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Pharmacy students at the University of Tartu 1802–2010 – a historical study

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Received September 8, 2011, accepted September 21, 2011

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Pharmazie 67: 658–664 (2012)

doi: 10.1691/ph.2012.1136

The aim of this article was to give an historical overview of pharmacy education in Estonia and the social profile of pharmacy students of the University of Tartu (previously Dorpat and Jurjew) during the period 1802–2010. In addition, separate data is presented about female students and students of Estonian ethnicity. During the period observed, 6736 students studied pharmacy in the University of Tartu, of whom 4184 graduated in the specialty. The largest proportional representation by place of birth was Tartu and the Tartu region (13.5%). 42% of the students were 21–25 years old. The majority (96.84%) of the students were Estonians. At the end of the 19th century, russification of the university resulted in Russian being made the official language of instruction, with a concomitant decrease of ethnically German and an increase in ethnically Estonian students. Changes in admission policies have led to an increased number of Russian students among graduates since 2004. 2319 of the total 6736 students were female. During the period 1926–1940, women achieved the majority among graduates and they represent the majority up to the present day.

1. Introduction

The University of Tartu (previously known as Dorpat and Jurjew) was founded in 1632 by Gustav II Adolf, King of Sweden and was initially called Academia Dorpatensis. Modelled after the University of Uppsala, the new university consisted of the faculties of law, philosophy, theology and medicine. The history of the University of Tartu can be divided into three periods: the founding period (1632–1800), the Russian imperial period (1800–1918) and the Estonian-language university (1918–present) (Siilivask 1982).

During the first period, the discipline of pharmacy was closely connected to chemistry and medicine. The Faculty of Medicine had two professors who taught botany and the use of medicines for the treatment of various illnesses. The need for pharmacy studies was stated in the University constitution of 1689. In 1696, Tartu city pharmacist Gottfried Hasenfelder took his oath as pharmacist of the University and the city pharmacy entered the jurisdiction of the University (Raal et al. 2002).

On May 4 1799, the Russian Czar Paul I approved the plan for the imperial University (*Kaiserliche Universität zu Dorpat*), which included the establishment of a joint chair of chemistry and pharmacy. In 1800, Philipp Arzt, the Tallinn City Hall pharmacist, became the first Professor of Chemistry and Pharmacy at Tartu. His task was to arrange equipment for a laboratory and make preparations for studies. Unfortunately he drowned in 1802, but his work was continued by a chemist from Germany, Alexander Nicolaus Scherer. In the years that followed, several professors contributed to the development of chemistry and pharmacy at the university of Tartu. The first separate chair of pharmacy was established in 1842, along with the positions of assistant teaching staff, learned pharmacist and laboratory assistant, as well as other posts essential for teaching pharmacy. In 1843, Carl Friedrich Eduard Siller, the first Professor of Pharmacy, came to Tartu and started teaching. Thus, the year 1843 is generally con-

sidered the beginning of pharmacy teaching at the University of Tartu. For thirty years (1864–1894) the institute was managed by Professor Johann Georg Noël Dragendorff (1836–1898), who was primarily known as a forensic chemist and pharmacognost, an author of textbooks and monographs. Until the end of the second period of the history of University, the Institute was run by professor Ivan Kondakov (Raal et al. 2002; Hinrikus et al. 2007; Past and Tankler 2007; Past et al. 2009).

The beginning of the third period, February 24, 1918, coincided with Estonia's declaration of independence, followed shortly thereafter by the outbreak of War of Independence (1918–1921). The opening convocation of the Estonian-language university (*Tartu Ülikool*) was held on December 1, 1919. The discipline of pharmacy was represented at first by a professorship in pharmacognosy and an associate professorship in pharmaceutical chemistry. Teaching was initially in German and in Russian but Estonian gradually replaced them as the language of instruction. In 1925, the Institute was divided into the Institute of Pharmacognosy and the Institute of Pharmaceutical Chemistry, from which the Institute of Applied Pharmacy separated in 1936. In the postwar Soviet era (1944 to 1989) the University bore the designation *Tartu Riiklik Ülikool* (Tartu State University) and the Institutes were reallocated into corresponding departments. The Institute of Pharmacy was re-established in 2007 (Hinrikus et al. 2007; Raal et al. 2002).

This article focuses on the demographic profile of pharmacy students of the University of Tartu 1802–2010, with a view to analyzing how broader changes in society affected the student body during this period.

2. Investigations and results

Research on the history of pharmacy students at the University of Tartu was conducted by 11 students in the Institute

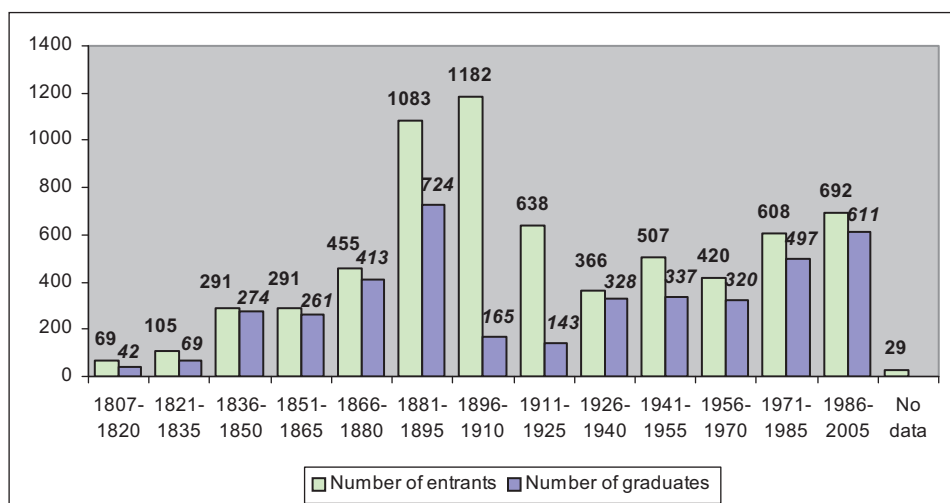


Fig. 1: Entrants and graduates of pharmacy studies at the University of Tartu in different periods

of Pharmacy in the years 1998–2010. The data was collected from the student roll books in the Estonian Historical Archives and from files located in collection number 402, inventory numbers 2, 7 and 12. Additional sources were, records from the Tartu University Archives and the books “*Tartu Ülikooli Üliõpilaskonna Teatmik*” (Report on the Students of Tartu University), “*Tērbatas Universitāte 1632–1932*”, “*Livlands und Estlands Älteste Apotheken*” (The Oldest Pharmacies of Livonia and Estonia); the journals “*Pharmacia*” and “*Eesti Rohuteadlane*” (Estonian Pharmacist), and an electronic database “*Amburger-Datenbank zu Ausländer im vorrevolutionären Russland*” (Amburger Database on Foreigners in Pre-revolutionary Russia). Data regarding the years 2000–2010 are from an electronic database compiled by the Tartu University Archives.

The electronic database contains the following data on pharmacy students of 1802–2010: student roll number; name and surname; year of birth; place of birth; parents’ social standing; years of entrance and exit or graduation; ethnicity; school previously completed. Entries for many students lacking firm data as to date of graduation; ethnicity is only ascertainable for students who graduated in the years 1919–1996. The following volumes were used for the specification of places of birth: “*Baltisches historisches Ortslexion. Estland. I*” (Historical Lexicon of Baltic Places, Estonian I), “*Baltisches historisches Ortslexion. Lettland. II*” (Historical Lexicon of Baltic Places II, Livonia), “*Estland. Adolf Richters Baltische Verkehrs- und Adressbücher*” (Estonia: Adolf Richter’s Baltic Address Book), “*Livland. Adolf Richters Verkehrs- und Adressbücher*” (Livonia: Adolf Richter’s Baltic Address Book), “*Maailma Atlas 2001*” (World Atlas 2001). The database was tabulated using the computer program Microsoft Excel.

This article derives from two electronic databases, compiled on the basis of the aforementioned research and reflecting the profiles of the pharmacy students of the University of Tartu in 1802–2010. The first database comprises all students, the second only pharmacy graduates.

2.1. Number of students

In the years 1802–2010, 6736 students studied pharmacy at the University of Tartu. The study revealed that 4184 of them completed their studies and 583 dropped out. No data about the graduation of the remaining 1969 students could be found in the archives.

Numbers of the pharmacy students in the 19th and 20th century are presented in Fig. 1. After the re-opening of Tartu University in 1802 the number of entrants was low. Before 1810, only 7 pharmacy students were admitted (Martinson and Pärna 1975). By the year 1820, the number had risen to 69. Compared to the overall number of students in the University of Tartu – 309 students enrolled in 1821 – this was a high figure. 35.1% of the total number of students were of medical and pharmacy students. Especially notable was the increase in number of the students in the Faculty of Medicine in 1809, when the government provided scholarships for foreign students, with the purpose of training them to be military surgeons. In 1812, a number of scholarship holders were transferred in to Tartu from the University of Vilnius (Siilivask 1982).

During the next 45 years, the number of the pharmacy students grew, as did the size of the total student body. Establishment of the Institute of Pharmacy in 1842 did not result in a substantial rise in student numbers (Tankler and Hinrikus 1993): the number of students enrolled in the intervals 1836–1850 and 1851–1865 was equally 291. In the whole student body, their number remained stable. In 1837–1851 the average number of students was 580. There was a slight increase in the following 10 years, but in 1862–1866 the number decreased again to 589 again. The increase in student numbers in comparison to the 1820s was probably linked to the general growth of Tartu University as one of the major centres of research and higher education in the Russian Empire. Also, in contrast to the other faculties, the medical faculty had no upper limit on the number of entrants. Because of the Crimean War (1853–1856) there was a need for trained medical professionals. Tartu University was generally specialised in training of medical doctors and pharmacists for the whole Russian Empire, hence the faculty of medicine was the proportionately largest in terms of number of students (Siilivask 1982). Higher education was also favoured by the reforms of Alexander II whose endeavour to modernize the empire brought along the establishment of private boarding schools and turned many middle schools into state operated high schools in the middle of the century (Hiio 2007c). The number of students also increased on account of the students coming from other provinces, as the universities in Vilnius and Warszawa were closed in 1832. Tartu’s reputation for favourable living conditions likewise attracted more foreign students (Siilivask 1982).

Beginning in the 1860s, the number of pharmacy students as well as other students in the University of Tartu rose substantially. If in 1865 there were 594 students, by 1889 their number

Table 1: Percentage of graduates of all students by periods

Period	Percentage of graduates	Period	Percentage of graduates
1807–1820	60.9	1911–1925	22.4
1821–1835	65.7	1926–1940	89.6
1836–1850	94.2	1941–1955	66.5
1851–1865	89.7	1956–1970	76.2
1866–1880	90.8	1971–1985	81.7
1881–1895	66.8	1986–2005	88.3
1896–1910	13.9		

had risen to 1741. This triplication was caused by much wider availability of secondary education (Siilivask 1982) and by a change in legislation, which shortened the duration of compulsory military service for recruits with higher education. Another contributing factor was the abolition of restrictions on the admission of Jewish students (Hiio 2007c). Among the faculties, the greatest growth occurred in the faculty of medicine, where the number of students increased by 740, or almost four times, during the period of 1865 to 1889 (Siilivask 1982). In part this increase can also be attributed to the closing of the pharmacy department in the Academy of Military Medicine in St. Petersburg in 1880 (Martinson and Pärna 1975). Another probable contributor to the increase in student numbers was a German scientist, Johann Georg Noël Dragendorff, in whose tenure at the University of Tartu in 1864–1894 the laboratory of the Institute of Pharmacy became a world contender in the fields of plant analysis and forensic chemistry. This period has been referred to the golden age of pharmacy in the University of Tartu (Raal et al. 2002).

Dragendorff was born in 1836 in Rostock in the family of a medical doctor. His research covered topics in forensic chemistry, environmental chemistry and phytochemistry. He also gave significant attention to teaching. During his tenure, pharmacy and forensic chemistry were separated as subjects; new practical workshops were introduced and the institute moved to a separate building with much better teaching facilities. Dissertations and award-winning papers were written under Dragendorff's supervision by his own (pharmacy and medicine) as well as visiting students. He was supervisor for a total of 90 master's and 87 doctoral thesis papers in the fields of forensic, environmental and food chemistry, pharmaceutical chemistry, pharmacology, physiology, bacteriology and pharmacognosy (Raal et al. 2009; Hinrikus et al. 2005; Tankler et al. 2002; Tomingas and Tammeorg 1976).

At the end of the 19th century the growth of the student body ceased, both in general, and specifically in the field of pharmacy. While in 1890 there were 1812 students at the University of Tartu, by 1896 their number was merely 1225. This decrease was caused in part by a restriction on the number of Jewish students: a decree that went into effect in 1886/1887 stipulated that their number should not exceed 5% of the enrolled and 10% of the pharmacy students. This decree and the departure of Baltic Germans from the university were both results of the russification reforms, which also made Russian the official language of tuition. Also, it became impossible to enter the university with a diploma from a science school (*Realschule*), which was the typical credential for a large number of Baltic Germans (Hiio 2007b).

In the first decade of the 20th century the number of students started to rise again because of several changes in the admission policies. In 1897 a decree was passed, allowing the entrance of graduates from the orthodox seminaries. The educational level of these students was not on par with graduates of gymnasias, but they had to pass entrance examinations covering the

entire gymnasium curriculum (Hiio 2007c). Despite the 1899 imposition of limits on student admission into the faculties of medicine, law, and mathematics-physics, due to lack of lecture hall and laboratory facilities, these restrictions were not in fact followed. The university continued to enrol pharmacy students and accept auditors. From 1906 onwards, admission to the university was available irrespective of the school district. A right to enter the university was granted to the graduates of 7-year science schools, law schools, commercial high schools and cadet corps, on condition that they passed the Latin examination. The student body also increased by the influx of students from other provinces of Russia, who had previously been held back by German as the language of instruction, or who had been expelled from the universities of Moscow, Khasan or Novorossiysk because of their participation in the revolutionary movement. The restrictions imposed on Jewish students were ignored, with the result that they made up 6–10% of the student body in the beginning of the 20th century (Siilivask 1982). In the second decade of the century the number of pharmacy students and graduates dropped drastically. The number of students enrolled decreased by nearly a half, and when in the years 1881–1895 66.8% of the students graduated, this number dropped to 22.4% in 1911–1925 (Table 1).

The overall number of students dropped in the whole university. While in 1907–1911 the university had about 2800 students, in 1912–1916 the respective number was 2400. One reason for this was the decrease of seminarists among the students, since other universities were also beginning to admit them (Siilivask 1982). Student enrollment was also affected by the outbreak of World War I. Many volunteers went to the front; students coming from Germany and Austria-Hungary were deported to the North of Russia (Hiio 2007d). The number of students increased in 1915–1916, but this was not a natural process. Rather, the training of standby medical doctors was intensified due to the war; also many refugees entered university (Hiio 2007c).

During the German occupation only 1011 students, including 33 pharmacy students were enrolled in the *Landesuniversität*, which was founded in 1918. The student body shrank, as most of the students coming from inner Russia discontinued their studies and most Estonian students boycotted the university because its German language and mentality. Also, since a Latvian University was being founded in Riga, many Latvians and most Latvian Germans continued their studies there. Among those were enrolled some German officers, who left with their army after the defeat in the end of the year (Tamul 2007b).

On December 1, 1919, i.e. one year after the takeover from the German occupation administration, the Estonian Republic's University of Tartu began to operate in Estonian language (Piirimäe 2007b). Among numerous other changes, chairs of galenic pharmacy and pharmaceutical recipes were established. The status of pharmacy auditors was abolished (Hiio 2007e). The university started with 347 students but after the signature of Tartu peace treaty and the demobilisation, their numbers quickly began to increase (Siilivask 1982). The number of students was positively affected by Independence War veterans who were granted a right to study free of charge. An average of 600–700 students entered annually, only in 1934 was the number of students admitted 1067 due to opening of the technical department in the faculty of mathematics and science. The economic recession had no substantial impact on the number of students entering university, probably because of widespread unemployment (Hiio 2007f). However, when tuition was raised and several other fees imposed in order to limit the number of students, the total number of students fell to 2800. The number of students also started to decline because competitive tests were introduced in 1935, and the technical department was closed (Siilivask 1982). World War II also played a role; during the fall term

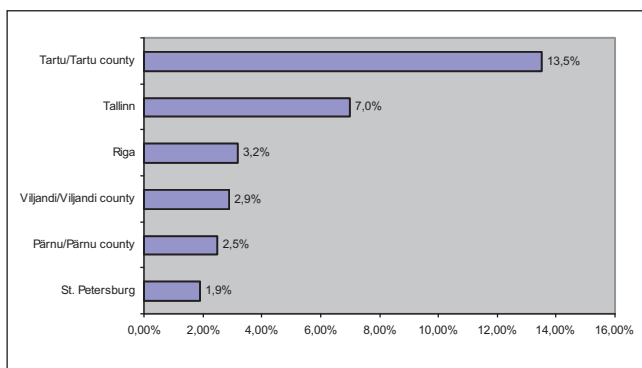


Fig. 2: The most common birthplaces of the pharmacy students by percentage of total

of 1941 the university was closed altogether (Hiio 2007f). During the German occupation (1942–1944), 1801 students were enrolled, including 133 pharmacy students (Hiio 2007g).

The Soviet university opened its doors in November 1944, made possible by the fact that the war had left most of the important facilities and clinics intact. There was still a lack of teaching staff, because many had fled and others were not permitted to teach for political reasons. The number of students began growing rapidly, and in 1950 there were already 3588, mostly Estonians. Admission was regulated by national quotas, test results and additional favours. The number of students enrolled was the biggest in the Faculty of Medicine, as preparations for a nuclear war were under way and attempts were made to provide free medical care for everybody (Hiio 2007h). The number of enrolled pharmacy students and graduates also underwent growth in the second half of the 20th century. After the 1980s, the annual number of those admitted fluctuated between 30 and 40 (Hinrikus and Raal 2007). The Faculty of Law was the second largest faculty, second only to the Faculty of Medicine, as companies needed legal advisers and a generation shift was taking place in public administration (Hiio 2007a). Other humanities fields had a smaller share of students, and theology was not taught at all (Hiio 2007h).

Since the time that Estonia regained independence in 1991, the student body has grown steadily. In 2005, nearly 14000 students studied at the University of Tartu and all its colleges (Hiio 2007i).

2.2. Students' background and age upon entrance

Of all the pharmacy students, the birthplace can be identified in 98.9% of the cases. The most common birthplace (by present administrative division) was the city of Tartu and Tartu county (13.5%), Tallinn (7.0%) and Riga (3.2%) (Fig. 2).

The above-mentioned cities were also the greatest contributors to the whole student body. Namely, 1802–1918 students from the provinces of Livonia, Curonia, St. Petersburg and Estonia dominated in the university: the abovementioned cities of origin were located in these provinces. For example, in the years 1880–1918, 21.8% of the students came from Livonia (Hiio 2007c). Throughout the 20th century the students from the Baltic Sea area constituted the majority of the student body. During the pre-World War II independence period, only 15% of the students were born outside Estonia, and of those, most were from the city or province of St. Petersburg where there was a significant Estonian diaspora. Of the students coming from Estonia, a third originated from Tallinn, Tartu and other major towns of Estonia (Hiio 2007f).

To calculate the age of the students upon entrance, their year of birth and year of admission to the university were used. The results are presented in Table 2.

Table 2: Pharmacy students by age groups upon entrance to the university

Age	Number of students	Percentage
15–20	2149	31.90
21–25	2828	42.00
26–30	1371	20.40
31–35	282	4.20
36–40	37	0.55
41–45	12	0.20
46–50	4	0.05
No data	53	0.70

We can see that out of 6736 students, 42% entered at the age of 21 to 25 years; many also belonged to the age group of 15–20 (31.9%) and 26–30 (20.4%). 5% were over 30 at the time of enrollment. Compared to the student body in general, the pharmacy students entered at somewhat older age, the main reason being a requirement in effect during a certain period in the 19th and 20th century that stipulated three years service as a pharmacist's apprentice or 2–4 years as an assistant prior to beginning the study of pharmacy at the university (Gustavson 1972). Many older men entered the university in 1942 – these were the volunteers of the Eastern front, whose contracts had been terminated by that time (Hiio 2007f).

2.3. Pharmacy students by ethnicity

The attempts at russification of the Baltic provinces were occasioned by the ethnic diversity and lack of integration inside the Russian Empire. The Russian political elite feared that Germany might annex the “German” Baltic provinces and started to propagate the idea of a nation state (Zetterberg 2010). However, one major impetus for russification, was the location of the Baltic provinces at the western border of the empire, and their controlling position with respect to the Baltic Sea. The local elite was non-Russian, Lutheran and Catholic faith dominated, and their general cultural orientation was towards the West (Andresen et al. 2010). Systematic russification of the western peripheries of the Russian state began in the first half of the 19th century and reached Estonia and Latvia in 1880–1890s (Andresen et al. 2010). In Estonia, russification peaked in the years 1887–1894 (Zetterberg 2010).

Russification of the University of Tartu started in 1884, first through assessment of the proficiency of the students in Russian language. It was then announced that new academic chairs could only be established if they operated in Russian. In 1889 the university tribunal was dissolved and the university council was deprived of its right to elect the rector, the deans and the professors (Hiio 2007b). The Faculty of Law was reorganised and by 1895, in addition to the latter, the faculties of history and languages, physics, mathematics and medicine had adopted Russian as the language of instruction. Only the Lutheran Faculty of Theology continued to function in German (Tamul 2010c). In 1893 the city of Tartu was renamed Yuryev and the name of the university was thus also changed: from *Kaiserliche Universität zu Dorpat* to *Imperatorskij Yuryevskij Universitet*. A compulsory student uniform was introduced, and the tuition fee was set to 50 rubles, as in the rest of the universities of the empire. A fixed curriculum was adopted with a strict order of subjects by terms and course years. Instead of the tests at the end of each term, the academic year ended with examinations (Siilivask 1982). Staff unable or unwilling to teach in Russian were forced to leave and replaced with other, often younger and

Table 3: Pharmacy students by ethnicity, 1919–1996

Ethnicity	Percentage
Estonian	96.84
Russian	1.10
German	1.00
Finn	0.39
Jew	0.30
Latvian	0.20
Norwegian	0.04
Swiss	0.04
Pole	0.09

less qualified academics from other Russian universities (Hiio 2007b). Simultaneously, professors teaching in Russian received higher salaries (Kangro 1970). Despite its negative effects, the russification also had its positive aspects. The influence of local nobility and conservative German professors decreased (Raun 2009). Tartu became an attractive place for many well qualified Russian researchers from the universities of St. Petersburg, Moscow and Kiyv (Andresen et al. 2010). During this period, teaching positions also became available for Estonians. Though there were few professors, Estonian assistant professors, adjunct professors and scholarship holders were numerous. Estonians holding doctoral degrees taught Estonian grammar, folklore and mythology, as well as Finnish and Livonian languages (Piirimäe 2007a).

During the period of russification, the share of Estonian students started to grow. In 1892 there had been 70 Estonian students in the university (Sepp 1932); in 1916 there were already 319 of them. In the Faculty of Medicine Estonians constituted the second biggest ethnic group after Russians. Their actual number may have been even larger, as many denied their Estonian origin and pretended to be Russians or Germans (Hiio 2007c). After the opening of the Estonian national university, 82% of the student body consisted of Estonians; after World War II their share climbed to 96–97% of the student body, with Jews and Russians in the minority (Siilivask and Palamets 1982). In the 1940–1960s the share of the Russian-speaking population in Estonia began increasing due to immigration from the rest of the Soviet Union. Therefore Russian-language departments were opened, resulting in the increase of the number of students of other ethnic origin and, by 1978, the decrease of the share of Estonians to 80% (Hiio 2007a). The most ethnically diverse was the Faculty of Medicine where in the 1970s, students of 26 different ethnicities were enrolled (Siilivask and Palamets 1982). In the last decades of the 19th century and the early 20th century, 10 to 20 new Estonian pharmacy students had been enrolled every year (Tankler and Hinrikus 1993). Table 3 shows the share of Estonian students in the Estonian-language university. Estonians made up 96.84% of the pharmacy students; such a large majority was obviously due to the fact that their native language was the language of instruction, and the impact of world wars which lowered the proportion of the minority ethnic groups.

The growth in numbers of Estonian students was also based on the improvement of the economic situation in the beginning of the 20th century, which led to the emergence of an Estonian middle class, made up of the paid employees of the manors and small entrepreneurs. Especially important was the emergence of wealthy peasants who had acquired their own farms, the consequent demand for education and the university's good reputation among the people. This social class strove to give their children a better education, thus enabling them to improve their position in society (Andresen et al. 2010). Hugo Treffner's gymnasium was a great asset for aspiring students, since it gave

Table 4: Percentage of Russian pharmacy students, 2000–2010

Graduated in	Number of Russian students	Percentage
2000	1	6.25
2001	1	3.85
2002	1	5.26
2003	4	16.00
2004	14	40.00
2005	16	42.11
2006	15	41.67
2007	11	33.33
2008	9	40.91
2009	11	40.74
2010	10	33.33

the necessary secondary education to many less affluent Estonians (Piirimäe 2007a). Learning was favoured by educational societies, founded after the revolution of 1905 and which gave their support to Estonian private schools, adult education and libraries (Raun 2009).

After Estonia regained its independence in 1991, the university's admission policies were changed once again. An essay in Estonian language was no longer required from the entrants and applicants were selected based on their results of the national exams passed at the end of secondary school. This brought more Russian-speaking pharmacy students to the university. Their share increased sharply from 2004 onwards, and is now approximately 30–40% of all pharmacy graduates of the university (Table 3).

Thus it is paradoxical that during the russification of the 19th century the proportion of Estonian pharmacy students increased, while in independent Estonia of the 21st century it has decreased (Table 4).

2.4. Increased numbers of female students

The number of students in the first half of the 20th century also increased on account of women, who in 1905 were given the right to attend lectures (Tamul 2007a). However, they were not given full rights as students, were not permitted to sit the final exams nor to receive a diploma. A 1915 imperial decree granted women full rights as university students. Between 1905 and 1915 there were 243 auditor students at the University of Tartu, 112 of whom were able to complete their studies. Women were most likely to be admitted at the Faculty of History and Languages and Faculty of Medicine. This was partly because of the World War, which required intensified training of surgeons and assistant doctors (Tamul 2007a). On the other hand, the number of male students had declined because of their recruitment into the army, so women were very welcome at the academy (Sepp 1932). Other opportunities for a woman to obtain a higher education were offered by courses at Tartu's private university and advanced courses for women (Tamul 2007a) as well as by the conservatory in St. Petersburg (Andresen et al. 2010). Throughout the years 1802 to 2010, 2319 women studied pharmacy at the University of Tartu. Their percentage during different periods is displayed in Fig. 3.

The first female student of pharmacy was admitted in 1917 and during the following decades the share of women increased constantly, so that in 1941–1970 women made up more than 90% of all pharmacy students. Beginning in the 1980s, the share of male pharmacy students has gradually increased. In the total student body there was also an increase of women, remaining between 60 and 70% in 1945–1980 (Siilivask and Palamets 1982). The proportion of women students was espe-

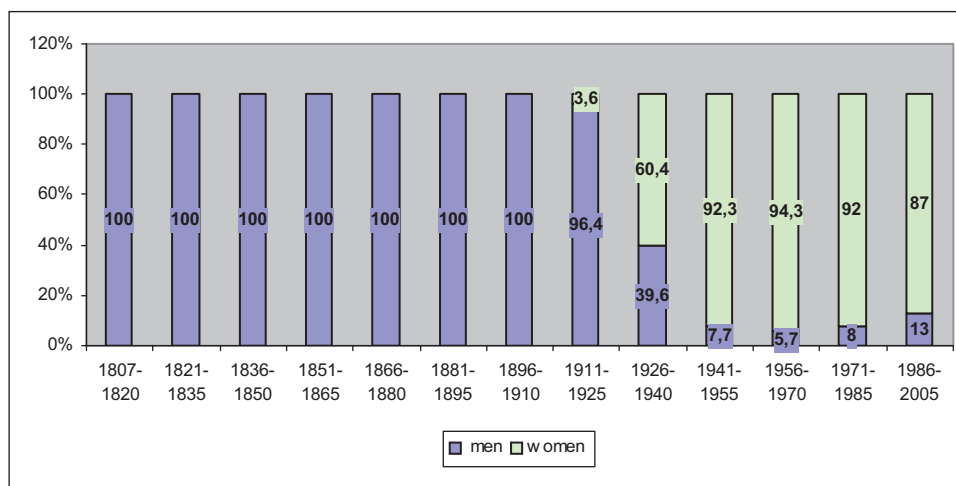


Fig. 3: Proportion of male and female students in different periods

cially high in 1985 (75%): due to the lack of potential recruits, those young men previously exempted for health reasons were also conscripted. World War II contributed to the feminisation of the student body, as many men had been killed, in the army or in prison camps (Hiio 2007a). Those who had served in the German army were not allowed to study at the University of Tartu (Mertelsmann 2006). The share of men was further decreased by the creation of Estonian Agricultural Academy and the expansion of Tallinn Polytechnic Institute, which taught subjects that were of higher interest to young men (Siilivask and Palamets 1982). Women were motivated to study because of unemployment and general poverty, as scholarships enabled one to get an education and avoid hard labour in the factories and collective farms. Girls were also more likely to have the chance to enter university, as their average marks upon graduation from the secondary school often surpassed those of the boys (Hiio 2007a). Another contributing factor was communist propaganda, which promoted equal rights for women and men (Mertelsmann 2006).

Acknowledgements: The authors would like to thank pharmacy students Triinu Linamaa, Helen Voll, Tiina Samm, Virge Seemen, Jaanika Paabo, Jekaterina Lilleorg, Julia Masljonok, Jaanika Kajara and Marko Tähnas for collecting and systematisation of data.

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