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Item Type	Journal article
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DOI	<a href="http://dx.doi.org/10.1086/688415">http://dx.doi.org/10.1086/688415</a>
Download date	2024-10-03 13:19:38
Link to Item	<a href="http://hdl.handle.net/20.500.14018/12810">http://hdl.handle.net/20.500.14018/12810</a>

## Comment

# Science and Russian Orthodox Scholarship

Karl Hall and Dimitri Bayuk

**Abstract:** In Russia the theme of science and religion found its strongest resonance at the levels of humanistic scholarship and Christianity in general, where visions of harmony dominated and doctrinal and confessional particularity was largely absent. The fraught relations of both the Holy Synod and the Imperial Academy of Sciences with the Russian state since the early eighteenth century had the collateral consequence of minimal institutional contacts between theology and natural philosophy. Though “scientific apologetics” eventually found a place in the seminaries, scientists did not contribute to this scholarship in the nineteenth century. The rare prominent scientist who entertained religious beliefs posited either harmony or conflict in public writings even more rarely, and it is the varieties of religious indifference—not solely Soviet in origin—that invite historical inquiry.

Like Efthymios Nicolaidis and his coauthors, we will adopt John William Draper as our foil, since he was already familiar to progressive Russian readers for his *History of the Intellectual Development of Europe*, and the translator of that book, A. N. Pypin, quickly rendered *History of the Conflict between Religion and Science* into Russian in 1876. Though subject to modest abridgment, it nonetheless won the censor’s approval with the suitably modified title *History of the Relations between Catholicism and Science*.<sup>1</sup> Goring the papal ox thus held few risks for the liberal Russian advocates of Draper’s anticlericalism, who similarly sought to naturalize the history of cultural development.<sup>2</sup> That Draper treated Orthodoxy as “never . . . in opposition to the advancement of knowledge” may indeed obscure matters, according to Nicolaidis *et alii*,

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*Acknowledgments.* The authors thank Michael Gordin and the Editor of *Isis* for helpful comments.

<sup>1</sup> John William Draper, *Istoriia otnoshenii mezhdru katolitsizmom i naukoii*, trans. A. N. Pypin (St. Petersburg: Znanie, 1876). In tsarist Warsaw the 1882 Polish translation was in turn modified to *History of the Relation between Faith and Reason*.

<sup>2</sup> Draper’s counterpart, Andrew Dickson White, was approved in these same circles for his progressive curriculum at Cornell University, but his famous *History of the Warfare of Science with Theology* was little noticed and was not translated into Russian until 1932.

yet his most assiduous Russian critics still thought he was right in this regard. In this brief essay we will suggest how the apparent contradiction might be resolved.

“For the tribe of Slavs since the beginning of its Christian history, faith and science have gone amicably together in close alliance, not constricting, but mutually strengthening one another,” the Church historian and archpriest A. M. Ivantsov-Platonov assured the Slavic Congress in Moscow in 1867. “The first cultivators of faith were also the first scientific figures.”<sup>3</sup> He did not mean natural philosophers but, rather, Saints Cyril and Methodius, who devised the Glagolitic alphabet in the ninth century. That his audience applauded the claim that other nations and peoples should welcome the example of the Orthodox Slavs as a tribe that had never known conflict between faith and reason also reinforces the sense in which Draper could have been correct in the eyes of Russian contemporaries.<sup>4</sup> It was the long arc of humanistic “science” *qua* scholarship (*nauka*) that produced the strongest advocates of the harmony thesis, rather than any modern practitioners of the natural sciences (*estestvoznanie*). While the place of theology (*bogoslovie*) in particular as a science had been uncertain at least since the days of Peter the Great, after the Great Reforms in education, the military, and the courts that followed the abolition of serfdom in 1861 a small number of theologians gradually won modest space in the curriculum of the seminaries for an increasingly sophisticated “scientific apologetics.”<sup>5</sup> It was here that the science-and-religion thematic took form, but their influence on university life was negligible.<sup>6</sup>

And what of those longer precedents invoked by Ivantsov-Platonov? Early in the second millennium Byzantine administrative and intellectual life had been formative in Kievan Rus, but in 1448 the Russian Orthodox Church effectively claimed autocephalous status when it installed a new metropolitan without the approval of Constantinople, then under threat from the Ottomans. Unlike in the Latin West, the identity of political and religious communities would be presumed long afterward. Greek scholarship remained central to early Muscovite intellectual life, as Nicolaidis has outlined.<sup>7</sup> By the late seventeenth century the Latin tradition was also contributing to an increasing intellectual ferment at seminaries in Kiev and Moscow. In medicine and pharmacy the Muscovite court also fostered complex interactions with Europe, and we underestimate the richness of these contacts at our peril.<sup>8</sup>

In the generation before the young Peter I ascended to the throne in 1689 the fragmentation of the Church hierarchy in the wake of bitter theological and liturgical disputes eventually enabled Peter to become not only tsar but also the effective head of the Church. Peter was famously curious about the wider world in a way that previous Muscovite rulers had not been, and the evidence suggests that he sought Church reforms—but informed by the idiosyncratic understanding he had acquired of the Lutheran Church in Northern Europe. Peter’s best-known ally was Feofan Prokopovich, who was well versed in Polish, Italian, and German

<sup>3</sup> *Vserossiiskaia etnograficheskaia vystavka i slavianskii s’ezd v mae 1867 goda* (Moscow, 1867), p. 308.

<sup>4</sup> In writings otherwise highly critical of Draper’s work, his position on the Orthodox Church was noted approvingly in P. A. Miloslavskii, “Sovremennaia uchenost’ i khristianstvo,” *Pravoslavnoe obozrenie*, 1877, 1(1), p. 119; and A. F. Gusev, “Khristianstvo v ego otnoshenii k filosofii i nauke,” *ibid.*, 1885, 9(3), p. 466.

<sup>5</sup> V. D. Kudriavtsev-Platonov, *Iz chtenii po filosofii religii*, 1st ed., Vol. 2/3, Sochineniia (Sergiev Posad: A. I. Snegireva, 1898); N. P. Rozhdestvenskii, *Khristianskaia apologetika: Kurs osnovnago bogosloviia*, Vol. 1 (St. Petersburg: F. Eleonskii, 1884); and P. Velikanov and A. I. Osipov, “Apologetika,” in *Pravoslavnaia entsiklopediia* (Moscow, 2009), <http://www.pravenc.ru>.

<sup>6</sup> *O prepodavanii bogosloviia v universitetakh* (St. Petersburg: Imperatorskaia Akademiia Nauk, 1866); and *Ustav pravoslavnykh dukhovnykh akademii* (St. Petersburg: Synodal’naia tipografiia, 1883).

<sup>7</sup> Eftymios Nicolaidis, *Science and Eastern Orthodoxy: From the Greek Fathers to the Age of Globalization* (Baltimore: Johns Hopkins Univ. Press, 2011), pp. 140–150. Nikolaos Chrissidis’s forthcoming book on Greek scholars and Jesuit education in early modern Russia is sure to expand our perspectives.

<sup>8</sup> Clare Griffin, “Russia and Early Modern European Medicine,” *Kritika*, 2011, 12:967–982.

theological developments. Both men found aspects of Pietism attractive, while recent scholarship on Prokopovich's esotericism greatly complicates the conventional view that the new natural philosophy was simply the thin edge of the wedge of secular reform, resisted by the Church at every turn.<sup>9</sup> Indeed, both religious and scientific reforms were frequently in service to Peter's peculiar providentialism. It remained difficult to introduce natural philosophy with an explicitly cosmological cast, such as a 1717 translation of Christiaan Huygens's *Cosmotheoros*—the first such book in Russian to synthesize the new science—which was slow-walked to near oblivion by the typographer.<sup>10</sup> Prokopovich was a vital patron of the Academy of Sciences after Peter's death in 1725—and was later regarded as a founder of scientific apologetics—but continual rivalries around the throne under Peter's successors left little room for either ecclesiastical or scientific institutions to foster either meaningful autonomy or productive institutional interactions.

The *Ecclesiastical Regulation* of 1721, as well as the Academy of Sciences *Project* of 1724, should nonetheless be understood as eclectic Russian variants of enlightened absolutism, conceived as Leibnizian “colleges” in bureaucratic terms. Indeed, the Holy Synod and the Academy of Sciences mirrored each other over time as they learned to present a unified front to state authorities, fearful that any internal divisions would only be settled at court. This also had lingering disciplinary consequences, because the new university that was supposed to have been subordinated to the academy was slated to include law, medicine, and philosophy but not theology.<sup>11</sup> In this quasi-cameralist context philosophy in eighteenth- and early nineteenth-century Russia struggled to serve for a spectrum of subjects as the integration point with the notion of divine order. Nor could the new universities of the early nineteenth century offer much succor to natural philosophy, since they were chartered with a separate faculty uniting physiological, chemical, mineralogical, physical, and mathematical subjects. These universities were international from the beginning, and the French Revolution and Napoleonic wars brought aristocratic Russian Orthodox proponents of Enlightenment into contact with émigré German-speaking Catholics whose role in shaping these new intellectual environs remains inadequately studied.

Accomplished Russian naturalists who regarded their work as testimony to a continuing Providence could readily embrace Kant and especially Schelling as inspiration for a natural philosophy spanning more than cameralist utility, but they did so with little grasp of the contentious theological context in which the German philosophers had originally articulated their projects.<sup>12</sup> Philosophers suffered many indignities at the hands of ministerial authorities in the 1820s, while scientists (*naturalisty*) like M. A. Maksimovich and M. G. Pavlov were largely free to propagate *Naturphilosophie* on their own terms.<sup>13</sup> The émigré Austrian mathematician Nikolai Brashman (1796–1866) cast science as more mature than philosophy and mathematics as propaedeutic to proper judgment, urging scholars merely to winnow their choice of philosophy with Orthodox values in mind.<sup>14</sup> A providentialist historian like Sergei Soloviev

<sup>9</sup> Robert Collis, *The Petrine Instauration: Religion, Esotericism, and Science at the Court of Peter the Great, 1689–1725* (Leiden: Brill, 2011).

<sup>10</sup> V. S. Kirsanov, “Pervy russkii perevod ‘Kosmoteorosa’ Giuigensa,” *Voprosy istorii estestvoznaniia i tekhniki*, 1996, no. 2, pp. 27–37.

<sup>11</sup> A. I. Vvedenskii, “Sud’by filosofii v Rossii,” in *Filosofskie ocherki*, Vol. 1 (St. Petersburg: V. S. Balashev, 1901), pp. 12–38, on p. 9.

<sup>12</sup> M. A. Maksimovich, “Review of Pavlov, Osnovaniia fiziki,” *Severnaia pchela*, 14 Sept. 1883, no. 207, pp. 825–828; and *Razmyshleniia o prirode*, 2nd ed. (Kiev: I. Val’ner, 1847).

<sup>13</sup> Vvedenskii, “Sud’by filosofii v Rossii” (cit. n. 11), p. 24.

<sup>14</sup> Nikolai Brashman, *O vliianii matematicheskikh nauk na razvitie umstvennykh sposobnostei: Rech’, proiznesennaia v torzhestvennom sobranii Imperatorskago Moskovskago Universiteta* (Moscow, 1841), p. 16.

(1820–1879), who never experienced any doubt about the harmony between (positivist historical) science and religion, may have done more than any scientist to pave the way for the kind of secular understanding of progress found in Henry Thomas Buckle, who enjoyed immense popularity in Russia.<sup>15</sup>

Few natural scientists in the second half of the nineteenth century were exercised at all about the relationship between science and (Orthodox) Christianity, in a period when “*indifferentism*” entered the Russian vocabulary. Other scholars felt they had equal warrant to weigh in, however. As the St. Petersburg seminarian N. P. Rozhdestvenskii put it, even overweening rationalists acknowledged that the Orthodox Church was never hostile to science, but he meant this more as an assertion about the credibility of theology *vis-à-vis* other disciplines. “If theology cannot take it upon itself to instruct physiologists, chemists, geologists, or botanists, then natural science on the other hand cannot pretend to understand and interpret the Holy Scriptures.”<sup>16</sup> His concern was not so much with the bearing of any scientist’s work on Orthodox belief but, rather, with the haste with which liberal theologians hitched their wagons to the latest word in science, heedless of the fleeting nature of many scientific theories. For him, “no science answering its true designation can be anti-religious,” though he was conscious of relative proximities and concerned in the first instance with the relation between the “sciences” of theology and philosophy.<sup>17</sup>

The years after Draper’s *History of the Intellectual Development of Europe* saw the publication of several works on related themes in Russia, though none by natural scientists. Count P. A. Valuev, sometime Minister of the Interior and something of a disillusioned reformer, wrote a booklet on religion and science in 1886, picking up on the conflict trope only to argue against it. The distinguished liberal legal scholar Boris Chicherin (1828–1904) weighed in with a large tome on science and religion in 1879, but his untethered metaphysical musings were largely met with withering disdain across the political spectrum.<sup>18</sup> Rozhdestvenskii, as the most competent practitioner of apologetics, more often engaged philologists and anthropologists as interlocutors along with Schopenhauer or Hartmann. Russian religious scholars invested in the debate regularly rehearsed the names of modern scientists from Faraday and Liebig to Pasteur and Virchow as positive contributors, but the only Russian name invoked was the surgeon and educational reformer Nikolai Pirogov.<sup>19</sup> By contrast, even the conservative Moscow physicist N. A. Liubimov, widely disliked for his hostility to the university reforms, adopted the conventional contemporary narrative of Galileo’s trial as a triumph of the “new worldview,” and he was otherwise unconcerned with any Orthodox apologetic frame for modern science.<sup>20</sup>

<sup>15</sup> S. M. Solov’ev, *Istoriia Rossii s drevneishikh vremen*, Vol. 13 (Moscow, 1962); Solov’ev, “Nabliudeniia nad istoricheskoi zhizn’iu narodov,” *Vestnik evropy*, 1868, 3(11):676–707; and Ana Siljak, “Christianity, Science, and Progress in Sergei M. Solov’ev’s History of Russia,” in *Historiography of Imperial Russia: The Profession and Writing of History in a Multinational State*, ed. Thomas Sanders (Armonk, N.Y.: Sharpe, 1999), pp. 215–238.

<sup>16</sup> See his review of Draper: N. P. Rozhdestvenskii, “Istoriia otnoshenii mezhdu bogosloviiem i estestvoznaniem,” *Khristianskoe chtenie*, 1880, no. 9–10, p. 239. Similar views are expressed in Gusev, “Khristianstvo v ego otnoshenii k filosofii i nauke” (cit. n. 4), p. 125.

<sup>17</sup> Rozhdestvenskii, *Khristianskaia apologetika*, Vol. 1 (cit. n. 5), p. 157.

<sup>18</sup> P. A. Valuev, *Religiia i nauka* (Moscow: I. N. Kushnerev, 1886); and B. N. Chicherin, *Nauka i religiia* (Moscow: Martynov, 1879).

<sup>19</sup> S. S. Glagolev, “Ob otnoshenii filosofii i estestvennykh nauk k nauke Vvedeniia v Bogoslovie,” *Bogoslovskii vestnik*, 1892, 3(12):370–390; Gusev, “Khristianstvo v ego otnoshenii k filosofii i nauke” (cit. n. 4), p. 473; P. S. Strakhov, “Bogoslovie i estestvoznanie (K voprosu o zadachakh estestvenno-nauchnoi apologetiki),” *Bogoslovskii vestnik*, 1908, 1(2):257–286; and P. Ia. Svetlov, *Religiia i nauka* (St. Petersburg: P. P. Soikin, 1914), pp. 101–124.

<sup>20</sup> N. A. Liubimov, *Istoriia fiziki: Opyt izucheniia logiki otkrytii v ikh istorii*, Vol. 3 (St. Petersburg: V. S. Balashev, 1896), pp. 166–197.

The science-and-religion problematic is not altogether absent but, rather, takes place in a different register in prerevolutionary Russia. A relatively flat and undifferentiated disciplinary landscape initially combined with a lively and diverse “thick-journal” publishing milieu that made it difficult for the academic scientist to trade on distinctions between specialized and popular audiences.<sup>21</sup> There was no reliable way to invoke the public authority of science when matters of faith were also at stake, even if the protagonists largely shared common premises.<sup>22</sup> In Russian thought an opposite extreme had become equally powerful, one in which religious knowledge was merely a specific manifestation of universal philosophy.<sup>23</sup> Russia’s greatest philosopher, Vladimir Soloviev (son of Sergei), trained in plant morphology and comparative anatomy, and he was that rare Russian student who immersed himself in academic philosophy in order to arrive at a grander understanding of those disciplines. In *Critique of Abstract Principles* (1880) his ultimate goal was “to link theology internally to philosophy and science and so to organize the whole field of true knowledge into a full system of free and scientific theosophy.”<sup>24</sup> Soloviev’s desire to elevate knowledge at the expense of faith did remove him from the Orthodox mainstream, but his gnostic tendencies were far from alien to many of his contemporaries.<sup>25</sup> In a limited sense we might say that Soloviev took part in the science-and-religion discourse by updating Schelling and reintegrating (positive) empirical knowledge and (abstract) rational knowledge at the level of immanent collective consciousness (his phrase is “*sobornost’ soznaniia*,” which has obvious religious connotations).<sup>26</sup> But he left very little for the practicing scientist to hang his hat on.

The Russian religious revival around the fin-de-siècle further complicates this picture, not least because Russian scholars revised European conceptions of Oriental Studies through their own investigations of Islam, Buddhism, and the indigenous practices of the empire’s many cultures.<sup>27</sup> Though the religious practices in question were not usually Orthodox, and tsarist politics even after the 1905 revolution left little space for our notion of civil society, Oriental Studies fueled a period of remarkable syncretic experimentation that contributed to the rise of modern discourse about religion as private rather than public. Within the monastic orders certain circles began agitating, albeit with little success, for the Holy Synod to distance itself from the state. The Name-Worshiping movement recently investigated by Loren Graham and Jean-Michel Kantor in connection with the mathematician Dmitri Egorov’s religious sensibilities represents an important point of entry to the broader problem of modernization among Orthodox intellectual elites.<sup>28</sup>

At the level of anthropological practices, we do see room for further investigation of how natural scientists across the revolutionary divide may have adopted religious indifference or

<sup>21</sup> This was recognized by one of Darwin’s translators: M. A. Antonovich, “Teoriia proiskhozhdeniia vidov v tsarstve zhitovnom,” *Sovremennik*, 1864, 101:63–107, esp. p. 64.

<sup>22</sup> Michael D. Gordin, “Loose and Baggy Spirits: Reading Dostoevskii and Mendeleev,” *Slavic Review*, 2001, 60:756–780.

<sup>23</sup> Rozhdestvenskii, *Khristianskaia apologetika*, Vol. 1 (cit. n. 5), pp. 152–157.

<sup>24</sup> V. S. Solov’ev, *Kritika otvlechenykh nachal*, ed. S. M. Solov’ev and E. L. Radlov, 2nd ed., Vol. 2: *Sobranie sochinenii Vladimira Sergeevicha Solov’eva* (St. Petersburg: Prosveshchenie, 1911), p. 350; and Paul Valliere, *Modern Russian Theology: Bukharev, Soloviev, Bulgakov: Orthodox Theology in a New Key* (Grand Rapids, Mich.: Eerdmans, 2000), p. 139.

<sup>25</sup> Maria Carlson, “Gnostic Elements in the Cosmogony of Vladimir Soloviev,” in *Russian Religious Thought*, ed. Judith Deutsch Komblatt and Richard F. Gustafson (Madison: Univ. Wisconsin Press, 1996), pp. 49–67.

<sup>26</sup> N. Ia. Grot, “Eshche o zadachakh zhurnala,” *Voprosy filosofii i psikhologii*, 1891, 6:i–vi, on p. vi.

<sup>27</sup> Vera Tolz, *Russia’s Own Orient: The Politics of Identity and Oriental Studies in the Late Imperial and Early Soviet Periods* (Oxford: Oxford Univ. Press, 2011).

<sup>28</sup> Loren Graham and Jean-Michel Kantor, *Naming Infinity: A True Story of Religious Mysticism and Mathematical Creativity* (Cambridge, Mass.: Harvard Univ. Press, 2009).

atheism as elements of their professional identities.<sup>29</sup> Yet we must take care not to pour the new wine of antireligiosity as a potential marker of new social relations of science into the old bottle of Mertonian science versus ideology. The difficult line of inquiry that begins with the Stalinist retreat to autarky and the elevation of dialectical materialism and Lysenkoist voluntarism to quasi-religious status would most likely bear fruit only if directed at an understanding of how later generations of Soviet and post-Soviet scientists have come to grips with the legacies of Communism and how the radically asymmetric Sovietizations of science and religion are shaping their understandings of both the relative decline of scientific institutions today and the return of Orthodox institutions to Russian intellectual life. “Who is to blame?” likely continues to have an animating force here.

In 2012 Ilarion (Alfeev, b. 1966), Metropolitan of Volokolamsk, was appointed head of a newly founded theology department (*kafedra*) at an unlikely university, the Moscow Engineering Physics Institute (MIFI), a specially designated national research university for nuclear physics.<sup>30</sup> An accomplished scholar with impeccable international credentials, Ilarion is admired for his ecumenical efforts, not for any professional engagement with the natural sciences. Ilarion’s agenda is dual: to make theology departments a normal part of the modern Russian university and to raise the average student’s (abysmal) knowledge of Orthodoxy. Despite ready phrases about the scientist benefiting from the theological perspective, Ilarion is clearly not pursuing in the first instance a high-level dialogue between science and religion. His deputy, Father Rodion, previously pursued a career as a condensed matter physicist, but since taking orders he has shown a greater interest in early modern Church history. These Orthodox scholars are not so much raising a challenge to contemporary scientists as they are revisiting a familiar dilemma: how to shore up the scientific status of theology without inviting backlash from a Church hierarchy that is once again deeply entrenched in the workings of state power.

Whether we approach science and Russian Orthodoxy in conflict, harmony, or isolation modes of analysis, we need to be prepared to concede that most of the time we still remain at the general level of Christian religion, rather than requiring any special pleading at the doctrinal or confessional level.<sup>31</sup> The neglect of Orthodoxy in Anglophone history of science may be regrettable, but it is perhaps as much a function of the fragile institutional genealogy of our small profession as it is of any principled neglect. Science and Orthodox Christianity is only partly about distinctive philosophical and theological tensions in Orthodox milieus. It is in part a proxy for a more general problem in the profession: how to incorporate the history of science on the European periphery into an Anglophone narrative inordinately dominated by other regions. In taking up this debate we are all effectively lodging a gentle indictment against the structural biases inherent in Anglophone history of science. But we would ultimately caution against exaggerating the role of Orthodox topics in redressing that imbalance.

<sup>29</sup> Scientists as such are not problematized in the otherwise valuable work of Daniel Peris, *Storming the Heavens: The Soviet League of the Militant Godless* (Ithaca, N.Y.: Cornell Univ. Press, 1998).

<sup>30</sup> Daria Zagvozdina, “Teologicheskaia fizika,” *Gazeta.Ru*, 17 Oct. 2012, <http://www.gazeta.ru/social/2012/10/17/4815217.shtml>. The department’s website is <http://theology.mephi.ru/>.

<sup>31</sup> Since 1991 a considerable literature has grown up around the science and religion theme, though it is of decidedly mixed quality. For a useful survey see Vladislav Razd’iakov, “Institutsionalizatsiia dialogicheskogo napravleniia diskursa ‘nauka i religiia’ v sovremennoi Rossii,” *Gosudarstvo religiia tserkov’ v Rossii i za rubezhom*, 2015, no. 1, pp. 11–29. For an extensive bibliography see A. P. Zarubin, “Nauka i Religiia—Otechestvennaia bibliografiia 1993–2015 gg.,” <http://www.prometeus.nsc.ru/partner/zarubin/scirel.ssi> (accessed 20 Apr. 2016).