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The Russian Eugenics Society: history and scope of activities

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The history of the Russian Eugenics Society that was created in 1920 and existed till 1929 is reconstructed from the archival documents. The discussion of eugenic problems coincided in time with the development of genetics in Russia. It was no accident that fascination with genetics among the scientists who received their university education in natural science and began their scientific career in the traditional biological disciplines such as comparative morphology, entomology, hydrobiology, and anthropology (N.K. Koltsov, A.S. Serebrovsky, Yu.A. Filipchenko (J. Philiptschenko), and V.V. Bunak) prompted them later to look into anthropogenetics. Classical scientific traditions facilitated the development of eugenics in Russia as a scientific discipline with its own methodological framework and advanced research techniques. By the late 1920s, the chapters of the Russian Eugenics Society were engaging in extensive scientific and educational work. While the Moscow Chapter explored the broadest range of research areas, the Leningrad Chapter mostly focused on sociodemographic studies, the Odessa eugenists concentrated on promoting the ideas of the new science, and, in Saratov, the eugenics approach was used to address the vital medical problems such as the spread of various diseases and the elucidation of their causes, controlling abortions and sexually transmitted diseases, and prevention of hereditary anomalies. In contrast to the eugenics societies in other countries, the Russian Eugenics Society was governed by strict scientific standards and skepticism towards pseudo-scientific utopias. In the Russian tradition, eugenics was equaled with anthropogenetics. Therefore, the historical period of the formation of eugenics may be justly regarded as a stage in the history of human genetics in Russia.

Keywords: Russian Eugenics Society, Russian Journal of Eugenics (Russkii Evgenicheskii Zhurnal), human heredity research, science popularisation, science and power

The history of Russian eugenics is rooted in the 19th century when the ideas of bettering physical and mental traits of human beings by controlling heredity-tainting factors. The founder of eugenics, the doctrine of bettering human heredity, was Francis Galton (1822–1911). It was Galton who introduced the term “eugenics” (from Greek

εὐ- 'good' and γένος — 'born') in 1883. Galton's ideas of regulating marriages in order to get the traits that are beneficial for the society fixed in the progeny began to spread across many countries of the world. Eugenics societies appeared in a number of countries in the first decades of the 20th century. A number of major works authored by the historians of science review the processes of formation of national eugenics societies and organisations in various countries. Thus, the works by G.R. Searle (Searle, 1976, 1998) and R.A. Soloway (Soloway, 1990) are devoted to the history of the eugenics movement in the UK; by A. McLaren (McLaren, 1990), in Canada; by D. Kevles (Kevles, 1995, 1998, 1999), N.H. Rafter (Rafter, 1988), I.R. Dowbiggin (Dowbiggin, 1997), E. Black (Black, 2003), and R. Marcattilio-McCracken (Marcattilio-McCracken, 2017), in the US; by Z. Suzuki (Suzuki, 1975), in Japan; M. Tydén (Tydén, 2000), in Sweden; by G. Broberg and N. Roll-Hansen (Broberg, Roll-Hansen, 1996; Roll-Hansen, 2017), in Denmark, Sweden, Nowrway, and Finland; and by R. Álvarez Peláez (Álvarez Peláez, 1988), in Spain. Various aspects of the eugenics movement in France were described by A. Carol (Carol, 1995), J.-P. Gaudilliere (Gaudilliere, 1997), A. Rosental (Rosental, 2012), P.-A. Taguieff (Taguieff, 1991), and L. Mucchielli (Mucchielli L., 2000).

Having originated in the US and Europe, the eugenics movement quickly spread to and across Russia. The Russian Eugenics Society ('Russkoye evgenicheskoye obshchestvo, REO') was organised in 1920. Although REO's history, membership composition, and main lines of work are covered in the works by the Russian (Babkov, 2008, 2013; Pchelov, 2004, 2008) and international (Graham, 1977; Adams, 1989, 1990a, 1990b; Krementsov, 2011, 2014, 2015a, 2015b) historians of science, certain aspects of REO's activities (financial, scientific, training, and educational) remained underexplored. We will attempt to fill the historical gaps and clarify some details of REO's history and operations.

The eugenic ideas sparked interest in Russia back in the late 19th century. A translation of Galton's "Hereditary Genius, its Laws and Consequences" was published in Russia by the publishing house of the journal "Znanie" in 1875 (Galton, 1875). However, eugenics as a research area only began to develop in the first decades of the Soviet era. V.V. Babkov wrote that "the mental context for the discussion of the ideas of eugenics" was rather peculiar: in Russia, it was medical professionals and biologists who became enthusiastic about eugenics in the 1910s and 1920s (Babkov, 2008, p. 27). They discussed the problem of the fatal degeneration of the population, the association of genius with physiognomic traits, and the possibility of manipulating physical and mental abilities. Russian eugenics movement, in a way, became a predecessor of a number of research areas such as medical genetics, behavioural genetics, and ethnogenetics, which is mentioned in the articles by different authors (Gershenzon, Buzhievskaya, 1996; Korochkin, 2004; Korochkin, Romanova, 2007; Babkov, 1998a, 1998b, 2001, 2006).

The first official eugenic laboratory was established in Russia at the Institute of Experimental Biology ('IEB'), the country's then leading scientific centre for experimental biology, in 1920. The Institute of Experimental Biology itself was organised in 1917, funded by the Moscow Society of Scientific Institutes, and its first director was Nikolai Konstantinovich Koltsov. Creation of IEB provided an opportunity for Koltsov to integrate a number of the latest research areas in biology so as to comprehensively explore various biological problems, using physicochemical research methods.

In the summer of 1920, Koltsov organised at the Institute of Experimental Biology a Eugenics Department with Yury Alexandrovich Filipchenko (also known in the literature as J. Philiptschenko) as its head. Filipchenko was hired on the IEB staff at the Board Meeting

of the State Scientific Institute of Public Health ('GINZ') under the People's Commissariat for Public Health on 30 June 1920[1]. Initially the Eugenics Department was located in Petrograd (continued to be called Petersburg by the scientists in their publications), which complicated its work, as all organisational activities concerned with the Department's operations had to be carried out in Moscow. Thus, due to the difficulties with receiving advance salaries by the Eugenics Department's staff members, Koltsov had to issue one big paycheck to Filipchenko who, during his visits to Moscow, could receive a huge sum amounting to 100,000 rubles, intended for overhead costs and salaries of non-staff researchers[2].

In the late 1920, however, Filipchenko decided to quit IEB and Viktor Valerianovich Bunak was invited to head the Eugenics Department since 1 December 1920[3]. Quitting his job with the Eugenics Department allowed Filipchenko to plunge into science-organising work in Petrograd. The narrow limits of the Eugenics Department, however, precluded rapid expansion of the scientific and educational work in the field of eugenics, which necessitated involving in this work the professionals from different disciplines as well as everyone interested in the issues of human heredity. On the initiative of a meeting at the Biological Department of the Museum of Social Hygiene, a constituent meeting of those interested in eugenics was held in October 1920 and the Russian Eugenics Society was organised under the auspices of GINZ in November the same year. N.K. Koltsov became the Chairman of the new society.

The Russian Eugenics Society was formally established and its members were registered during its first meeting held at the Institute of Experimental Biology on 19 November 1920.

In addition to scientific studies in eugenics, the Society planned to expand the scope of its activities and open a special "Society for Eugenics Propaganda." Many scientific researchers in the field of biology, medicine, sociology, and psychology joined the Russian Eugenics Society. In 1921 only, 17 sessions were held, during which 24 papers on the issues of heredity, selection, and demography were heard. Those invited to the Society's meetings included scientists, students and everyone interested in human heredity and its regulation. Apart from discussing the papers presented at the meetings, the Society began to work to organise studies in the field of eugenics.

It was stipulated in the Constitution of the Russian Eugenics Society that it pursued the objective of uniting scientific researchers in the field of eugenics and race hygiene in Russia and conducting relevant scientific research, spreading the respective knowledge, and arousing interest for the Society's objectives among wider public.

To carry out the work in these areas, the Society planned the following: to hear and discuss papers and presentations devoted to eugenics; to organise public disputes; to open training courses; to organise scientific observations, collection of materials, scientific trips and expeditions; to set up laboratories, experiment stations, observation points, museums, and exhibitions; to create specialised libraries; to confer awards for the results of scientific research; to organise congresses; and to open the Society's chapters in various localities[4].

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[1] *Arkhiv Rossiĭskoĭ akademii nauk* [Archive of the Russian Academy of Sciences]. (ARAN).. F. 570. Op. 1. D. 1. L. 17.

[2] ARAN. F. 570. Op. 1. D. 1. L. 58.

[3] ARAN. F. 570. Op. 1. D. 2. L. 42.

[4] ARAN. F. 450. Op. 4. D. 62. L. 6.

The Membership in the Russian Eugenics Society was voluntary. The Society united everyone interested in eugenics and among its members were the representatives of different professions, which broadened the range of themes of scientific presentations and extended the scope of activities of the eugenics movement.

During the first year of its existence, the Society developed and disseminated the family questionnaires for everyone who wished to participate in the eugenic survey. In addition to this, special questionnaires were prepared for the studies on genetic genealogies and genealogy of hereditary physical and mental traits.

N.K. Koltsov remained the Society's Chairman throughout its entire history (from 1920 to 1929). The Society established a Bureau (1920) to perform administrative and management functions, with Koltsov as Chairman of the REO Bureau and V.V. Bunak as its Academic Secretary. Other members of the Bureau were T.I. Iudin, A.S. Serebrovskii (Serebrovsky), and N.V. Bogoyavlenskii (*Bogoiavlensky*). In 1923, M.V. Volotskoi joined the Bureau as the Society's Academic Secretary while Bunak remained a member of the Bureau. A.N. Sysin and V.V. Sakharov joined the Bureau in 1924.

The number of the Society's members was steadily growing from year to year. Thus, with 77 members in 1922 and 95 members in 1923 (Iz otcheta..., 1924, p. 66–67), the Society counted 129 members by the end of 1924 (Otchet..., 1925, p. 85).

Created in 1920 and located in Moscow, the Russian Eugenics Society was inseparable from the activities of the Eugenic Department of the Institute of Experimental Biology. After quitting the post as the Head of the Eugenic Department, Yu.A. Filipchenko set about organising the eugenic work in Petrograd.

The Bureau of Eugenics in Petrograd was set up under the Commission for the Study of Russia's Natural Productive Forces ('Komissiia po izucheniiu estestvennykh proizvoditelnykh sil Rossii, KEPS') of the Russian Academy of Sciences ('RAN') in 1921. The Bureau was initially hosted in Filipchenko's apartment. This is how he describes the organisation of his brainchild:

> [I] got involved with KEPS owing to A.E. Fersman's support and my modest flat is now dignified with a title of "KEPS Eugenics Bureau under RAN." It might help a little, as [I] did it rather out of the necessity to have a signboard and a flag; but [I] still work alone and, for a while, intend to do without coworkers, for it is hard to find the right ones and, with those who are not the right ones, there'd be too much fuss[5].

Yu.A. Filipchenko soon invited T.K. Lepin and Ya.Ya. Lus, the first graduates from Petrograd's University's Department of Genetics, to work at the Bureau. Together with these young researchers, Yury Alexandrovich carried out a study of the inheritance of morphological traits and mental abilities in humans (Filipchenko, 1922a).

The autonomy of the Bureau of Eugenics in Petrograd was strengthening from year to year due to deteriorating communications between Filipchenko and Koltsov. In 1922, Yury Alexandrovich wrote to his Moscow colleague and head of the Russian Eugenics Society:

> Allow me just to say a few words concerning a rebuke for breaking up our forces and the absence of connections with each other, which I sensed addressed at me in your letter and which seems not quite fair to me. I am guilty of only one thing: namely, of having resigned from your Department two years ago and setting to work independently. However, looking back, I believe that it has been a quite right thing to do. My

[5] ARAN. F. 450. Op. 3. D. 153. L. 5.

absence did not prevent you and your coworkers from quite productively working in Moscow while I and my assistants succeeded in doing something here[6].

The lack of proper communications with Koltsov worried Filipchenko a lot. In February 1921, Filipchenko received a draft questionnaire developed by the IEB researches. He wrote a long letter about the content of this questionnaire, in which he expressed his wishes concerning its improvement. In this letter, he also asked to send him the agendas of the Eugenics Society's meeting so as to be aware of what was going on in Moscow. Yury Alexandrovich repeated his request in his letter of 9 December 1921 when he sent his pamphlets to Koltsov. However, no meeting agenda has been sent to him. In the meantime, Yu.A. received from Nikolai Konstantinovich a news of the preparation for publication of "Russkii evgenicheskii zhurnal"; however, this letter only contained one phrase inviting Filipchenko to collaborate with the journal without an express proposal to join its editorial board. In his letter to Koltsov, Yu.A. wrote:

Had I known about the latter [«Russkii evgenicheskii zhurnal»] in time, I would have, first, been obliged to participate more actively and, perhaps, would not have thought about my own journal but, I repeat, I have only learned about it from your letter and have not even seen my name in [the issue] No. 1 of «Russkii evgenicheskii zhurnal», even though I have read it very carefully. I will be honest with you, I have become convinced that both I and my Bureau are of no worth for you. I have found in the bibliographical section of [the issue] No. 1 of your journal the reviews of rather minor articles from "Lancet" but no mention whatsoever of my pamphlets, which are, after all, the first attempt at this kind of publications in Russia, and which I am actively disseminating everywhere possible, for we have no other publications of this kind. I hope you won't see in this comment the results of wounded author's pride since, if I do have it, then it is not in relation to these brochures[7].

Having become the head of the REO Petrograd Chapter in 1924, Filipchenko tried to set about a larger-scale work to study heritable traits in humans. In his opinion, the eugenic studies in Petrograd/Leningrad were organised much less efficiently than in Moscow for a number of reasons. In his letter to Koltsov, he wrote with regret:

Working in Moscow, you are probably in a somewhat better situation than we are here. You have even managed to purchase literature and so on while we here only have what our foreign colleagues will send us as hand-outs. Most of the costs have to be paid from our own pockets and, in such situation, ordering books is out of question[8].

In the first years of its existence, the Society's membership grew significantly, with new members attracted from across Russia. In 1924, REO achieved the status of the all-union society. Subsequently REO comprised four chapters in Moscow, Petrograd, Saratov and Odessa. While the work of the Moscow and Petrograd/Leningrad chapters is reflected in some archival documents and articles published in specialised journals, it has been extremely difficult to find any records and documents concerned with the organisation and activities of the Saratov and Odessa Chapters.

[6] ARAN. F. 450. Op. 3. D. 153. L. 6.

[7] ARAN. F. 450. Op. 3. D. 153. L. 6.

[8] ARAN. F. 450. Op. 3. D. 153. L. 6.

The collection of documents related to N.K. Koltsov at the Archive of the Russian Academy of Sciences contains a letter from the Chairman of the Odessa Chapter of the Russian Eugenics Society, Professor Nikolai Nikolaevich Kostyamin of 28 June 1923. Prof. Kostyamin, a graduate from the Military Medical Academy in St. Petersburg, specialised in hygiene. In the 1920s, Kostyamin worked at the Institute of Hygiene (located at 4 Olgievskaya ulitsa in Odessa), of the Medical Academy that was founded in 1920 as a result of reorganisation of the Medical Faculty of the New Russian University, and reorganised into the Odessa Medical Institute in 1921.

It follows from Kostyamin's letter to the Chairman of the Russian Eugenics Society that the Odessa Chapter had very few contacts with the Moscow Chapter and had neither administrative support from the local authorities nor an official status. The Chairman of the Odessa Chapter wrote:

The Odessa Chapter deeply believes and hopes that, with your further assistance and owing to your valuable instructions, it will germinate and, being closely connected to REO in your charge, develop its work to broaden the tasks of both profound scientific interest and large nationwide practical importance for the country's culture and progress. We kindly ask you to send us <…> a copy of a resolution by the REO Board or by Glavnauka [Principal Administration for Scientific, Art and Museum Institutions], concerned with the creation of the REO Chapter in Odessa. This is necessary for formalising the existence of our Chapter, for registering locally with the local administrative bodies, which will give us an opportunity to convene public sessions as well as to recruit new members [9].

In another letter Kostyamin writes, "Here, in Odessa, the understanding of the scientific discipline of eugenics is too vague and impossibly primitive." [10] In the same letter he provides an example of how, in 1920, he spoke on the issues of higher medical education at a scientific collegium in the presence of scientists of different specialities: physiologists, surgeons, histologists, and embryologists. In his presentation Kostyamin pointed out to the necessity of establishing chairs for the preventive medicine disciplines such as social hygiene and occupational hygiene, including the chair of eugenics. The professors responded with derision and began to ask what practical classes were proposed to be conducted at the chair of eugenics. Nikolai Nikolaevich wrote with regret:

Of course, my idea has not met with success. We have no literature at all. At the same time, it is absolutely necessary to foster large-scale propaganda of eugenics, for the new Russia needs new people, needs betterment (physical, spiritual, and moral) of the growing generation, this mainstay of our race; the cadre of professionals in this area ought to be trained. <…> I am appealing to you as a representative of a highly competent scientific organisation <…> for your assistance in the matter of educating the Odessa Society. How can our Institute obtain all the literature from recent years? My request for providing funds has not been granted to this day and we are sitting in the dark[11].

Nikolai Nikolaevich Kostyamin met a tragic fate. The 1930s saw the mass arrests of the intelligentsia across the Ukrainian SSR. V.A. Smirnov described how Vladimir Petrovich Filatov (1875–1956), Professor at the Medical Faculty of the Imperial New

[9] ARAN. F. 450. Op. 4. D. 62. L. 9.

[10] ARAN. F. 450. Op. 4. D. 48. L. 1.

[11] ARAN. F. 450. Op. 4. D. 48. L. 2.

Russian University (in 1921, reorganised into the Odessa Medical Institute) since 1911, Chair of the Department of Eye Diseases, was arrested by the OGPU (Joint State Political Directorate) in February 1931. He was accused of being involved in a secret White Guard organisation. The membership lists of a fictional anti-Soviet organisation were beaten out of Filatov and N.N. Kostyamin undeservingly happened to be on one of these lists (Smirnov, 2005). Based on the documents from the KGB Archive, V.R. Faitelberg-Blank and V.A. Savchenko established that N.N. Kostyamin was arrested in 1931 and his further fate remains unknown — like the fates of many other wrongfully convicted citizens (Faitelberg-Blank, Savchenko, 2001, p. 4).

The reports on the activities of the Russian Eugenics Society, prepared by Professor M.P. Kutanin and published in "Russkii evgenicheskii zhurnal (Russian Journal of Eugenics)", helped to reconstruct the history of the Saratov Chapter (Kutanin, 1927, 1928). The idea of creating such chapter in Saratov emerged in 1923. An initiative group consisting of Dr. P.P. Pod'yapolskii, Prof. M.P. Kutanin, and Dr. A.N. Nikolskii prepared an appeal to the scientists and general public of the city of Saratov with a request to partake in new initiatives. This appeal was signed by the following Saratov scientists: Professors V.S. Elpatievskii, N.M. Kakushkin, A.A. Bogomolets, and V.V. Golubev; Drs. P.N. Solov, I.V. Vyazemskii, A.I. Kovalev, S.M. Zhelikhovskii, A.I. Domracheva, A.B. Rabinovich, M.N. Solovieva, and A.M. Kantorovich.

During the first meeting of the initiative group on 29 December 1923, its Constitution and petition were prepared. These documents were submitted for approval to the Saratov administration (Executive Committee of the Saratov Soviet of People's Deputies). The first session of the Saratov Eugenics Society was held on 18 May 1924. In 1925, the Saratov Eugenics Society became a Chapter of the Russian Eugenics Society.

The Board of the Saratov Chapter included Professors M.P. Kutanin, A.A. Bogomolets, N.M. Kakushkin, and G.K. Meister, and Drs. M.M. Generozova, A.B. Rabinovich, and M.V. Soloviev (Kutanin, 1927).

The Saratov Society was chaired by Mikhail Pavlovich Kutanin (1883–1976), a prominent Russian psychiatrist, the father of the Russian school of hypnosis and the founder of the Department of Psychiatry at the Saratov Medical Institute where, in the Soviet era, the works by the western classics of psychoanalysis were studied despite prohibitions. M.P. was the first to use bibliotherapy, i.e. extensive reading, as a method for treating psychiatric disorders. A pupil of S.S. Korsakov, Kutanin followed in the footsteps of his teacher in the field of psychiatry, studying mental disorders among the population. A large mass of collected data allowed him to establish the annual increase in psychiatric disorders, which later influenced the formation of his eugenic outlook.

For Kutanin, the main objective of eugenics was promoting medical and biological knowledge among the population. In 1925, he traveled to several Russian cities (Nizhny Novgorod, Penza, Astrakhan, and other cities of the Volga Basin) to deliver public lectures.

A number of scientific studies of inherited human traits were carried out with the assistance of the Saratov Chapter of the Russian Eugenics Society. The R-6742 fonds of the M. Gorky All-Union Institute of Experimental Medicine at the State Archive of the Russian Federation ('GARF') holds an unpublished work of P.V. Zabolotnikov, titled "Clinico-genetic studies of polydactyly and syndactyly," that was conducted on the initiative of the Saratov Chapter[12].

[12] GARF. F. P-6742. Op. 1. D. 261.

Zabolotnikov began his research at the Saratov Medical Institute. He conducted a clinico-genetic study of syndactyly and polydactyly, which included the reconstruction of genealogies with detailed descriptions of identified anomalies. He analysed a total of 35 family genealogies, covering 2304 individuals.

To determine the frequency of polydactyly, he examined the records of maternity ward at the Saratov Municipal Hospital No. 1 as well as of the Saratov Medical Institute's clinic of obstetrics and gynaecology. He found that, from 1925 to 1932, the frequency of birth of children with polydactyly comprised 0.034 percent.

Zabolotnikov's studies on polydactyly were not limited to the Saratov region. In 1936, he went to a Tatar village of Demerdzi on the south coast of Crimea, which was rumoured to be a place where many local inhabitants had this anomaly. Having reconstructed the genealogies of the inhabitants of Demerdzhi, the scientist concluded that polydactyly is inherited in a dominant manner. He identified six different types of polydactyly, each determined by a dominant gene with different phenotypic expressions. P.V. Zabolotnikov wrote that, in different geographic populations, the same gene of polydactyly is expressed to a different degree[13].

The Society's Chapters shared the Bureau (Presidium) of the Russian Eugenics Society, which was in charge of exchanging scientific publications, conducted joint meetings, sessions, and conferences, and helped young scientists with scientific internships. The Society's Chapters were able to make significant contributions to the development of human genetics and popularisation of scientific knowledge due to a large number of professionals in different areas, attracted by these Chapters, the extensive efforts of some leaders of the eugenics movement, and the interest in the eugenics problems among wider public.

The Russian Eugenics Society needed sufficient funding for its day-to-day activities. Although its members mostly worked from sheer enthusiasm, money was needed for the Society's publishing activities, for purchasing specialist literature, and for organising the research and educational work. The money partly came from the Academic Centre of the People's Commissariat for Education and the People's Commissariat for Public Health, partly from private donations, and partly from the proceeds of public lectures.

N.K. Koltsov was an excellent manager, able to extract money for the studies on human heredity. During the first year of REO's operations, he managed to secure funding for the development of special eugenic questionnaires from GINZ. For this work, T.I. Iudin, V.V. Bunak, and N.K. Koltsov were paid 15,000 rubles each and A.S. Serebrovsky received 7,500 rubles[14]. For comparison, Koltsov's monthly salary as director of the Institute comprised 4,800 rubles.

Being a talented organiser, Koltsov was able to see eye to eye with the Party leaders, Presidium of the USSR Academy of Sciences, People's Commissariat for Public Health ('Narkomzdrav'), and public organisations. He was in correspondence with N.A. Semashko and A.M. Gorky, gave lectures on the radio, and participated in the international eugenics congresses and meetings. The REO Chairman's extensive efforts, patronage on the part of the Party leadership, large-scale propaganda of the eugenic knowledge — all of this helped to attract public and private funds to the Society's treasury.

The Society's meetings were held quite often, sometimes up to three times a month. With most of the REO members being on staff at the Institute of Experimental

[13] Ibid. l. 65.

[14] ARAN. F. 570. Op. 1. D.2 L. 36.

Biology, and N.K. Koltsov also being in charge of both the Society and the Institute, the Society's meetings were mostly held at the Institute. Sometimes public sessions were held at the House of Scientists at 14 Prechistenka.

After the REO Chapters were organised, the regional meetings pursing the education and training goals began to be held in Petrograd/Leningrad, Saratov and Odessa.

The Society's permanent printed mouthpiece was "Russkii evgenicheskii zhurnal", REZh ("Russian Journal of Eugenics"). Seven volumes (25 issues) of REZh were published from 1922 to 1929. The Petrograd Bureau of Eugenics also began to publish its own journal, "Izvestiya Byuro po evgenike," in 1922.

N.K. Koltsov was against simultaneously publishing two eugenic journals in Russia, which is obvious from a letter written to him by Yu.A. Filipchenko on 8 October 1922:

> As regards your general opinion that two eugenic journals are an unnecessary luxury for Russia, you are right, of course, and it's worth thinking about. However, essentially, if "Russkii evgenicheskii zhurnal" remains of the same character as its [issue] No. 1 (which I have read with a keen interest), our publications will be rather dissimilar to each other. While broad, general articles prevail in your journal, for which [the issue] No. 1 reminded me of "The Eugenics Review," which is comprehensible for a wide audience, we will offer in our No. 1 something like Davenport's "Bulletins," a rather crude account of the results obtained by us, that will be of interest mainly for specialists [15].

Soviet scientific periodicals devoted to eugenics that began to be simultaneously published in 1922 had a huge role in the propaganda of eugenic ideas. In addition to original articles, one could find there critical reviews, brief communications, reports on the Society's activities, critique and bibliographies, as well as the reviews of Russian and international publications. Both of these journals, "Russkii evgenicheskii zhurnal" and "Izvestiya Byuro po evgenike", were distinguished for the diversity of the authors' scientific positions, discussions of topical issues in anthropogenetics and anthropotechnics, and inviting prominent Russian and international scientists to publish their works in these journals.

Presently, these journals provide a most valuable source for reconstructing the history of Russian eugenics. Examining the content of their issues allows to elucidate how new ideas about human genetics penetrated the Russian scientific tradition.

Russian eugenists regarded the studies on human heredity with the participation of as many different professionals (geneticists, cytologists, biochemists, anthropologists, medical professionals, psychologists, etc.) as possible as one of their high priority lines of work.

Many REO members, inspired by the far-reaching ideas of improving the species of *Homo sapiens* were promoting research projects on the studies of inherited human traits. The Head of REO N.K. Koltsov acknowledged the existence of huge reserves of hereditary variation among humans. Some people possess considerable physical strength and robust physique while others may be physically weak but intellectually advanced. Mental and physical traits inherited from parents may be extremely diverse. All these traits can be passed on from parents to children more or less independently, in accordance with certain Mendelian laws.

Koltsov was aware that the studies of inherited potential abilities in humans was complicated by the impossibility of experimental works. He regarded the method of observation as the most suitable for this purpose despite its many limitations. Besides, in

[15] ARAN. F. 450. Op. 3. D. 153. p. 6.

Koltsov's opinion, for many human traits, it would be difficult to compare the roles of nature and environment in their formation. Therefore the researchers into human genetics seldom focused their attention on the traits such as musical or mathematical abilities. The traits that were analysed most often were those unaffected by living conditions, environment and nurture (Koltsov, 1924).

Like many eugenists of the first half of the 20th century, Koltsov was interested in the heritability of mental and psychic traits in humans and perused the literature on psychology and physiology of higher nervous activity. He attached great importance to the studies of chemical, or rather hormonal, regulation of various behaviours. Although Koltsov acknowledged I.P. Pavlov's concept of nervous reflexes, he believed that substances released into human blood play a no less important role in the organism. Koltsov believed that ability to produce certain substances is also transmitted genetically. He concluded that many psychic characteristics such as temperament, emotionality, and drives are a product of inherited potential (Koltsov, 1924).

The analysis of the heritability of complicated characteristics such as psychic features remained a stumbling block for the eugenists. These characteristics did not easily fit into the simple scheme of Mendelian heredity. A more detailed study of the genetics of psychic features required time. Having taken interest in this problem, Koltsov attempted to analyse the transmission of psychic characteristics, using the genealogical method. He initiated a series of research works, carried out by the researchers from the Institute of Experimental Biology, in which they reconstructed the genealogies of different people (including the IEB stuff), capturing individual personal qualities of each proband and their relatives. Koltsov believed that this work would shed light on the mechanism of inheriting different traits of character.

Koltsov regarded the studies of geniuses as one of the most important areas in eugenics. He hoped that science would thus be able to understand the mechanism of the emergence of talents, manifested by prominent individuals. He was convinced that personality can develop in very diverse types of environment. Both extraordinary and very ordinary people can be simultaneously raised in the presence of the same external factors. He believed it to be the result of varying inherited potential. His first article on the genealogies of geniuses was devoted to those of Charles Darwin and Francis Galton (Koltsov, 1922). For Koltsov, the fact of these scientists being related to each other (they shared the common grandparent Erasmus Darwin) was a proof of hereditary transmission of outstanding abilities.

N.K. Koltsov's next work on this topic was titled "The genealogies of our *vydvizhentsy*" (Koltsov, 1926). He became interested in this problem, as, for the so-called vydvizhentsy (self-made men), the role of environment in the making of a talent was eliminated. While the great writers, scientists, and artists in pre-revolutionary Russia were usually those who received an all-around education since early childhood, many of the vydvizhentsy of the Soviet era had grown up without proper upbringing and education and no favourable conditions, conducive to the development of their talents, had been available to them.

In his study Koltsov attempted to prove that many of the prominent individuals' qualities were inherited. For instance, Maxim Gorky inherited his propensity for literary narrative from his grandmother who was a natural storyteller. The genealogies of F.I. Shalyapin, N.P. Kravkov, and L.M. Leonov allowed Koltsov to conclude that the genotype composition of common Russian people was very rich. Geniuses can emerge from among the popular masses; they only need proper conditions for this.

N.K. Koltsov did not deny the role of the external factors in the manifestation of traits. He used a new concept of "euthenics" to designate external conditions, conducive to the

activation (manifestation) of inherited germs[16]. At the time, genetics operated the concepts of "genes (determiners)" and "phenes." Genes were understood as hereditary germs innate in the gametes and phenes, as external characters of the organism that depended on certain genes and conditions for their manifestation.

In regard to genes, N.K. Koltsov emphasised that they possess great endurance that is difficult to change of one's own volition — at the best, this might be achieved by inducing artificial mutations. Therefore practical eugenic measures only came down to artificial selection for a purpose of propagation of valuable genotypes and preventing the propagation of genotypes that are regarded as bad[17].

In Koltsov's opinion, euthenics had a particularly important role in the improvement of physical traits and capacities in humans. He believed that in humans, more that in any other animal and plant species, the phenotype is determined by the external conditions. An example of this could be children, raised in the conditions of poor hygiene and nutrition, which, to a great extend weakened their natural ability to resist infections. On the contrary, both the upbringing and living in good conditions enhances the child's innate strengths and resistance to some diseases. Hygiene, particularly social hygiene, physical culture, and maternal and child welfare, is a powerful instrument of euthenics.

Koltsov wrote:

> Man is born without a single conditioned reflex while the reserve of his innate unconditioned reflexes is absolutely insufficient for sustaining his existence, because in this respect Man is less endowed by nature than other animal species (especially insects) that possess inborn instincts that sufficiently regulate all of their behaviour. Moreover, Man is a gregarious organism whose existence is probably impossible without social environment. It is only in a fictional or poorly conceived piece of writing that baby Tarzan managed to grow up and even learn language without seeing a single human being. In reality, it is obvious that only the abilities for spoken language are innate in human genotype while speech itself, as well as the rest of the system of conditioned reflexes, is bestowed by the external social environment with the great wealth, accumulated by the humanity and passed on from generation to generation. Therefore the entire child-rearing system belongs to the realm of euthenics[18].

Koltsov admitted that genetic traits could not be always easily determined from the observed external phenotype. If a person grew up in good hygienic conditions and received a good upbringing and education, and still remained physically weak and feeble-minded, one may conclude, fairly enough, about this person's physical and mental inferiority. However, such conclusion may not be made about an individual who developed in an unfavourable environment: a sickly worker, lead-poisoned since childhood, could have actually been endowed by nature with good health and physical strength that he may pass to his offspring. "A shepherd playing his own compositions on a reed pipe may turn out to be a more gifted musician than some untalented piano player who has been trained in music since childhood" [19].

Most of the Russian eugenists were the proponents of positive eugenics whose purpose was spreading among the population the 'good' genes responsible for the formation of talent in various areas: intellectual, musical, artistic, or sporting. To implement practical measures

[16] ARAN. F. 450. Op. 1. D. 58. L. 1.

[17] ARAN. F. 450. Op. 1. D. 58. L. 12.

[18] ARAN. F. 450. Op. 1. D. 58. L. 14.

[19] ARAN. F. 450. Op. 1. D. 58. L. 17.

intended to improve the human species, the inheritance of particular abilities had to be studied first. The scientists were aware that they were dealing with complex characteristics that defied simple mathematical analysis. Moreover, valuable innate capacities often do not manifest themselves visibly or are not provided with the possibilities for their full realisation. Physically feeble children often begin to show marked abilities later on and go down in history as geniuses.

For instance, T.I. Iudin wrote:

> One must not forget that individual traits are inherited independently of each other, and the hereditary mass often contains, say, the germs of physical feebleness, the germs of diseases, in addition to quite valuable germs, the talents. Quite a number of the greatest thinkers — Kant, Copernicus, Alexander von Humboldt, Descartes, Leibnitz and many others — had been very weak children. Newton and Kepler were prematurely born. J.J. Rousseau was a very weak child until the age of ten. Victor Hugo was born almost dead and Goethe, asphyxiated. Quite a number of great individuals — in addition to their genius — had the germs of mental diseases. Dostoevsky was an epileptic; Walter Scott and Byron suffered from infantile paralysis (Yudin, 1925, p. 238).

Iudin emphasised that physically handicapped people way have many positive traits, needed by the humankind.

Yury Alexandrovich Filipchenko, Professor at Petrograd University, was one of the pioneers in the studies on the inheritance of talent, using the method of questionnaires and statistical methods. Filipchenko's eugenic studies were distinguished for their thoroughness and purely scientific approach, relying on nothing but strictly scientific facts. In eugenics, naturally, experimenting was out of question but Filipchenko accumulated, integrated and analysed an impressive material from the questionnaires. The questionnaire used in these surveys was expressly developed for these studies and spread among different categories of the Petrograd population. "We regard all of our conclusions as the first and the crudest approximation to truth," he wrote, "the mean of ten observations is much more valuable than a one and only observation or a complete lack of observations although, certainly, it is even better to make a thousand observations" (Medvedev, 1978, p. 46). "However, if this is impossible, any number is better than a total lack of it." A series of works was published based on these findings (Filipchenko, 1921a, 1921b, 1921c, 1922b, 1922c, 1925; Lepin, Lus, Filipchenko, 1925).

Filipchenko's first eugenic study was devoted to the inheritance of giftedness or, in modern phrasing, a socio-demographic study of Petrograd's scientific community of the early 1920s, based on the answers of the reference groups of scientists to the questions in a special questionnaire developed by himself. This study was complicated as much by its huge volume of work as by some of the respondents' lack of understanding of its importance.

In his letter to N.K. Koltsov of 28 February 1921, Yury Alexandrovich wrote:

> I have encountered an unpleasant attitude: some have no time for it <…>, others regard it as gross intrusion in their life, and still others (among them a number of famous names that are, indeed, *sunt odiosa*; they are the ones who do the most harm) call it anti-scientific. Then again, someone has said long ago that, with things like this, they first say that nothing will come of this, then that it's unscientific, and finally, that all of this has been known long ago. The things I have done! I have put, and still am putting, notices everywhere; I have spoken, and still am speaking, at the sessions; and I have written appeals to various institutions — and here's the result: over 2 months, of 2,000 scientists, only 250 responded! <…> I hope that the House of Scientists would yield about 150 responses (even though I am very far from being sure of it); besides, with

Gorky's support, I am spreading the same questionnaire to the House of Arts and, in summer, I will survey the employees at the Petersburg station. If I could manage to collect 1,000 responses, an interesting work would come up but I don't know if I will manage it [20].

Filipchenko was collecting his questionnaires throughout entire 1921 and processing the data in the winter of 1921/1922. He presented his findings at the House of Scientists and published a brief communication in the journal "Nauka i ee rabotniki (Science and its workers)" (Filipchenko, 1922a). Meanwhile the Bureau staff began to distribute and collect the questionnaires among the artistic community (through the House of Arts) and students. Filipchenko wanted to perform comparative analysis of the data obtained from the scientists and representatives of the artistic community, which, naturally, aroused much interest, as the aim of his study was a generalising analysis of the inheritance of intellectual capabilities and giftedness among the intelligentsia. The Bureau was extensively involved in the promotional and consultancy activities although the requests for such consultancy were very few. The Bureau was establishing contacts with foreign colleagues. The results of the Bureau's efforts during the first year and a half of its existence were presented in the first issue (No. 1) of "Izvestiya Byuro po evgenike" that was released in 1922 and is a bibliographic rarity nowadays.

The questionnaire distributed by the Bureau of Eugenics comprised a large Main Sheet with the questions that may be called socio-demographic. The so-called Minor Sheet contained the questions about who of those listed on the main sheet have had inborn anatomical and functional anomalies and hereditary diseases (tuberculosis, deaf-mutism, epilepsy, and mental disorders including alcoholism). There was space left for information on other relatives in the case of inheritance of interesting genetic traits and for the respondent's address. The sheet with the explanatory notes emphasised the importance of the questionnaire survey and provided explanations for individual items.

The main items in the questionnaire provided the answers to the following questions: age and gender distribution of scientists and their spouses; year of birth; place of birth and place of origin (place of birth of the scientist's father) of the scientists and their spouses; ethnicity and profession of the fathers of scientists and their spouses; profession of scientists' spouses; number, gender and years of birth of scientists' offspring; professions of scientists' offspring; diseases frequently occurring in the families of scientists and their spouses; correlation between the diseases and ethnicity.

Filipchenko had also conducted a similar survey among the "prominent scientists" many of whom were still alive and remained in Petrograd at the time. It must have been interesting to try to identify the traits and qualities that distinguish an extraordinary talent from an average one. In addition to the items in the questionnaire intended for the rest of the scientists, the questionnaire for the prominent scientists also included the following items: the estate ('soslovie') the scientist belonged to by birth; how many children the scientist's brothers and sisters had; prominent relatives; defective relatives (low intellectual endowment, mental diseases, alcoholism); special capacities (this section included capacities that were not associated with the scientist's core professional activities (e.g. organisational, linguistic, literary, musical, poetical).

As may be seen from these additional items in the questionnaire for the prominent scientists, particular attention was given to their genealogy, i.e. an attempt was made to

[20] ARAN. F. 450. Op. 3. D. 153. L. 5.

clarify certain hereditary, genetic patterns associated with the emergence of an extraordinary scientific talent.

The first survey conducted in 1921 allowed to analyse 330 questionnaires that contained detailed information about 510 families of the scientists and their spouses and 166 families of the scientists' offspring. The total of 676 questionnaires enables Filipchenko to conduct a statistically valid analysis. Even the answers to the first two questions in the questionnaire produced interesting results. Firstly, the percentage of women scientists among the respondents was found to be rather high, a little more than 1/3 of the respondents. The age of Petrograd's scientists at the time was found to be between 37 and 62, i.e. those born from 1860 to 1885. Therefore, the mean age of the scientific community members was 45–50 years.

As regards the scientists' place of birth, St. Petersburg occupied the first place, followed by the central part of Russia and the Volga Region, the Western Krai (9 westernmost governorates), and the south of Russia. As regards the scientists' place of origin (place of birth of a scientist's father and grandfather), the central part and the Volga Region ranked first, followed by the Western Krai and Petersburg. Filipchenko believed that this distribution was not accidental as it was found to be exactly the same for the scientists' spouses (Filipchenko, 1922c, p. 10).

The issue of the scientists' origin would not have been fully addressed without determining what social strata they came from. Filipchenko divided all professions into two groups of "higher and lower qualification (in a sense of education and talent)." The resulting tables allowed to expressly conclude that most of the scientists (about two thirds) as well as their spouses came from the intelligentsia. Their fathers tended to be teachers, doctors, lawyers, military officers, public officials, and clergy. Many came from the merchants and industrialists.

As regards the distribution of certain diseases (tuberculosis, cancer, mental diseases, and alcoholism) among the respondents and the correlation of the occurrence of these diseases with ethnicity, Filipchenko considered the results of the survey to be quite informative:

> The scourge of purely Russian families is alcoholism which is mentioned almost 1.5 times as often as could be expected: 70 percent instead of 51 percent. The rest is quite close to the norm, although [the occurrence of] tuberculosis is somewhat higher than expected and that of mental diseases, somewhat lower but not so much as to attach special importance to it. On the contrary, among the foreigners [non-Russians], alcoholism occurs about three times less often than expected and all other diseases, especially tuberculosis, are somewhat lower than the norm. The situation in the families of mixed origin is the worst: tuberculosis, cancer and alcoholism significantly exceed the expected figures while mental diseases occur even more often (more than 1.5 times as often as expected) than alcoholism among purely Russian elements. One cannot help seeing in the latter fact a certain confirmation of the idea of the undesirability of mixed marriages from the eugenic standpoint (Filipchenko, 1922c, p. 19).

In concluding his article, Yu.A. Filipchenko made a very important conclusion that many of the observed traits were typical not only for Petrograd's scientists — this conclusion was probably applicable to the entire intelligentsia of the time, although this conclusion was formulated by Filipchenko later, in the article titled "Intelligentsia and talents" (Filipchenko, 1925), in which he compared the data of the surveys of scientific and artistic (writers, artists, actors) communities.

The survey of prominent scientists became a logical continuation of the survey of scientific community. Filipchenko wrote, "If from the standpoint of eugenics, a group of scientists as one of the typical representatives of our intelligentsia is of particular interest, the same is even truer for those few chosen of the talent, who may be called prominent scientists" (Filipchenko, 1922b, p. 22). Filipchenko categorised as prominent scientists the founders of the most important Russian scientific schools and research areas, the scientists of world-wide repute. He excluded from this group all medical professionals and engineers as "the representatives of applied rather than theoretical knowledge who, because of this, in my opinion, could not be directly compared to the representatives of other specialities" (Filipchenko, 1922b, p. 23).

The list compiled by Filipchenko contained 80 names of the representatives of "theoretical knowledge." The questionnaires distributed among them contained a number of questions about themselves, their ancestors, spouses, and children. Many of these questions were absent from the previous questionnaire for the scientists at large. The question about ethnicity ('national origin') turned out to be the most interesting of general questions. The percentage of 'pure Russians' was the same as among the entire scientific community while, "on the contrary, there were noticeably more persons of mixed origin and noticeably less pure foreigners than among the general population of the House of Scientists. Therefore, a somewhat smaller proportion of foreign element has to be noted; as regards the latter's nature, it is mostly German or Jewish among the persons of mixed origin, and Jewish among pure foreigners" (Filipchenko, 1922b, p. 27).

As for the estate ('soslovie') the scientist belonged to by birth ('estate origin'), having compared the survey results with the well-known statistical data obtained by Alphonse de Candolle (1806–1893) for the foreign members of the Paris Academy of Sciences (De Candolle, 1911), Filipchenko concluded that the prominent scientists in Petrograd came from a much more democratic milieu, from practically all of the estates: nobility, clergy, merchants, townspeople, and peasants, although the biggest number of the prominent scientists came from the first two.

The question about a prominent scientist's number in order of birth was not accidental in this survey. Karl Pearson and Ilya Metchnikoff, both of them being respected scientists, shared a belief that the first-borns were of low quality. Filipchenko's survey allowed him to make a definite opposite conclusion: "the first-borns have considerably more chances to become prominent scientists — at least, almost half of our prominent scientists are the first-borns" (Filipchenko, 1922b, p. 33).

As regards the prominent and defective (mostly mentally ill) relatives, the limited data obtained by Filipchenko suggested that both the giftedness and psychic anomalies were mostly passed on through the female lineage. This allowed Filipchenko to raise the next question: "Perhaps, in the transmission of psychic deviations from the norm, both positive and negative, sexually limited inheritance does indeed exist. This question, naturally, may only be raised by us purely tentatively" (Filipchenko, 1922b, p. 35).

The distribution of "special" abilities (unrelated to a scientist's core research work) among the prominent scientists appears to be interesting. The organising ability ranked first, followed by the linguistic, literary, musical, oratory, and drawing abilities. I.e. a large proportion of prominent scientists were, above all, good organisers and possessed literary and artistic gifts.

Filipchenko identified five main differences between scientists in general and prominent scientists. First, there were no women among the surveyed prominent scientists. Second, the mean age of prominent scientists considerably exceeded that of the scientists in general (60 vs. 50). Third, the number of pure Russians among the prominent scientists

was significantly higher than among the general sample. Four, prominent scientists were found to have significantly more prominent and mentally-ill relatives, and in both cases the maternal lineage was more significant than the paternal lineage. Filipchenko wrote, "These latter findings convince us yet again that the persons who may be recognised as prominent scientists become such not under the influence of their own efforts or some accidental circumstances but under the influence of a force that, more than anything else, makes us what we are, i.e. under the influence of heredity. Like many other things, prominent scientists are born rather than created" (Filipchenko, 1922b, p. 37).

Filipchenko emphasised that this fact needed to be especially remembered in Russia. During ten months after the completion of the list of prominent scientists, seven of them were "taken away by death" and three left Russia. During four postrevolutionary years, Russia lost a large part of its scientific community. Filipchenko wrote, "No natural increase, for certain, can make up for these losses and, should these latter continue in the same proportion further, we may very soon come down to such lack of talented people in our milieu that Pearson profoundly fairly regards as the 'worst evil that may befall the nation'" (Filipchenko, 1922b, p. 38). This doubtless truth that was fair for many periods in the Russian history prompted Filipchenko to epigraph his article titled "Our prominent scientists" with a quotation from Fritz Lenz that reflected his own vision of the focus of eugenic studies: "Der Schutz der geistigen Arbeiter, und speziell der hochbegabten, ist eine Hauptaufgabe der Rassenhygiene" ("Protection of intellectual workers, especially the most talented of them, is one of the main goals of racial hygiene").

Filipchenko's work on the reconstruction of genealogies of prominent people was the first of its kind in Russia; no such thorough and large-scale socio-demographic survey of the scientific community has been conducted so far. This study was interesting for its time because it employed a scientifically-grounded statistical approach in the analysis of demographic parameters. The issues of the inheritance of intellectual abilities remained relevant for a long time (Korochkin, 1989; Efroimson, 1998; Ridley, 2010). Today, of course, many of the conclusions from Filipchenko's eugenic studies are considered to be one-sided. Nevertheless, his ideas about creating favourable living conditions for the country's intellectual elite have not lost their relevance even today. Providing intellectually gifted children with the opportunities for meeting their cognitive needs as a most important means for their personal growth is particularly important in this day and age.

The works of Russian eugenists devoted to the study of the families of prominent individuals were numerous and not always inclined towards the Mendelian interpretation of the transmission of different abilities. The studies of giftedness encountered many difficulties associated with the uncertainty of this concept, the diversity of the types of giftedness as well as of approaches and methods for analysing it, and a small number of specialists trained for this work.

Thus, both Filipchenko and Koltsov recognised genetic determination of intellectual and creative abilities. This opinion, however, was not unanimously shared by the Russian scientific community. The leaders of the Russian Eugenics Society, too, had opponents who promoted their own hypotheses to explain the occurrence of geniuses. On the one hand, these were the proponents of the key role of nurture and environment in the formation of personality; on the other hand, the scientists, convinced of the priority of physiological and biochemical factors in the realisation of human abilities. One of Filipchenko's opponents was a psychiatrist G.D. Yaroshenko.

Yaroshenko believed that being a genius is associated with the functioning of endocrine glands and very often with anomalies in the sexual system[21]. He reduced genius to the growth of one trait at the expense of atrophy of another. Thus, for instance, an outstanding intellectual ability could result from the excessive "one-sided" (unbalanced) activity of the brain. In his opinion, most geniuses suffer from anemia, poor sexual potency, physical feebleness, and neurasthenia, resulting from an unharmonious, "one-sided" activity of the organism. To explain the fact of negative traits in an intellectual genius not being always clearly manifested, Yaroshenko maintained that these person's health capacities are bigger than those of an average person, and the genius can channel the excess of his health into the development of his intellect, without taking the strength away from other organs.

He adduces an interesting example of how, in relation to an artistic genius, the opposing art movements unanimously agreed that his creativity was a result of his low libido. G.D. Yaroshenko believed that aesthetic emotions, poetic inspiration, and a composer's intuition were nothing but unsatisfied libido.

He concluded that the majority of people were potentially gifted. "Each healthy, harmoniously developed individual carries the germs of different geniuses that are sort of mutually neutralised by their harmonious balance. A harmoniously developed, healthy person forestalls one-sided development of traits and thus prevents the manifestation of genius" [22].

Like many others, G.D. Yaroshenko wondered about the possibility for the transmission of genius from one generation to another. In regard to the facts of transmission of such traits from the ancestors, he commented that such examples are extremely rare. In a great number of cases, he believed, genius is not inherited: on the contrary, the offspring of geniuses are usually ordinary if not failures. Most geniuses are born of ordinary parents and produce ordinary offspring or no offspring at all. Yaroshenko explained it by an inverse dependency between intellectual and sexual potency. He believed that, while hereditary transmission of outstanding ability is observed in some cases, in this case it is unspecific traits such as the organism's increased energy potency (i.e. predisposition for genius) that are inherited. He also believed that the specific traits of genius are developed through nurture, conditioned upon the formation of a habit for inhibiting sex drive, which that increases the intensity of internal secretion of sexual glands.

According to G.D. Yaroshenko, the internal processes related to internal secretions of the gonads and thyroid gland play an important role in the formation of capacities. "Both of these glands," he wrote, "are antagonists and mutually balance each other; an increased development of any of these glands causes anomalies; if both glands gain momentum simultaneously, this phenomenon, in all probability, is the cause of the increased overall energy potential of the organism, i.e. determines the predisposition for genius"[23]. In December 1925, Yaroshenko sent his theoretical speculations to N.K. Koltsov, having stressed that it would be of primary interest for eugenics to test his hypothesis and to study the sexual life of geniuses.

The studies of geniuses occupied the minds of many leading Russian eugenists. In the first decades of the 20th century, in line with the Russian tradition, the problem of giftedness evoked many theories and approaches (Yu.A. Filipchenko, G.D. Yaroshenko, G.V. Segalin, N.K. Koltsov). The scientists, however, failed to arrive at a single definition of what must be understood as giftedness and its causes. This problem remains unresolved to this day

[21] ARAN. F. 450. Op. 5. D. 106.

[22] ARAN. F. 450. Op. 5. D. 106. L. 5.

[23] ARAN. F. 450. Op. 5. D. 106. L. 6.

because it is difficult to trace the formation of such a complicated trait whose manifestation depends on a very large number of internal and external factors. Nevertheless, the Russian eugenists did formulate the main principles for the studies of talented people that are still relevant and include the following:

— comprehensive nature of the studies of various aspects of prominent individuals' behaviour;
— attracting researchers from various disciplines (geneticists, physiologists, endocrinologists, psychologists) to the studies of giftedness;
— comparing outstanding abilities among the relatives of talented individuals; and
— utilising a broad range of diagnostic methods: questionnaire surveys, observations, interviews, statistical analysis.

One of the leaders of the Russian Eugenics Society was A.S. Serebrovsky. We have discovered previously unpublished materials on eugenics in his archive: the texts of the lectures delivered by Serebrovsky at the Anikovo Genetic Station in July 1922, his notes and comments on the articles devoted to anthropogenetics[24].

Serebrovsky believed that humans have a large number of Mendelian genes, which makes them an interesting object for genetics, and that further development of eugenic studies can significantly change what we know about the similarities and differences between individual persons, tribes and peoples: it would become possible to write a genetic formula of the Europeans, Africans, or Australians, and confirm that Africans lack some genes that are present in Europeans and vice versa[25].

Eugenics opened the horizons for the studies of hereditary basis of human psyche and talent. In regard to the inheritance of capacities, According to Serebrovsky, one may only guess about the presence of certain inborn capacities in people, as nurture also plays an important role in the making of talent[26]. He identified the following main research areas in eugenics:

1. Studies of individual genes of physical constitution in the families where certain traits are manifested in a number of generations
2. Studies of children from interracial and interethnic marriages
3. Long-term observation of several generations of individual families
4. Studies of genealogies

Since the reconstruction of genealogical trees of the families under study was very important for anthropogenetic studies, Serebrovsky proposed to open a special division ('otdelenie') under the Moscow Chapter of the Russian Eugenics Society to collect data pertaining to Russian genealogies. Ideally, such division was to register all marriages, about a million of which were annually concluded in Russia at the time. However, even if such huge effort was impossible to undertake, the scientist suggested registering all marriages of more or less prominent individuals. At the same time, the Genealogical Division was meant

[24] Lektsii po antropogenetike, 1922 g [Lectures on anthropogenetics, 1922], *Kollektsiia arkhivnykh dokumentov A.S. Serebrovskogo* [Collection of archival documents of A.S. Serebrovsky].

[25] Ibid.

[26] Ibid.

to study genealogies of prominent Russian citizens, based on various historical and literary sources, gentry and parish registers, and respective questionnaire surveys.

Serebrovsky believed that a study of genetics of rural population would be of particular interest. The population of villages was largely migrationally inert. People lived in the same place year after year, generation after generation, and conducting a survey a today, one could be assured that the same traits would be found there in 25, 50 and even 100 years. People usually marry within the same village or take brides from neighbouring villages and peasant families are usually large, with many children, which may be helpful in their genetic analysis.

Serebrovsky believed that the stock of genes of the country's population tends to be preserved without noticeable changes for a long time, and therefore, in future, many more generations will have largely the same stock of genes, which the scientist coined 'genofond' (gene pool).

Many scientists from different disciplines, including anthropologists, took an interest in eugenics. It was not accidental that the anthropologist V.V. Bunak was invited to succeed Filipchenko as head of the Eugenic Department at the Institute of Experimental Biology. He held this position till 1929[27].

In November 1922 when the Scientific Research Institute of Anthropology was created under the auspices of Moscow University, Bunak became one of its first four full members ('deistvitelnye chleny') and, after D.N. Anuchin's death in 1923, its director. In 1927, V.V. Bunak became the head of the Central Anthropometric Bureau under the State Institute of Social Hygiene of the People's Commissariat for Public Health ('Narkomzdrav').

Bunak regarded collecting factual material on human genetics as one of the main tasks of eugenics, and maintained that collecting such material required joint efforts of many researchers who share the same goals (Bunak, 1922).

Bunak suggested to develop a special research programme in eugenics, similar to those at the Galton Laboratory based at University College London and at the Eugenics Record Office (ERO) in New York. The Russian counterpart of these programmes, naturally, was to be adapted to local specifics.

This research programme was intended to pursue the main goal of providing guidance more to the members of general public, interested in the issues of human heredity, than to researchers specialising in eugenics who already possessed the skills necessary for conducting such surveys.

The implementation of this programme required the presence of special eugenic organisations across the country. Bunak thought it expedient to organise eugenic observation centres or eugenic stations at the institutions dealing with the population. He believed that health institutions would be the most suitable for the purpose, particularly as physicians were able to understand the tasks of eugenics better than anyone else. V.V. Bunak wrote:

> To cover the most typical category of Russian medical institutions, it would be most correct to establish such experiment/observation centre at some rural district hospital. The latter [rural hospitals], due to their close connection to a certain stationary population, its [this population's] better availability for observation, relative uniformity of its external living conditions, and other similar reasons, comprise in many respects a particularly favourable site for various biosocial observations, and it is these institutions that have produced

[27] ARAN. F. 570. Op. 1. D. 11. L. 29.

quite a number of valuable sanitary-statistical, hygienic and anthropometric works in the Russian scientific literature (Bunak, 1922, p. 83).

In Bunak's opinion, the abundant material dealt with by the district medical facilities provided broad opportunities for research in different areas in human genetics. Available statistical data enabled the studies of the influence of exogenous and endogenous factors on the formation of different traits as well as household surveys aimed to look into the heredity of diseases. Bunak placed big hopes on the studies of differences between the representatives of different professions. He believed that people of different professions are biologically different, which is the cause of social competition among the population.

When developing the content for the eugenic survey programme, V.V. Bunak specified the documents that had to be filled out: (1) a family sheet for individual traits; (2) a family sheet for multiple traits; (3) a typological sheet for studying homogenous typological groups; (4) a sample biographical sheet; (5) a demographic family sheet; and (6) a genealogical family chart. Each of these questionnaires was complete in itself and could be filled independently of other documents.

The family sheets for individual traits were intended for registering one particular trait, e.g. a hereditary disease. The most complete information about families under study was contained in the family sheets for multiple traits, which provided the data about racial, demographic (life span, number of children), typological (chest circumference, nutritional status, overall constitution), psychological and pathological traits.

All of these documents, however, only allowed to collect factual data but not to process it. It was the geneticists who were to analyse thus collected material. The researchers were expected to make conclusions about one individual or his family and to compare unrelated subjects, e.g. those afflicted with tuberculosis, in order to determine the true cause of the disease. Indeed, understanding the exogenous and endogenous factors that determine the development of a trait was one of the goals of Bunak's eugenic programme.

Of particular interest were the studies on familial anomalies. During the examination of individuals with pathologies, special consideration was given to the following aspects: (1) information about parents; (2) age; (3) family status; (4) number of children; (5) profession; (6) general health status, and (7) psychic characteristics. Genealogical tables or graphical representations of genealogies were to be prepared for each subject. Graphical genealogical trees were only intended to illustrate the transmission of hereditary properties.

In his eugenic views, V.V. Bunak placed a great emphasis on practical application of scientific research. For human genetics, it was a comprehensive study of human organism and its hereditary properties. Practical experiment stations, proposed by Bunak for registering various anthropological and medical features of individuals, were intended to benefit health care, education, and various industrial sectors. Anthropometric studies of people of different age groups, ethnicities, and professions, organised by Bunak and his colleagues, covered the territory of the entire Soviet Union. The data on morphological features of the country's population, just as he hoped it would, began to be used for various practical purposes and needs of the country's economy. For instance, anthropometric characteristics obtained in Bunak's studies were used in the development of the first state standards for clothes and footwear in the USSR.

Bunak's works in the field of "practical eugenics" provided human genetics with the still relevant methods of measuring different anthropometric parameters. The types of human constitution, age periodisation of individual development, classification of races,

and hypothesis about the origin of different nationalities and their dispersion, proposed by Bunak, remain theoretically and practically relevant to this day.

The analysis of, and public reaction to, the eugenic works indicate that, in the 1920s, Russian eugenics reacherd the frontiers of biological science. We see the genesis of eugenics as a result of a complicated interaction of the humanities and naturals sciences within the framework of integrative processes in the cognitive and socio-cultural components of scientific knowledge. It was not accidental that, in the eugenic journals, one could find the articles written by medical professionals, geneticists, anthropologists, lawyers, psychologists and historians. The participation of the representatives of different disciplines in the eugenics movement broadened considerably the scope of the new science and helped to attract public attention to its problems.

By the late 1920s, the persecution of eugenists began in the USSR and the Russian Eugenics Society's activities began to gradually wane together with the entire field of eugenics. The number of articles devoted to the heredity of human traits dropped considerably and the chronicle of the Society's events and activities almost ceased to be published. Despite the fact that, in 1928, the Society for the Studies on Racial Pathology and Geographical Distribution of Disease, whose scope was to an extent in keeping with eugenic research, was organised in Moscow under the leadership of N.K. Koltsov, whose scope of studies was to an extent in keeping with eugenic rersearch, the former scientific enthusiasm of the eugenists began to fade. E.V. Pchelov believes that one of the causes of the slowing down of research in eugenics was the evolution of views of the eugenics movement's leaders themselves (Pchelov, 2004, 2008).

The attacks of the opponents of eugenics also had a profound negative impact on the Eugenics Society's activities. One of the sources of resentment against eugenics was the fact that this discipline acknowledged inequality, even if it was genetic inequality, among people. The belief that the people's inherited capacities depend on the privileges associated with favourable social status became firmly established in the European tradition. The proponents of equality were strongly opposed to such privileges for gifted individuals, believing that all human beings are endowed with equal abilities. The differences in social status were ascribed to the oppression by the ruling class. From this standpoint, the people engaging in heavy labour were nothing but the product of social system's unfairness, the victims of oppression.

According to the Marxist doctrine, the people's social status is determined, rather than by their heredity, by ownership of the means of production, by their property status. The widespread antagonism towards the rich in the USSR created a tendency to underestimate the importance of heredity and gave people a feeling of satisfaction from knowing that one's imperfection can be attributed to differences in the possession of material wealth. The Soviet eugenists were heavily criticised for adopting the theories of a number of Western European scientists, according to which poverty itself was an indicator of poor biological development.

Another source of public antagonism towards eugenics was a conviction that nurture and education cannot change the individual's nature, which was shared by many of its leaders. The issue of inheritance of acquired characteristics was widely discussed in the USSR in the 1920s. The geneticists refuted the possibility of such an inheritance. This was the period of struggle between the representatives of classical genetics and mechanolamarckism. The discussions on the problems of natural science in the magazine "Pod znamenem marksisma" ('Under the banner of Marxism') began to escalate to political debates and

lose their scientific value. According to E.I. Kolchinsky and S.A. Orlov, the concept of mechanolamarckism, in contrast to nomogenetic theory of evolution and saltationism, became firmly established in the Soviet Union due to political interference in philosophical discussions (Kolchinsky, 1997; Kolchinsky, Orlov, 1990). I.V. Stalin personally advocated the thriving of "<...> the science, which has the courage and determination to break the old traditions, norms, and attitudes when they become obsolete, when they became a hindrance for progress, and which is able to create new traditions, new norms, and new attitudes" (Stalin, 1938, p. 3). The faction of mechanolamarckists included M.B. Mitin, T.D. Lysenko, E. Kolman, A.A. Avakyan, and B.P. Bakhrash. Mechanolamarckists mostly ignored the philosophical and methodological aspects of the debates.

The discussions on the issues of inheritance of acquired characteristics pushed the Russian philosophical and biological thought several decades back. Such debates had already occurred in England long before the publications in "Pod znamenem marksisma." In the 1870s-1880s, Darwin's theory was criticised by Herbert Spencer who regarded organism as an aggregate of organs that exist in equilibrium. According to Spencer, the external milieu was able to disrupt this equilibrium that could only be restored through the transmission of acquired characters. Spencer opposed the theory of selection as an all-important factor in evolution (Spencer, 1866, 1870, 1871, 1893, 1894). Many scientists sided with Spencer, calling themselves mechanolamarckists. Others sided with A. Weismann, demanding to "purge" Darwinism from the mistakes of Lamarckism. This situation repeated in Russia. In his speech on philosophical issues of science, A.S. Serebrovsky maintained, "We are the proponents of the position that has been advocated by Weismann and Wallace against Spencer's line that led to mechanolamarckism, which erupted in a blazing outbreak in our country in recent years" (Serebrovsky, 1938, p. 97). Serebrovsky himself sometimes came out with brave statements in favour of genetics. Thus, in his article titled "An attempt at a qualitative characterisation of the process of organic evolution" (1930) he proved wrong the theory of human origins, substantiated by Engels. He refuted this theory as false and scientifically invalid. According to Serebrovsky, it was not Engels who was to be held accountable for the labour theory but, rather, biology of the time. "The people of genius are children of their time, who can make mistakes together with their contemporaries" (Serebrovsky, 1930b, p. 34). Having perused the works of the classics of Marxism, Serebrovsky wrote, "Even though, in the Marxist literature, a sympathising attitude towards Lamarckism can be encountered in the works of some authors, it by no means follows from it that Lamarckism is closely linked to Marxism ideologically" (Serebrovsky, 1930a, p. 220). In his opinion, the all-important task of biology was "cleansing the evolutionary theory from Lamarckism." In regard to the driving forces of evolution, Serebrovsky remained a fierce anti-Lamarckist, never giving in a single inch to the simplification of evolutionary theory by the orthodox Darwinists (as neo-Lamarckists called themselves in opposition to neo-Darwinists/geneticists).

The attacks on eugenics on the part of neo-Lamarckists were particularly fierce. The proponents of the inheritance of acquired characters criticised the eugenists for underestimating the role of new social conditions in the process of personality formation; at the same time, the ideas of artificial selection among humans were harshly criticised. Only very few were able to cope with such fervour, particularly when politically and ideologically-driven factors that had nothing to do with science intervened in scientific disputes. Thus, after Yu.A. Filipchenko's fundamental work "The intelligentsia and talents" was subjected to harsh criticisms, he abandoned his eugenic research and the Leningrad Bureau of Eugenics soon completely changed the direction of its research.

Furthermore, a number of countries Soviet society was opposed to at the time were using eugenics to address their demographic problems. Nationalistically tinted idea of racial hygiene was running rampant in Germany. "Russkii evgenicheskii zhurnal" even used to publish the foreign programmes of negative eugenics for a time, which naturally provoked negative attitude towards eugenics in the public consciousness. N.K. Koltsov himself thus explained the closure of the Society: "When the first signs of fascism manifested themselves in Germany, I abruptly stopped eugenics by myself, without any external pressures, closed the Eugenics Society, having ceased to publish the journal, and closed the Department of Eugenics at the Institute" (Astaurov, 1976, p. 25). In the late 1920s, the overall situation for the development of new scientific societies changed for worse. On the eve of the year of the Great Breakthrough, the state launched an offensive against scientific thought and a large number of scientific societies were closed.

The thrashing of eugenics in the USSR began in the late 1920s when it was on the rise. The Russian Eugenics Society and its Chapters ceased to exist in 1929. "Russkii evgenicheskii zhurnal" was no longer published and the eugenics laboratories were closed. The leaders of the Russian Eugenics Society were accused of racism and chauvinism and forced to publicly repent for their enthusiasm about eugenics.

In 1931, an article on eugenics was published in the Great Soviet Encyclopedia, in which Filipchenko's eugenic ideas were called "bourgeois"; Koltsov's ideas, "fascist"; and Serebrovsky's ideas, an "example of Menshevist idealism" (Batkis, 1931). The author of this article, Grigorii Abramovich Batkis (1895–1960), became the Chair of the Department of Social Hygiene at the 2nd Moscow Medical Institute the very same year (1931). Despite his in-depth training in psychiatry and biological sciences at the St. Petersburg Psychoneurological Institute and Kiev University[28], he was skeptical about some studies in the field of human genetics and a zealous opponent of the methods of preventive eugenics (Batkis, 1927, 1928, 1936, 1938, 1941).

In the 1930s, eugenics was hold against the scientists who had paid tribute to it. This accusation was used throughout the entire period of struggle against genetics. Hitler's coming into power in Germany put an end to eugenics in the USSR. Germany always had a reputation of the country with a huge scientific potential, including its significant contribution to the history of genetics. It is enough to name Carl Correns who together with Hugo de Vries (Netherlands) and Erich von Tschermak-Seysenegg (Austria) rediscovered Mendelian laws in 1900 and Erwin Baur who was one of the most important architects of the synthetic evolution. However, after the dictatorship of the Nazi Party was established, the geneticists switched over to the development of racial theories in very limited sense.

After the attacks on eugenics on the part of Soviet politicians and public figures, the leaders of the eugenic movement saw the salvation of eugenics in changing its name to "anthropogenetics," "medical genetics," or "human genetics," as these terms had not been negatively associated with the Western tradition of racial hygiene.

No single act of sterilisation or elimination of hereditary defective individuals has been committed in the USSR, the proposed projects of organising a union "For a better child" ('Za luchshego rebenka') and a society named "Let's produce a healthy child" ('Dadim zdorovogo rebenka') had not been realised either. The Russian eugenics movement, in

[28] *Arkhiv Rossiĭskoĭ akademii meditsinskikh nauk* (ARAMN). [Archive of the Russian Academy of Medical Sciences]. F. 1. Op. 8/3. D. 23.

contrast to its foreign counterparts, placed the biggest emphasis on the scientific investigation into the issues of human genetics and the popularisation of the eugenic knowledge.

The mentality of the leaders of new science was governed by their conviction that the value of positive knowledge lies in its being based on the principles developed by natural sciences. Russian eugenists believed that the conditions of human existence could be improved based on the accomplishments in the cognition of the laws of human heredity, which was reflected in the development of 'positive eugenics' projects. They put forward their grandiose plans for the only purpose of helping the society suffering from hereditary diseases and degeneration. The ideas of perpetual commitment to serving people were inherent in the Russian scientists' activities. The humanistic goals inspired them to spread scientific achievements and knowledge among the people through public lectures that aroused wide public interest.

Our scientists believed that practical objectives of eugenics, associated with the elimination of negative heredity, should be the organisation of special medico-eugenic consultancies. The first such consultancy in the USSR was organised by S.N. Davidenkov at the Genetic Department of the Moscow Institute of Neuropsychiatric Prophylaxis under Narkomzdrav. Davidenkov organised the work of this consultancy based on the principle of strictly individual analysis of each of the newlyweds and their families. The specialists offered their advice based on the examination of the couples' genealogical charts and assessment of transmission of hereditary anomalies. The scientific basis of the eugenic recommendations was the assumption that most of the recessive forms of hereditary diseases were characterised by the intermediate type of heredity. This gave rise to the need to elucidate the type of genotypic combinations, associated with a trait under study, the individual belonged to, whether it was heterozygous or completely free of the negative hereditary factor. "I have been constantly pushing the idea that medico-eugenic advice to the families with recessive anomalies must be based on the diagnosis of heterozygotes rather than on parents' being blood-related," wrote Sergei Nikolayevich Davidenkov (1929, p. 37).

Later on, a eugenic consultancy was organised at the Genetic Consulting Room of the Moscow Medical Institute's Psychiatric Clinic. The demand for such consultations was high, with most of those who sought consultations being women. One of the staff members of this clinic cum consultancy centre, A.G. Galachian, thus wrote about the importance of such work: "Medico-eugenic practices, particularly under our [Soviet] Union's conditions where neither inequality of property, nor national, estate, or religious prejudices exist that dictate the choice of marriage partner, are the matter of today" (Galachian, 1936). The creation of medico-eugenic consultancy centres marked the beginning of a new direction in medical genetics. This day and age, such centres employ modern diagnostic methods. A large number of young families seek such consultations, being aware of their importance. Modern family planning centres are impossible to imagine without an extensive use of genetic technologies allowing to anticipate the birth of a healthy child.

The examples given here demonstrate the diversity of theoretical and methodological views of the scientists who had turned to eugenics in the 1920s, which indicates how popular this area was among the biological and medical communities. According to V.V. Babkov, the preconditions for the extensive spread of this movement in Russia were the need for the mobilisation of the nation's productive and creative forces after WWI and the Civil War as well as the projects of national economy restoration and the belief in the power of the human mind (Babkov, 1998a). These, however, were not the only and not the main caused. The entire socio-cultural atmosphere of the 1920s with its economic, political, religious,

ethical, familial, and scientific aspects facilitated the adoption by the society of the ideas of bettering humankind. The process of emergence of the new public organisations and scientific institutions of eugenics was a universal trend worldwide. The adoption and spread of the eugenic ideas in Russia proceeded in the context of socio-cultural and socio-political changes occurring in the first decades of the Soviet regime. To be recognised and financially supported by its own country, it was not enough for eugenics to just adapt to socialist realities, requirements and specifics. It became involved in the processes associated with addressing the economic, political and socio-cultural tasks of the Soviet society, and carried out extensive organisational, research and educational activities.

The totalitarian system killed many initiatives of the Russian eugenists, banished many advanced studies, and destroyed research teams and institutions but failed to erase the remarkable pages of "the eugenics period" from the history of Russian genetics. The contemporary interest in the history of the eugenics movement in the USSR is governed not only by the scientific, methodological, sociopolitical and educational works by the outstanding eugenists but also by the examples of adherence to scientific and moral principles and earnest commitment to work for the benefit of future generations.

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Русское евгеническое общество: история и основные направления деятельности

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В статье на основе архивных материалов реконструирована история Русского евгенического общества, созданного в 1920 г. и просуществовавшего до 1929 г. Обсуждение евгенических проблем совпало и с распространением генетики в России. Не случайно среди учёных, получивших первоначально естественно-научное университетское образование и начавших свою научную карьеру в традиционных биологических областях, таких как сравнительная морфология, энтомология, гидробиология, антропология (Н.К. Кольцов, А.С. Серебровский, Ю.А. Филипченко, В.В. Бунак), увлечение генетикой привело их в дальнейшем к рассмотрению ключевых проблем антропогенетики. Научные традиции, привнесённые из классических дисциплин, способствовали развитию евгеники в России как научной дисциплины, с характерными для неё методологическим базисом и привлечением современных для того времени методик исследования. Отделения Русского евгенического общества к концу 1920-х гг. проводили масштабную научную и просветительскую работу. Наибольшее число направлений деятельности было в Московском отделении, в Ленинграде в основном упор был сделан на социодемографические исследования, в Одессе евгенисты сосредоточились на пропаганде идей новой науки, а в Саратовском отделении связали евгенику с решением

важнейших медицинских проблем: распространением различных заболеваний и выяснением их природы, борьбой с абортами и венерическими заболеваниями, профилактикой появления наследственных аномалий. В отличие от евгенических обществ других стран, в России оно было пропитано строгими научными стандартами и скепсисом в отношении к околонаучным утопиям. В отечественной традиции между евгеникой и антропогенетикой ставился знак равенства. Таким образом, исторический период формирования евгеники в полной мере можно считать одним из этапов в истории отечественной генетики человека.

Ключевые слова: Русское евгеническое общество, Русский евгенический журнал, изучение наследственности человека, популяризация науки, наука и власть.