

# Medical education and academic traditions in universities and institutes of European countries through the eyes of professors, teachers and staff of the Imperial Tomsk University (1902–1914)\*

Sergey A. Nekrylov<sup>1</sup>, Alexey O. Stepnov<sup>1</sup>, Sergey F. Fominykh<sup>1</sup>

<sup>1</sup> *National Research Tomsk State University  
36 Lenin Ave., Tomsk 634050, Russia*

**Corresponding author:** Sergey A. Nekrylov (medicinahistory@yandex.ru)

---

**Received:** 20 February 2019    **Accepted:** 05 March 2019    **Published online:** 21 June 2019

---

**Citation:** Nekrylov SA, Stepnov AO, Fominykh SF (2019) Medical education and academic traditions in universities and institutes of European countries through the eyes of professors, teachers and staff of the Imperial Tomsk University (1902–1914). *History of Medicine* 6(1): 45–53. <https://doi.org/10.17720/2409-5583.v6.1.2019.06f>

---

## Abstract

This article analyses reports on trips abroad made by professors, privatdozents, laboratory assistants and prosecutors from the Imperial University of Tomsk to European countries in the period from 1902 to 1914. It examines the difficulties they faced on their visits “for research purposes” to Europe. It is emphasised that maintaining contacts with colleagues abroad was one of the key priorities for representatives of the pre-revolutionary academic community in Tomsk. The Russian academics’ observations also focused on the teaching methods used in the courses taught by leading professors from universities and institutes in Berlin, Breslau, Paris, Freiburg, Tübingen, Zürich, and so on, the contents of the lectures, the relationship between theory and practice in the educational process, and the comparative features of the mentality of foreigners and Russians. Following a comparative historical analysis, it is concluded that, despite the superiority of European university-level medical education in the period, Russians academics not only enjoyed successes in this field, but also took a critical view of the content of individual courses (legal medicine, the absence of toxicology in the programmes, etc.), the students’ general preparation, and the state of hospitals and individual laboratories (in particular, the physiological laboratory at the Pasteur Institute in Paris, etc.). At the same time, the reports studied represent the experience of mapping the biggest centres of science and education in the fields of hygiene and bacteriology, surgery and ophthalmology, legal medicine and pathological anatomy, and so on. They also reflect the particular features of the development of the medical systems of Russia and Europe, which were then part of a single “academic ecumene”, shown most clearly in attitudes to academic tradition and the participation of Professor Aleksei Kulyabko of the University of Tomsk in anniversary celebrations at Trinity College Dublin in 1912 and at the University of Groningen in 1914.

---

## Keywords

medical education, academic traditions, Tomsk University, European countries, teaching methods

---

The first centre of scientific education in Asian Russia was established in 1878 with the founding of the Imperial University of Tomsk (which opened in 1888, and initially had a single faculty – of medicine). However, its remoteness from European centres of science deprived it of one of the most important prerequisites for

academic work: regular academic communication and the sharing of information on the latest teaching methods. At the same time, Tomsk around the turn of the twentieth century was a city, the spirit and, to an extent, the architecture and traditions of which drew on typically European ideas. For a long time, its distinguishing feature was an eclectic combination of the ancient and modern. At various times, Tomsk has been called the “Siberian Athens” and the “Soviet Oxford”.

---

\* This study has been carried out with the support of a grant from the Russian Science Foundation (Project No. 18-18-00121)

For the professors, lecturers and staff of the University of Tomsk in its first decades (up until the restoration of Soviet power in the city at the end of 1919), maintaining contacts with foreign colleagues was a key priority. This was achieved primarily through academic visits, which usually involved a lengthy stay abroad.

On these trips to Europe, the professors and lecturers not only learned about how academic research was organised at universities and institutes, but also studied the principles underlying their management of academic affairs, visited archives and libraries, and addressed conferences and congresses. In addition, they often purchased literature, instruments and artefacts with their own money while abroad, giving them to the university's library, armamentaria, laboratories and museums on their return to Tomsk.

They faced various difficulties in connection with the trips. One of the most important conditions for granting them was that they had to take place at set times in the academic year, and a replacement for the person travelling had to be available, or their lecture course moved to another semester, if the trip took place during class time. In practice, it was often difficult to meet this condition because of the small numbers of staff in the departments. Furthermore, the trustees of the West Siberian educational district and the Ministry of National Education were not keen on the visits. Not infrequently, even requests from the university council for permission for a trip were refused. The professors had to make the majority of the visits during vacation time (Nekrylov 2010, p. 341).

In his report on his trip to Berlin, Würzburg and Munich in 1902–1904, Doctor of Medicine Pavel Butyagin, a laboratory assistant in the Department of Medicine at the University of Tomsk, highlighted “the inconvenience of scheduling the trip from 1 to 1 January”: the academic could go only in the middle of the winter semester, when “the enrolment for the lectures was already over”, and at the end of the trip, having paid for all the lectures and classes in the winter semester – i.e. from November to March, had to break off the classes as early as the middle of December (Butyagin 1905, p. 52–53).

It was also difficult at the time to gain access to well-known academics without obtaining a letter of recommendation in advance. For example, Doctor of Medicine Ivan Valedinskiy, a privatdozent from the University of Tomsk who travelled to Paris and Berlin for research purposes in the academic year 1911–1912, could not fail while in Germany to pay his respects to “the pride of modern German medical science”, the Nobel Prize winner Paul Ehrlich. According to Valedinskiy, opportunities to work at the professor's institute then were limited. However, using as a pretext for a meeting the need to study the potential of triparosan, the beneficial effects of which on the lungs in cases of tuberculosis Valedinskiy had heard about from Profes-

sor Sergei Levashov, from Odessa, in 1912, the Tomsk academic went to the Institute of Experimental Therapy in Frankfurt am Main. He asked Erlich in person for the medicine. While waiting for the great scientist in his waiting room, Valedinskiy noticed that it seemed that there was “not a single well-known name in medical science and biology” that did not appear in the old reception book. Without a recommendation, however, the young academic encountered a rather cold welcome. Valedinskiy wrote: “I was struck by his [Erlich's] diminutive figure, which was completely at odds with his great scientific reputation: this little old man, short in height, already a little hunchbacked and looking out from under his spectacles... Was evidently not minded to give the triparosan, seeing in front of him someone totally unknown to him requesting it”. The situation was saved when Valedinskiy mentioned that he worked at Tomsk: Mikhail Kurlov, a professor and physician at the University of Tomsk, had once studied under Erlich. Remembering this, Erlich “livened up a little and began to ask about Siberia”. Two hours later, Valedinskiy received “a simple and courteous reception” from the professor, who gave him a vial of the medicine (Valedinskiy 1914, p. 35–37).

Butyagin emphasised that the opportunity to work at Breslau under the celebrated Professor Carl Flügge “without advance notice” came about “thanks to the kindness of Professor [Volodymyr] Vysokovych”, who provided the Tomsk academic with a recommendation when he passed through Kiev (Butyagin 1905, p. 1). Mikhail Rayskiy, a privatdozent who went to the Institute of Legal Medicine in Berlin to work under Fritz Strassmann, obtained a recommendation in advance from his teacher, Professor Mikhail Popov of the University of Tomsk (Rayskiy 1910, p. 1).

Once they had decided where to work and study, the visiting academics soon found plenty to do. For example, in Berlin Rayskiy attended practical courses under the Director of the Institute of Pathology, Johannes Orth, from 7:30 to 10:30 am, and by 11:00 he had moved on to Strassmann for classes on legal medicine (Rayskiy 1910, p. 19). As well as attending practical classes, the professors took lecture courses and engaged in independent research under the supervision of European scientists. At Breslau, Butyagin worked in Professor Albert Ladenburg's laboratory until lunch, and then, from 4:00 to 6:00 pm, attended Flügge's lectures, after which he worked in the professor's laboratory. Once, after a lecture, Butyagin went to the chemistry laboratory for a lecture by privat associate professor Hertz (Butyagin 1905, p. 22).

However, it was not always possible to get hold of such scientists. For example, in 1902, Nikolai Spasskiy, a prosector from the Department of Physiology, planned to do research at the laboratory of Professor Arsène d'Arsonval in Paris. However, it turned out that the latter was at the time occupied with “secret

experiments for the Naval Ministry”, and Professor Danilevskiy was then working in his laboratory. After attending d’Arsonval’s spring lecture at the Collège de France and having waited for May, when the laboratory became available, Spasskiy did not receive a reply to his next letter. In September, he learned that d’Arsonval had gone to spend the whole winter in a village “because of illness” (Spasskiy 1904, p. 97, 101, 102). The Tomsk prosecutor’s trip ended on 1 January 1903, and he never did get the chance to work in the renowned professor’s laboratory.

Foreign trips could also be expensive. Despite the subsidies from the Ministry of National Education, travelling from Tomsk to Saint Petersburg, and then Europe, living abroad, and buying medicines and literature entailed considerable costs, some of which the Tomsk academics paid for out of their pockets.

Despite all this, representatives of the Imperial University of Tomsk made 246 academic visits to European countries in the period from 1888 and 1917, with the majority (211) coming in the period from 1899 to 1914. 179 of these were made by teachers and staff from the Faculty of Medicine (Nekrylov 2010, p. 363). The first person to approach the University Council with a request to go on a trip abroad was Professor Nikolai Maliev, from the Department of Anatomy, in 1888 (*Zhurnal zasedaniy...* 1889, p. 117). His trip, the aim of which was to learn about “the current state of Europe’s best institutes of anatomy” for the benefit of the museum of anatomy then being established in Tomsk, and “to introduce the latest accessories for anatomy teaching”, took place in May–September the next year, 1889 (*Otchet o sostoyanii...* 1890, p. 18).

Reports on the visits were submitted to the Ministry of National Education, where they were reviewed at meetings of the main department of the Academic Committee. Some reports were published in the journal *Izvestiia Tomskogo universiteta*. This study focuses on 11 reports prepared for publication by professors, privatdozents, laboratory assistants and prosecutors from the university. They relate to the period when the trips were most frequent: from 1902 to 1914. Most of these were to France, primarily Paris, as well as Switzerland, Austria-Hungary and various cities in the German Empire – a scientific “superpower” at the time that, according to Valedinskiy, “both from a theoretical” point of view, and in terms of “the research and practice structure of its clinics and teaching set-up” “all but [held] first place among other European medical schools”. Leipzig, Munich, Breslau and Berlin “stood out for the wealth and diversity both of all kinds of medical establishments and clinics in general, and of their therapeutic ones in particular”. The universities and institutes in German cities at the start of the century became “Meccas” for scientists from all over the world, who formed particular international enclaves. Rayskiy recalled that “the Japanese almost always vi-

sited” the laboratories at the Institute of Pathology in Berlin (Rayskiy 1910, p. 29). The lectures of Johannes Orth always attracted foreigners, among whom Rayskiy encountered not only Japanese scientists, but also Italians, Greeks, Austrians, Bulgarians, Americans, and other nationalities. In describing the university clinic at Freiburg, headed by Professor Theodor Axenfeld, Pavel Chistyakov, a laboratory assistant at the clinic at the University of Tomsk’s Department of Ophthalmology who visited Germany in 1910, emphasised that it enjoyed “international renown”. In summer 1910 alone, more than ten physicians from the USA, Japan, Italy, the Netherlands, and Russia worked in the professor’s laboratory (Chistyakov 1911, p. 4).

The central role played by Europe, primarily Germany, in medical science at the time motivated Russian academics and teachers to look closely at the teaching methods used in the courses taught by leading professors, the contents of their lectures, and the relationship between theory and practice, and to identify differences in mentalities by comparing foreigners and Russians. Attitudes to tradition also played a significant role. A connecting role was played here by Professor Aleksei Kulyabko of the Imperial University of Tomsk, who was the first person to revive a person’s heart twenty hours after their death. In 1912, he attended the 200th anniversary celebrations of the School of Medicine at Trinity College Dublin, and in 1914 he was present at the 300th anniversary celebrations of the University of Groningen.

Combining practical classes in laboratories at European institutes with attending lectures, the Tomsk academics always rated the course teaching set-up highly. Working with Professor Carl Flügge at the Institute of Hygiene in Breslau (as well as under the supervision of his assistant, Dr. Emil Gotschlich), Butyagin attended his systematic course in bacteriology. The course taught by this leading German microbiologist, hygienist and epidemiologist was of a general nature, and, observed Butyagin, “covered the methods usually used in Flügge’s laboratory, as well as the latest methods of studying bacteria in pure cultures and the tissues of living organisms”. Butyagin wrote: “One can easily judge the detail in which Flügge regards it necessary to present information on bacteriology to the students” (Butyagin 1905, p. 23).

Before each class, Flügge would write the lesson plan on the board and spend 20–25 minutes explaining it. The lecture material was closely connected to practice: the students took it in turns to work in the laboratory for six weeks each. All the classes there for the trainees were “completely free of charge”. Each was assigned their own place, a microscope, staining solutions and other things needed for bacteriological research. Six assistants of Flügge supervised the trainees’ classes, which was also “the greatest convenience”. The students learned about methods of diagnosis and

microorganism staining, and approaches to diagnosing typhus and diphtheria, including at the diagnostic facility at the institute, where the professor's assistants also worked every day. Occasionally, there were excursions for the students to learn about the workings of the city's sanitary facilities – Breslau's water supply system, abattoir and livestock market, and so on. "I have to say," emphasised Butyagin, "that the students who have taken the course undoubtedly acquire sufficient practical experience" (Butyagin 1905, p. 5–7).

Butyagin's interests also included Flügge's short practical course on bacteriology. He learned about preventive inoculation techniques, methods of disinfection, and took in a review of the latest teaching on immunity and its types and theories. The formation and action of antitoxins, agglutinins and bacteriolysins were examined by the lecturer from the viewpoint of Erlich's "side-chain theory", which was then popular in the German school but accepted by few people in France. Flügge regarded bacteriology as a "separate chapter" and introduction to hygiene. At the same time, the professor devoted much more time to bacteriology, at the expense of hygiene itself, as a result of which Butyagin received the impression that "it is as if hygiene exists under bacteriology and is a component of it, rather than vice versa" (Butyagin 1905, p. 35–36).

The students also addressed questions of the role and significance of microorganisms in nature and their classification. The courses were not limited to a theoretical exposition of the material: they were always accompanied by a demonstration of "masses of cartograms, drawings, devices and instruments". Adjacent to the lecture theatre were two rooms that could be entered after the lecture, in which there was an exhibition of microscopic slides of various microorganisms under 10–15 microscopes.

Butyagin wrote that during the semester Flügge sometimes set up discussion groups instead of the scheduled lecture, inviting the students themselves to choose the topic and the questions to be addressed. However, he also noted that the professor effectively "did not hold any" practical classes for the students, which, in the Russian academic's view, was more of a shortcoming. He also regarded the presentation of the hygiene course, to which the second half of the winter semester was devoted as brief and sketchy. Butyagin observed: "In teaching the course, Flügge, who, evidently, Himself recognises the inadequacy of the information being given on hygiene, not infrequently states directly that details on a particular issue may be found in his hygiene textbook" (Butyagin 1905, p. 30).

More effective in this sense, according to Butyagin, was the Würzburg Institute of Hygiene, where "bacteriology does not preponderate". There, he met Professor Karl Bernhard Lehmann, a hygienist thanks to whose work Würzburg had become the "capital" for hygienists from Germany and worldwide, leaving Munich behind

since the death of Max Joseph von Pettenkofer. "Lehmann himself," observes Butyagin, "may be called a zealous follower of the opinions and ideas of Pettenkofer, whose school he indeed comes from". Like Flügge in Breslau, Lehmann, whose theory lectures on hygiene Butyagin attended, took a meticulous approach to demonstrating during his lectures an "enormous amount of material", drawing on the splendid collections of the local museum and "an abundance of teaching aids". In general, Butyagin rated the teaching of hygiene under Lehmann highly, noting its "great instructiveness".

High school teaching in Paris, which Spasskiy visited at roughly the same time, had its specific features. The prosector from the University of Tomsk attended lectures and practical classes at the *École de Médecine* in Paris, including those taught by Professor Langlois. In Spasskiy's opinion, the lectures on physiology there were "exclusively theoretical", with no experiments or demonstrations, which were performed separately under the supervision of other professors and their assistants. Furthermore, despite the lectures not being compulsory for grading in the semester, the students willingly attended them.

The timetable was also unusual. There were no lectures in the morning: before noon, the students worked in hospitals under the supervision of their qualified colleagues, externs, interns and the *Chef de Service*. Spasskiy noted some excellent lectures by individual professors, who presented the material "in vivid language" (Spasskiy 1904, p. 97). He also observed that the practical classes in physiology in the laboratories were accompanied not so much by "practical work" per se, as by demonstration, instructions on how to use an ophthalmoscope, a saccharimeter, methods of electrodiagnosis, and so on.

Aleksandr Bogolepov, a laboratory assistant in the dermatology clinic at the University of Tomsk who worked in Paris from April to September 1907, mainly at the *Hôpital Saint-Louis* (and also visited Hamburg to see Doctor Paul Unna's laboratory), was most interested not in the teaching itself, but in the theoretical side (everything to do with dermatology and syphilology and certain aspects of urology) of the French school of Dermatology, which he learned about on a two-month university course taught by Professor Philippe Gaucher with the participation of 18 lecturers. The Russian physician was particularly interested in learning about heredo-syphilis, which was then just beginning to spread in Russia. "Russian doctors," observed Bogolepov, "spend more time studying acquired syphilis." An exception was Professor Benjamin Tarnowsky, "who laid the foundation stone for the study of congenital syphilis in Russia". The young scientist was also attracted by a course on the use of electrotherapy for skin diseases, taught by Louis-Anne-Jean Brocq. Bogolepov wrote: "I willingly signed up for this course in

the expectation that at some time trichophytia will be treated using this method at our clinic too” (Bogolepov 1909, p. 7).

At the same time, there was also room for criticism in the Tomsk academics’ reports. For example, Rayskiy noted in 1907 that it was only since 1901 that it had been compulsory for medical students in Germany to take a course in legal medicine (previously, this had been optional). He was perplexed by the lack of practical classes in this subject, and even, at the universities of Strasbourg and Jena, of theoretical ones as well. “These last-named universities,” observed Rayskiy, “are merely indicators of the past. One may assume that they will not maintain their negative attitude to our science for long” (Rayskiy 1910, p. 4).

At the University of Berlin, Professor Fritz Strassmann taught a theory course covering the principles of the judicial system and judicial proceedings in Germany, and teaching on fatal injuries and various forms of violent death (forms of asphyxiation, deaths from wounds caused by sharp weapons, blunt weapons and firearms, as well as suicide, miscarriages and infanticide). Rayskiy, not without regret, noted that Professor Strassmann did not address other areas of legal medicine. The lectures were accompanied by a demonstration of anatomical specimens from a local museum, drawings and photographs, original works and monographs. The practical course took place in a large autopsy room at the *Unterrichtsanstalt für Staatsarzneikunde* (the name of which dated back to a time when legal medicine was not yet separate from hygiene), a large three-storey building at the morgue. There were not enough microscopes in the classroom, but there were examinations of living people, under the supervision of a *privatdozent*, Curt Strauch, and dissections of cadavers (accessible to trainee doctors, but not to students). This course, in Rayskiy’s assessment, shed light on all areas of legal medicine, albeit unevenly, but there was no unit on poisonings. This “incompleteness” was exacerbated by the fact that toxicology at German universities was usually taught by pharmacology teachers. Unlike Butyagin, who bemoaned the lack of practical classes at Breslau’s Institute of Hygiene, Rayskiy criticised the opposite tendency he observed at the University of Berlin, where the courses on legal medicine were marked by their “glaring domination”: “For every two hours of theory lectures, there are eight hours of practical” (Rayskiy 1910, p. 10). One reason for this was the make-up of the audience, which included a considerable number of future district doctors.

The views of Doctor of Medicine Pavel Chistyakov were also critical and reflexive. He attended lectures by Richard Greeff, a professor of ophthalmology, at the Charité, and noted that, despite the abundance of clinical material (models of external eye diseases, cases of early, advanced and late-stage interstitial keratitis, etc.), the course was not “strictly systematic” (Chistyakov

1911, p. 2). At the same time, Chistyakov praised the teaching of eye diseases at Professor Theodor Axenfeld’s clinic in Freiburg, where the lecture theatre was equipped with stereoscopes, with the help of which various forms of external eye conditions could be observed, as well as a projector, which proved “a most valuable aid” (Chistyakov 1911, p. 5, 6).

Rayskiy was greatly enthused by the courses in pathological anatomy run at the University of Berlin by Professor Johannes Orth, who was also the Director of the Institute of Pathology, (in the vestibule on this institute’s first floor there were two marble busts, one of Orth and “the father of modern pathology”, Rudolf Virchow). The practical course was accompanied by “detailed dissection of cadavers”, showing possible variations of the technique. Individual lectures were devoted to dissection of the brain and its meninges, the chest cavity, and then the abdominal cavity. Material (parts of autopsied cadavers and diseased organs) for the course was provided by the institute’s autopsy material. Rayskiy noted that there was always plenty of material (Rayskiy 1910, p. 16).

The specimens were set out on wooden trays and plates on tables against the wall, on which there were also microscope slides, the stained sections of which, after the macroscopic aspects had been analysed and the lecture theatre curtains let down, were projected onto a screen. Orth explained to his audience the pathological changes taking place in the organs and confirming the macroscopic diagnosis. The professor always had two assistants standing by him. Rayskiy wrote: “It must be said that the course is very comprehensive. It covers all areas of pathological histology” (Rayskiy 1910, p. 18).

The course was also accompanied by a detailed review of the literature, and an outline of the development of various branches of medicine. The conceptual framework for the presentation of the material was provided by the teachings of Morgagni and Virchow, whose portraits, adorned with laurel wreaths, hung in a single frame in the lecture theatre above the lectern. Rayskiy gave the following description of Orth’s lectures on general and clinical anatomy: “The lectures were presented so ardently, so convincingly, with such knowledge of the history of medicine and those stages which medical and pathoanatomical viewpoints have gone through or are going through, such erudition and knowledge of the general and pathological literature from the lecturer, that he unwittingly captivated the audience... These lectures are fully comparable to talks by a talented clinician by a patient’s bedside, with the difference that such a talk is given here next to a corpse as a lesson to the living... It is a comprehensive, detailed and highly academically valuable series of lectures... He is one of the most popular lecturers” (Rayskiy 1910, p. 20, 23).

It is also worth mentioning the more detailed scientific portrait Rayskiy provides of Orth, who had by then

held a professorship at the University of Berlin for more than thirty years. The sixty-year-old scientist remained “a sprightly and lively person”. An active organiser of learning, brilliant lecturer, and “first-hand witness of the development and flourishing of pathological anatomy in the second half of the nineteenth century”, Orth was popular with students, physicians, the institute’s department heads, and the staff at the journal *Virchow’s Archives*, which he edited. In Rayskiy’s opinion, he was “one of Germany’s best teachers”.

Doctor of Medicine Nikolai Bereznegovskiy also had a high opinion of Orth’s lectures, and was also particularly interested in the demonstrations of the multitude of specimens, since the institute’s museum was one of the wealthiest in the world. “The microscope slides,” he wrote, “are displayed on a screen with the help of a magic lantern. The resulting pictures are very clear and instructive” (Bereznegovskiy 1911, p. 38–39). In 1911–1912, Doctor of Medicine Viktor Mirolubov, a privatdozent and prosector from the Department of Pathological Anatomy at the University of Tomsk, also saw the marble bust of Virchow, adorned with living flowers, at the Institute of Pathology in Berlin. He too was impressed by the abundance of materials used in lectures on general pathology by Orth and others. For example, the theoretical aspects of the influence of heredity on the development of diseases were explained using drawings and diagrams, particularly on haemophilia, polydactyly, typhoid and tuberculosis, and the family tree of Don Carlos, showing “the relationship of alcoholism to degeneration” (Mirolubov 1914, p. 5). The biological causes of diseases were explained through demonstrations of numerous parasites and false parasites, and lectures on abnormalities were illustrated with tables of their classification, and slides. Animals with various pathologies, and so on, were also demonstrated.

Orth’s course on pathological anatomy also featured a wealth of material. Mirolubov wrote: “Since there can be from four to six dissections a day at Berlin’s Institute of Pathology, there can be a lot of material... Such an abundance of material can be provided only in the conditions of Berlin’s Institute of Pathology.” Orth’s presentation of the lecture material was marked by accuracy and clarity, thanks to which, according to the Tomsk academic, the audience “received a full and complete picture” (Mirolubov 1914, p. 12, 16). With regard to the course in clinical pathological anatomy, Mirolubov believed that “the presentation of this subject was even more eye-catching than Orth’s previous course on general pathology” (Mirolubov 1914, p. 22). The Tomsk academic also noted the influence of Virchow’s teachings on the lecturer.

Coming back to the idea that medical education and practice were superior in Germany during the period in question, it should be stressed that on his later visits to Paris and Zürich Mirolubov was more restrained in

his assessment. For example, in describing the Institute of Pathology in Paris he wrote: “After the pristine and wealthy Berlin Institute of Pathology, Paris’s is not impressive”. He was also unimpressed with the Institute of Pathology in Zurich, except for the good lighting in the dissecting room and the fact that it had an amphitheatre: “Apart from this, the institute offers nothing special” (Nekrylov 2010, p. 28).

In 1909, Bereznegovskiy attended a course of lectures taught by the celebrated professor of surgery August Bier, Director of the Royal Clinic in Berlin. These lectures were accompanied by a demonstration of patients who had been operated on, which made it possible to assess the merits of the method used and to show that “only contact infection” was dangerous. Particular consideration was given to the practical component, when the students, with the professor watching, examined patients and, from reading the case history of their disease, established its clinical form.

Bier, who, wrote Bereznegovskiy, was called a genius in the press, greatly impressed the Tomsk academic, as did the set-up of his clinic: “Bier’s popularity in Berlin is huge. The amount of physicians from literally all corners of the world visit his clinic has to be seen... It is hard to imagine someone in whom all the qualities of an outstanding professor are combined as they are in Bier’s persona. His stately figure, superb diction, vivacity in teaching, originality of scientific opinions, superb operating technique – all this, taken together, creates quite a harmonious whole” (Bereznegovskiy 1911, p. 16). He was also impressed by the fact that Bier valued folk medicine extremely highly, and not infrequently referred in his lectures to its “deep meaning”, which even influenced the surgeon’s discoveries (Bereznegovskiy 1911, p. 18). Mykola Bohoraz, a privatdozent from the University of Tomsk, who also visited the professor’s clinic in Berlin, wrote that Bier was the most famous surgeon at the time, while the clinic itself was “Berlin’s main centre of scientific surgery”: “So often has this clinic’s operating theatre been described in print, so many images of it have been circulated all over the world, that there can hardly be a physician who does not more or less have an idea of it in their mind” (Bogoraz 1911, p. 14, 15).

Bereznegovskiy was also impressed by the lectures by Professor Otto Hildebrand at the Charité’s surgical clinic, by Professor Victor von Bruns, Director of the surgical clinic at Tübingen, and so on (Bereznegovskiy 1911, p. 34–35, 48–52).

“A true masterpiece of vivid and lively lectures” was how Valedinskiy described the lectures of Professor Friedrich Kraus from the Second Medical Clinic in Berlin (the Charité). Describing his lectures on typhoid, he wrote: “Kraus painted a picture of typhoid fever and all the stages of its course with such artistic skill that, I think, the audience will never forget the main symptoms of this disease. And the audience ex-

pressed its approval to the lecturer quite demonstratively... If the comparison is permitted, Kraus may be likened to a fine performer, who captivates the audience and gets carried away himself” (Valedinskiy 1914, p. 4, 8). However, he was especially interested in lectures and demonstrations concerning electrocardiography: it was at Kraus’s clinic that this method was first introduced (Valedinskiy 1914, p. 6).

At the systematic lectures and practical classes organised by Kraus, Valedinskiy found “a great wealth of clinical material”. The superbly equipped lecture theatre, in the form of an amphitheatre, with excellent lighting and supplied with electricity, gas, hot and cold water, a projector, and so on, also played no small role here. During the semester, almost all areas of the clinical pathology of internal diseases were covered. The Russian academic also learned about many “interesting case studies”, original opinions on certain clinical matters, and the latest clinical research methods (apart from electrocardiography, this meant X-raying) which, in his words, helped in “developing confidence in clinical knowledge” and “generating new ideas”. Valedinskiy also rated the content of the theory lectures on bacteriology and, in particular, the practical classes at the Robert Koch Institute in Berlin highly (Valedinskiy 1914, p. 81–82).

With regard to medical education, the issue of feedback, which concerns the recipients of such education – the students and trainee doctors – cannot be ignored. The reports studied for this research also contain broader generalisations relating to national psychology and mentality. Rayskiy wrote: “The German student is conscientious. Having paid for the course, he then attends the lectures diligently... Those arriving late enter carefully, trying not to disturb the classes. If they fail in this, the audience expresses its dissatisfaction with the disturbance of the silence by shuffling its feet” (Rayskiy 1910, p. 32).

At the same time, Rayskiy also emphasised that on Professor Strassmann’s course it was physicians rather than students who diligently attended the classes. Once, noticing some empty seats in the lecture theatre, one of Strassmann’s assistants, writes Rayskiy, said: “It’s too hot today. The students are probably sitting in bars and drinking beer, and they’re hardly going to come to a lecture” (Rayskiy 1910, p. 7).

Mirolyubov, in attending Orth’s brilliant lectures, could not fail to notice that “an unfortunate aspect” of the classes was “the insufficient independence of those studying” (Mirolyubov 1914, p. 16). Bereznegovskiy also observed that the students were “generally not particularly strongly prepared” for the lecture tests, including the analysis of new patients under Bier. “In most cases, they either keep silent or give answers that are far from correct”, wrote the Russian surgeon (Bereznegovskiy 1911, p. 16). At one of the lectures, the sceptically minded Chistyakov was struck by the discrepan-

cy between “the rich and complex clinical forms” and “the extremely weak answers of the regular students” (Chistyakov 1911, p. 3).

Butyagin noted something curious in his report: during his lectures, Professor Lehmann regularly asked the audience questions to which “the answers can be satisfactory, but also frequently, very wrong”. This greatly upset the lecturer. After one of the lectures, Lehmann even asked Butyagin a question: “So how is it with you in Russia – the students are probably better prepared and do not give such answers?” (Butyagin 1905, p. 49–50).

As such, it may be said that the pedantry and love of order so often ascribed to the German character were not in general distinguishing qualities of German students. However, this once again confirms that while the Western academic culture was admired by the Russian academics and teachers from the Imperial University of Tomsk, it also produced a reflexive approach. One may recall Valedinskiy’s comments on the First Medical Clinic in Berlin, then still located in its old building, the new one having yet to be built: “In its peripherals,” he wrote, “the clinic is reminiscent of our old ‘Board [of Public Welfare –authors’ note]’ hospitals: the floors are wooden and unpainted, with a dark corridor in the middle onto which the wards open” (Valedinskiy 1914, p. 21). Chistyakov reported that the Vienna Eye Clinic, which, it was assumed in 1910, still had a long time left in its old building, also “smelled of the familiar atmosphere of the Tomsk Board of Public Welfare Hospital... The same smell, the same cramped conditions, but, on the other hand, a huge amount of clinical material!” (Chistyakov 1911, p. 8). These comments are supported by the report by Bohoraz, who observed that of all “foreign clinics the Vienna clinics are most like the Russian” (Bogoraz 1911, p. 4).

In 1902, K.F. Dmitrievskiy, a laboratory assistant in the University of Tomsk’s Department of General Pathology, travelled to Paris for research purposes, stopping off beforehand in Saint Petersburg, where he had the opportunity to observe the work of Ivan Pavlov at the Imperial Institute of Experimental Medicine. Subsequently, he noted that the physiological unit at the Pasteur Institute was “inferior in many ways in its organisation to the laboratory at our [the Saint Petersburg – authors’ note] Institute of Experimental Medicine” (Dmitrievskiy 1904, p. 108).

Rayskiy also tells us that the standard of toxicology, an area of legal medicine, at German universities was low, while at Russian universities it was always read “at a faculty of legal medicine”. “For a Russian,” observed Rayskiy, “knowledge of toxicology is simply a necessity” (Rayskiy 1910, p. 33, 34).

Comparing the “Western” with the “Russian” was unavoidable when assessing universities and institutes, as well as clinics and laboratories, and the foreign ones were not always preferred. This also applied to how

the teaching was organised. For example, Valedinskiy wrote in his report: “It is true that even for us in Russia it is not the case that everything is bad. Our medical education in its general trend is no worse than of Western Europe, and one can do scientific work just as well in our country. In my opinion, if Western European clinics and academics do have advantages, they are more of a technical nature. The clinics are better built, the laboratories are richly equipped, work and labour are well regulated, and all this makes the classes easier” (Valedinskiy 1914, p. 45).

We will refrain from tendentious conclusions with regard to comparing the medical systems, in particular medical education, where Europe’s superiority during the period in question was obvious even to the Tomsk academics. What is important is that, as products of a common civilisation, Russia and Europe were heading in the same direction in the field of medicine. A clear example of this “invisible kinship” was provided by the academic traditions most clearly seen in festivities. Professor Kulyabko, who represented the Imperial University of Tomsk at 200th anniversary celebrations of the School of Medicine at Trinity College Dublin in 1912, noticed in particular the “loyalty to the traditions of the good old days”, which motivated the use on ceremonial occasions of “Latin, which was once a universal international language of science, but, unfortunately, has lost this significance in recent times” (Kulyabko 1912, p. 51). The tradition of a “country of academics” with no borders or nations, was reflected in the “dead Latin” in which invitations were sent to universities and other academic institutions from Dublin. There was even a greeting from the University of Tomsk in Latin: “E profundis nivibus gelidae ac remotae Siberiae”. This was written on parchment in Gothic letters, featuring a delicate artistic vignette (by Nikolai Tkachenko, an artist from Tomsk) and enclosed in a velvet folder embroidered with the Russian coat of arms and a headline.

At the unveiling of a monument to John Stearne, the founder of the School of Medicine Trinity College, and its oldest member; at a ceremonial procession to the Royal College of Physicians and at a reception hosted by the President of the College; at the official presentation of the guests in the Long Room at the College Library to the Chancellor of the local University, Viscount Iveagh, and the Provost of the College, Dr. Anthony Traill, who were dressed in embroidered golden robes; at a banquet with a prayer reading at the Mansion House; at a ceremony where addresses were presented from Austria, Belgium, the Netherlands, Switzerland, France and the United States, India, Egypt, Australia, England and Scotland, and other countries; at a performance of a play by Oliver Goldsmith by members of the University of Dublin Dramatic Society; at a celebratory meeting of the Senate of the University of Dublin; at a garden party in the Trinity College gardens; and, finally at a farewell banquet put on by the Provost and senior

members of Trinity College – in all this, Kulyabko saw features of celebration “so typical of English university life and little known” to him and his colleagues. The professor wrote: “The loyalty shown everywhere to their native land, to age-old traditions and rituals, stands out. And in these age-old rituals, in these long mediaeval gowns and berets there is so much solemnity and splendour, so much proud recognition of one’s worth” (Kulyabko 1912, p. 76–77).

The Siberian professor may have encountered found the same respect for tradition at the University of Groningen’s anniversary celebrations in summer 1914. Once again, he delivered a greeting in Latin, this time to a Dutch city. He was welcomed by a reception from the Rector and Senate of the University of Groningen, at the end of which a student choir performed a serenade. Again, the professor witnessed some festivities, this time at the Nieuwe Kerk. As part of the Russian delegation, Kulyabko presented an address from the University of Tomsk. By tradition, one of the representatives delivered a greeting. On behalf of the Russian academics, Tadeusz Zielinski, a professor of philology from Saint Petersburg, did so on 30 June – in impeccable Latin, which, according to Kulyabko, “evidently made a good impression and drew attention”. At a celebratory meeting of the University of Groningen Council on 1 July, Zielinski was awarded an honorary doctorate, and Professor Kulyabko, as “a representative of one of the most remote universities”, was presented to Queen Wilhelmina (Kulyabko 1915, p. 2).

The reports on the trips abroad by representatives of the Imperial University of Tomsk to Germany, France, Austria and Switzerland contain elements of the reverence of a “younger brother”. Their experience is valuable not only from the viewpoint of attitudes to European educational practices and science, but also as a source of evidence on an external view of medicine in these countries, as an attempt at mapping the biggest centres of science and education in the fields of hygiene and bacteriology, surgery and ophthalmology, legal medicine and pathological anatomy, and so on.

However, recognising their superiority did not mean blindly accepting them: there was room for criticism and reflection with regard to the “Russian” and the “other” in their assessments of the teaching methods, the students’ preparation, and the material resources of the universities and institutes. After all, medicine, and science and education in general, in Russia and Europe at the time were part of a single “academic ecumene”, which, for Europeans (Russians, Germans, the French, etc.), prioritised a rationalist outlook, adherence to positive knowledge, a critical, while cumulative and respectful, view of the past, and, finally, loyalty to age-old university traditions, which, at the end of the nineteenth century, reached even to the “depths” of Siberia.

## References

- Bereznegovskiy NI (1911) Otchet o zagranichnoy komandirovke 1909–1910 gg. [Report on business trip abroad 1909–1910]. Izvestiya Imperatorskogo Tomskogo universiteta [Proceedings of the Imperial Tomsk University] 43: 1–72. (In Russ.)
- Bogolepov AA (1909) Otchet o zagranichnoy komandirovke v Parizh s 1 aprelya po 1 sentyabrya 1907 g. [Report on overseas travel to Paris from April 1 to September 1, 1907]. Izvestiya Imperatorskogo Tomskogo universiteta [Proceedings of the Imperial Tomsk University] 35: 1–24. (In Russ.)
- Bogoraz NA (1911) Otchet o zagranichnoy komandirovke v noyabre–fevrale 1910–1911 gg. [Report on business trip abroad in November–February 1910–1911]. Izvestiya Imperatorskogo Tomskogo universiteta [Proceedings of the Imperial Tomsk University] 46: 1–26. (In Russ.)
- Butyagin PV (1905) Otchet o zagranichnoy komandirovke 1902–1904 gg. [Report on business trip abroad 1902–1904 gg.]. Izvestiya Imperatorskogo Tomskogo universiteta [Proceedings of the Imperial Tomsk University] 27: 1–53. (In Russ.)
- Chistyakov PI (1911) Otchet o zagranichnoy komandirovke v 1910 g. [Report on business trip abroad in 1910]. Izvestiya Imperatorskogo Tomskogo universiteta [Proceedings of the Imperial Tomsk University] 46: 4–9. (In Russ.)
- Dmitrievskiy KF (1904) Otchet o zagranichnoy komandirovke 1902 g. [Report on business trip abroad in 1902]. Izvestiya Imperatorskogo Tomskogo universiteta [Proceedings of the Imperial Tomsk University] 24: 105–110. (In Russ.)
- Kulyabko AA (1912) Prazdnik britanskoy nauki (Vpechatleniya zagranichnoy komandirovki letom 1912 g.) [The holiday of British science (Impressions of a foreign trip in the summer of 1912)]. Zhurnal Ministerstva narodnogo prosveshcheniya [Journal of the Ministry of Education] 41 (10): 51–77. (In Russ.)
- Kulyabko AA (1915) Otchet o zagranichnoy komandirovke letom 1914 g. [Report on business trip abroad in the summer of 1914]. Izvestiya Imperatorskogo Tomskogo universiteta [Proceedings of the Imperial Tomsk University] 64: 1–2. (In Russ.)
- Mirolyubov VP (1914) Otchet o zagranichnoy komandirovke s 1 marta 1911 g. po 1 sentyabrya 1912 g. [Report on business trip abroad from March 1, 1911 to September 1, 1912]. Izvestiya Imperatorskogo Tomskogo universiteta [Proceedings of the Imperial Tomsk University] 59: 1–29. (In Russ.)
- Nekrylov SA (2010) Tomskiy universitet – pervyy nauchnyy tsentr v aziatskoy chasti Rossii (seredina 1870-kh gg. – 1919 g.) [The University of Tomsk is the first scientific center in the Asian part of Russia (mid-1870s – 1919)]. Vol. 1. Tomsk: Izd-vo Tom. gos. un-ta. 514 p. (In Russ.)
- Otchet o sostoyanii Imperatorskogo Tomskogo universiteta za 1889 (1890) Izvestiya Imperatorskogo Tomskogo universiteta [Proceedings of the Imperial Tomsk University] Book 2, section 1. (In Russ.)
- Rayskiy MI (1910) Otchet o zagranichnoy komandirovke v 1908 i 1909 gg. [Report on business trip abroad in 1908 and 1909]. Izvestiya Imperatorskogo Tomskogo universiteta [Proceedings of the Imperial Tomsk University] 40: 1–49. (In Russ.)
- Spasskiy NS (1904) Otchet o zagranichnoy komandirovke [Report on business trip abroad]. Izvestiya Imperatorskogo Tomskogo universiteta [Proceedings of the Imperial Tomsk University] 24: 95–104. (In Russ.)
- Valedinskiy IA (1914) Otchet o zagranichnoy komandirovke v 1911/1912 uch. g. [Report on overseas business trip in the 1911/1912 study year]. Izvestiya Imperatorskogo Tomskogo universiteta [Proceedings of the Imperial Tomsk University] 56: 1–45. (In Russ.)
- Zhurnal zasedaniy soвета Imperatorskogo Tomskogo universiteta. 9 dekabrya 1888 g. [Journal of meetings of the Council of the Imperial Tomsk University. December 9, 1888] (1889) Izvestiya Imperatorskogo Tomskogo universiteta [Proceedings of the Imperial Tomsk University] Book 1, section 1. (In Russ.)

## About the authors

Nekrylov Sergey Aleksandrovich – Doctor of Historical Sciences, Professor, Head of the Department of Russian History at the Faculty of Historical and Political Sciences, the National Research Tomsk State University. Email: [medicinahistory@yandex.ru](mailto:medicinahistory@yandex.ru)

Stepnov Alexey Olegovich – Graduate student at the Department of Russian History of the Faculty of Historical and Political Sciences, Laboratory assistant in the laboratory of social and anthropological research at the National Research Tomsk State University. Email: [ASAO@yandex.ru](mailto:ASAO@yandex.ru)

Fominykh Sergey Fedorovich – Doctor of Historical Sciences, Professor at the Department of Russian History of the Faculty of Historical and Political Sciences, Distinguished Professor of the National Research Tomsk State University. Email: [sergei.fominyh1940@mail.ru](mailto:sergei.fominyh1940@mail.ru)