did not have the means or the ambition to extend their studies to Europe.

All but seven of the graduates obtained qualifications both of Bachelor of Medicine and of Master of Surgery (M.B., C.M.). The other seven only obtained the M.B., of whom three obtained the licence of the Glasgow Faculty in the same year. A further two of this group had obtained it earlier and two had obtained the licence of the Royal College of Surgeons of Edinburgh. It is not clear why these students chose to do this, but it could be that a surgical qualification from a medical corporation carried more weight than one from the university. Of the other qualifications listed in the *Medical Directory* during the first five years following graduation, six were of Doctor of Medicine; in addition Addison records a further 12 graduates obtaining M.D.s in subsequent years[19]. This accords with the advice given to students on graduation from senior teaching staff to proceed to a Doctor of Medicine degree[20]. Of other qualifications three graduates had obtained an M.A. prior to their medical study and one a B.Sc.(apparently concurrently). Two graduates listed themselves as obtaining a Licence in Midwifery and one became a Fellow of the Glasgow Faculty.

Mobility

The extent of the graduates' mobility is difficult to determine, but it seems that, on average, they moved a little over once each in the first five years either to gain experience, to find satisfactory employment or to

establish themselves; it is not clear from the records for which of these purposes they moved. Figure 1 (at the end of the thesis) shows the location of the addresses which the graduates recorded in the *Medical Directory* during those first five years. From this it is possible to obtain a picture of where they lived and worked, and of how they moved around during that period. One feature of the Figure is that a quarter of the graduates (14) had no entry in the *Directory* in the first year; as has been explained earlier, this is likely to be because they had not set up in practice yet, or felt that they did not have sufficient information to warrant an entry.

Graduates varied as to the number of places in which they are recorded as living during the first years - some had one address, others two or three. Of the total number of places recorded by graduates, 27 were in Glasgow, 31 in the rest of Scotland and 36 in England, Wales and Ireland, with a further four abroad. A large number lived in Glasgow; other concentrations of graduates were in the west of Scotland, with 17 recorded addresses, (of which nine were in Ayrshire in the coastal area), and in Wales, seven of the 27 in England and Wales being from there. In Ayrshire eight of the nine returned to the area where they were born, which was also true of those who went to work in Wales. Overall about 22, about two-fifths, of the graduates appear to have returned to their home district, either immediately following graduation or later, to set up in practice, with those coming from the west of

Scotland forming two-thirds of that total.

The Figure also gives an indication of how mobile the graduates were. There were 17 moves from one area to another, 11 moves within an area and 25 moves within a town or city. Approximately half of the moves were by graduates who moved once, half by graduates who moved twice and one graduate moved three times. In addition, the *Medical Directory* records 19 posts held by graduates in places other than those recorded by them as their addresses, so these need to be added to the moves. This makes a total of 72 moves by the 56 graduates, an average of over one per graduate. However this is likely to be an under-recording, as there were years when no address was given, which would be likely to increase the number of moves. This contrasts with Crowther and Dupree, who found that only nine out of 108 GPs from Glasgow seem to have practised in more than one place, although this figure did not include short-term appointments[21].

One feature that one might expect is a move away from Glasgow as the five years progressed, since it might have been thought that there would be a tendency to stay in Glasgow immediately following graduation. The number giving an address in Glasgow in 1877 was 12, whereas in the last year studied (1882) it was eight, which does not suggest a significant move away, although the figure of 12 may be an under-recording. A further interesting statistic is that nearly half (25) of the graduates stayed in the same area for the whole of the five years, which

suggests a comparatively high degree of stability, although this figure conceals a considerable amount of movement within areas. It is also interesting to note that there were significantly more moves within a town or city (25) than within an area (11). Apart from these there do not appear to be further deductions to be made from the Figure, although the overall impression is gained that graduates tended to become more settled at the end of the first five years.

Professional life

The following table shows the graduates' occupations, as recorded in the census:

Description of graduates' occupation in the 1881 census

Medical practitioner - 5
General practitioner - 17
By qualification - 4
Physician and surgeon - 4
Physician - 2
Surgeon - 4
Assistant - 3

However these descriptions are probably not very significant, since they are terms often used quite loosely and interchangeably, and most graduates would in fact have been general practitioners. The *Medical Directory* entries do not record general practice[22]; as stated earlier, it is therefore fair to assume that the majority of the graduates were in general practice for part of the first five years following graduation. The nature of the

general practice can be imagined from where they lived; rural and urban practices were very different. They also held a wide variety of posts in the community, which suggests that many of them had achieved a modicum of success by the end of the first five years. The holding of a number of local appointments was an indication of a popular and successful general practitioner.

Other forms of professional work are easier to determine, as they are listed in the *Medical Directory* by the graduates. The chief among them was hospital work; 25 of the 56 graduates listed a total of 52 appointments. The forms of hospital work can be divided into three main categories. There were the short-term appointments, which graduates held before entering general practice; 21 of the graduates held posts such a house physician or resident surgeon at either the Royal or Western Infirmaries in Glasgow and one or two other posts recorded appear to be of this kind. This is approximately the same as the third of graduates who held such posts in Crowther and Dupree's study[23]. The second form of hospital work was also full-time, but the posts were longer-term, usually at an asylum or fever hospital; about 12 of the posts appear to have been of this type. The third form of hospital work was likely to be part-time and involved serving as a surgeon or physician at a dispensary or sometimes at a hospital; about eight graduates held posts that appear to be of this type, including four at Anderson's Dispensary. The nature of some of the hospital appointments is rather ambiguous;

it is not clear always whether they were resident posts or how senior they were. This was at a time when there was increasing separation between general practitioners and hospital doctors, but the posts appear to have been those held by general practitioners, not by full time hospital doctors.'

The next most frequently recorded form of work was employment as a medical officer under the Poor Law. These posts were often held by graduates soon after graduating and setting up in general practice as a useful form of supplementary income and as a way of getting oneself known in the district. Of the 1876 graduates 11 recorded a total of 13 posts: seven in Scotland, five in England and one in Ireland.

24 graduates recorded a wide variety of a further 39 appointments - these are set out in the table below:

<u>Other forms of employment listed by the 1876 Glasgow medical graduates</u>

Industrial - 7
Friendly societies - 4
Insurance companies - 7+
Shipping - 7
Local militia - 2
Missionary - 2
Overseas military - 2
Registrar - 1
Teaching - 5
Hebrew Society - 1
Emigration service - 1

+ denotes that some of the graduates recorded working for more than one company

These different forms of employment were discussed earlier in the section 'Opportunities for Work'. Those who worked in teaching mostly worked as assistant to a professor, although one was a professor of physiology at Anderson's. Work as a ship's doctor was a common form of work immediately following graduation, but only for a short period of a year or less[24].

Many graduates recorded membership of medical associations and clubs, although it is likely that this is not a complete record, as such membership would not normally be seen as particularly prestiguous, except when membership of a club counted professionally. 23 graduates recorded membership of 40 clubs. The most common membership was that of the British Medical Association (BMA), with ten members, and of the Medical Chirurgical Society of Glasgow, with seven. The membership of the BMA amongst graduates was probably higher than recorded in the *Medical Directory*, as the medical profession was becoming more organised professionally. It was probably higher amongst those working in England, certainly in the early part of the period of the study. Bartrip records only three members in Scotland of the precursor organisation, the Provincial Medical and Surgical Association, in 1842[25]. Eight graduates recorded being a member of the Council of the University of Glasgow, but in fact all graduates were automatically members[26]. Most other memberships were of local medical associations or societies, which were often as much social in nature as

professional. However one graduate recorded himself as being a Fellow of the Obstetric Society of London, surely a prestigious organisation, and another as Secretary of the Biology Section of the Glasgow Philosophical Society.

In all eight graduates recorded 18 publications and papers. The most frequently recorded journal was the *Glasgow Medical Journal*, a local publication of some repute. There were three articles in *The Lancet*, two by the same graduate, something of an achievement within the first five years of his career.

Family and social connections

A significant aspect of the study of the 1876 graduates was a scrutiny of their entries in the 1881 census records to ascertain their family connections and social standing at that point in time. These records provide a useful snapshot of the graduates' situation, with accurate information about their household and an indication of their social position. They show a high degree of family involvement in the graduates' professional life, mainly in the form of household support for their practice.

Of the 56 graduates, entries in the 1881 census records were found for 39. Of the other 17, four are known to have died by then, eight were certainly or probably overseas and no record was found of a further five. Of the latter it has to be assumed that they somehow were not recorded in the census, were abroad or

had died.

The census records marital status. Of the 39 graduates recorded, 11 were married, 27 unmarried and one was a widower. This shows a low proportion of married graduates, considering that their average age was about 29. It suggests that they tended not to marry until they had become established and had the means to support a family.

It is interesting to note, in the case of the unmarried and widower graduates, whom it is who appears to be running the household, as shown by the following analysis:

Female member of 1876 graduates' household with apparent domestic responsibility

Mother - 4
Sister - 7
Sister-in-law - 1
Housekeeper - 5
Other domestic - 4
Wife of head (other than graduate) - 5
Daughter of head (other than graduate) - 1

Of the four instances of the mother keeping house, two were of the graduate living in his own property and two were of him living with his parents. The sister-in-law was keeping house for the widower, whose wife had apparently just died, as there was a two month old baby. The figures show a fairly high dependence on family support; together with wives, family members kept house for 27 out of 39 graduates. A further interesting piece of information is the number of servants whom graduates,

who were heads of households, employed. These, including housekeepers, domestic servants and coachmen, numbered 37, making an average of a little over one per household, a modest number by Victorian standards, which might have increased once the graduates had become established, more of them had married and had children.

It is interesting to discover from the census returns which other members of the household had medical or associated connections. These were as follows:

Members of the 1876 graduates' household engaged in medical or associated work

Surgeon or GP - 3
Assistant - 2
Medical student (pupil) - 1
Dentist (brother) - 1
Chemist and druggist (mother and brother) - 2
Dispenser (sister) - 1

The table shows that in a few households there was something of a shared medical enterprise, with the graduate combining with relatives either in dentistry or the preparation of medicines. At this early stage of their careers few graduates were able to employ an assistant or pupil. Where a surgeon or GP is recorded in the same household as a graduate, the former appears to be working as a medical assistant. It is also interesting to note that there were no cases of a father and son living and practising together.

Three graduates were chosen to be studied in detail, two who were considered fairly typical on the evidence of their early careers and one who seemed atypical. One of the two typical graduates, George Lumsden was born in Hull, the son of a soldier, and graduated M.B.,C.M., like the majority of his fellows. On graduation he worked as House Surgeon at Glasgow Western Infirmary and then went to London as an assistant to a surgeon in the East End. In 1879 he went to work at Pateley Bridge in the West Riding of Yorkshire. He was appointed as medical officer for two Poor Law districts and at the workhouse, at salaries of £30 and £10 respectively, and also to the post of Public Vaccinator; he was medical officer for several friendly societies. By becoming established relatively early, he was able to buld up more posts than normal for the first five years of practice. There is a very vivid record in the local newspaper of a dispute concerning a post as medical officer for a mining firm, quoted in the section 'Opportunities for Work', which suggests that he may have held more local appointments than recorded in the *Medical Directory*. At the time of the 1881 census he was living in his own property in Pateley Bridge in the West Riding of Yorkshire with an unqualified assistant and a housekeeper. Information about his social activities can also be gathered from the local newspaper. In the year following his arrival in the town, he was recorded as being a member of a Glee party at a Grand Concert. The

next year he responded on behalf of the ladies at the church annual tea and festival. Later records show that he became chairman of the local parish council. In later years he became the local medical officer of health, a factory surgeon and medical officer for the local isolation hospital, as well as medical referee for several assurance companies. He also became Fellow of the Society of Medical Officers of Health, a prestigious position.

The other typical graduate, William MacFarlane, was born at Killin in Perthshire, the son of a blacksmith and graduated M.B.,C.M. Soon after graduation he was appointed Assistant Medical Officer of the poorhouse and asylum at Govan. He appears to have stayed there until 1881, when he moved into general practice at Maybole in Ayrshire. He was a member of the Glasgow South Medical Society and subsequently of the Glasgow and West Scotland Medical Society. At the time of the census he was living in his own property with his younger sister. During the first five years he had articles published in the *Glasgow Medical Journal* and the *Sanitary Journal*. In later years he was assistant medical officer of the local hospital and asylum and medical officer for the poorhouse. He subsequently held parochial medical officer and public vaccinator posts, as well as being medical referee for the Workmen's Compensation Act; he was also a member of the BMA. It is also recorded that he was appointed a Justice of the Peace.

Thomas Macklin was chosen as the atypical graduate

because of the variety of posts which he held in the first five years following graduation. He was born in Glasgow, the son of a teacher, and was one of the minority of graduates who graduated with only a M.B., taking the licence of the Glasgow Faculty in the same year. After three years as medical officer for a pioneering mission in Africa, he had a spell as ship's doctor and then held a post as a junior medical assistant in an asylum in Cheshire. He did not register as a doctor until the end of 1879, so presumably his work in Africa did not require it. Towards the end of the first five years following graduation he also appears to have spent some time at Anderson's College - it is not clear in what capacity. At the time of the 1881 census he was living with his older married sister and her family in Glasgow. Later he went to work in India as medical officer for tea plantations and for the railways. On return to England he obtained the Diploma of Public Health and was appointed Medical Officer of Health for the Isles of Scilly; here he held a wide variety of local appointments, including that of Justice of the Peace. Subsequently he went to work in Lancashire in general practice, but was also medical officer of health, parish medical officer, factory surgeon and medical officer for the Post Office. In retirement he was temporary assistant medical officer for the county asylum and finally moved to Canada where he died. He was a member of public health and geographical societies, as well as the BMA, and wrote two articles on the Isles of

Scilly as a health resort. He had a son who was medical officer for Shackleton's Antarctic expedition.

To sum up, the majority of the graduates came from Scotland, although a small, but significant, number were from Wales; they came mostly from middle-class backgrounds. They graduated mainly in their mid twenties, having studied for four or five years at the university. During the first five years following graduation they worked in a approximately equal proportion in Glasgow, the rest of Scotland and England and Wales. During that period they moved on average at least once. Approximately half obtained junior hospital posts on graduating and most went into general practice. They held a wide variety of supplementary appointments, of which posts in hospital and under the Poor Law were the most common. At the end of the first five years following graduation only about a quarter of those with census records had married. Family support, not just from wives but also from mothers and unmarried sisters, was evidently important at this time in their careers. Few graduates were in medical households, i.e. practising with a father or other relative.

The 1896 graduates

The year 1896, towards the end of the Victorian era, was at a time of continued industrial and imperial expansion. The year saw the start of the Boer war, but this does not appear to have impinged on the graduates. Glasgow's expansion also continued; by 1901 the population had reached 762,000[27]. Glasgow was known in the nineties as the sixth city of Europe. Developments in medicine continued and facilities to practise them increased; the Victoria Infirmary was built in the south side of the city and St Mungo's School of Medicine was founded in the Royal Infirmary.

In 1896 there were 88 graduates from the medical school, out of a total of 366 for the university as a whole. This was a comparatively low figure, since the average in the previous ten years had been 114. The year included five, who were among the first women graduates. All the graduates obtained both the Bachelor of Medicine (M.B.) and the Master of Chirurgy (C.M.); a further 30, who had graduated in earlier years, obtained the Doctor of Medicine (M.D.)[28]. Although the minimum length of study was increased to five years in 1892, this would not have applied to those who had started, or were about to start studying at that time[29]. All the five female graduates, together with a sample of 15 male graduates, were chosen for study - a total of 20 being the same number as the 1856 graduates for the purpose of comparison.

Origins and education

As with the 1856 and 1876 graduates, it is possible to get an idea of the origins of the 1896 graduates from the matriculation records. The medical school continued to show its Scottish nature[30], with three quarters (15) of the graduates sampled for study born in Scotland; five of the graduates came from Glasgow itself and the other ten mainly from counties in the south west of the country. The profession and employment of the fathers of the graduates continued to show a preponderance of middle class origins, with seven being in one of the professions, seven in business and six craftsmen or labourers; only one father was a doctor.

The age on graduation, which is calculated by adding one year to the age on final matriculation, ranged from 21 to 41, with the majority being between 24 and 27 and with an average of 26. The number of years of study at the university by the graduates, taking the number of times which they matriculated, ranged from three to eight, with half (10) registering four times, four years being the minimum period of study. The graduate who only matriculated three times, John Lyell, must have studied for a year or more elsewhere. One graduate, Archibald Mason, recorded in the *Medical Directory* that some of his studies had been at Anderson's College and another, John Lyell, reported spending time at St Andrews University. Four of the five women recorded that they had studied at Queen Margaret College and it is certain that the fifth

had also done so, as this was the only way that women could study medicine, unless they had studied abroad.

Only two of the graduates recorded further degrees or qualifications during the first five years following graduation; both obtained the Licence in Midwifery (L.M.)from Dublin. This suggests that the Glasgow University qualification was seen as adequate by that time and that a further qualification would not help in their careers. Three of the 1896 graduates recorded in the *Medical Directory* that they had obtained some distinction in their examinations.

Mobility

The information in the matriculation records is different for the 1896 graduates from that recorded for the 1876 graduates. In addition to their age, birthplace, name and occupation of father and number of years of matriculation, there is recorded both their present and home addresses, although these are not given in full. This makes it possible to see the graduates' movements from place of birth to current address and then to first place of work in the *Medical Directory*. Their present addresses were mostly in Glasgow, as one would expect at the start of their final year of study. Approximately half (nine) had a home address at their place of birth, suggesting a degree of family stability. In the case of more than half (12) of the graduates their first address following graduation was the same as that which they gave

as their home address on their final matriculation. This indicates either that their first employment was in their home area or, more likely, that they had not yet found employment; a third possibility is that they were working elsewhere, but still retained their home address because of the temporary nature of the employment.

The graduates recorded a total of 29 moves, taking a change of address in the *Medical Directory* as a move; this gives an average of 1½ moves per graduate, almost certainly an under-recording, because of the likelihood of unrecorded moves in the first year or so. The moves were 11 from one area to another, 11 within an area and seven within the same city or town, showing a comparatively small proportion, a quarter, moving within the same city or town. It may have become harder to obtain posts in their original city or town; they may have gone further afield to gain experience or because travel was easier.

Of the places of work recorded in the *Medical Directory* approximately a third each were in Glasgow (15), rest of Scotland (13) and England (16), with three abroad; these show an even spread of graduates pursuing careers in the three locations. Within these figures there are perhaps two significant trends. The graduates working in Scotland worked throughout the country and not preponderantly in the south west, from which the majority born outside Glasgow came. This could suggest a shortage of openings in their home areas or more people could afford to employ a doctor, so there were more openings for

practice in what had been less prosperous areas. The other interesting feature is that nearly a half (seven) of those who went to England went to work in Yorkshire, mostly in general practice. This suggests that there were some connection - official or unofficial- between the medical school and the county at that time[31].

Professional life

Eight of the graduates listed a total of 17 junior hospital appointments in the *Medical Directory*. The majority of the posts (12) were in Glasgow, which is a career pattern, which was already well established, of graduates staying on at the teaching hospitals where they had studied and furthering their studies by working for the senior hospital medical staff, or obtaining similar posts at non-teaching hospitals[32]. The number holding these posts is however only two-fifths of the total in the sample and may be less than the actual figure due to under-recording, as such posts were increasing in number.

Nine of the graduates listed a total of 19 further appointments. Five each of these were local council/Poor Law and teaching posts, four were other hospital appointments and two medical officer posts with clubs; the other three were as medical officer overseas, with an industrial firm and with an insurance society. It is somewhat surprising that 11 of the graduates apparently held no appointments during the first five years, since the number of part-time appointments increased towards the

end of the century and the majority of the graduates would have been general practitioners, who held such posts[33]. Five of the graduates were members of medical societies, four of which were the BMA; as with the earlier graduates this is probably an under-recording. Two of them listed their publications in the *Medical Directory*: one, Samuel Prior, had an article in *The Lancet* and the other, John Lyell, had two articles in the *British Medical Journal*. This is likely to be an accurate record because of the prestige of being published.

The five women graduates held a total of 12 posts between them, but in fact these were all held by the three graduates who did not marry, making an average of four posts held each. Nine of these posts were in hospital, four apparently junior ones, five more senior. This confirms Wendy Alexander's finding that for the early women doctors hospitals were a more favourable place to work than general practice (although this would not generally have been the case, as in some hospitals there was still strong opposition to women doctors)[34]; the other posts were in education as demonstrator in anatomy at Queen Margaret College (Madge Maclean), and as medical officer for a parish in the Orkneys (Mary Hannay). The two women graduates who married during these first five years, Mildred Ransome and Roberta Stewart, had no record of having held any posts; it is not clear whether they worked after, or even before, marriage. Mildred Ransome,

however, had obtained a Licence in Midwifery, which suggests that she intended to work as a doctor.

Family and social connections

A study of the 1901 census records found 13 of the 20 graduates in the study - seven in England and six in Scotland. Of the other seven, three had gone abroad and the remaining four could not be found, even though at least three of them appeared from *Medical Directory* entries to be practising.

By the end of the first five years following graduation, most of the graduates had established households. Six of the graduates had married by the time of the census and seven had not. It was perhaps surprising that more than half of the graduates had not married, since their average age was over 31. Only three of the graduates did not have their own household - Edwin Brooke was boarding with a surgeon, presumably as his assistant, Thomas Fletcher was living at home and Edith Goodrich was working on the staff of an asylum. Of the other four who were not married, two had sisters running the household and two had servants doing this. The graduates' households averaged one servant each. Few of the households had other medical connections. In one, as already mentioned, the graduate was living with a surgeon as a boarder, in another the graduate had a niece who was a dispenser and the graduate working in the asylum obviously had a number of medical and nursing colleagues.

A further interesting detail which was recorded in the census in Scotland was the number of rooms with one or more windows. These averaged just under six and ranged from three to ten; they give an indication of the size of the properties which the graduates occupied, which would suggest a big flat or middle-size house.

The male graduate studied in detail, Samuel Prior was born at Maryport in Cumberland, the son of a draper. He was a bright student, who obtained a bursary in medicine and was a prize medallist in pathology and surgery. On graduation he held junior posts at the Western Infirmary and at Woodilee Asylum in Glasgow, where his salary was £100 p.a. He also was assistant to the Professor of Pathology and had an article published in *The Lancet*. Some time later he held a junior hospital post at Birmingham and Midlands Ear and Throat Hospital. At the beginning of 1900 he was appointed Public Vaccinator for a district in Huddersfield and became Medical Officer two months later; his salary was £30 p.a., but payments for vaccinations were much in excess of this. He set up practice in Huddersfield and stayed in work there until the early 1940s. At the time of the 1901 census he was married with a baby son and his wife's sister was living with them. By 1921 he was recorded as being in practice with two other doctors. Samuel Prior is typical in some ways of the graduates being studied in filling junior hospital posts in his teaching hospital and elsewhere in

Glasgow before leaving the city to set up practice elsewhere, with supplementary income from a post. He is possibly not typical in that he appeared to have a promising career ahead of him, but went into ordinary general practice and Poor Law work.

Five women graduated from the medical school in 1896; Edith Goodrich, Mary Hannay, Madge Maclean, Mildred Ransome and Roberta Stewart. Details of all five are given here, so as to attempt to build up a picture of the early careers of women doctors at this time. Of the five three were born in Glasgow. The fathers of all five came from the professions or business; working class families would not have thought it appropriate for women to go into medicine and could not afford that education, certainly not for daughters as well as sons. Their age on graduation averaged 26 and years of study five, which were both in line with the graduates as a whole. Two of them, Mildred Ransome and Roberta Stewart, married during the first five years following graduation. The three female graduates who did not marry obtained an M.D. after the first five years, and one, Madge Maclean, also obtained a Diploma in Public Health (as a preliminary to working in the school medical service).

The five women graduates had a total of ten moves between them, rather more on average than the whole sample. Of the 15 addresses, seven were in Glasgow and the rest of Scotland, six were in England and two abroad.

In addition to the addresses listed in the *Medical Directory*, there were a further five appointments in areas other than the addresses given, so that the amount of movement was even greater; for example, Edith Goodrich gave a Manchester address in the *Medical Directory* throughout the period, but listed a post at a hospital in Yorkshire. The difference between the three women graduates who did not marry and the two who did is really significant. Including the posts at places other than the addresses listed, the three unmarried ones had a total of 13 moves, more than four each, whereas the two married had only one each. The high number for those not married suggests difficulty in finding long term appointments or a desire to get a variety of experience. The reason for a lack of mobility in the other two appears to be because they married approximately two years following graduation and their husbands' employment remained stable.

The two women graduates who married, as has been noted, did little or no work, although Mildred Ransome did record two Clinical Assistant posts in the 1912 *Medical Directory*; it is not clear when she held them. Of the other three Edith Goodrich had a career working mostly in hospitals in the North; she retired to Essex, from where she had originated. Mary Hannay had a career in Pathology, first in Glasgow, then in London and finally in Paisley; she became a Fellow of the Royal Society of Medicine. Madge Maclean worked for a number of years in a variety of posts in Hull before moving to London to work

as a school medical officer.

Only two of the female graduates could be traced in the census and they had very different patterns of life. Edith Goodrich was working at an asylum for the insane as 3rd Assistant Medical Officer; the staff there included a medical superintendant, three other assistant medical officers and a variety of attendants. Mildred Ransome married in 1898 and at the time of the census had a ten month old child and four servants. One other of the female graduates, Roberta Stewart, had married in Australia in 1898 - there are no *Medical Directory* entries for her after her marriage. The other two female graduates, Mary Hannay and Madge Maclean, appear from the *Medical Directory* to have moved with their work, but there is no census information about their households.

To sum up, the graduates came mostly from Scotland of middle class parents. Their age on graduation was 26 years on average and the majority had studied for the minimum period of four years. The graduates moved about twice during the first five years following graduation, more from one part of the country to another than within a town or city. They worked in approximately equal numbers in Glasgow, the rest of Scotland and England and Wales. Less than half listed hospital appointments and a similar number of part-time posts associated with general practice, both surprisingly low proportions. The graduates were evenly divided between those who were

married by the end of the first five years and those who were not, but nearly all had set up their own household by that time.

Of the five women graduates three came from Scotland and two from England; their fathers were in a profession or business. Two of them married during the first five years following graduation. They moved on average at least twice during that time, significantly more than the male graduates. Those who did not marry held more posts than the male graduates; the majority of these were in hospital.

The 1876 Licentiates

In 1876 the Faculty of Physicians and Surgeons of Glasgow gave licences to 63 medical students, of whom 28, approximately half (every other) of the total number of graduates from the same year, were selected for study. Of these, three also obtained a medical qualification from the university and appear in the cohort for the same year. Licences were given throughout the year and do not appear to relate to the dates of examinations, which took place four times a year.

Origins and education

The Faculty's register records the licentiate's age, place of birth, present place of residence and place of education. The information presents a picture of students with a wide variety of places of birth, slightly more than half studying in Glasgow and, at the time of obtaining the licence, residing almost equally in Scotland and England.

The figures for place of birth show a fairly even spread, with eight born in Scotland, nine in England, seven in the rest of the United Kingdom and four abroad. The licentiates listed 34 places of medical education in all, six of them recording two places. This is not a high figure, since many medical students attended more than one medical institution at that time, and it is possible that more than the six did so and only listed the institution in which they did most of their training. 18 licentiates

listed places of education in Glasgow (ten at Anderson's College and eight at Glasgow University). Of the remainder, six were educated in England, four abroad and three each in Edinburgh and Ireland. It would appear that a number of licentiates came to Glasgow especially to take the Faculty's exams. This is confirmed by information on their present place of residence - 13 licentiates listing Scotland, ten England, four Wales and Ireland and one abroad.

The age of the students at the time of licensing varied from 21 to 37, with an average of just under 26½ years. This is a year and a half more than the Glasgow graduates in the same year. This suggests that some, at least, sat for the licence later, some months after completion of their education.

This is reinforced by information on the other degrees and qualifications which the licentiates listed in the *Medical Directory*. These total 48, making an average of 1¾ each. These are very varied, but the most common is that of the licence of the Royal College of Physicians of Edinburgh, which was taken by half (14) of the licentiates. This was taken at approximately the same time as the Glasgow licence and formed the Double Qualification. Three obtained the M.B., C.M. of the University of Glasgow in the same year. Six licentiates had the licence of the Society of Apothecaries, three of them taken before the Glasgow licence; this, together with three other licentiates who had obtained other

qualifications before 1876, goes some way to confirm the idea that some licentiates obtained their licence some time after completing their medical education. The most common other qualification was the licence in midwifery, which was listed by 12 licentiates; a qualification which would be useful in setting up in general practice.

Mobility

The extent to which the licentiates moved during the first five years following obtaining their licence is difficult to determine, because, out of a potential number of entries in the *Medical Directory*, one sixth are absent or it is recorded 'no address communicated'. Also 11 of the 28 licentiates had no entry in the first year. Of the addresses listed, the vast majority were in England, Wales and Ireland, with a total of 32; there were ten abroad, six in Glasgow and only three in the rest of Scotland. This presents a very different picture to that of the present place of residence at the time of licensing and suggests that licentiates moved away from Scotland soon after qualification. The total number of addresses given (51), a figure of almost two each, makes only one move per licentiate. This is certainly an under-recording in view of the high number of entries absent and of addresses uncommunicated.

Of the 23 moves which the licentiates made only five were from one area to another, ten were moves within one area and eight within the same town or city. In

addition to the 23 moves recorded, there were a further eight records of licentiates holding posts in an area in which they had not recorded an address. This is further evidence of the under-reporting of addresses and moves by the licentiates. Only two who had entries for all six years had the same address for all that time; a further five had the same address for the last five years and another three for the last four years. This indicates that over a third (ten) had become established after two years.

Professional life

Of the licentiates for whom an entry was found in the 1881 census, the following descriptions were given:

Surgeon - 6
General practitioner - 5
Physician/surgeon - 3
Assistant - 2
By qualification - 1

As with the Glasgow graduates these descriptions are not significant, since the terms were often used interchangeably. It is likely that the majority were in general practice, unless at that time they held a post which was full-time.

Of the posts recorded in the *Medical Directory* by the licentiates, hospital appointments were the most common; 11 licentiates listed a total of 19 posts. Of these eight appeared to be junior appointments, six full time more senior ones and five part time posts filled by

the licentiates while working as a general practitioner. This information is also likely to be an under-reporting, particularly during the first year following licensing, when there was a lack of entries, which was when they would often hold junior hospital posts. Three of the posts held were junior appointments at the Glasgow Royal Infirmary, two at the Town's Hospital (the Poor Law hospital for the city) and one at the Lock Fever Hospital, but the rest of the posts were in a wide variety of hospitals, indicating that many licentiates did not stay in Glasgow.

The following are the other appointments recorded in the *Medical Directory*:

Poor Law - 11
Insurance company - 6
Industrial - 4
Shipping - 3
Charitable - 2
Overseas military - 2
Local militia - 1
Colonial civil service - 1
Overseas mission - 1

Overall 19 licentiates recorded 35 appointments - nearly two each. The kinds of posts held are very diverse - more so than the graduates, possibly because they became more dispersed and therefore had a wider opportunity for work.

Not many licentiates recorded membership of medical societies - only eight recorded a total of ten memberships. Three listed membership of the British Medical Association; one licentiate was a Fellow of the

Chemical Society of London, (a prestigious sounding organisation, but not to be confused with the Royal Institute of Chemistry, which was founded about this time and was the truly prestigious professional body[35]), and another a member of the Royal Medical and Chirurgical and Obstetric Societies. The others were members of local medical organisations. The explanation for this apparent low participation in medical organisations could be that the licentiates did not think that their memberships were worth recording or that they were not interested in taking part in meetings with their colleagues.

Of other information recorded in the *Medical Directory* three licentiates listed between them a total of four articles in journals and one said he was a medallist at his medical school. With the exception of this, of the licentiate who became a Fellow of the Glasgow College the year after obtaining his licence and of the licentiate who held both the B.A. and B.Sc. from the University of Rennes as well as an M.D. from the University of Paris, they do not appear to have been particularly successful academically; possibly the licence was an easier option than a university degree.

Family and social connections

The study looked at the 1881 census records to try and ascertain the licentiates' family and social situations. Entries in the census were found for only 18 of the 28 licentiates. Of the other ten, two had died,

five had gone abroad and one had returned to Ireland. Nine of those recorded had married, eight were single and one was a widower. Those licentiates who were married form a higher proportion of the total than those of the graduates who were married; this is possibly accounted for by the slightly higher age on obtaining their licence. This is underlined by information on those persons who appeared to be running the household. In 13 of the entries it appears to be a wife, with a housekeeper or servant in four cases and in one of a sister-in-law, where the licentiate's wife appears to have died recently.

Of the 15 households where the licentiate was head there were a total of 24 servants, an average of over one and a half, slightly higher than that of the younger and single graduates. There were only two households in which another member was involved in medicine in some way. In one the head was recorded as being a medical student (at the age of 36) and in the other he was listed as a visitor and consulting practitioner. However a cursory look at adjacent entries in the *Medical Directory* suggests that a number had fathers and brothers who were also doctors.

To sum up, the licentiates had a very wide variety of places of birth, only eight of the 28 being born in Scotland. The majority trained at Glasgow - half at Anderson's College and half at the university; they averaged 26½ years of age at the time of licensing. They obtained on average nearly two qualifications in addition

to the college license, of which the most frequently taken was the license of the Royal College of Physicians of Edinburgh.

A large number of licentiates failed to communicate information about themselves, especially in the first two years following licensing. Of those who did, the majority of addresses were in England and Wales. The number of moves averaged one, likely to be an under-recording in the light of the lack of information. The most frequently held posts were in hospitals and with Poor Law institutions; there were a very wide variety of other posts held. More than half of the licentiates had married by the end of the first five years following licensing.

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4. DISCUSSION OF FOUR MAIN ASPECTS OF THEIR EARLY CAREERS

This chapter is an analysis of the early careers of the graduates and licentiates according to the four aspects identified in the previous section: origins and education, mobility, professional life and family and social connections. The pattern of their early careers will be studied under these four headings to see whether there were differences and whether their early careers changed over time. Comparison will be made with Crowther and Dupree's findings to see whether this pattern differed from those of the whole careers which they studied.

Origins and Education

One aspect of the graduates which did not change was their origins; two thirds of the 1856 graduates, just over three quarters of the 1876 group and three quarters of the 1896 sample were born in Scotland. Moreover the graduates' origins tended to be localised within Scotland: two thirds of the 1856 Scottish graduates came from Glasgow and the counties to the south and west of the city, while more than two thirds of the 1876 and 1896 graduates came from the same area. This contrasts with the origins of the 1876 licentiates, of whom less than a third came from Scotland and more came from England. This connection of the graduates with the counties to the south and west of Glasgow, as well as the city itself, mirrors the connection of the Faculty with that area, in which at

one time it had control of surgical practice[1]. This could seem strange, since those graduates did not obtain the Faculty's qualification, but it had long since ceased to have control of this area of practice. There appears to have been a slight, although not significant, trend over the period in the graduates' other origins; although there were significant minorities who came from Ireland with the 1856 graduates and from Wales with the 1876 graduates, these did not continue with the 1896 group. These origins contrast significantly with Edinburgh graduates of the same period studied by Crowther and Dupree, who were drawn from a much wider field. My findings are in agreement with their samples around 1871 of Glasgow graduates, of whom 69-83% (varying according to whether they had obituaries or not, or were GPs) were from Scotland, compared with 30-52% of Edinburgh graduates[2].

There is not enough information to draw conclusions about changes in the family background of graduates and no comparison is possible with the licentiates, as their fathers' occupation was not recorded by the Faculty. There is no information in the 1856 matriculation records of the graduates' fathers' occupations, but the 1876 and 1896 graduates came mainly from business, professional and other middle class families. In 1876, of the graduates for whom this information is recorded, approximately two-sevenths were from the professions, four-sevenths from commercial and business classes and one-seventh from manual occupations;

in 1896 the proportions were approximately a third from each of these groups; there would not appear to be a significant trend here. As stated earlier, these figures compare with those of Crowther and Dupree, who also found that the majority came from professional and business classes, with only a small proportion from working class backgrounds[3]. However the study material does not illustrate the transition from the entrepreneurial middle class, particularly because of the lack of information about the 1856 graduates.

Over the period of the study there was a definite trend of students starting their studies at a progressively later age and taking less time to complete their studies. The university matriculation records give information on the graduates' age and the number of years of matriculation; the College records give the licentiates' age on obtaining its licence. The 1856 graduates averaged slightly more years of matriculation than the 1876 and 1896 graduates - $5\frac{1}{2}$ compared with about $4\frac{3}{4}$. Study appears to have begun at a very early age for some; of the 1856 graduates, one first matriculated at ten years old, while a number of 1876 graduates matriculated first at 14 and 15. The average age on graduation can be calculated by adding one year to the age in the final matriculation year. This was just under 23 for the 1856 graduates, 25 for the 1876 group and 26 for the 1896 sample; for the licentiates the average age was $26\frac{1}{2}$.

There are a number of factors behind these

trends. In 1856 there were no entry requirements for the medical course, whereas by the time the 1876 graduates started there was a preliminary examination showing liberal educational attainment[4]. The lower average age on graduation in 1856 was therefore probably a result of the earlier start of study by these graduates. The number of years of matriculation is not necessarily the total number of years of study, since there was, certainly in the earlier part of the period, a practice of studying in more than one institution, although the average of $4\frac{3}{4}$ years for the 1876 and 1896 graduates conformed to the minimum of four years study required by the university at the time. Apart from the later start of study by the 1876 and 1896 graduates, it is not easy to explain their greater age on graduation; in 1856 there was no minimum age for graduation - following the 1858 Medical Act the 1876 and 1896 graduates had to be 21. It may be that they took time out to earn money to pay for fees or to study elsewhere. In the case of the licentiates, as has been stated earlier, many took the licence after or at the same time as qualifying elsewhere.

Graduates usually did not record in the *Medical Directory* where else they had studied, except in a few cases when they had studied abroad, so it is not possible to show trends here. A comparison of the graduates and licentiates who obtained a basic qualification in addition to that of the university or college is interesting, showing clearly a trend towards taking a degree of one

institution rather than several qualifications. 12 of the 1856 graduates had a total of 13 such qualifications - three before graduating and nine after; of these five were from the Glasgow Faculty, six from the Royal College of Surgeons of Edinburgh and two from Irish universities. The situation was rather different in 1876, because the MD degree had been replaced by the MB and CM. Of the total of 56 graduates seven took only the MB and obtained a surgical qualification elsewhere - five at the Glasgow college and two at the Edinburgh one. By 1896 all students took both degrees and none obtained another basic qualification. Of the licentiates, 14 obtained the licence of the Royal College of Physicians of Edinburgh, six the Society of Apothecaries qualification and three other qualifications.

These figures suggest that the University of Glasgow MD in the early years of the second half of the century was not seen as adequate on its own and that the majority of students sought a further surgical qualification, as required by the army. This was true to a lesser extent in the middle of the period, when a few graduates chose to take a surgical qualification elsewhere instead of the CM, although by then the MB had to have a surgical component. By the end of the century students had to take both qualifications[5]. In the case of the licentiates the opposite applied; students obtained the qualification of the Royal College of Physicians of Edinburgh as part of the Conjoint Diploma. This suggests

that for most of the period the university's strength was in the teaching of medicine and the strength of the Faculty's qualification was in surgery[6].

Of the further qualifications obtained by the graduates and licentiates, a few graduates each year obtained the Licence in Midwifery, whereas nearly half of the licentiates did; this suggests that many of the latter found the College's examination in midwifery inadequate. The other degree obtained by the graduates was the MD; six of the 1876 graduates obtained this in the first five years following graduation (and a further 12 did subsequently). None of the 1896 graduates recorded this qualification in the first five years, although three of the female graduates studied in more detail obtained one subsequently. As observed earlier, obtaining a MD was recommended by medical school staff as a useful means of furthering one's career, which advice was followed by about a third of the 1876 graduates. It would appear that, by 1896, it was no longer felt necessary to take the M.D., because the basic qualifications of M.B.,C.M. were seen as adequate.

Mobility

Many of the graduates moved during the first five years presumably to gain experience and to attempt to set themselves up in the profession. The measurement of their mobility, using the addresses which they gave in the *Medical Directory*, is made difficult by the lack of entries, especially during the first year or two following graduation, and, as already stated, these moves were probably under-recorded; also, as stated earlier they may have decided to give up medicine. Nevertheless it is possible to make certain deductions.

The first of these relates to the graduates' place of residence during those first five years. The places recorded in the *Medical Directory* show an approximately equal number of the three cohorts of graduates residing in Glasgow, the rest of Scotland, and in England, Wales and Ireland, with a slightly higher proportion of the 1876 graduates giving addresses in England, Wales and Ireland and a slightly lower proportion of the 1856 doing this; the other significant difference was the number of 1856 graduates going abroad, mainly in the services.

These figures show that, in spite of the lack of openings for work in Scotland compared with the numbers graduating from Scottish medical schools, most Glasgow graduates still preferred, and managed, to work in their own country. The figures contrast with the findings of Digby that only a third of graduates from Scottish

universities succeeded in establishing a practice in Scotland[7]. This is probably because Glasgow was a particularly Scottish university; many graduates returned to their home area to practise. This figure declined over the period - in 1876 two fifths returned during the first five years, compared with only a quarter in 1896. This confirms the reduction which Digby found; whereas two thirds of Scottish graduates practised in Scotland in the years 1820-79, only one third did so in 1911-48[8].

The other useful measurements of the graduates' early careers are the number and the nature of the moves which they made. Here it is possible to make some significant deductions. The first is that the graduates tended to move more frequently towards the end of the century. Although nothing can be really learned from the 1856 graduates (there were only four moves recorded in total in the *Medical Directory*, such is the lack of information about them), there is a difference between the 1876 and the 1896 graduates. With the former there is just over one move each on average; with the latter the figure is almost one and a half. However if one adds on the posts listed in the *Medical Directory* which were not at the graduates' recorded address, the contrast is greater, with a possible one and a third average moves for the 1876 graduates and a figure of nearly two and a half for the 1896 graduates.

One likely cause of this increase in moves was the fact that there were more doctors towards the end of

the century and therefore it was necessary to move more frequently to try and become established, as Digby has shown[9]. The section on the medical profession has already shown that the ratio of doctors to population in Britain increased from 1 to 1,721 in 1881 to 1 to 1,574 in 1901[10]. Further confirmation of this trend comes from studies of mobility of general practitioners. Crowther and Dupree, from their sample of students from Glasgow and Edinburgh around 1871, found that general practitioners were not mobile at that time, only about one fifth having practised in more than one place[11]. By contrast Digby shows an increase in the number of practitioners with more than one location in the late Victorian and Edwardian period compared with the early and mid-Victorian period[12]. There may have been other factors in the greater mobility towards the end of the century. There may have been a wish to get more experience with an increase in the number of posts available. Other reasons given by Digby, i.e. pressure of work and failing health, relate more to general practitioners' long-term, rather than early, careers[13].

There are also interesting comparisons between the years about the direction of these moves. In 1876 the number of moves within the same city or town was nearly half the total number of moves; in 1896 they were only one quarter of the total. The reason for this is not clear. It could be that travel had become easier, there were fewer opportunities in the same city or town or that the

graduates had become more adventurous. Another comparison can be made between the years of graduation of locations in Scotland where the graduates worked. In 1876 there was a significant proportion who went to work in the counties to the south and west of Glasgow in areas from which they had originally come. In 1896 those who worked in Scotland worked throughout that country. This could suggest a shortage of openings in their home areas or that more people could afford to pay a doctor, so there were more openings for practice in less prosperous areas. The other interesting comparative statistic is the increase in the number of graduates going to work in the north of England, and in particular in Yorkshire. In 1876 only seven of the 38 addresses in England, Wales and Ireland were in Yorkshire; in 1896 nearly half of them were in that county. This confirms Digby's figures of an increase from one in four to two out of five of Scottish medical graduates going to northern England in approximately those periods[14]. The reasons for this increase are unclear. It may have been the relative lack of medical schools in the area, some connection - official or unofficial - between the Scottish medical schools and the area at that time, or merely the proximity of that part of England. As stated earlier Scottish journals carried a number of advertisements for posts in northern England.

The recording of the mobility of the licentiates is not as full as for the graduates of the same year, since one sixth of potential entries of the former in the

Medical Directory are absent, compared with one eighth of the latter. The figures for the licentiates are in stark contrast with those for the three groups of graduates, reflecting the fact that they were obtaining a qualification rather than an education. The location of the formers' addresses were mainly in the rest of the United Kingdom rather than Scotland and a significant number (more than all those in Glasgow and the rest of Scotland) went abroad. In contrast with the majority of graduates, the licentiates mostly came to Glasgow to take the college's qualification and returned to work in their place of choice. The number of moves which they made is similar to that for the 1876 graduates, being about one move on average. The direction of their moves does not appear to have been particularly significant, the chief difference being that they started work mainly outside Scotland and their moves were mostly outside that country as well.

Professional Life

As has already been stated, the details of the first year or two of the graduates' professional life are not easy to discover. Many of them would already have had some experience of medical life, either before entering formal medical education as an unqualified assistant to a general practitioner or hospital doctor, or during their education as a partly qualified assistant in vacations. However on completion of their studies it would appear that many, if not most, of the graduates were not certain what kind of medical career they would follow. The number of moves which they made and the different kinds of post which they held suggest that it was not so much a question of gaining experience, but rather of looking for somewhere to become established and to make a living. From other studies and publications about the lives of doctors at this time, it would seem likely that many new graduates would have held junior hospital posts initially and would then go into general practice with supplementary appointments, of which the most common would be with Poor Law Boards of Guardians.

The first stage for about a third of the graduates was, according to the record in the *Medical Directory*, a junior hospital appointment, which was held at one of the growing number of voluntary hospitals. These treated the 'deserving poor', mostly working men and women; the middle and upper clases were not admitted, as they would not wish to mix with poor people and preferred to be treated at

home[15]. The senior staff of these hospitals were part-time medical practitioners, who gave their services free; a few graduates held such posts (see page 156).

Many of the graduates will have held a position as an unpaid dresser or clerk working for a senior hospital doctor during the later stages of training; these provided real practical opportunities for experience. Junior hospital posts, compared to the above, were paid appointments and, if held at the hospital associated with the medical school (the Royal Infirmary and later the Western Infirmary), could be a boost for the graduates' careers. The number of those holding such posts varied during the second half of the century. Only three of the 1856 graduates recorded junior hospital posts - this was perhaps because many went straight into the armed services. In 1876 18 graduates (about a third) held a total of 34 hospital posts. In 1896 eight graduates (two fifths) held 17 posts. An even smaller proportion (less than a quarter) of licentiates recorded them. Interestingly, with both the 1876 and 1896 graduates, those holding junior hospital posts averaged almost exactly two each. These figures confirm Crowther and Dupree's findings that only about a third recorded junior hospital appointments, but, as they say, this figure is likely to be an undercounting, as such appointments were increasingly seen as necessary to start a successful career[16].

For the vast majority of graduates at this time,

both those who had held junior hospital posts and those who did not, their ultimate careers lay in general practice. It is not only difficult to establish at what point during the first five years they started working in general practice, but it is also sometimes difficult to know for certain, from the census data, whether they were in practice at the end of the first five years. From the *Medical Directory* entries it must be assumed that, if there is no evidence of a current full time appointment, then the graduate is likely to be working in some way in general practice, whether as a medical assistant, as a partner or as a single handed practitioner, or to be seeking such an opening. Where a new address is given, this is likely to be an indication of a move with the intention of starting work in that place in general practice.

At the end of the first five years the census entries list the profession or occupation of individual members of households. This could provide a useful guide to those graduates who were in general practice at that point. Of the five 1856 graduates for whom entries were found in the 1861 census, only one described himself as a G.P. In 1881, out of the 39 1876 graduates recorded in the census, 17 described themselves in this way. Only three of the 1896 graduates did so and, of the licentiates, five out of 17. However many of the other descriptions used, such as 'doctor of medicine, medical or surgical practitioner, physician and surgeon', could

equally be used of a general practitioner and are likely to have described one. It is however perhaps interesting to note that the highest proportion actually describing themselves as 'general practitioner' was in 1881 - a time when the profession was becoming more settled following the 1856 Act; however it is slightly strange that the term was less popular in 1901.

In the second half of the century there were not many opportunities for full time medical work apart from general practice and many of those, such as medical officer of health or in medical education, required years of experience and further training, which would take more than five years. So it is that few of the graduates were in full time medical posts. The main exception to this were those who went into the armed services; this was particularly true of the 1856 intake, of whom seven out of 20 went into the services. From an analysis of that year's graduates, and of those of the previous and of the following years, it appears that many went into the services or to work abroad at that time. This may well have been because of the lack of opportunities to practise in Scotland then. By contrast, only two of the 1876 graduates listed overseas military employment and only one of 1896 group listed overseas employment of any kind.

The most common other form of full time employment was that of hospital doctor in a Poor Law hospital or in an asylum or other hospital providing long term care. Poor Law hospitals or wards in workhouses were created for

paupers, who were receiving relief from Boards of Guardians or parochial boards. Asylums for the mentally ill and isolation hospitals for those suffering from infectious diseases were provided by local government[17] These posts differed from junior hospital posts in that the former were held in hospitals for the mentally ill or some other chronic medical condition, whereas the latter were held in general hospitals treating acute cases; there was also usually a difference in length of appointment, with the posts in institutions for the chronic sick being held for longer periods than those in the general acute ones. Of the 1876 graduates ten held asylum type posts, nearly a fifth of the total. Only three 1896 graduates held such posts and six of the licentiates; none of the 1856 graduates listed such employment. The main other form of full time employment was short term appointments in the merchant navy. Seven 1876 graduates listed this, approximating to the 10% of Digby's cohort between 1880 and 1900[18]. However ship's doctor posts were not listed by either the 1896 graduates or the licentiates.

Other forms of medical employment were part time - nearly all forms of work performed by general practitioners as a supplement to their general practice. As has already been shown, the income which this work provided was necessary especially for doctors starting in general practice, but also in the longer term; the work helped, too, in making the doctors known in the district and improved their chances of increasing their practice.

The most common form of part time work was with Boards of Guardians and parochial boards, providing medical care under the Poor Law Act. Three 1856 graduates held a total of four such posts; for the 1876 graduates the figures were 11 and 13, for the 1896 group five and six and the licentiates nine and 11. These figures are slightly lower than those in Digby's dataset, especially in the early part of the period[19]. Perhaps the biggest surprise is the small proportion (one fifth) of 1876 graduates who recorded these posts, since they were known as a principal source of supplementary income for many doctors. This suggests that there was significant competition for these openings, rather than a lack of interest in competing for them.

There were a variety of other forms of part time work which doctors could take; these were set out in detail in the chapter 'Opportunities for Work'. The chief among these were work for an industrial concern such as a coal mine or factory, acting as a medical assessor for an insurance company and being doctor for a friendly society or club. An eighth (seven) of the 1876 graduates worked for the first two of these; a rather larger proportion of licentiates worked for insurance companies. The comparatively small number of graduates working for friendly societies and clubs (four of the 1876 group and two of the 1896) is perhaps because these organisations were not as well developed in Scotland as elsewhere in the United Kingdom[20]. Part time work for a hospital or

dispensary was another popular form of work - eight of the 1876 graduates were employed in this way; of the other groups only licentiates had significant numbers doing this work. The highest proportion in general of those holding part time posts and of total posts held were the licentiates, of whom three quarters (21) of the sample held about two posts each. The figures for the 1876 and 1896 graduates were similar at about one post each, while the proportion for the 1856 group was very small, caused by the number going into full time employment in the services. These findings contradict the conclusions of both Digby and Lamb that there was an increase in the number of doctors holding appointments towards the end of the century[21]. This trend is not mirrored here, because only just under half (nine) of the 1896 graduates held appointments. It is not easy to see the reason for this low proportion; a partial explanation is that, of the 20, two emigrated and two of the women got married during the first five years.

Historians have explained the importance of belonging to medical societies and associations in developing a sense of belonging to a professional body[22]. The *Medical Directory* lists membership of medical societies for some of the graduates and licentiates. It is not clear how full a record the *Directory* contains of their actual membership; certainly some would not think their participation in a local medical society merited a mention and therefore the numbers are likely to be an

under-recording. The highest proportion who recorded such membership were the 1876 graduates; 23 of them listed a total membership of 40 societies. The figures for the 1856 and 1896 graduates were low, with only about a quarter having any such record, with the licentiates lying in between these two proportions. It is not possible to draw any clear conclusions from these. The British Medical Association had the largest recorded membership, with a proportion of about a fifth of all groups listing this, although it is likely to be an under-recording. The other society most often mentioned was the Medical Chirurgical Society of Glasgow; since many graduates worked in Glasgow, this is not surprising. Two of the 1876 graduates and two of the licentiates recorded membership of prestigious sounding societies; this small number is also not surprising, since the graduates had not become really established in their careers by then. It is not clear to what extent all these were truly professional bodies. The British Medical Association clearly fell into this category, being the 'trade union' for medical practitioners. Other bodies such as the Chirurgical Society probably combined an element of serious academic study with the function of bringing together in solidarity surgeons working in Glasgow.

A few graduates recorded articles published in medical journals. Eight of the 1876 graduates had a total of 18 articles recorded, of which three were in *The Lancet*. A smaller proportion of both the 1896 graduates

and the licentiates recorded articles published. Articles ranged in topics from general health matters, such as "The causation of insanity" to particular case histories, such as "Tearing out entire tendon of flexor longus pollicis muscle by donkey bite". The record of these articles is likely to be full, as it was considered good for one's career to be published. There would not appear, however, to be any particular significance in the differences between the groups.

Family and social connections

Data from the censuses taken at the end of the first five years following graduation or licensing was analysed to try and assess family and social standings at that point. This information gives an indication of how well established the graduates were and what support they were receiving from family and others in their work. It also shows whether they were working in association with other medical practitioners and health care workers; however, because some doctors practised at premises other than their home, this will not be the full picture. Apart from the 1856 graduates, for whom only a quarter of census entries were foumd, coverage of the others was reasonable, with entries found for about two-thirds to three quarters. A number of those not found went abroad or died during this period, so there would appear to be a reasonable picture of those practising in England, Scotland and Wales.

In the majority of cases the graduates and licentiates were recorded as being head of the household. The group which had the highest proportion of graduates recorded as being other than head of household were the 1876 graduates, of whom 10 out of 39 were not head. Of these four were lodging with another doctor (presumably as a medical assistant), two were living with their parents, one was a lodger and one was living at a hospital. Of the other groups, only three in each were not head. This could mean that it took longer to establish oneself in

1876, although other statistics suggest that the competition was not so great at that time. The figures show that a large majority of the graduates were sufficiently established by then to have their own households, although it does not indicate what kind of dwelling they had, whether they owned it, or how permanently they were settled there.

An analysis of the other members of the households provides further interesting statistics. One of these is the number of graduates who were married. The proportion is small - around one third - except for the licentiates, for whom it is a half. This reflects the age of the practitioners - the average age for the 1856 and 1876 groups of graduates was in the late twenties, with the 1876 group averaging 29 at the time of the 1881 census; the average for the 1896 graduates and the licentiates was however 31. These figures contrast with the average age on marriage of 26.43 in 1871 and 27.06 in 1891 in England and of 26.3 in 1871 and 26.9 in 1891 in Scotland[21]. This suggests that the majority did not marry until they had become well established and that the first priority was to have their own property. The reason for a higher proportion of licentiates being married was that they as a group were slightly older. However it is slightly odd that the 1896 graduates do not fit with this pattern.

Digby has shown the importance of a wife in assisting her husband in running his practice[24]. In the absence of a wife, it is interesting to see who provided

support to the graduate at home and was in effect running his household. Table 5 of the chapter on the 1876 graduates gives an indication of this. It shows significant participation by other members of the graduates' families. The role of sister is noteworthy; seven graduates had a sister apparently running the household for them. In each case, whether it was in Scotland or England, the graduate was of Scottish origin and this suggests that this might have been a particularly Scottish practice. Sisters also provided support to two each of the 1856 and 1896 graduates. Mothers, too, played a part, as did housekeepers.

The number of servants employed can give an indication of how well established the graduates were and of how many they could afford to employ. The number of 1856 graduates with their own households (three) was not significant; the 1876 and 1896 graduates averaged one servant each, whereas the licentiates averaged one and a half. It would appear that the graduates could not afford or did not need a high level of servant support, whereas the licentiates, who were more likely to be married and were possibly slightly better off because of their greater experience, had greater need and could afford more servants. The majority of servants were in the census category of 'General Servant (Domestic)'. Those graduates who were not married often had a housekeeper. In some cases where they were married, there was a governess or nurse. Those households with the greatest number of

servants were those where the graduates were older and had been married for some time; these would occasionally include a coachman. Those households where the graduates' sister was living with him usually included a domestic servant as well.

The census data show that there were, in a few households, other people who were doctors or were associated with medical practice. Table 6 of the chapter on the 1876 graduates listed a total of ten such people. In three cases they would appear to be the doctors for whom the graduates were working and in a further three others they seem to be assistants or pupils of the graduates; the other four were a chemist, two dispensers and a dentist, all members of a graduate's family. With the 1856 graduates all three members of the households with medical connections were family members - two fathers of the graduate and one a son. One of the 1896 households appears to have been a medical assistant and another a niece of a graduate staying with him as a dispenser. There were no significant medical associations among the licentiates. As one would expect, there are a few instances of medical assistants resident with their general practitioners, although the number is not as great as might have been anticipated. It is interesting to note that only with the 1856 graduates were there instances of fathers and sons practising together. This confirms Digby and Crowther and Dupree's findings that family practices were not so common[25]. It could not really be deduced,

however, because of the small number for the 1856 graduates, that there was a decline in this form of practice over the half century.

Another significant fact is that two of the four 1896 women graduates were married by the time of the 1901 census and one had a child by then. This appears to have resulted in their ceasing to practise. However the impression is that a relatively small proportion of early women graduates married, because, as pioneers, they were determined to pursue their medical careers.

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6. CONCLUSIONS

The thesis has set out to discover whether there was a pattern or patterns to graduates' early careers, whether these changed over the period under study and whether the experience of licentiates was different from that of the graduates. It has sought also to compare its findings with other relevant studies, in particular those of Crowther and Dupree[1]. It has attempted to cast light on a period of medical experience which has not previously been described.

In some respects it has been difficult to discover the experience of graduates during the first five years following graduation. It was a period when they were trying to establish themselves in a career, both by gaining experience and by finding somewhere to set up in general practice. They did not have much to record in the *Medical Directory*, certainly in the first year or so, nor did they seem to have had time or the inclination to keep a diary (certainly none appear to have survived in public archives). It is also difficult to make comparisons, because previous studies have dealt with practitioners' whole careers. However from the lack of entries in the *Directory* at that time, one gets the impression, for many of them, of a shadowy existence, working as a medical assistant perhaps and moving from one place to another looking for an opening. By the end of the first five years there is an impression of greater stability. Most of the graduates by then had their own households,

although they would not have been in all cases where they became permanently established. There appears to have been a pattern of greater mobility for the later cohorts of graduates, but it is not clear whether this was due to greater opportunities for experience or to difficulty in finding employment.

The most significant feature of the graduates was how Scottish they were. Not only were they mainly born in Scotland, but they also tended to seek work there, in spite of the fact that there were far fewer opportunities for work in Scotland than there were graduates from Scottish medical schools. The majority of Scottish graduates moreover came from a limited area, that of Glasgow itself and the counties to the immediate south and west, although, by the end of the century fewer returned to that area to work. As a result of the Scottish connection many were members of Scottish medical societies and a few wrote articles in the *Glasgow Medical Journal*. There even appears, in a minority of cases, to have been what was possibly a Scottish practice of the graduate's sister keeping house for him.

Other features and trends appear to have been the result of changes in medical education and regulation of the profession. An increase in the age on graduation would seem to be caused by entry requirements introduced by the 1858 Medical Act; there was by 1876 a preliminary examination, so that it was not possible to matriculate first at a ridiculously low age and there was also a

minimum age for graduation of 21. The reduction in the number of graduates obtaining additional basic qualifications was the result of changes to the medical curriculum; many early graduates took further qualifications, apparently to gain further surgical training.

The passing of the 1858 Act reduced the number of medical practitioners by restricting those who could practise legally as a doctor. Before the Act competition amongst different kinds of practitioner seems to have been intense, as witnessed by the large proportion of 1856 graduates going abroad, mostly into the services. The 1876 graduates appear to have benefited from the changes brought about by the Act, in that they did not move so much during the first five years. By 1896 the number of medical practitioners had increased; the graduates moved more frequently and more moved to England to practise. Nevertheless in the middle period life could still be very competitive, as shown by George Lumsden's experience[2].

Trends in the pattern of work are less easy to determine. Only a minority of the graduates held junior hospital appointments following graduation and there would appear to have been no clear trend over the period here. It can safely be assumed that the vast majority of the 1876 and 1896 graduates went into general practice. However it is not clear from the *Medical Directory* entries whether they were working as a medical assistant, as a partner in a practice or were single-handed; even the

census records shed little light on this. The increase in the number of general practitioners holding appointments found by Digby and Lamb is not mirrored in the study, which showed fewer doctors proportionally having such posts in 1896 than in 1876[3].

Information about graduates' family and household is mostly new, as earlier studies have not included census data. An exception is information on graduates' fathers, and the study confirms Crowther and Dupree's findings that only a small proportion came from working class backgrounds, the majority of fathers being professional or business men[4]. As stated earlier the majority of graduates had their own households - there were no significant trends over the period of the study. Only a third of all graduates were married; there was again no significant trend here. However it is perhaps a surprisingly low proportion for the 1896 graduates who were unmarried, given that their average age at the time of the 1901 census was 31, when, as stated earlier, the average age on marriage was nearly four years less. Although there were a few instances of other family members in the household practising health related care, there were few instances of father and son practising together, which confims Digby's and Dupree and Crowther's findings[5].

An attempt was made to see whether early unusual or successful careers were mirrored by later careers. Of the graduates studied in detail, two, John Wolfe from the 1856

group and Thomas Macklin from 1876, stood out as having particularly out of the ordinary early careers and were therefore selected as atypical graduates. Their subsequent careers confirmed their early promise; Wolfe went on to become a successful ophthalmologist and Macklin had a varied and successful career in a number of fields. The two 1876 graduates chosen as typical, George Lumsden and William Macfarlane, went on to have typical careers in general practice. The graduates chosen as typical from the 1856 and 1896 groups, Asher Asher and Samuel Prior, did not turn out quite as expected. Asher Asher, after what appeared to be an ordinary start to his career, went on to be a leading figure in health care for Jewish populations in Glasgow and London. Samuel Prior, although his early career was not unusual, had been an outstanding student; his subsequent career was not particularly special. From this it can be judged that, although in some cases it is possible to predict an unusual or successful career, it is not always possible to do so.

In spite of the changes in medical education, there was much continuity in the characteristics of the graduates and their experience. There was little change in the profession or employment of their fathers, as they tended to come from similar social classes. Their movements in the early years were similar - frequent in the first two or three years, less towards the end of the period. They held similar appointments - junior hospital posts early on and a variety of Poor Law, medical

insurance and industrial posts later. Although there were some changes, there was an underlying continuity and stability.

Previous studies have featured practitioners' whole careers; this study is the first to focus solely on graduates' early careers. The main difference is greater mobility in their early years of practice and this confirms Crowther and Dupree's findings on their general practitioners[6]. This is not unexpected, as the new graduates had to move to gain experience and find more permanent employment. As stated earlier, fewer held appointments than earlier studies of whole careers have shown. The reason for this was likely to have been that the recent graduates had not sufficiently established themselves to obtain such appointments. Another difference is the participation of graduates in medical societies. The number in the study who listed membership is low compared to the statements in studies of graduates' whole careers. This may be because graduates were not sufficiently established in one place to have the time and the inclination to join; it may also be that the extent of participation by practitioners in their whole careers was not as great as previously assumed.

The licentiates were very different from the graduates. In the first place they differed in the form of qualification. For the graduates their examinations at the university were the culmination of the teaching which they had received there, although some may have studied

elsewhere as well; for the licentiates the Faculty's examinations were merely for a qualification, for which they had studied elsewhere. This is indicated both by the licentiates' place of birth, their place of residence at the time of examination and by the places of work following qualification. Less than a third of the licentiates were born in Scotland, compared with about two thirds of the graduates. Less than a half of the licentiates' current place of residence were in Scotland, even though two thirds had studied in Glasgow. Of the places of work listed less than a fifth were in Scotland. This presents a picture of students coming to Glasgow to take the college's exams from all over the United Kingdom, a large proportion of whom had studied mainly, at least in the latter part of their study, at Glasgow, and then going to work chiefly in England and Wales. This contrasts with the very Scottish character of the graduates.

Other data suggests that the licentiates were an older and more experienced group than the graduates. Their average age on qualification was one and a half years more than the graduates of the same year, a higher proportion had married by the end of the first five years and six had obtained a basic qualification before the college's. Information about their moves and posts held is more sketchy than that of the graduates because there were fewer entries in the *Medical Directory*, but they seem to have held a greater variety of posts and to have moved more widely. The main difference is therefore between

medical students receiving a qualification as the climax of their studies and those who obtained it at a convenient point at the start of their career.

The study has confirmed a number of Crowther and Dupree's findings in respect of the Scottishness of the medical school, the social origins of the graduates, the number holding junior hospital appointments and the small number of medical dynasties[7]. It has shown the effect of changes in medical education and professional regulation on the age on qualification, on the number and nature of qualifications obtained and on the mobility of graduates; it has also shown a surprising reduction at the end of the period in the numbers of general practitioners holding appointments. It has shed some light, for the first time, on the nature of the graduates' households five years after graduation and has described the early experience of some of the first women graduates, although, because they only featured in the 1896 group and then only to a limited extent, it is not possible to make many deductions about them. Although hampered by lack of data on the first year or two following graduation, it has made a significant contribution to the understanding of an important part of doctors' careers.

References

1. Crowther and Dupree, "The Invisible General Practitioner", pp.387-413.

2. See chapter "Opportunities for Work".

3. Digby, *The Evolution*, p.79; Lamb, "The Medical Profession", p.21.

4. Crowther and Dupree, "The Invisible General Practitioner", p.397.

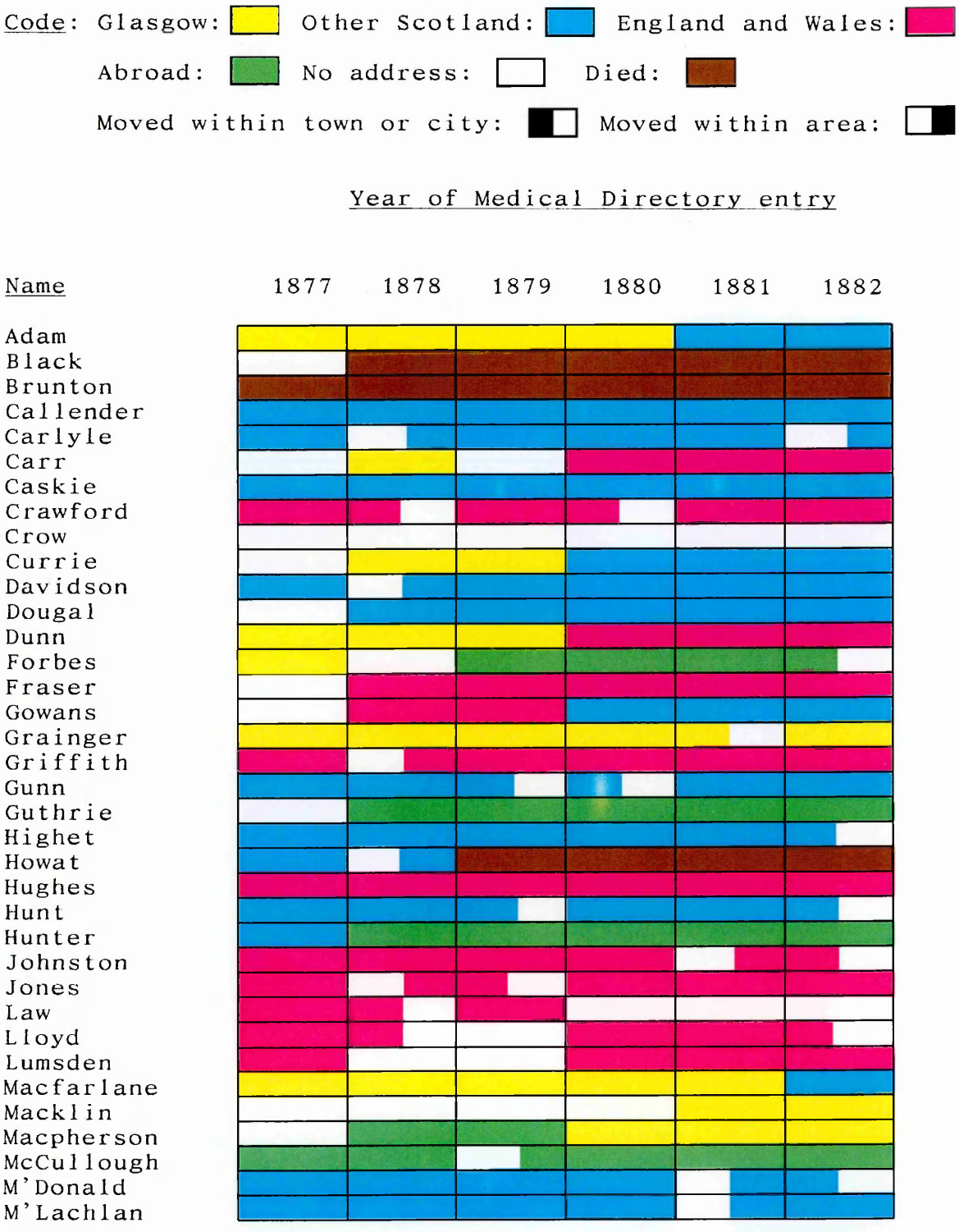
5. Ibid., p.401; Digby *The Evolution*, p.77.

6. Crowther and Dupree, "The Invisible General Practitioner".

7. Ibid.

FIGURE 1

MOBILITY OF 1876 GRADUATES



Year of Medical Directory entry

Name	1877	1878	1879	1880	1881	1892
Middleton						
Moore						
Mukerjea						
M'Vail						
O'Brien						
Owen						
Pinkerton,J						
Pinkerton,R						
Pollok						
Rees						
Service						
Shearer						
Stewart						
Stirling						
Thompson						
Thomson						
Wallace						
Wilson,C						
Wilson,D						
Wilson,J						

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(b) Graduate records for the years 1856, 1876 and 1896, GB 0248 GUA R1

(c) General Council Register: 1868, GB 0248 DC 183/11/1-29

(d) Register of marriages: 1896-1902, GB 0248 GUA R12/1

Royal College of Physicians and Surgeons of Glasgow:

(a) Register of Licentiates: RCPSG, 1/4/1

(b) Papers of John Reisberg Wolfe, Ophthalmologist, RCSPG 25

Devon county archives, Barnstable:

Ilfracombe Union, minutes of the Board of Guardians - 1895-1899

East Sussex county archives, Lewes:

Ticehurst Union. minutes of the Board of Guardians - 1859-1867

North Yorkshire county archives, Harrogate:

Pateley Bridge Union, minutes of the Board of Guardians - 1879

Strathclyde Regional archives, Glasgow::

(a) Barony Parish Council Asylum Committee minutes - 1896-97

(b) Cadder Parochial Board minutes - 1857-61

West Yorkshire County archives, Huddersfield:

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