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Idolatry and the Polemics of World-Formation from Philo to Augustine

This article examines the association of idolatry with erroneous ideas about the natural world in the writings of late antique Jewish and Christian authors. It follows two polemical genres. The first is the hexaemeral commentaries composed by Philo of Alexandria, Basil of Caesarea and Augustine, which positioned the hexaemeron against the background of natural philosophy and used various critiques of idolatry to revise or refute pagan natural philosophy. The second genre is that of heresiology initiated by Irenaeus of Lyon and adapted by Augustine to refute Gnostic and Manichaean cosmological myths and disregard for the creation account in Genesis. The article analyses a variety of ways in which the prohibitions against idolatry figured in methodological questions about how to conceptualize the natural world, how to locate the sources of conceptual error, and how to distinguish those errors from truth.

Francis Bacon's *Novum Organum* of 1620 is one of the seminal texts of the seventeenth century to define a programme for the new science. He intended the treatise to serve as a new guide for the attainment of certain knowledge, and thereby to replace the old organon of Aristotelian logic. The *Novum Organum* was polemical as well as constructive. In the preface Bacon identified two positions as perils between which the intellect must hold its course. On one side were those who "dared to pronounce on nature as if it were already understood." He was presumably referring to the Aristotelians, whose notions about the physical world had, Bacon believed, erroneously been mistaken for that world and had become institutionalized in the universities. On the other side were the sceptics who claimed that nothing about the natural world could ever be known. This designation could refer to anyone influenced by the rediscovery of Pyrrhonian scepticism in the sixteenth century or to nominalist-inspired views on the radical contingency of nature.¹ Bacon's point here was more heuristic than sociological. These positions represented

1. Francis Bacon, *Novum Organum*, praefatio, in James Spedding et al., eds. *The Works of Francis Bacon* Vol. 1, (Boston: Brown and Taggard, 1861), 233. For the role of Pyrrhonian scepticism in the sixteenth and seventeenth centuries, see Richard Popkin, *The History of Skepticism from Erasmus to Spinoza* (Berkeley: University of California Press, 1979). The question of late medieval scepticism is generally related to discussion of God's ability to preserve intuitive cognitions of non-existing things, and particularly to Nicholas of Autrecourt's critique of Aristotelianism. On the cognitive implications of these ideas, see Katherine Tachau, *Vision and Certitude in the Age of*

obstacles in the path toward true science. But they were not simply obstacles to be avoided once recognized. Rather, false notions about the natural world and the sceptical inability to distinguish the true from the false had already become internalized within the structure of the human intellect. The *Novum Organum* was not so much a warning against, but a treatment for, the confusion of true and false conceptions of the physical world.

To impress the gravity of this situation, Bacon employed, famously, the metaphor of the “four idols” to characterize the precarious circumstances facing any attempt to found a new science. The idols of the tribe, cave, marketplace, and theatre implicate human nature, individual experience, language and common philosophy in the production of false, or idolatrous, knowledge. On the grounds that such obstacles to certain knowledge had become the norm, Bacon declared the human intellect of his time to be in a state of ill health and insanity. Through the daily habits of life the mind had become pre-occupied with rumour and impure doctrine, besieged by vain idols.² The new organon was therefore more than a prescriptive system for logical inference; it carried the freighted obligation to “purge” and “liberate” the human mind from false notions. As Bacon informed his readers, “entering the kingdom of man, founded on the sciences, is practically the same as entering the kingdom of heaven, *in that entrance is granted only to children.*”³ One must regain innocence by detecting and destroying the idols of false science, or those of false religion, in order to enter the truth of these respective kingdoms. Scientific method, in this configuration, serves a more complex function than a set of regulative procedures would suggest. It occupies the prophetic role of calling the intellect back from errors that have become so customary as to be mistaken for truths.

The connection Francis Bacon made between his reform of science and a critique of idolatry is not altogether surprising. The ideal of reform, from the prophets of the Hebrew Bible to modern liberalism, has fuelled many bonfires of diverse vanities. In an astute analysis of the conceptual structure of the

Ockham: Optics, Epistemology and the Foundation of Semantics, 1250–1345 (Leiden: E. J. Brill, 1988), 315–52; Marilyn M. Adams, *William Ockham* Vol. 1, (Notre Dame: University of Notre Dame Press, 1987), 551–629; and on the scepticism of Nicholas of Autrecourt: Julius Weinberg, *Nicholas of Autrecourt: A Study in 14th Century Thought* (Princeton: Princeton University Press, 1948), 31–113.

2. Bacon, *Nov. Org.*, Vol. 1, 234: “postquam mens ex quotidiana vitae consuetudine, et auditionibus et doctrinis inquinatis occupata, et vanissimis idolis obsessa fuerit.”

3. Bacon, *Nov. Org.*, Vol. 1, 274: “ut non alius fere sit aditus ad regnum hominis, quod fundatur in scientiis, quam ad regnum coelorum, *in quod, nisi sub persona infantis, intrare non datur.*” The scriptural reference is to Matt. 18:3. On the critique of the idols as a central component of Bacon’s method, see Peter Urbach, *Francis Bacon’s Philosophy of Science: An Account and a Reappraisal* (La Salle, Illinois: Open Court, 1987), 83–106. For the broader conception of reform in Bacon’s natural philosophy see Julian Martin, *Francis Bacon, the State, and the Reform of Natural Philosophy* (Cambridge: Cambridge University Press, 1992); and Paula Findlen, “Francis Bacon and the Reform of Natural History in the Seventeenth Century,” in Donald R. Kelley ed., *History and the Disciplines: The Reclassification of Knowledge in Early Modern Europe* (Rochester: University of Rochester Press, 1997), 239–60. For criticisms of Bacon’s method see Michael Hattaway, “Bacon and ‘Knowledge Broken’: Limits for Scientific Method,” *Journal of the History of Ideas* 39, (1978): 183–97; and Lisa Jardine, “*Experientia Literata* or *Novum Organum*? The Dilemma of Bacon’s Scientific Method,” in *Francis Bacon’s Legacy of Texts*, ed. William A. Sessions (New York: AMS Press, 1990): 47–67.

biblical injunctions against idolatry, Moshe Halbertal and Avishai Margalit have elaborated a four-link chain of historical extensions built on the biblical prohibitions. The first link consists of a monotheistic critique of the conventions of polytheism, such as supplicatory statues and mythical poems (the literal level of anti-idolatry polemic); the second link, an extension of this initial critique, is a philosophically informed conception of religion raised against popular notions of the same religion (e.g. the perceived need to allegorize anthropomorphic language in scripture or to explain away ritual sacrifice); the third extension is the secular enlightenment critique of religion in general; the fourth and final link is a critique of ideology pure and simple.⁴ This conceptual progression shows a process of secularization that is structurally continuous with theological origins. Francis Bacon's use of idolatry plays an important role in Halbertal and Margalit's analysis. Bacon seems at once to promote a secular enlightenment usage of idolatry to distinguish between true and false science, and to provide the tools for ideology critique by elaborating the basic mechanisms of systematic illusion, such as the biases of language, education, and social norms.

I suggest pointing Francis Bacon backward rather than forward. In some sense it was an obvious choice to associate the errors of false science with the errors of false religion. This association had already been made in the later ancient world when biblically informed thinkers were considering the meaning of creation alongside pagan natural philosophy. At this historical juncture, biblical thinkers tied the structure of idolatry critique to evaluations of natural science. But it would be a mistake to view this convergence in the overly linear scheme of Halbertal and Margalit. For one thing, the critique of idolatry was not exclusive to biblical traditions. The structure of a philosophical critique of idolatry already belonged well within Greek philosophical schools in the sixth and fifth centuries B.C.E. Xenophanes criticized anthropomorphic depictions of divinities that fell short of the "one god . . . in no way similar to mortals either in body or in thought." A second example of a pagan philosophical position that parallels a critique of idolatry can be found in Parmenides' poem "On Nature". Unlike Xenophanes' obvious critique of anthropomorphism, Parmenides took aim at all "appearances" derived from sense impressions and proposed a strict logical monism for all reality. The poem hinges on a distinction between seeming, or opinion (*doxa*) and truth (*aleitheia*), which can be applied both to conceptions of the divine and to those of the natural world. For Parmenides, errors about nature and about god occur for the same

4. Moshe Halbertal and Avishai Margalit, *Idolatry*, trans. Naomi Goldblum (Cambridge, MA: Harvard University Press, 1992), 112–16, offers the most succinct formulation of the "chain link" conception of extensions to the biblical injunction against idolatry. The book as a whole, while being highly insightful, has sacrificed historical messiness for conceptual clarity. The philosophical critique of popular religious conceptions such as anthropomorphism was not simply an addition to biblical monotheism. Pagan monotheists since Xenophanes used the same polemic against what they saw as popular conceptions of religion. The historical route to a secular critique of religion was, likewise, not so linear. The millenarian function Bacon gave to science, for instance, should be taken quite literally. Cf. Katherine R. Firth, *The Apocalyptic Tradition in Reformation Britain, 1530–1645* (Oxford: Oxford University Press, 1979), 204–7.

reasons.⁵ Likewise, much of Presocratic natural philosophy carried within it a critique of mythological representations of the gods. Early science was as much a reform of religion as anything else, and these reforms relied on arguments structurally parallel to philosophical critiques of idolatry. In late antiquity, when biblical thinkers entered into broad discussions about the natural world, the biblical injunction against idolatry converged with the philosophical critique in two ways. One was to use the biblical injunction against the philosophical position: the philosophers may have demythologized the natural world, but in doing so they mistook creation for the creator, thus worshipping at the idol of nature. The other was to borrow the philosophical critique to attack those who sought to mythologize scripture and the divine act of creation.

These two variations on idolatry critique belonged to distinct theological and polemical contexts. One was rooted in a tradition of hexaemeral commentary that began with Philo of Alexandria's attempt to interpret the six days of creation through the conceptual order of Plato's *Timaeus*. Among Christians, Basil of Caesarea adopted this exegetical interest in Genesis in the fourth century. The genre was quickly translated into Latin by Eustathius and Ambrose, and developed in robust ways by Augustine's career-long dedication to the book of Genesis. This exegetical tradition positioned itself in relation to natural philosophy, which it saw as either competing explanations of the cosmos, or as a set of theoretical notions that could be used to flesh out the sparse account of the hexaemeron in Genesis, or as both. The critique of idolatry was most pointedly used to counter natural philosophy when that philosophy was most successful on its own terms. To the degree that nature could be explained autonomously, it could also become the object of idolatrous adoration. Hexaemeral exegetes frequently used Romans 1:25 as a proof text for the error of deifying the natural world: "they exchanged the truth about God for a lie and worshipped and served the creature rather than the creator." Paul was referring to a more literal example of idolatry, the construction of images (icons) resembling human and animal forms. But Paul also claimed that this polytheistic idolatry arose from a failure to acknowledge the clear truths about God that are discernible from creation. He suggested a form of natural theology, accessible to those who lacked revelation, as an alternative to idolatry. Later exegetes and polemicists who were more engaged with the relationship between Genesis and natural philosophy were somewhat less sanguine about the obvious conclusions of natural theology. Rather than perceiving the natural world as an effect of God's creation, philosophers often attributed divine attributes, such as eternity, to the physical world. The distinction

5. Xenophanes famously claimed that cows and horses, if they were capable, would depict their gods as cows and horses. This may be the first "projection" theory of religion. The fragment on anthropomorphism is in G. S. Kirk and J. E. Raven, *The Presocratic Philosophers* (Cambridge: Cambridge University Press, 1962), 169, n. 172. For the quotation in the article: 169, n. 173. For Xenophanes and the projection theory of religion see Halbertal and Margalit, *Idolatry*, 129. On Parmenides' distinction between seeming and truth: Kirk and Raven, *The Presocratic Philosophers*, 279, n. 353. For a general account of his critique of the human error of imposing the limitations of human perception onto the "one," see W. K. C. Guthrie, *History of Greek Philosophy* Vol. 2 (Cambridge: Cambridge University Press, 1965), 50–57.

between a natural philosophy that makes an idol of nature and one that supports a creational theology is subtle. Guilty interpreters need not worship created objects literally, just confuse divine attributes with natural ones.

The second context in which idolatry critique converged with conceptions of the natural world was the theological and polemical literature directed against the various Gnostic accounts of world-formation. This heresiographical tradition, initiated by Irenaeus of Lyon, Hippolytus of Rome, and Tertullian, was distinct from the exegetical tradition, although it did inform Augustine's Genesis commentaries, the first of which was explicitly directed against the Manichaeans. But for the most part, the heresiographers were not trying to solve exegetical problems with an eye toward natural philosophy. They were more apt to use the old philosophical critiques of mythology against Gnostic creation myths. Philosophical principles applied to creation were a resource for the heresiographers. While some, especially Hippolytus and Tertullian, argued that heresies had historical roots in ancient philosophy, this was not really a critique of philosophy as the ancestor of heresy. Rather, the falsehood of heresy was further implicated by its derivative nature. Hippolytus, who developed the most systematic argument for the philosophical origins of heresy, referred to the heretics as *klepsilogoi*, "argument thieves." His polemical point was that none of the heretical ideas actually came from Scripture, as their authors had claimed.⁶

Heresiographers used the structure of idolatry critique in several ways. Rather than deifying the cosmos, the Gnostics under-valued it as the product of an evil or irrational creator. Thus, their evaluation of the cosmos entailed the production of an imaginary deity. This was not a failure to recognize the evidence for a natural theology, as Paul had accused the pagans, but rather a complete misreading of the natural world for the purpose of a counter-theology. Furthermore, the Gnostics confused themselves with the true God by projecting human qualities onto the realm of the divine. And, most obviously, the Gnostics expressed these errors in the form of elaborate mythologies. They returned to one of the most primitive forms of idolatry in writing about the cosmos. Even the pagan philosophers had repudiated mythology for its many profanities and contradictions. And the Gnostics had the effrontery to read scripture into their myths, thereby turning truth itself into a lie in a manner more extreme than even Saint Paul had imagined. Their misinterpretation of the natural world seemed to the heresiographers intimately tied to their misuse of scripture.

Both the hexaemeral tradition and the heresiographical tradition used idolatry to indicate core confusions of creation for creator. Before giving specific examples of this, I would like to identify what I take to be a definitive element of the connection between idolatry critique and conceptions of the natural world. Such critiques of idolatry served a methodological function by identifying the sources of erroneous thinking about the cosmos. Moreover,

6. Hippolytus, *Refutatio omnium haeresium*, prooemium, ed. Miroslav Marcovich (Berlin: W. De Gruyter, 1986), 56. For a detailed account of how the heresiographical tradition construed philosophical doxographies see Jaap Mansfeld, *Heresiography in Context* (Leiden: E. J. Brill, 1992); and for the development of the heresiological tradition, see Alain Le Boulluec, *La notion de l'hérésie dans la littérature grecque, iie-iiiie siècles* (Paris: Études Augustiniennes, 1985).

the kinds of errors that implicated idolatry with conceptions of nature were plausible human errors, ones that could be made with ease. For this reason, strict methodological attention had to be paid to their refutation. They were not self-evidently false. The conflation of creation with creator was conceived to be a genuine problem of confusion, not a willful disobedience of command. In an ur-story of idolatry from the book of Exodus 32, Aaron's construction of the golden calf, one is struck by the lack of any real comparison between the calf and God. The Israelites decided to worship something that was obviously not God. By contrast, Francis Bacon's elaboration of the four idols of the mind presented acts of mental idolatry as virtually impossible to avoid. Human nature, individual experience, language, and philosophical education all conspire to distort perceptions of nature by substituting perceptions of one's self or one's social conventions. In the *Instauratio Magna*, Bacon distinguished between "innate" and "adventitious" idols. The former can never be eradicated, he tells us. The mind must persist in a continuous state of "reproval" against its own false notions.⁷ Bacon explicitly identified his doctrine of the idols with Aristotle's *Sophistical Refutations*.⁸ Just as the semblance of sophistry to valid logic required a method to distinguish them, so the plausibility of mistaking mental phantasms for natural truths required its own method of "reproval." This attempt to identify methodological techniques for locating the source of erroneous thinking informed both the hexaemeral and the heresiographical extension of idolatry into questions of cosmology.

Hexaemeral Commentaries, Creation, and the Idol of Nature

The use of hexaemeral commentaries to refute philosophical errors began with Philo of Alexandria's *De opificio mundi* written around the year 30 C.E. All late ancient hexaemeral commentaries were shaped by this seminal work, and many later Christian authors assumed that Philo was a bishop or at least an honorary Christian.⁹ The *De opificio* is an allegorical interpretation of the creation story in Genesis designed to show that the cosmological truths of Plato's *Timaeus* appeared first as a philosophical preface to Mosaic law. The

7. Bacon, *Instauratio Magna*, "distributio operis," Vol. 1, 219: "Atque priora illa duo *Idolorum* genera aegre, postrema vero haec nullo modo, evelli possunt. Id tantum relinquitur, ut indicentur, atque ut vis ista mentis insidiatrix notetur et convincatur." Bacon was not the only theorist of the new science to employ the motif of idolatry, but he, more than anyone else I know of, viewed idolatry as embedded in mental structures. Robert Boyle also claimed that the "vulgar" conceptions of nature (Platonic, Aristotelian, Stoic, Neoplatonic) were forms of idolatry. His analysis of the idolatrous character of incorrect views of nature took the form of a genealogical and historical account of the derivation of idolatry. The "heathen" world was idolatrous both in its religious practices and in its philosophy. The scriptural reproof of idol worship and the critique of erroneous philosophies of nature are, therefore, one and the same. See Robert Boyle, *A Free Enquiry into the Vulgarly Received Notion of Nature*, ed. Edward B. Davis and Michael Hunter (Cambridge: Cambridge University Press, 1996), 41–57. On the broad theological context for Boyle's natural philosophy, see Jan Wojcik, *Robert Boyle and the Limits of Reason* (Cambridge: Cambridge University Press, 1997), 95–117.

8. Bacon, *Nov. Org.*, Vol. 1, 251: "Doctrina enim de Idolis similiter se habet ad interpretationem naturae, sicut doctrina de Sophisticis Elenchis ad dialecticam vulgarem."

9. For an overview of the hexaemeral commentary tradition in late antiquity, see Frank Robbins, *The Hexaemeral Literature: A Study of the Greek and Latin Commentaries on Genesis* (Chicago: University of Chicago Press, 1912); and Paul Vignaux, ed. *In principio, interprétations des premiers versets de la Genèse* (Paris: Études Augustiniennes, 1973). Eusebius, *Ecclesiastical*

Jewish Alexandrian school of exegetes appropriated Greek meanings for Jewish texts in such a way that “classical writers [were] demoted to the status of Mosaic epigones.”¹⁰ There were several levels of polemic here beyond the obvious one of making Moses the progenitor of Plato. Philo positioned Genesis as a didactic, philosophical account of *cosmopoiesis* contending with other explanations of the universe. The composition of Genesis distinguished Moses from other law makers by providing a philosophical introduction to the law code proper. Where other law makers presented their codes either “unembellished and naked,” or dressed up in “mythical fabrications,” Moses prefaced his law code with a philosophical *archê*, which consisted of a rational account of the creation of the cosmos. The implication is clear. Philo was suggesting that the civic/constitutional foundations of the Greek polis were dogmatic when compared to the philosophically structured law code of the Jews.¹¹ Furthermore, the congruence of cosmos and law in the Mosaic books rendered the observant person a “citizen of the cosmos” (*cosmopolitês*).¹²

History, 2.16–17 is the earliest evidence claiming that Philo was an admirer of Christian communities in Egypt and that he conversed with Peter in Rome. David Runia, *Philo in Early Christian Literature: A Survey* (Assen: Fortress Press, 1993), 3–7 analyses the early claims of Christian authors for recruiting Philo. He only lost his position as a respected early Christian in the seventeenth century. See Runia, *Philo in Early Christian Literature*, 31–3.

10. David Dawson, *Allegorical Readers and Cultural Revision in Ancient Alexandria* (Berkeley: University of California Press, 1992), 74–82. The *De opificio mundi* is allegorical in the sense that it reads into Genesis a set of philosophical/cosmological meanings that are not in any apparent way intended by the author. Philo’s interpretive methods fit easily with Stoic and Middle Platonic exegetical practices for reading mythical and poetic texts. The Stoic tradition of allegorical reading recognized three distinct levels of meaning: literal, ethical, and metaphysical. Thus, philosophically oriented readers found deeper meanings in Homeric poems that corresponded to philosophical notions of virtue or to philosophical cosmologies. Pagan and Jewish readers shared these forms of allegorical interpretation. Heraclitus, the first century author of the *Homeric Allegories*, argued that Homer was the original philosopher whose poems contained sophisticated philosophical ideas in allegorical form. Likewise, Aristobulus, the Jewish Alexandrian exegete, held that Moses wrote philosophical material in allegorical form, which provided the basis for later Greek philosophy. Philo clearly saw himself as one of many allegorical readers who located the derivation of philosophical ideas from the allegorical meaning of non-philosophical texts. For Philo’s place within pagan interpretive strategies, see Robert Lambertson, *Homer the Theologian: Neoplatonist Allegorical Reading and the Growth of the Epic Tradition* (Berkeley, University of California Press, 1986), 44–54. On the notion of Moses as the originator of all philosophy see the essays collected in Roberto Radice et al., eds. *Filone di Alessandria: la filosofia mosaica* (Leiden: E. J. Brill, 1987). For a broad and suggestive account of the “elective affinities” between the *Timaeus* and Genesis see Jaroslav Pelikan, *What has Athens to do with Jerusalem? Timaeus and Genesis in Counterpoint* (Ann Arbor: University of Michigan Press, 1997); a more detailed study is David Runia, *Philo of Alexandria and the Timaeus of Plato* (Leiden: E. J. Brill, 1986). For Philo’s exegetical techniques see Valentin Nikiprowetzky, *Le commentaire de l’Ecriture chez Philon d’Alexandrie* (Leiden: E. J. Brill, 1977).

11. Philo, *De opificio mundi*, 1.1 (LCL, Vol. 1, 6). A pagan tradition of positive evaluations of Moses as law giver existed at least from the time of Hecataeus of Abdera (fourth century B.C.E.): John G. Gager, *Moses in Greco-Roman Paganism* (Nashville: Abingdon Press, 1972), 26–37. For a re-evaluation of this tradition emphasizing Jewish origins for it, see Erich S. Gruen, *Heritage and Hellenism: The Reinvention of Jewish Tradition* (Berkeley: University of California Press, 1998), 49–55. A negative evaluation of Moses as an unphilosophical law maker also existed: Gager, *Moses in Greco-Roman Paganism*, 87–101.

12. Philo no doubt derived this expression from Stoic usage. Ironically, its origin was probably from the Cynics, a school founded by Diogenes who became a “citizen of the cosmos” by systematically disregarding the laws of every particular polis. Diogenes Laertius, *Lives of Eminent Philosophers*, 6.2, 63 (LCL, Vol. 2, 64). On the meaning this phrase may have had for Diogenes see John L. Moles, “Cynic Cosmopolitanism,” in *The Cynics: The Cynic Movement in Antiquity and Its Legacy*, ed. R. Bracht Branham and Mari-Odile Goulet-Cazé (Berkeley: University of California Press, 1996), 105–20.

Mosaic law has a universal correlation with nature. This point was apologetic. Among the charges brought by pagans against Jews and Christians was their parochialism. Why should a universal deity favour an insignificant people from the provinces?¹³ Just as Philo made Moses the source of all philosophical wisdom, so he equated Jewish law with the “design of nature.”

Universalizing the Mosaic account of the cosmos put Philo into a polemical relationship with other universalizing philosophies of nature. He imagined the hexaemeron within an agonistic framework of competing philosophical cosmologies, from which Moses emerged as the best philosopher and law giver. Presumably, Philo could have simply declared philosophical debate otiose by virtue of Moses’ temporal priority and the truth of his account. Instead, he put Moses into the polemical fray by suggesting that in the hexaemeron Moses had anticipated later erroneous arguments concerning the cosmos and had already refuted them in Genesis before they had ever been made. Thus, the original philosophy of nature was at once a response to and correction of future philosophical devolution and error. This rather curious notion of Genesis as an anticipatory refutation of future errors arose from the association of erroneous natural philosophy with idolatry. Philo criticized the idea of an eternal cosmos as the effect of “wondering at” (*thaumasantes*) the world rather than its creator. This idolatrous relationship to the cosmos resulted from a theological misunderstanding of causation. Contrary to those who claim that the cosmos is “ungenerated and eternal,” Moses “understood the necessity among existing things that there be an active cause and a passive object.” Philo does not name the authors of the opposing position, but his reference to an “ungenerated and eternal” world, as well as to the active and passive aspects of causation, suggests Aristotle.¹⁴ An eternal world, according to Philo, would render

13. Origen, *Contra Celsum*, trans. Henry Chadwick (Cambridge: Cambridge University Press, 1965), 4.23, 199–200 cites Celsus as accusing Jews and Christians of believing that God “deserted the whole world and the motion of the heavens, and disregarded the vast earth to give attention to us alone.” Exegetical emphasis on God as “creator of heaven and earth” — i.e. a universal deity — had an apologetic provenance. Galen also employed a philosophical critique of biblical cosmogony based on a distinction between the Mosaic God who creates whatever he wills and a Platonic demiurge who is deliberate and wise. Again, the underlying criticism was of a God that has only particular, rather than universal, relevance. See R. Walzer, *Galen on Jews and Christians* (Oxford: Oxford University Press, 1949), 11–13 and 23–37.

14. Philo, *Opif.*, 8: ἔγω δὲ ὅτι ἀνογκαιὸν ἔστιν ἐν τοῖς οὐρανοῖς τὸ μὲν εἶναι δραστήριον αἴτιον, τὸ δὲ παθητόν. For a commentary on the identity of Philo’s opponents in this passage see Philo of Alexandria, *On the Creation of the Cosmos According to Moses*, introduction, translation, and commentary by David T. Runia (Leiden: E. J. Brill, 2001), 111–13. Runia suggests that Philo is referring to the “Chaldeans” who “represent a mentality rather than any particular Greek philosophy”. He also refers to other passages in Philo in which the Chaldean “mentality” is associated with excess “wonder” at the cosmos, making it into an “autonomous god.” In other words, Philo seems to associate the Chaldeans with natural philosophy that turns the cosmos into an idol. Runia further claims that “Aristotle cannot be the main opponent” on the grounds that not all elements of the opponent position are consistent with Aristotle and that some aspects of the Mosaic philosophy outlined by Philo are consistent with Aristotle. But if we take the unnamed opposition to represent a “mentality” rather than a specific philosophical system, surely elements of Aristotle figure into that mentality. Over the course of his commentary on this chapter, Runia does suggest that the idea of an “ungenerated and eternal” world most closely approximates Aristotle’s views (113), that the formulation of active and passive principles has “some reference to Stoic and Aristotelian terminology” (115), and that it is “still possible” to read Philo’s argument as primarily directed against Aristotelian philosophy (121). Borrowing from one’s opponent to show that the proper understanding of his/her own ideas entails a different conclusion is good polemical form. On Philo’s use

God, the first cause, largely “inactive” (*apraxia*).¹⁵ Thus, to preserve God in the position of necessary cause required giving the world a temporal beginning.

Philo offered a second reason why the necessity of causality argued against an eternal world. This one was rooted in providence rather than transcendence. The argument from providence was alien to Aristotelian philosophy, but easily derived from the Stoic conception of *pronoia*, although the Stoics did not use this concept to subtend a theory of creation.¹⁶ Philo, in effect, asserted that only the fact of God’s having created the world would make sense of divine care for its outcome. An uncreated world would be *ipso facto* deprived of God’s attention. With this argument Philo shifted from physical to moral reasoning, though it is perhaps more accurate to say that he elided moral and physical considerations. Providence is at once “the most useful [incentive] for piety,” and that which prevents the cosmos from being “anarchic” (literally without principles).¹⁷ Philo criticized the idea of an uncreated universe as an error resulting from an idolatrous relationship to the cosmos: wonder for the creation rather than the creator. He also provided a mechanism for avoiding this idolatrous conception of the cosmos by way of a true understanding of the very philosophy from which the error arose. Correct understanding of the “necessity” entailed by a philosophical theory of causation and of the metaphysical basis for divine providence effectively counters the misapplication of a divine attribute to the natural world.

Both of these arguments constitute a rational critique of idolatry in the sense that Philo was assuming that a failure to achieve a fully rational understanding of causes and cosmic structures leads to an idolatrous conception of the universe. Idolatry is an error that stems from a failure in reason. There is a deeper critique of idolatry in the *De opificio* that rests on the opposite assumption: that the success of reason leads to idolatry. This critique occurs in Philo’s commentary on the temporal order of creation in Genesis, and specifically on the fact that God put the heavens in order on the fourth day, one day after setting the earth in order. Philo’s interest in this ordering of creation seems to have stemmed from a belief that this particular ordering found in Genesis was both irrational and purposeful. He begins his exegesis on this point by refuting an obvious misinterpretation of this ordering.

God proceeded to order the heaven with variegated adornment, not because he placed it behind the earth in rank, thereby giving a privileged position to the inferior nature and considering the superior and more divine deserving of the second

of Aristotle against Aristotle cf. Harry Wolfson, *Philo: Foundations of Religious Philosophy in Judaism, Christianity, and Islam*, Vol. 1 (Cambridge, MA: Harvard University Press, 1947), 296.

15. Arguments about the “idleness” of God went hand in hand with support for an eternal world. Such arguments were used against both pagan theories of creation and biblical theories of creation. Cf. Runia, *Commentary*, 113. Augustine, *De civitate dei*, 9.5, was still responding to this charge. Scholastic discussions of the eternity of the world often emphasized a counterpoint as well. God could have created an eternal world and still be a transcendent cause of that world. This was the argument of Thomas Aquinas in the *De aeternitate mundi*. He was trying to preserve the integrity of Aristotelian philosophy as well the truth of creation *ex nihilo*.

16. Wolfson, *Philo*, 298.

17. Philo, *Opif.*, 11.

position only, but rather in order to give a very clear demonstration of the might of his sovereignty. He understood in advance what the humans who had not yet come into existence would be like in their thinking. They would focus their aim on what is likely and convincing and contains much that is reasonable, but not on the unadulterated truth, and they would put their trust in appearances rather than on God, thereby showing admiration for sophistry rather than wisdom.¹⁸

The order of creation in Genesis is designed to refute future errors about the cosmos. These future errors, moreover, are the result of “likely” (*eikota*), “convincing” (*pithana*), and “rational” (*eulogon*) conclusions.¹⁹ These conclusions are not, however, the truth about the cosmos. The ordering in Genesis therefore is less rational (because the heavens are indeed “superior and more divine” than the earth), but it is less rational with a purpose. Were the text to support the more likely interpretation of the cosmos by, for instance, ordering the heavens prior to the earth, it would facilitate the erroneous conclusion that “the regular rotation of heavenly bodies is the cause of the yearly growth and production from the earth.”²⁰ Such a position is idolatrous on two accounts. It results from putting “trust” and “wonder” in appearances and sophistry, rather than in God and wisdom. And it supposes that the heavens play a necessary causal role in natural processes, rather than reserving this distinction for God alone. Moses, foreseeing this dilemma and the idolatrous error to which it would lead, deliberately composed the text to refute obvious assumptions about the cosmos.

This particular example also illustrates general methodological considerations concerning the relationship between scripture and natural philosophy. Philo discussed the fourth day of creation as if it represented divine actions that occurred temporally after the actions of the third day of creation. But the sequence of the text cannot actually represent a temporal order of creation. Philo has already informed his readers not to consider the six days as a length of time. God does not require time to create. Rather, He “created everything at the same time” (*hama*).²¹ The numbering of days stands for the rational order of numbers, which is relevant for understanding the order of God’s creation. Indeed, much of Philo’s exegesis of the fourth day of creation pertains to the perfection of the number four and therefore its suitability for the “day” on which God set the heavens in order. The temporal sequence of days is purely an effect of the text, not an actual sequence of creation. Since, however, Philo treated the fourth day as if it were part of a temporal sequence, he drew attention to the relationship between the ordering of the text and the order of creation. The scriptural text cannot simply be superimposed over the actions of God in a literal manner, but likewise, strictly allegorical interpretations are not always sufficient either. In this instance, Philo implied a genuinely dialectical reading of a scriptural passage. Its meaning can only be

18. Philo, *Opif.*, 45 (translation by Runia, *On the Creation of the Cosmos*, 57).

19. On these particular terms and their association with academic scepticism, see Runia, *On the Creation of the Cosmos*, 189.

20. Philo, *Opif.*, 45: τῶν ἐκ γῆς ἀνά πᾶν ἔτος φεομένων καὶ γιγνομένων ἀπάντων αἰτίας ὑπολήψονται τὰς τῶν κατ’ οὐρανὸν ἀστέρων περιπολήσεις.

21. Philo, *Opif.*, 13.

understood in relation to a rational but erroneous theory of the natural world. Since the erroneous theory is rational, it cannot be refuted through reason, hence the seemingly paradoxical account in Genesis. But Philo was also making a comment about natural philosophy based entirely on reason. Plausible philosophical theories cannot be superimposed on the natural world either. The ordering of the written text of Genesis provides the key corrective to the inherent tendency of natural philosophy to become idolatry *because* of its rationality. No one would mistake the earth as causing the natural cycles of the heavens, so the text was written in precisely this way in order to counter the common mistake that many later thinkers would make: that the heavens cause the terrestrial cycles. Both views, in Philo's mind, comprise the same mistake. They afford to created things, rather than to the creator, a position of causal priority. Thus, Moses was able to counter a sophistical error, by way of a ridiculous error that no one would make.

Philo's *De opificio mundi* provided a general format for Christian hexaemeral commentaries by orienting the creation account in Genesis toward pagan natural philosophy, whether in the mode of accommodation or criticism, and by using the motif of idolatry as a basis for refuting or refining philosophy. Sometime in the 370s Basil of Caesarea composed a series of sermons on the hexaemeron designed to instruct the reader, or listener, how the book of Genesis can provide a basis for understanding the cosmos.²² Basil followed Philo's convention of claiming that scripture was already polemically engaged with alternative views of the cosmos. The homilies, however, expressly aimed at a literal interpretation of Genesis, thereby excluding much of the ground for the idea that Moses composed a work of philosophical depth on the far side of the letter.²³ This Christian concern for literalism, however, implied an even bolder claim about the polemical meanings of scripture. Basil referred to the same passage in Genesis on the temporal priority of the earth, and like Philo suggested that its purpose was to prevent a plausible excuse for heliolatry.

Since some people consider the sun to be the cause of things produced from the earth, drawing energy from the depths to the surface by the attraction of heat, the ordering of the earth was prior to that of the sun so that those in error would cease from worshipping the sun as providing the cause of life.²⁴

Like Philo, Basil made the ordering of the cosmos into a polemical point aimed at future philosophical and idolatrous errors. But Basil's literal interpretation carried a more radical implication. Not only was scripture composed to refute future sophistries, but also the cosmos itself was created in

22. For the dating of these nine homilies see Paul Fedwick, "A Chronology of the Life and Works of Basil of Caesarea," in *Basil of Caesarea: Christian, Humanist, Ascetic*, ed. Paul Fedwick (Toronto: Pontifical Institute of Medieval Studies, 1981), 18. The dating is controversial. For a discussion of the problems see Philip of Rousseau, *Basil of Caesarea* (Berkeley: University of California Press, 1994), 360–63.

23. Basil did, however, make sure to give Moses proper philosophical credentials, having learned "wisdom" from the Egyptians and having spent forty years in "leisure" (*scholê*) contemplating nature. Basil of Caesarea, *Homiliae IX in Hexaemeron*, 1.1 (Migne PG 29 5A–B). On the context for Basil's concern with literal interpretation see Richard Lim, "The Politics of Interpretation in Basil of Caesarea's *Hexaemeron*," *Vigiliae Christianae* 44, (1990): 351–70.

24. Basil, 5.1 (96A–B).

this order for the purpose of refuting future errors. The natural world was not simply the object about which philosophical debates were waged; it was a participant in these debates, the key to its polemical position being contained in the literal meaning of Genesis. This literalization of Philo's more subtle use of the scriptural passage fits well with Basil's overarching pastoral concern to shield Christians from the fraught environment of philosophical *elenchos*. The Greek wise men defeat one another in argumentation.²⁵ Apparently, the cosmos itself was also designed to refute philosophical errors, thereby further freeing Christians from the obligation of philosophical debate.

Basil recognized another aspect of confusing creator with creation, one that stemmed more from affect than from ideas. The problem of emotion corrupting the methods of science, mistaking one's personal interests for important aspects of nature, was implicated in Francis Bacon's idol of the cave. So much so that he warned his readers to distrust anything having a powerful hold on their intellectual interest.²⁶ Basil's attention to affect in relation to nature derived from pastoral concerns, an element entirely alien to Philo's commentary. His pastoral suspicions identified in affect a specific sort of error. Even when the science is correct, Basil still characterized it as "belabored vanity" because it induces fascination with the world rather than with its maker. Errors of affect can also result in false conclusions, all the more so when the science is correct. The truths of astronomy and geometry easily lead to the error that the objects being measured are eternal, thus falsely attributing a category of divinity to the cosmos.²⁷ Basil's pastoral goal was to evoke a properly Christian attitude toward the natural world, distanced enough not to mistake the cosmos as an independent entity. His concern for proper affect toward the natural world again mirrored the attitude Basil recommended his audience hold toward philosophical disputation. One need not argue with the philosophers because they argue among themselves. An appropriate Christian *epoché* should be maintained by "sitting down as spectators to their war."²⁸

Basil expressed the difference between appropriate and inappropriate emotions for contemplating the cosmos figuratively through a distinction in female beauty. He compared the scriptural account of the heavens to the beauty of a chaste woman, while likening the arguments of natural philosophers to the allure of a prostitute. The beauty of the former can only be appreciated at a

25. Basil, 1.2 (8A).

26. Bacon, *Nov Org.*, n. 58, 261: "Generaliter autem pro suspecto habendum unicuique rerum naturam contemplant, quicquid intellectum suum potissimum capit et detinet."

27. Basil, 1.2 (9C). For the view that Basil entirely rejected pagan sciences see Emmanuel Amand de Mendieta, "The Official Attitude of Basil of Caesarea as a Christian Bishop towards Greek Philosophy and Science," in *The Orthodox Churches and the West*, ed. Derek Baker (Oxford: Blackwell, 1976), 29; and Yves Courtonne, *Saint Basile et l'Hellénisme: Étude sur la rencontre de la pensée Chrétienne avec la sagesse antique dans l'Hexaméron de Basile le Grand* (Paris: Firmin-Didot, 1934). For a perspective with more nuance see Jaroslav Pelikan, *Christianity and Classical Culture: The Metamorphosis of Natural Theology in the Christian Encounter with Hellenism* (New Haven: Yale University Press, 1993), 249–61.

28. Basil, 3.8 (73C): θεοῦ τῶν αὐτῶν τοῦ πολέμου καθήσοι. On the concern of Greek-speaking Christians that theological disputation and rancor were getting out of hand, see Richard Lim, *Public Disputation, Power, and Social Order in Late Antiquity* (Berkeley: University of California Press, 1995), 151–7.

distance, while the attraction of the latter clouds the mind with the promise of excessive proximity.²⁹ The metaphor works only in part. It focuses the error of natural philosophy on the level of affect rather than that of reason, but it distinguishes between proper and improper emotions in terms of the objects of those emotions. The key point about affect as a source of idolatrous error is that the same object can be an idol or not depending on the emotion with which it is perceived. This point addresses the crux of the late ancient critique of natural philosophy as a form of idolatry. The natural world could never be an idol in the sense that the statue of the golden calf was because the world is God's creation. Only thinking, or emotion, can make it into an idol, hence the need to locate the rational or emotional source of idolatrous errors. This problem was further accentuated by Basil's turn to a literal commentary of the hexaemeron. Since the literal meaning of the text refers to the natural world, idolatry arises from a misinterpretation of nature rather than from a misinterpretation of the text.³⁰

Basil offered a basic framework for Christian hexaemeral commentaries, but the genre by no means remained static. Eustathius composed a fairly literal Latin translation of Basil's commentary and Ambrose delivered sermons on the hexaemeron in the 380s that were highly tropological in content, avoiding any confrontation with philosophical themes. Of all the Church fathers, Augustine was the most inventive with the genre of hexaemeral commentary. He returned to this form throughout his career often with conceptions of the hexaemeron very different from those of Basil. His first commentary, and one of the first works he composed after his baptism in 387, was an allegorical interpretation of the first three chapters of Genesis written in opposition to the Manichaeans. The *De genesi contra manichaeos* was a novel combination of Hexaemeral commentary and antiheretical polemic. It preserved something of the homiletic character of the hexaemeral genre even as an invective against heresy.³¹ About five years later he attempted a literal commentary, but was unable to finish the task. The fact of his difficulty is noteworthy. Augustine was rarely short of interpretive versatility, and Basil's literal commentary was available in Latin. Augustine returned to Genesis in the *Confessions*, the last three books of which are an extended interpretation of the first verse. A year after completing the *Confessions*, Augustine began his massive literal commentary *De genesi ad litteram*, which took him over a decade to complete.

29. Basil, 3.8 (73C). Idolatry as a form of sexual transgression goes back to the Old Testament. Cf. Halbertal and Margalit, *Idolatry*, 9–36.

30. Peter Harrison has argued for a connection between literal interpretations of scripture and natural science in *The Bible, Protestantism and the Rise of Natural Science* (Cambridge: Cambridge University Press, 1998). The argument is a good one, but he relegates all pre-Protestant exegesis to figurative interpretation. The association of the literal sense of scripture with the natural world was standard in the Middle Ages, and perhaps begins with Basil's commentary on the hexaemeron. Augustine certainly felt that understanding the natural world required attention to the literal level of scripture. Harrison too easily elides distinctions between the exegetical strategies of late ancient authors in terms of their rejection of philosophy and their recourse to tropology, as on pp. 13–14 and 21–4.

31. In the first chapter Augustine claims that he was persuaded to compose an anti-Manichaean treatise that would be accessible to the uneducated. *De gen. c. man.* 1, 1 (CSEL, Vol. 91, 68). There is some tension here between his use of sophisticated allegorical interpretation and his claim to be composing a "common, everyday sermon" (*sermonem usitatem et simplicem*).

The scale and nuance of this work go beyond anything in Basil's sermons. Augustine absorbed the orientations toward natural philosophy that had become part of the hexaemeral commentary, but he also adapted this genre to his own purposes and methodological considerations.

His most pronounced innovation was the use of the hexaemeron as a platform to critique the Manichaeans. Shifting the backdrop to the scriptural account from natural philosophy to dualistic heresy entailed a different way of comprehending the relationship between Scripture and nature. The problem of idolatry as it arose in connection with natural philosophy stemmed from an overvaluation of the cosmos. Either the necessary truths of natural philosophy were mistaken for an independent necessity of nature, or the pathos of wonder obscured deeper theological truths of creation. Dualistic and Gnostic heresies of late antiquity, by contrast, undervalued the cosmos by making it the product of an evil demiurge or a fallen condition from an original cosmic Fullness (*Pleroma*). Augustine noted in opposition to Manichaean devaluation of the cosmos that God took "pleasure" at his own creation. This exegetical reference reversed the message of Basil's sexual metaphor to warn off the sensuous attachments of the natural philosophers. Divine pleasure, rather than chaste indifference, was the affective model for human contemplation of the cosmos. False interpretations of nature were recognizable by the "displeasure" they implied toward the created world. In the thirteenth book of the *Confessions*, Augustine indicated that those who were "displeased" with creation comprised both the philosophers "who say that You were compelled to create out of necessity," and the heretics "who say that You did not make the world at all, but that it was formed by a hostile mind and an alien nature."³² But he did not hold these two forms of displeasure to be equally invalid. The Manichaeans were the real haters of the material world, which they rejected along with the creation story of Genesis. Augustine took particular offence at the idea that the Manichaeans had created "fables" out of the cosmos and the five elements. They had falsified the natural world by turning it into a myth, a literary vehicle closely associated with idolatry. Augustine was generally critical of literary fiction, as he made clear in narrating his conversions, first to philosophy and then to Christianity. But he explicitly denounced the Manichaean myths as far worse than poetic verses. Intelligent

32. *Confessiones*. 13.30, ed. James J. O'Donnell (Oxford, 1992), 202: "... sunt quidam, quibus displicent opera tua, et multa eorum dicunt te fecisse necessitate compulsam . . . alia vero nec fecisse te nec omnino conepigisse, sicut omnes carnes et minutissima quaeque animantia et quidquid radicibus terram tenet, sed hostilem mentem naturamque aliam non abs te conditam tibi que contrariam in inferioribus mundi locis ista gignere atque formare. insani dicunt haec, quoniam non per spiritum tuum vident opera tua nec te cognoscunt in eis." The theme of creation in Augustine's thought has been treated by Katharina Staritz, *Augustins Schöpfungsglaube dargelegt nach seinen Genesisauslegungen* (Breslau: n.p., 1931); Christopher J. O'Toole, *The Philosophy of Creation in the Writings of St. Augustine* (Washington DC: Catholic University of America Press, 1944); William A. Christian, "Augustine on the Creation of the World," *Harvard Theological Review* 46 (1953): 1-25; Gilles Pelland, *Cinq Études D'Augustin sur le Début de la Genèse* (Montreal: Bellarmine, 1972); Aimé Solignac, "Exégèse et Métaphysique Genèse 1, 1-3 chez saint Augustin," in Vignaux ed., *In principio*, 153-71; and Marie-Anne Vannier, «Creatio», «Conversio», «Formatio» chez S. Augustin (Fribourg: Éditions Universitaires, 1991).

readers do not “believe” stories about Medea to be true, but the Manichaean myths of the cosmos did inspire “belief”.³³

Heresiology and Idolatry

Augustine’s concern with fabrication and the falsification of the physical world derived from the genre of anti-Gnostic polemic prevalent in the second and third centuries. Irenaeus, originally from Smyrna, then presbyter and bishop of Lyon in the late second century, was a formative figure in this tradition. Although there were predecessors in this genre, Irenaeus’ “Five Books Against the Gnostics Falsely So Called” was recognized by later heresiologists as an authoritative example.³⁴ Writers of anti-Gnostic polemic regarded their opponents as more dangerous than natural philosophers. Within this genre, orthodox authors could not feign, even rhetorically, disengagement from the disputative framework of alternative cosmological theories. The Gnostic heretics were rewriting the central Christian story of creation, fall and redemption to reflect very different cosmological and religious conceptions. The truth of the cosmos and the truth of scripture were in the balance. If hexaemeral exegetes criticized natural philosophers for committing errors of reasoning or of affect, Irenaeus accused the Gnostics of fabricating lies by turning the creator God of Genesis into an evil demiurge and inventing a non-existent God on the basis of which they deified themselves. The undertones of idolatry-critique in Irenaeus are more pronounced than those present in critiques of natural philosophy. They extend into a much more drastic conception of idolatry. The Gnostics, in Irenaeus’ view, do not simply worship false gods, they make themselves into gods; they do not simply hold false ideas, they turn truth itself into a lie.

The Gnostics denigrated the cosmos by making it either the work of an evil creator or the fallout of irrational passions from within the transcendent hierarchy known as the Pleroma. Irenaeus tried to disclose the true purpose of this cosmology as an attempt by the Gnostics to proclaim their own superiority to the creator of the material cosmos, and thus to assimilate themselves to a more spiritual deity. He located the historical origin of this heresy in the character of Simon Magus from the book of Acts 8:9–14. In Irenaeus’ version, the story is not about the commercialization of the spirit, but rather the attempt by Simon Magus to stupefy the crowds with tricks and falsely to declare himself a God. The root of all heresy, according to Irenaeus, lay in this primal act of denying God as creator of the cosmos and replacing that God with one’s self. The confusion here is not between the cosmos and its creator, but between one’s self and the creator, a more severe form of falsehood. There is evidence to support the creator God of Genesis, namely Genesis and the created world. But the Gnostics rejected this evidence and were left with nothing but themselves as a basis to understand their God. Thus, the

33. Augustine, *Conf.* 3.6.11 (O’Donnell, 27).

34. Gerard Vallée, *A Study in Anti-Gnostic Polemics: Irenaeus, Hippolytus, and Epiphanius* (Waterloo, Ontario: Wilfrid University Press, 1981), 9.

heretics were all successors to Simon Magus, not in the sense that they worshipped him, but in the sense that they believed in a God without any evidence. Rather than making an idol of nature, as the philosophers did, the heretics made idols of themselves. The historical source for this particular kind of fraud was Simon's claim to be the God of all things.³⁵

Besides locating the historical/social origin of heresy, Irenaeus also claimed to have uncovered its psychological root as well. Here too the explanation was based on the Gnostic confusion of one's self with the deity. In this case, however, the confusion was the result of thinking that the divine resembled the human. Irenaeus recounts the Valentinian myth of the production of a spiritual hierarchy of Aeons emanating from the Pleroma. These Aeons bear names such as *Nous* (mind), *Ennoea* (conception), *Logos* (reason), *Aletheia* (truth), and *Zoe* (life). The account in Irenaeus reads as an elaborate theology.³⁶ He then asks where the Gnostics came up with these abstract entities? The plausibility of the book of Genesis in part stems from the evidence of the physical world. Since the Gnostics rejected Genesis, they were forced to fall back on their own mental processes and "affects." They projected these aspects of themselves onto their God. The more they claimed to believe in a God that transcends the creator God, the more their deity resembled themselves. The psychological origin of heresy thus parallels the mental origins of idolatry — projecting one's own representations onto God or onto the cosmos.³⁷

Irenaeus also criticized the "mythical" form of Gnostic literature. The Gnostics were, in effect, reverting to a primitive form of idolatry by populating the divine with fabricated personae and by using the literary forms of poetry to write about the cosmos. The accusation of poetry further incriminated Gnostic ideas as the products of passion rather than reason. Referring again to the Valentinian myth, Irenaeus emphasized the notion that the material world was the product of the irrational passions of one of the lower Aeons. This erroneous association of the physical world with irrationality was, according to Irenaeus, reflected in the literary genre the Gnostics used to write their cosmologies. He accused them of writing about the cosmos "as if it were the composition of a tragedy."³⁸ This critique of turning the cosmos

35. Irenaeus, *Libros quinque adversus haereses*, 2.8.2, ed. Harvey W. Wigan, (Cambridge: Typis Academicis, 1857): "Constante igitur hoc Deo, quemadmodum diximus, et testimonium ab omnibus accipiente quoniam est: ille sine dubito, qui secundum eos advenitur pater, inconstans et sine teste est, Simone mago primo dicente semetipsum esse super omnia Deum, et mundum ab angelis ejus factum; post deinde his, qui secesserunt ei secundum quod ostendimus in primo libro, variis sententiis impias et irreligiosas adversus fabricatorem circumducentibus doctrinas."

36. Irenaeus, *Libros quinque adversus haereses*, 1.1–7. The remainder of this book is taken up with other variations of heretical beliefs and their refutation.

37. Irenaeus, *Libros quinque adversus haereses*, 2.42.2. Cf. Vallée, *A Study in Anti-Gnostic Polemics*, 18–19.

38. Irenaeus, *Libros quinque adversus haereses*, 2.13.3: "De passione enim, quam sine complexione conjugis passam eam dicunt, iterum reliquam universam velut tragoediae compositionem affinxerunt." Harold Bloom has for many years now been associating Gnosticism with "strong poets." Irenaeus made more or less the same judgement, but with the exact opposite value attached to it. For a succinct statement of Bloom's position see his "Lying Against Time: Gnosis, Poetry, Criticism," in *The Rediscovery of Gnosticism*, Vol. 1, ed. Bently Layton (Leiden: E. J. Brill, 1980), 57–72. For Irenaeus' reference to the Valentinian claim that passion is the source of the material world: Irenaeus, *Libros quinque adversus haereses*, 1.2.2–3.

into a tragedy relied to some degree on Plato's famous rejection of tragic poetry in the *Republic* on the grounds that it was implicated in the passions and therefore removed from reason. The tragic conception of the cosmos is the reverse of a philosophical conception of the cosmos. Anaxagoras, too, had opposed philosophical observation of the heavens to the tragic claim that it would be better never to have been born.³⁹ Irenaeus thus drew on a tradition of philosophical critiques of tragic poetry to undermine the literary and conceptual basis of Gnostic cosmogonic myths. A rational cosmology easily does away with the idolatrous personification of cosmic entities and the error attendant upon anything conceived in the passions. Here, Irenaeus took the position of the presocratic philosophers who argued against the mythical and literary presentation of the gods. The logical consistency of God and the rational order of the natural world militated against Gnostic cosmogonies.

Irenaeus had a more pressing case against Gnostic treatment of scripture. One could argue against cosmological myths by appealing to the strict unity of God or to a rational understanding of the natural world. But the Gnostics had gone further by deliberately mangling scripture and recomposing it into myth, making it very difficult to correct their errors. Throughout the *Adversus Haereses*, Irenaeus criticized Gnostic exegesis on many grounds. They were overly allegorical, they built their interpretations from the most obscure scriptural passages, and they ignored those passages that contradicted their own views. His deepest criticism, however, was not that they misread scripture, but that they actually took it apart and recomposed something new out of its pieces. He compared their misuse of scripture with the literary practice of building centos by creating new poems out of verses from old poems.⁴⁰ If it seemed to offend his sensibilities to play this game with classical texts, doing so with scripture breached a whole new level of fictionalization. Classical poetry at least began as fables, but to rearrange scripture was to create fiction out of truth. Irenaeus compared this specific form of falsification to the production of an image out of bits and pieces taken from a different image. The analogy of myth with image immediately suggests an underlying critique of idolatry, but this was not the association Irenaeus was evoking. He was aiming for an even deeper level of falsehood. In the comparison, Irenaeus suggests we think of an image of a king made out of fine jewels. Then we must imagine someone taking apart this image and using the jewels to refashion an image of a dog, which is then passed off as an image of the king. This, Irenaeus claims, is precisely what the Gnostics have done by refashioning scripture into myth. Apparently, since the jewels in the analogy were once used skilfully to represent the king, these scurrilous frauds could more easily deceive the ignorant into believing that the image of a dog was in fact an image of the king.⁴¹ They have made a lie out truths. Of course, the real problem

39. Plato, *Republic* 10 (602c — 608b). On Anaxagoras and the opposition between cosmos and tragedy, see Hans Blumenberg, *Genesis of the Copernican World*, trans. Robert M. Wallace (Cambridge, MA: MIT Press, 1987), 8–11.

40. Irenaeus, *Libros quinque adversus haereses*, 1.9.4.

41. Irenaeus, *Libros quinque adversus haereses*, 1.1.15.

was that such a scenario made it impossible to separate truth from lies since they consist of the same parts. In this sense, Irenaeus' polemic transcends the structure of an idolatry critique. The Gnostics created a situation in which it was impossible to call worshippers back from falsehood to truth because the one was made from the other. As a result of this conundrum, the implication of idolatry in Irenaeus comes closer to a matter of disobedience than to a problem of error. The establishment of truth required the institutional authority of the Church grounded in apostolic succession. Identifying the sources of error was not sufficient for its eradication without the institutional guarantee of the Church to warrant the distinction between truth and falsehood.

Augustine's polemic against the Manichaeans shared with Irenaeus a focused critique of the fictionalization of the physical world. Constructing fables out of the heavens, the stars, the sun, and the moon struck Augustine as far worse than poetic literary fictions. The Manichaeans turned the truth of God's creation into falsehood. Unlike Irenaeus, Augustine appealed directly to the natural philosophers to counter this fictionalization of truth. When he heard the great Manichaean teacher, Faustus, Augustine compared his "endless fables" with the books of philosophy he had read, and the latter seemed to him more probable.⁴² While one can have wisdom and piety without natural philosophy, to pretend to have the latter and then dare to teach it suggested to Augustine that the Manichaeans lacked wisdom and piety. The association he made was between false philosophy and impiety. Augustine's attitude toward natural philosophy in this passage is quite complex. His main argument was that astronomical knowledge of the heavens could serve as foil to Manichaean mythological cosmologies. But in the middle of this argument he launches into a critique of natural philosophy as vanity and profane curiosity. Why undermine the very authority being used to refute the Manichaeans? Hans Blumenberg used precisely this passage as a key to the medieval injunction against theoretical curiosity. According to Blumenberg, Augustine used the accomplishments of pagan science against the Manichaeans in a way that did not acknowledge those accomplishments. He "fields philosophy against Gnosticism but does not turn the field over to the victor."⁴³ This conclusion misses a more pointed concern of Augustine: how to accept the truths of natural philosophy without slipping into idolatry. The vanity of the philosophers was that they credited themselves with their discoveries without considering

42. Augustine, *Conf.* 5.7 (O'Donnell, 50).

43. Hans Blumenberg, *The Legitimacy of the Modern Age*, trans. Robert M. Wallace (Cambridge, MA: MIT Press, 1983), 311. Though critical of Blumenberg, a similar assessment of Augustine and curiosity can be found in Loraine Daston and Katherine Park, *Wonder and the Order of Nature* (New York: Zone Books, 1997), 123–4, 305–6. They omit, however, any discussion of the Manichaeans, who clearly represented the major target of Augustine's condemnation, and against whom Augustine positioned the truth of Greek science. Cf. also Henri-Irénée Marrou, *Saint Augustin et la fin de la culture antique* (Paris: Editions E. de Boccard, 1958), 472ff, who sees Augustine's rejection of *curiositas* as a turn away from nature and toward scriptural exegesis. I would argue the opposite. Augustine was bringing scriptural exegesis closer to the study of nature, as is evident throughout his grand hexaemeral commentary, the *De genesi ad litteram*. Pierre Duhem noted the seriousness with which Augustine took pagan cosmologies in *La système du monde: Histoire des doctrines cosmologiques de Platon à Copernic*, Vol. 2 (Paris: Hermann, 1913–59), 411.

their own ability to make these discoveries.⁴⁴ The fact that philosophers discover truths of nature indicates that God created them and their capacity for discovering these truths. This criticism obviously ensures the validity of their science. Philosophical failure is hardly evidence for divine creation.

Augustine's critique of natural philosophy embedded in a refutation of Manichaean fables presents a position against two forms of idolatry, that of natural philosophy and that of Gnosticism. As we saw, Irenaeus argued that the heretics confused themselves with the transcendent deity either by imagining that they shared a common substance or by projecting their own mental processes onto the divine. Augustine accused the natural philosophers of doing the same. They take pride in their own discoveries and give themselves credit rather than crediting God. They confuse themselves with the creator. He thus assimilated the natural philosophers into a form of "gnosis," which over-estimates the human intellect. At the same time, the truths of natural philosophy are indeed true. Natural philosophy is not a form of fiction, but precisely its truth raises the risk of an idolatrous relationship to the cosmos. Philo and Basil of Caesarea used Scripture to counter this form of idolatry. Scripture provided the key to avoiding idolatry that stems from the plausibility of philosophical reasoning. But Augustine was not trying to counter this reasoning; he was accepting it. Natural philosophers can avoid philosophical idolatry by avoiding the idolatry of Gnosticism, that is, by using the truths they discover as evidence for divine creation, personal and cosmic. Augustine repeated this warning to the natural philosophers in the second of his *Tractates on the Gospel of John*. Here he connected it explicitly to the problem of idolatry and to the famous passage of Paul's letter to the Romans 1:20–25 admonishing the pagans for worshipping the creation rather than the creator. Augustine gave a significant twist to the message of Paul, whose point seems to have been that the pagans were "inexcusable" (*anapologêtous*) because truths about God could be understood through the evidence of creation. For Augustine, aiming his argument at natural philosophers specifically, the problem was that they had seen these truths in the natural world, but they "wanted to attribute to themselves what they saw." And because of their pride in discovering natural truths, they lost God and "were turned to idols and images."⁴⁵ In other words, Augustine attributed the literal worship of idols to the truths discovered in natural philosophy and the concomitant failure to recognize the source of those truths. This problem illustrates nicely the difficulties of connecting idolatry with natural philosophy. If for Philo this form of idolatry was especially problematic because of the plausibility of natural philosophy, for Augustine the problem was compounded because idolatry

44. Augustine, *Conf.* 5.3, (O'Donnell, 47–8): "et multa vera de creatura dicunt, et veritatem, creaturae artificem, non pie quaerunt, et ideo non inveniunt, aut si inveniunt, cognoscentes deum, non sicut deum honorant, aut gratia agunt, et evanescent in cogitationibus suis, et dicunt se esse sapientes sibi tribuendo quae tua sunt."

45. Augustine, *In Iohannis Evangelium*, 2.4.1 (CCSL, Vol. 36, 13): Viderunt quo veniendum esset, sed ingrati ei qui illis praestitit quod viderunt, sibi voluerunt tribuere quod viderunt; et facti superbi amiserunt quod videbant, et conversi sunt inde ad idola et simulacra et ad culturas daemoniorum, adorare creaturam, et contemnere Creatorem.

stemmed from the truth of natural philosophy. Thus, it was all the more important for him to locate the source of idolatrous error.

Conclusion

Writers within these two theological currents of the late ancient world, hex-aemeral commentary and heresiology, perceived that interpretations of the physical world could become a form of idolatry. They were more conscious of this particular problem than they were of any abstract concern over the relationship between natural philosophy and religion. Natural philosophy could become idolatrous, but so could it be used to counter other, more dangerous forms of idolatry arising from misinterpretations of the natural world, such as those of the Gnostics and Manichaeans. These theological concerns fostered a sustained set of critiques aimed at errors in the understanding of nature. It would, of course, be simplistic to trace the origins of Francis Bacon's use of idolatry to early biblical theologians. They do, however, belong to a shared conceptual tradition of trying to critique and explain how errors concerning the natural world occur within the framework of idolatry. There are, I believe, reasons why idolatry was an obvious category for framing polemics about the natural world, both for late ancient theologians and for early modern natural philosophers. Idolatry both required explanation and was a normative form of worship. Jewish and Christian thinkers of late antiquity perceived the need to explain how it was that the original monotheism of Adam devolved into a near universal polytheism and worship of idols. In the ancient Mediterranean world, idolatry was the norm.⁴⁶ Likewise, Francis Bacon had to explain how it was that nearly everyone had been wrong about how the natural world worked. Scientific knowledge, like monotheism, was distorted by the fall of man from paradise. Even though there was a kind of naturalism to idolatry and to "vulgar" conceptions of the natural world, their existence still required an explanation. Idolatry therefore served both as a description of common (and erroneous) beliefs and as a vehicle for explaining how it was that such common errors came about. The more common the error, the more sophisticated its explanation had to be. The critique of idolatry provided a means to get at the source of obvious and plausible errors by focusing attention on the key confusions that produced them. These confusions were considered especially acute because the natural world could be both the object of divine creation and the object of idolatry. It cannot therefore be false in the way that false gods can be, but confusing the creation with the creator or projecting one's own mental structures onto the cosmos can turn the truth of the natural world into an idol. The prophetic call of return from idolatrous conceptions of the natural world required more than just indicating that an error of judgement had occurred. It required a method to distinguish those errors from truth.

46. The Perception of this had changed in the Middle Ages. Maimonides, for instance, believed that most of the human population had once again become monotheists. Maimonides, *Guide to the Perplexed*, 3.29, trans. Shlomo Pines (Chicago: University of Chicago Press, 1963), 515.