

Franek, Juraj

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JURAJ FRANEK (MASARYK UNIVERSITY)

LUCRETIUS AND THE MODERN INTERDISCIPLINARY CRITIQUE OF RELIGION

Article compares some aspects of current interdisciplinary discourse critical of religion with Lucretius' poem De rerum natura. In the first part, I try to show how a brief review of modern scientific literature can assist to resolve one of the much discussed problems in Lucretian scholarship, namely the attitude of Lucretius towards traditional Graeco-Roman religion and the question of (in)coherence of his thought. In the second part, I change the perspective in order to show that, in some key aspects, Lucretius can be viewed as the precursor of contemporary critique of religion.

Keywords: Lucretius, Religion, Critique, Contemporary, Science, Physics, Biology, Philosophy, Venus, Anti-Lucrèce, Patin, Dennett

Venus doesn't play dice

One of the most discussed problems in Lucretian scholarship is undoubtedly poet's seemingly ambivalent attitude to gods and religion. As anyone decently familiar with Epicurean theology knows, gods of Lucretius are immortal entities living in the *intermundia*, concerned almost exclusively with enjoying themselves in eternal bliss. They did not create our world, nor account for apparent order in it. They do not cause meteorological phenomena, nor do they listen to our prayers. In fact, they are just exceedingly well-ordered heaps of atoms and they really cannot be much more given the fundamentals of the atomistic theory Lucretius endorses.¹

¹ As such, the notion of Epicurean god has been subject to much ridicule and resentment of early Christian authors. For instance, Tertullianus characterizes him as *otiosum et inexercitum et ut ita dixerim, neminem humanis rebus*, for Clemens of Alexandria, Epicurus himself is *διὰ πάντων ἀσεβῶν* (Usener, H. [ed.]. 1887. *Epicurea*. Leipzig: Teubner, frg. 363, 368).

On the background of such theology, the problem arises the moment we take *De rerum natura* and start reading. The very beginning of the poem (1,1–5)² surely does not provide us with a goddess of Epicurean provenience. Venus³ seems to be very much involved in the world — she is *genetrix* of Aeneas; she seems to be in a relationship with men as well as gods (*hominum divumque voluptas*); she is in charge of the growth of all living things (*alma Venus*) and likewise in charge of their procreation (*per te quoniam genus omne animantum | concipitur*). As if this would not be enough, later on Lucretius even propitiates Venus to assist him in the labours of composing his philosophical poem (*te sociam studeo scribendis versibus esse*, 1,24) and bids her to warrant peace and safety in the turbulent times of the first century bc (*effice ut interea fera moenera militai | per maria ac terras omnis sopita quiescant*, 1,29–30). Insofar, the proem of *De rerum natura* rather resembles a typical religious hymn and nothing seems to indicate that the author is an Epicurean.

Yet if we read a few dozen lines more, we witness an abrupt change. Another eulogy starts, but this time the praised one is Epicurus himself, who is extolled for being first to banish the evils of superstitious religion (*quare religio pedibus subiecta vicissim | obteritur, nos exaequat victoria caelo*, 1,78–79), and Lucretius is quick to provide us with a graphical example of the atrocities provoked by this *religio* by relating the story of the sacrifice of Iphigenia, ending in brief yet instructive *tantum religio potuit suadere malorum* (1,101).

It would seem that on the space of mere hundred verses, Lucretius presents two irreconcilable views of religion. Opening lines operate within the basic framework of traditional Graeco-Roman religion; lines that ensue next seem to attack this framework in full force. Moreover, we are not dealing with an isolated case. Vivid descriptions of the cult of Cybele (2,600–660) or the occasional use of language suggesting that personalized nature could be the principle governing the movement of atoms in the void (*natura gubernans*, 5,77) seem to echo the same problem.

These apparent contradictions in respect to gods and religion did not escape the keen eye of nineteenth century French classicist Herni Patin and with the publication of the first volume of his *Études sur la poésie latine* the

² Here and throughout the paper, Lucretius is cited from Bailey, C. [ed.]. 1921. *Lucreti De rerum natura*. Oxford: University Press.

³ Venus was more than appropriate choice for propitiation, since she was also the patron goddess of Memmius' family, Codoñer, C. [ed.]. 2007. *Historia de la literatura latina*. Madrid: Cátedra, 93.

problem got its name⁴ — “*Anti-lucrèce chez Lucrèce*”. Patin argues⁵ that the text of Lucretius is full of “involuntary contradictions”, “silent objections” and as such can be viewed as an “anticipated refutation of his own doctrine”. Following this interpretation, scholars argued⁶ that Venus of the proem of the first book is not an abstraction or the personification of Bergsonian *élan vital*, but “the very divine Lucretius feels in that happy moment when the soul is free from the painful work of doubts and innermost terrors.” Others have been more cautious with the interpretation of the proem and conceded⁷ that Venus functions here as the personification of the “desire of love”, yet argued⁸ that Lucretian *natura* announces the idea of lawgiver God. To be sure, these lines of thought about Lucretius provoked a reaction, but it seems that the issue at hand is still far from being definitely resolved. In 2007, two important collections of essays on Lucretius (*Oxford readings in Classical studies* and *Cambridge companion to Lucretius*) have been published. While Monica Gale, editor of the former, claimed⁹ that the *communis opinio* holds Venus for a symbolic figure, editors of the latter, Stuart Gillespie and Phillip Hardie, argued¹⁰ that these interpretations of the goddess “have not persuaded all readers”. It would seem, then, that we do not even have the general consensus on whether we have a general consensus or not.

It is vital to note that I do not aim to explain *why* Lucretius uses the imagery of the traditional Graeco-Roman religion in the proem of *De rerum natura*. Various scholars proposed various solutions. For instance, Diskin Clay argued¹¹ that Lucretius is playing a kind of a didactic game with his reader. He opens the poem with what is familiar to his average reader or listener, namely the invocation of the goddess Venus in the form of religious hymn. Then, as Clay further elaborates, the poet moves from “what is appealing and traditional to

⁴ Pigeaud, J. 1972. „Quel dieu est Épicure? Quelques remarques sur Lucrece, V, 1 à 54.“ *Revue des études latines*, 50, 162 termed this expression *célèbre et malheureuse*. I can only agree.

⁵ Patin, H. 1875. *Études sur la poésie latine. Tome premier*. Paris: Hachette, 118.

⁶ Martini, R. 1954. „La religione di Lucrezio“. *Giornale italiano di filologia*, 7, 142.

⁷ Chomarat, J. 1986. „La mythologie de Lucrece.“ In Martin, P. M. — Ternes, C. M. [eds.] *La mythologie, clef de lecture du monde classique: hommage à R. Chevalier*, vol. I. Tours: Centre de Recherches A. Piganiol, 1986, 53.

⁸ J. Chomarat (1986: 55–56).

⁹ Gale, M. [ed.]. 2007. *Oxford Readings in Classical Studies. Lucretius*. Oxford: University Press, 17.

¹⁰ Gillespie, S. — Hardie, P. [eds.]. 2007. *The Cambridge Companion to Lucretius*. Cambridge: University Press, 6.

¹¹ Clay, D. 1976. „The Sources of Lucretius’ Inspiration.“ In M. Gale (2007: 28–31, 42).

a vantage which both comprehends and transcends tradition.” Lucretius proceeds to criticize his opening position in the course of the poem, indicating reasons for the implausibility of the traditional view of gods, while revealing the origins of these beliefs. He leads us on the way from tradition to his own theology of deities who do not have any significant relation to our world. Gerhard Müller is of the opinion¹² that Lucretius opens the first book with the hymn to Venus “in order to begin his opening verses in the appropriate style.” In other words, the invocation is just a *topos*, poetic commonplace. Elizabeth Asmis advanced¹³ different interpretation, according to which Venus of the opening lines of Lucretius’ poem represents a counterpart to Stoic Zeus, as portrayed in the famous *Hymn to Zeus* by Kleanthes. The goddess of love thus represents pleasure and spontaneous creative force of nature in contrast with the divine ordinance of Stoic version of the Father of men and gods. David Sedley argued¹⁴ for the influence of Empedocles on the poem and Joseph Farrell in a recent paper proposed¹⁵ an interpretation based on what he terms “inversion”. As Farrell explains by summing up the first hundred verses of the poem, “in the space of these relatively few lines, then, Lucretius moves from the position of a conventional poet who petitions the gods for favours, to that of one who asserts that we live in a materialist universe in which the gods play no active role.”

Be that as it may, my goal in this paper is much more modest. I want to argue that *whatever the reasons for the use of traditional religious imagery and language might be*, contrary to what Patin and others after him suggested, Lucretius does not contradict himself by using traditional religious imagery and language in *De rerum natura*. As we shall see presently, the practice of using the language of religion is a commonplace even in contemporary scientific discourse.

¹² Müller, G. 1978. „The Conclusions of the Six Books of Lucretius.“ In M. Gale (2007: 242).

¹³ Asmis, E. 1982. „Lucretius’ Venus and Stoic Zeus.“ In M. Gale (2007: 88–103). See also Asmis, E. 2007. „Myth and Philosophy in Kleanthes’ Hymn to Zeus.“ *Greek, Roman and Byzantine Studies*, 47, 413–429 for the discussion on the Kleanthes’ *Hymn to Zeus*, that is being used in the former paper to contrast with Lucretian Venus.

¹⁴ Sedley, D. 1998. *Lucretius and the Transformation of Greek Wisdom*. Cambridge: University Press, 34.

¹⁵ Farrell, J. 2007. „The architecture of the *De rerum natura*.“ In S. Gillespie — P. Hardie (2007: 87).

Let us start with the Nobel laureate physicist Richard Feynman and his 1986 Dirac Memorial Lecture. While explaining the Pauli exclusion principle,¹⁶ Feynman states the following:

“The Pauli exclusion principle says that if you take the wavefunction for a pair of spin $\frac{1}{2}$ particles and then interchange the two particles, then to get the new wavefunction from the old you must put in a minus sign. It is easy to demonstrate that if Nature was nonrelativistic, if things started out that way then it would be that way for all time, and so the problem would be pushed back to Creation itself, and God only knows how that was done.”

I have to admit that I do not know much about the Pauli exclusion principle, but the language Feynman uses to explain it is rather peculiar. Now, Feynman himself is a notoriously difficult figure to assert any religious beliefs for, but according to his less technical and more personal writings,¹⁷ he was an “avowed atheist” in his youth and I have not come across any statement that would further falsify this. Yet in the space of a single sentence, he is talking about the “Creation”, “God” and seemingly personalized “Nature”, all words capitalized. Apparently, what we have here is the case of a scientist critical to religion using its common vocabulary. Should we conclude then that Feynman is contradicting himself?

Consider another, probably more familiar example. Stephen Hawking in the conclusion of his well-known book *A brief history of time* uses¹⁸ the expression “mind of God”. But what does he really mean by that? Does he mean it literally? Everyone who read the aforementioned book is bound to give the negative answer. As summed¹⁹ in the preface by the astronomer Carl Sagan, Hawking is proposing the view of “a universe with no edge in space, no beginning or end in time, and nothing for a Creator to do.” Indeed, the so-called Hartle-Hawking no-boundary condition advocated in this very book and elsewhere implicates that the “Creator” of the universe is at best unnecessary hypothesis. And what should we then think about the title of another recently published book by Hawking, *God created the Integers* with the subtitle *The mathematical breakthroughs that changed history*.²⁰ Does this all signify that Hawking is being inconsistent?

¹⁶ Feynman, R. — Weinberg, S. 1987. *Elementary particles and the laws of physics*. Cambridge: University Press, 3.

¹⁷ Feynman, R. 2001. *What do you care what other people think?* New York: W. W. Norton & Company, 25.

¹⁸ Hawking, S. W. 1988. *A Brief History of Time*. London: Bantam Books, 185.

¹⁹ S. W. Hawking (1988: xi).

²⁰ Hawking, S. W. 2007. *God Created the Integers. The Mathematical Breakthroughs That Changed History*. Philadelphia — London: Running Press.

To illustrate the matter further, let us consider an example by Albert Einstein (no less), who famously described himself²¹ as a “deeply religious nonbeliever”. He firmly rejected both atheism and personal God of monotheistic religions. As he once proclaimed,²² “I believe in the God of Spinoza who reaveals himself in the orderly harmony of what exists, not in a God who concerns himself with fates and actions of human beings.” Nevertheless, he did not refrain from using the word “God” outside this very narrowly defined semantic field. For instance, while adressing his assistant Ernst Gabor Straus, Einstein stated²³ the following:

“Was mich eigentlich interessiert, ist, ob Gott die Welt hätte anders machen können; das heißt, ob die Forderung der logischen Einfachheit überhaupt eine Freiheit lässt.”

Surely, there are other better-known dicta where Einstein uses similar language (the one about God not playing dice being probably the most famous one), but I chose this one as an example, since it is very instructive in how Einstein uses the notion of “God” in general. Quoted expression is completely self-explanatory in this regard: Einstein asks whether God had any liberty in creating the universe in some other way and at the same time makes it equivalent (*das heißt*) to the question whether the condition of logical simplicty allows for any freedom in decision-making.

As the last example, I chose the philosopher Daniel Dennett. Dennett wrote a large tome entitled *Darwin's Dangerous Idea*, where he argues that the amazing variety and complexity of living entities is the product of blind, purposeless, mechanical algorithmic process that is exemplified by Darwinian evolution by natural selection. Yet in one of the closing chapters of his book²⁴ he pronounces this process “sacred”. To add insult to injury, in a more recent publication entitled *Breaking the Spell: Religion as a Natural Phenomenon* (as well as in the one just mentioned) Dennett persistently uses²⁵ the term “Mother Nature” that would *prima facie* suggest an overarching personal intelligence guiding the process of natural selection, in spite of the fact that this perspective is the the exact opposite of the view

21 Jammer, M. 2002. *Einstein and Religion*. Princeton: University Press, 157.

22 M. Jammer (2002: 49).

23 M. Jammer (2002: 124).

24 Dennett, D. C. 1995. *Darwin's Dangerous Idea. Evolution and the Meanings of Life*. New York: Simon & Schuster, 520.

25 Dennett, D. C. 2006. *Breaking the Spell. Religion as a Natural Phenomenon*. New York: Viking, 58, 127, 128, 170.

he himself advocates. Is Dennett betraying his cause and convictions by the use of such language?

The answer to all these questions is a resolute no. As Bertrand Russell once very aptly pointed out,²⁶ “for aesthetic satisfaction, intellectual conviction is unnecessary”. Indeed, many scientists critical of religion made similar claims of enjoying religious music, architecture and fine arts.²⁷ In *God’s Delusion*, Richard Dawkins relates²⁸ a story that I find especially significant for the present argument. Dawkins, being a guest in the British radio show, was asked what selection of music he would take to an isolated desert island. One of his choices was *Mache dich mein Herze rein* from Bach’s *St. Matthew Passion*. This apparently perplexed the interviewer and — as Dawkins continues — she was “unable to understand how I could choose religious music without being religious.” It seems to me that scholars arguing for the presence of contradictions related to religion and gods in *De rerum natura* are quite like Dawkins’ interviewer. If we take into consideration that even contemporary science makes an active use of religious language in scientific prose, we should not be surprised that Lucretius does so in a work of highest poetic aspirations. Whatever his intentions behind this use might be, we can be — in my opinion — quite sure that the overall meaning is not to be taken literally and as such does not contradict his Epicurean philosophy and theology. Now, if we accept that Lucretius’ thoughts on religion are consistently Epicurean in origin and substance, two further implications for the Lucretian scholarship follow.

“Religion of Lucretius”

Firstly, it seems inappropriate to speak about the “religion of Lucretius”. While preparing this paper, I have come across no less than three studies bearing this very title²⁹ and many others used it regularly in the text. If we consider any modern anthropological definition of religion, such as the

²⁶ Russell, B. 1957. *Why I Am Not a Christian and Other Essays on Religion and Related Subjects*. New York: Simon & Schuster, 101.

²⁷ D. C. Dennett (2006: 252); Stenger, V. J. 2008. *God: The Failed Hypothesis. How Science Shows That God Does Not Exist*. New York: Prometheus, 254; Weinberg, S. 2009. *Lake Views: This World and the Universe*. Cambridge, Mass. — London: The Belknap Press of Harvard University Press, 242.

²⁸ Dawkins, R. 2006. *The God Delusion*. Boston — New York: Houghton Mifflin, 86.

²⁹ Case, S. J. 1915. „The Religion of Lucretius.“ *The American Journal of Theology*, 19/1, 92–107; Masson, J. 1923. „The Religion of Lucretius.“ *The Classical Review*, 37/7–8, 149–152; R. Martini (1954).

one offered by Scott Atran, who defines³⁰ it as “a community’s costly and hard-to-fake commitment to a counterfactual and counterintuitive world of supernatural agents who master people’s existential anxieties, such as death and deception”, we will find out that Epicurean theology — while certainly not atheistic — would not qualify as religion by any conceivable standard. If anything, its main goal is indeed to set people free from the commitment to “supernatural agents who master people’s existential anxieties” that Atran singles out in the *definiens* of religion. If we interpret the hymn to Venus and related verses non-literally, there is no reason at all to speak about the “religion of Lucretius”, because Lucretius simply does not have one. On the other hand, it is perfectly valid to speak about the critique of religion in *De rerum natura*, since there is plenty of it.

Lucretius the Pessimist

The second implication from what has been said concerns Lucretius’ alleged pessimistic world-view. Some scholars have been eager to single out the contradictions in Lucretius’ view of the gods and religion as the chief testimony for his deep pessimism.³¹ They generally see the Roman poet as one of the many tragic heroes from the films of Ingmar Bergman who are both rejecting God and yearning after him, or like the madman in Nietzsche’s famous parable about the death of God.³² But if we interpret Venus from the proem non-literally, we have one reason less to make unqualified judgments about Lucretius’ personality. To be sure, there are some murky lines in Lucretius’ poem, but as Nietzsche’s madman has its counterpart in godless Zarathustra, rejoicing in the liberation from God,³³ there is also the unspeakable joy of the serene temples built by the teachings of the wise (*edita doctrina sapientum templa serena*, 2,8). And this is not only pleasant (*suave*, 2,1), but there is indeed nothing sweeter than this (*nil dulcius est*, 2,7).

³⁰ Atran, S. 2002. *In Gods We Trust. The Evolutionary Landscape of Religion*. Oxford — New York: Oxford University Press, 4.

³¹ R. Martini (1954); Barra, G. 1954. „La polemica antireligiosa nel V libro di Lucrezio.“ *Rendiconti dell’Accademia di Archeologia, Lettere e Belle Arti di Napoli*, 29, 141–170; Hepp, N. 1955. „Lucrèce ou le monde vide de Dieu.“ *Revue des sciences religieuses*, 29/4, 313–332.

³² Colli, G. — Montinari, M. [eds.]. 1999. *Friedrich Nietzsche. Sämtliche Werke. Kritische Studienausgabe in 15 Bänden*. München — Berlin — New York: dtv — Walter de Gruyter, vol. III, 481.

³³ G. Colli — M. Montinari (1999: vol. IV, 323).

Lucretius and the relationship between science and religion

Hoping to have shown that Lucretius should be exonerated from the alleged contradictions in his poem, I would like to compare some aspects of the relationship between science and religion found in *De rerum natura* with the most outspoken voices of the contemporary critique of religion, representing the movement that has been termed³⁴ “New Atheism”. It includes physicist Victor Stenger, philosopher and neuroscientist Sam Harris, biologist Richard Dawkins, philosopher Daniel Dennett, journalist Christopher Hitchens and finds its moderate counterpart in astronomer Carl Sagan, physicists Steven Weinberg and Taner Edis and biologists Edward O. Wilson and Jerry Coyne. I would like to argue that main points of their criticism of religion, such as intrinsic incompatibility of science and religion and the rejection of teleology and supernatural explanations, are to be found present in Lucretius’ poem.

An important commonplace in Lucretius and the authors just mentioned lies in the belief of the incompatibility of science and religion. To be sure, this is not the only way how one can conceive the relationship of science and religion. Indeed, some scientists and theologians believe that the findings of science underline and reinforce religious doctrines, but their arguments are rather unconvincing and consist of the caricature of either science or religion (in the worst cases both), large amounts of wishful thinking and cherry-picking from the findings of science. As Daniel Dennett puts it,³⁵ “religious organizations are quite impressed with the truth-finding power of science when it supports what they already believe.”

Another approach to this problem is to claim that science and religion are dealing with fundamentally different areas of human knowledge, and therefore there is no common ground where they could come in conflict. This perspective has been argued for most eloquently in the book of prominent American biologist Stephen Jay Gould entitled *The Rocks of Ages*.³⁶ Gould advances the hypothesis according to which science and religion are dealing with what he calls “non-overlapping magisteria”. Simply put, science deals with how things are, and religion deals with how things ought to be. Magisterium, then, is simply a set of all there is to know from a perspective

³⁴ Stenger, V. J. 2009. *The New Atheism. Taking a Stand for Science and Reason*. New York: Prometheus, 11–44; Stausberg, M. [ed.]. 2009. *Contemporary Theories of Religion. A Critical Companion*. London — New York: Routledge, 242–263.

³⁵ D. C. Dennett (2006: 280, 364).

³⁶ Gould, S. J. 1999. *Rocks of Ages: Science and Religion in the Fullness of Life*. New York: Ballantine.

field of study and as the argument goes, magisteria of science and religion are distinct, therefore if any conflict between science and religion arises, it is caused by the transgression of the boundaries of each respective set of possible knowledge. The appeal of this perspective is mostly due to social and political issues.³⁷ By adopting this stance, science does not have to worry about the aspirations of religious zealots eager to contaminate the public education system by religion-inspired nonsense such as creationism or intelligent design. On the other hand, religious people uneasy about the explanatory power of modern science can stay reassured, because there is nothing science could find that would render their innermost beliefs invalid. Though socially and politically feasible, this approach is intellectually untenable, for various reasons.

As Pascal Boyer comments³⁸ in relation to the Western culture and its predominant religion, “in every instance where the Church has tried to offer its own description of what happens in the world *and* there was some scientific alternative on the very same topic, the latter has proved better. Every battle has been lost and conclusively so.” Yet, should science confirm any of the religious tenets, its findings would be undoubtedly accepted by religious persons as a welcome reinforcement of their beliefs.³⁹ Leaving the issue of motivation aside, reducing religion to morality is making a caricature out of religion and — as Steven Weinberg points out⁴⁰ —, “the great majority of the world’s religious people would be surprised to learn that religion has nothing to do with factual reality.” Indeed, religious beliefs contain many propositions that can be subject to scientific study⁴¹ and there is a mutual agreement of the modern authors criticizing religion that the advance of science in fact widens the gap between science and religion,⁴² increases tensions between the two and weakens the salience of religious beliefs.⁴³

³⁷ Edis, T. 2008. *Science and Nonbelief*. New York: Prometheus, 80.

³⁸ Boyer, P. 2001. *Religion Explained. The Evolutionary Origins of Religious Thought*. New York: Basic Books, 320.

³⁹ R. Dawkins (2006: 59).

⁴⁰ Weinberg, S. 1994. *Dreams of a Final Theory. The Scientist’s Search for the Ultimate Laws of Nature*. New York: Vintage Books, 249.

⁴¹ V. J. Stenger (2008: 29).

⁴² Wilson, E. O. [ed.]. 2006. *From So Simple a Beginning. The Four Great Books of Charles Darwin*. Edited, with Introductions by Edward O. Wilson. New York — London: W. W. Norton & Company, 1483.

⁴³ S. Weinberg (2009: 231).

As Roman literature goes, we could find the counterpart of the non-exclusivity of science and religion just outlined above in the few lines of Vergilius' *Georgica*⁴⁴ and these could be seen as a direct answer to Lucretius and his philosophy. Vergil seems to be adopting the theory of non-overlapping magisteria and chastises Lucretius for singling out science or philosophy as the only relevant source of knowledge and human happiness. For Vergilius, *felix qui potuit rerum cognoscere causas* (2,490), but also *fortunatus et ille deos qui novit agrestis* (2,493). One can be both scientist and a saint. For Lucretius, this will not do. At the beginning of the fourth book, he unequivocally states that one of the main goals of *De rerum natura* is to release men from shackles of religion (*magnis doceo de rebus et artis | religionum animum nodis exsolvere pergo*, 4,6–7). Religion, associated in content with the terrors of mind and visually with darkness, is to be surpassed and won over by what Lucretius repeatedly marks as *naturae species ratioque* (1,148; 2,61; 3,93) — the observation and rational analysis of nature. Today, we would simply call it science. Lucretius not only sees science and religion as two irreconcilable fields, but he actively uses science (i.e. his atomic ontology) to undermine religious claims and beliefs.

Another important commonplace in modern critics of religion and Lucretius lies in the advocacy of exclusively naturalistic explanation of any given phenomena coupled with strong rejection of teleology. The positive correlation between the rejection of teleology and the rejection of supernatural beliefs has been already observed⁴⁵ by Schopenhauer (who explicitly names Lucretius as a chief example of this view), and the argumentation of modern scientists runs pretty much in the same vein. Physicists are insisting on the “impersonality”,⁴⁶ indeed sometimes even “chilling impersonality”⁴⁷ of the laws of nature and biologists from Darwin onwards unequivocally reject any traces of teleological thinking that could be used as a possible explanation of the diversity and complexity of living entities. As Ernst Mayr sums it,⁴⁸ the answer to the question whether any process in evolution requires a teleological explanation is an emphatic “No”. To generalize this perspective, philosopher Daniel Dennett proposed the “sky-hook” — “crane” dichotomy to underline the crucial difference between

⁴⁴ Mynors, R. A. B. [ed.]. 1969. *P. Vergili Maronis Opera*. Oxford: University Press.

⁴⁵ Hübscher, A. — Hübscher, A. — Schmolders, C. — Senn, F. — Haffmans, G. [eds.]. 1977. *Arthur Schopenhauer: Zürcher Ausgabe. Werke in zehn Bänden*. Zürich: Diogenes Verlag, vol. III, 396.

⁴⁶ T. Edis (2008: 44).

⁴⁷ S. Weinberg (1994: 245).

⁴⁸ Mayr, E. 2001. *What Evolution Is*. New York: Basic Books, 275.

explanations and pseudo-explanations of any given complex phenomena. His definition runs as follows.⁴⁹ *Skyhook* is “an exception to the principle that all design, and apparent design, is ultimately the result of mindless, motiveless mechanisticity.” *Crane*, on the other hand, is “a subprocess or special feature of a design process that can be demonstrated to permit the local speeding up of the basic, slow process of natural selection, *and* that can be demonstrated to be itself predictable (or retrospectively explicable) product of the basic process.” In plain English, Dennett’s idea, quickly adopted by other scientists,⁵⁰ simply demands any true explanation to be a *crane*, that is, a description based on the non-teleologic description of the phenomenon that does not require — and indeed exclude — any *skyhooks*, *deus ex machina*-like interventions of further unexplainable supernatural forces. Rejection of teleology, advocacy of the impersonal laws of nature and rejection of supernatural forces as redundant are undoubtedly the centerpieces of the modern science-based critique of religion, both in the realms of physics and biology.⁵¹

Arguably, Lucretius shares this methodological background to the last bit. Explanatory framework in *De rerum natura* is dictated by atomistic ontology. The universe and everything in it is composed from two fundamental principles (atoms and the void) and Lucretius repeatedly points out that *tertium non datur* — there is no other principle beside the two just mentioned (1,430–450). The interactions of atoms in the void yield in turn the notion of the natural laws (*foedera naturai*; 1,568; 2,302; possibly 5,55–59) that are due to the physical properties of the atoms and the compounds made of them. The main article of this ontology is exposed with admirably sparsity on the space of just three lines in the second book of *De rerum natura* (2,10901092): *Quae bene cognita si teneas, natura videtur | libera continuo dominis privata superbis | ipsa sua per se sponte omnia dis agere expers*. The unique single point of these three lines is that any supernatural explanation involving a supernatural agency must be rejected as superfluous and false since nature (that is, the interaction of atoms in the void) can account for everything that happens in the universe. Lucretius, being a great poet that he was, underlines it here no less than five times: Nature that works in the universe is free (*libera*); she is not a subject to the gods (*dominis privata superbis*); she works all alone (*per se*), by the governance of her own will (*sua sponte*) and free of all gods (*dis expers*). You

⁴⁹ D. C. Dennett (1995: 76).

⁵⁰ R. Dawkins (2006: 73); T. Edis (2008: 29).

⁵¹ Coyne, J. A. 2009. *Why Evolution Is True*. New York: Viking, 224–225; T. Edis (2008: 73); V. J. Stenger (2008: 262); S. Weinberg (2009: 233); S. Weinberg (1994: 248).

would hardly ever find more confined rejection of supernatural agency than these three lines.

To be sure, this perspective is unequivocally expressed in the writings of Lucretius' philosophical hero, Epicurus himself. For instance, while explaining thunderbolts in the *Letter to Pythocleus* (*DL* 10,104),⁵² the founder of the Garden offers a handful of various explanations, stating that there are probably even more possibilities of explaining the meteorological phenomenon at hand. It would seem that Epicurus is less concerned about the origin of thunderbolts than about the proper methodology, framed by the guideline *μόνον ὁ μῦθος ἀπέστω*. Every possible explanation that is not contradicted by sensory evidence is as good as any other, provided that it does not invoke supernatural causes and agents. Given the methodological distinction by Dennett we mentioned above, Epicurus simply demands — just as modern science does — that for the explanation of natural phenomena, only *cranes* and no *skyhooks* are used. Later in the text (*DL* 10,115), Epicurus discusses the phenomenon of falling stars, and the very same framework emerges again. He offers a few explanations and concludes that there are also other possibilities of explaining them without the invocation of the supernatural (*καὶ ἄλλοι δὲ τρόποι εἰς τὸ τοῦτο τελέσαι ἀμύθητοί εἰσιν*).

Conclusion

(1) By invoking Venus in the proem of *De rerum natura*, Lucretius does not contradict his severe critique of religion found throughout the poem. The use of religious imagery and notions is a commonplace even in the contemporary prose scientific discourse that is critical to established religion, so we probably should not be surprised to find it in the poetic work of great ingenuity from first century bc.

(2) By extension of (1), it is abusive to talk about the “religion of Lucretius”. *De rerum natura* is a treatise highly critical to traditional Graeco-Roman religion and Epicurean theology on its own does not classify as “religion” by any standards. Not only that, it is indeed aimed against traditional beliefs.

(3) By extension of (1) and (2), portraying Lucretius as a pessimist torn between the rejection of the anthropopathic gods and the need of the transcendence and the divine is not supported on any reasonable grounds.

⁵² Marcovich, M. [ed.]. 1999. *Diogenes Laertius. Vitae philosophorum*. Leipzig: Teubner.

(4) Lucretius shares important perspectives with the contemporary interdisciplinary critique of religion, namely the incompatibility and mutual exclusivity of science and religion, complete rejection of teleological argumentation and strong emphasis on the use of *cranes* (self-contained natural explanations) and the exclusion of *skyhooks* (quasi-explanations by the means of supernatural agency).