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Darwin's *On the Origin of Species* in Russia and in the USSR: some aspects of translation and publication

Abstract

The translation of Ch. Darwin's main and most well-known book, *On the Origin of Species*, had great significance for the reception and development of his evolution theory in Russia and later in the USSR, and for many reasons. The history of the book's publication in Russian in tsarist Russia and in the Soviet Union is analyzed in detail.

The first Russian translation of *On the Origin of Species* was made by Sergey A. Rachinsky in 1864. Till 1917 *On the Origin of Species* had been published more than ten times, including the publication in Darwin's collected works. The edition of 1907–1909 with Timiryazev as editor had the best quality of translation and scientific editing. This translation was used in all subsequent

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Soviet and post-Soviet editions. During Soviet time, *On the Origin of Species* was published seven times in total, and three times as a part of Darwin's collected works.

From 1940 to 1987, as a result of the domination of Lysenkoism in Soviet biology, *On the Origin of Species* was not published in the USSR.

During the post-Soviet period, the book was published only two times, and it happened already in the 21st century. The small number of editions of Darwin's main book in post-Soviet time is one of the consequences of the discredit of the evolutionary theory in mass media and by the Russian Orthodox Church as well as the rise of neo-Lysenkoism.

The general circulation of nine pre-revolutionary editions of *On the Origin of Species* was about 30,000–35,000 copies. Only four editions which had been released in the USSR from 1926 to 1937 had the total circulation in 79,200 copies. Two post-Soviet editions published in 2001 and in 2003 had already a circulation of only 1,000 copies. Subsequent editions in each period of Russian history was thus some kind of an answer to the scientific, political and social requirements of the Russian society and the Russian state.

Keywords: *Charles Darwin, translation and publication of On the Origin of Species in Russia and the USSR, socio-political context*

***O pochodzeniu gatunków* Darwina w Rosji i ZSRR: niektóre aspekty tłumaczenia i publikacji**

Abstrakt

Tłumaczenie głównej i najbardziej znanej książki Ch. Darwina *O pochodzeniu gatunków* miała wielkie znaczenie dla recepcji i rozwoju jego teorii ewolucji w Rosji, a później w ZSRR, i to z wielu powodów. Szczegółowo przeanalizowano historię publikacji książki w języku rosyjskim w carskiej Rosji i Związku Radzieckim.

Pierwszego rosyjskiego tłumaczenia *O pochodzeniu gatunków* dokonał Siergiej A. Rachinsky w 1864 r. Do 1917 r. *O powstawaniu gatunków* ukazało się ponad dziesięć razy, w tym w pracach

zebranych Darwina. Wydanie z lat 1907–1909 z Timiryazevem jako redaktorem miało najlepszą jakość tłumaczenia i redakcji naukowej. To tłumaczenie było używane we wszystkich kolejnych wydaniach sowieckich i poradzieckich. W sumie w czasach radzieckich *O pochodzeniu gatunków* ukazało się siedem razy i trzy razy jako część dzieł zebranych Darwina.

Od 1940 do 1987 roku, w wyniku dominacji Łysenkizmu w biologii radzieckiej, nie publikowano w ZSSR *O pochodzeniu gatunków*.

W okresie poradzieckim książka ukazała się tylko dwa razy i wydarzyło się to już w XXI wieku. Mała liczba wydań głównej książki Darwina w czasach poradzieckich jest jedną z konsekwencji dyskredytacji teorii ewolucji w środkach masowego przekazu i przez rosyjski Kościół prawosławny, a także powstania neolysenkizmu.

Ogólny nakład dziewięciu przedrewolucyjnych wydań *O pochodzeniu gatunków* wynosił około 30 000–35 000 egzemplarzy. Tylko cztery wydania, które ukazały się w ZSRR w latach 1926–1937, osiągnęły łączny nakład 79 200 egzemplarzy. Dwa poradzieckie wydania, które ukazały się w 2001 i 2003, miały już nakład zaledwie 1000 egzemplarzy. Kolejne edycje w każdym okresie rosyjskiej historii były więc swoistą odpowiedzią na naukowe, polityczne i społeczne wymagania rosyjskiego społeczeństwa i państwa rosyjskiego.

Słowa kluczowe: *Karol Darwin, przekłady i wydania O pochodzeniu gatunków w Rosji i ZSSR, kontekst społeczno-polityczny*

1. Introduction

The influence of Charles Darwin's theory of evolution on Russian biologists can be expressed briefly in the famous words of Kliment Arkad'evich Timiryazev's (1843–1920), a botanist and a major proponent of the theory of evolution of Charles Darwin in Russia: "Russia is the second native land of Darwinism". Later, in the 20th century the USSR also was the second native land of Darwinism and an even greater native land than the tsarist Russia.¹ But post-Soviet Russia cannot be named such and is rather a country where the evolutionary theory has

¹ Polyansky 1977; Gall, Konashev 2008.

lost its prominent position in the public opinion.² This position changed partly even among biologists, many of whom think that it is impossible to integrate a huge variety of new evolutionary facts and concepts into a single theory of biological evolution.³ The basis of modern evolutionary theory or the so-called “synthetic theory of evolution” was founded mostly in the USA, although it had an international character and was the result of united efforts of many evolutionary biologists from different countries including the USSR. Besides, one of its key founder in the USA was a Russian scientist,⁴ geneticist and evolutionist Feodosii Grigor’evich Dobzhansky (1900–1975), whose name was transformed as Theodosius Dobzhansky owing to Thomas H. Morgan who was not able to pronounce ‘r’.⁵ In that period, the USSR had considerably less evolutionary research in quantity and quality than its main competitor in the geopolitical sphere in future, the USA. However, the USSR was undoubtedly ahead of all countries including the USA in education, popularization and especially in propagation of Darwin’s theory of evolution.⁶

Down to present time, the principal attention in the researches on the history of evolutionary biology had been given to the origin of Darwin’s theory of evolution and to its reception and development in different countries, including Russia.⁷ Additionally, the history of translation of Darwin’s main book in France, Italy, Spain and China was reviewed recently.⁸ The history of translation and publication in Russian of Darwin’s works and the most well-known book named by him and later by Ernst Mayr as ‘one long argument’⁹ was considered only fragmentary. However, this history has an exceptional value for the

² Konashev 2008; 2015.

³ See, for example: Shishkin 2006; Tatarinov 2005; Zavarzin 2000.

⁴ The adjective “Russian” referring to scientists in the article is used to denote the relationship of these people with the Russian culture, as expressed in their works written in Russian. The article omits the aspect of the national origin of these authors and their national consciousness.

⁵ Konashev 1996; 2008; 2010.

⁶ Sobol 1957; Vorotsov 1984.

⁷ Gaisinovich 1982; Georgievsky 1983; Georgievsky, Khakhina 1996; Ipatova 1970; Rogers 1960; 1973; Todes 1987; 1989; Xiaoxing 2018.

⁸ Alamán, Regattin 2015; Regattin 2016; 2017; Xiaoxing 2018; Vandaele 2019.

⁹ Mayr 1991.

understanding of how, into what degree and in what form Darwin's theory of evolution has affected the development of biology in Russia, and primarily the development of evolutionary ideas, programs and research. One of essential reasons for this is the continued discussion on the originality or specificity of historical development of science in Russia. Such specificity, of course, means also originality of the development of evolutionary studies and evolutionary theory in the USSR, and in particular during the period of Stalinism. The science of this period was even named 'Stalinist' or 'red' in a number of publications at the end of 20th century.¹⁰

One can suppose that the general specificity of the development of science in Russia including the development of evolutionary studies and evolutionary theory included as one of its features the specificity of translation and publication of *On the Origin of Species*. Therefore, the history of translation and publication of *On the Origin of Species* in Russia is an essential part of the history of the reception of Darwin's theory of evolution and its influence on the development of Russian biological and public thought. The absence of such history till present is a certain gap in understanding the development of evolutionary studies and evolutionary theory in Russia. The purpose of the article is to fill this gap at least partly by means of comparative analysis of several editions of Darwin's book and also some important scientific, cultural, social and political conditions under which its translations into Russian and publications were made in different periods of the Russian-Soviet history. The main supposition is that each edition in each period of Russian history was some kind of an answer to the scientific, political and social requirements of the Russian society and the Russian state. Presumably, the evolution of both the society and the state caused some changes in the reception and development of the evolutionary theory in Russia. Finally, comparing translations of *On the Origin of Species* in some countries and in Russia will help clarify the specifics of the translation and publication of the main Darwin's book in Russia.

¹⁰ Kremontsov 1997; Soyfer 1998.

2. Darwin's *On the Origin of Species* in tsarist Russia

Scientific and other communities in Russia had three main ways to get acquainted with the new scientific theory in the mid-19th century. The first one was the personal correspondence, and this was used mostly and often by scientists. The second one was articles and other sorts the messages in newspapers and magazines of that time, and this way was used mainly by educated people. Finally, the third one was the primary source, i.e., the original book or its translation. All three ways were used regularly and effectively in Russia, but in comparison with Western Europe they were under more severe control of tsarist censorship. After the revolutions of 1848 in Europe, tsarist censorship had become tougher and it was especially severe to the foreign literature of the 'freethinking' Europe.¹¹ Usually, most educated people and even scientists became acquainted with new theories by reading translations. Only some Russian libraries in St. Petersburg and Moscow received foreign books, and not all scientists could buy these books abroad. The translation of Darwin's *On the Origin of Species* was thus mainly and, perhaps, the only one way for the majority of Russian scientists and educated people to learn about Darwin's theory of evolution.

The first Russian translation of *On the Origin of Species* as well as some later ones were published without any serious obstacles, but censorship of books and articles in which Darwin's theory was presented for common people had practically complete character.¹² In censors' opinions the popularization of Darwin's scientific works, was undoubtedly directed against the truths of Christian belief, the doctrine and the influence of the Russian Orthodox Church, as well as against family foundations and public morals as a whole.¹³

Nevertheless, *Origin* confronted some cultural difficulties. The first Russian translation by Sergey Aleksandrovich Rachinsky (1833–1902), a botanist and professor of Moscow University, was rare and thus did not become a book for many readers.¹⁴ Darwin's theory of evolution was also available in his 1860 publication, but in a German translation. This

¹¹ Choldin 1985; Zhirkov 2001.

¹² Kovalev 1959; Kharakhorkin 1960.

¹³ Konashev 2005, pp. 31–32.

¹⁴ Darwin 1864.

German translation was read by many Russian scientists and publicists, and the book became their handbook, which continued even after the publication of a Russian translation in 1864.¹⁵ This is because in the 19th century very few people in Russia read in English, which led to a rather weak engagement with the English scientific literature. In addition, the original editions of *On the Origin of Species* almost did not reach Russia.¹⁶

It is not known which edition Rachinsky used for his translation. It is likely that he used the American edition of 1860. Rachinsky's translation was printed three times: in 1864, 1865, and in 1873, although in 1861–1872 Darwin prepared and issued four new editions of his book.¹⁷ However, it is obvious that Rachinsky's translation was made under strong influence of the first German translation.¹⁸ Naturally, some questions arose. Why did Rachinsky base his translation on the American edition instead of the original English one? And why did he need a German translation too?

The answer to the second question is:

For continental Europe, the first German edition of *On the Origin of Species* played the same role as the second English one for England and the second American one for Northern America: in these variants both the scientific and the uneducated world got acquainted with the book which marked a revolution in science.¹⁹

In other words, Rachinsky translated Darwin influenced by the sense of the translated book or by the interpretation of this sense that had already been set in its German translation by Heinrich Georg Bronn (1800–1862), a German geologist and paleontologist. As a result, a Russian reader who did not know English actually read a German version that was Bronn's version of Darwin's theory of evolution. This version became factually the 'right' statement of Darwin's theory of evolution in Russia until the publication of the second translation of Darwin's book in 1896. This second translation appeared in two

¹⁵ Chaikovsky 1984, p. 88.

¹⁶ Chaikovsky 1984, p. 88.

¹⁷ Chaikovsky 1983, pp. 94–103.

¹⁸ Chaikovsky 1984, p. 88.

¹⁹ Chaikovsky 1984, p. 88.

variants, one of which was done by Mikhail Mikhailovich Filippov (1858–1903), a journalist, historian and mathematician and the other one by Timiryazev jointly with other translators. Both translations (Filippov's and Timiryazev's) were made from the last, 6th edition of Darwin's book, and not from the first one.²⁰ All subsequent translations also were made from this 6th edition, although in comments to this last translation all text distinctions between first and last English editions were provided.²¹ Hence, in “the second native land of Darwinism” the initial original text of Darwin's book has not been published in Russian until now.

There is no answer to the question why Rachinsky made his translation based on the American edition, and not the original English one. In fact, there is no difference between the English edition and the first American edition of the Darwin's book. The first American edition (January 1860) is an exact copy of the 1st London edition (November, 1859), and the 1st German edition (July, 1860) is a translation of the 2nd American edition (May, 1860). Rachinsky chose to translate not the first, but the second edition of the *Origin*. Perhaps he did so because the 2nd American edition (a copy of the 2nd English edition) and, with certain amendments the 1st German edition offered some obvious advantages for him. It is in it that Darwin, yet not without some reservations and concessions, practically finished his evolutionary concept.²² Hence, these two editions represent the fullest, most exact and finished statement of the initial theory of evolution by Darwin. That is why this edition was used by Rachinsky for translation. Lastly, the 6th edition of Darwin's book is the only one of the subsequent and improved versions of Darwin's theory of evolution. These versions are indeed versions of Darwinism of the 19th century, namely, Darwin's Darwinism.

Rachinsky's translation possessed therefore a doubtless advantage: it was a representation of the fullest, most exact and finished text of the initial theory of evolution of Darwin in Russian. But it also had a doubtless deficiency: it was a German or Bronn's ‘transposition’, or more precisely, re-representation of Darwin's text. This peculiarity of Rachinsky's translation has its expression even in his translation of the

²⁰ Darwin 1895–1896, 1896.

²¹ Darwin 1991; 2003. See in detail: Gall, Starobogatov 1991, pp. 420–447; 2001, pp. 420–447.

²² Chaikovsky 1984, p. 89.

key terms, and especially the term ‘natural selection’. Both of these key features of Rachinsky’s translation have predetermined in many respects the subsequent debate in Russia about the Darwin’s theory of evolution both in the scientific, and non–scientific communities.²³ Partly for the same two reasons, for a long time there was no necessity for a new translation. Only in the very end of the 19th century did such necessity appear and the reason for it was also two-fold.

3. Darwinism in tsarist Russia

The first reason was the development of evolutionary biology and Darwinism itself.²⁴ The Russian scientists who studied hereditary variability, adaptations, natural selection and struggle for existence, speciation, processes of macroevolution also collected data proving the fact of evolution. For example, in 1873 Vladimir Onufrievich Kowalewsky (1842–1883), a paleontologist, professor of St. Petersburg University, published a book in which he reconstructed the evolution of the horse family. Additionally, he explained the change of a number of morphological features in adaptive features with the selection upon transition of ancestral forms of horses living in the forest areas of the steppe. In 1865, his brother, Alexander Onufrievich Kowalewsky (1840–1901), an embryologist, professor of St. Petersburg University, demonstrated that initial stages of ontogenesis of a sea squirts (*Ascidiae*) repeat stages of phylogenetic development of its ancestors. The origin of acranial chordates, the phylogeny of skulls and phylogenetic communications between diverse groups of bony fishes were studied by Yury Appolonovich Belogolovy (1884–?), an embryologist, professor of Moscow University, Nikolai V. Gorkovich, Vladimir N. L’vov, and Petr Petrovich Sushkin (1868–1928). In 1881, Sergey Nikolaevich Nikitin (1851–1909), a paleontologist of Russian Geological Committee, found a complete series of transitional forms from *Ammonites alternoides* to *Ammonites alternans*. In 1897, Nikolai Ivanovich Andrusov (1861–1924), a paleontologist, professor of Kiev University, described a number of evolutionary forms of double-wing mollusks of the *Dreissensiidae* family. In 1872–1886, Timiryazev proved functional links between

²³ Chaikovsky 1984, p. 96.

²⁴ Zavadsky 1973; Zavadsky, Ermolenko 1975, pp. 362–386.

the green coloring of leaves, i.e. the existence of chlorophyll, and photosynthesis. In 1883–1892, Ilya Il'ich Mechnikov (1845–1916), an embryologist, professor of Novorossiysk University, studied protective properties of organisms at the cellular and fabric levels and proved that a phagocytosis is a protective adaptation of *Vertebrata* and man.

In the beginning of the 20th century, research on species and speciation began. In 1910, based on his enduring research, Iosif Konradovich Pachosky (Józef Konrad Paczowski in Polish, 1864–1942), a Polish and Russian biologist, professor of Kherson Polytechnic Institute, during the Russian period of his life assumed that geographical races were a complete system consisting of elementary races, which he called biotopes, and are connected among themselves. The same year, Andrey Petrovich Semenov-Tyan-Shansky (1866–1942), an entomologist of Zoological Museum of the Russian Academy of Sciences, proposed the concept of polymorphic species of animals including such specific forms as a species, subspecies, or geographical race, local geographical race, an arising race or a morph. In works of 1909 and 1913, studying the race process of *Alectorolophus major* Nikolay Vasil'evich Tsinger (1866–1923), a botanist, assistant-professor of Kiev University, discovered that this species includes several races differing in the traits providing adaptation of this species as a rye weed. Tsinger explained formation of seasonal, early-flowering and later-flowering races by natural selection, including different conditions of cutting the meadows. In 1917 Rudol'f Gustavovich Betner (1887–?), a botanist, continued Tsinger's research and proved that adaptation of many weed plants to crops of cultural forms were also caused by natural selection if farm vehicles were used. On the basis of studying speciation in the genus *Dentaria* and *Holosteum* Valery Ivanovich Taliyev (1872–1932), a botanist, assistant-professor of Kiev University, concluded in 1915 that the polymorphic structure of a species is a basis of its differentiation.²⁵

The second basis for the development of evolutionary biology and evolutionary theory was the beginning of a dramatic capitalist development of tsarist Russia and the unprecedented rise of revolutionary movement as its consequences. It is natural that where people wanted and demanded changes, a theory proving that everything – even in nature – is subject to inevitable and, finally, progressive historical change, objective evolution

²⁵ See in detail: Georgiyevsky 1983; Todes 1987; Vucinich 1988a; 1988b.

attracted special attention and popularity.²⁶ Following K. Marx, Russian revolutionaries from ‘revolutionary democrats’ (Lenin’s expression) to social democrats saw in the theory of Darwin a weapon that added to their arsenal.²⁷

On the whole, in Russia until 1917, the collected works of Darwin, which included *On the Origin of Species*, were issued more than ten times. The collected works of Darwin published by Olga Popova with Timiryazev as editor in 1898–1900 and the illustrated collected works of Darwin issued in 1907–1909 with Timirjazev as editor both had the best quality of translation and of scientific editing.²⁸ Translations of all these editions were made mainly by Timirjazev (a historical sketch, Introduction, chapters I, II, III, IV, V, VI, VII, XV and editing of the translation of the entire text), and by Mikhail Aleksandrovich Menzbir (1855–1935), a zoologist, professor of Moscow University, (chapter VIII, XII, XIII, XIV and a part of VII), Alexander P. Pavlov (chapter X and XI) and Ivan A. Petrovsky (chapter IX).²⁹ Filippov and Bitner’s editions were considered of lower quality.³⁰

4. Darwin’s *On the Origin of Species* in the Soviet Union

The new editions of *On the Origin of Species* published after the revolution of 1917 were based on previous huge translational and scientific work. All subsequent editions, including the post-Soviet ones, were based on Timiryazev’s translation. It had been carefully verified by Alexey Dmitrievich Nekrasov (1874–1960), a zoologist, professor of Moscow University, and Samuil L’vovich Sobol (1893–1960), a historian of science of the Institute for the History of Science and Technology, Academy of Sciences of the USSR, for the edition of 1937 and once more verified by them for the edition of 1939. The same verification process was repeatedly followed for the academic publication in 1991 and for its reprint in 2001.³¹ Several years ago, the old edition of *On*

²⁶ Georgiyevsky 1983.

²⁷ See in detail: Dobzhansky 1955, pp. 338–339.

²⁸ Darwin 1898; 1907.

²⁹ Darwin 1939, p. VIII.

³⁰ Darwin 1909; 1910.

³¹ Gall, Takhtadzhyan 1991, pp. 5–7; 2001, pp. 5–7.

the Origin of Species of 1907 was republished for some reason.³² The edition of 1907, albeit the best translation of the pre-Soviet period, also had a number of problems, i.e. in particular, distortions and words unsuccessfully picked up for translation, which generally belonged not to Timirjazev himself, but to other translators. These weaknesses of translation were caused, first of all, by peculiarities of the language and the terminology of the end of the 19th century and by the general attitude to the translation of foreign texts that prevailed at the time.³³

In the same period, different editions of *On the Origin of Species* began to be supplemented with materials concerning the biography of Darwin, or the history of his theory of evolution. This innovation was caused, besides other reasons, by a publication of Darwin's handwritten documents in Great Britain. In 1887, Darwin's son, Francis Darwin, published – as a part of the second volume of Darwin's *Life and letters* – the most interesting fragments from his father's *Notebook* of 1837.³⁴ Having found the preliminary sketches of the *Origin* written by Darwin in 1842 and 1844, F. Darwin published them in 1909, for the 50th anniversary of the first publication of the book. In tsarist Russia four fragments from the *Notebook* of 1837 were published in several editions of Darwin's works or books devoted to him or his theory of evolution. Three were published in Antonovich's book *Ch. Darwin and his theory* and one in the edition of *On the Origin of Species* of 1907.³⁵ There is also a note submitted by Darwin in the Linnean society in 1858.³⁶ This note represented, according to the opinion of the editor, 'the first coherent sketch of the theory, initial editing of which go back to 1844'.³⁷ The *Sketch* of 1842 was published for the first time already during the Soviet period in a translation made by Nekrasov without those parallel texts that Darwin wrote on margins and opposite sides of pages, together with the *Sketch* of 1844, *Notebook* and *On the Origin of Species* in the 3rd volume of the Darwin's collected works.³⁸ Also materials of the well-known

³² Darwin, 1991; 2001.

³³ Ot redaktsii 1939, p. II.

³⁴ Darwin 1887.

³⁵ Antonovich 1896; Darwin, *op. cit.* (25), p. 45.

³⁶ Darwin 1898, p. 47.

³⁷ Darwin 1898, p. 6.

³⁸ Darwin 1939, pp. 253–680.

session of the Linnean society of July 1, 1858, Lyell and Hoocker's note, the chapter of the *Sketch* of 1844 in the form that it was submitted in the Society, Darwin's letter to Asa Gray and, at lastly, Alfred Wallace's article were all included in this volume. It was the first time that *Additions and amendments to the sixth edition* in Sobol's translation and *The Dictionary of the primary scientific terms* in Nekrasov and Sobol's translation had been published in Russian in this volume.³⁹ *The Dictionary of the primary scientific terms* was prepared by U.S. Dallas for the sixth edition under Darwin's request. Dallas's *Dictionary* and the *Origin of Species* included in this volume were issued also separately in 1937 in a popular series "Classics of biology and medicine".⁴⁰ In the middle of 1930s *On the Origin of Species* was also published twice by the publishing house 'Sel'khozgiz' that is an abbreviation of *Gosudarstvennoe izdatel'stvo sel'skokhozyaistvennoi literatury* or *State Publishing House of Agricultural Literature*.⁴¹

In addition to various additional materials about the process of formation of Darwin's theory of evolution, the Soviet editions of the *Origin* have auxiliary scientific instruments such as introductory articles and notes. The special volume 12th of Darwin's collected works of 1935 represents an entire encyclopedic dictionary of Darwin's terms. The detailed analysis of the historical conditions of the origin of Darwin's theory is provided, and the genesis of the Darwinian evolutionary concept is examined in detail in an introduction to *On the Origin of Species* or in articles following the basic text. Certainly, each epoch left a mark both on the articles, and on the comments and notes, though these comments and notes not always had an extremely political or ideological character.

5. Darwinism in the Soviet Union

During the period before the domination of Lysenkoism in Soviet biology, evolutionary researches were continued by many famous scientists including Menzbir, Georgy Vasil'evich Nikols'ky (1910–1977), an ichthyologist, professor of Moscow University, Sushkin, Valery Ivanovich Taliev (1872–1932), a botanist, professor of Petrovsky

³⁹ Darwin 1939, pp. 259–260, 667–678.

⁴⁰ Darwin 1937.

⁴¹ Darwin 1935; 1937.

Agricultural Academy, Nikolay Alexandrovich Kholodkovsky (1858–1921), a zoologist, professor of Forest Institute in Petrograd, Tsinger, Shimkevich (1858–1923), a zoologist, professor of St. Petersburg University (Petrograd University in 1914–1924). Such evolutionists as Nikolay Ivanovich Vavilov (1887–1943), a geneticist, Institute of Genetics of the Academy of Sciences of the USSR, Vladimir Ivanovich Vernadsky (1863–1945), a biologist, professor of Moscow University, Aleksey Alekseevich Borisyak (1872–1944), a paleontologist, professor of Moscow University, Valentin Aleksandrovich Dogel' (1882–1955), a zoologist, professor of St. Petersburg University (since 1924 Leningrad University), Nikolay Konstantinovich Kol'tsov (1872–1940), a zoologist, professor of Moscow University, Vladimir Leont'evich Komarov (1869–1945), a botanist, professor of St. Petersburg University, Aleksey Nikolaevich Severtsov (1866–1936), an embriologist, professor of Kiev University, Alexander Sergeevich Serebrovsky (1892–1948), a geneticist, professor of Moscow University, Vladimir Nikolaevich Sukachev (1880–1967), a botanist, professor of Moscow University, Yury Alexandrovich Philipchenko (1882–1930), a geneticist, professor of St. Petersburg University and Ivan Ivanovich Shmalhausen (1884–1963), an embriologist, professor of Kiev University headed old and new scientific institutes, and laboratories and departments at the universities. Their scientific activity had key elements and parts of the “synthetic theory of evolution” formulated during “the evolutionary synthesis” in 1930–1940. In that period, Bolsheviks essentially and strategically supported the development of science according to the Marxist theory, in which science is the main productive force of the society, and a success of the construction of new society that has no exploitation of a person by another person. What is more, a general transition from capitalism to communism depends primarily on this development. This fact was admitted even by foreign authors, including emigrants from the USSR. The geneticist, the evolutionist and ‘*nevozzvrashenets*’ i.e. the compelled emigrant, Th. Dobzhansky, for example, wrote:

The Soviet government has consistently claimed from the earliest days of its existence to the recent times that science is entitled to, and is in fact receiving, the most generous support from the state.⁴²

⁴² Dobzhansky 1955, p. 329.

World famous VIR, that is the All-Union Institute of Plant Industry, was established by Vavilov owing to party and state decisions. The network of experimental stations was created, which gave grades of many crops so necessary for agriculture. Beside these stations, within ten years, many scientific research institutes and higher education institutions were established, where students became geneticists and selectors.⁴³ Many other institutes, new departments and laboratories in old and new universities were established including the Institute of Experimental Biology in 1917, the Biological Institute in 1923, the Physiological Institute in 1925, the Institute of Genetics in 1933, the Institute of Microbiology in 1934, the Institute of Biochemistry in 1935, and at Moscow State University: the Department of Experimental Biology (1918), the Department of Genetics (1930), and the Department of Darwinism in 1936.

In 1920–1930 Dmitry Dmitievich Romashov (1899–1963), a geneticist, Institute of Experimental Biology, Petr Fomich Rokitsky (1903–1977), a geneticist, professor of Moscow Fur Institute, Nikolay Petrovich Dubinin (1906–1998), a geneticist, Institute of Experimental Biology, Elena Alexandrovna (1904–1990) and Nikolay Vladimirovich Timofeev-Resovsky (1904–1990), a geneticists, studied genetic variability of several species of *Drosophila* using Sergey Sergeevich Chetverikov's theory of genetic structure of natural populations. In 1925, Georgy Adamovich Nadson (1867–1939), a geneticist, Institute of Microbiology, and Grigory Semenovich Filippov (1898–1933), a geneticist, received mutants artificially by means of X-rays. Artificial hybrids in plants were studied by Georgy Dmitrievich Karpechenko (1899–1941), a geneticist, professor of Leningrad University, Georgy Karlovich Meister (1873–1938), a breeder, professor, Saratov Institute of Agriculture and Land Reclamation, Nikolay Vasil'evich Tsitsyn (1898–1980), a botanist, director of the Main Botanical Garden of the Academy of Sciences of the USSR, Vladimir Alekseevich Rybin (1893–1979), a geneticist, the Main Botanical Garden of the Academy of Sciences of the Moldavian SSR. The struggle for existence and natural populations of different species of animals were studied by Vladimir Vladimirovich Alpatov (1898–1979), a zoologist, professor of Moscow University, Aleksey

⁴³ Konashev 2016, pp. 37–38.

Porfir'evich Il'insky (1888–1945), a botanist, professor of the Leningrad State Pedagogical Institute, Nikolay Ivanovich Kalabukhov (1908–1991), a zoologist, professor of Kharkov University, Nikolay Pavlovich Naumov (1902–1987), a zoologist, professor of Moscow University, and Sergey Dmitrievich Pereleshin (1900–1959), a zoologist, professor of Moscow Fur Institute. Natural populations of different species of plants were studied by Nikolay Nikolaevich Kuleshov (1890–1968), a botanist, professor of Kharkov University, Vladimir Nikolaevich Lubimenko (1873–1937), a botanist, professor of Leningrad University, Viktor Evgrafovich Pisarev (1882–1972), a botanist, Institute of Grain Farming, and Andrey Afanas'evich Sapegin (1883–1946), a botanist, director of the Institute of Botany of the Academy of Sciences of the Ukrainian SSR. Owing to Gershenson, Dubinin and a geneticist Yury Mikhailovich Olenov's (1904–1990) works it was proved that genetic polymorphism of a natural population is a result of natural selection. Many other problems of genetic and ecological processes, of speciation and macroevolution were studied too.⁴⁴

6. Darwin's *On the Origin of Species* and Lysenkoism

The very low level of scientific comments in the 1952 edition was an inevitable consequence of the domination of Lysenkoism in Soviet biology established in 1948, after which almost any research and teaching in genetics and many other fields of biology including evolutionary theory was negatively affected or even banned for 15 years.⁴⁵ So it is not surprising that this Lysenkoist edition of 1952 was supplied 'with antiscientific comments, references and the covering note of articles in the Lysenkoist sense'.⁴⁶ As a result, since 1940 until 1987, no single scientifically prepared text of the *Origin* was published in Russia, and scientists, teachers, students, pupils, and all other readers were compelled to use the editions of previous years, which were available in limited quantity in libraries. Most students had to use the textbooks written by Lysenkoists as the Lysenkoist's version of the theory of evolution

⁴⁴ See in detail: Adams 1968; 1970; 1980; Polyansky 1977; Gall, Kolchinsky 1983, pp. 62–78; Gall, Konashev 2008.

⁴⁵ Medvedev 1969; Soyfer 1994; 2002.

⁴⁶ Gall, Takhtadzhyan 1991, p. 5.

‘improved’ by ‘the Soviet creative Darwinism’ that was taught at universities and other higher educational institutions as well as at schools.⁴⁷

In addition, during the period of the agronomist Trofim D. Lysenko’s (1898–1976) dominance, textbooks, monographs, popular books on true genetics and the evolutionary theory were not published at all. All books published earlier were withdrawn from libraries. Page-proofs of books were destroyed, and composed types of texts were scattered. Such was, for example, the fate of Dubinin’s book *Genetics and the Evolution of Populations*, a translation of Dobzhansky’s book *Genetics and the Origin of Species* and the book written by Marcel Prenan, the member of the Central Committee of the French Communist Party, *Biology and Marxism*.⁴⁸

7. New editions of Darwin’s *On the Origin of Species*

The revival of genetics and the liberation of biology as a whole from the Lysenkoist dictatorship led to the restoration of high qualities of preparation and edition of Darwin’s work. That being said, this process occurred with a huge delay and was not simple. In the beginning of 1960s, a new academic publication of the *Origin* was planned, but not carried out. According to Sobol’s offer, the text for this edition was prepared by Abram L’vovich Zelikman (1897–1969), a zoologist, professor of Moscow University, only at the end of 1980s when it was decided to return to preparations of a new academic publication. Zelikman was a pupil of the famous Soviet biologist and evolutionist Ivan Ivanovich Schmalhausen. But before this new publication, a perfectly prepared edition of *On the Origin of Species* specially intended for teachers of biology for high schools was printed in 1987.⁴⁹

This new academic and complete edition of Darwin’s book was prepared by a collective of authors who were evolutionary biologists and historians of evolutionary biology known also as experts on Darwin’s scientific heritage.⁵⁰ The translation of this edition was anew verified

⁴⁷ See, for example: Alekseev 1951; Gurev 1959; Dvoryankin 1964; Ivanova 1956; Lebedev 1962; Melnikov, Shibanov, Korsunskaya 1950; 1956; Pravdin 1960; Pronin 1961; Veselov 1957; 1961.

⁴⁸ Dubinin 1992, p. 168.

⁴⁹ Darwin 1987.

⁵⁰ Darwin 1991; 2003.

by Faneda Iudovna Krichevskaya (1904–1990), a translator, Leningrad branch of Nauka Publishing House, who used the original English text. Then this translation was examined carefully by Yakov Mikhailovich Gall (b. 1946), a historian of science, Yaroslav Igorevich Starobogatov (1932–2004), a zoologist, Zoological Institute of the Academy of Sciences of the USSR and Armen Leonovich Tahtadzhjan (1910–2009), a botanist, professor of Leningrad University. They also wrote comments and other additional texts. Such an approach allowed them to bring the text into accord with the new requirements for scientific translation and to restore terminology that Darwin used originally.⁵¹ The manuscript was completely prepared by the end of 1980s. All necessary work was finished in time, but the volume was printed already in first post-Soviet months.

In total, during the Soviet time, *On the Origin of Species*, including the last edition of 1991, was published seven times, and three times as a part of Darwin's collected works.⁵²

8. Darwinism in the Soviet Union

By that time, research in the field of evolutionary biology reached and even surpassed a pre-Lysenkoist period. For example, the struggle for existence and different forms of natural selection in nature and in a lab were studied intensively already in the second part of the 1950s by Sukachev, Kirill Mikhailovich Zavadsky (1910–1977), a botanist, professor of Leningrad University, Valentin G. Karpov, a botanist, and A. L. Zelikman. In 1960 and later, the genetics of the evolutionary process in *Drosophila* was studied by Leonid Zinov'evizh Kaidanov (1936–1998), a geneticist, professor of Leningrad University, the problem of species and speciation of protozoa – by Yury Ivanovich Polyansky (1904–1993), a zoologist, professor of Leningrad University and karyotypes of several species of animals – by Nikolay Nikolaevich Vorontsov (1934–2000), a zoologist, professor of Far Eastern State University. Molecular biology was established as a new field of research, owing to the works of Semen Efimovich Bresler (1911–1983), a biophysicist, professor of Leningrad Polytechnic Institute, Gershenson, Valentin Sergeevich

⁵¹ Gall, Starobogatov 1991, p. 6.

⁵² Darwin 1925–1929; 1926; 1939.

Kirpichnikov (1908–1991), a geneticist, professor of Leningrad University, Boris Mikhailovich Mednikov (1932–2001), a zoologist, professor of Moscow University, Vadim Alexandrovich Ratner (1932–2002), a biophysicist, professor of Novosibirsk University and many others. Several new institutes, especially in Siberia, were established even before the fall of Lysenko and many other institutes were established later. For instance, in 1957, Institute of Cytology and Genetics was created in Novosibirsk, and in 1955 Institute of Biology was created in Sverdlovsk, which was transformed into Institute of Ecology of Plants and Animals in 1964. In the 1960s, Institute of Molecular Biology, Institute of Biology of Development, Institute of Cytology and several others were established too.⁵³

9. Darwin's *On the Origin of Species* in the post-Soviet Russia

In the 21st century the translation of Darwin's book executed by Timirjazev at the beginning of the 20th century was republished.⁵⁴ Although from the point of view of scientific preparation this edition is worse than not only the editions of 1991 and 2001, but also the initial edition of 1907. In the edition of 1907, a number of important additional texts were included by its editor, Timirjazev, and none of these texts except 'A Brief sketch of Darwin's life' written by Timirjazev was included in the edition of 2003.⁵⁵ At the same time, this edition is supplied with notes by its editor Tatyayna Repina and the so-called scientific adviser of the edition Alexander Sergeevich Rautian (b. 1949), a paleontologist, who is professor of Moscow State University. But the principal and rather modest task of this text is to explain some old or special terms that are not known to a common reader of a popular scientific book or are not useful.⁵⁶ Other Darwin's scientific works, scientific and popular scientific books devoted to the history and the philosophy of formation of his theory of evolution were not published in post-Soviet time at all.

⁵³ See in detail: Polyansky 1977; Gall, Kolchinsky 1983.

⁵⁴ Darwin, 1991; 2003.

⁵⁵ Timiryazev 2003, pp. 490–495.

⁵⁶ Ot izdatel'stva 2003, p. 7.

Another important subject is the circulations of the *Origin*. The comparison of the quantity of copies printed in tsarist Russia, in the Soviet Union and in post-Soviet Russia is very indicative. As a whole, in Russia *On the Origin of Species* was published more than ten times till 1917, including its publication in Darwin's collected works. In the Soviet period the *Origin*, including the edition of 1991, was published seven times, and three times as a part of Darwin's collected works.⁵⁷ During the post-Soviet period, the book was published only two times, and both times already in the 21st century. The first edition is the second edition of the book printed in 1991.⁵⁸ The second edition is factually the reprint of the edition of 1907.⁵⁹ Hence the general circulation of nine pre-revolutionary editions of the *Origin* released for almost a semicentennial since 1864 till 1910 was about 30,000–35,000 copies. Only four editions that were released in the USSR in 12 years since 1926 to 1937 had the total circulation of 79,200 copies, which is more than twice than all pre-Soviet circulation.⁶⁰ The special edition of the *Origin* for teachers, published in 1987, had a circulation of 135,000 copies. The edition published in 1991, that is at the very end of 'perestroika' had a circulation of 11,000 copies – considerably smaller in comparison with the circulations of the Soviet times, but still exceeded circulations of tsarist times. The second edition of the same book prepared by the same collective of authors and published ten years later in 2001 had already a circulation of only in 1,000 copies – a standard 'very good' circulation for a scientific book of post-Soviet times. The edition of 2003 was released also with a circulation of 1,000 copies. That is a so-called 'stabilisation' or – in other terms –stagnation.

This deterioration of publishing of Darwin's principal book in the post-Soviet time as well as a practical absence of new popular scientific books devoted to the evolutionary theory is not accidental. Except for the discredit of the evolutionary theory in mass media and the opposition of the Russian Orthodox Church, evolutionary researchers and science on the whole had considerably lost the support of state and society, including financial support. The so-called reform of the Russian

⁵⁷ Darwin 1925–1929; 1926; 1939.

⁵⁸ Darwin 2001.

⁵⁹ Darwin 1991; 2003.

⁶⁰ Ot redaktsii 1939, p. II.

science initiated by Russian Government but in reality by President Putin has worsened the situation.⁶¹ Neo-Lysenkoism has arisen almost simultaneously and it has had people on enough serious positions, including some mass media. According to Eduard Kolchinsky, the origin of neo-Lysenkoism and the reasons behind the attempts to rehabilitate Lysenko in modern post-Soviet Russia, are primarily connected with the nationalist sentiments inherent not only to parts of the Russian society, but also to a part of the Russian ‘ruling elite’. However, the main reason for the revival of Lysenkoism from Kolchinsky’s point of view consists in the changes in both the relation of Russian society and its ‘ruling elite’ to science in general. This change was caused not least by the growing influence of religious fundamentalism in the country. The revival of Lysenkoism is partly explained by the factors relating to the organization of science in the field of biology and to those traditions and contradictions still remaining and persisting in three main Russian scientific communities. They are the Academy of Sciences, higher educational institutions and, at finally, the scientific institutions dealing with agricultural and applied researches. The latter community is still generally in the power of supporters and defenders of Lysenkoism⁶²

10. Conclusion

The comparison of the various stages of the translation and publication of *On the Origin of Species* in Russia can be supplemented briefly by comparing its translation and publication in other countries where the translation had been studied in sufficient detail, namely in France, Italy, Spain, and China. The Chinese translation of the *Origin* was initiated as early as 1902. The translator, Ma Junwu, incorporated non-Darwinian doctrines, particularly Lamarckian and Spencerian principles, into his edition. Ma’s translation of the *Origin* was shaped by such geopolitical factors as anti-colonial nationalism in China at the turn of the twentieth century and legitimized a version of progressive evolutionism in its broadest sense and offered a perfect framework for political reformers and revolutionaries at the dawn of the twentieth century.⁶³ The ultimate

⁶¹ See, for example: Rukshin 2018.

⁶² Kolchinsky 2017.

⁶³ Xiaoxing 2018, p. 11.

goal of the Chinese translation was to solidify the previous progressive evolutionary code and to supply Chinese readers with the desiderata for continued existence, and ultimately prosperity.⁶⁴

In the case of Italy and Spain, Darwin's work was read first in French, not in the original English, as evidenced in some Italian and Spanish translations.⁶⁵ In France, the translated corpus of the French translations of the 1st, 3rd, and 6th editions was characterized by a greater heterogeneity than the source corpus of the six original editions of Charles Darwin's work, but the specificities pointed to salient elements of Darwinian thought and its evolution. The translated corpus, on the other hand, presents variations that reflect the choice of translators and emphasize that access to Darwin's thinking remains incomplete for a French-speaking reader.⁶⁶ At the same time, between 1880 (last revision of the translation by Barbier) and 2009, no new translation was made, except in the form of a revision of an over century-old translation carried out in 1992 by Daniel Becquemont. Perhaps this could be due to the certainty that finally only one correct translation of a scientific text could exist and such correct translation had already been made.⁶⁷

Something similar happened in Russia. During the tsarist period of Russian history, the translated corpus of the Russian translations of the 1st and 6th editions has also a great heterogeneity and changes in used terms and meanings. It can be interpreted as the search for a better translation and also as a result of changes in Russian evolutionary research and thought. Then again, all translations of Soviet times were based on the translation of the 1907–1909 edition with Timirjazev as the editor as it represented the best quality of translation and of scientific editing. In post-Soviet Russia, the translation of the 1907–1909 edition was used without changes for both editions of the *Origin*. However, the latest new French translations of 2009 and 2013 had as its aim to restore the significance of Darwin's theory and try as much as possible to return to the first English edition of 1859 with its original stylistic, rhetorical, and formal aspects in the broad sense.⁶⁸ On the contrary, the Soviet

⁶⁴ Xiaoxing 2018, p. 25.

⁶⁵ Alamán, Regattin. 2015.

⁶⁶ Vandaele 2019.

⁶⁷ Regattin 2017.

⁶⁸ Regattin 2017, p. 78.

editions – except for the period of Lysenko’s dominance – included a number of consecutive improvements in the scientific translation of the last, 6th edition of the *Origin*. Such difference is explained by the fact that soviet biologists and historians of evolutionary biology were sure that the most elaborate theory of evolution was presented by Darwin in this last edition. At the same time, their efforts had powerful party-state support as Darwin’s theory of evolution had been read initially by Karl Marx and Friedrich Engels as support for their views and later by revolutionaries in Russia and by communist officials in the USSR to justify the communist ideology, the program of the socialist reconstruction of the country and also their own political agenda.

On the whole, the comparative analysis of all the clarified circumstances of translation and publication of Darwin’s main book *On the Origin of Species* in Russia (both tsarist and post-Soviet) and in the USSR confirms the supposition that each edition of Darwin’s ‘one long argument’ in each period of Russian history was some kind of an answer to scientific, political and social requirements of the Russian society and the Russian state. The evolution of both the society and state caused changes in the reception and development of the evolutionary theory in Russia.

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