

SPECIAL ISSUE: ANIMISM AND ITS DISCONTENTS: SOUL-BASED EXPLANATIONS IN EARLY MODERN NATURAL PHILOSOPHY AND MEDICINE

SPECIAL ISSUE INTRODUCTION

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Introduction

The aim of this special issue is to explore varieties of animism in western European natural philosophy from the sixteenth to the eighteenth centuries. The issue focuses on “natural-philosophical animism,” by which we mean the position that the soul, along with its various faculties and powers, is integral to the functioning of nature as a whole, or to the functioning of some natural entities. The term “animism” was coined in the second half of the eighteenth century, first in French and then migrating to English, and it emerged in connection with the work of the Halle professor of medicine Georg Ernst Stahl (1659–1734). It came to be used as a general term for a variety of positions that challenged the mechanist and materialist accounts of nature that proliferated during the early modern period. Soon enough, “animism” became a catchall for doctrines that lost out to modern science. This opposition between animist and material, or animist and mechanical, has profoundly marked the history of sciences: one of the achievements of the Scientific Revolution and Enlightenment was, the usual story goes, to remove the soul and its forces from scientific investigation. However, when we reconsider the history of animism from the Renaissance on, we find complex overlays of the animate and materialist (or, later, animate and mechanical) in the same

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figure. Indeed, throughout the sixteenth century, anatomy introduced itself into philosophical discussions of the soul. One can read major authors of the Renaissance and be struck by the quasi-material reduction of the soul and its faculties, including the intellect (e.g., Walker 1984; Park 1988). A knowledge of the soul and its faculties was generally considered necessary to heal the body and mind (Hirai 2011; Corneanu and Vermeir 2012; Giglioni 2016) and even to repair spiritual schisms in the church (Kusukawa 1995). Meanwhile, important figures used animist concepts to promote arguments that would make up the theoretical hard core of the new science of the seventeenth century (Debus 1977; Henry 2001; Regier 2014; Jalobeanu 2016).

Sometimes animism was also portrayed as the most extreme and the most inappropriately metaphysical form of such positions, which grants the soul a kind of hegemonic “controlling” power over organic functions. In the nineteenth century, animism seemed like the clearest case and worst offender of an atavistic tendency in man to project agency on nature, for instance in the work of the influential French historian of medicine Charles Daremberg, who wrote in his discussion of Stahl:

As far as I am concerned, I see no difficulty in declaring that seeking, outside of the organism itself, some being whatsoever in order to explain life, seems to me to be a conception from the infancy of the art. It casts us back into those primitive times when men, not knowing how to account for the phenomena of nature, had a God, a Demigod, some specific genie, or simply blind *fatum* for explaining each of its manifestations. . . . I dare affirm that, if religious partisanship or pure theology had not taken hold of animism, this doctrine would not have survived its author. (Daremberg 1870, 1022)

Daremberg’s appraisal of animism is characteristic of its traditional evaluation found in many authors inspired by positivism. Animism is here regarded not as a genuine philosophical or scientific position but rather a relapse to a primitive, mythical thinking that simply projects human agency onto natural processes to compensate for the utter lack of proper scientific explanation. Animism is thus disqualified as a scientific and philosophical view, and its popularity is explained away by purely religious motives and concerns. As such, animism seems to be an irrational opposition to scientific inquiry rather than a true alternative to mechanical and materialist explanation.

But such traditional judgments lack nuance in at least two ways. First, they overlook the wide variety of animist positions and the notable evolution of animism during the period from the sixteenth to the eighteenth centuries, and the extent to which animism frequently went hand in hand with forms of mechanism

and materialism. In response, the contributions to this special issue consider how animist conceptions of the soul and of the soul's involvement in nature were transformed throughout this period, sometimes by thinkers who were not invariably animists themselves. In doing so, this issue investigates animism not as a monolithic category but rather as a variety of positions offering very different pictures of the soul, of matter, and of the workings of nature.

Second, the traditional judgment of animism overlooks its active contribution to the development and transformation of natural philosophy in early modernity. The various forms of animism, and of criticism raised against it, manifested controversies within the scientific enterprise that concerned not just the theory but also the practice and social context of natural philosophy and medicine. And it would be inaccurate to claim that animism always harmonized with religious and theological concerns. As several contributions to this special issue reveal, the tendency to involve the soul within natural philosophy threatened at times to lead to a naturalization of the soul—that is, a lowering of the soul from an immaterial and immortal entity (preferred by Christian doctrines) to a material substance or physiological process.¹ Contrary to discourses of naturalization prominent in mid- to late-twentieth-century thought, the kinds of naturalization of the soul discussed in this issue do not promote “science” at the expense of “philosophy,” nor do they seek to eliminate or bracket off the soul. Instead, they integrate the soul into a body of natural knowledge as occurs, for instance, both in the context of Enlightenment Stahlianism and in earlier Epicurean (including “medical Epicurean”) projects.² Indeed, a central episode in the history of animism is the debate between Gottfried Wilhelm Leibniz and Georg Ernst Stahl on the precise difference between living systems and mechanical systems studied by the mechanical philosophy (see Pasini 1996; Smith 2011), giving rise to the notion of “organism” (Cheung 2006; Demarest and Wolfe 2017). Leibniz and Stahl offered different ways to overcome the limitations of the mechanical philosophy in dealing with the phenomena of life, harking back to different aspects of the

1. Our usage of this term is independent of and different from that of Martin and Barresi (2000): they focus primarily on seventeenth- and eighteenth-century British thought to find forerunners of thought experiments on personal identity, such as Parfit's “fission” experiment. Further, Martin and Barresi confidently employ a more clear-cut distinction than we do in this issue between what counts as science (empirically based) and what is merely a priori (e.g., Martin and Barresi 2000, 14, 49). What naturalization could mean (Is medicine the master discourse? Is psychology a relevant “telos” or endpoint? [Compare Vidal 2011, 2019.]) is itself a topic of discussion here, instead of treating it as a straightforward and unidirectional instance of scientific progress.

2. On Stahlianism, see the work of Francesco Paolo de Ceglia, including his contribution to this volume; see also Pecere in this volume. On Epicureanism and the fortunes of the “material soul” in early modern natural philosophy, see Wolfe and van Esveld (2014). On the medicalization of the soul, see Thomson (2008) and Wolfe (2015).

ancient tradition. In fact, Stahl offered his position partly in explicit opposition to earlier animist concepts, such as Galenic spirits or van Helmont's *archeus*. Stahl's theory that an immaterial, intentional agent was directly responsible for the phenomena characteristic of life might therefore be better understood as a distinctively modern response to earlier theories that played, to his mind, fast and loose with the distinction between material and immaterial and between intentional and nonintentional.

Contributions to This Volume

Historically, animism has provided ways to think not only about living beings like humans, plants, and animals but also about the structure of nature, the interlinking of its parts, the rapport between these parts and the whole, and the fundamental causes at play. In the medieval period and the Renaissance, we find rich discussions about whether the heavenly bodies are ensouled and, if so, what kinds of souls they possess. As eccentric or abstract as these discussions can seem to contemporary readers, they engage with the essential question of how orderly change arises in nature, passed down from higher and more necessary causes (the celestial bodies) to the more irregular and unpredictable bodies of the sublunar world. As two articles in our volume show, the question of celestial souls was tightly connected to some of the most pressing themes of Renaissance philosophy. Darrel Rutkin's contribution, "A Cosmological Controversy in the Renaissance: Marsilio Ficino's and Giovanni Pico della Mirandola's Contrasting Views on the Animation of the Heavens," discusses the question of celestial life and souls in the works of Ficino and Pico, two of the most consequential philosophers of the Renaissance. In particular, Rutkin examines a critical development in Pico's cosmology, from an embrace of heavenly vitality to a rejection of it, and he considers how this shift undergirds the harsh, anti-astrological position of Pico's later period just as it reveals important aspects of Pico's complex relationship with Aristotle. Pietro Daniel Omodeo, in "Heavenly Animation as the Foundation for Fracastoro's Homocentrism: Aristotelian-Platonic Eclecticism beyond the School of Padua," begins by outlining the medieval, Islamicate discussions on celestial souls that were picked up by Italian humanists of the early sixteenth century. One of the most pressing debates of the period was on the immortality of the human soul. Omodeo shows to what extent celestial animism was used to advance one or the other position (mortality or immortality) by two of the principal actors of the debate, the Aristotelians Pietro Pomponazzi and Agostino Nifo. He then discusses how Girolamo Fracastoro furthered this debate, grounding his homocentric theory of celestial motion on a foundation of celestial animation. In doing so, Omodeo writes, he "eclectically connected Platonic vitalism with a

sort of Christianized mathematical cosmogony and Scholastic views on the soul, matter, and heavenly order.”

In the mid-sixteenth century, Girolamo Cardano emerged as one of the major opponents of the view that Aristotle (or philosophy in general) advocated for the soul’s mortality. Cardano argues passionately that not only had Aristotle held the soul to be immortal, but so had Hippocrates, whom Cardano considered the greatest physician of antiquity. Cardano no doubt thought that he was bolstering the agreement of philosophy and theology. Yet, his manner of doing so was rather disturbing to censors of the Roman Inquisition and Index. Jonathan Regier, in his contribution to this volume, “A Hot Mess: Girolamo Cardano, the Inquisition, and the Soul,” considers Cardano’s doctrine of celestial heat, a principle of life and generation in the cosmos. Regier examines how and why Cardano drew this doctrine from the Hippocratic corpus. He then goes on to discuss the nature of this celestial heat in Cardano’s *De subtilitate*, Cardano’s best known work of natural philosophy. There, Cardano seems with only the slightest qualification to equate all souls with this celestial heat. Regier considers this position in detail, especially as it manifests in discussions of human desire and love, and he examines the response of an important Vatican censor.

An early seventeenth-century author who is often mentioned in the same breath as animism is the Brabantian physician Jan Baptist van Helmont. The feature of van Helmont’s thought that is commonly described as animist is his version of the Paracelsian notion of an *archeus* as an internal principle of the generation and governance of natural things. In his contribution to this issue, Boris Demarest argues that this common assimilation of van Helmont to animism is problematic. He argues that van Helmont instead intended his theory of the *archeus* as an alternative to animist theories of his own time that explicitly attributed generation to the soul. Demarest also argues that, through his account of the *archeus*, van Helmont wanted to defend the reality of natural causes against those who ascribed causal power solely to God or transcendent causes.

Roger Smith, in his original and probing essay, “The Senses of Touch and Movement and the Argument for Active Powers,” returns to a different, perhaps older, and more enduring meaning of animism: not strictly discourses on the soul, but discourses working on the basis of analogies between, as he says, “the causal power of persons as agents and supposed causal powers at work in the world bringing about change, whether through movement or not (as in the action of so-called sympathetic causes).” Indeed, current animistic discussions like those found in New Materialism (Coole and Frost 2010; Ellenzweig and Zammito 2017) pursue this kind of thinking. But Smith turns the focus back toward the psyche, as he reflects on the possible relation between early modern explanations of change via movement and the conscious modalities accompanying active touching.

Jonathan Shaheen, in his contribution to this volume, “The Life of the Thrice Sensitive, Rational, and Wise Animate Matter: Cavendish’s Animism,” argues that Margaret Cavendish’s philosophy is animist in more than a superficial, metaphorical sense. He argues that Cavendish attributes to matter many of those cognitive properties and faculties traditionally reserved for the soul. As Shaheen argues, Cavendish’s animism is an interesting case because she sees no merit in accounting for natural phenomena through the involvement of immaterial entities such as God or immaterial souls. But this thoroughgoing materialism does not put her theory at odds with animism, since she explains natural phenomena via the operation of cognitive faculties. In this way, Shaheen argues, Cavendish’s philosophy challenges the idea that animism and materialism must be radically opposed.

Another important English woman philosopher from the seventeenth century, Anne Conway, also held views that challenged the materialist and mechanist perspectives of her time. Doina-Cristina Rusu argues in her contribution, “Anne Conway’s Exceptional Vitalism: Material Spirits and Active Matter,” that Conway’s views have mistakenly been identified as purely spiritualist. Instead, Rusu argues that, although Conway regards all of nature as spirit, these spirits are nonetheless material. In this way, Rusu suggests, Conway’s views are reminiscent of earlier Renaissance matter theories, particularly those of Bernardino Telesio. The relation between animism and materialism is further explored in Ludovica Marinucci’s contribution, “Christiaan Huygens’s Natural Theology in his *Cosmotheoros* and Other Late Writings.” Marinucci examines the question of animal souls in Huygens’s writings, showing how they can be seen to join together “his understanding of mechanism and of the teleology of nature.” Marinucci also considers how Huygens’s reflections on animal souls connect to his theories concerning other planets and their inhabitants.

Finally, two contributions deal with Georg Ernst Stahl’s animism and its impact. In his “Matter Is Not Enough: Georg Ernst Stahl, Friedrich Hoffmann, and the Issue of Animism,” Francesco Paolo de Ceglia provides an analysis of Stahl’s animism and positions it against the iatrochemist and iatromechanist traditions at work in Stahl’s opponent Friedrich Hoffmann. De Ceglia argues that Stahl’s animism was partly motivated by his adherence to the view that matter is passive, which put him at odds with many iatrochemists. This reveals that Stahl did not oppose the passive matter theory of iatromechanists, nor did he deny that the body was in a way material and mechanical. But Stahl claimed that, for this reason, the material and mechanical aspects of the body did not suffice to make it alive, and that, instead, an immaterial principle must be responsible for the organic aspects of the body. De Ceglia also carefully situates Stahl’s solution in relation to similar Neoplatonist and Renaissance Aristotelian strategies. In the final sections of his paper, de Ceglia argues that, in contrast to Stahl, Hoffmann thought

of matter as active. This position, de Ceglia suggests, commits Hoffmann in a certain respect to a crypto-animism.

In his contribution “‘Stahl Was Often Closer to the Truth’: Kant’s Second Thoughts on Animism, Monadology, and Hylozoism,” Paolo Pecere discusses Kant’s reception of the controversy between Stahl on the one hand and Hoffmann and the iatromechanists on the other. Pecere first offers an interpretation of Kant’s positive evaluation of Stahl in the precritical *Dreams of a Spirit Seer*, according to which Kant understood Stahl’s soul in a Newtonian manner—that is, as the ground of a force that can be established empirically, even though this ground itself is immaterial. By relating this reading to Kant’s precritical concerns, Pecere advances the thesis that in *Dreams of a Spirit-Seer*, Kant saw in Stahl’s approach a way to overcome the metaphysical problems plaguing both Newtonianism and Leibnizianism. In the second half of his contribution, Pecere discusses Kant’s later abandonment of this positive evaluation of Stahl’s animism, and how this abandonment marked Kant’s response to the vitalist and vital materialist positions that emerged in German thought in the final decades of the eighteenth century.

REFERENCES

- Cheung, Tobias. 2006. “From the Organism of a Body to the Body of an Organism: Occurrence and Meaning of the Word ‘Organism’ from the Seventeenth to the Nineteenth Centuries.” *British Journal for the History of Science* 39:319–39.
- Coole, Diana, and Samantha Frost. 2010. “Introducing the New Materialisms.” In *New Materialisms*, ed. D. Coole and S. Frost, 1–43. Durham, NC: Duke University Press.
- Corneanu, Sorana, and Koen Vermeir. 2012. “Idols of the Imagination: Francis Bacon on the Imagination and the Medicine of the Mind.” *Perspectives on Science* 20:183–206.
- Darembert, Charles. 1870. *Histoire des sciences médicales*. Vol. II. Paris: Baillière.
- Debus, Allen. 1977. *The Chemical Philosophy: Paracelsian Science and Medicine in the Sixteenth and Seventeenth Centuries*. New York: Science History.
- Demarest, Boris, and Charles T. Wolfe. 2017. “The Organism as Reality or as Fiction: Buffon and Beyond.” *History and Philosophy of the Life Sciences* 39(2). <https://doi.org/10.1007/s40656-016-0128-8>.
- Ellenzweig, Sarah, and John H. Zammito, eds. 2017. *The New Politics of Materialism. History, Philosophy, Science*. London: Routledge.
- Gigliani, Guido. 2016. “Medicine of the Mind in Early Modern Philosophy.” In *The Routledge Handbook of the Stoic Tradition*, ed. J. Sellers, 189–203. New York: Routledge.
- Henry, John. 2001. “Animism and Empiricism: Copernican Physics and the Origins of William Gilbert’s Experimental Method.” *Journal of the History of Ideas* 62:99–119.
- Hirai, Hiro. 2011. *Medical Humanism and Natural Philosophy: Renaissance Debates on Matter, Life and the Soul*. Leiden: Brill.
- Jalobeanu, Dana. 2016. “‘Borders,’ ‘Leaps’ and ‘Orbs of Virtue’: A Contextual Reconstruction of Francis Bacon’s Extension-Related Concepts.” In *Boundaries, Extents and Circulations*:

- Space and Spatiality in Early Modern Natural Philosophy*, ed. K. Vermeir and J. Regier, 229–54. Dordrecht: Springer.
- Kusukawa, Sashiko. 1995. *The Transformation of Natural Philosophy: The Case of Philip Melancthon*. Cambridge: Cambridge University Press.
- Martin, Raymond, and John Barresi. 2000. *Naturalization of the Soul. Self and Personal Identity in the Eighteenth Century*. London: Routledge.
- Park, Katharine. 1988. "The Organic Soul." In *The Cambridge History of Renaissance Philosophy*, ed. C. B. Schmitt and Q. Skinner, 464–84. Cambridge: Cambridge University Press.
- Pasini, Enrico. 1996. *Corpo e funzioni cognitive in Leibniz*. Milan: Angeli.
- Regier, Jonathan. 2014. "Kepler's Theory of Force and His Medical Sources." *Early Science and Medicine* 19:1–27.
- Smith, Justin E. H. 2011. *Divine Machines: Leibniz and the Science of Life*. Chicago: University of Chicago Press.
- Thomson, Ann. 2008. *Bodies of Thought: Science, Religion, and the Soul in the Early Enlightenment*. Oxford: Oxford University Press.
- Vidal, Francesco. 2011. *The Sciences of the Soul: The Early Modern Origins of Psychology*. Chicago: University of Chicago Press.
- . 2019. "Psychology." In *Encyclopedia of Early Modern Philosophy and the Sciences*, ed. D. Jalobeanu and C. T. Wolfe. Dordrecht: Springer.
- Walker, D. P. 1984. "Medical Spirits and God and the Soul." In *Spiritus. IV Colloquio Internazionale Roma*, ed. M. Fattori and M. Bianchi, 223–44. Rome: Edizioni dell'Ateneo.
- Wolfe, Charles T. 2015. "Tres medici, duo athei? The Physician as Atheist and the Medicalization of the Soul." In *Early Modern Medicine and Natural Philosophy*, ed. P. Distelzweig, B. Goldberg, and E. Ragland, 343–66. Dordrecht: Springer.
- Wolfe, Charles T., and Michaela van Esveld. 2014. "The Material Soul: Strategies for Naturalising the Soul in an Early Modern Epicurean Context." In *Conjunctions: Body, Soul and Mind from Plato to Descartes*, ed. D. Kambaskovic, 371–421. Dordrecht: Springer.