

Claws on the Behind: Tolstoy and Darwin

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In his diary for 28 October 1900 Tolstoy reports his ruminations during a walk taken that day. His mind, as it often did, dwelt on the distance between the “religion of true Christianity,” of which he felt himself almost the sole living spokesman, and false religion, the superstition of the “cultured mob,” propagated by such unjustly celebrated eminences as Hegel, Darwin, Spencer, Shakespeare, Dante, Ibsen, the Decadents, Raphael, Bach, Beethoven, and (perhaps worst of all) Wagner. Tolstoy’s thoughts then turned to his growing fingernail. Why should the fleshy end of the finger be covered with a nail? According to Darwin, Tolstoy (questionably) argues, the nails originally “grew everywhere, but except on the extremities the nails were useless and were not retained. Animals that had claws produced a race with claws. But the formed embryos (зародыши) of claws, even on the extremities, provided no advantages, and animals with the rudiments (зачатки) of claws on their extremities had no reason to leave more descendants than those which had claws on their behinds.” Sic! Perhaps we should simply regard this garbled statement as a slip of the pen and credit Tolstoy with intending to write a more credible version of the evolution of claws. Surely claws on the extremities would prove more useful than claws on the behind and therefore survived, while the latter, if they ever existed, were discarded. But at least Tolstoy had assimilated the basic notion of evolution, perhaps Lamarckian rather than Darwinian.

“Darwinism,” Tolstoy goes on, “has all that is needed for a philosophy of the mob. It is not simple and can be puzzling, and the fact that it

is stupid is not immediately perceptible, because it is curly (курчав). Refinement, impressiveness, stupidity and curliness are the hallmarks of the religion and philosophy and poetry and art of the mob. Such are Dante, Shakespeare, Beethoven and Raphael” (*PSS* 54: 50-52). I gratefully leave aside Tolstoy’s aspersions on such literary or artistic luminaries as Dante et al., which have been well studied by eminent scholars, to focus on the contemptuous dismissal of Darwin and Darwinism. How did this antagonism evolve?

The first mention of Darwin in Tolstoy’s literary *Nachlass* is found in one of the drafts to *War and Peace*. There Darwin is listed, apparently quite favorably, among leading thinkers “working toward new truth”: zoology (Darwin), physiology (Sechenov), psychology (Wundt), philosophy [name illegible to the editors, but Schopenhauer seems a likely candidate for this slot], history (Buckle)” (*PSS* 15: 233).¹ Thus by the late 1860s the name of Darwin as a leading scientist was already familiar to Tolstoy and duly respected.

Darwin had of course been in the news for some time. Despite its heavy technical baggage, *The Origin of Species* became an instant best-seller in England on its publication in 1859, and its ideas were quickly disseminated abroad, including Russia. The first Russian translation, by Sergei Rachinskii, did not come out until 1864, but Russian scientists, including Rachinskii (at that time a professor of botany at Moscow University) had assimilated its ideas earlier and were excited by them. In 1863 Rachinskii published a beautifully written article entitled “Flowers and Insects,” subtly and delicately illustrating Darwin’s

discoveries. This essay is the best type of *haute vulgarisation*. The author gently leads his readers out into the fields to look closely at the grasses that grow there. Eventually, to help explain how these grasses became what they are through a process of adaptation to environmental conditions and fierce competition among rival species, he tells of the appearance of “one of the most brilliant books ever written in the natural sciences,” Darwin’s *Origin*. Rachinskii concludes with the announcement that a Russian translation of this great work is being prepared, but modestly refrains from identifying himself as the translator. Whether Tolstoy read this article we do not know, but he might well have done so: His own story, “The Cossacks,” marking his reemergence as a writer of fiction after a four-year hiatus, appeared in the very same issue of *Russkii Vestnik* (January 1863).

A noteworthy feature of this early article by Rachinskii is its stress on the mutual dependence of organisms, for instance, flowers’ dependence on insects for pollination. This kind of “mutual aid” was later celebrated by Pyotr Kropotkin as a counterbalance to the grim picture put forward by other evolutionists of a pitiless and lethal struggle for existence, pitting all against all.² However, Rachinskii also makes clear the overwhelming importance of death in the biological world, noting especially (as Darwin also did), how disastrous it would be if all the individuals produced by the stupendous reproductive powers of all species were to survive. He calculates, for instance, that if all the 2,500 to 3,000 seeds produced by each poppy were to mature and produce seeds that then continued to do the same, in six generations all the land on the globe would be completely covered by poppies.

I wish to pause briefly on the matter of Tolstoy’s relations with Rachinskii, since they seem culturally illustrative. Back in 1858, the same Rachinskii had proposed to translate Tolstoy’s military stories—into what language is not clear³—and Tolstoy wanted him to un-

derstand that in “Sevastopol in May” certain patriotic sentences denying Russian responsibility for the Crimean War had been inserted by Ivan Panaev, then an editor of *Sovremennik*, and were not his.⁴ (No such translation ever appeared.) There was yet another, more lasting strand of connection between Tolstoy and Rachinskii: schools. Sergei Rachinskii (1833-1902) and his brother Konstantin (1838-1909) together with their sister Varvara (1836-1910), both in the 1860s and 1870s, were following Tolstoy’s example and sponsoring schools for peasant children on their estates. Sergei Rachinskii read Tolstoy’s short-lived pedagogical journal *Yasnaya Polyana*, and Tolstoy seems to have asked him to contribute to it.⁵ On 7 August 1862 Tolstoy wrote to Rachinskii, warning him against hiring ex-seminarians as teachers, since they invariably prove too “ideological,” regarding it as their mission to eradicate the peasants’ “superstition” (*PSS* 60: 433-34).⁶ Tolstoy and Rachinskii seem to have been acquainted for at the end of the letter Tolstoy sends warm greetings to “all your family.”

In the late 1870s Tolstoy and Rachinskii again corresponded about schools. Their letters were not only cordial, but one of Tolstoy’s contained an actual declaration of love (“Я вас очень люблю”).⁷ However, the love does not seem to have drawn Tolstoy to any recognition of Rachinskii’s professional standing as a scientist. The Tolstoy–Rachinskii dialogue veered from pedagogy into literature, and it was in a letter to Rachinskii (27 January 1878), in reply to a question about the structure of *Anna Karenina*, that Tolstoy made the famous statement that Tolstoy scholars know by heart (“I am proud of the architecture—the arches are joined in such a way that you cannot discover where the keystone is” (*PSS* 62: 377)). But how many of us have bothered to find out who Rachinskii was?

What seems to me significant in this relationship is that despite personal acquaintance and some very cordial exchanges about peasant schools, at no time did Tolstoy appear to

recognize that Rachinskii was a person of some distinction in his own right, a professional scientist and a university professor. (Actually, in 1866, along with four other Moscow University professors, including Tolstoy's sometime friend, B. N. Chicherin, Rachinskii resigned his position in protest against highhanded behavior by the university administration.) Tolstoy's obliviousness reminds one of the famous "two cultures" of C. P. Snow. The sciences and the humanities are two distinct spheres that never meet. In fact, in this case they do meet, but only from one side: The scientist is quite well informed about Tolstoy's literary accomplishments and discusses them intelligently with him, whereas Tolstoy draws a complete blank on Rachinskii's science.

Like many humanists, Tolstoy never showed much interest in science. In 1859 he wrote to Chicherin that he had "begun to study the natural sciences" (*PSS* 60: 316),⁸ and earlier that year his diary mysteriously reports that "on August 6 I went to Moscow and began to dream of botany. Of course, it was a dream and childish" (*PSS* 48: 21).⁹ Whatever they were, these studies do not seem to have gotten very far. Later, when he was organizing and running a school, Tolstoy did consider science a necessary part of the curriculum and spent some effort reviewing science textbooks used in British schools (*PSS* 8: 397). In Weimar in 1860 Tolstoy had met a young graduate of the Jena Polytechnic Institute named Gustav Keller and engaged him as a teacher for the Yasnaya Polyana school, especially to "conduct experiments in physics and chemistry."¹⁰ However, in a later account of the actual school, Keller is listed as a teacher of *drawing*.¹¹ There seems to be no record of Keller's experiments, but a teacher's diary does report experiments carried out by students and also that Tolstoy himself performed physics demonstrations.¹²

Later in life Tolstoy developed a marked antagonism to science, regarding as especially invalid its prestige among intellectuals and its claims to offer general truths about the world and life. His aversion was expressed most

vehemently in his preface to a Russian translation of an article entitled "Modern Science" by the English essayist Edward Carpenter.¹³ Scientists, Tolstoy proclaims, study the wrong problems and evade the right ones. Ordinary people, whose toil actually supports the scientists, naturally look to them for answers to the basic existential questions: What is life for? Why am I here? How should I live? But the scientists assiduously avoid such questions. Symbolizing their elitism and distance, they answer in French, "Vous êtes hors la question, cela n'est pas du domaine de la science" (*PSS* 17: 140)¹⁴ (You are off the question; that is not in the domain of science). Instead, mainly for their own amusement, they occupy themselves with problems as remote as possible from the concerns of ordinary folk.

When the ordinary person asks, how should I live, how [should I] relate to my family, to my neighbors, and to foreigners, how can I control my passions, what should I believe and not believe, and much else, what does our science answer him? It triumphantly tells him how many miles separate the earth from the sun, how many millions of vibrations per second in the ether constitute light, how many vibrations in the air make sound. It will tell about the chemical composition of the Milky Way, about a new element called helium, about microorganisms and their excreta [...] about X-rays and so forth. 'But I don't need any of that,' says the ordinary man. 'I need to know how to live.' (*PSS* 31: 89-90)

That question, say the scientists, belongs to sociology. But before we can answer a sociological question, we must first answer zoological, botanical, and physiological questions; and to answer those questions we must answer questions of physics and chemistry, and we must agree about the form of infinitesimally small atoms and about how the weightless and inelastic ether conveys motion (*PSS* 31: 90).

Tolstoy was equally unwilling to see any benefit in applied science or the remarkable

technological advances of his time. At least in his later, post-conversion years, and to some extent earlier, his basic yardstick for measuring value was the Russian muzhik. Self-sufficient peasant agriculture—a man, a woman, and a farm—was the right life, he believed, the way we are all meant to live, in close harmony with the earth and her seasons. Everything else, all urban culture, was an excrescence, harmful, exploitative, and often murderous. Tolstoy's article "Progress and a Definition of Education," published in his own magazine in 1862, shows that his views on this point were then already well established. He does not, he asserts, "hold to the religion of progress." The "progress" that historians like Buckle boast of, Tolstoy notes scornfully, consists of improved means of communication, printing, gas-lit streets, and the gunpowder and shells with which "we" are introducing the idea of progress into China. Political progress is likewise an illusion (*PSS* 8: 333). "In ancient Greece and Rome there were more freedom and equality than in the new England, with its Chinese and Indian wars, the new France, with its two Bonapartes, or the new America, with its fierce war over the right of slavery" (*PSS* 8: 334). Only the upper classes benefit from technological advances. Peasants do not send telegrams to one another, but a Russian lady vacationing in Florence wires her husband to send her more money. Do steamships, locomotives, and machines make life better for peasants? Tolstoy answers with an unqualified no, a persistent nihilism that later exasperated Dr. Chekhov, already annoyed by Tolstoy's hostile treatment of doctors in his fiction. "Something in me protests..." Chekhov retorted, "that in electricity and steam there is more love for humanity than in chastity and abstention from meat."¹⁵ But Tolstoy's absolutism would concede nothing, not even admitting the value to peasants of such vital tools as steel plows, scythes, spades, knives, hammers, nails, and their beloved samovars—all manufactured goods made in cities, not to mention factory-made cloth, which liberated peasant women

from the spinning wheel and loom. Tolstoy could argue, of course, that the most ruinous factor in peasant life, vodka, also came to them from cities.¹⁶

Tolstoy even refuses to credit any of the advances in medicine as improvements in the lot of humankind. To cure one child of diphtheria under current social conditions, he asserts, is of no value, when

not only children, but the majority of people, because of poor food, unbearably heavy work, poor habitations and clothing, and because of their poverty do not live half as many years as they should. Our way of life is such that children's diseases, syphilis, tuberculosis, and alcoholism affect more and more people, and a great part of human labor is extracted from the population to prepare for war, and every ten or twenty years millions of people are destroyed by war. (*PSS* 31: 94)

Tolstoy thinks that all these evils would disappear if science would devote itself to "propagating among people correct religious, moral and social concepts" (*PSS* 31: 94).

To return to Darwin, Rachinskii's translation of *Origin* evoked a lively reaction in the Russian intellectual world, including many articles addressed to a lay public in the "thick" journals. Perhaps the liveliest of these was a lengthy celebration written by Dmitrii Pisarev from his cell in the Peter and Paul Fortress, "Progress in the World of Animals and Plants."¹⁷ Tolstoy very likely did not read this drawn-out but animated effusion; he was not a fan of Pisarev's, despite two very favorable early reviews of his works by the young critic.¹⁸ Tolstoy probably also eschewed the parallel article by Pisarev's rival radical, M. A. Antonovich, "A Theory of the Origin of Species in the Animal Kingdom."¹⁹ The same may well be true of other articles on Darwin and reviews of the Rachinskii translation addressed to non-specialists.²⁰ Scientifically the best grounded of these was by the youthful Kliment Timiriazev (1843-1920), then a student at St. Petersburg

University, later a professor of botany at Moscow University and commended in Soviet times for enthusiastically joining the Communist Party in 1918 at the age of seventy-five. Timiriazev's article, "Darwin's Book, Its Critics and Commentators," originally published in *Otechestvennye Zapiski*,²¹ was signed only "K.T." It was later expanded and issued as a separate brochure that went through several editions.²² We will encounter Timiriazev again as a leading combatant in the Darwinian debates of the 1880s.

For our Tolstoyan purposes a particularly important response to Darwin's *Origin* was published as early as 1862 in the Dostoevskys' magazine *Vremia*. It was written by Nikolai Strakhov, who a decade later would form a close intellectual and personal friendship with Tolstoy that lasted until Strakhov's death in 1896. Strakhov had better credentials for evaluating Darwin's theory than any of the other popular commentators except perhaps Timiriazev. He was a trained scientist, held a master's degree in biology (with a thesis on the ankle bones of mammals), and was well informed about the scientific issues of the day. A brochure by Strakhov on the place of science in education appeared in 1865,²³ and his 1872 book *The World as a Whole*²⁴ reprints a variety of articles on scientific topics published over the preceding decade. The 1862 article on Darwin was ominously entitled "Bad Signs," but the bad signs refer not to Darwin's book itself, for which—surprisingly, in view of his later attitude—Strakhov at this early stage had words of unqualified praise, crediting Darwin with having taken "an enormous step [forward] in the movement of the natural sciences."²⁵ The "bad signs" Strakhov used for his title referred to the introductory essay accompanying the French translation, written by the translator, Clémence Royer. Royer was more a social than a natural scientist—she published a prize-winning book on taxation simultaneously with the Darwin translation²⁶—and Darwin's book appealed to her as much for the philosophical conclusions she

could draw from it as for its scientific theories. With remarkable chutzpah—latterly she has been celebrated by French feminists as "l'intrépide"²⁷—Royer, qua militant atheist, used Darwin's book as the basis for a general assault on the whole history of Christianity, stressing its stupefying effects on intellectual development and in particular its systematic and often brutal efforts to inhibit the growth of science.²⁸

Not too sure of his own Christianity, ex-seminarian Strakhov glides over Royer's atheism (perhaps with an eye to the censors of his own article), but finds the "bad signs" in the latter part of her preface, where she voices in an extreme form ideas that later became well known under the name "Social Darwinism." Christianity and the laws derived from it, she asserts, have interfered with and impeded the operation of the basically benign natural law of the struggle for existence and natural selection, which is the guarantee of progress. Christianity has led us

always and in everything to sacrifice what is strong to what is weak, the good to the bad, beings well endowed in mind and body to beings deformed and sickly. What is the result of this exceptional and foolish protection accorded to the weak, the infirm, and the depraved themselves, indeed to all those disfigured by nature? It is that the evils that have affected them tend to be perpetuated indefinitely [by reproduction].²⁹

Shocked by this statement, Strakhov recognizes its connection with Malthusian calculations and reduces it for effect to familial terms:

When there are many children in a family and nothing to eat, Malthus simply-mindedly takes this as a misfortune. Now [from Royer] we see that the more children the better, the more powerfully will operate the beneficent law of competition. The weak will perish, and only the *naturally selected*, most privileged members will win

the struggle, so that as a result progress will ensue, the betterment of the whole tribe.³⁰

Such a formulation is appalling. "Such opinions are monstrous, incredible," Strakhov exclaims. He believes that mankind, to deserve the name of human, should set itself a different, higher ideal than the one imposed by nature. Finally, Strakhov inveighs against Royer's assertion that both races and individuals within each race are inherently unequal. He counters with the claim that in a puzzling, mysterious sense people *are* equal as people, if not as animals. "We cease to understand human life, we lose its meaning, as soon as we do not separate man from nature [...] and begin to judge mankind as we judge animals and plants" (396).

Again we do not know whether Tolstoy read this Strakhov article, either when published or later. But the ideas it expressed, the horror aroused by the application of Darwinian principles to human life, became the dominant feature in Tolstoy's rejection of Darwinism and remained such all the rest of his life. After 1870 there was to be no more recognition of Darwin as a great zoologist; in Tolstoy's eyes he had been permanently transmuted into an over-praised, intellectually sloppy mediocrity, on a par with Wagner.

The first scientific article by Strakhov we know Tolstoy read was "Revolution in Science," which appeared in 1872.³¹ This article was written as a review of a new and equally sensational book by Darwin, *The Descent of Man* (1871), of which no fewer than three Russian translations appeared within a year. In this new work Darwin crossed the border he had carefully avoided in *Origin* and applied his theories to the human species, explicitly asserting man's kinship with the apes and opening the door to moral and philosophical speculations (which of course had already begun) about the application within human society of natural selection and the struggle for existence. The 1870s began an era

of increasing polarization in Russia over "Darwinism," with the two camps, pro- and anti-Darwin, engaged in increasingly acrimonious dispute, culminating in the bitter and verbose polemic that marked the late 1880s.

In his 1872 article Strakhov already takes a firm stand with the anti-Darwinists. He does not revert to Clémence Royer's incipient Social Darwinism, but now attacks Darwin himself on scientific/philosophical grounds. No longer crediting Darwin with having moved science an "enormous step" forward, Strakhov's tone is uniformly hostile. What Darwin did, he maintains, is to attribute changes in species to sheer accident, with favorable changes providing organisms with advantages in the struggle for existence and unfavorable ones the reverse, leading to their eventual demise. But Darwin does not explain the causes of these variations; therefore his title, *The Origin of Species*, is inaccurate because their origin is never explained. Likewise, to classify man as an animal related to monkeys does nothing to explain the uniqueness and complexity of human beings. The stampede to celebrate Darwin and his theories only illustrates the unfortunate tendency among scientists and others to succumb to fads.

Originally published in the neo-Slavophile journal *Zaria*, of which he was serving as the de facto editor, this article was later reprinted in a collection significantly entitled *The Struggle with the West*. Strakhov had by this time assumed a permanent stance of suspicion and hostility toward all intellectual emanations from Western Europe, even in science. It was no longer as if all human beings were engaged in a common search for truth; now every intellectual product came marked with its national origin and was judged accordingly. Russia had its own unique voice, its own contribution to make, and it need not join the cheering squad for each new Western fad. To be sure, it was important to keep abreast of the intellectual life of "Europe," and Strakhov assiduously did so by massive readings in German, French, and (occasionally) English. But the underlying

impetus behind all this effort was to belittle, downgrade, and deflate the West's unjustified claims to embody the highest and most valuable attainments of human civilization. Russia had its own, independent path to pursue; there was no need to be in thrall to the false gods of the West.

In this article Strakhov cites a programmatic book by his friend Nikolai Danilevskii, *Russia and Europe*, a work that was to become famous only later, in the 1880s, which provided a world-historical, theoretical foundation for the position Strakhov essentially maintained for the rest of his life, a "struggle with the West."³² Danilevskii later also became one of the leading Russian anti-Darwinists, publishing a massive treatise, *Darwinism: A Critical Investigation* in 1885. Apparently he began work on this project soon after finishing *Russia and Europe*.

As for Tolstoy, in his letter to Strakhov of 3 March 1872 he describes this article, "Revolution in Science," as "splendid" (прекасная), but unfortunately he does not discuss its contents.³³ By that time he and Strakhov were already friends. The previous summer Strakhov had paid his first visit to Yasnaya Polyana, visits that were to be repeated almost every year until Strakhov's death. Strakhov in many ways served as a conduit through which Tolstoy "kept up," after a fashion, with current ideas and intellectual trends both in Russia and the West. Tolstoy was never so thoroughly "Slavophile" as Strakhov in orientation, and he was never pan-Slavic at all; but he did share with Strakhov an attitude of suspicion and hostility toward voguish ideas (like spiritualism) emanating from the West.

In 1874 a new scientific article by Strakhov, "On the Development of Organisms,"³⁴ evoked a more considered, but notably pessimistic response from Tolstoy.

Thank you, dear Nikolai Nikolaevich, for sending me your article on Darwin; I devoured it and felt it was good and satisfying food. For me it was a confirmation of my vague dreams on the same subject, and an

expression of what I had seemed to want to express. One thing is surprising. The article is published, people will read it. It is impossible to regard it with contempt and impossible not to agree with it. But will it change even by a hair's breadth the current opinion about some sort of new word uttered by Darwin? Not at all.³⁵

Tolstoy goes on to lament the alleged and doubtless discouraging "fact" that a critical article affects public opinion only when it purveys nonsense (мелет окоlescную); a serious and sincere one like Strakhov's has no effect. Strakhov did not respond to this mournful prophecy; versatile journalist that he was, he had already moved on to another topic altogether, an article on Pushkin.

Later in the 1870s, reverberations of the debate over Darwinism even found their way onto the hallowed pages of *Anna Karenina*. The novel's alter ego hero, Konstantin Levin, (unlike his author) was an *estestvennik*, a university graduate in the sciences. "The origin of man as an animal" is listed among the current scientific topics that interested him, despite the fact that like all academic ratiocination, in his view it cravenly dodged the basic existential question, which alone should be its pressing subject: What is the meaning of life (One: vii). Levin's half-brother Koznyshev and his friend, the professor from Kharkov, are thus typical "scientists" in their evasions.³⁶ Later we learn that Levin's friend, the nominally liberal Sviiazhskii, "considered the Russian peasant in his state of development to stand in a transitional stage between the monkey and man" (Three: xxvi)—clearly an echo of Darwin reverberating in the Russian provinces. Most importantly, at the end of the novel Levin, like his author, is engaged in an agonized effort to find some "meaning" that could justify his continuing to live. Darwinism, or more properly Social Darwinism, though never named, enters into these ruminations. "Reason," Levin argues, "has discovered the struggle for existence and the law that demands that I suffocate

all those who hinder the gratification of my desires." But happily, he continues, man is governed not only by reason. He also experiences love, "and reason could not discover how to love another person, because it is irrational" (Eight: xii).³⁷

K. A. Timiriazev rightly argues that Levin has not read his Darwin very carefully because in fact Darwin himself maintained that "as applied to humans the struggle for existence signifies not hatred and extermination, but on the contrary, love and protection."³⁸ Doubtless for tactical reasons, Timiriazev makes Darwin's views sound more benign than they really were, but Darwin did indeed recognize the value of love, notably parental love, as a factor in survival, and he also saw man's moral capacity as a product of evolution, observing that rudiments of morality are found among many animals, especially those that band together in packs or herds, where social cohesion enhances the likelihood of survival. These same tendencies have only been expanded and intensified in man, likewise very much a "social animal."³⁹ Tolstoy, however, never recognized or made use of this potential support from Darwin for his doctrines of love.

The next major reverberation from Darwinism to affect Tolstoy came from an article in the *Revue des deux mondes*, a magazine to which he subscribed for many years. Entitled "La démocratie devant la morale de l'avenir" (Democracy before the Morality of the Future), it was written by a prominent Catholic philosopher and moralist named Elme-Marie Caro (1826-1887). Ostensibly judicious and even-handed, Caro spelled out what he felt were the terrible moral conclusions to be drawn from Darwin's theories, conclusions already partly articulated by Herbert Spencer. (They had already in fact been voiced by Clémence Royer, but Caro does not mention her.) The basis for the (Darwinian) "morality of the future" is this: The measure of good is what is good for the species. The good of the species demands that the strongest and most intelligent individuals should reproduce themselves; the weak and

stupid should not. Caro gleefully points out how undemocratic such ideas are; they deny anything like equality before the law. In fact, what the Darwinists advocate is "scientific despotism," which would not hesitate to sacrifice one or more individuals if the "common interest" required it. Recoiling before this prospect, Caro ends with a celebration of pan-human solidarity and extols the charity that succors the weak ones whom nature had condemned to die, seeing in them the "seeds of beautiful souls" (53).

Tolstoy essentially agrees with Caro, in fact appearing to derive from Caro his basic notions of what Spencer and Darwin said. "Spencer and Darwin," he wrote, "demand the killing of the weak and the prohibition of their marriages, because human progress is retarded [by their reproducing themselves]. This is indubitable for people who do not see any aim of human life beyond earthly life. But this is contrary to love, the basic emotion of human nature, and this very fact proves that the aim of life cannot lie in earthly life alone."⁴⁰

The Darwinian theme seems to fade from Tolstoy's field of vision in the early 1880s. The great scientist's death, on 19 April 1882, and the flurry of Russian writing it evoked, does not seem to have aroused Tolstoy's interest. Again via Strakhov, he once more became somewhat engaged only in 1885, when Strakhov's friend Danilevskii at last completed his massive *Darwinism: A Critical Investigation*.⁴¹ On hand in Petersburg, Strakhov saw this monumental work through the press and was available to defend it when his friend suddenly died (7 November 1885).⁴²

The appearance of Danilevskii's book triggered the beginning of a long and bitter journalistic war in which Strakhov took a very active part. Since Tolstoy only watched it from the sidelines without much engagement, it can be summarized here briefly.⁴³ Though he had been in effect editor of Danilevskii's book, Strakhov nevertheless published a laudatory review of it in 1887, under the inflammatory title, "A Complete Refutation of Darwinism."⁴⁴

Strakhov now saw Darwinism as an offshoot of the materialism and “nihilism” he had dedicated his life to oppose, and Danilevskii’s book, “one of most extraordinary phenomena in world literature,” was a powerful salvo aiming at their destruction. The Darwinists were not slow to fire their own guns in reply. K. A. Timiriazev responded with a strong affirmation of Darwinian doctrine, “Has Darwinism Been Refuted?” originally delivered as a public lecture at the Petersburg Technological Museum and published soon after.⁴⁵ Strakhov lost no time in counter-attacking with a new article, “The Perpetual Mistake of the Darwinists,” devoted mainly to exposing flaws in Timiriazev’s logic and deploring the crudely disrespectful tone in which he spoke of the late Danilevskii.⁴⁶ With that the war subsided for a year. Then in 1889 a new combatant entered the fray, Andrei Famintsyn, professor of plant physiology at St. Petersburg University. Famintsyn was basically on Darwin’s and Timiriazev’s side, but he tried to assume a more conciliatory tone in relation to Danilevskii’s attack.⁴⁷ He agreed that there were flaws in Darwin’s theory, great as its achievement was, and that later research would undoubtedly add to or supplant many of his ideas.

Strakhov would have none of such concessions and attacked Famintsyn as a vacillating Darwinist insufficiently respectful of Danilevskii.⁴⁸ Meantime Timiriazev launched two new attacks, one on Famintsyn, for his lack of full allegiance to Darwinism, and yet another on Strakhov.⁴⁹ Strakhov of course had to respond. In his final article in the series, “An Argument over N. Ia. Danilevskii’s Books,” still another figure is found wandering in the battlefield, a bit like Pierre Bezukhov at Borodino: the philosopher Vladimir Solov’ev. Solov’ev had nothing to do with the Darwin dispute, but had attacked Danilevskii’s other controversial opus, *Russia and Europe*. That traitorous deed showed Strakhov that Solov’ev, formerly considered an ally, had gone over to the Westernizers. Therefore, in one concentrated blast Strakhov sought to deliver the coup de grace to

both Solov’ev and Timiriazev. Showing off his erudition, he reduced the essence of the whole Darwin polemic to the ancient dispute between Epicurus, who held that the order of the world rose by itself out of chaos, and Anaxagoras, who believed in an intelligence forming the cosmos.⁵⁰ At the conclusion of the war, in April 1889, Strakhov expresses himself to Tolstoy as “in general very satisfied.” He enjoys the fact that the Darwinists Timiriazev and Famintsyn are themselves at odds. There will be other, more substantial responses to Danilevskii’s book, he concludes, but they will end with “Danilevskii’s triumph and therefore mine.”⁵¹ And Strakhov was shrewd enough to see that the value of this “victory” lay not so much in the success of his arguments as in the publicity generated for Danilevskii’s book.⁵²

Strakhov kept Tolstoy informed about the progress of the war, sending him copies of his articles along with his letters. On hearing of Timiriazev’s public lecture, for instance, he wrote Tolstoy, “Finally they are speaking, but—what a weapon—a public lecture! I have no choice but to get ready for a fight and plant my feet wide apart.”⁵³ Tolstoy thanked Strakhov for one of these articles, probably “The Perpetual Mistake of the Darwinists,” saying that he had “derived much from it,”⁵⁴ and he seems to have been generally convinced by Strakhov’s arguments and claims on behalf of Danilevskii. In 1886 he told the American journalist George Kennan that the Russian scientist Danilevskii was said to have “written a book that will completely demolish the Darwinian theory.” The notes of Ivan Ivakin, who lived with the Tolstoy family in the 1880s as tutor to their sons, reports the same verdict from Tolstoy: “Danilevskii...wrote a book, and according to Strakhov after his objections nothing will be left of Darwin’s theory.”⁵⁵

Thus by and large Tolstoy tended to go along with his friend. He even thought Strakhov’s attack on Famintsyn “too weak”: Famintsyn had deserved “total annihilation for proclaiming without proofs that Darwin was a great man and Darwin’s theory a great theory.”

But then in the same letter Tolstoy abruptly dismisses and even condemns the whole controversy. "Enough of him [Famintsyn] and of Darwin. I hope you will not be offended if I say...that what we think about how species originated is not only not important, but that old men like us, preparing to appear before Him, should even be ashamed, that it is disgraceful and sinful to talk and think about that."⁵⁶

Strakhov tried weakly to justify himself after this drastically deflationary reproof, arguing that to demolish such a false idol as Darwin in the defense of his friend Danilevskii was a worthy effort, part of his ongoing war against "materialism and nihilism."⁵⁷ Tolstoy does not seem to have been mollified; a year later he was still shocked that people as civilized and decent as Strakhov and Timiriachev could engage in such vicious verbal fisticuffs. "Why? From science, like peasants from alcohol. Conclusion: their science is bad."⁵⁸

Even before the conclusion of the war Tolstoy, independently of Strakhov, had discovered an unexpected anti-Darwinian ally, none other than his old nemesis Nikolai Chernyshevskii, who after twenty years in Siberia at last returned to civilization (though only as far as Astrakhan) and was allowed to publish (although not under his own name). In December 1888, under the name of "An Old Transformist," Chernyshevskii published an article entitled "The Origin of the Theory of a Beneficent Struggle for Life."⁵⁹ By signing it as he did, Chernyshevskii seemed to proclaim that he was no creationist nor even a follower of Cuvier, who had insisted that species were fixed forever. He believed in evolution, just not Darwinian evolution. Chernyshevskii concludes that the transformation of species must have taken place by some less murderous process than natural selection. Future transformationists will discover the answer.

Tolstoy read this article and commented in his diary, "Chernyshevskii's article on Darwin is splendid (прекрасная). Strength and clarity" (*PSS* 50: 16). It is hard to discern just what

Tolstoy liked so much about the article other than the denial of natural selection. A large part of it is given over to a biographical and bibliographical account of Darwin's career, filled with many highly laudatory assessments of Darwin's character and achievements. As a research scientist and writer on particular topics, Chernyshevskii says, Darwin was superb: conscientious, gifted, industrious, and learned (10: 750). In view of his many later disparaging comments about Darwin, one can hardly believe that Tolstoy found agreeable such praise of the man. Where Darwin failed, according to Chernyshevskii, was in extracting large generalizations from his research, in particular his theory of natural selection. The idea that a horribly cruel struggle for existence could lead to *progress*, to improvement of the species, seemed to Chernyshevskii clearly wrong. It would lead rather to degradation and extinction. Tolstoy may have liked that idea; he had never believed in progress anyway, at least material progress. Further, Chernyshevskii maintained that Darwin's reliance on Malthus was suspicious. Malthus was a political reactionary, believing that political reforms were useless in view of the overwhelming threat of overpopulation. Tolstoy was also strongly anti-Malthusian. He had taken a swipe at Malthus as early as "Progress and a Definition of Education" (1862), but his most withering denunciation is found in *What Then Must We Do?* (1886):

A very bad English journalist, whose works were all forgotten and adjudged the

most worthless of the worthless, writes a treatise on population in which he invents a supposed law that the growth of population is incommensurate with the food supply. This writer pads this supposed law with mathematical formulas with no basis and publishes it [...] The journalist who wrote this work suddenly becomes a scientific authority and has been kept at this level almost half a century. (*PSS* 25: 333)

One of Malthus's deluded admirers was Darwin, who applied his theory to animals and plants. This aspect of Darwinism had never found favor in Russia, and in this respect for once Tolstoy found himself in the mainstream.⁶⁰

In general, after 1890 Tolstoy's views of Darwin and Darwinism solidified into a permanent pattern. The purely scientific part, the origin of species and the descent of man from ape-like creatures, though perhaps true, was of no significance, irrelevant to the problems of here and now. It was a typically useless intellectual game played by idle, upper-class people to amuse themselves. We live now, and the important thing is to decide how to live and what we must do, not to ponder over rocks and fossils and try to figure out what was the state of the earth millions of years ago. On the other hand, the danger of Darwinism was the *moral* conclusions some people drew from it, that is, Social Darwinism.

Of course, many Darwinists had also been troubled by the apparent moral implications of their theories, and such conclusions as those drawn by Clémence Royer seemed just as appalling to them as they did to Strakhov. One of the most thoughtful responses to this problem was an essay by one of Darwin's most loyal and energetic disciples, Thomas Huxley, once known as "Darwin's bulldog," a response especially important to us because Tolstoy read it and argued with it.⁶¹ By late September 1893, Tolstoy had read the Russian translation and wrote to Strakhov, asking him to obtain a copy of the English original. Of Huxley's article he said only, "How stupid."⁶²

In the meantime Tolstoy had received a letter from one Georg von Gizycki, a professor of philosophy at Berlin, who had founded an Ethical Society which in turn published the journal *Für Ethische Kultur*. Von Gizycki asked Tolstoy to answer two vital questions: what he understood by the word "religion" and whether he considered possible the existence of morality independent of religion. Huxley, of course, had attempted to do just that, construct

a morality without religion; so Tolstoy's reply to von Gizycki, which grew into a substantial article entitled "Religion and Morality," was at the same time a direct confrontation with the views of the English scientist.⁶³

Huxley began his essay with a long and learned excursus, designed to engage his erudite Oxford audience—the article was originally delivered there as the Romanes lecture—into the earliest formulations of morality found in ancient religions, notably Hinduism, Buddhism, and ancient Greek philosophy. This section only irritated Tolstoy as a useless display of irrelevant learning. Huxley carefully avoids Christianity. His basic idea is that man as a conscious, rational being can set himself moral principles or laws different from the crude imperatives of the struggle for existence. Some of these, as Darwin had noted, stem from the fact that man is a social animal, and that even within the struggle for existence the good of the social unit may take precedence over the desires, interests, and will of the individual. Some of these principles may be enforced as "laws" and violations punished; others may be internalized as shared values. The example of the perfectly functioning societies of ants and bees is telling, but man is different, for unlike the ant or bee the individual man retains independent desires and will, sometimes leading to conflict with his own society. Many of the competitive and aggressive qualities that enabled human beings to win "the headship of the sentient world" become harmful and destructive under conditions of civilization. To apply the doctrine of the "survival of the fittest" to civilized man is a "fallacy."⁶⁴ "Social progress means a checking of the cosmic process at every step and the substitution for it of another, which may be called the ethical process, the end of which is not the survival of those who happen to be the fittest [...] but of those who are ethically the best" (139). Man has tamed nature; he can tame himself, restrain "the instinct of savagery in civilized man." Oddly, in setting the human quest for morality in opposition to man's instinctual

nature, Huxley does not invoke Darwin's observation that loving and altruistic behaviors are also observable products of evolution.

In any case, like his fellow Christian moralist Dostoevsky, from whom he differed in so many respects, Tolstoy cannot accept Huxley's idea of a morality designed by man for man. Nature, Tolstoy argues (sounding almost like a Darwinian), offers only

the law of evolution, which lies at the base of all the science of our time and rests on a general, eternal, and unchanging law—the law of the struggle for existence and the survival of the most capable (the fittest)⁶⁵ and that therefore each man, to obtain his own good and the good of his society, must be this fittest and make such his society, so that the one to perish will be not him or his society, but the other, the less fit. (*PSS* 39: 21)

This law governs the whole organic world. Some naturalists like Huxley have taken fright at the application of this law to the human species and have tried to think up ways around it. Huxley invents something called the “ethical process,” which is embodied both in self-denial by individuals and in laws enforced on those who do not practice self-denial.

So far Tolstoy has given a pretty fair exposition of Huxley's ideas. Then, however, he unjustifiably ascribes to Huxley the claim that contemporary English society, with all its faults—“its Ireland, poverty, insane luxury of the rich, trade in opium and vodka, executions, wars, destruction of people for profit and politics, secret vice and hypocrisy”—embodies the “ethical process” fully realized. Huxley, of course, made no such claim. But the essence of Tolstoy's objection is the lack of any foundation for the “ethical process.” The cosmic law of the struggle for existence applies only to man as an animal. It is a cruel and immoral process. Even if all men were included in a single state, the struggle would still go on. Man must indeed govern and change himself, but this can never happen as a result of social

“progress.” Using his favorite device of metaphorical analogies, Tolstoy argues that to try to base morality on non-religious prescriptions is like having a person totally ignorant of music try to conduct an orchestra. Morality can only be founded on religion. It would indeed be desirable, Tolstoy goes on, to have a religion-based moral doctrine with no admixture of ecclesiastical superstition. But the fact remains that “moral doctrine is only the consequence of a definite, established relationship of man to the world and to God. By applying reason we can free this doctrine from superstition, but in no way can we substitute for it an unfounded, so-called secular, non-religious morality” (*PSS* 39: 26).

Such remained Tolstoy's moral doctrine for the rest of his life. The basic principles of morality, though enunciated in the writings of the great religious thinkers, especially Jesus, are fundamentally not learned or inculcated. They are implanted by God in every human heart. We have only to look within to find them. Tolstoy in his writings merely shows us what we should find there and will find if we persevere. It may take much time for most men to accomplish this process—Tolstoy is not a millenarian. But eventually people, perhaps helped by reading his treatises, will understand “what then must we do.”

As for Darwin and evolution, in his late years, as several of the above citations demonstrate, Tolstoy basically accepted a great deal of what Darwin said: the origin of species by natural selection, the struggle for existence and the survival of the fittest, and even the simian kinship of man. All this applied, however, only to man as an animal. But man is also a spiritual being, a child of God, from whom he receives directly moral imperatives quite different from those that affect him as an animal.

Since Darwin and the Darwinists do not recognize this fundamental principle, Tolstoy gives them no credit for their discoveries, which have proved morally pernicious. Therefore, in all Tolstoy's pronouncements of his old

age, Darwin is invariably classed as a moral enemy and included among all those over-hyped, meretricious, fake eminences and idols of the educated mob, such as Dante and Shakespeare. Tolstoy even seems to take malicious pleasure in the perception that by 1903 in the minds of the educated “mob” Darwin was beginning to be superseded by a figure even more evil and immoral, Nietzsche (*PSS* 35: 261).⁶⁶

Yet there is hope. Hope comes from the common folk of the world, who more and more, Tolstoy claims, recognize the God within them. The educated classes must do the same. They must cast aside “the complex code of unnecessary knowledge called science.” Tolstoy makes use of another favorite rhetorical device, pluralizing the names of thinkers he disagrees with, thus depriving them of individual identity and casting them into a common pool of derogation. He proclaims that mankind will find answers “not from the Darwins, the Haeckels, the Marxes, the Avenariuses, but from the greatest religious thinkers of all times and peoples” (*PSS* 38: 290).⁶⁷ Perhaps secretly he would have liked to include his own name among the latter luminaries, the lights that shine in darkness.

Yet the demon of Darwinism haunted Tolstoy to the very end. After his celebrated departure (уход) from Yasnaya Polyana, lying mortally ill in the stationmaster’s house at Astapovo, Tolstoy dictated a letter to his two oldest children, Sergei and Tat’iana. In the letter he singles out Sergei as the especially contaminated one who needs one last admonition. “Darwinism,” it would appear, had come to encapsulate for Tolstoy much that he hated in the modern world: its urbanism, its secularism, its God-denying “science”:

I still wanted to add for you, Seryozha, some advice that you should take thought about your life, about who you are and what you are, what is the meaning of human life and how every rational man must live it. The views you have assimilated of

Darwinism, evolution, and the struggle for existence will not explain to you the meaning of your life and will not provide guidance in your actions; and life without explanation of its meaning and significance, and without the immutable guidance that stems from that meaning, is a pathetic existence. Think about that. I say this loving you, probably on the eve of my death. (*PSS* 82: 222-23)⁶⁸

Notes

1. Ivan Mikhailovich Sechenov (1829-1905) was a distinguished scientist, active in introducing the methods of physics and chemistry into physiology. He was strongly pro-Darwin and translated *The Descent of Man* into Russian. Wilhelm Max Wundt (1832-1920), a professor at Leipzig, founded the first laboratory for experimental psychology. Henry Thomas Buckle (1821-62) wrote *A History of Civilization in England* that attempted to apply the methods of science to history. He had an enormous vogue in Russia in the 1860s.
2. See Kropotkin. Todeš shows in detail that the idea of mutual aid among organisms had been popular in Russia long before Kropotkin’s book and was evoked as an alternative to natural selection as a determinant in evolution.
3. Probably German: Rachinskii published a German translation of Sergei Aksakov’s *Семейная хроника* in Leipzig in 1858. See *PSS* 60: 435.
4. Tolstoy did not write directly to Rachinskii about this, but asked his friend Evgenii Korsh to tell Rachinskii about Panaev’s untoward interpolation. Tolstoy to E. F. Korsh, 12 May 1858. *PSS* 60: 269.
5. Once again Tolstoy used an intermediary. On 28 October 1861 he wrote to his then friend B. N. Chicherin, asking him to “pass on my request” to Rachinskii. The letter was damaged, and the nature of the request is missing, but it has been surmised that Tolstoy hoped Rachinskii could be persuaded to contribute to his journal. See *PSS* 60: 408.

6. Rachinskii hardly needed the warning. In the 1870s and later, he strongly advocated basing his pupils' literacy on readings of Scripture in both Church Slavic and Russian. He also favored using village priests as teachers. Tolstoy does not seem to have known about these latter-day developments.
7. Tolstoy to Rachinskii, 5 April 1877. *PSS* 62: 318.
8. Tolstoy to Chicherin, end of October or beginning of November 1859.
9. Diary entry of 9 October 1859.
10. Gusev, *Материалы с 1855 по 1869 год*, 426.
11. After the school was closed Keller served for a time as tutor to Tolstoy's nephew Grigorii, son of his brother Sergei, and later taught German in the Tula gymnasium. The writer V. V. Veresaev remembered him there. See N. M. Mendel'son and V. F. Savodnik, *PSS* 8: 489-520.
12. Gusev, *Материалы*, 479.
13. Tolstoy, "Предисловие." The translation was by Tolstoy's son Sergei, but Sergei did not want his name to appear as the translator.
14. Tolstoy, "Разговор о науке."
15. Chekhov to A. S. Suvorin, 27 March 1894. *Переписка* 1: 248.
16. There were occasionally some breaks in Tolstoy's total abhorrence of urban products. In 1885, during an excursion to the Crimea, he visited a glass factory and iron foundry belonging to a rich tycoon named S. I. Mal'tsov. He was appropriately horrified by the child labor in the glass factory—twelve-year-old girls working twelve-hour shifts—but of the iron foundry he wrote that it was "terrible and *very necessary* (*необходимейшая*)." Tolstoy to S. A. Tolstaia, 9 March 1885. *PSS* 83: 490. *My italics*.
17. "Прогресс в мире животных и растений" (1864).
18. "«Три смерти»" (1859; "Промахи незрелой мысли" (1864)).
19. "Теория происхождения видов в царстве животных" (1864).
20. These are well studied in A. B. Georgievskii; S. R. Mikulinskii and Iu. I. Polianskii; Kline; a series of articles by James Allen Rogers; Alexander Vucinich, "Russia: Biological Sciences" and *Darwin in Russian Thought*; and Todes.
21. "Книга Дарвина, ее критики и комментаторы" (1864).
22. *Краткий очерк теории Дарвина*.
23. *О методе естественных наук и значении их в общем образовании* (1865).
24. *Мир как целое*.
25. *Критические статьи*, 2: 391.
26. Royer, *Théorie*.
27. In the title to the book by Demars, *Clémence Royer l'intrépide*.
28. Darwin himself was rather amused by this preface. In June 1862 he wrote to his American friend Asa Gray, "I received 2 or 3 days ago a French Translation of the Origin by a Mlle. Royer, who must be one of the cleverest and oddest women in Europe: is ardent Deist & hates Christianity & declares that natural selection and the struggle for life will explain all morality, nature of man, politicks, &c., &c.!!! She makes some very curious & good hits, & says she shall publish a book on these subjects, & a strange production it will be." Darwin, *Correspondence*, 10: 241.
29. I cite in my translation the original 1862 preface as reprinted in Dorothée, 403. In the 1866 and 1870 editions Royer made changes in the original preface as well as adding new prefaces.
30. *Критические статьи*, 2: 393.
31. "Переворот в науке."
32. *Россия и Европа* (1869-70). On Danilevskii see MacMaster.
33. Donskov, 1: 19.
34. "О развитии организмов." This article unfortunately proved inaccessible to me. The editors of the Jubilee edition (*PSS* 62: 66) tell us only that it "criticizes Darwin from idealist positions."
35. Tolstoy to Strakhov, 13 February 1874. Donskov 1: 151.

36. This conversation is very similar to the one in the fragment “Разговор о науке.” See note 14 above.

37. My friend Brett Cooke has kindly called my attention to two additional passages in *Anna Karenina* containing echoes of Darwinism. As early as One: iii, as part of an enumeration of Stiva Oblonsky’s fashionable views, he jokes about people who take excessive pride in their aristocratic ancestry, saying that they should not stop with Riurik, but go back to our true forefather, the monkey. And at the very end of the novel, in Konstantin Levin’s anguished effort to find meaning in his life, he seems to be troubled by Darwinian thoughts: “In all of us, along with the aspens, and the clouds, and spots of fog, development is going on. Development out of what and to what? Endless development and struggle?...As if there could be any development and struggle in infinity!”

38. Cited from Todes, 162 and 208.

39. Darwin, *Origin*, 310. “As man is a social animal, it is also probable that he would inherit a tendency to be faithful to his comrades, for this quality is common to most social animals. He would in like manner possess some capacity for self-command, and perhaps obedience to the leader of his community. He would from an inherited tendency still be willing to defend, in concert with others, his fellow-man and would be ready to aid them in any way which did not too greatly interfere with his own welfare or his own strong desires.”

40. “О значении христианской религии,” a title given by the editors to a series of disconnected notes probably written in 1875.

41. “Volume One” was issued in two voluminous “parts” in 1885. “Volume Two,” consisting of one additional chapter culled by Strakhov from Danilevskii’s papers and a long article by Strakhov himself, did not appear until 1889.

42. In March of that year Tolstoy had become personally acquainted with Danilevskii, visiting him at his Crimean estate, Mshatka. Gusev, *Материалы с 1881 по 1885 год*, 396-97.

43. An excellent and full account can be found in Vucinich, *Darwin in Russian Thought*.

44. “Полное опровержение дарвинизма” (1887).

45. “Отвергнут ли дарвинизм?” (1887).

46. “Всегдашняя ошибка дарвинистов” (1887).

47. “Н. Я. Данилевский.”

48. “А. С. Фаминцын.”

49. “Странный образчик” and “Бессильная злоба антидарвиниста” (1889).

50. “Спор из-за книг” (1889).

51. Strakhov to Tolstoy, 13 April 1889. Donskov 2: 785.

52. Strakhov to Tolstoy, 18 May 1889. Donskov, 2: 789.

53. Strakhov to Tolstoy, 25 April 1887. Donskov 2: 737.

54. Tolstoy to Strakhov, 23/24 January 1888. Donskov 2: 767.

55. Ivakin, 59.

56. Tolstoy to Strakhov, 21 April 1889. Donskov 2: 788.

57. Strakhov to Tolstoy, 18 May 1889. Donskov 2: 789.

58. Diary entry of 20 August 1890. PSS 51: 79.

59. “Происхождение теории” (1888).

60. Todes’s informative book is centrally devoted to this topic, the Russian effort to embrace their Darwin without the contamination of Malthus.

61. The response time was unusually fast. Huxley’s essay was first delivered as the Romanes Lecture at Oxford on 18 May 1893 and published as a pamphlet immediately after delivery. The alert Timiriazev obtained a copy at once, had it translated into Russian, and published it with his notes in *Русская мысль*, No. 9 (1893).

62. Tolstoy to Strakhov, 25 September 1893. Donskov 2: 931.

63. “Религия и нравственность.” In October Strakhov did send Tolstoy the English text of “Evolution and Ethics” (Strakhov to Tolstoy, 20 October 1893; Donskov 2, 933), but Tolstoy had already finished his article; he sent it to von Gizycki on 4 October. It was translated into German and appeared in four numbers of *Für Etische Kultur* (December 1893-January 1894) and as a separate brochure (Berlin, 1894). In Russia it was drastically mutilated by the censors and appeared in *Северный Вестник* (no. 1, 1894) under the title

“Противоречия эмпирической нравственности.” I draw these details from V. S. Mishin’s commentary in *PSS* 39: 225-29 and from L. D. Opol’skaia, 64-65.

64. I cite the edition edited, with excellent accompanying essays, by James Paradis and George C. Williams, 138.

65. Tolstoy inserts the English word here.

66. “О Шекспире и о драме” (1903-04)

67. “О «Вехах»” (1909). *PSS* 38: 290. Ernst Heinrich Haeckel (1834-1919) was a distinguished German biologist, an early follower of Darwin. Richard Avenarius (1843-96) was a German philosopher and positivist, originator of “empiriocriticism.”

68. Tolstoy to S. L. Tolstoy and T. L. Sukhotina, 1 November 1910. *PSS* 82: 222-23. The letter was dictated to Aleksandra Tolstaia and signed by Tolstoy “in weakened handwriting.” Later Sergei Tolstoy wrote: “Father attributed to me views of Darwinism, evolution and the struggle for existence, recalling the distant past—my conversations and arguments with him in my student days. In 1910, when I was already 47 years old, my views had greatly changed. They were little known to him, because to avoid arguments I rarely spoke with him about matters of principle.” S. L. Tolstoy, 259.

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