

Russian Opposition to Darwinism in the Nineteenth Century

By James Allen Rogers*

THE OPPOSITION TO DARWINISM both as a scientific theory and as a social theory was extremely slow to develop in Russia. The scientific community, with the notable exception of Karl Ernst von Baer, generally received Darwinism with approval. Social thinkers of a pronounced liberal or radical hue also warmly welcomed Darwinism, although again there was one notable exception: Nikolai Chernyshevsky, who rejected Darwinism in its entirety.¹ Opposition to Darwinism in Russia came almost entirely from conservative thinkers who based their opposition on social, political, scientific, and religious grounds.² Furthermore, the prominent opposition to Darwinism came more than two decades after the translation of the *Origin of Species* into Russian in 1864.

Although few prominent Russian thinkers publicly expressed opposition to Darwinism in the 1860s and 1870s, the Russian autocracy was not sanguine about the impact of Darwinism on Russian social and political thought. Following the assassination attempt of Dmitri Karakozov against Alexander II in 1866, the Tsarist government revealed its belief that there was a close connection between revolutionary thought and Darwinism. It banned the *Origin of Species* and other "subversive" scientific works. "Vogt, Darwin, Moleschott, Buckle—are

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¹Chernyshevsky did not publish his opposition to Darwinism until 1888 for reasons which will become apparent below. For a discussion of the favorable reception of Darwinism by Russian radical thinkers, see my article "The Russian Populists' Response to Darwin," *Slavic Review*, Sept. 1963, pp. 456–468. Von Baer's opposition to Darwinism is most clearly expressed in the second volume of his *Reden, gehalten in wissen-*

schaftlichen Versammlungen und kleinere Aufsätze vermischten Inhalts, 2 vols. (St. Petersburg, 1864–1876).

²In this article I have only summarized the religious and scientific opposition to Darwinism in Russia, since two excellent studies of those subjects have already been published. See George L. Kline, "Darwinism and the Russian Orthodox Church," in E. J. Simmons, ed., *Continuity and Change in Russian and Soviet Thought* (Cambridge, Mass.: Harvard University Press, 1955), pp. 307–328; and Alexander Vucinich, *Science in Russian Culture, 1861–1917* (Stanford: Stanford University Press, 1970), pp. 275–292. By contrast, the study of the objections to Darwinism from the viewpoint of political and social thought has hardly begun.

participants of the Karakozov attempt," Alexander Herzen wrote from London. "Their works have been ordered to be taken away from the booksellers."³ The temporary ban on the *Origin of Species* affected even the Russian translator of Darwin's later works. "I have not yet received Darwin's *The Expression of the Emotions in Man and Animals*," Alexander Kovalevsky wrote to I. I. Mechnikov on November 27, 1872. "I fear the censor is holding it back. It was supposed to be here on the 22nd, but it still has not arrived."⁴

The Ministry of Public Education had believed that the study of the natural sciences had no political implications when the natural sciences replaced the classics as the main staple of the Gymnasium curriculum after 1848. But the growth of nihilism and revolutionary opinion among Russian youth in the late 1850s and 1860s led the Tsarist government to once again offer classical education as an antidote to the allegedly subversive influence inherent in the study of the natural sciences. "In the study of ancient languages—and sometimes in the study of mathematics—all the knowledge imparted to the students is under constant and nearly errorless control, which discourages the formation of independent opinions," D. A. Tolstoy, Minister of Public Education, explained. "In all other subjects, particularly in the natural sciences, the student's interpretation of acquired knowledge is beyond the teacher's control. For this reason, these subjects may engender personal opinions and differing views."⁵

It is ironic that classical education in the form in which the Minister of Public Education reinstated it was clearly reactionary in character while in Western Europe the study of the classics had supported a humanist tradition. In Russia the natural sciences had come to be associated with radical and "progressive thought" by revolutionaries and conservatives alike.⁶ The allegedly subversive role of the natural sciences confronted the autocracy with a recurring dilemma: it needed the scientific and technological benefits which resulted from the study of the natural sciences, but at the same time it feared the diffusion among the Russian youth of that critical spirit of science which had shown itself so easily turned to revolutionary uses.

³A. I. Herzen, *Sobranie sochinenii* (Collected works), 30 vols. (Moscow, 1954–1963), Vol. XIX, p. 131. The "subversive" works of Karl Vogt, Jacob Moleschott, and Henry Thomas Buckle were respectively *Vorlesungen über den Menschen* (Giessen, 1863), *Der Kreislauf des Lebens* (Mainz, 1852), and *The History of Civilization in England*, 2 vols. (London, 1858). Ludwig Buchner's extraordinarily popular and influential *Kraft und Stoff* (Frankfurt a.M., 1855) had already been banned from Russia. It should be noted that none of the above is listed in the appendix to L. M. Dobrovolsky, *Zapreshchennaia Kniga v Rossii, 1825–1904* (Banned books in Russia, 1825–1904) (Moscow, 1962), because Dobrovolsky explicitly excludes five categories of banned books numbering, he suggests on pp. 3–5, in the thousands. By restricting his list to only one

type of banned book Dobrovolsky ends with only 248 titles.

⁴Iu. I. Poliansky, *Pis'ma A. O. Kovalevskogo k I. I. Mechnikovu* (Letters of A. O. Kovalevsky to I. I. Mechnikov) (Moscow, 1955), pp. 83–84.

⁵I. Aleshintsev, *Sosloynyi vopros i politika v istorii nashikh gimnazii v XIX veke* (The class problem and policy in the history of our Gymnasias in the 19th century) (St. Petersburg, 1908), p. 71, as quoted in Vucinich, *Science in Russian Culture*, p. 60.

⁶The change in the Gymnasium curriculum in 1871 almost eliminated the natural sciences from the curriculum. See the excellent discussion of these changes in education within a broader framework in Chs. 2 and 3 of Patrick Alston, *Education and the State in Tsarist Russia* (Stanford: Stanford University Press, 1969).

Nikolai Chernyshevsky was the first major figure among the radical thinkers of the 1860s to propagandize the supposedly revolutionary implications of the natural sciences. Upon his interpretation of the natural sciences he built a rigid materialistic philosophy. In his *Anthropological Principle in Philosophy* of 1860 Chernyshevsky revealed his belief in "transformism," as he referred to pre-Darwinian evolution. Fusing this belief with his materialistic philosophy, Chernyshevsky asserted that all the diverse phenomena of the organic world were governed by the law of rational egoism.⁷ The stimulus for Chernyshevsky's article was an essay by Peter Lavrov sketching out a "practical philosophy" based on the theoretical point of the primacy of consciousness.⁸ Chernyshevsky vehemently rejected the subjectivism inherent in Lavrov's anthropological positivism. Here lay the root of the basic difference in the approach to Darwinism of the young revolutionists of the 1860s and the socialist revolutionists of the 1870s and 1880s. The rigid scientism of the young revolutionists of the 1860s led them to accept Darwinism at first without qualification. Dmitri Pisarev, inspired by Chernyshevsky's essay of 1860, enthusiastically welcomed Darwin's theory in 1864 because it seemed to offer unequivocal scientific support for a revolutionary philosophy based on materialism and rational egoism. Until the quarrel among the young revolutionists over racism in 1865 made him rethink his position, he accepted Darwinism as universally applicable to all phenomena in nature and human society.⁹ By contrast, N. K. Mikhailovsky and P. L. Lavrov read into Darwinism scientific support for the socialist revolutionary ideals which dominated Russian radical thought in the 1870s.¹⁰

Chernyshevsky, alone among the prominent revolutionary thinkers of the 1860s and 1870s, totally rejected Darwinism. But he did not publish his opposition to Darwinism until 1888 and then only anonymously. Chernyshevsky's

⁷N. G. Chernyshevsky, *Polnoe sobranie sochinenii* (Complete collected works), 16 vols. (Moscow, 1939–1953), Vol. VII, pp. 222–295.

⁸P. L. Lavrov, *Ocherki voprosov prakticheskoi filosofii* (Essays on the problems of practical philosophy) (St. Petersburg, 1860). Originally published as "Ocherk teorii lichnosti" (A sketch of the theory of personality), *Otechestvennye zapiski* (Notes of the fatherland), 1859, No. 11: 207–242; No. 12: 555–610.

⁹Dmitri Pisarev, *Sochineniia* (Works), 6 vols. (St. Petersburg, 1897), Vol. III, p. 360. It should be emphasized that while Russian radical thinkers generally accepted Darwin's theory of natural selection, many of them, including Pisarev, soon came to have reservations about the metaphors borrowed from Malthus and Spencer in which Darwin expressed that theory. That did not detract, however, from their admiration for Darwin and his theory. For a discussion of the role of those metaphors in Darwin's theory of natural selection, see my "Darwinism and Social Darwinism," *Journal of the History of Ideas*,

April–June 1972, pp. 265–280.

¹⁰N. K. Mikhailovsky, "Teoriia Darvina i obshchestvennaia nauka" (Darwin's theory and social science), *Sochineniia*, 10 vols. (4th ed.; St. Petersburg, 1906–1913), Vol. I, pp. 165–350; P. L. Lavrov, "Sotsializm i bor'ba za sushchestvovanie" (Socialism and the struggle for existence), *Izbrannye sochineniia* (Selected works), 4 vols. (Moscow, 1934–1935), Vol. IV, pp. 99–109. To make Darwinian natural selection compatible with his own ethical socialism, Lavrov postulated a primary stage of human history where the Malthusian struggle for existence reigned supreme until enlightened individuals arose to point the way toward cooperation rather than competition. However, Lavrov failed to explain adequately why such individuals should arise. This belief in an initial struggle for existence in human society contradicted his ethical socialism and was the subject of a correspondence which he initiated with Friedrich Engels. See my article "Marxist and Russian Darwinism," *Jahrbücher für Geschichte Osteuropas*, June 1965, pp. 199–211.

long silence on Darwinism followed by his unsigned article are explained by his unusual circumstances. Since 1862 he had been in prison and then in exile. His repudiation of Darwinism was not only at variance with Russian revolutionary thought, but it might seem to give support to that tradition of Russian conservative and religious thought which he deplored and which criticized Darwinism.

Chernyshevsky had been familiar with Darwin's *Origin of Species* at least since 1864.¹¹ An inventory of his library in 1872 included Darwin's *Descent of Man* in Russian translation.¹² From 1873 Chernyshevsky discussed the implications of Darwinism in letters to his family. His son, Alexander, believed that his father was an opponent of Darwinism. Chernyshevsky explained that he had come to a belief in evolution long before the publication of the *Origin of Species*: "I formed my intellectual ideas about botanical and zoological history by eighteenth-century books and mainly by Lamarck."¹³ Chernyshevsky saw in Lamarck's theory of the transmutation of species a scientific basis for a consistent materialistic philosophy. He found congenial Lamarck's emphasis on the role of the environment in forming new species. By contrast Chernyshevsky believed that Darwin had tainted his theory by his abuse of the Malthusian struggle for existence. Although Chernyshevsky did not condemn Malthus for his theory of population, he did not find the proposition that population tends to outstrip subsistence a very profound law or one with any useful application to human society. The unfortunate consequence of the Malthusian law was that it convinced many of the impossibility of helping the masses. Chernyshevsky believed that Malthus himself did not draw such a conclusion, although he wrote much "nonsense" to curry favor with the English landed gentry.¹⁴

Chernyshevsky found the consequences of Darwin's misuse of Malthus' law particularly flagrant in such works as Walter Bagehot's book on the application of the theory of natural selection to politics. In this work, *Physics and Politics*, published in England in 1867 and translated into Russian in 1874, Bagehot abstracted several laws from the theory of natural selection which he then applied to politics within and between nations.¹⁵ Chernyshevsky wrote to his

¹¹N. G. Chernyshevsky to A. N. Pypin, May 1864, *Sochineniia*, Vol. XIV, p. 489.

¹²M. N. Chernyshevskaiia, *Letopis' zhizn' i deiatel'nosti N. G. Chernyshevskogo* (Chronicle of the life and activity of N. G. Chernyshevsky) (Moscow, 1953), p. 401.

¹³Letter of Mar. 17, 1876, *Sochineniia*, Vol. XIV, p. 643.

¹⁴Letter of Apr. 27, 1876, *Sochineniia*, Vol. XIV, pp. 653-654. Also see Chernyshevsky's earlier article "Zamechaniia na poslednie chetyre glavy pervoi knigi Millia" (Remarks on the last four chapters of the first book of Mill), *Sochineniia*, Vol. IX, p. 255, where he "absolved" Malthus for the later "misuse" of his theory by John Stuart Mill.

¹⁵Walter Bagehot, *Physics and Politics, or Thoughts on the Application of the Principles of*

"Natural Selection" and "Inheritance" to Political Society (Boston: Beacon Press, 1956), p. 32:

1) In every particular state of the world, those nations which are strongest tend to prevail over the others; and in certain marked peculiarities the strongest tend to be the best. 2) Within every particular nation the type or types of character then most attractive tend to prevail; and the most attractive, though with exception, is what we call the best character. 3) Neither of these competitions is in most historic conditions intensified by extrinsic forces, but in some conditions, such as those now prevailing in the most influential part of the world, both are so intensified.

Chernyshevsky failed to recognize the tautologies in Bagehot's reasoning, nor did he take into account that Bagehot also wrote: "The progress

family that Bagehot's book had made a "sickening" impression on him and that he could not understand how Bagehot could be attracted to such "muck" as the theory of natural selection.¹⁶

It seemed to Chernyshevsky that when Darwin incorporated the Malthusian struggle for existence into his theory of natural selection he made possible the application to human society of a law that was brutal in its implications. For example, Chernyshevsky asked, if the Africans fought one another, would that be good or bad? According to Darwin it would be good. If the white race exterminated all the Africans, that would be even better. But, Chernyshevsky added, it would be better except for one thing: the expansion of the white race in Africa would be beneficial to itself only if it were accomplished by honorable means. Otherwise it would lower the level of white civilization, the good qualities of its citizens, and even the level of its material well-being. Chernyshevsky believed that Darwin was not aware of these implications of his theory. Perhaps it was not his task to investigate such problems unrelated to his specialized knowledge. Nonetheless, by incorporating the law of Malthus into his theory of natural selection, Darwin had made possible the application of his theory to human society in a particularly brutal and inhuman fashion.¹⁷

Chernyshevsky suggested that Darwin's theory of natural selection arose not from the observation of nature but from the influence of political economy. He drew a parallel with the famous law of Karl Ernst von Baer that organisms develop from homogeneity to heterogeneity and that the degree of advancement of an organism is proportional to the degree of differentiation of its constituent parts. Chernyshevsky thought there was a grain of truth in von Baer's law, as there was in Darwin's theory, but neither had been verified in zoology, botany, or philosophy as natural laws. On the contrary, Chernyshevsky saw in von Baer's law a reflection of Adam Smith's theory that economic success depends upon specialization. It was, like Darwin's theory, "an unfortunate formula carried uncritically from political economy to zoology and botany."¹⁸

By 1888 Chernyshevsky had gathered together his ideas against Darwinism into an article which he submitted to *Russkaia mysl'* (Russian thought) for publication. To V. A. Goltsev he explained,

By this article which I sent you, you will see that this analysis of Darwinism is not from a specialist but from a general point of view and that I find Darwinism absurd. What kind of man Darwin was you can judge from the article. But the name of Darwin inspires respect from the vast majority of specialists and educated people. Naturally I render justice to the erudition and nobility of Darwin's character; but all the same it comes out that he did not have either the knowledge or the qualities of mind necessary for the success of a work explaining the history of organic beings.¹⁹

of *men* required the cooperation of *men* for its development. That which any one man or any one family could invent for themselves is obviously exceedingly limited" (p. 154).

¹⁶Letter of Mar. 17, 1876, *Sochineniia*, Vol. XIV, pp. 643-644.

¹⁷*Ibid.*

¹⁸Letter of Sept. 15, 1876, *Sochineniia*, Vol. XIV, p. 677.

¹⁹Letter of June 23, 1888, *Sochineniia*, Vol. XIV, pp. 686-687.

Chernyshevsky had been convinced since early youth of the truth of Lamarck's theory of the transmutation of species. He explained to Goltsev that he was particularly surprised at the uproar in St. Petersburg in 1860 over Darwin's theory. He had known about evolution as a new idea fifteen years earlier, even though he was raised in a circle of seminarians and priests in a provincial town.²⁰

Chernyshevsky's article on Darwinism was an attempt to refute Darwinism by a dissection of the history behind the theory. Chernyshevsky saw the essence of Darwinism as a perversion of Malthus. In a long digression on English history, he sketched the political and economic reasons which supposedly led Malthus to write his essay on population. He added to this his interpretation of the scientific history behind the discoveries of Cuvier, Lamarck, and Lyell as background for Darwin's own work. In the discussion of Darwin's life and work Chernyshevsky showed an excellent acquaintance with the major as well as the lesser monographs of Darwin. He had little insight, however, into either Darwin's methodology or the scientific problems which Darwin confronted. He criticized Darwin on two counts. First, Darwin had already arrived at his theory of natural selection in 1842 or 1844 and had wasted years in additional and useless research which prevented him from going deeper into the basic problem of his theory—the struggle for existence. Second, Darwin devoted his life to gathering indiscriminately all kinds of facts to support his theory of natural selection which implied that everything in the world was for the best.²¹ "A man who is led in his judgment by such thought," Chernyshevsky noted, "has not the scientific preparation for the understanding of the laws of life, no matter what the breadth of his specialized knowledge."²²

Chernyshevsky was particularly disturbed that Darwin's education was so lacking in scientific knowledge that he did not even know of Lamarck's theory of the transmutation of species when he left England on the *Beagle* in 1831: "How could he leave England not knowing this?"²³ Chernyshevsky found it equally disturbing that Darwin took his clue for the theory of natural selection not from nature but from Malthus: "And suddenly—oh, happiness—the explanation was found. It was found—oh, wonder of wonders!—in a tract on political economy. . . ."²⁴ Chernyshevsky accepted Malthus' proposition that population tends to outrun subsistence, as well as Malthus' conclusion that excessive reproduction produces poverty. He praised Malthus for seeing

²⁰ *Ibid.* In failing to distinguish between Lamarckian evolution and Darwin's theory of natural selection, Chernyshevsky revealed his inability to understand that the unique contribution of Darwin was not the theory of evolution but a particular process—natural selection—to explain biological evolution. Chernyshevsky's belief in the inheritance of acquired characteristics was not significant in his preference for Lamarck's theory, since this belief was widespread in the nineteenth century among different theories of evolution, including that of Darwin.

²¹ N. G. Chernyshevsky, "Proiskhozhdenie teorii blagotvornosti borby za zhizn'" (The origin of the theory of the beneficence of the struggle for life), *Sochineniia*, Vol. X, pp. 737–746.

²² *Ibid.*, p. 764. Also see pp. 750–763 for an excellent example of Chernyshevsky's inability to understand the scientific problems raised by the theory of natural selection as it was understood in his own time.

²³ *Ibid.*, p. 765.

²⁴ *Ibid.*, p. 766.

that poverty was nothing but poverty and that it was evil: "He considered excessive reproduction the reason for poverty, and only that; but poverty he considered to be only poverty. In that he was faithful to truth and to science."²⁵ Darwin, by contrast, saw in poverty from excessive reproduction not an evil but the good that results from natural selection.

In vain Darwin cast himself as the pupil of Malthus—he distorted Malthus; in vain he called his theory the application of Malthus' theory to the problem of the origin of species—his theory was not the application of the theory of Malthus but the perversion of the sense of his words—a foul perversion because the true sense of the words of Malthus was clear.²⁶

In conclusion, Chernyshevsky presented "evidence" from physiology that the struggle for existence would result not in the progressive evolution of the species but in its physical degeneration.²⁷

This was precisely the argument that had been made by Russian revolutionists more than two decades earlier in accepting Darwinism but in arguing for an evolutionary process based on cooperation rather than competition. The importance of Chernyshevsky's opposition to Darwinism was that he was the only socialist revolutionary of prominence to repudiate Darwinism. Yet his opposition was based on the same moral and scientific objections to the struggle for existence which had characterized the earlier Russian revolutionary thinkers who had accepted Darwinism. Chernyshevsky's dissenting views only emphasize how strongly rooted and widespread was the belief among revolutionary thinkers that cooperation rather than struggle must reign among men. These Russian thinkers sought scientific arguments to bolster their belief in cooperation, but ultimately their objection to the Malthusian struggle for existence in Darwin's theory rested on moral grounds. From the 1860s through the 1880s the same view of social evolution was repeatedly advanced against the idea of a struggle for existence in human society: it would lessen human solidarity, slow the progress of the human race, and ultimately violate the integrity and freedom of each individual.²⁸

The conservative and religious attack on Darwinism began in 1885 with

²⁵ *Ibid.*, p. 770.

²⁶ *Ibid.*, pp. 769–770. Chernyshevsky's praise of Malthus and condemnation of Darwin raises difficulties for Soviet commentators on Darwinism. They would have us believe that Chernyshevsky is not criticizing Darwinism as a scientific theory but only the Malthusian element of Darwinism. See, e.g., B. E. Raikov, *Predshestvenniki Darvina v Rossii* (Predecessors of Darwin in Russia) (Leningrad, 1956), p. 200. The reverse is more nearly true. Chernyshevsky is not criticizing the Malthusian theory of population with its pessimistic conclusions but Darwin's supposed perversion of it by turning it into an optimistic doctrine bringing good out of evil.

²⁷ Chernyshevsky, *Sochineniia*, Vol. X, pp. 770–771. Chernyshevsky signed his article "The Old Transformist" to show that he believed in the Lamarckian process of the transmutation of species rather than in Darwinian natural selection. It was also a way of avoiding the ban on articles under his own name.

²⁸ See my "The Russian Populists' Response to Darwinism," pp. 456–468. The first Russian radical thinker to formulate a "cooperative" interpretation of Darwinian natural selection was the young biologist N. D. Nozhin. See his "Nasha nauka i uchenye" (Our science and scientists), *Knizhnyi vestnik* (Book herald), 1866, No. 7: 128.

the publication of a massive work by Nikolai Danilevsky against Darwinism. Danilevsky came from a gentry family of the province of Orlov. He attended the Lycée at Tsarskoe Selo and entered the University of St. Petersburg in 1843 to study the natural sciences. He received his degree in mathematics in 1846 and was just short of his master's degree in biology in 1849 when he was arrested as a former participant in the Petrashevsky circle. He was exiled to Vologda province but reprieved in 1853 to take part in the Caspian expedition of Karl Ernst von Baer which lasted until 1857. By 1869, in tribute to his many contributions to Russian science, he received the highest award of the Russian Geographical Society.²⁹

Danilevsky first became acquainted with Darwin's *Origin of Species* in the early 1860s. He recognized Darwin's concept of the struggle for existence in his major work, *Russia and Europe* (1869), at the same time that he criticized Darwinism as a theory of evolution. Danilevsky did not believe in competition within the species or in the descent of man from the animals. Nonetheless, there was an echo of the popular interpretation of Darwinism in Danilevsky's description of cultural-historical types (civilizations) struggling for existence and thus creating their own forms of individuality.³⁰

Although Darwinism itself was only of peripheral concern to Danilevsky when he wrote *Russia and Europe*, it became the focus of his attention the following fifteen years while he labored over his criticism of Darwinism. The result was a massive two-volume work whose first volume (in two parts) appeared in 1885.³¹ Danilevsky's arguments were based on scientific objections to Darwin-

²⁹The biographical details are from the perceptive study by Robert E. MacMaster, *Danilevsky, A Russian Totalitarian Philosopher* (Cambridge, Mass.: Harvard University Press, 1967). MacMaster discusses Danilevsky's views on Darwinism within the context of Danilevsky's intellectual biography rather than on a comparative basis within the conservative opposition to Darwinism, as does this article. MacMaster explains that Danilevsky's "Darwinism is a work of great significance in his intellectual biography because it expresses honestly Danilevsky's true convictions. Indeed, in again viewing science as a humanistic activity, in openly championing higher things against scientism and materialism, and in proudly defending metaphysical thinking . . . the Danilevsky who wrote *Darwinism* recalls . . . the young humanist of the Petrashevsky circle" (p. 162).

³⁰N. Ia. Danilevsky, *Rossia i Evropa. Vzgliaid na kulturnye i politicheskie otnosheniia Slavianskogo mira k Germano-Romanskomu* (Russia and Europe. A survey of the cultural and political relations of the Slavic to the Germano-Roman world) (5th ed.; St. Petersburg, 1895); originally published serially in *Zariia* (The dawn) in 1869. Danilevsky's scheme of social evolution in *Russia and Europe* was partly a response to Russia's defeat

in the Crimean war and an assertion of the Russian right to develop in her own way based on the rich cultural history of Russia. Danilevsky asserted that each people of an original culture had been able to create cultural-historical types. These types represented the progressive forces in history in the sense that each had contributed to universal history by developing the potential spiritual and material conditions of its own environment and history. Danilevsky formulated in *Russia and Europe* the basic "organic" laws governing the birth, growth, and decline of these cultural-historical types. These "organic" laws were not however in any sense based upon Darwinian analogies, as Danilevsky's later work on Darwinism made quite clear. Danilevsky's consistent opposition to the application of Darwinism to explain in any way the evolution of human society separates him entirely from those who later were to be called Social Darwinists.

³¹N. Ia. Danilevsky, *Darvinizm: Kriticheskoe izsledovanie* (Darwinism: A critical investigation), 2 vols. (St. Petersburg, 1885–1889). Danilevsky died soon after the first volume was published. The second volume was to have contained a series of articles on the origin of man. Before his death Danilevsky had finished only one chapter, "Ekspressiia ili vyrazhenie chuvstva u

ism reputable in his time. If Danilevsky's ideas were not original, he had at least the merit of proceeding in a logical manner. He devoted the first two chapters to a detailed exposition of the theory. Then in Chapters 3 through 14 of Volume I and the single chapter of Volume II he outlined the specific points on which he disagreed with the theory of natural selection.³² Danilevsky's criticism of Darwinism was not merely a criticism of the scientific merits of the theory of natural selection; he expressed his fears that a scientific theory of dubious validity had become the sanction for nihilistic, materialistic, and revolutionary philosophies.

On the title page of his work Danilevsky placed the quotation: "Will without motive, power without design, thought opposed to reason, would be admirable in explaining chaos, but would render little aid in accounting for anything else."³³ Danilevsky attacked with particular vehemence the concept that random variations, which he equated with chance, could furnish the basis of Darwin's theory of natural selection.³⁴ From the time Danilevsky first read the *Origin of Species* he thought he saw a dilemma: random variations within species could not possibly explain progressive evolution, yet Darwin based his theory of natural selection on such random variations.³⁵ Moreover, it seemed to Danilevsky that the principle of heredity would not strengthen such variations unless the species with the new characteristics were separated from the old. Otherwise interbreeding would dilute the new characteristics. If heredity strengthened acquired characteristics, as Darwin suggested, then the older species would have a better chance of retaining their acquired characteristics than would those whose acquired characteristics were not yet strongly fixed

cheloveka i zhivotnykh" (The expression of feeling in man and animals), Vol. II, pp. 1-83, dated Aug.-Sept. 1885. The second volume of 1889 also included a long preface by his close friend N. N. Strakhov, who saw both volumes of *Darvinizm* through the press.

³²(1) Darwin erred in extrapolating the mechanism of change in domesticated animals and cultivated plants to all organisms. (2) There is no evidence that variations within the species in nature ever cross the boundary of any particular species. (3) Variations within domesticated animals and cultivated plants never produce new species. (4) Natural selection is not the cause of differentiation in domesticated animals and cultivated plants. (5) Neither the struggle for existence nor the power of heredity as Darwin understood it can produce new species. (6) Natural selection does not exist in nature because useful traits are eventually dissipated by interbreeding. (7) Darwin bases his theory on the retention by the organism of useful traits, but he does not explain why animals retain variations that are useless. (8) The paleontological evidence to substantiate transition from one species to another is lacking. (9) Darwin's logic is erroneous,

and his theory of evolution is based on pure chance. (10) Parallel traits between men and animals, such as certain common expressions, are not convincing evidence that man was descended from animals.

³³The quotation was from J. F. W. Herschel.

³⁴The problem of "chance" in Darwin's theory of natural selection raised questions for the thinkers of his own time. Danilevsky was not alone in his questioning on this point. The following explanation is therefore made only for clarity and not as an anachronistic criticism or answer to Danilevsky's problem on this point: "It might be asserted that natural selection explains evolution as a result of chance. What on earth would this mean? Does someone win all the money in a card game by chance? In the sense that a given player wins all the money, the answer is yes; in the sense that such an event should happen, no. The parallel with natural selection is only too obvious." Michael Ghiselin, *The Triumph of the Darwinian Method* (Berkeley/Los Angeles: University of California Press, 1969), p. 69.

³⁵Danilevsky, *Darvinizm*, Vol. I, Pt. 1, pp. 22-23.

by inheritance and were likely to be lost.³⁶ Danilevsky concluded:

In refutation of Darwin's theory, it is possible to construct the following absolutely irrefutable syllogism. Natural selection consists of the more or less complete elimination of crossbreedings not adaptable to the conscious or unconscious goal of the variation of the organism, and in nothing but this elimination. And I challenge anyone to deny this proposition which constitutes my first premise. The struggle for existence in no way and to no degree eliminates crossbreeding, and Darwin nowhere shows that it will, nor how and by what, crossbreeding in nature should be eliminated. And I again challenge anyone also to deny this proposition which is my second premise. Consequently, in nature there is no kind of natural selection, and I again challenge anyone to show the falsity of this conclusion from the two preceding premises. And from this it follows that so-called natural selection is not a real factor or force in nature but only a phantasy. . . .³⁷

Danilevsky's syllogism unfortunately made two assumptions irrelevant to Darwin's theory of natural selection. The first was that the organism had a biological goal, conscious or unconscious, predicated upon the idea of design rather than upon adaptability to the environment and other organisms within its population. Second, Danilevsky assumed that the kernel of Darwin's theory was the extinction of unadaptable variations by the Malthusian struggle for existence, and by that struggle alone. Darwin had not, of course, made that assumption and had explicitly stated that he used the Malthusian struggle in a metaphorical sense.³⁸ Danilevsky's antipathy to Darwinism, aside from his inability to understand the idea of random variations, came from his premise that the essence of Darwin's theory was the Malthusian struggle for existence, a concept which Danilevsky found as indigestible as had his predecessors. Having proved to himself that this essential part of Darwin's theory had no effect on the differentiation of species, Danilevsky thought that he had proved both logically and empirically that natural selection was not an operative factor

³⁶ *Ibid.*, Pt. 2, pp. 501–502. Danilevsky's emphasis on the weakness of the doctrine of the inheritance of acquired characteristics in Darwin's overall theory was a common argument against Darwinism in the nineteenth century even by those who accepted the doctrine in a non-Darwinian context. It resulted from an ignorance by Darwin's critics as well as by Darwin himself of the exact process of heredity. What is significant, consequently, is Danilevsky's method of reasoning rather than the result. Danilevsky assumed that what is important is whether a given variation is "fixed" by the "principle of heredity." What he did not see, and what could not be seen clearly until the advent of modern genetic theory, was that the important relation is not only between the organisms transmitting and receiving variations. An equally important relation is with the changing environment which may develop and reinforce those variations which aid survival. A modern authority on

evolutionary genetics has expressed this very succinctly: "The same genotype may produce different phenotypes under different environmental conditions. An extreme environment may bring out developmental potencies that are not expressed under more normal conditions; it permits genetic factors to manifest themselves that do not normally reach the threshold of phenotypic expression." Ernst Mayr, *Populations, Species, and Evolution* (Cambridge, Mass.: Harvard University Press, 1971), p. 110.

³⁷ Danilevsky, *Darvinizm*, Vol. I, Pt. 2, p. 496.

³⁸ "I should premise that I use the term Struggle for Existence in a large and metaphorical sense, including dependence of one being on another, and including (which is more important) not only the life of the individual, but success in leaving progeny." Morse Peckham, ed., *The Origin of Species by Charles Darwin. A Variorum Text* (Philadelphia: University of Pennsylvania Press, 1959), III, 25.

in the evolutionary process.

Danilevsky believed that Darwin's theory, like the Malthusian struggle for existence, was a reflection of English utilitarianism and competition. He saw that emphasis in Bentham and Spencer on ethics, in Hobbes on political theory, and in Adam Smith on economics. Malthus had applied this same emphasis to the problem of population. Darwin went one step further and applied it to the evolution of the entire organic world. Danilevsky did not deny, however, the possibility of a struggle of a species against the conditions of existence. What he did deny was the concept of struggle between individuals within the species, a Hobbesian war of each against all.³⁹

Danilevsky was aware that his criticism of Darwin's "mistakes" was not original. "Many of these mistakes were noticed by various scholars, and to these must be added *the most remarkable minds* dedicated to science of our time. First I name the great naturalist-philosopher, von Baer."⁴⁰ It is significant that Danilevsky thus began his list. He had taken part in von Baer's Caspian expedition of 1853 as a statistician and had carefully studied von Baer's works, which he cited many times in *Darvinizm*. Although von Baer had done more than anyone else by his research in embryology to discredit the transcendental and teleological evolutionary theories of *Naturphilosophie*, his own theory of transformism retained a teleological frame of reference.⁴¹ Danilevsky interpreted von Baer to mean that the evolutionary process at the phylogenetic level was analogous to the ontogenetic. Just as the embryo developed through its various stages by definite "jumps" to realize its ultimate and predetermined structure, so too did the organic universe as a whole develop from definite primitive forms to definite complex forms to realize the predetermined structure or design of the evolutionary process as a whole.⁴² Danilevsky's view of teleological evolution reflected his aversion to what he considered the meaningless universe of chance found in Darwinism. The existence of design in evolution made unnecessary the Darwinian struggle for existence as a major factor of evolution.

Danilevsky had been encouraged in the development of his views on Darwinism by his close friend N. N. Strakhov.⁴³ It is difficult at this point, however, to attribute the derivative ideas in *Darvinizm* primarily to one or the other, since they worked together for fifteen years on the book. Strakhov, like

³⁹Danilevsky, *Darvinizm*, Vol. I, Pt. 2, p. 478.

⁴⁰*Ibid.*, p. 479. Danilevsky then named many of the most eminent and reputable opponents of Darwinism in Western Europe, such as Louis Agassiz, Richard Owen, Albert Kölliker, and Karl Burmeister.

⁴¹This is explicitly argued in a manner to separate man from other biological organisms in von Baer, *Reden, gehalten in wissenschaftlichen Versammlungen und kleinere Aufsätze vermischten Inhalts*, Vol. II, p. 433.

⁴²Danilevsky, *Darvinizm*, Vol. I, Pt. 2, pp. 505–513. Darwin had suggested that evolution proceeded by the accumulation of small variations. Danilevsky was proposing that species

changed by small "jumps" from one form to another.

⁴³For an excellent study of Strakhov's life and development that rescues him from the simplified labels to which he has been subjected see Linda Gerstein, *Nikolai Strakhov* (Cambridge, Mass.: Harvard University Press, 1971). Her study briefly treats Strakhov's views on Darwinism within the context of his philosophical development: "there is little question that Strakhov's interest in Darwinism is largely the result of a negative stimulus. He considered Darwinism the greatest scientific heresy of its day because it asked from science more than science could legitimately offer" (p. 154).

Danilevsky, had been well trained in the natural sciences. From a seminary in Kostroma he went to St. Petersburg in 1844 and eventually received a degree at the Pedagogical Institute. While teaching in a Gymnasium he took a master's degree in biology in 1857. Several popular articles on organic life in 1860–1861 suggested the influence of *Naturphilosophie* on his developmental view of all evolution. He saw in the growth of an organism not the mechanistic expansion of its constituent parts but the development of the organism as a whole toward perfection. On the phylogenetic level this implied that evolution progressed toward perfection, toward actualization of the grand design of the universe.⁴⁴

When Strakhov reviewed the *Origin of Species* in 1862, he saw in Darwin's theory of natural selection the latest success of the belief in progress. Although it was a step forward in the development of the natural sciences, Strakhov thought it was not necessarily a step forward philosophically, as it was being interpreted by some of Darwin's advocates such as Mlle. Clémence Royer. Her attempt to use the Malthusian element of Darwinism to explain the evolution of human society in all its aspects brought a warning from Strakhov: "Mlle. Royer attributes to Darwin's theory much more importance and meaning than the theory has in its own right."⁴⁵ Strakhov explained that Darwin's theory made possible such egregious interpretations as Mlle. Royer's, because Darwin recognized no essential distinction between the human and the animal, and therefore no special value in man. Strakhov believed that the quality of human value belonged equally to all human beings, even though this quality was imperceptible, immeasurable, and indefinable by any clear traits. The concept of human value was so important and so fundamental in human society that for most people it concealed even those acquired distinctions which separated the ignorant from the educated. An essential attribute of the quality of being human was man's striving toward perfection.⁴⁶

Strakhov's particular view of organic nature rested upon a neo-Kantian positivism which separated scientific knowledge from metaphysics but did not give precedence to scientific knowledge. Strakhov instead saw science and metaphysics as two distinct realms of knowledge.⁴⁷ Although Strakhov worked from an entirely different ontological and epistemological point of view than the revolutionists of the 1860s and 1870s, he nonetheless foreshadowed by several years in his 1862 review their objections to the Darwinian struggle

⁴⁴N. N. Strakhov, "Pis'ma ob organicheskoi zhizni" (A letter on organic life), in *Mir kak tseloe* (The world as a whole) (St. Petersburg, 1872).

⁴⁵N. N. Strakhov, "Durnye priznaki" (Bad signs), *Kriticheskie stati* (Critical articles), 2 vols. (Kiev, 1902), Vol. II, pp. 379–397. The quotation is from p. 395. Strakhov's review of the *Origin of Species* was of the English edition of 1859, the German translation by H. G. Bronn of 1860, and the French translation by Clémence Royer of 1862. It was originally published in *Vremia* (Time), 1862, No. 11.

⁴⁶Strakhov, "Durnye priznaki," pp. 396–397.

⁴⁷N. N. Strakhov, *Filosofskie ocherki* (Philosophical sketches) (St. Petersburg, 1895), pp. 123–173. Strakhov translated a major work contributing to the growth of neo-Kantian philosophy in Russia: F. A. Lange, *Geschichte des Materialismus und Kritik seiner Bedeutung in der Gegenwart*. It was published in Russian in 1883–1884. Chapter 4 of Vol. II on Darwinism and teleology may have contributed to Strakhov's ideas on Darwinian "chance" and its relation to teleology in evolution.

for existence applied to human society. He believed, as they would also, that analogies between human society and the world of nature were incomplete, and that the extrapolation of Darwinism from nature to human society not only disregarded the essence of scientific knowledge but resulted in cruelty toward fellow human beings.⁴⁸ But these similarities became apparent only after the revolutionary thinkers had reinterpreted Darwinism to fit their own social and revolutionary ideals which Strakhov strongly opposed. In the meantime, Strakhov was criticized by the more intransigent revolutionists, who believed that they were only carrying Darwinism to its logical social conclusions.⁴⁹

Danilevsky had not only disagreed with the materialistic interpretation of Darwinism but with aspects of the theory itself. Strakhov believed with Danilevsky that Darwinian random variations, which Strakhov also equated with "chance," could not give rise to the process of evolution. This idea became one of the leading motifs of Danilevsky's book against Darwinism to which Strakhov contributed from 1871 to 1885. Danilevsky died shortly after the book was published. Strakhov, who had seen the book through the press, now took it upon himself to draw the attention of the public to Danilevsky's work. He was disturbed that the book did not have a flattering reception in Russia. It had been submitted in May 1886 to the Academy of Science in St. Petersburg for the Macarius award. The judge of the merits of the book was the geologist F. B. Schmidt. He solicited the opinion of Count Alexander Keyserling, who replied: "Science cannot exist without theories, and Darwinism is presently the only theory resolving the question of the origin of species."⁵⁰ The book was further judged inadequate for its unoriginal criticism of Darwinism. It did, however, receive honorable mention in the competition for the Macarius award.⁵¹

Although Danilevsky worked within the framework of recognized arguments against Darwinism from reputable authorities of his time in Europe, his failure to postulate any viable alternative system to Darwinism continued to bring disfavor on his book. This was true even of those thinkers whose philosophical orientation made them receptive to an intelligent critique of Darwinism. Vladimir Solov'ev, for example, wrote,

Two years ago I took up for reading with great interest the two-volume *Darwinism*. . . . Nothing appeared in *Darwinism* which I had expected from it and had reason to expect: an independent Russian theory of the origin of species. . . . Believe

⁴⁸Strakhov, "Durnye priznaki," pp. 396–397.

⁴⁹P. A. Bibikov strongly criticized Strakhov for his inconsistency in praising Darwin and yet finding fault with Mlle. Royer, who, in his opinion, had only extended the conclusions inherent in Darwinism to human society. Bibikov's article, "Sentimental'naia filosofiia" (Sentimental philosophy), was in turn criticized by V. A. Zaitsev for its acceptance of the Malthusian struggle for existence, even though Zaitsev himself had carried Darwinism so far as to sanction

racism. See V. A. Zaitsev, *Izbrannnye sochineniia* (Selected works), 2 vols. (Moscow, 1934), Vol. I, p. 522. Strakhov was in the forefront of the attack against radical thinkers when they found sanction for their revolutionary ideas by a materialistic interpretation of the natural sciences.

⁵⁰B. E. Raikov, *Russkie biologi-evoliutsionisty do Darvina* (Russian biological-evolutionists before Darwin), 4 vols. (Moscow/Leningrad, 1951–1959), Vol. IV, pp. 635–636.

⁵¹MacMaster, *Danilevsky*, p. 339, n. 22.

me, friend, I searched for a Russian Darwin, but I found only a sympathetic Russian excellently explaining foreign scientific ideas.⁵²

Strakhov's review of the first volume of *Darvinizm* in 1887 was designed to draw attention to Danilevsky by summarizing and defending his ideas under the provocative title "The Full Refutation of Darwinism."⁵³ The challenge was picked up by K. A. Timiriazev, the "bull-dog" of Darwinism in Russia. Timiriazev emphasized that the question of whether Darwinism had been refuted would have been inconceivable a decade earlier when it was so widely and enthusiastically accepted in Russia by scientific and social thinkers alike. He accused Danilevsky of trying to investigate the process of evolution without looking for a mechanistic or causal explanation, which Timiriazev identified with a scientific explanation. Danilevsky sought instead the purpose rather than the cause of evolution. Timiriazev proposed that the problem in Danilevsky's study of Darwinism was that Danilevsky assumed a natural harmony of nature which was upset by the Darwinian struggle for existence. Danilevsky could not accept the idea of random chance which he attributed to Darwinism. He wanted to substitute for that incomprehensible cause an Aristotelian teleology which explained the purpose as the cause of evolution.⁵⁴

Timiriazev's lecture marked the beginning of an intense battle between the Darwinists and anti-Darwinists in Russia. The dominant tendency among Darwinists had been to view evolution within the framework of Newtonian mechanistic laws and to attempt to reduce organic life to the materialistic basis of the physical sciences. Radical thinkers saw in this interpretation sanction for a materialistic and deterministic philosophy. They were soon challenged, however, by the philosophical criticism of Darwinism which was beginning in Russia and by the revival of vitalism in Europe which soon spread to Russia. This brought about an attempt in Russia to emancipate biology from mechanistic and materialistic interpretations such as that of Timiriazev.

Although Timiriazev had contributed to the diffusion of a revolutionary interpretation of Darwinism in Russia for two decades, his rigid mechanistic approach to biological evolution was now becoming the chief impediment to the further scientific development of Darwinism.⁵⁵ While Western Europe had

⁵²Vladimir Solov'ev, *Sobranie sochinenii* (Collected works), E. Radlov, ed., 9 vols. (St. Petersburg, 1901-1907), Vol. V, p. 129.

⁵³N. N. Strakhov, "Polnoe oproverzhenie darvinizma," *Russkii vestnik* (Russian herald), Jan. 1887, pp. 9-62.

⁵⁴K. A. Timiriazev, "Oprovergnet li darvinizm?" (Has Darwinism been refuted?) *Russkaia mysl'* (Russian thought), May 1887, pp. 145-180; June 1887, pp. 1-74. Timiriazev considered the challenge by Danilevsky and Strakhov to Darwinism sufficiently important that he gave a long public lecture in the Polytechnical Museum of St. Petersburg to answer Strakhov. Timiriazev's attack revealed his own belief that Darwinism

was a force for "good" in the world in the sense of producing adapted organisms, and that "evil" (unadapted organisms) was an accident ceaselessly conquered by Darwinian natural selection.

⁵⁵Timiriazev was not alone in this attitude. For example, M. A. Menzibir, *Istoricheskii ocherk vozzrenii na prirodu* (An historical sketch of a view of nature) (Moscow, 1896) was another biologist who dogmatically defended the mechanistic interpretation of Darwinism against revisionism of any kind. Their opponents, who advocated a vitalist position, were such competent naturalists as S. I. Korzhinsky and A. S. Famintsyn. The debate was ultimately over two opposing viewpoints of evolution. The first,

gone from classical Darwinism to a debate between neo-Darwinism and neo-Lamarckism, Timiriazev continued to lead Russian biologists in a debate over the merits of classical Darwinism. Timiriazev condemned all opposition to classical Darwinism as idealistic metaphysics. This was in the spirit of the revolutionary thinkers of the 1860s, who saw Darwinism as the final link in that great chain of materialistic determinism that connected organic evolution with Newtonian mechanism. It is significant for an understanding of the interaction of Darwinism and Russian revolutionary thought that Timiriazev considered himself not only the major spokesman for classical Darwinism in the biological sense but also for the materialistic doctrines of the revolutionary generation of the 1860s.⁵⁶

Strakhov replied to Timiriazev's articles with the confession that in his original article of February he had purposely mentioned Timiriazev's name to draw the attention of Timiriazev and the scientific community to Danilevsky's book. Strakhov complained that Danilevsky's book on Darwinism had been largely ignored by the book reviewers since the publication of the first volume in 1885. Strakhov feared that the scientific community would not read his article about Danilevsky's book since they had not read the book itself:

The temperament of our learned people has long been known to me from both books and practice. Only religious fanatics excel them in rank prejudice and aversion to all that is contrary to their opinions. Scholars belong to that class of people, most blindly devoted to their own authorities and least of all able to relinquish their preconceived thoughts. That which they call science is their creed, their faith; they are inflated and devoured by this science and that is why they are infected, so to speak, by scientific fanaticism.⁵⁷

Strakhov had found Timiriazev's stinging reply and the strong attack on Danilevsky and his book so painful that he felt it necessary to defend once again at great length Danilevsky's book. He also attacked Timiriazev's mechanistic view of organic evolution as incompatible with a teleological view of nature. Reverting to his own interpretation of positivism, Strakhov found contemptible Timiriazev's failure to separate Danilevsky's scientific criticism of Darwinism from Danilevsky's metaphysics. It seemed to Strakhov that Danilevsky had successfully restricted his criticism to the area of scientific knowledge. Moreover,

represented by Timiriazev, saw Darwinism as a closed and deterministic system of evolution operating by mechanistic laws upon living matter which itself was to be explained by the laws of physics and chemistry. The second viewpoint, symbolized by Korzhinsky, saw in evolution the operation not of mechanistic laws but of a "vital" or "living" force. This force could not be explained by physics and chemistry, since it represented the "essence" of life itself and was not reducible to deterministic matter. The advocates of vitalism consequently developed a teleological rather than a deterministic explanation of evolu-

tion. See, e.g., S. I. Korzhinsky, *Chto takoe zhizn?* (What is life?) (Tomsk, 1888). A good discussion of the scientific issues in the battle between the Darwinists and vitalists in Russia is in Vucinich, *Science in Russian Culture*, pp. 275–284.

⁵⁶K. A. Timiriazev, "Razvitie estestvoznaniia v 60-e gody" (The development of natural science in the 1860s), *Sochineniia*, 10 vols. (Moscow, 1937–1940), Vol. VIII, p. 175.

⁵⁷N. N. Strakhov, "Vsegdashniaia oshibka darvinistov" (The usual mistake of the Darwinists), *Russkii vestnik*, Nov., 1887, pp. 66–114. The quotation is from p. 67.

Strakhov saw in Timiriazev a “pure Darwinist” who was an uncritical “true believer” in the Darwinist faith.⁵⁸

Before Timiriazev could answer Strakhov, the scope of the debate was widened by A. S. Famintsyn, a plant physiologist. In an article on Danilevsky and Darwinism he tried to play the role of an honest broker. He praised Danilevsky for raising some key issues regarding Darwin’s theory, but he also took Danilevsky to task for misinterpreting some of Darwin’s basic premises. Famintsyn also suggested that Darwinism was not incompatible with religion nor did it lead necessarily to a materialistic philosophy. Moreover, as a plant physiologist aware of new developments in biology, Famintsyn suggested that all the problems of biological evolution could not be solved within the framework of Darwin’s theory of natural selection as it was then interpreted.⁵⁹

Famintsyn’s reasoned essay suggesting the possible compatibility of Darwinism and religion brought down on him the wrath of both Timiriazev and Strakhov. Calling Famintsyn’s essay “A Strange Type of Scientific Criticism,” Timiriazev labeled his arguments irrelevant. Famintsyn’s attempt to broaden the scientific interpretation of Darwinism brought Timiriazev’s complete condemnation.⁶⁰ Strakhov also found Famintsyn’s article irrelevant. He saw in Darwinism the enemy of evolution by design. Moreover, Strakhov did not believe that Darwinism and religion could be compatible because of Darwin’s own aversion to religion.⁶¹

The last major salvo in the battle over Danilevsky’s interpretation of Darwinism came in the spring and summer of 1889. Strakhov had accused Timiriazev in 1887 of attacking Danilevsky for his philosophical rather than his scientific arguments against Darwinism. Timiriazev now replied that they were one and the same, since Danilevsky, like Strakhov, opposed Darwinism because it repudiated his idealistic view of a natural world harmony guided by design. Timiriazev insisted that the attack on Darwinism by Danilevsky and Strakhov was neither scientific nor in the interests of science. It was instead an attempt to attack the materialistic outlook of science under the guise of science.⁶² By this time the articles on both sides of this controversy had become repetitious and unproductive to the further understanding of Darwinism in the scientific or social sense. But the public had been made aware of the controversy in Europe as well as in Russia over Darwinism as both a scientific and a social theory.

The attack on Darwinism initiated by Danilevsky and Strakhov in the 1880s

⁵⁸ *Ibid.*, Dec. 1887, pp. 98–129, esp. 124–129.

⁵⁹ A. S. Famintsyn, “N. Ia. Danilevsky i Darwinizm” (N. Ia. Danilevsky and Darwinism), *Vestnik Evropy* (The herald of Europe), Feb. 1889, pp. 616–643.

⁶⁰ K. A. Timiriazev, “Strannyi obrazchik nauchnoi kritiki,” *Russkaia mysl'*, Mar. 1889, pp. 90–102.

⁶¹ N. N. Strakhov, “A. S. Famintsyn o Darwinizme N. Ia. Danilevskogo” (A. S. Famintsyn on Danilevsky’s *Darwinism*), *Russkii vestnik*, Apr.

1889, pp. 225–243.

⁶² K. A. Timiriazev, “Bezsil'naia zloba antidarvinista” (The weak malice of the anti-Darwinist), *Russkaia mysl'*, May 1889, pp. 17–52; June 1889, pp. 65–82; July 1889, pp. 58–78. Timiriazev had the last word in this controversy, since he wrote the articles on both Danilevsky and Darwin as well as Lamarck for the seventh edition of the *Granat Encyclopaedia*. See Br. A. i I. Granat, *Entsiklopedicheskii slovar'*, 53 vols. (7th ed.; Moscow, n.d.), Vol. XVII, pp. 552–558; 627–640; Vol. XXVI, pp. 399–407.

was followed by other writers, but their concern with Darwinism was peripheral to other major interests. V. V. Rozanov, a literary disciple of Strakhov, wrote in defense of Danilevsky and criticized Darwinism for its mechanistic explanation of biological evolution. His arguments reflected the revival of vitalism as an "explanation" of evolution in Russia and Europe alike.⁶³ Danilevsky's attack on Darwinism was also supported by scientists such as A. A. Tikhomirov, professor of zoology at the University of Moscow and later rector of the same university.⁶⁴ Boris N. Chicherin took a more original view in his attack. As a Hegelian he saw in science a field of knowledge limited to external experience. Only an understanding of the Absolute, which was reserved for philosophy and religion, could convert the knowledge of external experience into absolute knowledge. Chicherin consequently criticized those revolutionaries who sanctioned social revolutionary thought by science in general and by Darwinism in particular. Their limited materialistic view, unenlightened by knowledge of the Absolute through philosophy or religion, would only strip man of everything distinctively human and reduce him to the mere animal level.⁶⁵

Konstantin P. Pobedonostsev, the conservative spokesman for autocracy and orthodoxy, believed Darwinism to be subversive of Christianity: natural selection had become a new religion that was no better than a new superstition. Even the natural sciences had not yet verified Darwin's hypothesis.⁶⁶ Pobedonostsev criticized Darwin for failing to make any distinction between men and animals. That allowed the materialistic revolutionary thinkers to assume that all forms of life had sprung from the unceasing progression of matter. It led to a faith in man alone and a consequent cult of humanity. Pobedonostsev feared that man would no longer value his uniqueness. By destroying the moral barriers standing between him and the savagery of the amoral world of animals, man would fall victim to violence and arbitrary power. Pobedonostsev saw an example of this in Darwin's own thinking: according to his interpretation, Darwin had concluded that men no longer had a Christian right to be responsible for their own bodies when that right came into conflict with the biologically progressive evolution of the human race. The progress of medicine worked against such biologically progressive evolution by sustaining weaker organisms. Darwin's solution, according to Pobedonostsev, was to correct that weakness by allowing the struggle for existence free rein in human society: "It is plain that to him [Darwin] the fundamental law of life is *the preservation of the strong and the extirpation of the weak*. And apparently he would establish this

⁶³V. V. Rozanov, "Vopros o proiskhozhdenii organizmov" (The problem of the origin of organisms) and "Teoriia Charl'za Darvina ob'iasniaemaia iz lichnosti ei avtora" (The theory of Charles Darwin explained by the personality of its author), in his *Priroda i Istoriia* (Nature and history) (St. Petersburg, 1900), pp. 1–24, 25–37.

⁶⁴A. A. Tikhomirov, *Sud'ba Darvinizma* (The fate of Darwinism) (St. Petersburg, 1907).

⁶⁵B. N. Chicherin, *Nauka i religiiia* (Science

and religion) (Moscow, 1879); *Polozhitel'naia filozofia i edinstvo nauki* (Positive philosophy and the unity of science) (Moscow, 1892), esp. the appendix, "Opyt klassifikatsii zhivotnykh" (The method of classification of animals).

⁶⁶K. P. Pobedonostsev, *Reflections of a Russian Statesman*, R. C. Long, trans. (Ann Arbor: University of Michigan Press, 1965), pp. 175–176. Originally published in Russia in 1896 as *Moskovskii sbornik*.

principle as a law of civil society.”⁶⁷

Like his predecessors, Pobedonostsev had confused Darwinism with the Malthusian struggle for existence and the Spencerian survival of the fittest, neither of which he could accept within the framework of his religious and developmental view of human evolution. Pobedonostsev could see in the application of Darwinism to society only chaos, and he suggested that such chaos would dominate the modern world “until man recognizes that he was created in the image of God, and not by the theory of Darwin from the ape, and until he stops playing at liberalism and novelties. . . .”⁶⁸

In a country where orthodoxy provided the divine sanction for autocracy, the politically conservative and religious criticisms of Darwinism were often intertwined. Consequently a reconciliation between Darwinism and religion was as unwelcome to conservative and religious thinkers as it had been to socialist revolutionaries. When S. A. Rachinsky, the Russian translator of the *Origin of Species*, tried to publish in the Holy Synod’s official journal, *Tserkovnyye vedomosti* (The church gazette), an article demonstrating the essential harmony of Darwinism and Christianity, Pobedonostsev refused to allow its publication.⁶⁹

Between 1873 and 1916 the journals of the ecclesiastical academies published some two dozen articles against Darwinism. Most of these appeared after the 1880s. Orthodox theology, unlike Protestant and Catholic thought in the West, had not felt immediately threatened by Darwinism. Although the ecclesiastical academies of Russia were slow to respond to the challenge of Darwinism, their answer was not one of ignorance. Earlier they had not lacked theologians capable of a rational rebuttal to the scientism of the nihilists and critical realists. When Chernyshevsky published his “Anthropological Principle in Philosophy” in 1860 Professor P. D. Iurkevich of the Kievan Theological Academy replied with an essay which was the embodiment of rational theology. He conceded the importance to theology of the new realism in science, even though he did not accept its basic premises.⁷⁰ The same attitude was apparent in the response of the Russian ecclesiastical journals to Darwinism. George Kline, who has carefully studied the anti-Darwinian stance of the Russian theological journals from 1873 to 1916, concludes that

the resistance to Darwinism on the part of the Russian Orthodox Church was of a comparatively dispassionate and ‘rational’ kind, and that most, though not all, of the criticisms directed at Darwinian theory were scientifically justified, or at least intellectually respectable, in their historical setting.⁷¹

⁶⁷ *Ibid.*, p. 183. Pobedonostsev’s interpretation of Darwin’s position in the *Descent of Man* is an inadequate portrayal of Darwin’s ambiguous feelings about the possible ill effects of uncontrolled human breeding. See Charles Darwin, *The Descent of Man, and Selection in Relation to Sex*, 2 vols. (London, 1871), Vol. I, pp. 168, 180.

⁶⁸ K. P. Pobedonostsev *i ego korrespondenty* (K. P. Pobedonostsev and his correspondents)

(Moscow, 1923), Vol. I, p. 229.

⁶⁹ Kline, “Darwinism and the Russian Orthodox Church,” pp. 318–319, n. 44.

⁷⁰ Pamphilus D. Iurkevich, “Iazyk fiziologov i psikhologov” (The language of physiologists and psychologists), *Russkii vestnik*, Apr. 1861, pp. 912–934; May 1861, pp. 373–392.

⁷¹ Kline, “Darwinism and the Russian Orthodox Church,” p. 327. In his valuable study of Darwinism and the Russian Orthodox Church,

It seems, then, that Darwinism had an effect on conservative thought in Russia which was similar to the effect which it had on radical thought earlier. It tended to support old loyalties rather than to develop new ones. The attitudes of conservatives and radicals were similar, not in what they advocated, but in what they wished to avoid: a scientific justification for the introduction of a competitive and atomistic social order. The similarity of views on this issue between conservatives and radicals arose from specific conditions of Russian life. When Russian thinkers introduced certain Western ideas into Russian intellectual life, those ideas did not operate within a social order which reinforced the same political and economic aspects as they had in Western Europe. Russia and Western Europe had little in common in their respective traditions of political economy. Unlike Western Europe, Russia had never known the influence of a *laissez-faire* ideology advocating the play of unrestrained economic forces in an open market. Neither had Tsarist Russia experienced a political structure allowing competing groups to vie for power—with a secular rationalization of their success.

As a result of these important historical differences between Russia and Western Europe, no group in Russia looked to analogies from Darwinism for a secular rationalization of its vested position in society. Nothing in the history of Russia, nor in its social structure in the last half of the nineteenth century, supported an ideology, later to be called Social Darwinism,⁷² which claimed that the key to human progress was an uncontrolled and individual struggle for existence in human society. That ideology appeared both irrelevant and dangerous to Russian conservative and radical thinkers, whether they were defending the contemporary Tsarist order or a socialist regime which they hoped to see realized in the future.

Kline also touches briefly on two other topics treated in much greater detail in this article. He devotes two paragraphs to Chernyshevsky's views on Darwinism, and he cites briefly three of the articles in the Strakhov-Timiriazev debate, before concluding that "This polemic cannot be

considered further here . . ." (p. 317).

⁷²The term Social Darwinism has not been rigorously or consistently defined since its first use at the turn of the century. See my "Darwinism and Social Darwinism," pp. 265–280.