Abstract. This article is intended to contribute to the small but growing literature on university students in nineteenth- and twentieth-century Canada—in this case, to add to our knowledge about medical students at the University of Toronto between 1910 and 1940. Aside from crude estimates of total numbers, we know very little about medical students before the early twentieth century because the kinds of records required to probe further have rarely survived. Beginning in 1910, however, all of the applications for entry to the University of Toronto medical faculty have been preserved, as have the academic record cards of many graduates. Using these and other sources, this article focuses on the academic standards students had to meet to get into medical school; on the socio-economic composition of the student body, and how that changed over time; and on some key features of students’ progress through the program of studies.

Résumé. Cet article se veut une contribution au petit nombre d'études — mais qui va en croissant — portant sur les étudiants des universités canadiennes au XIXe et au XXe siècle. Dans ce cas, il s'agit de mieux connaître le profil des étudiants en médecine de l'Université de Toronto entre 1910 et 1940. En-dehors d'estimations grossières sur leurs nombres totaux, nous savons très peu de choses sur les étudiants en médecine avant le début du XXe siècle, parce que le genre de sources nécessaires pour en approfondir davantage l'analyse ont rarement survécus. À partir du XIXe siècle, toutefois, toutes les demandes d'admissions à la Faculté de médecine de l'Université de Toronto ont été préservées, comme l'ont été les bulletins des résultats académiques des candidats qui avaient été admis. En utilisant ces sources et d'autres, cet article étudie les niveaux académiques que les étudiants devaient avoir atteint pour entrer dans les écoles médicales, la composition socio-économique du corps étudiant et comment cela a évolué au cours du temps, ainsi que certaines caractéristiques centrales de la progression des étudiants dans leur programme d'études.
It is hardly more than stating the obvious to say that one critical prerequisite to understanding the professions in modern society is to grasp the role of the professional school itself. This article is one small part of a larger project designed to contribute to that end by elucidating the changing nature of professional education for a variety of occupations during the nineteenth and twentieth centuries, a project that includes a focus not only on ideas and institutions, but on students as well.  

In the latter case we are attempting to provide answers to such basic questions as how many students there were; how their number changed and why; what their social and academic backgrounds were; how they fared in their program of studies; and how the size and nature of the student body intersected with, or influenced, other matters, such as the politics and economics of professional education.

As the first fruits of this research, our article presents a profile of medical students at the University of Toronto over three decades in the early twentieth century. It is based on a variety of archival and published records, but the three most important collections for much of what follows are the applications to enter the faculty of medicine, from 1910 to 1932, a complete set of some 3,800 in all; the student academic record cards for all graduates from 1910 to 1929, numbering about 2,600; and the name lists of students enrolled in the faculty each year and printed annually in the university calendars. These sources contain a large amount of routinely generated data on the backgrounds of students, including their place of residence, religion, and nationality, father’s occupation, and academic record prior to and during medical school. Together, they enable us to draw a collective portrait of medical students in the period and to tackle some questions that cannot be answered for the nineteenth century because comparable evidence does not survive. In this particular discussion we propose to focus on three aspects of that portrait: the academic standards students had to meet to get into medical school; the composition of the student body and how that changed over time; and some key features of students’ transit through the program of studies.

ENROLMENTS AND ADMISSION REQUIREMENTS FOR MEDICAL SCHOOL

From some 3,400 students in 1904-5, total enrolments at the provincial university rose to over 4,000 by 1910, over 5,500 by the mid-1920s, and to 8,000 by the mid-1930s—more than doubling over the course of three decades. Apart from transient oscillations caused by the war and its aftermath, this growth was remarkably consistent in its steady progress upwards. Much of it was caused by new entrants to arts and science, but well into the 1920s, those studying in professional faculties—medicine, applied science (engineering), forestry, education, social
service, and so on—still constituted half or more of the student population.\textsuperscript{5} Enrolment in medicine alone grew substantially over the first four decades of the century. From 339 in 1900-1, it rose to around 500 by 1910, to well over 700 by the mid-1920s, and to over 800 for much of the following decade, thus maintaining a strong presence simply in numerical terms (see Figure 1).\textsuperscript{6}

Figure 1
Total Undergraduate Enrolment
Faculty of Medicine, 1900-40

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure1.png}
\caption{Total Undergraduate Enrolment Faculty of Medicine, 1900-40}
\end{figure}

How did this swelling crowd of students get into medical school? There are two key preliminary points that need to be clarified before that question can be answered. First, throughout the period there was no such thing as selective admissions in the modern sense. That is,
the medical school did not draw from a pool of qualified candidates. Rather, the university set a minimum standard of entry, called a matriculation requirement, and every applicant who met that standard was admitted. Second, there was no "premedical" course at the university; medical education was an undergraduate program running parallel to arts and science, not built on top of it. A minority of students might do a year of arts, or in a few cases even a full undergraduate degree, before entering medicine. But the vast majority entered with no more than a high school education: in 1910, about 90 percent; through the 1920s, some 70 percent; and in 1932, about 85 percent.

The normal entry standard was the possession of an Ontario high school matriculation certificate. That certificate was obtained by writing a number of examinations drafted by a committee of professors representing several Ontario universities, administered by the Department of Education, and written in high schools across the province. The first set of these examinations was usually written at the end of the fourth year of high school—what came to be called Grade 12. A successful candidate was awarded the Junior Matriculation Certificate, which admitted its holder to most programs in the university until the 1920s and to the pass arts program until 1931. In medicine, junior matriculation was the required entrance standard until 1922.

A student who remained in high school for an extra year or two might obtain the Honour or Senior Matriculation Certificate—what would become known as Grade 13. Such a certificate was considered to be the equivalent of first-year university, and entitled its holder to be admitted to second-year pass arts, or to the first year of some of the honors programs. In 1922, medicine began to require junior matriculation plus what was termed "partial Honour Matriculation"—three senior matriculation subjects (two papers in English, three in mathematics, and another two in a language, which might be Latin). And in 1928, the entry standard was raised to a full slate of senior matriculation subjects—that is, raised to the level of a full five years of high school. That remained the standard of admission throughout the 1930s, and indeed beyond.

In the years immediately following World War I, when soaring enrolments stretched the faculty of medicine (as well as the university as a whole) almost beyond capacity, one other requirement was put in place: as of 1921, first-year applicants who were not residents of Ontario were turned away. But, to reiterate, with that exception, anyone armed with an Ontario matriculation certificate who applied to medical school at Toronto was admitted.

Both the faculty and senior university authorities would have preferred a different admissions policy. There were recurring complaints throughout the entire period about an excessive number of entrants,
their variable quality, and the overcrowding of laboratories and clinical facilities which made it difficult to maintain the conditions requisite to the pedagogical ideal of a modern medical education. But the politics of the provincial university made selective admissions inexpedient. Financially dependent on the government, viewed as the crown of the province's public system of education, and itself setting the matriculation standard which high schools were expected to meet, the University of Toronto found that any proposal to introduce more selective entry standards invited political intervention and public opposition. Thus the student body in medicine (as in other faculties) mirrored the qualified applicants who chose to attend—which, indeed, is one of the reasons the application forms constitute such a valuable source: with only minor deviations, they reflect the social and academic backgrounds of those who actually entered the first year of medical studies.

NATURE OF THE STUDENT BODY: AGE, SOCIO-ECONOMIC BACKGROUND, SEX, ETHNICITY

Since most applicants came to medical school by the shortest academic route, with the minimum qualifications, they tended to be young. Between 1910 and 1932 that characteristic became more pronounced. In 1910, their median age was 20, and the average age was 20.6 years; 20 years later, these figures had dropped to 19 and 19.3, respectively. Over time, moreover, the range of ages narrowed substantially. Before the war, it was not unusual to have applicants aged 16, and a significant number were in their late 20s or early 30s. One of the 16-year-olds who entered in 1917 noted in his diary that he always referred to some of his classmates as "Mr." because they were so much older than he. In the postwar period, ages began to span a lesser range, from 17 to the late and then the mid-20s.

In part, this was the result of deliberate policy: the minimum age for entry was set at 17 in 1922, at the same time as matriculation standards were raised. But it was also part of a long-term trend, going back many decades, which saw the linkages between different parts of the education system tighten, encouraging students to stay in school, obtain the necessary paper credentials, and then go directly into the universities or other forms of professional training. Thus, before the war, upwards of 35 percent reported some form of work experience before entering medical school—anything from a few months to two or three years, or even considerably more, teaching school, working in a drugstore, or engaged in some other business. In other words, a significant number of these young adults, some in their mid-20s or older, were choosing a medical career after trying out some other occupation, or after working to raise the money to continue their education. Over the period, however, their
numbers were substantially reduced; by the early 1920s, only 17 or 18 percent of medical students did not come directly from high school. As this trend intensified, not only were entrants younger but the range of their ages also narrowed. Indeed, that is one reason why the average age of entrants dropped in the postwar period despite the fact that an additional year of high-school work was required to obtain the new senior matriculation standard.17

Given the nature of the program and this profile of the age of entrants, it follows that medical students, as a whole, tended to be younger than they are now. A large number would graduate from medicine at age 25 or 26, and a quarter to a third at 23 or 24. As a result, the medical faculty was increasingly dealing with students in their late teens and early 20s. At this point we can only speculate upon the impact that may have had on the nature and content of the medical curriculum, affecting everything from increased regulation over dissecting-room rules or classroom behavior, to the structure of the program itself and the attempt to incorporate, for these high-school graduates, a measure of general arts education within the first year of medical studies—a remnant of the notion of the "liberal education" befitting a medical gentleman.18 A student body sharing the same academic experience and reaching medical school by the same route was, at any rate, increasingly one of the features of a distinctively twentieth-century medical school.

With one great exception, to which we will return, our analysis of the socio-economic origins of Toronto's medical students reveals few surprises.19 The children of professionals entered medical school out of all proportion to the percentage of professionals in the work force, increasing from a fifth of all entrants in 1910 to almost a third 20 years later (see Table 1). Similarly, business and white-collar families sent their children in increasing and disproportionate numbers—rising from a quarter to nearly half of medical students. There were, on the other hand, a declining number of youngsters from the farm: what had been, in 1910, a nearly proportionate representation of farm families (27 percent compared to 31 percent in the province) was replaced, by 1932, by a widening gap of nearly 20 percent. The children of skilled and unskilled workers were massively underrepresented, though there was also a modest increase, rising from 5 to 15 percent of total entrants over the period.

There was nothing distinctive about this sort of socio-economic distribution, compared either with other faculties of the University of Toronto or with university students elsewhere in Canada. Calculations by university authorities at Toronto in the 1920s showed that the children of professionals were overrepresented in arts, medicine, and applied science in about the same proportions in all three faculties; the
children of farmers and artisans were similarly underrepresented. This kind of social make-up was also not much different from that of the student body at Queen's University in the late 1890s, or of other Canadian universities in the 1930s. Nor is this surprising, given the expense of becoming a doctor. Families had to be able to underwrite the actual and opportunity costs of keeping their offspring in school far longer than the vast majority of their peers, just to complete the matriculation requirements. Five or six years of medical training, with their attendant costs and foregone income, vastly increased the expense. Even if a student lived at home, tuition fees until 1927 were $150 a year, and by the mid-1930s they had risen to $175 for the first year, and $275 by year four of the program, a considerable sum of money at the time. Students from outside Toronto had to pay boarding costs on top of this. In a period when those who attended university constituted a mere handful of their age group, it was the children of the relatively privileged who could aspire to medicine as a career.

Table 1
Occupational Distributions (as percentages)

<table>
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<tr>
<th>Medical students' fathers</th>
<th>1910</th>
<th>1922</th>
<th>1932</th>
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</thead>
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<tr>
<td>Professional</td>
<td>23</td>
<td>27</td>
<td>29</td>
</tr>
<tr>
<td>Business</td>
<td>26*</td>
<td>32</td>
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</tr>
<tr>
<td>White collar</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Artisan/laborer</td>
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<td>14</td>
<td>15</td>
</tr>
<tr>
<td>Farmer</td>
<td>27</td>
<td>6</td>
<td>5</td>
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</table>

<table>
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<th>Ontario work force</th>
<th>1911</th>
<th>1921</th>
<th>1931</th>
</tr>
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<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Trade, finance</td>
<td>9</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Clerical</td>
<td>3</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Manufacturing, laborers, construction</td>
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<td>33</td>
<td>33</td>
</tr>
<tr>
<td>Agriculture</td>
<td>31</td>
<td>26</td>
<td>23</td>
</tr>
</tbody>
</table>

* Includes white-collar workers.

Sources: University of Toronto Archives, Office of Admissions, A69-0008/178-189, Applications to Faculty of Medicine, 1910-32; Ian M. Drummond, Progress without Planning: The Economic History of Ontario from Confederation to the Second World War (Toronto: University of Toronto Press, 1987), Tables 2.2 and 2.3; and Census of Canada, 1931, Vol. 7 (1921 and 1931).

Insofar as we can deduce rough wealth categorizations from their fathers' occupations, on the other hand, medical students do not appear to have been the children of a wealthy elite. As Paul Axelrod remarks of
Canadian university students in the 1930s, they came from a "mainly middle-class constituency whose ranks ranged from the comfortable to the modest to the struggling." Thus, in 1925, a Queen's professor found it noteworthy that the eight-month term in medicine typical of Ontario's medical schools rendered it possible for "many men in the summer months... to make very nearly enough money to put themselves through the university," creating a profession widely accessible to the less than prosperous.

Relatively privileged they were, nonetheless, and increasingly, they were also privileged by virtue of living in the more urban areas of the province. In 1910 only 16 percent came from Toronto, and nearly 60 percent from Ontario's villages, hamlets, and farms. By 1920, a third were Toronto residents, another 10 percent were from other Ontario cities, and the proportion of those from rural areas had dropped to 45 percent. Over the next decade or so, the trend accelerated: by 1932, nearly 60 percent listed Toronto as their permanent address, while rural Ontario contributed merely 20 percent of students, and only 5 percent came from farm families. Urbanization and the increasing regionalization of Ontario's universities no doubt helped to account for this trend, but so, we suspect, did the change in entry requirements in 1922, from junior to senior matriculation. Many village high schools and rural continuation schools lacked the specialist teachers and other facilities to offer senior matriculation, and youngsters had to board in town to complete Grade 13, thus materially increasing their difficulties in obtaining the requisite entry certificate.

Whatever the cause, in any case, the declining number of students from villages, hamlets, and farms, in medicine and in other faculties as well, helps explain and helped to fuel the growing antipathies to the provincial university manifested by the United Farmers of Ontario and others who spoke for that constituency. "It is apparent," declared a representative of the United Farmers in 1921,

that the situation [in Toronto] of the State University excludes a large proportion of the people who are outside from its benefits.... [I]n the University of Toronto culture education has been overcome and overborne by professional training at the public expense and immensely for the benefit of the City of Toronto.... [T]here has been an obvious disregard to the real interest of the whole people in the devotion of the public moneys to... professional schools, such as medicine, dentistry, and the like.

Such hostility dictated caution on the part of an institution whose grants from the government never seemed enough, and on the part of a faculty of medicine that had to balance its desire to become a "world-class" facility with the need to avoid the appearance of excluding potential students by, for example, raising entry standards even further or
introducing selection mechanisms beyond those already in place in the schools themselves.

For the first two decades of the twentieth century, Toronto was Ontario’s only medical school accepting female students, and throughout our period those women attending Toronto represented the vast majority of all the province’s women medical students. Whether or not the faculty wanted them is a moot point, but their presence was yet one more consequence of the policy that Toronto must accept all qualified applicants.

Given that they could not be formally excluded, the outstanding characteristic of women medical students during the period was that they did not register in greater numbers. After a brief, sharp increase during the war, the number of women entrants settled at a more or less constant level through the 1920s and 1930s. Essentially, they reached a plateau equalling about 10 percent of the student body (see Figure 2)—higher than in prewar days, it is true, but fewer than might have been expected, since women (like men) were qualifying in ever-greater numbers through the Department of Education matriculation examinations, and many more than formerly were going on to university, in arts especially, but also in education and social work. The first generation of women students in Ontario, in the late nineteenth century, had eagerly scaled the ramparts to medical school; this second generation advanced little farther. The reasons may include such factors as the closing of the Ontario women’s medical colleges, the chilly climate of male-dominated schools, or some more indefinable combination of individual aspirations and the societal roles that young women were expected to fill in postwar Canada. Whatever the causes, they lie beyond the scope of this discussion, though an examination of those who did attend medical school may shed some light on the subject. For our purposes here, it is perhaps sufficient to note that while women students differed somewhat from their peers, the same general patterns we have described in the preceding paragraphs applied to them as well.

We have, then, a group of medical students who were mainly the sons and daughters of professionals and businessmen, and who were more likely to come from urban than rural Ontario. They were also overwhelmingly white, Protestant, and of British stock. A very small number were Catholic, and there was a fitful scattering of applicants who were Italian, Caribbean, Chinese, or Japanese. Some of the latter two groups were born in Canada but remained exotic figures nevertheless: Victoria Chung, for example, aged 20, enrolled in first-year medicine in 1917; born and educated in Victoria, B.C., she came to Toronto with the support of the Presbyterian Women’s Missionary Society, and was destined, so reported the Varsity, to be a medical missionary in China, “her own country.”
The one significant exception to the majority profile, however, was the rising number of Jewish students (see Figure 3). At the beginning of our period, in 1910, a mere 2 percent of entrants were Jewish. But in subsequent years an upward trend began that would accelerate with astonishing rapidity. In 1920, Jewish students constituted 7 percent of applicants; by 1925, they made up 17 percent; in 1929, 21 percent; and by 1932, over a quarter—42, or 27 percent—of all entrants were Jewish. This is a surprising record indeed in view of the miniscule proportion of the population of Ontario that was Jewish. Even in Toronto, where Jewish immigrants had concentrated, they formed only 7 percent of the city's population in 1931.
The story of the Jewish immigrant experience from the 1880s on, in Canada and in Toronto, has been told elsewhere. It is a remarkable history of a people swept from their homelands in eastern Europe by pogrom, persecution, and the hope of a better life, landing in successive waves on the shores of the New World, and determinedly concentrating on the business of survival, while re-creating the familial, religious, and social bonds of the shtetl. In Toronto, they settled in “the Ward,” a tight-packed few blocks that by the 1900s lapped around the university and spilled over to Spadina Avenue, home of the garment industry in which many of them found work. Their children went to public school at McCaul and Lansdowne, then to Parkdale, Jarvis, and later, Harbord Collegiate Institutes, all the while struggling with an alien tongue and learning the new customs of their adopted land. A few of them, a very few, graduated with the requisite matriculation certificate and then
presented themselves at the doors of the university, and to the faculty of medicine. They were mostly men, though a sprinkling of women began to appear from the 1920s on.  In all, from 1910 to 1932, 351 Jewish men and 22 Jewish women applied to the faculty—that is, 10 percent of all applicants.

Their presence in the University of Toronto medical school was a note of grace in an otherwise hostile environment. Antisemitism was expressed at Canadian universities in various ways but most notably by the institution of formal quotas on Jewish entrants, in medicine among other faculties. Because of the exclusion of Jews from some American colleges, it is true, a few Canadian universities like Dalhousie served as an academic refuge for a considerable number; however, most medical schools across Canada put up barriers in the interwar years. But since the University of Toronto admitted any citizen of Ontario who presented the requisite qualifications, it became one of the handful of exceptions. And that policy, in turn, opened the door to those who might otherwise have been excluded. Though prejudice may well have operated to discourage applicants in informal ways, there was at least no formal mechanism for quota systems. Thus, in comparison to a Canadian average in 1930-31 of 12 percent of medical students who were Jews, Toronto's medical faculty accepted more than double that proportion into first year. And the academic record of Jewish students, as we shall see, does not support the presumption that they experienced systemic prejudice as they moved through the course of studies at medical school.

Up to World War I, Jewish medical students might well have been viewed by their peers as exotic, for they were mostly migrants. In 1910, 60 percent of Jewish applicants were born in Russia or Austria and another 27 percent in other non-Canadian places. Even by 1920, 43 percent were born in Russia, Austria, or Poland; but by then, a further 29 percent listed Toronto as their place of birth. And the "Canadianization" of the postwar Jewish students continued apace: in 1925, 58 percent were born in Toronto; by 1932, it was 73 percent. Nearly all the immigrant generation, on the other hand, had arrived in Canada as children and attended Ontario public schools before university: in 1910, 85 percent gave Toronto as their permanent address. Thereafter the records show that virtually all were residents of the city. Indeed, their geographical origins stand in marked contrast to those of other medical students, and form one of the distinguishing characteristics of the group as a whole.

The occupations of their fathers mark them off from their peers as well. Their parents were concentrated in the business class, or were artisans or skilled laborers. These categories require some caution, for
many of the occupational designations could have fallen into either, and without wealth data we cannot be precise. Many parents were listed as "merchants," for example, but that could encompass anything from a pedlar to a well-to-do storeowner. The garment industry was full of such ambiguous titles: a "tailor," "cloak maker," or "dress designer" could be employer or employee, petty entrepreneur or sweatshop operator, artisan or manufacturer. Bearing in mind the existence of overlapping categories, however, "business" occupations accounted for 50 to 70 percent of their fathers throughout our period, and "artisan" for a quarter to a third. What was missing was the professional class: aside from the prewar period, when the occupations of a handful of fathers fit this category (a rabbi and two teachers, uprooted from their European bourgeois backgrounds), there were no fathers at all who were professionals. This, it hardly needs to be emphasized, stood in the sharpest contrast to the occupational profile of all entrants' fathers. Indeed, it is Jewish students who largely accounted for the modest upswing in working-class origins we noted previously.

Finally, except for the first generation of 1910-14, Jewish applicants tended to be even younger than others. Moreover, over the two decades analyzed, the average age of Jewish applicants dropped substantially. This pattern reflects, first, their immigrant origins, and then parental and individual ambitions. Those who were born or raised outside the country often had to learn English and master the intricacies of the school system, as well as earn enough to support themselves through medical school. This might require several extra years of high school, cram school, or night classes in order to earn the coveted matriculation certificate, and perhaps some months or years of paying work between high school and university. But by the postwar period, almost all Jewish entrants were applying straight from high school, and moving through the matriculation process with the greatest possible speed, more so than any other group of students. Born in Ontario, and especially Toronto, comfortable with the school system, and ambitious to do well, they came with the support of an immigrant generation who wanted something better for their sons and daughters. As a woman union activist in the Jewish garment sector put it, "Just because we had a hard life to make a living,... we wanted our children should have it better. So no matter how poor a cloakmaker was, he wanted his son to be a doctor, a lawyer."41

ACADEMIC PROGRESS OF MEDICAL STUDENTS

Between 1908 and 1919, the medical program took five years to complete; a sixth year was added in the 1919-20 academic year. In both cases, the program of studies consisted of two equal parts. The first two
and a half or three years were devoted to the basic and medical sciences, taught in classrooms and science laboratories, and the second half to clinical instruction, carried on mainly in hospital wards and laboratories, clinics, and the like. As students moved through this program, they encountered certain key transition points along the way. One of these, and the most difficult one, was getting out of first year. Before the war, a failure rate of 10 to 15 percent was the norm in the examinations at the end of that year. Between 1917 and 1921, the rate was over 15 percent, and though at times during the 1920s it dipped below 10 percent, in some years during the 1930s it reached 30 percent or more—at one memorable point, nearly half the class was "ploughed" (Table 2). These were the outright failures, who would have to repeat the entire first year if they were to continue. There were also those who were "starred" because they failed a subject or two, and whose entry into the next year of study was conditional on passing supplemental examinations. Their numbers too were substantial—in that first year, very often a fifth or more of those who wrote the spring exams. From the point of view of the student, then, the first year was "make or break," the critical year of the entire course of studies. And success in first year was a good predictor of future success. Large numbers of those who failed then also failed to graduate; either they never returned to the university, or they began their first year over again but dropped out during the repeat year or at some later point.

<table>
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<th>Year</th>
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<td>14</td>
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<tr>
<td>1912-13</td>
<td>102</td>
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<td>1937-38</td>
<td>140</td>
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Source: Annual Reports of the President of the University of Toronto for the year ending 1911 through 1938.
This was not the only academic hurdle to be faced. While some 50 percent of the students sailed through without any academic problems at all, the other half encountered more or less serious difficulties, having to write supplementary examinations or repeat a course, or even a full year at some point after the entry year. The major portion of such difficulties, however, occurred in years one to three. And a second key transition point came at the end of this “academic” phase of the program and the beginning of the “clinical” instruction—halfway through the third year of the five-year program, and then at the end of the third year in the six-year program. After a much lower failure rate in second year, compared with first, the numbers failed outright at the end of third year rose, often to 8 percent or more of those writing. The percentage of “stars” also multiplied. One argument put forward for increasing the length of the medical curriculum had been to get rid of the awkward break halfway through third year between academic and clinical work. The Dean of Medicine in 1914 commented that the mid-term transition “seems to cause the students more worry... than any other.... [I]t seems as if the student, finding himself between the Scylla of primary work and the Charybdis of final study, comes to grief with an ill defined idea of the best course to steer.” But the transition still caused the same amount of academic grief when it came at the end, rather than the middle, of the year. Only when students had successfully negotiated the passage to clinical instruction did their difficulties become noticeably fewer.

Failures and academic problems through the program helped to winnow an entering class considerably by the time the survivors graduated. To determine how many entrants completed the program, we have traced the progress of four entry cohorts after World War I—those of 1922-23, 1925-26, 1930-31, and 1932-33. A common enough pattern emerges. After the carnage of first year, something like half the students would go on to complete their course of study with a clear record. This group, together with those who were starred along the way but did not have to repeat a full year, graduated in the shortest time possible, six years later; they constituted some 60 percent of the original cohorts of 1922-23 and 1925-26, and half or less of the entering classes of 1930-31 and 1932-33. That rate of retention seems fairly low, compared to post-World War II rates—until we add in all those who eventually completed the program at some later point in time, having repeated one, two, or even more years. The retention rates for the 1922-23 and 1925-26 cohorts then rise, respectively, to 79 percent and 83 percent; for the two cohorts of the early 1930s, to 66 percent and 63 percent respectively. And that marks the most significant feature of student academic careers in the interwar period: large numbers of students took a very long time to com-
plete their studies. Though retention rates in the 1920s would in the end match post-World War II rates, the program accommodated a leisurely pace towards graduation—and, possibly, the retention and accreditation of those who would have failed out in a later era.

A second significant feature of these retention rates is their sharp decline in the 1930s. One obvious cause is the effect of the Depression. University students across the country were hard-pressed to pay tuition and other costs of schooling, and many fell by the wayside for financial reasons alone. Large numbers of medical students at the University of Toronto were in arrears of fees during the decade, to a greater degree than in other faculties. Unfortunately, we do not have the student record cards for the 1930s—they were destroyed by a fire after World War II—but it would seem reasonable to assume that financial distress would have contributed to the drop-out rate in the 1930s.

It might be supposed that Jewish medical students, belonging as they did to an economically and socially vulnerable sector of society, would have formed a proportionately greater part of these drop-outs. In fact, despite their reputation for having financial problems, they almost always did better than their peers in medical school in completing their medical studies within the six-year term. Of the 1920s cohorts, two thirds and three quarters respectively managed to complete the course in that length of time, well above the general retention rates; and compared with the normal pattern, an astounding number—95 and 100 percent respectively—completed their degrees after repeating one or more years. Even after the onset of the Depression, Jewish students had measurably better success at finishing the course than their classmates.

Whatever the factors that determined success or failure in medical school, in any case, it was not the degree of success students had on their matriculation examinations. At the outset we had assumed that there would be at least some relationship between the two, and perhaps our analysis lacks the sophistication to reveal it. But for the two subgroups, women and Jewish students, for whom we can relate individual educational records to their subsequent medical school careers, there seems to be no such correlation. How well a student did on the Department of Education examinations, in other words, bore little relationship to his or her record at the faculty of medicine. Both groups displayed some collective deviations from the norm: women, for example, consistently did better on their English papers than did all students, and Jewish students consistently did worse. On science papers, the reverse was true. But these results did not translate into similar medical school successes or failures. Equally, some high school students who took an excessive number of years to write their matriculation examinations turned into model medical students; others, entering
with a string of seconds and firsts, dropped out, repeated years, or otherwise did not fulfil their early academic promise. As the Dean of Medicine would put it in 1932, "the standing and marks obtained by students at matriculation do not form a satisfactory standard for the selection of medical students. A student may stand high at matriculation and fail hopelessly in his medical subjects or vice versa." It was not clear to contemporaries why this was the case; but together with rapidly rising numbers of matriculants, it framed one of the central political and pedagogical problems confronting the faculty throughout the period: how best to apply scarce resources in the face not only of multiplying numbers but also of the level of "waste" promoted by existing admission requirements.

CONCLUSION

There is far more to understanding students' experience of medical school than just looking at a bunch of numbers. And even our quantitative data yield more riches than we have suggested here. Looking at the numbers, nonetheless, has its uses. And these extend beyond illustrating the sheer growth of the university or its increasing importance in Canadian society. Placed in conjunction with other records, they help illuminate both the politics and the economics of medical education.

Take but one example. In order to forward its ambitions to be a "world-class" institution, the faculty of medicine had to adhere to a pedagogical model which put the emphasis on small-group instruction and large amounts of "hands-on" learning in laboratories and clinical facilities alike. But in doing so, it ran smack into the problem of admissions: the faculty had no choice but to take every qualified candidate who applied, and there were too many of them to be accommodated within that model. One solution (though not the only one adopted) was to fail large numbers of first-year students. This was, needless to say, a policy devised ostensibly for academic reasons in order to "weed out those students who are obviously unfitted for a career in medicine." But the first-year failure rate also bears an uncanny correspondence to the size of the annual entry—and therefore to the potential size of the classes in later years. A small entry class meant a low failure rate; a large one, a high rate (see Figure 4 and Table 2). For both academic and pedagogical motives, in other words, the faculty was using the first-year examinations to limit numbers it could not otherwise control because of the political environment beyond its doors.

Thus what made first year "make or break" for students was not just the intrinsic intellectual demands it imposed, but a more complex mix of institutional financial constraints, the internal and external politics of the medical faculty, and assumptions about the pre-eminent value of a
particular pedagogical model linked to the new pre-eminence of the research ideal within the university. The individual student's experience of first-year medical school was constructed out of this intersection, and cannot be compartmentalized from the larger history of the institution itself. Indeed, the reverse is true as well: student numbers shaped curricular and other academic decision-making which reached far beyond the expansion of the physical plant alone.

Figure 4
First-year Entry and Failures
Faculty of Medicine, Toronto, 1918-40

Source: Annual Reports of the President of the University of Toronto, 1918-40.

A similar point might be made about the culling process as a whole. By 1910, and even more emphatically in the decades that followed, the first three years—the years dominated by courses in basic and medical science—were being used to select those who would go on to clinical training. It was during these years, as their academic records show, that
the vast majority of entrants failed and dropped out. Whether or not the timing and rationale for such selection was appropriate is another question—one that went to the heart of the debate over the place of the basic sciences versus clinical instruction that had begun in the last quarter of the nineteenth century, and lingers even today.54

The rapid growth in student numbers, in any case, also offers a prism through which one can assess doctors’ own perceptions of their problems. Despite a continuing wail of complaints about “overcrowding” in the profession and the consequent difficulties of making a decent living, the rising number of applicants, and graduates, testifies to the continuing attraction of a profession that promised a certain measure of social status and financial security, though the allure of medicine’s powerful new alliance with science and its palpable successes in the period cannot be discounted either.

Historical “snapshots” taken at a particular point in time have their uses, but there are advantages to a longitudinal study as well. In particular, it allows us to see what changed—and of no less importance, what did not, or changed very little. Our charts, if not our text, point to the unique impact of World War I. Not only did it bring a startling increase in overall enrolments, but it also brought significant, if temporary, changes in the composition of the student body, and thus it deserves attention in its own right. Even within the limited scope of this study, the effects of the Depression on retention rates are clear, though it changed the student body in other ways as well. The increasing marginalization of rural Ontario is apparent here, as is the sharp segregation of experience and opportunity along the lines of social class: if, as we have said, one discounts the Jewish students, there is virtually no change in the entry rates of working-class youngsters across the entire period. Even middle-class girls entered medicine in greater numbers than working-class boys, but the gendered nature of medicine produced yet another kind of “glass ceiling”—an entry rate that seldom exceeded 10 percent a year.55 The Jewish students, on the other hand, represent something of a surprise in both their numbers and their backgrounds. It was their good fortune to live in Toronto, where the local university was forced by circumstance to maintain a policy that admitted anyone who could acquire a high school matriculation certificate. Their entry into medicine, on the other hand, also reflects a keen and accurate assessment of the job market, and the harsh reality of prejudice and discrimination found there: a living could be made in medicine by individual entrepreneurship, amongst one’s own community or perhaps even beyond. But there was little point in enrolling in engineering or education, for example, where one had to depend on being hired by private firms or school boards.56
What remains tantalizing is the potential of a longitudinal study that is longer still. Though it may not be possible because of the restrictions necessary to preserve individual privacy, the real challenge is to try to see how all of the patterns revealed in this study, and of others besides, persisted or changed in the very different world of the second half of the twentieth century.

NOTES

* We would like to acknowledge the financial assistance of the Faculty of Education, the University of Western Ontario, in enabling us to undertake the research on which this article is based. We would also like to thank Dr. Garron Wells, University Archivist, and the other staff of the University of Toronto Archives for their generous assistance and advice in locating the pertinent sources.

1 For our initial exploration of this subject, see R. D. Gidney and W. P. J. Millar, Professional Gentlemen: The Professions in Nineteenth-Century Ontario (Toronto: University of Toronto Press, 1994), chaps. 8 and 17.

2 University of Toronto Archives [hereafter UTA], Office of Admissions, A69-0008/178-189, Applications to the Faculty of Medicine, 1910-32; UTA, Faculty of Medicine, A86-0026, boxes 1-4, 1890-1929, Student Record Cards. The record cards are not complete for the period before 1910, and those of the last full cohort, beginning in 1923, belong to the graduates of 1929. Name lists by class are found in the Calendars, University of Toronto, Faculty of Medicine.


4 Throughout this article, we will generally ignore the effects on enrolments of the war and its aftermath, though these were important. They were, however, temporary, and in this article we want to focus on longer-term developments and their overall impact.

5 The figures can be found in the Annual Reports of the President of the University of Toronto for the year ending June . . . [hereafter President's Reports]. In 1925-26, for example, there were 2,626 students in the faculty of arts and 2,797 in all other (professional) faculties. For comparable figures in universities across Canada see Paul Axelrod and John G. Reid, eds., Youth, University and Canadian Society: Essays in the Social History of Higher Education (Kingston and Montreal: McGill-Queen's University Press, 1989), p. xv (1911-12); Paul Axelrod, Making a Middle Class: Student Life in English Canada during the Thirties (Montreal and Kingston: McGill-Queen's University Press, 1990), p. 67 (1935). Compare similar trends in enrolments, using data on graduates in medicine, at McGill (George Weisz, “The Geographical Origins and Destinations of Medical Graduates in Quebec, 1834-1939,” Histoire sociale, 37 [May 1986]: 96-97).

6 UTA, Faculty of Medicine, Office of the Dean, A79-0023, Series 11, Boxes 63-64, Letterbooks, p. 612, Dean to Chancellor, University of Toronto, 6 June 1901; and President's Reports, 1902-40. Amalgamation with Trinity College Medical School in 1903 produced a temporary upsurge. These figures are only for students enrolled full-time in the undergraduate medical course; they do not include occasional, dental students (of whom there were a large number up to and including 1919-20), or a variety of others. For that reason, the figures differ from those cited in McKillop, Matters of Mind, p. 359-60, which include all these students in the totals.

7 Toronto was unlike McGill, its major Canadian competitor in medicine, in this respect (see Weisz, “Geographical Origins,” p. 107).

8 There were also a large number of acceptable equivalents ranging from university matriculation examinations and private school certificates to those of other provinces and countries.
In 1909, a joint University Matriculation Board was created, with half its members from the University of Toronto and the rest from Queen's University, McMaster University, and Western University. This board set the standards and subjects of examination. For a brief history and the regulations of the board, see Annual Report, Ontario Minister of Education, 1914, 520-21: Circular No. 24.

As an option, a candidate might take only two mathematics papers—algebra and geometry—and substitute a science for trigonometry.

In 1933, the requirements of senior matriculation for entry to medicine were changed to the equivalent of an honors science university entry level: that is, a "hard" science was made compulsory, whereas before then, in theory, agriculture as a subject could be substituted for physics, chemistry, or biology. In practice, most applicants to medicine were already offering one of the latter sciences.

There were, however, an increasing number of students from outside the province entering at a senior level: they were transferring from other Canadian universities, such as the University of British Columbia or the University of Alberta, to finish at Toronto under reciprocal agreements between the institutions. Home-grown entrants to fourth-year medicine came from Toronto's own Biological and Medical Sciences course.

For a summary of the faculty's views, see President's Report, 1938, Report of the Dean of the Faculty of Medicine, p. 30-31. For the origins and nature of the pedagogical ideal, see R. D. Gidney and W. P. J. Millar, "The Reorientation of Medical Education in Late Nineteenth-Century Ontario: The Proprietary Medical Schools and the Founding of the Faculty of Medicine at the University of Toronto," Journal of the History of Medicine, 49, 1 (1994): 52-78.


David Eisen, Diary of a Medical Student (Montreal: Canadian Jewish Congress, 1974), Tuesday, 2 October 1917, p. 7 and p. 107 n.23. Dr. Robert McClure, the future medical missionary and moderator of the United Church Conference, was one of the other 16-year-olds in the fall of 1917 (see Munroe Scott, McClure: The China Years of Dr. Bob McClure [Toronto: Canec Publishing and Supply House, 1978], p. 42).


The question about "prior experience" ceased to be asked on the application forms after 1922, but the trend in median and average age of entrants confirms the notion that most applicants were now coming direct from high school.

See, for example, Keith Walden, "Flazes, Hustles, Scraps, and Stunts: Initiations at the University of Toronto, 1880-1925," in Axelrod and Reid, eds., Youth, University and Canadian Society, p. 94-96, 111-16; and McKillop, Matters of Mind, p. 405-20. Bob McClure and David Eisen, like others in the period, obtained their medical degrees at the age of 21. See also CMA Committee on Archives, Interviews with Past Presidents of the CMA (Ottawa: CMA Committee on Archives, 1980), p. 52 (Dr. Kirk Lyon); and for the same phenomenon during World War II, p. 230 (Dr. Bette Stephenson).

In the absence of data on the economic standing of medical students' families, their fathers' occupations were used as the sole indicators of socio-economic standing. This procedure is obviously flawed but allows us to follow a well-established historical tradition which, for Canada, has resulted in a usable social ranking by occupational labels. In particular, in order to provide comparable data in the 1930s, we have followed the occupational classification outlined in Axelrod, Making a Middle Class, Appendix B, and have found it eminently usable for the earlier period as well.

Report of the Royal Commission on University Finances, 1921, Appendix I, University of Toronto, General Statement, p. 14; and President's Report, 1928, p. 11.
21 Chad Gaffield, Lynne Marks, and Susan Laskin, "Student Populations and Graduate Careers: Queen's University, 1895-1900," in Axelrod and Reid, eds., Youth, University and Canadian Society, p. 11-15; and Axelrod, Making a Middle Class, p. 21-26.

22 Calendar, University of Toronto, Faculty of Medicine, 1925-26, p. 383; 1935-36, blue insert; and UTA, Faculty of Medicine, A86-0027/019, Faculty Council Minutes, 17 September 1926, p. 169.

23 For an estimate of the relative value of these amounts, see Michael Bliss, Banting: A Biography, 2d ed. (Toronto: University of Toronto Press, 1992), p. 49; and on sample prices and wages in the 1930s, see Pierre Berton, The Dionne Years (Toronto: McClelland and Stewart, 1977; Penguin Books, 1991), p. 128-30.

24 Axelrod, Making a Middle Class, p. 28.


26 Calculated from the applications; see also the President's Reports for annual analyses of the geographic origins of students.


28 Western University did not do so until 1919, and Queen's University not until 1943 (see Gidney and Millar, Professional Gentlemen, p. 486 n.72). For Quebec, see Weisz, "Geographical Origins," p. 96-97.

29 Undoubtedly, informal methods, such as counselling, were used on occasion to discourage women applicants (see, for example, Axelrod, Making a Middle Class, p. 91); such efforts could backfire, however (see the comments of one woman on her dismissal of such attempted discouragement, in "Kicking Down Doors," Toronto Star, 30 March 1995).


31 Though we have the figures for the different Protestant denominations and for those with parents born in Canada as against Britain, the numbers are so predictable that they hardly warrant further attention here.

32 [University of Toronto], Varsity, 1 October 1917, p. 1.

33 In 1931, 2 percent (see Bernard L. Vigod, The Jews in Canada, Booklet No. 7 [Ottawa: Canadian Historical Association, 1984], p. 14).


36 See the comments by Lynne Marks, "Kale Meydelach or Shulamith Girls: Cultural Change and Continuity among Jewish Parents and Daughters—A Case Study of Toronto's Harbord Collegiate Institute in the 1920s," in Ruby Heap and Alison Prentice, eds., Gender and Education in Ontario: An Historical Reader (Toronto: Canadian Scholars' Press, 1991), p. 296-300.

37 Axelrod, Making a Middle Class, p. 32-34; and Weisz, "Geographical Origins," p. 107.

38 Louis Rosenberg, Canada's Jews: A Social and Economic Study of Jews in Canada in the 1930s, edited by Morton Weinfeld (1939; Montreal and Kingston: McGill-Queen's University Press, 1993), Table 175, p. 272, and Table 267, p. 405. Nineteen percent of all Toronto medical students in 1930-31 were Jewish, rising to 22 percent by 1935-36 (see Table 268, p. 405).
In the following analysis of the socio-economic characteristics of Jewish students, entrants from 1910 to 1914 have been grouped together for comparison with the total figures for 1910, because the numbers of Jewish entrants in each of those years are too small to be meaningful by themselves. However, the numbers were large enough by 1920 that all other comparisons can be made by reference to the Jewish entrants for a particular year.

Until the 1930s; in 1932, the proportion from Toronto fell to 73 percent (still far above that of non-Jewish students, which was 50 percent). Jewish entrants resident elsewhere in Ontario came mainly from other large cities.

Quoted in Frager, Sweatshop Strife, p. 216.

Failure rates have been calculated from the figures given in the President’s Reports at the end of each academic year. They are the percentages of failures out of those actually examined; a certain number of students never made it that far.

The student record cards literally show stars beside the subjects failed. Later in the period, the term was replaced by “conditioned.”

Out of 2,619 student record cards examined, there were 1,220, or 47 percent, with stars, failures with supplementary examinations, or failures of an entire year.

Owing to the disruption caused by the war to the normal course of university studies and graduation, it is not possible until the 1920s to trace the progress of an entering class through to its final year. The ranks of the cohort entering in 1910 and graduating in the spring of 1915 were already thinned by war (see UTA, P87-0046, Convocation Programmes, Box 1, File 66, 1915). The four cohorts after the war were chosen to capture what we thought might be significant points in time: the first class to be required to have senior matriculation for entry; a cohort in the mid-1920s, after the postwar enrolment boom had passed through; one at the onset of the Depression; and the last entry cohort to whose applications we had access at the time this article was written. It should also be noted that instead of calculating a retention rate by comparing the number in a given year of the course to the number who a year earlier had been in the previous class, we traced each individual through student record cards and the calendar name lists, supplemented by the convocation lists, over the entire length of that individual’s academic career. The former method cannot take account of the drop-outs, repeaters, and entrants to upper years of the course in any given year. Though a time-consuming task, our procedure is, we think, far more accurate.

Though we lack exactly comparable data, figures cited by J. W. Grove for the University of Toronto faculty of medicine, 1947-66, reveal a retention rate essentially the same as in the 1920s—about 80 percent (see J. W. Grove, Organized Medicine in Ontario, Study for the Committee on the Healing Arts [Toronto: Queen’s Printer, 1969], p. 108).

See, for example, UTA, Office of the President (Cody Papers), A68-0006/9, File: Fennell, Arthur Bertram, Fennell to Cody, 26 January 1934.

A point recognized by the university authorities, and not surprising given their less advantaged economic status. The “Hebrew problem,” as identified by the university registrar and President Cody, was clearly a reference to both their ethnicity and their frequent difficulties in paying for a medical education (compare McKillop, Matters of Mind, p. 360-61).

This generalization is based on the records of the entrants in the years 1930 and 1932; these two cohorts graduated from 1936 on and thus were attending school through the height of the Depression.

President’s Report, 1932, Report of the Dean of Medicine, p. 16.

UTA, Faculty of Medicine, Office of the Dean, A79-0023, Series 13, Box 67 (4), Meeting of the Special Committee of the Medical Council of Ontario on Curriculum and Matriculation with the Faculty of Medicine Committee, November 1923, typescript, p. 20-21. The medical faculty always flatly denied any intention to limit numbers by failing students (see, for example, UTA, Cody Papers, A68-0006/6, “Applied Science
and Engineering," Ryerson to Cody, 17 October 1932, attached to Anonymous to Mitchell, 11 October 1932), but, apart from the evidence of failure rates themselves, there was also a tendency to assume that larger entry numbers meant the presence of a larger proportion of less academically able students, who would therefore be more likely to fail their examinations—which could therefore be academically justified (see, for example, President's Report, 1933, Report of the Dean of Medicine, p. 18; and President's Report, 1936, Report of the Dean of Medicine, p. 30).

Among other factors, the creation in this period of new occupations associated with medicine which accommodated women more readily may have had something to do with the lack of women entrants into the faculty: dental nurses, for example, or physiotherapy (see Ruby Heap, "Training Women for a New 'Women's Profession': Physiotherapy Education at the University of Toronto, 1917-40," History of Education Quarterly, 35, 2 [Summer 1995]: 135-58).

See, for example, the comments by David Eisen on the difficulties of Jewish graduates in engineering in securing employment, in his Diary of a Medical Student, p. 111 n.65, 118 nn.107 and 108. His brother counselled him to give up a scholarship to study history at McMaster, specifically "on the basis of the difficulty for a Jew to obtain employment as a high school teacher in Toronto" (p. 4). See also Rosenberg, Canada's Jews, p. 272 and 304.