Between Darwin and Dostoevsky: The Syntheses of Theodosius Dobzhansky

Christopher Howell

Abstract: Theodosius Dobzhansky was one of the foremost evolutionary biologists of the twentieth century who spent a great deal of time pondering, studying, and writing about religion. A confessed Eastern Orthodox Christian, though one with an idiosyncratic take on the faith, Dobzhansky was interested in harmonising the different elements of his life—religious background, scientific knowledge, and political beliefs. Throughout his oeuvre, he made various attempts to do this, and his legacy therefore amounts to a great synthesis. His greatest scientific achievement is the fusion of genetics and natural selection, which constitutes the groundwork for modern evolutionary biology. He also worked to synthesise democratic politics with Christian ethics, and religion with science. Dobzhansky was worried that science could not provide a basis for morality, and believed that Dostoevsky definitively proved this. Accordingly, he undertook not only to make sense of his own life and beliefs, but to protect and secure science, religion, morality, and democracy as parts of a cohesive whole.[1]

Keywords: Theodosius Dobzhansky; evolution; Eastern Orthodoxy; religion; science

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Christopher Howell is an adjunct assistant professor of religious studies at Elon University. He holds a PhD in Religion from Duke University and a Masters in Theological Studies from Duke Divinity School.

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That one of the most important evolutionary scientists of the twentieth century was a confessed Orthodox Christian is an oft-overlooked and tantalising fact. Theodosius Dobzhansky (1900–1975), whose contribution to evolution and genetics was immense, remains an enigmatic figure in the history of science and religion. Philosophical questions of ethics, politics, and religion occupied him throughout his life, but his idiosyncratic religious ideas have not usually been probed as much as his scientific contributions.[2] This is understandable, of course, as there is no doubt that his legacy in the sciences is as secure as his legacy in religion is obscure. Nevertheless, it is worth analysing his scientific and religious beliefs alongside each other and in depth, as they most certainly influenced each other. As Jitse M. van der Meer argues, Dobzhansky was driven by a desire to harmonise Darwin with his Eastern Orthodox background—this quest implicitly drove his scientific research program.[3]

When studying Dobzhansky's thought in detail, it becomes clear that the quest for *synthesis* was the dominant intellectual thrust behind his philosophical excursions. He hoped to find ways to integrate his scientific knowledge with his religious life, to bridge what has so often been torn asunder. As he wrote towards the end of his life, the Delphic command to "know thyself" extends beyond science, but science must be included. "This adds up to something pretty simple," he observed, "a coherent credo can neither be derived from science nor arrived at without science."[4] Dobzhansky came to evolution through philosophical interest, as Garland Allen notes, and so it is not surprising he maintained

2 There are a few noteworthy exceptions. Michael Ruse addresses Dobzhansky's religion and philosophy in-depth in his chapter "Dobzhansky and the Problem of Progress" in the volume *The Evolution of Theodosius Dobzhansky*, ed. Mark Adams (Princeton, NJ: Princeton University Press, 1994), 233–245. Jitse M. van der Meer cites Ruse as the main scholar who engaged in such analysis, other than van der Meer's own work on the subject. See Jitse M. van der Meer, "Theodosius Dobzhansky: Nothing in Evolution Makes Sense Except in the Light of Religion," in *Eminent Lives in Twentieth-Century Science and Religion*, ed. Nicolaas Rupke (Bern: Peter Lang, 2009), 105–127.

3 Van der Meer, "Theodosius Dobzhansky," 113–116.

4 Theodosius Dobzhansky, *The Biology of Ultimate Concern* (New York: The New American Library, 1967), 9.

an interest in philosophy and religion throughout his life.[5] Charles E. Taylor relates that Charles Birch, who wrote on philosophy despite being a scientist, decidedly influenced him; it is Birch who inspired Dobzhansky to do the same.[6] To build a holistic worldview where science, religion, and philosophy hold together, Dobzhansky embarked upon a lifelong journey. This drive was about more than his personal interest, however, as he was concerned that a purely scientific picture of reality might not be able to account for ethical principles like human equality, which he viewed as the basis for democracy.

In this paper, I will consider three of Dobzhansky's syntheses. In his desire to heal fractures in human knowledge and experience, he bequeathed three important attempts—to synthesise natural selection and genetics, democracy and ethics, and religion and science. The first is what brought Dobzhansky his fame. This "modern synthesis" is well known, and therefore much of the material discussed here is established already in the secondary literature. Consequently, this portion will be something of an overview of scholarship. However, little attention has been given to Dobzhansky's political views, while a little more (but still not enough) has been said about his religious beliefs. In addition, how the latter vouchsafed the former remains a poorly researched topic. The second and third parts of this paper will focus on these elements and put his neglected philosophical books, now out of print, in conversation with his science. I will attempt to prove that the synthetic approach that defined his science—for which he was famous—extended into politics and religion as well. Dobzhansky spent considerable intellectual energy bridging the gaps between these areas of human experience and tying them together into a holistic framework. His legacy, then, is that of a great synthesiser.

5 Garland E. Allen, "Theodosius Dobzhansky, the Morgan Lab, and the Breakdown of the Naturalist/Experimentalist Dichotomy, 1927-1947" in *The Evolution of Theodosius Dobzhansky*, 94.

6 Charles E. Taylor, "Dobzhansky, Artificial Life, and the 'Larger Questions' of Evolution," in *The Evolution of Theodosius Dobzhansky*, 165–166.

Dobzhansky's Life and Background

The unusual name of the Ukrainian-born Theodosius Dobzhansky was consequence of his mother's prayers. As recounted by his daughter Sophia, "My father's parents were childless for quite a while after their marriage and tried to remedy their condition by prayer and pilgrimage." Their prayerful journey took the couple to the shrine of St Theodosius of Chernigov, and when they found themselves with child, they christened him with the saint's name. Dobzhansky was thus enmeshed in Orthodox religious culture from his birth—though, interestingly, many of his paternal ancestors were Polish Catholics who converted to Orthodoxy in the late nineteenth century. On his mother's side, Dobzhansky was descended from a long line of priests, and his affinity for Dostoevsky was as much genetic as aesthetic, for he proudly numbered the great novelist among his maternal ancestors as well.[7]

When he was young and Russia was in the throes of revolution, Dobzhansky felt the "urgency of finding a meaning of life . . . in the bloody tumult." But he was stuck between two poles that drew him equally: religion and science. He loved Darwin and he loved Dostoevsky. "The intellectual stimulation derived from the works of Darwin and other evolutionists was pitted against that arising from reading Dostoevsky," he wrote towards the end of his life.[8] Resolving this tension—which partly stands for the broader tension between his scientific interests and his religious background—became one of the driving forces of his career. When looked at more deeply, though, there was one particular struggle that occupied him. Darwin had unlocked the key to evolution, but Dobzhansky believed that Darwin—and scientific worldviews based on his thought—provided no real basis for ethics, especially the ethics of human equality. Furthermore, he felt that Dostoevsky had articulated the terrible truth of scientific atheism: that it has no ethics at all. He sought to find a way through this maze and preserve both science and religion in order to secure morality in both the personal and

7 Sophia Dobzhansky Coe, "Theodosius Dobzhansky: A Family Story," in *The Evolution of Theodosius Dobzhansky*, 13–14.

8 Dobzhansky, *Ultimate Concern*, 1.

political realms. In the coming decades, after he fled to America and became a "nonperson" in the USSR, Dobzhansky would emerge as one of the greatest biologists of the twentieth century. The search for union between the disparate spheres of his life continued to be dominant in all of his writing, however, not just his scientific research.

In America, his home from 1927 onwards, Dobzhansky's eccentricity made him memorable. Colleagues marvelled at his facility with languages (writing in fluent English despite only learning it as an adult) and were amused by his "extraordinary accent . . . high and staccato."[9] A scientist who joined him on one of his last field trips described him as "passionate and ready to take offence, but with a deep interest in the arts," and compared him to Vladimir Nabokov's unforgettable Timofey Pnin. This was a fitting comparison, as Nabokov followed Dobzhansky's scientific work with interest and the two corresponded in 1954.[10] In true Pninian fashion, Dobzhansky endured a "series of tragicomic rows with colleagues and officials that end[ed] up with his exile from New York and a forced move to the far west."[11] It was in California that Dobzhansky found a home and contributed his greatest scientific achievements—in between his favourite hobbies of mountain climbing in the Sierras and horseback riding in Pasadena.

The Modern Synthesis: Dobzhansky's Scientific Legacy

After shattering his knee in a horseback riding accident, Dobzhansky was bedridden and, in his own retelling, used the time to produce his most significant work: *Genetics and the Origin of Species* (1937).[12] This

9 E. B. Ford, "Theodosius Grigorievich Dobzhansky: 25 January 1900 – 18 December 1975," *Biographical Memoirs of Fellows of the Royal Society* 23 (1977): 60.

10 David M. Bethea, "Evolutionary Biology and 'Writing the Diaspora': The Cases of Theodosius Dobzhansky and Vladimir Nabokov," in *Redefining Russian Literary Diaspora* (1920–2020), ed. Maria Rubins (London: UCL Press, 2021), 144.

11 Steve Jones, "The day I went on a field trip with Theodosius Dobzhansky," *The Guardian*, 20 March 2016, https://www.theguardian.com/lifeandstyle/2016/mar/20/a-field-trip-with-theodosius-dobzhansky-steve-jones-genetics-biology.

12 William Provine was a little suspicious of Dobzhansky's memory, but nevertheless included his testimony of the events in a chapter on the man. See William B. Provine, "The Origin of Dobzhansky's *Genetics and the Origin of*

book proved pivotal for "the modern synthesis" of evolution, though its significance is lost now in the eighty-plus years since, when Darwinism went from being moribund to triumphant (in no small part due to Dobzhansky).

In the early twentieth century, evolutionary biology was in crisis, as the new science of genetics seemed to be incompatible with evolution by natural selection, Darwin's main contribution. Darwin did not know by what mechanisms heredity was transmitted, and he died before Gregor Mendel's pea plant experiments were rediscovered in 1900. But genetics was not easily integrated with evolution, at least not at first. William Bateson, who coined the word "gene" and popularised Gregor Mendel's ideas, doubted the harmony between genetics and the gradualism of natural selection. The famed geneticist Thomas Hunt Morgan likewise harboured some scepticism about Darwin's main theory, though he softened on this while Dobzhansky was a postdoctoral researcher at his Columbia University laboratory.[13] This period has come to be known as the "eclipse of Darwinism," in Julian Huxley's phrase. Darwin's theory of natural selection was diminishing, with many scientists preferring rival neo-Lamarckian theories such as orthogenesis.

Darwin was down, but not out. J. B. S. Haldane, R. A. Fisher, and Sewall Wright would construct the mathematical theory of population genetics, and Dobzhansky's *Genetics and the Origin of Species,* along with the work of Ernst Mayr and G. Ledyard Stebbins, would help build the edifice for the modern synthesis: the long-awaited marriage of natural selection and genetics. As Julian Huxley wrote, "The death of Darwinism has been proclaimed not only from the pulpit, but from the biological laboratory; but, as in the case of Mark Twain, the reports seem to have been greatly exaggerated, since to-day Darwinism is very much alive."[14]

Species," in *The Evolution of Theodosius Dobzhansky*, 99–114.

13 Allen, "The Morgan Lab," 88; Nicholas W. Gillem, "Evolution by Jumps: Francis Galton and William Bateson and the Mechanism of Evolutionary Change," *Genetics* 159:4 (2001): 1383–1392.

14 Julian Huxley, *Evolution: The Modern Synthesis*, Definitive Edition (Cambridge, MA: MIT Press, 2010), 22.

In all this, Dobzhansky played the role of the synthesiser, translating the difficult mathematics of population genetics into readable language. As Peter Bowler writes, Dobzhansky "pointed the way toward a complete synthesis by presenting the mathematician's conclusions in a form [other scientists] could understand and use."[15] Dobzhansky's student Bruce Wallace agrees, writing, "It brought sense and logic to an otherwise completely muddled branch of biology."[16] It is hard now to even speak of evolutionary biology without using Dobzhansky's language. He brought into English the terms microevolution, macroevolution, gene pool, coadaptation, and homeostasis.[17] He helped develop the biological species concept.[18] Beyond that, in harmonising natural selection and genetics—which is an epochal achievement on its own—Dobzhansky concurrently helped merge the disparate scientific practices of naturalist fieldwork and experimental laboratory work. According to Garland Allen, in addition to genetics, "the more general fusion of the laboratory and field naturalist traditions . . . remains among the deepest and most lasting aspects of Dobzhansky's legacy."[19] Scientific legacies are difficult, as works fall out of fashion in their respective fields quickly, but Dobzhansky's influence is clear. He even received the highest praise the ornery J. B. S. Haldane could give: Dobzhansky was good enough reason, and maybe the only reason, to visit America.[20]

A historical and biographical question is, then, why was it Dobzhansky that spearheaded this synthesis? Until recently, writing on Dobzhansky and his work tended to depict him as an American,

15 Peter J. Bowler, *Evolution: The History of an Idea* (Berkeley, CA: University of California Press, 2009), 336.

16 Bruce Wallace, "The Legacies of Theodosius Dobzhansky," in *Genetics of Natural Populations: The Continuing Importance of Theodosius Dobzhansky*, ed. Louis Levine (New York: Columbia University Press, 1995), 44.

17 Mark B. Adams, "Introduction: Theodosius Dobzhansky in Russia and America," in *The Evolution of Theodosius Dobzhansky*, 3; Wallace, "The Legacies of Theodosius Dobzhansky," 44.

18 Nikolai L. Krementsov, "Dobzhansky and Russian Entomology: The Origin of His Ideas on Species and Speciation," in *The Evolution of Theodosius Dobzhansky*, 31.

19 Allen, "The Morgan Lab," 87.

20 Costas B. Krimbas, "Resistance and Acceptance: Tracing Dobzhansky's Influence," in *Genetics of Natural Populations*, 23.

but, though he became a US citizen, to understand him one needs to *synthesise* both the Russian and the American aspects of his thought. This includes not only the Russian scientific tradition, such as Dobzhansky's debt to Yuri Filipchenko and Sergei Chertverikov, but also the philosophical and religious traditions.[21] Dostoevsky and Tolstoy are important, but so, too, is Vladimir Solovyov. Solovyov mediated much of Darwin's thought into Russia, where non-Darwinian evolution was less popular than in America. It is he who impressed on Dobzhansky the importance of progress and development in evolutionary history, a conviction that assisted him in sorting out the tangled relationship between natural selection and genetics. This led him, furthermore, to see evolution by natural selection as directional even though not "directed" (contrary to orthogenesis, which he viewed as deterministic).[22]

As Michael Ruse contends, it was Dobzhansky's religious views—influenced by Solovyov and others—that informed his scientific ones, such as his faith in developmental progress and his hostility to determinism.[23] Dobzhansky was vexed by the problem of evil, which might explain his affinity for Dostoevsky, and he believed Darwinian evolution allowed for free will, which would rescue the Creator from responsibility for extinctions. Wrote Dobzhansky, "predetermined [evolution] collides head-on with the ineluctable fact of the existence of evil . . . the evolution of the universe must be conceived as having been in some sense a struggle for a gradual emergence of freedom." Darwin's theory meant that "the history of the living world has not been wasted."[24]

As Bowler speculates, Dobzhansky's fervour in defending a high anthropology and free will likely stemmed from his Orthodox roots.[25] But they were more than merely roots. While Dobzhansky's religious views were eccentric, they were real. Van der Meer chronicles that he tried to pray every morning and used Dostoevsky to bring his colleagues

21 Richard M. Burian, "Dobzhansky on Evolutionary Dynamics: Some Questions about His Russian Background," in *The Evolution of Theodosius Dobzhansky*, 138.
22 Van der Meer, "Theodosius Dobzhansky," 112.
23 Ruse, "Dobzhansky and the Problem of Progress," 239–240.
24 Dobzhansky, *Ultimate Concern*, 25, 120.
25 Bowler, *Evolution*, 345.

closer to God.[26] In turn, Costas Krimbas recalls that Dobzhansky insisted on making a pilgrimage to Mt Athos in order to take communion, but was evasive about why. He said it reminded him of childhood, but Krimbas surmised this was not the real reason.[27]

Even though Dobzhansky's religious beliefs informed his science, they did not stay restricted to it. Rather, they would drive other attempts at synthesis—attempts to preserve democracy and to search for common grounds between religion and science.

Freedom and Equality: Dobzhansky's Political Views

It is in Dobzhansky's writing on ethics that Dostoevsky's influence, and the importance of religion to society, is most apparent. Freedom mattered to him. He was interested in articulating a scientific worldview where Darwin buttressed free will, and he felt Dostoevsky helped answer the problem of evil. At this juncture, Dobzhansky offered an early version of the "free process defence" to natural evil that anticipates John Polkinghorne's.[28] But he was also interested in protecting political freedom, both from totalitarianism and from hereditary aristocracy. His second synthesis amounted, then, to merging democracy with science and Christian ethics, to defend all three from conservative critics, whether of the religious, social, or economic bent. A hierarchical, aristocratic, class-based society was, in Dobzhansky's view, a defence mechanism designed to allay the fears of the wealthy when confronted with Jesus' harder sayings. "Christ's parable of the camel passing through the eye of a needle is too explicit to be easily interpreted away," he wrote. And he continued:

> To assuage their consciences, the Creator is blamed for having made some people nobles and others commoners, some wise

26 Van der Meer, "Theodosius Dobzhansky," 111.
27 Costas B. Krimbas, "The Evolutionary Worldview of Theodosius Dobzhansky," in *The Evolution of Theodosius Dobzhansky*, 188.
28 Van der Meer, "Theodosius Dobzhansky," 108; John Polkinghorne, *Belief in God in an Age of Science* (New Haven, CT: Yale University Press, 2003), 14.

> and others improvident, some talented and others incompetent. Different people are thus born to occupy different stations in life. Such, allegedly, is God's will, and to go against it is sin.[29]

"Don't blame us," one can imagine the rich and the powerful saying, "it's God's fault for endowing us with superior genes." Wealth, power, influence, and so on, are simply inevitable under such circumstances, and no amount of political equality would change it.

Such hereditarians, observed Dobzhansky, were often political conservatives who believed "genetic conditioning of human capacities would justify the setting up of rigid class barriers and a hierarchical organisation of the society."[30] However, he argued, this was a misunderstanding of genetics and reflected a poor knowledge of inheritance. There is, he argued, no one-to-one relationship between genotype and phenotype, there is no "gene for" intelligence or any particular skill. Rather, genes allow for a "norm-of-reaction"—a pattern of phenotypic expression that flows from the genotype, but which can result in highly variable developments in each person as they grow, develop, and evolve. "A newborn infant is not a blank page," he wrote, "however, his genes do not seal his fate." The environment plays a crucial role.[31] Freud might have proclaimed that "biology is destiny," but Dobzhansky rejected this notion. "Heredity . . . is destiny," he argued, "largely in proportion to our biological ignorance."[32]

Ironically, Dobzhansky argued, a rigid, caste-based society premised on stasis and a lack of change for the moneyed aristocracy would induce a great deal of genetic diversification at the top. Those with "superior" genes would easily beget offspring rather less like the *Übermensch* than they are wont to claim. In an ossified, isolated system, where natural selection could not operate, stagnation and devolu-

29 Theodosius Dobzhansky, *Mankind Evolving: The Evolution of the Human Species* (New Haven, CT: Yale University Press, 1962), 52.
30 Dobzhansky, *Mankind Evolving*, 247–248.
31 Dobzhansky, *Mankind Evolving*, 76.
32 Quoted in Diane B. Paul, "Dobzhansky in the 'Nature-Nurture' Debate," in *The Evolution of Theodosius Dobzhansky*, 223.

tion would be the name of the game. This was obvious to anyone who encountered the luxuriant upper class "snobs," self-styled elites, who were certainly "better endowed financially than genetically."[33] Dobzhansky was likewise contemptuous of any suggestions that there must be a social aristocracy of elite minds who stewarded culture and safeguarded it from the unwashed hordes. He singled out T. S. Eliot for criticism. "I, for one," he wrote, "do not lament the passing of social organizations that used the many as a manured soil in which to grow a few graceful flowers of refined culture."[34]

The solution to this was equality and its political expression, democracy. Inequality of opportunity prevents genetic change and allows for those ensconced at the top to maintain their wealth and status.[35] Equality, on the other hand, reduces "genetic wastage" and creates a more diverse society, beneficial to the entire species.[36] A static, changeless society—a non-democratic one—would in essence be conservative and unscientific. No wonder Dobzhansky highlighted that "the foundation of all conservatisms was undermined by the flood of scientific discovery."[37] In exchange, conservative hierarchical worldviews would naturally lead "to the frightful doctrines of Dostoevsky's Grand Inquisitor."[38]

In the end, Dobzhansky was a liberal with a tilt towards social democracy and a deep revulsion towards totalitarianism and hereditary authority. Despite the focus on democracy, however, he was suspicious of communism, which he termed a "Christian heresy." That he referred to famous communist works as "Marxist Scriptures" indicates that he viewed communism as a substitute religion.[39]

While he placed a high emphasis on human equality, Dobzhansky felt that it was an ethical precept and not one that could be reduced to a scientific postulate. This existentialist take on human dignity was likely influenced by his reading of Dostoevsky, and especially *The Broth-*

33 Dobzhansky, *Mankind Evolving*, 334.
34 Dobzhansky, *Mankind Evolving*, 325.
35 Dobzhansky, *Mankind Evolving*, 248.
36 Dobzhansky, *Mankind Evolving*, 324–325.
37 Dobzhansky, *Ultimate Concern*, 113.
38 Dobzhansky, *Ultimate Concern*, 106.
39 Dobzhansky, *Ultimate Concern*, 99; *Mankind Evolving*, 19.

ers Karamazov. "People do not need to be biologically (genotypically or phenotypically) alike to be equal before God," he argued.[40] Equality is, in essence, a Christian theological concept.[41] It is a good in and of itself, not because it may or may not be scientifically provable; good and evil, after all, are concepts beyond the capacity of science to articulate. Julian Huxley and C. H. Waddington may have laboured mightily to find an ethics based on evolution, but they failed. "The force of these strictures has never been overcome," contended Dobzhansky. Evolution by natural selection could, at most, "explain how we develop our belief that certain things are good and others evil; it does not explain why we *ought* to regard them good and evil."[42] In the end, no one could answer the Karamazovs. As Dmitri Karamazov summarises, "But what will become of people then . . . without God and immortal life? All things are permitted then, they can do what they like?" The existentialists were right. Years later, Sartre famously captured the moral consequences of this belief: "Nor, on the other hand, if God does not exist, are we provided with any values or commands that could legitimise our behaviour. Thus we have neither behind us nor before us in a luminous realm of values any means of justification or excuse.—We are left alone, without excuse."[43]

But Dobzhansky couldn't leave it at that—his moral intuition was too strong. "Evil is," he wrote, "very real. Not only real but also unredeemable."[44] The reality of good and evil could not be explained scientifically because there is no gene for ethics. And ethics is needed because it presupposes the freedom necessary to safeguard democracy. "Attempts to discover a biological basis of ethics suffer from mechanistic oversimplification," he contended.[45] In turn, the knowledge of

40 Dobzhansky, *Mankind Evolving*, 52.
41 Dobzhansky, *Mankind Evolving*, 219.
42 Dobzhansky, *Mankind Evolving*, 343.
43 Jean-Paul Sartre, "Existentialism is a Humanism," in *Existentialism from Dostoevsky to Sartre*, ed. Walter Kaufmann (New York: Penguin, 1975), 353.
44 Dobzhansky, *Ultimate Concern*, 101.
45 Theodosius Dobzhansky, *The Biological Basis of Human Freedom* (New York: Columbia University Press, 1956), 131.

good and evil was given by revelation,[46] and we must remember that "the highest wisdom of all was at one time entrusted to a group of unlettered Galilean fishermen."[47]

All this points to Dobzhansky's hope to vouchsafe human equality, political freedom, and a society of open movement by grounding democracy in science and supporting it with Christian ethical concepts. Such was the second of his three syntheses. These multiple strands often seemed in tension, especially to his scientific colleagues, most of whom did not share his sympathy for religion. His first two syntheses, focusing on science and politics, were in fact conflicting: Darwin's world could not provide an answer to Dostoevsky's ethical challenge regarding a modern egalitarian society.

But could religion persist in a world of science? Dobzhansky believed there was difficulty in establishing a moral basis for human equality and democratic politics without religion. Accordingly, he hoped to achieve a third synthesis, one which would encapsulate, explain, and defend the other two: a harmony between science and religion.

Hope and the Ultimate Synthesis: Dobzhansky on Religion

Dobzhansky's religious views were idiosyncratic and highly personal. Charles E. Taylor lumps him in with "Russian Romanticism" and, while he considers his ideas interesting, nevertheless dismisses them as "outside analysis by reason."[48] Such a reductionist perspective need not prevent a deeper analysis of Dobzhansky's worldview, however. He considered himself Orthodox and so should be investigated with that kept perpetually in mind. Nevertheless, it must be admitted that the extent to which he held to specific Orthodox doctrines is unclear. Although he was open about his sympathy for religion and his interest in philosophy, he kept much to himself, praying in a language his colleagues could not understand. This has made his beliefs hard to parse.

46 Van der Meer, "Theodosius Dobzhansky," 111.
47 Dobzhansky, *Mankind Evolving*, 345.
48 Taylor, "Dobzhansky," 168

Ernst Mayr remarked that Dobzhansky believed in a personal God, and that "he would work as a scientist all week and then on Sunday get down on his knees and pray to God." However, Francisco Ayala, present with Dobzhansky when he died, maintained that he did not.[49] For his own part, Dobzhansky at times softened traditional dogmas, but he also wrote in *The Biology of Ultimate Concern* that it was "no use" to pray to a "deistic clockmaker God."[50] Yet Dobzhansky prayed often. How does one sort this out?

Belief is only one part of religious life. While Dobzhansky's beliefs were sometimes inscrutable, his practice was more overt. In his excellent essay on Dobzhansky's religion, van der Meer observes the way he was influenced by Solovyov but also includes a deep dive into Dobzhansky's diaries and journals to show that religion was a preoccupation throughout his life, not just as he approached death, as was sometimes thought. Dobzhansky did go to confession, although he did not appear to regard sin as significant as his colleagues would have expected—influenced as they were, even if they rejected it, by a more Protestant emphasis on depravity. As a consequence, he did not believe sin made it impossible to do good, maintaining his defence of human agency and freedom in the face of determinism (either scientific or theological). In fact, as van der Meer shows, the entries of Dobzhansky's diary were saturated with religion. He often began and ended with glorifications of God. He was bothered by the lack of religious education in America, writing that "the trouble is that they do not have moral and religious schooling, and that they grow up to be egoists and self-centered and freethinkers." He was disappointed with American Easter, penning a 1927 entry in his diary that could contend for the most Orthodox sentence ever constructed: "Easter is not interesting here; they buy special lilies or in general flowers and that is all. There is not even gourmet food, perhaps only two chocolate eggs. It has no

49 Michael Shermer and Frank J. Sulloway, "The Grand Old Man of Evolution: An Interview with the Evolutionary Biologist Ernst Mayr," *Skeptic* 8:1 (2000): 82; Francisco Ayala, "Theodosius Dobzhansky: January 25, 1900–December 18, 1975," *Biographical Memoirs of the National Academy of the Sciences* 55 (1985): 179.

50 Dobzhansky, *Ultimate Concern*, 98.

meaning."[51] Michael Ruse, likewise, contends that Dobzhansky's faith in God and hope for salvation was "nigh overwhelming."[52]

Hope was at the centre of Dobzhansky's religious worldview, and both Christianity and evolution offered it to him. Because evolution by natural selection allowed for a developmental process in history, and therefore made room for human freedom, it offered hope. As Dobzhansky stated in *Mankind Evolving*, the idea that humanity is not evolved but is, rather, evolving (much as, in Orthodox thought, humanity is not "once saved, always saved," but is, rather, always being saved), means humanity "is not the center of the universe physically, but . . . may be the spiritual center."[53] Darwin helped heal the "wound inflicted by Copernicus and Galileo." A developmental view of salvation and history could thus be merged between Christianity and science.[54] "If there is no evolution, then all is futility," he wrote in *Genetic Diversity and Human Equality*, but "if the world evolves, then hope is possible."[55] Evolution provides hope that, "while the universe is surely not geocentric, it may conceivably be anthropocentric."[56] A fluid world is a redeemable world, one that may be on the way to deification.[57] Humanity, after all, is "not a passive witness but a participant in the evolutionary process."[58]

But Dobzhansky needed more. He desired a synthesis, and this explains his turn to Pierre Teilhard de Chardin, for whose work Dobzhansky evinced genuine enthusiasm, even as most scientists followed Peter Medawar's scathing review and dismissed Teilhard's *The Phenomenon of Man* out of hand (Medawar termed it "anti-scientific," "unintelligible," and reading it occasioned "real distress, even . . . despair").[59] Nevertheless, Dobzhansky was a devoted proponent, to the point that he became president of the Teilhard Association in 1969.

51 Van der Meer, "Theodosius Dobzhansky," 105–112.
52 Ruse, "The Problem of Progress," 240.
53 Dobzhansky, *Mankind Evolving*, 346.
54 Dobzhansky, *Mankind Evolving*, 346.
55 Theodosius Dobzhansky, *Genetic Diversity and Human Equality* (New York: Basic Books, 1973), 113.
56 Dobzhansky, *Mankind Evolving*, 7.
57 Van der Meer, "Theodosius Dobzhansky," 108.
58 Dobzhansky, *Ultimate Concern*, 137.
59 Peter Medawar, "Critical Notice," *Mind* 70:277 (January 1961): 99–106.

Teilhard's thinking offered Dobzhansky the framework of a synthesis. In *Mankind Evolving*, Dobzhansky wrote that humanity needed a faith, a hope—"nothing less than a religious synthesis . . . grounded in one of the world's great religions, or in all of them together."[60] He was attracted to Teilhard's developmental and progressive view of history, praising him as "the evolutionist who had the courage to predict future transcendences, mankind moving toward what he called the megasynthesis and toward Point Omega, this last being a symbol for God."[61] Dobzhansky maintained that Christianity was "basically evolutionistic," and necessitated a progressive, linear history rather than a cyclical one ("Creation, through Redemption, to the City of God").[62] Augustine, he argued, "expressed this evolutionistic philosophy most clearly."[63] Cyclical views of history were, in Dostoevsky's words, a "devil's vaudeville," but Christianity's affirmation of time and history meant it could harmonise with evolution.[64] Both Christianity and evolution showed that creation "is an ongoing process, not an event of a distant past." Teilhard pointed to a possible way this synthetic evolution might happen, and Dobzhansky tried to rescue him on orthogenesis, arguing that Teilhard did not really believe in that form of evolution, as his critics maintained.[65]

Naturally, traditionalist critics have not taken too kindly to Dobzhansky's views. Seraphim Rose, in his posthumous *Genesis, Creation, and Early Man*, attacked Dobzhansky not only for his beliefs, but also his practice. He condemned him for not often going to church, and for cremating his wife's body and scattering her ashes in the Sierras. Rose noted with alarm that Dobzhansky gave the commencement address at St Vladimir's Seminary in 1972, and that the seminary had conferred upon him an honorary doctorate. Rose stated Dobzhansky's beliefs were "the usually liberal Christian ideas that Genesis is symbolical" and that

60 Dobzhansky, *Mankind Evolving*, 109.
61 Dobzhansky, *Genetic Diversity and Human Equality*, 109.
62 Dobzhansky, *Mankind Evolving*, 112–113; *Ultimate Concern*, 112.
63 Dobzhansky, *Mankind Evolving*, 2.
64 Dobzhansky, *Genetic Diversity and Human Equality*, 111.
65 Dobzhansky, *Mankind Evolving*, 347.

humanity could "cooperate with the enterprise of creation."[66] Dobzhansky never corresponded with Rose, but he likely would have replied, as he stated in *The Biology of Ultimate Concern*, that the "Fathers of the Church did not always hold views which would at present be described as fundamentalist."[67] And perhaps he would have argued that Rose's scientific views were as modern as his were, as Rose's were derived almost entirely from the work of Henry Morris and the Protestant fundamentalist world of the Institute for Creation Research. Likely, though, he would not have given Rose much thought. Dobzhansky once tried to change the views of creationist Frank Lewis Marsh, only to eventually throw up his hands and admit defeat at the prospect of changing minds. Though Dobzhansky admitted some respect for Marsh's knowledge of contemporary science, he nevertheless described it later as a "futile and exasperating correspondence." "Discussions and debates with such persons," he wrote, "are a waste of time."[68]

Despite his frustrations with creationists, however, Dobzhansky adopted the label himself, perhaps in an attempt redeem it and wrest it away from antievolutionists. "I am a creationist *and* an evolutionist," he wrote (emphasis original). This is not a label most scientists would dare self-apply, but it is arguably his most synthetic statement, as he wrote in his most famous essay—"Nothing in Biology Makes Sense Except in the Light of Evolution"—a classic whose title mirrors its thesis.[69]

Throughout his life and work, Dobzhansky was the great synthesiser, one who sought to merge the various strands of his interests and life to combine natural selection and genetics, democracy with genetics and Christian ethics, and religion with science. He had saved Darwin, but he worried deeply about the questions Dostoevsky raised

66 Seraphim (Eugene) Rose, *Genesis, Creation, and Early Man: The Orthodox Christian Vision* (Platina, CA: St Herman of Alaska Brotherhood, 2011), 573–577.

67 Dobzhansky, *Ultimate Concern*, 112. He attributed this to his reading of Robert T. Francoeur's work *Perspectives in Evolution* (Baltimore, MD: Helicon, 1965).

68 Dobzhansky, *Ultimate Concern*, 96. For a history of this exchange, see Ronald L. Numbers, *The Creationists, Expanded Edition: From Scientific Creationism to Intelligent Design* (Cambridge, MA: Harvard University Press, 2006), 151–153.

69 Theodosius Dobzhansky, "Nothing in Biology Makes Sense Except in the Light of Evolution," *The American Biology Teacher* 35:2 (1973): 125–129.

regarding ethics and morality, and therefore sought to merge his scientific views with his religious ones in order to protect human dignity and equality. Whether or not he was successful is beyond the scope of this analysis, but his work is nevertheless to be admired for its earnestness and ambition. And it must be recalled that the man whom Stephen Jay Gould called "the greatest evolutionist of our century" was an Orthodox Christian, albeit of a rather peculiar style.[70]

In all these realms, it was synthesis that was Dobzhansky's greatest legacy. He worried in *Mankind Evolving*, along with Albert Schweitzer, that "our age has discovered how to divorce knowledge from thought," and he hoped to find ways to mend the breach, stating "attempts to synthesize knowledge are indispensable."[71] Fighting the balkanisation of education, the splitting of philosophy and science, and the hermetic sealing of spirituality from biology, Dobzhansky hoped to find the middle way. The clearest summation of these attempts might have come a mere two years before his death, when Dobzhansky wished to remind everyone that "Evolution is God's, or Nature's, method of Creation. Creation is not an event that happened in 4004 BC; it is a process that began some 10 billion years ago and is still under way."[72]

70 Stephen Jay Gould, "Darwinism Defined: The Difference Between Fact and Theory," *Discover* 8, no. 1 (1987): 65.

71 Dobzhansky, *Mankind Evolving*, xi

72 Dobzhansky, "Nothing in Biology Makes Sense Except in the Light of Evolution," 127.