Efim Mikhailovich Tschepourkowsky and his contribution to anthropology

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Abstract. The paper is devoted to the biography of an émigré scientist, Efim Mikhailovich Tschepourkowsky. The main stages of his life are described: schooling at progymnasium in Kyiv and gymnasium in Novocherkassk, studies at the Imperial Kharkov University, study visits to the leading European centers for the studies of anthropology, teaching at Moscow University and Far East University, moving to Harbin and working at the Law Faculty, forced emigration to Lithuania and the USA. E.M. Tschepourkowsky’s works are analysed, in particular, his works on geographical variation of the cephalic index and eye/hair color among the Slavs. In his publications, he employed the geographical method to characterise the variation of morphological traits as well as the latest developments in genetics and biometry. Apart from the analysis of morphological features across the governorates, Tschepourkowsky made an interesting comparison of their characters. Naturally, he did not write about it in his scientific papers but described it in his memoirs.

1. Introduction

Russian anthropologists at the beginning of the XX century worked with a wide variety of types connected with each other by gradual transitions. The identification of these types presented considerable difficulties, since each vast group of people (ethnicity, tribe) consisted of many individuals, differing in their physical and mental characteristics. Russian scientists believed in the existence of a certain physical type in each nation, so they tried to cover as many people as possible with anthropological research. One such anthropologist was Efim Mikhailovich Tschepourkowsky.

2. Materials and methods

The publication is based on the biographical method of historical research. The life and scientific activities of E.M. Tschepourkowsky are considered, taking into account psychological, social and cultural, historical and scientific factors, which help understand the scientist’s motives of behavior and interests. Sources of research are E.M. Tschepourkowsky’s scientific works and memoirs.

3. School, University and the beginning of scientific activity

E.M. Tschepourkowsky was born in Kiev on the 1st of February (20th of January, after the Julian calendar) 1871. At the age of 8 Efim began to attend a six-year classical progymnasium in Kiev, where he studied Greek, Latin, Russian, German, French, arithmetic, history, geography, and natural history. Much of this could only be learned by rote [1].
The family soon moved to the Stanitsa Kamenskaya in the Don Host Oblast and then to Novocherkassk, the capital of the Don Cossacks. Because of these relocations, Efim had to change schools and adapt to unfamiliar children’s groups and their behaviors.

After he graduated from the Novocherkassk Boys Gymnasium and obtained his school-leaving certificate, Tschebournkowski applied for admission to Kharkov University but was refused to have his documents admitted because of his getting B for conduct, and asked to produce his conduct and performance report from the Gymnasium. In response to the University’s query, two documents arrived from the Gymnasium: one contained a very detailed characterisation of the youth while the other consisted of one sentence only: “able but failed to demonstrate interest in the Gymnasium curriculum subjects” [1, Ch. I, p. 64]. In the end, the admissions board accepted the papers of the “undisciplined enrollee”. According to the admission rules of the time, gymnasium graduates were admitted without entrance exams and thus Tschebournkowski soon became a student at the Physico-Mathematical Faculty in Kharkov University.

Financially, his life as a student was very modest and his resources were meager. In Kharkov, he lived on Primerovskaya Street as a bed lodger, paying 6 rubles a month for his lodging. In winter, the rent was raised to 7 rubles because of the heating. In addition, he had to pay for his sustenance and buy the textbooks and uniform for himself. According to the 1886 University Regulation, students were required to wear a uniform of a double-breasted coat with a blue stick-up collar for everyday wear or a ceremonial single-breasted tunic with two gold braids on the collar, worn with the uniform trousers. It was strictly prohibited to wear any other clothes, even outside the University premises; otherwise the culprit would be instantly summoned to the University Inspector for a talk. As Tschebournkowski could not afford to have his uniform sewn by the tailor who made uniforms for the students, he had to look for a cheap outfitter or buy used clothes at a flea market [1].

Kharkov University was one of the oldest universities in the Russian Empire. It was established in 1805 and, by the 1890s, became a leading education and research centre in the South of Russia. The University’s forte was education in natural sciences. Having enrolled in the Natural Sciences Division of the Physico-Mathematical Faculty, Tschebournkowski took a particular interest in chemistry, zoology, and anthropology. He was enthusiastic about classes taught by the teachers who engaged in real experimental research, devoted much time and effort to their students. One of such teachers was Ivan Pavlovich Osipov, professor of inorganic chemistry and graduate from the Physico-Chemical Division founded by N.N. Beketov. As Tschebournkowski recalls, Osipov was sociable with his students, detested scheming, and tried to bolster the young people’s aspirations to conduct experimental studies [1].

Technical chemistry was taught by V.O. Timofeyev. In addition to enthusing his students about his subject, he was also a virtuoso piano player and sometimes gave concerts for everyone interested in music. While studying chemistry, Tschebournkowski had for the first time encountered the phenomenon of ‘private’ science funded by the donors. Privatdozent P.D. Khrushchov who was quite well-off set up a real laboratory with his own money, where he carried out his studies on physical chemistry. Among the eminent scientists from Kharkov University who studied nature and wildlife and taught natural sciences in the 1890s, the following teachers deserve special mentioning: botanist L.V. Reinhardt; plant physiologist V.I. Palladin; zoologists P.T. Stepanov and V.V. Reinhardt; and physiologist V.Ya. Danilevskii [2]. Darwinism was quite popular in the Natural Sciences Division of the Physico-Mathematical Faculty in Kharkov University, having attracted quite a few students with its logic and the possibility it provided for applying its fundamental theoretical ideas to various fields of natural sciences.

While a student, Tschebournkowski was also keen on geography; he maintained this interest throughout his life and used it in his anthropological works. In his university years, he also studied the literature concerned with comparative studies of the prehistoric and modern European populations. He discovered that the authors had no clear position on a universal criterion allowing identifying changes in the anthropometric parameters in the course of evolution. Tschebournkowski wondered whether
cephalic index, i.e. the shape of cranium, could be used as a stable characteristic, unaffected by external factors.

To study the shapes of human skulls, Tschepourkowsky needed to travel abroad and, for this, he needed money. Therefore the young man had to moonlight giving private lessons. He used his own and donors’ money to train with the most eminent European anthropologists: Johannes Ranke at the University of Munich, Léonce Manouvrier at College de France, and a renowned mathematician and biometrist, Karl Pearson, at the University of London. He had measured more than 700 skulls in the anthropological museums across Europe. A comparison of the prehistoric and modern skulls allowed Tschepourkowsky to conclude that the cephalic index, indeed, could be used as a universal indicator for the analysis of evolutionary processes in different races and ethnic groups. Cephalic index, or cranial index, is the ratio of the maximum width of the skull to its maximum length. Anthropologists use this index to define the shape of human skull: the long-headed (dolichocephalics) with the cephalic index < 0.75; the medium-headed (mesocephalics) with the cephalic index 0.75-0.8; and the short- or broad-headed (brachycephalics) with the cephalic index >0.8. The cephalic index was found to change insignificantly under exposure to external factors, which made it a good indicator for describing ethnic groups.

Apart from working with the museum items, Tschepourkowsky had to determine the cephalic indexes of human subjects by himself. For these purposes, he was issued a permit for conducting this work with 2000 nursing mothers and their babies over several years. In 1896, Tschepourkowsky begins to collect data on skull configuration and eye and hair color of the peasant population of Great Russia. He plots a people’s biometric indicators on the map of its geographical distribution. Having studied the population of various governorates, Tschepourkowsky arrives at an interesting conclusion that, in the same region, men’s and women’s cephalic indexes are practically the same and therefore may be used for characterizing population without its gender composition taken into account. He publishes a paper with this conclusion in an internationally reputed journal, *Biometrica* [3].

In 1904, Tschepourkowsky moves to Moscow to work on his Masters dissertation. Moscow was known for its anthropological school that had begun to emerge in the second half of the 19th century. It was in Moscow that the milestone events in the history of anthropology took place: the founding of the Society of Friends of Natural Science, Anthropology and Ethnography (OLEAE) by A.P. Bogdanov; the opening of the Ethnographic Exhibition in 1867 and Anthropological Exhibition in 1879; the founding of the Chair of Anthropology in the Imperial Moscow University in 1876 (this department, however, only existed till 1884 when it was reorganized into the Chair of Geography and Ethnography); and the beginning of the publication of the *Russian Anthropological Journal* (*Russkii antropologicheskii zhurnal*) in 1900.

In Moscow, Tschepourkowsky continues to collect material on the anthropology of Great-Russians with the help of several enthusiastic students from Moscow University. Tschepourkowsky’s fundamental work that summarised his long-term anthropological studies carried out with the use of geographical method was published in 1913 [4]. This method had been first applied to the analysis of distribution of height and weight among the male population by D.N. Anuchin. Tschepourkowsky complemented his teacher’s findings with his own conclusions regarding the use of geographical method. He had justly noted that neither correlation tables nor variance lines could allow defining the currently existing clear types of ethnic groups. In Tschepourkowsky’s opinion, it was only the geographical distribution of strongly inherited traits that allowed understanding the peoples’ origin, development, and extent of insulation. In this work Tschepourkowsky refers to the experiments of Gregor Mendel and English biometrists, conducted to study the patterns of trait inheritance. Tschepourkowsky distinguishes three types of inheritance: exceptional (complete resemblance between offspring and one of the parents); mixed (the formation of a trait depends on both the father and the mother); and reversal (the return to the ancestors’ traits).

E.M. Tschepourkowsky studied the anthropometrics of the population of the Arkhangelsk, Kaluga, Kostroma, Moscow, Novgorod, Oryol, Olonets, Penza, Pskov, Ryazan, Smolensk, St. Petersburg, Tambov, Tula, Tver, Vitebsk, Vladimir, Vologda, and Yelets Governorates. He had identified two
extreme head shapes among the peasants: brachycephalic (broad-headed) that was largely observed in the Valdai Hills, and dolichocephalic (long-headed) that was common among the population of the Ryazan Governorate. The analysis of the peasants’ eye and hair color led Tschepourkowsky to a conclusion that the Great-Russians were mostly fair-haired and blue- or grey-eyed. Blondish hair was predominant in the North of Russia while the further to the south, the more widespread the brownish hair got. Brown-eyed individuals also prevailed in the southern regions. Comparison of morphology of men and women under study with that of the Little Russians [the term ‘Little Russia’ was used in the 19th-early 20th century to describe the territory of modern-day Ukraine] showed that, among the latter, brown-haired and brown-eyed individuals were significantly more common. At the borders with Little Russia, Tschepourkowsky found numerous transition forms between typical Great Russians and Little Russians, which he explained by the migration processes among the population.

Tschepourkowsky continued his studies on the biometrics of Russian population when working on his doctoral dissertation, which he defended in 1917 [5]. The abundant material accumulated by the scientist enabled him to identify the main types of Russian people. The Eastern Great Russians were distinguished for their long head (cerephalic index (CI) <80) and dark hair. The inhabitants of Great Russia’s watersheds were found to be largely broad-headed (CI 83) blonds while those who lived along the rivers were transition forms with CI 80-81. In Belorussia (“White Russia”), the types with fairest hair and broadest heads lived in the area of Rivers Pripyat and Berezina while rather long-headed blonds (CI 80-81) inhabited the Mogilev Governorate and lived down the Rivers Western Dvina and Neman. In Little Russia, the population was characterised by the brachycephalic skull (CI 83) and dark hair.

Tschepourkowsky analyzed the similarity of the cephalic index among the Great Russians and other peoples. In the end, it turned out that the Eastern Great Russians were similar to the Moksha Mordovians, the Cheremis, and some Bashkirs; the Great Russians from the watersheds were similar to Lithuanians (Samogitians), Zyrians, and Permyaks; and the Little Russians, to the Southern Poles and the population of the Carpathian Mountains. Based on the analysis of the data from historical anthropology, ethnography, and history in comparison with his own findings, Tschepourkowsky put forward a hypothesis that the Eastern Great Russians could be regarded as the most ancient population of Great Russia while fair brachycephalics from the watersheds were the descendants of the Krivichs who moved there from Belorussia at the time of the Tartar Invasion. The Little Russians, however, came from the Subcarpathia after the Tartar Invasion. The long-headed blonds from Belorussia, described by Tschepourkowsky, could have been the descendants of the Teutonic type.

In 1916, Tschepourkowsky published in the Russian Anthropological Journal an article in two parts, in which he substantiated the use of statistical and biological methods in the studies on human heredity [6, 7]. Tschepourkowsky’s training with a famous statistician and biometrist Karl Pearson allowed him to master the fundamentals of mathematical statistics and use this knowledge in his anthropological research. The idea of hereditary transmission of human traits is clearly discernible in his works. In regard to the cephalic index, the scientist confidently maintains that this indicator belongs with inherited characteristics.

4. Revolution, Soviet Russia, emigration

The revolutionary events of 1917 disrupted the plans and undertakings of many talented scientists, including Efim Mikhailovich Tschepourkowsky. In regard to the revolution, he thought it was but yet another struggle for power.

After the revolution, havoc and famine took over the country. To earn a little money for sustenance, E.M. Tschepourkowsky had to deliver lectures at various clubs and higher education institutions, scattered across Moscow. In 1919–1922, he worked as a professor with the Chair of Anthropology in Moscow University. In 1922, he worked at the Kostroma Workers’ and Peasants’ University founded in 1918. As famine was rampant in Kostroma too, the scientist decided to move to Vladivostok where the Soviet Government had began to implement a three-year plan for reconstructing economy (1923–1925).
Having moved to Vladivostok in 1923, Tschepourkowsky enthusiastically set to deliver a course on anthropology and ethnography at the State Far-East University (founded in 1920). At the same time he was also conducting research at the Research Institute, newly established at the University. A number of renowned scientists worked at the Far-East University at the time: botanist V.N. Savich, hydrologist K.A. Gomoyunov, archaeologist A.I. Razin, sinologist A.V. Rudakov, Mongologist I.A. Klyukin, philologist A.P. Georgievskii, zoologist G.N. Gassovskii and archaeologist A.I. Kozlov. In Vladivostok, Tschepourkowsky continued with his work on physical anthropology. He had organized the expeditions to study local Koreans, Orochis, and Russian population. A special camera was invented for covertly taking pictures of persons who remained unaware of being photographed [8]. In 1924, Tschepourkowsky publishes his “Essays on General Anthropology” [9], which is both a synthesising work on anthropology and a textbook for students, based on his lectures at Moscow University and complemented by up-to-date findings in the area of human genetics, evolutionary theory, and physical anthropology.

In 1924–1926, E.M. Tschepourkowsky worked as a director of the Vladivostok State Regional Museum, while keeping in touch with the Far-East University, reading lectures to students, guiding their research, and organising excursions with different themes. With his encounters with realities of the Soviet system getting increasingly more difficult to cope with, he begins to realise that his prospects are rather poor. Soviet regime had a short way with artistic and scientific intelligentsia regardless of their contributions to world science and art.

In 1926, Tschepourkowsky moves to Harbin, which, at the time, was the largest centre of Russian emigration in China. In Harbin, Tschepourkowsky gets a job at the recently created Law Faculty, a standalone educational institution modeled after the Russian people’s universities to unite Russian émigrés who escaped the Bolsheviks’ atrocities. The emergence of the Harbin Law Faculty was facilitated by the fact that, after the fall of the Omsk government, several law teachers – G.K. Gins, N.V. Ustryalov, and N.V. Mirolyubov – ended up in Harbin. Initially, these were the Higher Economic and Legal Courses opened in Harbin in 1920. In 1922, these courses were renamed the Law Faculty. In Harbin, Tschepourkowsky discovers for himself a local scientific community that mostly engaged in the studies of Manchurian nature. Among the most productive natural scientists working in Harbin at the time were pedologist T.P. Gordeyev, botanist B.V. Skvortsov, meteorologists P.K. Bedarev and A.P. Pavlov, geologist E.E. Anert, archaeologists V.Ya. Tolmachev and V.V. Ponomov, and plant breeder V.V. Krushel.

At the Law Faculty, E.M. Tschepourkowsky taught a course on geography that combined physical and economic geography. His interpretation of geography was broader than the description of Earth’s surface. When defining the cognitive scope of this field of knowledge, the scientist maintained that the characterisation of a particular territory must include the description of its topography, climate, flora and fauna, peoples, territorial units, and economy in their interplay and mutual influence [10]. He gave a special place to anthrogeography, a discipline that studies the distribution of peoples and ethnic groups, believing that humans comprise the most important link of a natural territorial complex and determine the economic and political features of the area. Tschepourkowsky wanted to combine the efforts of local researchers in order to study the geography of Manchuria and produce a detailed description of this region from the natural, ethnographic and economic standpoint. However, he failed to put his ideas into practice due to changes occurring in Harbin, including at the Law Faculty.

The 1930s saw a decline both in the number of students and in teaching standards at the Law Faculty. In 1934, N.I. Nikiforov becomes the Faculty’s Dean and begins to pursue destructive policies in regard to the organisation of teaching and learning process. Ten teachers (V.A. Ryazanovskii, E.M. Chepurkovskii, N.V. Ustryalov, A.A. Kamkov, M.N. Ershov, V.I. Surin, A.I. Grazhdantsve, N.A. Setnitskii, N.N. Trifonov, and P.M. Orlov) handed in their resignations in protest against the new Dean’s policy. The resignation of the leading teachers meant winding down the Law Faculty’s functioning. The students asked the resigned teachers to continue to teach privately but the idea of delivering lectures in the apartments failed to be implemented. N.P. Avtonomov believes that the teachers’ resignation in 1934 was associated with the presence of two competing clans at the Law Faculty.
Faculty: Russian émigrés (the first wave of emigration) and Chinese nationals, on the one hand, and Soviet émigrés, on the other hand [11]. Tschepourkowsky belonged with the second group who did not want to tolerate the policies of the Faculty’s leaders. The article about the Law Faculty devoted to its 15th anniversary does not even mention either him or other teachers who resigned in protest [12].

Another factor that aggravated the disruption of the Law Faculty’s functioning was the Japanese invasion of Manchuria in 1931. The independent State of Manchukuo was inaugurated in March 1932 to be transformed into the Empire of Manchuria two years later. This state existed under the de facto control of Japan. With a new regime in place, the position of Russian émigrés began to deteriorate. After the Soviet Union sold its rights to the Chinese Eastern Railway to the puppet Manchukuo government for a trifling sum in March 1935, Russians tended to migrate either back to their homeland or to other places on Earth.

5. Conclusion

In 1934, Tschepourkowsky moved to Lithuania. In the late 1930s, the situation in Lithuania became unsettling. Poland, Germany and the Soviet Union began to claim some territories of the independent state; moreover, the fate of Lithuania was predestined by the 1939 secret Molotov-Ribbentrop Pact. The countries were on the threshold of World War II and Tschepourkowsky therefore decided to leave Europe for the USA. In 1939, he settled down in Los Angeles where he spent 11 years. Little is known about the renowned anthropologist’s life overseas. One may only conclude from his 1940s publications that he was a devout pacifist and antifascist, keenly interested in oriental philosophical practices, including Taoism he had taken to in Harbin. Carrying deeply about the fate of his homeland, Tschepourkowsky tried to take part in the life of Russian diaspora in Los Angeles, delivered lectures and published educational articles. He had even put forward an initiative to publish a magazine aimed at consolidating the Russians who ended up as forced migrants in North America [13].

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