



Versions of the Natural

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There are many reasons why now is a good time to review the numerous versions of the medieval and early modern “natural,” the different and often contradictory ways in which the concept of “nature” works its way through our objects of study. Recent theoretical revisions of the relation of “the natural” to “the cultural,” along with other current critical and philosophical developments in the humanities, provide new vantage points from which to discern how problematic and contested the category of the natural has always been, and to chart the important role medieval and early modern studies have played in disputing it. The two articles that frame this volume are indicative of the scope and longevity of these debates. In our opening essay, “Defining Nature in Medieval Cosmological Literature,” philosopher Alice Lamy deftly teases out the multiple contradictions borne of the development from an antique conception of *physis* to a medieval one of Nature. English scholar Kellie Robertson draws the volume to a close with “Scaling Nature,” provocatively using medieval discussions of the concept of the microcosm to relativize and critique today’s proclamations of a “new materialism.” We could well have titled this volume, “Versions of the Natural, from Aristotle to Jane Bennett,” for its contributions are ranged along a long arc indeed, from A to B.

A constant reevaluation of the relation between nature and culture has been integral to the origins and development of medieval and early modern studies. In the latter part of the nineteenth century, when these disciplines were taking form, the specular confrontation of the twin Naturhistorisches and Kunsthistorisches museums across the Maria-Theresien-Platz in Vienna provided a concrete marker of this relationship as very much a focus of theoretical interest.¹ By the middle of the twentieth century, the high structuralist Claude Lévi-Strauss posited the opposition, and therefore the

relationship, of nature and culture as the intellectual crucible from which all the human sciences were to be formed.² A renewed challenge to any simple binary opposition of nature and culture was undertaken in the late 1960s by Jacques Derrida, and forcefully reimaged by Gilles Deleuze and Félix Guattari from the 1970s.³ In recent years this challenge has reached a pitch with the promotion of a new portmanteau term, “natureculture” (also spelled “nature-culture” or “nature/culture”). The fact that writers as diverse as sociologist Bruno Latour and biologist Donna Haraway meet in agreement over this term is itself evidence of the broad relevance and urgency of questions about the inextricability of the cultural and the natural.⁴ Within this concurrence of scholarly interest in the naturalcultural, the concept of the Anthropocene as an age when humans exert a determinate influence on the planet has emerged as a focus of study alongside many other intersecting currents that make up the whole field of the “environmental humanities.”⁵

Current ecocriticism, for instance, depends on the perception that nature and culture are so interrelated that they cannot readily be teased apart.⁶ In this volume, this insight is explicitly put to work by Anglo-Saxonist John Terry in “Æthelwulf’s *De abbatibus* and the Anglo-Saxon Ecological Imagination.” Here, Terry argues that a ninth-century Anglo-Saxon poem imagines the foundation of a monastery on a hill “crowned” with thorns in terms that are simultaneously Christological (invoking a world imbued with the presence of its creator) and wild (invoking a world of sinful “spines” to be cleared away for God’s work, but also the entangled wilderness of the Northumbrian landscape). Their naturalcultural imbrication permeates the text, in which images of the natural are expressed via the inherited cultural resources of the scriptures and church fathers, while also recreating in language the foliate forms of the art of the period.

A related interdisciplinary field, that of critical animal studies, highlights a particular flashpoint in the relationship between nature and culture: the vexed boundary between human and nonhuman animals, an issue which is approached in different ways by two of our contributors.⁷ French specialist Miranda Griffin (“Figures in the Landscape: Encounters and Entanglements in the Medieval Wilderness”) examines a series of mute, furry-skinned beings that recur across the medieval French literary genres of the romance, the *lai*, and the saint’s life. Each of these creatures, it turns out, is a partly human and partly nonhuman animal. Griffin contrasts these silent, question-posing figures with the articulate female personification of Nature found in so many other medieval philosophical and literary texts,

and analyzes the challenges the creatures pose for the humans within these texts who encounter and puzzle over them.

Working with the very different corpus of early modern political philosophy, intellectual historian Raphaële Garrod (“The Animal Outside: Animal Ingenuity and Human Prudence in French Renaissance Political Thought”) finds the nonhuman animal—as conceived in particular notions of animal ingenuity or *sollertia*—to be indispensable to understanding prudence as a human virtue. Garrod shows that according to Juan Luis Vives (as for earlier medieval scholastic thinkers), animals were capable of thinking inferentially—that is, assessing and responding to the environment, and judging on that basis the best course of action.⁸ Machiavelli goes further, she also shows, claiming that it is the fox, as much as the lion, that provides a model for the prudential and ingenious prince, while Montaigne admits to himself feeling the occasional involuntary “animal” response. As can be seen in these two contributions, transdisciplinary fields like critical animal studies also cut across periods, involving medieval and early modern scholars in what are recognizably related intellectual conversations.

Although not represented in this volume, another closely related transdisciplinary field in which lively naturalcultural debates take place is that of sound studies. This field extends beyond the discipline of musicology as traditionally defined to explore the soundworlds of melodies, texts, and images, often chiming with the environmentalist lead of one of the field’s founding figures, R. Murray Schafer, or overlapping with critical animal studies.⁹ Recent scholarship in musicology has likewise uncovered multiple complications in the category of the natural, tracing the tensions between music understood as cosmological (or mathematical) or as grammatical and vocal, and thus between music as a theoretical discipline and song as actually performed by humans or other creatures.¹⁰

The responsiveness of premodern works to contemporary critical approaches underlines how alert medieval and early modern writers are to the complex and problematic category of the natural.¹¹ At one end of the scale (a “ladder” metaphor that originates in Aristotle and is explored by Kellie Robertson in this volume) are attempts to think about the variable ways that the structures of nature relate to other large ontological categories, such as the divine or the One.¹² At the other end, effort is directed to thinking about whether and how the structures and processes of nature relate to the endlessly proliferating and changing categories, beings, and particulars that are observable within the world.

At the higher end of the scale, for instance, early Christian thought recognized an overlap between the categories of the natural and the revealed. If the revealed was primarily scriptural and miraculous, and defined as superseding the mechanics of nature, the natural could also be understood as part of God's self-revelation through creation. The Book of Wisdom claimed that "by the greatness of the beauty, and of the creature, the creator of them may be seen, so as to be known thereby," while St. Paul insisted that "for the invisible things of him from the creation of the world are clearly seen, being understood from the things that are made."¹³ This seam of thought is important to the argument made by John Terry in his essay on Æthelwulf's interpretation of an Anglo-Saxon monastic landscape as being at once natural and revealed. By the fourteenth century, writers such as the English poet William Langland had developed theories about the close relation of divine and human *kynde* ("nature" or "naturalness," but also linked to natural, loving "kindness"), while his contemporary, the visionary Julian of Norwich, formulated a theory of shared *kind* or *substance* between God and those who will be saved.¹⁴ Natural theology receives its accolade and its death sentence at the hands of Montaigne in his relentlessly skeptical "Apologie de Raymond Sebond."¹⁵

Beginning instead at the lower end of the scale, attention was directed toward the dazzling range, detail, and changeability of the natural world, so varied that it raised many questions about how all this could in any meaningful sense be understood as part of a larger notion of nature. Here again, the natureculture imbrication is everywhere in evidence. By the high Middle Ages, Aristotelian and scholastic thought provided tools for ever more precise delineation and analysis of the many subcategories of natural things, though the teachings of Aristotle also reinforced the idea that the techniques and disciplines by which the world could be known were themselves variable in their precision and purchase.¹⁶ Encyclopedism, already found in antiquity and exemplified in Isidore of Seville's influential seventh-century *Etymologiarum liber*, is all-pervasive from the thirteenth century. Alice Lamy's article presents a detailed analysis of two such thirteenth-century texts: the *Image du monde*, a work so successful that it was still being read in the sixteenth century, and the less widely diffused (and altogether weirder) dialogue of *Placides et Timéo*. The varying forms of other encyclopedic compilations, which include Vincent of Beauvais's *Speculum maius*, Jean de Meun's continuation of the *Roman de la Rose*, Brunetto Latini's *Livre dou Trésor*, or Stephen Hawes's *The Passetyme of Pleasure*, reveal the challenge of organizing the huge amount of data associated with nature, never mind representing it as part of the "ladder" of the universe.¹⁷

Throughout the Middle Ages and early modern period, inherited natural, scientific, and technical knowledge of all kinds—including information about esoteric, marvelous, and occult aspects of the universe—was collected in “books of secrets,” a genre that, according to William Eamon, not only became the popular science of the early print era, but also shaped ideas of scientific experimentation.¹⁸ These combinations of diverse material, and the structural tensions within the notion of nature that they entail, fuel the contributions to this volume by two historians of medicine, Maaïke van der Lugt and Laura Sumrall (see below); they are also explored by Alice Lamy, Mary Franklin-Brown, and Kellie Robertson.

Scholars have long recognized that the neoplatonizing Latin *prosimetra* of the twelfth and early thirteenth century are internally contradicted by their acknowledgment of the imperfections of the natural order and the supposedly problematic variability of human sexuality.¹⁹ In her essay on Bernardus Silvestris’s *Cosmographia* and subsequent French encyclopedic works (“Defining Nature in Medieval Cosmological Literature”), however, Alice Lamy goes much further than earlier studies, arguing that this contradiction is fundamental to the very notion of nature. Here the emergent vocabulary of *natura naturans* (French “nature naturals,” “naturing/making nature”) and *natura naturata* (French “nature naturee,” “natured/made nature”), used to differentiate nature understood as the creative maker from nature understood as what is made, is just one example of the fundamentally conflicted, indeed impossible, project of thinking a unified nature. Such a concept of nature would have to reconcile the intelligible and the sensory, the stars and the material world, souls and bodies; it would also have to encompass both the human urge to know that which can never fully be known, and the ceaseless, wild business of sexual reproduction.

Like Lamy, comparatist Mary Franklin-Brown (“The Monstrous Birth of Alexander the Great”) recognizes that much early thought was torn between more rational and more marvelous versions of the natural. Nature was cosmological, and thus preoccupied with the relation of the mutable material world to the supposedly orderly moving and unmoving stars, but it was also concerned with natural and supernatural marvels.²⁰ Franklin-Brown investigates the ethical and interpretative problems of understanding and acting within the world posed by the strange and portent-ridden history of Alexander, and in particular by the capacity of his father, the magus Nectanabus, to foretell the future from the constellations. In the French *Roman de toute chevalerie* by Thomas de Kent, we see an early vernacular attempt to think through the intellectual conundrums

and moral consequences posed by these barely compatible ways of understanding nature.

Concluding the volume, Kellie Robertson returns to the problems for free will that are posed by predictive arts such as astrology, physiognomy, and palm reading—arts that assume an ontological connection between human beings and the material, natural world. Robertson discusses how, for some thinkers, the human microcosm (or “minor mundus”) that reflected the larger natural world (the macrocosm or “maior mundus”) included both the material and spiritual self, both body and soul. The fourteenth-century poet Guillaume de Deguileville reacted to the tensions and strains to which this combination gave rise, she contends, when he proposed to “save” free will by insisting that the human microcosm can only be spiritual. His uncompromising position leads her to reflect provocatively and also, we think, profoundly on how difficult it has proved, even in twenty-first-century theories of “new materialism,” wholly to exclude nonmaterial from material agency.

Throughout premodernity, questions about nature and the natural impacted on certain arts or learned disciplines particularly acutely, causing naturalcultural articulations to proliferate. We see this in the two essays in this collection addressed, respectively, to medieval and early modern medicine. Notions of the natural were a central tool in determining what constituted bodily sickness and health, and in devising the regimens that constituted such a central part of the discipline of medicine.²¹ Like our volume’s two contributions to critical animal studies, these essays by van der Lugt and Sumrall vividly demonstrate the potential for dialogue across the two periods.

True, they engage with different issues, playing out the question of the natural—or natureculture—in very different spheres. In “Nature as Norm in Medieval Medical Discussions of Maternal Breastfeeding and Wet-Nursing,” van der Lugt addresses the understudied topic of breastfeeding, where the regimen-oriented teachings of the doctors repeatedly allowed them to stray into areas that were as much moral as they were physiological. Many of the debates here hinged on wet nurses: if both the Church and doctors recognized the argument that the most natural milk for a baby was that of its mother, various social pressures and medical arguments instead militated in favor of wet-nursing, with rationales ranging from aristocratic women’s reluctance to be confined by the business of rearing a baby to the doctors’ belief that a woman’s body was thrown into such disorder by childbirth as to pose a risk for the baby. At the same time, van der Lugt docu-

ments the multiple forms of arguments ranged against wet nurses, from the suspicion that babies would be morally corrupted by the milk of women of lower class to concern that they could be physiologically harmed by the milk of women who were simply malnourished.

Van der Lugt's essay thus stages a fascinating struggle for the control of breastfeeding between competing ideological investments, whether these are scientific, social, religious, or moral. The question of who controls bodily regimes is similarly raised in Laura Sumrall's study of Jan Baptista van Helmont, a seventeenth-century doctor from Louvain ("The Regurgitated Knife: Demonic Power and the Boundaries of Nature in Early Modern Medicine"). Van Helmont tried to expand the sphere of the natural to include a whole range of ailments and cures that involved the work of devils, illusions, and effects operating at a distance—phenomena that others firmly placed outside the realm of the natural. Sumrall documents the complex business of distinguishing fully demonic activity from illusions and natural illnesses caused by demons, in particular the strange phenomena of the ingestion and regurgitation or extrusion of extreme objects—knives, pins, glass, even animals, some of these objects too large to have entered the body by the throat. Debates hinged on difficult questions about how much power devils had to manipulate appearances and nature, and, indeed, whether they themselves were part of nature; but such questions also risked the possibility, according to van Helmont's opponents, that "the activity of God, nature, and the devil can [no longer] be distinguished." In this way, Sumrall's essay on seventeenth-century medicine also contributes to the same problematic of adjudicating the boundaries between the natural "marvelous" and the supernatural "miraculous" explored by Franklin-Brown with reference to the status of "wonders" in the twelfth-century *Roman de toute chevalerie*.

Van der Lugt's essay, meanwhile, reminds us that the body, and in particular its reproductive capacity, is a major preoccupation not only of medicine but of a broader Christian culture that had long had ambivalent feelings about it. Among bodily needs, seemingly innate and thus natural, sexual proclivities did not conform to the teachings of moral philosophy or the church, or to the supposedly natural imprimatur of the world for heterosexual sexual reproduction. This is a major preoccupation of the neoplatonizing *prosimetra* of the twelfth and early thirteenth centuries, but also of later vernacular literature, such as Chaucer's *Parliament of Fowles*.²² It was also obvious that human sexuality takes many different forms, many of which do not prioritize reproduction.²³ The problematic status of natural "norms" in sexuality, as also in ethics, political theory, law, and astrology,

is the subject of an important collection of essays edited by Maaïke van der Lugt, *La Nature comme source de la morale au Moyen Âge*.²⁴ This volume appeared in the series Micrologus' Library, an essential scholarly resource in intellectual history and the history of science that is insufficiently well known in the English-speaking world.²⁵

The philosophical and ethical challenges of sexuality as part of the natural world were exacerbated by the view of Nature herself as a force of generation. Both Jean de Meun's continuation of the *Romance of the Rose* and the dialogue of *Placides et Timéo* examined by Lamy use the scandal of sex as a magnet for drawing the reader into thinking about the contradictions of the natural world. Our knowledge of nature is problematic, not only in itself but because it is compromised by the makeup of the entire world of which we are a part, and those who seek to know more about the natural world are inevitably caught endlessly between titillation and guilt.

In short, nature is always productive, always in motion, its drive constant, unceasing, and all-pervasive. This theme, recaptured in modern theory by the Deleuzian-Guattarian strain that rethinks the natural in terms of energy or "becoming" rather than in terms of categories, is perceptible across many interdisciplinary fields such as critical animal studies. It also defines the "vibrancy" attributed to matter by Jane Bennett.²⁶ Indeed, from antique philosophy onwards, the natural world was seen as characterized by constant flux. Aristotle wrote *On Generation and Corruption* and insisted in the *Physics* that "we . . . must take for granted that the things that exist by nature are, either all or some of them, in motion," while Boethius's hugely influential *De consolazione philosophiae* premised its philosophical project on the negative version of this idea—the need to turn away from a world whose pleasures could only be in "mortal and impermanent things" [in . . . mortalibus cadicisque rebus].²⁷ Medieval mythography, with its endless narratives of sexuality and violence, provided a range of models for thinking about the constant coming-into-being and passing away of people and things in the world.²⁸ Scholastic natural philosophy, drawing on the recently rediscovered rich resources of the full works of Aristotle and Arabic philosophy, also addressed itself in sustained ways to questions of motion, time, and change.²⁹ Montaigne summed it up: "The world," he said, "is nothing but an eternal see-saw" [le monde n'est qu'une branloire pérenne].³⁰

We can see strands of this energized and mobile version of nature in several of the essays in this issue. The cosmological texts described by Lamy offer an intensely dynamic vision of a nature that both makes and is made, a cosmos that is in constant motion due to the never-ending pursuit of under-

standing and the perpetual urge of sexuality. Terry documents the energized and multisided approach to the landscape of the Anglo-Saxon era, while the mute, furred creatures studied by Griffin morph over the course of their narratives between the realms of the human and nonhuman animal. Garrod's essay on animal ingenuity and its human analogues illustrates a vision of the natural world in which creatures never cease perceiving, reacting to, and engaging with each other. Medical writings, too, present the body "in process": van der Lugt shows how breastfeeding was seen as part of obstetrics and the science of generation, but also as embedded in social practice, while Sumrall's analysis of seventeenth-century theories about the mysterious ingestion and expulsion of objects, as well as cures at a distance, reveals a fluid sense of the relationship between the body and the outside world, and between nature and the spirit world. Although the microcosmic thinking documented by Robertson seems to imply that nature has many discrete levels, it also reveals that this nature is in fact cut through by a destabilizing and interactive series of ontological identifications and connectivities.

This view of nature as always "becoming," a central part of which must be the "vibrancy" of matter, has been an important focus in recent theoretical work, just as it was in premodern thought. It is our sense that future studies in the medieval and early modern natural may have more to contribute to this aspect of the conversation.



Notes

- 1 See Lorraine Daston and Fernando Vidal, eds., *The Moral Authority of Nature* (Chicago: University of Chicago Press, 2004), introduction and passim; on the later period, see U. C. Knoepfelmacher and G. B. Tennyson, eds., *Nature and the Victorian Imagination* (Berkeley: University of California Press, 1977); Gillian Beer, *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot, and Nineteenth-Century Fiction*, 3rd ed. (Cambridge: Cambridge University Press, 2009), 1–21; Diana Donald, *Picturing Animals in Britain, 1750–1850* (New Haven, Conn.: Yale University Press, 2007).
- 2 For example, the central argument of *Les Structures élémentaires de la parenté* is the cultural regulation (by the "incest taboo") of "natural" sexual reproduction. Claude Lévi-Strauss, *Les Structures élémentaires de la parenté* (Paris: Presses Universitaires de France, 1949); rev. ed., trans. James Harle Bell, John Richard von Sturmer, and Rodney Needham (London: Eyre and Spottiswoode, 1968).
- 3 See for example Jacques Derrida's discussions of Rousseau and Lévi-Strauss in *De la grammatologie* (Paris: Minuit, 1967); trans. Gayatri Chakravorty Spivak as *Of Grammatology* (Baltimore: Johns Hopkins University Press, 1976). A major work of medi-

- eval scholarship to result from the confrontation between Derrida and Lévi-Strauss is R. Howard Bloch's *Etymologies and Genealogies: A Literary Anthropology of the French Middle Ages* (Chicago: University of Chicago Press, 1983). See also the two volumes of Deleuze and Guattari's *Capitalisme et schizophrénie*, vol. 1, *L'Anti-Oedipe* (Paris: Minuit, 1972); trans. Robert Hurley, Mark Seem, and Helen R. Lane as *Anti-Oedipus: Capitalism and Schizophrenia* (New York: Viking Press, 1977); and vol. 2, *Mille Plateaux* (Paris: Minuit, 1980); trans. Brian Massumi as *A Thousand Plateaus: Capitalism and Schizophrenia* (London: Athlone Press, 1988).
- 4 Donna J. Haraway, *When Species Meet* (Minneapolis: University of Minnesota Press, 2008), 7; Bruno Latour, *Nous n'avons jamais été modernes* (Paris: La Découverte, 1991); trans. Catherine Porter as *We Have Never Been Modern* (Cambridge, Mass.: Harvard University Press, 1993), 7. In Latour's words, "All of culture and all of nature get churned up again every day" (2).
 - 5 See, for example, Serpil Oppermann and Serenella Iovino, eds., *Environmental Humanities: Voices from the Anthropocene* (London: Rowman and Littlefield, 2016); Phillip John Usher, *Exterranean: Extraction in the Humanist Anthropocene* (New York: Fordham University Press, 2019).
 - 6 For an overview of this huge and still growing field, see the online *Oxford Bibliographies* entry by Derek Gladwin for "Ecocriticism," July 26, 2017, www.oxfordbibliographies.com/view/document/obo-9780190221911/obo-9780190221911-0014.xml.
 - 7 Originating in its philosophical form in continental Europe, especially in the writings of Jacques Derrida and Giorgio Agamben, this approach has been productive for medieval and early modern studies. Pioneering examples in the medieval and early modern periods respectively are Dorothy Yamamoto, *Boundaries of the Human in Medieval English Literature* (Oxford: Oxford University Press, 2000); Laurie Shannon, *The Accommodated Animal: Cosmopolitanism in Shakespearean Locales* (Chicago: University of Chicago Press, 2013).
 - 8 See Harry Austryn Wolfson, "The Internal Senses in Latin, Arabic, and Hebrew Philosophic Texts," *Harvard Theological Review* 28, no. 2 (1935): 69–133 (esp. 88–96); Ruth E. Harvey, *The Inward Wits: Psychological Theory in the Middle Ages and the Renaissance* (London: Warburg Institute, 1975).
 - 9 For sound studies, see R. Murray Schafer, *The Soundscape: Our Sonic Environment and the Tuning of the World* (Rochester, Vt.: Destiny Books, 1994); Jean-Marie Fritz, *Paysages sonores du Moyen Âge: Le versant épistémologique* (Paris: Champion, 2000); and *La Cloche et la lyre: Pour une poétique médiévale du paysage sonore* (Genève: Droz, 2011); Emma Dillon, *The Sense of Sound: Musical Meaning in France, 1260–1330* (Oxford: Oxford University Press, 2012). For the interaction between sound studies and critical animal studies, see for example Sarah Kay, "The Soundscape of Troubadour Poetry, or, How Human is Song?" in "Sound Matters," a cluster by Susan Boynton, Sarah Kay, Alison Cornish, and Andrew Albin, *Speculum* 91, no. 4 (2016): 998–1039, at 1002–15.
 - 10 Elizabeth Eva Leach, *Sung Birds: Music, Nature, and Poetry in the Later Middle Ages* (Ithaca, N.Y.: Cornell University Press, 2007); Andrew Hicks, *Composing the World: Harmony in the Medieval Platonic Cosmos* (Oxford: Oxford University Press, 2017).
 - 11 See Joan Cadden, "Trouble in the Earthly Paradise: The Regime of Nature in Late

- Medieval Christian Culture” in *The Moral Authority of Nature*, ed. Daston and Vidal, 207–31.
- 12 Aristotle, *History of Animals*, 8.1, 588a12–589a10, in *The Complete Works of Aristotle: The Revised Oxford Translation*, ed. Jonathan Barnes, 2 vols. (Princeton, N.J.: Princeton University Press, 1984), 1:774–993, at 921–23.
- 13 Wisdom 13:5 and Romans 1:20. See Edith Dudley Sylla, “Creation and Nature,” in *The Cambridge Companion to Medieval Philosophy*, ed. A. S. McGrade (Cambridge: Cambridge University Press, 2003), 171–95; Nicolette Zeeman, “*Piers Plowman*” and *the Medieval Discourse of Desire* (Cambridge: Cambridge University Press, 2006), 158–70, 187–200.
- 14 William Langland, *Piers Plowman: A Parallel-Text Edition of the A, B, C and Z Versions*, 2nd ed., ed. A. V. C. Schmidt, 2 vols. (Kalamazoo, Mich.: Medieval Institute Publications, 2011), B.17.218–94; see Rebecca Davis, “*Piers Plowman*” and *the Books of Nature* (Oxford: Oxford University Press, 2016), 85–132. Julian of Norwich, *Revelations of Divine Love: The Long and the Short Text*, ed. Barry Windeatt (Oxford: Oxford University Press, 2016), Long Text, chap. 57 (121); see Denys Turner, *Julian of Norwich, Theologian* (New Haven, Conn.: Yale University Press, 2011), 167–204.
- 15 See “Apologie de Raymond Sebond,” bk. 2, chap. 12 of Michel de Montaigne, *Les Essais: Livres I–III*, ed. Pierre Villey, preface by V. L. Saulnier, supplement by Marcel Conche (Paris: Presses Universitaires de France, 2004), 436–604.
- 16 See C. H. Lohr, “The Medieval Interpretation of Aristotle,” in *The Cambridge History of Later Medieval Philosophy*, ed. Norman Kretzmann, Anthony Kenny, Jan Pinborg, with assoc. ed. Eleonore Stump (Cambridge: Cambridge University Press, 1982), 80–98; Eileen C. Sweeney, “New Standards for Certainty: Early Reception of Aristotle’s *Posterior Analytics*,” in *Uncertain Knowledge: Scepticism, Relativism, and Doubt in the Middle Ages*, ed. Dallas G. Denery II, Kantik Ghosh, and Nicolette Zeeman (Turnhout, Belg.: Brepols, 2014), 37–62; Christia Mercer, “The Vitality and Importance of Early Modern Aristotelianism,” in *The Rise of Modern Philosophy: The Tension between New and Traditional Philosophies from Machiavelli to Leibniz*, ed. Tom Sorell (Oxford: Clarendon Press, 1993), 33–67.
- 17 M. B. Parkes, “The Influence of the Concepts of *Ordinatio* and *Compilatio* on the Development of the Book,” in *Medieval Learning and Literature: Essays Presented to Richard William Hunt*, ed. J. J. G. Alexander and M. T. Gibson (Oxford: Clarendon Press, 1976), 115–41; Mary Franklin-Brown, *Reading the World: Encyclopedic Writing in the Scholastic Age* (Chicago: University of Chicago Press, 2012).
- 18 William Eamon, *Science and the Secrets of Nature: Books of Secrets in Medieval and Early Modern Culture* (Princeton, N.J.: Princeton University Press, 1994).
- 19 Winthrop Wetherbee, *Platonism and Poetry in the Twelfth Century: The Literary Influence of the School of Chartres* (Princeton, N.J.: Princeton University Press, 1972), 152–219, 242–66; Mark D. Jordan, *The Invention of Sodomy in Christian Theology* (Chicago: University of Chicago Press, 1997), 67–91; Noah D. Guynn, *Allegory and Sexual Ethics in the High Middle Ages* (New York: Palgrave Macmillan, 2007), 93–135.
- 20 See Nadja Germann, “Natural Philosophy in Earlier Latin Thought,” in *The Cambridge History of Medieval Philosophy*, rev. ed., ed. Robert Pasnau and Christina van

- Dyke, 2 vols. (Cambridge: Cambridge University Press, 2014), 1:219–31; see also Sylla, “Creation and Nature,” 177–79.
- 21 See Luke Demaitre, “Nature and the Art of Medicine in the Later Middle Ages,” *Mediaevalia* 2 (1976): 23–47.
 - 22 See Sarah Kay, *The Romance of the Rose* (London: Grant and Cutler, 1995), 84–93, 96–110; Jessica Rosenfeld, *Ethics and Enjoyment in Late Medieval Poetry: Love after Aristotle* (Cambridge: Cambridge University Press, 2011), 45–73; Jonathan Morton, “Ingenious Genius: Invention, Creation, Reproduction in the High Middle Ages,” *L’Esprit Créateur* 55, no. 2 (2015): 4–19. On the *Parliament of Fowles*, see Cadden, “Trouble in the Earthly Paradise”; Nicolette Zeeman, “Philosophy in Parts: Jean de Meun, Chaucer, Lydgate,” in *Uncertain Knowledge*, ed. Denery et al., 213–38.
 - 23 Bonnie Kent, “On the Track of Lust: *Luxuria*, Ockham, and the Scientists,” in *In the Garden of Evil: The Vices and Culture in the Middle Ages*, ed. Richard Newhauser (Toronto: Pontifical Institute of Mediaeval Studies, 2005), 349–70; Joan Cadden, *Nothing Natural Is Shameful: Sodomy and Science in Late Medieval Europe* (Philadelphia: University of Pennsylvania Press, 2013).
 - 24 Maaikje van der Lugt, ed., *La Nature comme source de la morale au Moyen Âge* (Firenze: SISMEL, 2014).
 - 25 See Piero Morpurgo, *L’Armonia della natura e l’ordine dei governi (secoli XII–XIV)* (Firenze: SISMEL, 2000); Claudio Leonardi and Francesco Santi, eds., *Natura, scienze e società medievali: Studi in onore di Agostino Paravicini Bagliani* (Firenze: SISMEL, 2008); Thomas Bénatouïl and Isabelle Draelants, eds., *Expertus sum: L’expérience par les sens dans la philosophie naturelle médiévale; Actes du colloque international de Pont-à-Mousson, 5–7 février 2009* (Firenze: SISMEL, 2011); Antonella Sannino, *Il De mirabilibus mundi tra tradizione magica e filosofia naturale* (Firenze: SISMEL, 2011); Agostino Paravicini Bagliani, ed., *Adam, le premier homme* (Firenze: SISMEL, 2012); Danielle Jacquart, *Recherches médiévales sur la nature humaine: Essais sur la réflexion médicale (XII^e–XV^e s.)* (Firenze: SISMEL, 2014); Cecilia Panti and Nicola Polloni, eds., *Vedere nell’ombra: Studi su natura, spiritualità e scienze operative offerti a Michela Pereira* (Firenze: SISMEL, 2018); Lorenzo Bianchi and Antonella Sannino, eds., *La Magia naturale tra Medioevo e prima età moderna* (Firenze: SISMEL, 2018).
 - 26 Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham, N.C.: Duke University Press, 2008).
 - 27 Aristotle, *Physics*, 185a13–14, in *Complete Works*, ed. Barnes, 1:315–446, at 316. Boethius, *De consolazione philosophiae*, 3.pr.9.88–89, in *The Theological Tractates: The Consolation of Philosophy*, trans. H. F. Stewart, E. K. Rand, and S. J. Tester (Cambridge, Mass.: Harvard University Press, 1978), 268–71.
 - 28 See Nicolette Zeeman, “Mythography and Mythographical Collections,” in *The Oxford History of Classical Reception in English Literature*, vol. 1, ed. Rita Copeland (Oxford: Oxford University Press, 2016), 121–50, at 124, 133–34, 137–39.
 - 29 See *Cambridge History of Medieval Philosophy*, ed. Pasnau and van Dyke, 1:267–90.
 - 30 Montaigne, *Les Essais*, bk. 3, chap. 2, 804–17, at 804.