




1995

# Creatio ex Nihilo: Matter, Creation, and the Body in Classical and Christian Philosophy Through Aquinas

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# Creatio ex Nihilo: Matter, Creation, and the Body in Classical and Christian Philosophy Through Aquinas

## **Abstract**

*Creatio ex nihilo* marked a major redefinition of the material cosmos by the Christian apologists of the late second century, Tatian and Theophilus of Antioch. Other scholars have properly assigned the origin of *creatio ex nihilo* to these thinkers, notably Gerhard May and David Winston, but the reasons for the teaching's appearance remained unexplained. By examining the Classical philosophical views of matter, the challenge that Greek views of matter raised for the Christian message become evident. For Stoic, Platonist, and Peripatetic alike matter imposed the natural necessity of corruption upon the body. The moral limitations imposed by matter made a bodily resurrection seem offensive. Christian hopes for a resurrection seemed misguided both intellectually and morally. The Christian apologists of the late second century struck back by redefining matter as a creature of God, which he directed to his purpose. The religious claims of the Christian apologists signalled a major philosophical change. Within a century, Plotinus developed a rigorous monistic system of emanation within the Greek philosophical tradition. In his system, even matter was derived from the One. Nevertheless, because it was wholly indefinite, matter remained evil and the sage eschewed it. Augustine gave *creatio ex nihilo* its first careful philosophical consideration in the Christian tradition. Turning the valences of the Classical world on their heads, he argued that as something capable of being formed into good things, matter itself was good and a creature of the good God. The next major philosophical consideration of *creatio ex nihilo* in the Christian tradition came at the hands of Aquinas, who taught that *creatio ex nihilo* meant that nothing was presupposed to God's creative act, not matter, forms, natures, essences, ideas, laws of nature, or a hierarchy of being. The creature depended entirely on God's creative act. Despite the great dependence of the creature upon God, Aquinas taught that the creature still bore a genuine likeness to God, in his highly developed teaching of participation.

## **Degree Type**

Dissertation

## **Degree Name**

Doctor of Philosophy (PhD)

## **Graduate Group**

Religious Studies

## **First Advisor**

James F. Ross

## **Keywords**

Thomas Aquinas, saint, religion and theology

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**Subject Categories**

Ancient History, Greek and Roman through Late Antiquity | Ancient Philosophy | Christianity | History of Christianity | History of Religion | Other Classics | Philosophy | Religious Thought, Theology and Philosophy of Religion

CREATIO EX NIHILO: MATTER, CREATION, AND THE BODY IN  
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J. Noel Hubler

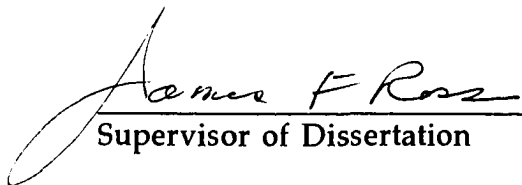
A DISSERTATION


in

Religious Studies

Presented to the Faculties of the University of Pennsylvania in Partial  
Fulfillment of the Requirements for the Degree of Doctor of Philosophy

1995

  
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Supervisor of Dissertation

  
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Graduate Group Chair

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**1995**

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So many have helped me along the way, that now memory proves the poorest aide of all.

First I would like to thank the Religious Studies Department as a whole, both faculty and students, for providing a sympathetic yet dynamic home for growth and learning. I would particularly like to thank Ann Matter for laboring so aggressively to see that it remains that way. I also thank her for the personal and academic guidance she provided along the way.

I wish to thank my advisor, James Ross, for the many hours of intense discussion and supervision he provided over the years. As an intellectual challenge to his students, he knows no equal.

I would like to thank Robert Kraft for his kind support shown throughout the years and the careful reading and welcome insight he provided this project.

I am extremely grateful to Amy Ayres for the proof reading and suggestions she offered so willingly. I thank my sister, Kathryn Hubler for the careful copy-editing and encouragement that she performs with equal skill.

Finally, I would like to acknowledge my wife, An, and children, Hannah, Samuel, and Nathaniel, who shared the burdens of student life with me. Their smiles and cheer are more than anyone could desire.

## ABSTRACT

### CREATIO EX NIHILO: MATTER, COSMOS, AND THE BODY IN CLASSICAL AND CHRISTIAN PHILOSOPHY THROUGH AQUINAS

J. NOEL HUBLER

JAMES F. ROSS

*Creatio ex nihilo* marked a major redefinition of the material cosmos by the Christian apologists of the late second century, Tatian and Theophilus of Antioch. Other scholars have properly assigned the origin of *creatio ex nihilo* to these thinkers, notably Gerhard May and David Winston, but the reasons for the teaching's appearance remained unexplained. By examining the Classical philosophical views of matter, the challenge that Greek views of matter raised for the Christian message become evident. For Stoic, Platonist, and Peripatetic alike matter imposed the natural necessity of corruption upon the body. The moral limitations imposed by matter made a bodily resurrection seem offensive. Christian hopes for a resurrection seemed misguided both intellectually and morally. The Christian apologists of the late second century struck back by redefining matter as a creature of God, which he directed to his purpose. The religious claims of the Christian apologists signalled a major philosophical change. Within a century, Plotinus developed a rigorous monistic system of emanation within the Greek philosophical tradition. In his system, even matter was derived from the One. Nevertheless, because it was wholly indefinite, matter remained evil and the sage eschewed it. Augustine gave *creatio ex nihilo* its first careful philosophical consideration in the Christian tradition. Turning the valences of the Classical world on their heads, he argued that as something capable of being formed into good things, matter itself was good and a creature of the good God. The next major philosophical consideration of *creatio ex nihilo* in the Christian tradition came at the hands of Aquinas, who taught that *creatio ex nihilo* meant that nothing was presupposed to God's creative act, not matter, forms, natures, essences, ideas, laws of nature, or a hierarchy of being. The creature depended entirely on God's creative act. Despite the great dependence of the creature upon God, Aquinas taught that the creature still bore a genuine likeness to God, in his highly developed teaching of participation.



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## Chapter 1, Monism: Egyptian and Milesian

In the sixth century B.C.E. in Miletus on the southwestern coast of Asia Minor, Greek speculation about the origin of the world took a dramatic turn. Previously Hesiod<sup>1</sup> and the near contemporaries Pherecydes<sup>2</sup> and Akusilaos<sup>3</sup> explained the origin of the world in terms of anthropomorphic genealogy. Breaking with tradition, the Milesian cosmologists, Thales, Anaximander, and Anaximenes adopted from Egypt a single, divine, yet undifferentiated material source which produced the world by its own physical transformations and continued as an immanent force in the world. For Thales the source of the world and life was water; for Anaximander, the infinite (see below); and for Anaximenes, air. It is hard to overestimate the impact the new teaching had on Greek thought. The archaic genealogical approach assumed that Zeus and the Olympians had received their powers by overcoming their parents, rendering the origins of the world to the stuff of ancient lore.<sup>4</sup> The new Milesian metaphysics presumed cosmic birth from still active physical

<sup>1</sup>Hesiod traced the lineage of all gods and nature to Gaia, Tartaros, and Chaos. For Hesiod Chaos was a gap. Etymologically it is related to chasm. On this basis, Cornford related the cosmology in Hesiod to other cosmogonic myths of separation of heaven and earth (in *Principium Sapientiae: the origins of Greek philosophical thought*, New York: Harper, 1965; p. 194f.). The difficulty with Cornford's interpretation is that heaven, Ouranos, does not arise until the second generation, as the offspring of Earth. It would seem better to take the original Chaos as the gap between earth and Tartaros. The first act of creation was the separation of Earth and Tartaros. Their separation produced Eros (the fourth and final god listed at the beginning) and the subsequent birth of the other gods.

<sup>2</sup>Hermann Diels, *Die Fragmente der Vorsokratiker*, ed. Walther Kranz, Berlin: Weidmann, 1951, 7.B.1.

<sup>3</sup>Diels, 9.B.1

<sup>4</sup>Hesiod's succession myth is the most developed example. In the *Theogony*, Kronos seizes power from his father Ouranos, as does Zeus from Kronos. Zeus also needs to overcome the Titans, vestiges of the earlier powers. The notion of succession is presupposed by Homer, who presents the Olympians as younger gods, although without narration of their rise to power. References to the succession myth can be found in Pherecydes who mentions the Titanomachy (Diels, 7.B.4) and in Akusilaos who mentions the castration of Ouranos (Diels, 9.B.20).

principles allowing the study of the cosmogony to be part of the study of every day phenomena. It had the reciprocal effect of raising the importance of study of natural phenomena to unprecedented levels.

Although crucially important to Greek philosophy, the Egyptian contribution has yet to be recognized because no study of adequate scope has been undertaken on the relevant Egyptians texts. G. S. Kirk made brief comparisons of Thales' work to Egyptian and Babylonian cosmogonies which began from water and Egyptian cosmology in which earth floated upon waters.<sup>5</sup> Even Kirk's general and modest comparisons to things Near Eastern have drawn a skeptical response. In the *Cambridge Ancient History*, T. F. R. G. Braun has argued that the difficulty of translation made exchange of ideas between Greeks and Egyptians difficult and that if communication had occurred, "it is hard to believe that Greek speculative thought would have gained."<sup>6</sup> In similar arguments, G. E. R. Lloyd charges that contacts between Greek and Near Eastern thought remain an "assumption."<sup>7</sup> He further objects to drawing comparisons between myth and philosophy, arguing that myth does not influence philosophy as philosophy: The philosopher's "theses are arrived at, and supported or defended, by reasoned argument and (where appropriate) appeals to evidence."<sup>8</sup>

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<sup>5</sup> G. S. Kirk and J. E. Raven, *The Presocratic Philosophers*, Cambridge: Cambridge University Press, 1971, p. 90. Other commentators have compared Greek mythologists to Babylonian and Egyptian predecessors. Cornford compared Thales to Hesiod and Hesiod to the Babylonian creation epic, the *Enuma Elish*, p. 248f. W. K. C. Guthrie, *A History of Greek Philosophy*, v.1, Cambridge: Cambridge University Press, 1962, compared both the Orphics' and Hesiod's cosmogony to the undifferentiated waters of Babylon and Egypt, p. 68.

<sup>6</sup>T. F. R. G. Braun, "The Greeks in Egypt," *Cambridge Ancient History*, III.3, 2nd ed., J. Boardman and N. G. L. Hammond, edd., Cambridge: Cambridge University Press, 1982, p.55.

<sup>7</sup>G. E. R. Lloyd, "The Debt of Greek Philosophy and Science to the Ancient Near East," *Pedilavium*, 1982, p. 5. The article was republished in G. Lloyd, *Methods and Problems in Greek Science*, Cambridge: Cambridge University Press, 1991, pp. 278–298.

<sup>8</sup>G. Lloyd, p. 10.

In response to Braun and Lloyd, the burst of new commercial and political contact between Greece and Egypt in the seventh and sixth centuries made an immediate and clear impression on the cultural and religious records of the time. More importantly, a careful consideration of the texts reveals the sophistication of Egyptian myth. In language of myth, the Egyptians made startling metaphysical claims about the underlying unity of the world and its physical transformations into the phenomena of the world. Thereby, they forged new metaphysical and physical paths for the Milesians. Neither the Egyptians nor the Milesians were yet prepared to prove their claims. Although yet untested, their insights would prove instrumental for the coming science. The proof of Egyptian influence comes from the sudden change of Greek thought in an Egyptian direction precisely at the time when Miletus was actively seeking new contacts with Egypt.

The second half of the seventh century B.C.E. for the Greeks of Ionia was a time of renewed commercial contact with the Near Eastern Civilizations and Egypt and new exploration in the West.<sup>9</sup> In the late seventh century, a Greek trading center was founded in Naucratis in the Nile delta near Sais, the 26th dynasty capital.<sup>10</sup> In the early sixth century, Naucratis was granted exclusive trading rights in Egypt by the Pharaoh.<sup>11</sup> Miletus was a key player

<sup>9</sup>Carl Roebuck *Ionian Trade and Colonization*, Monographs on Archaeology and Fine Arts IX, Archaeological Institutes of America, New York: Archaeological Institutes of America, 1959; p. 137, summarizes his foundational study of the period: "The great period of Ionian expansion opened in the last quarter of the 7th century, when Africa [Egypt], Spain, and the Black Sea were brought into its orbit."

<sup>10</sup>Roebuck, op. cit., p. 135, on the basis of the pottery found at Naucratis dates the settlement to the last quarter of the 7th century.

<sup>11</sup>On the excavations at Naucratis, see D. G. Hogarth, H. L. Lorimer, and C. C. Edgar, "Naucratis, 1903," *The Journal of Hellenic Studies*, 25 (1905), pp. 105–36; John Boardman, *The Greeks Overseas: Their early colonies and trade*, 2nd ed., New York: Thames and Hudson, 1980, p. 115; CAH III, 3, pp.41ff.

in the founding<sup>12</sup> and the trade of Naucratis. They maintained their own sanctuary in the city.<sup>13</sup>

Boardman notes that from the time of the founding of Naucratis, Egyptian styles began to effect Greek monumental sculpture, architecture, and painting. Egyptian objects, faience scarabs, glass flasks, and alabaster began to appear throughout Greece.<sup>14</sup>

The Egyptian 26th dynasty opened to Greece in unprecedented ways because they needed Greek military support. The dynasty began when Psammeticus I came to power with Ionian and Carian mercenary support. Greek mercenaries continued to serve throughout the 26th dynasty, and established settlements in Egypt.<sup>15</sup> Necho (610–595) began building Greek triremes probably for defence against the Phoenicians.<sup>16</sup> Later, Amasis again turned to Greece for help in establishing a naval force against the overland threat from a newly resurgent Babylon.<sup>17</sup>

Trade and joint military operations presuppose knowledge of language on one side or other. As the Greeks were taking the initiative to travel to Egypt either to trade with or serve militarily, they needed translators to make the necessary communications. They also began to settle both trading and military communities mainly in the Delta area. The main trading center,

<sup>12</sup>Braun, *Cambridge Ancient History* III, 3, pp. 37–43.

<sup>13</sup>Roebuck, *op. cit.*, p. 135.

<sup>14</sup>Boardman, *op. cit.*, pp. 141–153. See also Alan Lloyd, *Herodotus, Book II: Introduction*, Brill, Leiden, 1975; p.29ff, the Greeks obtained mainly corn but also faience, ivory, and papyrus for the silver. The Egyptians needed silver in their religious cult but it was not available in Egypt.

<sup>15</sup>A. Lloyd, *op. cit.*, pp.14–23

<sup>16</sup>A. Lloyd, *op. cit.*, p. 37f.; T. G. H. James, *Cambridge Ancient History* III.2. 2nd ed. ed. J. Boardman, et al. Cambridge: Cambridge University Press, 1991, pp. 720–24.

<sup>17</sup>James, *CAH* III, 2, p. 724.

Naucratis, had both Greek and Egyptian sanctuaries, indicating a mixed population.<sup>18</sup>

From the seventh and sixth century religious contacts between the Greeks and Egyptians are known. Herodotus claims that Necho dedicated armor at a Milesian temple.<sup>19</sup> A bilingual statue dating from the latter half of the sixth century bears a dedication to Amun in Egyptian and to the "Theban" Zeus in Greek, proof that both practices and deities were being shared.<sup>20</sup>

Most contact was probably oral as testified by Herodotus in his own accounts of conversations with Egyptian priests.<sup>21</sup> Herodotus knew the Egyptian god Amun and elements of the Hermopolitan and Heliopolitan cosmogonies (see below), indicating that these doctrines were not so esoteric as to be hidden from foreigners, whether they were communicated directly with Herodotus or through intermediaries.<sup>22</sup>

## Egypt

By the sixth century B.C.E., the Egyptians had long taught creation from divine elements acting according to their physical characteristics. Divine materials are central to both major creation traditions found in Egypt, the

<sup>18</sup>See Hogarth, et al. "Naucratis, 1903."

<sup>19</sup>Herodotus, *Histories*, 2:159.

<sup>20</sup>F. Ll. Griffith, "An Early Greco-Egyptian Bilingual Inscription," *Classical Review* 5, 1891: 77-9.

<sup>21</sup>For a detailed analysis of what Herodotus learned from his Egyptian informants, see A. Lloyd, *op. cit.*, pp. 89-116.

<sup>22</sup>On Amun, see Herodotus, *Histories*, II, 42.5; also 18.1,2; 32. 1; 55.3; and I, 46.3.

On the Ogdoad, see, II, 43.4; 46.1; 145.1.

On the Ennead (which Herodotus mistakenly calls the twelve, although he gets the lineage of divine kings right), see II, 144-145.

On Necho's school of interpreters, see II, 154.

Heliopolitan and the Hermopolitan, named after the cult centers which produced each tradition.<sup>23</sup> The Heliopolitan creation accounts were inscribed into the Pyramids beginning in the fifth dynasty (2465–2323).<sup>24</sup> Heliopolitan creation accounts begin with Atum, the “All,” who produced himself from the precosmic ocean, Nun. Then he created air, earth, and heaven from Nun. Hermopolitan creation accounts first appear in the Coffin Texts in the first intermediate period (2134–2040) but are not developed until the Ramasside period (1307–1070). Hermopolitan accounts attribute creation to Amun, the hidden god associated with Nun. Amun rose to preeminence in the pantheon in the New Kingdom (1550–1070), a position he maintained until the last dynasty of Egypt. Thales and Anaximander show closest connection to Hermopolitan creation, which is to be expected inasmuch as the 26th dynasty witnessed a resurgence in Amun worship. The dynasty’s capital was in Sais in the Delta only ten miles from Naucratis and its Milesian merchants. Anaximenes also shows connections to the Heliopolitan tradition, which may indicate a progressive familiarization with Egyptian theories in Miletus.

## Heliopolitan

In the Heliopolitan account, Atum first produced air and moisture, Shu and Tefnut, by means of expectoration or ejaculation. Shu and Tefnut in turn gave birth to earth and heaven, Geb and Nut, who then produced the

<sup>23</sup>There are several good studies of creation in Egypt that recount the major teachings and major traditions: James P. Allen in *Genesis in Egypt: The philosophy of Ancient Egyptian creation accounts*, Yale Egyptological Studies 2, New Haven, Connecticut: Yale University, 1988; Leonard Lesko, “Ancient Egyptian Cosmogonies and Cosmology,” *Religion in Ancient Egypt*, Ithaca: Cornell, 1991, p. 91ff.; Siegfried Morenz, *Egyptian Religion*, trans. Ann Keep, Ithaca: Cornell, 1973, on creation, see chapter 8, pp.159–182; John A. Wilson, “The Nature of the Universe” in *Intellectual Adventure of Ancient Man*, ed. H. Frankfort et al., Chicago: University Chicago Press, 1946.

<sup>24</sup>Inscriptions first appear in the pyramid of Pharaoh Unas (2356–2323 B.C.E.).

kings and their sisters, Osiris and Seth, Isis and Nephthis. These nine primeval gods, called the Nonad, expressed both cosmic and political understandings. The account of the struggles of Osiris and Seth and the restoration of the proper monarchy under Osiris' son, Horus, was fundamental to the Egyptian view of the divine origin of kingship, as the Pharaoh was seen as a Horus king and legitimate successor to Osiris. On a natural level, Osiris was also understood as the Nile River, the offspring of the Earth.

Shu, the god of air,<sup>25</sup> produced the earth by creating a division in the primordial waters, which allowed the dry earth to appear. In the same act, Shu created the heaven as the under surface of the primordial waters which were raised above the Earth. As Allen so aptly expressed it, the Egyptian universe existed as a bubble of air in the midst of the primordial waters.<sup>26</sup> Even in the earliest recorded versions of Egyptian cosmogony, the Egyptians were already invoking the physical properties of elemental gods such as air and water as keys to understanding the origin of the universe.

### **Hermopolitan**

The Hermopolitan account of creation was based on the work of eight primordial gods, known collectively as the Ogdoad. They were the gods of the primordial waters themselves and of their properties. In male and female pairs they were: Nun and Naunet, the waters; Kak and Kauket, darkness;

<sup>25</sup>See R. O. Faulkner, "Some Notes on the God Shu," *Jaarbericht* 18, 1964, p. 266-270. Faulkner takes particular note of Shu's cosmogonic role in the Coffin Texts.

<sup>26</sup>Allen, *Genesis in Egypt*, gives a detailed analysis of Egyptian cosmology based upon a relief and inscription of the 19th dynasty, dating to ca. 1280 B.C.E.; pp. 1-7. Allen shows that the Egyptians viewed Nun as surrounding both heaven and earth. Wilson, art. cit., pp. 45 f., pictures the Nun as existing under the earth only, but does not support this view from Egyptian texts.



Heh and Hehet, infinity; Amun and Amaunet, hidden ones.<sup>27</sup> Nun and Naunet, Amun and Amaunet appeared together as primordial gods in Pyramid Texts,<sup>28</sup> but they are not described as the agents of creation until the Coffin Texts.<sup>29</sup> It was not until the Ramasside period that the creation by the Ogdoad was fully developed as part of the new Amun-Re theology of the New Kingdom. Amun grew in importance in the New Kingdom as he was identified with the sun god, Re. He remained the hidden god despite displaying himself in his chief manifestation as the sun.<sup>30</sup>

Although Amun's centrality persisted through the later dynasties of Egypt and into the Ptolemaic period, the texts of the developmental period of the New Kingdom contain the best statements of Amun theology. The best narratives of the creative process are found in the Coffin Texts. The later dynasties preserve mainly hymns which reflect the narrative and theology of the earlier texts but do not recount it in detail. The narratives of Theban

<sup>27</sup>The essential themes of creation by the Ogdoad are developed in multiple variations in their order and membership. The Harris Magical papyrus, which is reproduced in the Amun temple at el-Hisbe, DMTh 50.51, presents Amun as the offspring of Nun in keeping with the older traditions of the Pyramid Texts (Kurt Sethe, *Amun und die acht Urgötter von Hermopolis*, Berlin: de Gruyter, 1929, § 78). The Ramasside period developed a more theological account by assigning priority to the hidden deity, Amun, a theory which is explained at length in the pLeiden I 350 (see below). Amun's priority was preserved into the Ptolemaic period in the Theban temple texts. The membership of the Ogdoad also varies in the texts. Tenem, gloom, takes Amun's place in the Coffin Texts from Bersheh. Gerech, night, takes his place at el Hisbe. Ny takes Nun's place in an Amasis inscription and Amun's at Edfu. (Sethe, *Amun*, Tafel I.)

<sup>28</sup>Pyramid Text 446–7. See Sethe, *Amun*, § 64.

<sup>29</sup>Coffin Text 80.

<sup>30</sup>Jan Assmann, *Agyptische Hymnen und Gebete*, ed. Erik Hornung. Zurich: Artemis-Verlag, 1975, p.18, argues that the new Amun theology markedly differs from the earlier sun theology. He claims that the development of an Amun pantheism makes sense only as a response to Akhnaten's Aton worship: Das spezifisch "pantheistische" Gepräge der ramassidischen Amun-Theologie ist in deren Frühform nicht angelegt und ist nur als Antwort auf die Amarna-Religion verständlich: als der Versuch, die Idee des Einen Gottes mit der polytheistischen Vorstellung von der Göttlichkeit und Differenziertheit des Kosmos zu verbinden. See also Lesko, "Cosmology," p. 140f.

temple inscriptions are an exception, but they are Ptolemaic and too late for comparison with the Milesian cosmologists. Nevertheless, they do show the continuity of Amun thought through the late dynasties.

Two texts will serve to illustrate the key developments of Heliopolitan and Hermopolitan theology. Coffin Text 80 is a Heliopolitan text of the Middle Kingdom (2040–1640). It clearly reveals new elaboration of the old Nonad cosmogony under the influence of the newer Ogdoad cosmogony.<sup>31</sup> Papyrus Leiden I 350 which dates to 1250 B.C.E.<sup>32</sup> contains a collection of hymns which are the best statement of Ramasside Amun theology.

### **Coffin Text 80**

Coffin Text 80 forms part of group of seven spells devoted to Shu, the god of air. In the seven spells, the coffin's occupant identifies himself with Shu. In most Coffin Texts, the dead identifies himself with Osiris, as the deceased seeks to reenact Osiris' triumph over death. In the Shu texts, the deceased seeks to imitate Shu as the first life that came forth from the precosmic flood. Death threatens the soul with return to the darkness and formlessness of precosmic Nun and requires the reenactment of the origin of life in Shu by means of spells. Cosmogony is recreated in the service of immortality.

The ancient Pyramid texts merely state that Atum formed himself from

<sup>31</sup>Between the Hermopolitan and Heliopolitan systems syncretism is common. Much of the speculation of the Ogdoad is subsumed under the earlier Nonad. In Coffin Text 76, Heliopolitan Shu comes first and produces Nun and the Ogdoad. In a neighboring text, Coffin Text 80, the Ogdoad creates Shu. In pLeiden I 350, Amun creates the Nonad (see below). There are many other systems that share many elements with the major systems. Ptah, the god of craftsmen, fashions the world in pBerlin and in the Memphite theology. Khnum, the potter creates the world at Esna. Magic is the creator in Coffin Text 261. These variations and mutual borrowings testify to considerable activity in cosmological speculation.

<sup>32</sup>A. H. Gardiner, "Hymns to Amun from a Leiden Papyrus." *Zeitschrift für ägyptische Sprache und Altertumskunde* 42, 1905: 12–42. For another text and translation, see Jan Zandee, *De Hymnen aan Amon van Papyrus Leiden I 350*, Leiden: Brill, 1948.

Nun before he produced the world. Coffin Text 80 develops the account of Atum's formation as a dialogue between Atum and Nun, as the Ogdoad first appear and play prominent roles in a Nonad text.

Spell 80 begins by invoking the eight infinite ones as parents of Shu. The list of the eight varies from the later standard formulation of the Ogdoad in its substitution of Gloom (Tenem) for Amun, which is appropriate to the spell's narrative and descriptive tone:

Oh that Ogdoad, in million of millions.  
Heaven was enclosed in their arms,  
Aker of earth was drawn together  
Only when you gave birth to Shu in the millions, in Nun, in  
Gloom, and in Darkness. (27 d-28 b)<sup>33</sup>

The production of Shu is also recounted by Atum:

Behold I am alone with Nun in weariness  
I cannot find a place that I might stand there.  
I cannot find a place that I might sit there.  
Heliopolis has not yet been founded that I might be there,  
Lower Egypt<sup>34</sup> has not yet bound that I might sit on it.  
Heaven has not been made that it might be over my head  
The first body has not been born  
The prime Nonad had not yet become,  
Then they were with me.

<sup>33</sup>Translation here and throughout is by the author. The Egyptian text is found in A. de Buck and A. H. Gardiner, *The Egyptian Coffin Texts*, Chicago: University of Chicago Press, 1935, v. 2.

See appendix for a copy of de Buck's Hieroglyphic text and transliteration by the author.

Allen, *op. cit.*, p. 21, translates, "Shu has given you birth out of the Flood, out of the Waters, out of Chaos, out of the Darkness." Besides its grammatical difficulties, Allen's translation makes the identity of the eight rather mysterious. They could not be the male-female pairs of flood, waters, chaos, and darkness as we would expect if the eight are born out of these. *Tn* should be taken as the subject, not the object.

<sup>34</sup>For the writing of "Lower Egypt" as it appears here, see *Wörterbuch der Aegyptischen Sprache*, Adolf Erman and Herman Grapow, 5 volumes, Leipzig: Hinrichs, 1926-1931, v. 2, p. 123.

Then Atum said to Nun,  
I am upon the flood, having become greatly wearied,  
And my limb being tired.  
By my son, life, shall my heart be supported,  
He will give life to my heart when he has drawn together these  
very weary limbs of mine. (33 e–35 a)

Nun replies, suggesting the exhalation of both Shu and Tefnut.

Shu then recounts his own birth:

It is from his nose that he bore me,  
It is from his nostrils that I came forth.  
I was set as his neck, when he inhaled me together with my  
sister, Truth (Maat),  
It is from his egg that he shines forth every day,  
When the splendid god is born. (35 j–36 d)

I am life, the binder of the head,  
The fixer of the neck and vivifier of the throat.  
I bind Atum.  
I fix Isis' head upon her neck  
Even for Cheper [the god of becoming] I bound the spine.  
I am splendor, the extender of journeys,  
The bringer of the sky for Atum  
To the nose of Re everyday.  
My coming is my going.  
In order that he may sail to the western horizon, I open the way  
for Re. (37 a–g)

Spell 80 is as dualistic as it is dialectic. It attributes the production of Shu and hence the subsequent creation of the world to both Atum and to Nun. Nun provides precosmic location of creation. In itself it is formless, yet it binds together and forms the earth and Shu. After giving them birth, it continues to surround and hold together the world. Atum first exists in the same formlessness as Nun. He remains as an egg until he brings forth Shu. Although he creates Shu, he himself needs him as an appropriate place for himself.

Shu divides the formless Nun and opens space for Atum to manifest himself as the sun.

Spell 80 demonstrates the physical considerations at work in Nonad cosmology. Nun as water is formless, instable, and dark. As water, it prevented the formation of the sun. The sun was understood as fiery by the Egyptians, making air the proper medium for the sun. Air is also understood as the principle of life. In the cosmic order, air was seen as the product of the sun, as the sun granted life to the world.

**pLeiden I 350:**

Amun theology unified the two principles of the Heliopolitan system into the hidden god Amun. In his hiddenness he was the source of the formlessness of Nun. But his own hiddenness gave him the potential for multiple manifestations in the sun and stars and throughout creation. His manifestations were linked as a series of emanations:

No one knows the forms of he who fashions himself,  
A perfect pattern, come about from the holy influx,  
He who made his own images, who formed himself by himself,  
Complete manifestation, who made his own heart joyful.  
He who bound the waters with his body  
In order to cause his egg might become in his secret inside.  
Model of models, the likeness of birth  
Completing himself, [. . .] true [. . .] , fashioner of the forty. (ch.  
40)<sup>35</sup>

Chapter 40 the hidden deity emanates in different forms from his original hidden formlessness. His first image shows only in the darkness of Nun. Nun provides the material for the egg, which marks a second and more

<sup>35</sup>Translated from the text of Gardiner, art. cit.

See appendix for a copy of Gardiner's Hieroglyphic text and transliteration by the author.

defined stage of emanation. Egg imagery is brought over from Heliopolitan theology and is an intermediate stage to the birth of the sun.<sup>36</sup> The sun is the greatest manifestation of Amun. pLeiden shares the imagery of the binding of the egg with the Coffin Text Heliopolitan account (see above). The same imagery is carried over into the Theban temple texts of the Ptolemaic period (Theban text 283).

Amun's hiddenness is such that it allows him to be the true reality behind many and varied manifestations. He is the true reality behind the Nun and the sun, which makes him prior to the two principles of the Heliopolitan system. In his emanation as Ogdoad, he is boundless; as sun, he is bound. He is fiery sun and watery Nun. As the sun, he is light; as Nun, darkness. As Nun, he is hidden and as sun he is the most manifest.

The Ogdoad is your first becoming,  
That you might complete them when you were alone.  
Your body was hidden among of the elders  
You were hidden as Amun before the gods,  
Only that you might make your becoming as Ta Tenen  
In order to give birth to the primeval Nonad as your first primeval  
Nonad. (ch. 80)

In addition to the sun egg, Nun produces Ta Tenen, the primal or literally the "uplifted" earth. In pLeiden, Amun produces both earth and egg by binding and forging (pl. 4.2,10). The order of production of earth and sun egg is not indicated, but when the sun rises in its splendor, the earth is there to receive its light.

The sun himself is joined together in his body  
He is the elder in Heliopolis.  
He is called Ta Tenen,

<sup>36</sup>The egg for the sun is borrowed from Atum theology cf. Coffin Text 714.

Amun who came forth from Nun.  
His image is the upper part,  
His other becoming was among the Ogdoad.  
The prime one before the primeval Nonad, begetter of the sun.  
He completed himself as Atum, one flesh with him.  
He is the lord to the limit, originator of being. (ch. 200)

Chapter 200 explicitly invokes Atum as a manifestation of Amun in order to subsume Nonad creation under the power of Amun and the Ogdoad.

pLeiden presents both a theological and a physical account. It presents teachings of the hiddenness and unknowability of Amun, but it also teaches the production of egg in the water, a biological analogy for physical growth and change. At the same time it teaches the physical transformation of the waters into earth and sun through binding. The Amun theologians took over the physical accounts of the creation of the Nonad and the role of Shu in the world. But for the Nonad theologians, the waters had to be driven back by Shu to make room for the sun and the world. For the Amun theologians of pLeiden, the waters were bound into the sun-egg. They taught that the Ogdoad supplied the material for sun, a new doctrine of elemental transformation, driven by Amun's ability for multiple manifestation.

The Egyptians did not have a concept of matter in the technical sense that the Greeks would develop. They did not develop distinctions between matter as substance in potency or matter as substance without quality as Aristotle and the Stoics would. Nevertheless they do present an analysis of the heaven and earth into a common pre-cosmic material. They presented in mythic terms the forces behind the formation of heaven and earth and they traced their development in stages: 1) the waters of Nun 2) the fiery sun 3) air 4) the earth and heaven.

The Amun theologians had succeeded in reducing creation to a single

principle. Their single principle also served the substance of the world. They did not teach *creation ex nihilo* in the sense that the Christian apologists would later develop in the second century. Rather they taught *creatio ex deo* and a world of *deus in omnibus*.

## Thales

Thales of Miletus, traditionally known as the first philosopher, began his active life toward the end of the seventh century B.C.E.<sup>37</sup> Thales' interest in astronomy has been attested since the 5th and 4th centuries B.C.E. Herodotus recorded Thales' prediction of a solar eclipse (Diels, A.5) and Plato related the story of his fall into a pit while observing the heavens (Diels, A.9). It is a humorous story, but it does testify to Thales' reputation for astronomical interest. Later witnesses also report Thales' geometrical skill in measuring the height of the pyramids from their shadows (Diels, A.21). In Plutarch he also was reported to have travelled to Egypt where he derived his water cosmology (Diels, A.11 A.14). His Egyptian journeys and learning were also recounted in later sources which added Babylon to Thales' itinerary.

Whether he travelled to Egypt or not, Miletus had sufficient contact with Egypt to allow him contact with Egyptians ideas (see above).<sup>38</sup> His

<sup>37</sup>Kirk and Raven, p. 74. The only firm date in Thales' life is the eclipse that he was reported to have predicted in 585 B.C.E.

<sup>38</sup>Alan Lloyd discounts the reports of Thales' journeys as a later invention based upon the observation of similarities in Thales' water cosmology, astronomy, and geometrical interest with Egyptian and Babylonian thought. He also noted that Herodotus makes no mention of Thales' journeys to Egypt and argues that Herodotus' silence is a "surely conclusive refutation" because "had he known it, he would certainly have told us because he was obsessed with the question of the Egyptian legacy to Greece." Lloyd also argues that Thales' speculation concerning the sources of the Nile do not indicate an Egyptian journey, "since Miletus was a sea-port with intimate Egyptian connections and masses of information on conditions there must have been available to all" (op. cit., pp. 52ff.). Lloyd's first argument begs the question, "the reports are false because they are inventions." The reports could be inventions, but that is precisely what is at issue. The second argument is weak because it is from silence. There could be many reasons



speculation about the sources of the Nile indicates that he had knowledge and interest about Egypt. His interests in astronomy and geometry make it difficult to believe that he would not have sought out information from Egypt since as a Milesian he had opportunity to gain it, either by visit or report.

Despite their brevity, Aristotle's comments in the *Metaphysics* are the best surviving account of Thales' cosmology:

Thales, the founder of this kind of philosophy, said that water was the principle (therefore, he asserted that the earth was upon water), probably taking this supposition from the observation that all nourishment is moist and that heat itself arises from this and lives by this (the principle of all is that from which things arise), for this reason he took this supposition and because the seeds of everything have a moist nature. (Diels A.12)<sup>39</sup>

Of Thales' cosmology, little is known other than that he derived the world from water and taught that the world continued to float on water. Water by Aristotle's account seems to have continued as a life force in the world. According to Aristotle, Thales came to the conclusion that moisture produces heat and is the seed of all by observation of nutrition and reproduction. Kirk notes that Aristotle's language is speculative, preventing firm attribution of the reasoning to Thales.<sup>40</sup> Nevertheless, the biological analogy for the cosmos of the kind Aristotle attributes to Thales, a biomorphism if you will, would be why Herodotus did not mention Thales' journeys to Egypt. He could have been unaware of them, or he could have neglected to mention them because his discussions of Thales occur in connection with Lydia and not when he is discussing the legacy of the Egyptians. Lloyd's last argument makes the case that the question of a journey to Egypt is irrelevant to the question of the influence of Egyptian thought on Thales.

<sup>39</sup>ἀλλὰ Θαλῆς μὲν ὁ τῆς τοιαύτης ἀρχηγὸς φιλοσοφίας ὕδωρ εἶναι φησιν (διὸ καὶ τὴν γῆν ἐφ' ὕδατος ἀπεφαίνετο εἶναι), λαβὼν ἴσως τὴν ὑπόληψιν ταύτην ἐκ τοῦ πάντων ὁρᾶν τὴν τροφήν ὑγρὰν οὖσαν καὶ αὐτὸ τὸ θερμὸν ἐκ τούτου γινόμενον καὶ τούτῳ ζῶν (τὸ δ' ἐξ οὗ γίγνεται, τοῦτ' ἐστὶν ἀρχὴ πάντων), διὰ τε δὴ τοῦτο τὴν ὑπόληψιν λαβὼν ταύτην καὶ διὰ τὸ πάντων τὰ σπέρματα τὴν φύσιν ὑγρὰν ἔχειν. Text by Herman Diels and Walther Kranz, *Die Fragmente der Vorsokratiker*, Berlin: Weidmann, 1951, p. 77.

<sup>40</sup>Kirk, p. 93.

consistent with Thales' successors, Anaximander and Anaximenes. Biomorphism figures in Anaximander's cosmogony from the seed secreted from the infinite and in the figure of fire growing around air as bark around a tree (see below). Anaximenes calls air "the soul of the universe" (see below). Biomorphism in Thales would also parallel Egyptian use of biological analogy in cosmic eggs and world soul. Thales' cosmogony from water and the suspension of the earth upon waters show close parallels to Egyptian cosmology. Thales' process of the generation of the world is not preserved, which prevents closer comparison with Hermopolitan creation.

### **Anaximander**

Anaximander, also of Miletus, was reported to have been a follower of Thales and to have reached his sixty-fourth year in 547/6.<sup>41</sup> He followed Thales in biomorphism but shows clearer similarities to Amun theology than Thales. Anaximander's interests in the rest of the world are demonstrated in the report that he was the first of the Greeks to draw a map on a tablet (πίναξ, Diels, A.6) which may indicate Anaximander's borrowing of Ancient Mesopotamian map and writing technology.<sup>42</sup> Likewise he is credited with introducing the Greeks to the γνῶμων for the purpose of telling time, itself a Mesopotamian and Egyptian tool (A.1).

Anaximander followed Thales in theorizing concerning the origin of the world, but he rejected water as first principle in favor of a more abstract notion, the infinite:

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<sup>41</sup>Diels, 12A1, cf. Kirk and Raven, p. 100.

<sup>42</sup>So Charles Kahn, *Anaximander and the Origins of Greek Cosmology* New York: Columbia University Press, 1960, p. 82–84; Kahn draws comparison to a Persian period circular map from Babylon that shares features with Agathemerus description of Anaximander's map. In each map, a circular earth is surrounded by one river and cut in two by another river.

Anaximander . . . said that the infinite was the principle and element of beings . . . . He says it [the infinite] is neither water nor any of the things which are called elements, but some other infinite nature from which all the heavens and the cosmoi in them came about. From them the things which are have their genesis. Corruption goes into the same by necessity. For they give justice and recompense to each other for the injustice according to the order of time. (Diels, A 9 a and B 1)<sup>43</sup>

Anaximander's infinite is unbounded both in its extent and in its form. The Greek term ἄπειρον, can be derived as a privative from πέρας, "end" or "limit," meaning endless or limitless.<sup>44</sup> It can also be understood as a privative from the word πείρω, pierce or traverse, meaning the intransversable.<sup>45</sup> As for its use in Anaximander, Aristotle records that he described it as "deathless and indestructible" (*Physics* iii.4, 203 b 13 f.) which suggests the sense of limitless.

Cornford rejects the interpretation of the ἄπειρον as spatially infinite, arguing that the 6th century is too early for such a notion. He argues instead that ἄπειρον means endless in the sense that a sphere and spherical motion are endless. He argues that Anaximander's ἄπειρον should be understood as a sphere.<sup>46</sup> Cornford's argument is curious in that the notion of the sphere is at least as abstract as the notion of extension without limit and would seem to require greater geometrical sophistication. Cornford's interpretation is also contrary to the testimony of Theophrastus who reports that Anaximander's

<sup>43</sup> Ἀναξίμανδρος . . . ἀρχὴν τε καὶ στοιχείον εἶρηκε τῶν ὄντων τὸ ἄπειρον. πρῶτος τοῦτο τοῦνομα κομίσας τῆς ἀρχῆς. λέγει δ' αὐτὴν μήτε ὕδωρ μήτε ἄλλο τι τῶν καλουμένων εἶναι στοιχείων, ἀλλ' ἑτέραν τινὰ φύσιν ἄπειρον, ἐξ ἧς ἅπαντας γίνεσθαι τοὺς οὐρανοὺς καὶ τοὺς ἐν αὐτοῖς κόσμους· ἐξ ὧν δὲ ἡ γένεσις ἐστὶ τοῖς οὐσι, καὶ τὴν φθορὰν εἰς ταῦτα γίνεσθαι κατὰ τὸ χρεῶν· διδόναι γὰρ αὐτὰ δίκην καὶ τίσιν ἀλλήλοις τῆς ἀδικίας κατὰ τὴν τοῦ χρόνου τάξιν. Diels, op. cit., p. 83.

<sup>44</sup>So Cornford, op. cit., 176–178.

<sup>45</sup>So Kahn, op. cit., p.232

<sup>46</sup>Cornford, op. cit., p. 175ff.

ἄπειρον was infinite “in form and in size” (κατὰ εἶδος καὶ μέγεθος, Diels, A 9 a). Egyptian Amun theology also demonstrates the understanding of boundless expanse at a period far earlier than Anaximander. pHarris from the Ramasside period describes Amun as “without limit in his width and breadth.” The concept was current in Amun theology in Anaximander’s time as the text was preserved into the 6th century and inscribed on the temple at el-Hisbe.

Anaximander’s phrase “contains and governs all” itself echoes Amun theology. pLeiden describes Amun as existing beyond the limits of Nun, which itself surrounds the world. In Coffin Text 80, Nun surrounds and binds together Shu, who then binds together the sun.

Another sense of ἄπειρον is indefinite in kind, most clearly attributed to Anaximander by Theophrastus as preserved by Simplicius (Diels, A.9a): the infinite’s “nature is indefinite (ἀόριστον) both in its kind and in its size.” As we saw according to Simplicius, the ἄπειρον had an indefinite nature, “other than water or any element.” Kahn has argued that elemental powers, such as wet, dry, light, and dark are the beings “from which the things which are have their genesis. Corruption goes into the same by necessity” (see above).<sup>47</sup> If so, the ἄπειρον is the indefinite principle of the elemental qualities. Its indefiniteness allows it to be transformed into any quality. In this respect the ἄπειρον is again parallel to Amun of pLeiden: the hidden, characterless principle which can transform itself into the elements of the cosmos.

Anaximander’s cosmogony proceeded in stages of separation, first separation from the infinite, then separation into realms of the cosmos:

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<sup>47</sup>Kahn, *op. cit.*, 182 f.

He says that that which is productive (γόνιμον) of hot and cold was separated from the eternal at the genesis of this cosmos and that from this a ring of fire grew around the air which surrounds the earth like bark around a tree. The ring was broken and closed into circles producing the sun, the moon, and the stars. (Diels A.10)<sup>48</sup>

A crux for interpretation is formed by the γόνιμον, that which produces hot and cold (Diels, A.10). Anaximander (or Theophrastus) rather mysteriously used the word γόνιμον, “productive,” without identifying that which is productive.<sup>49</sup> One hint Anaximander gives is in the description of its secretion, ἀποκρίνεται, a term which can describe the production of eggs.<sup>50</sup> Flame both grows from the γόνιμον (from “this,” “this” referring back to the γόνιμον) and flame grows around the air<sup>51</sup> “as bark around the tree.” Its proximity to air and the figure of bark would seem to indicate that flame grows from the air, making air equivalent to the γόνιμον as the source of flame. Air also surrounds earth, and possibly has produced it as the cold earth in balanced opposition to the fire on the outside.<sup>52</sup> Under this interpretation, the γόνιμον, the hot and the cold of the first clause are concretely identified as the air, fire, and earth in

<sup>48</sup>φησὶ δὲ τὸ ἐκ τοῦ αἰδίου γόνιμον θερμοῦ τε καὶ ψυχροῦ κατὰ τὴν γένεσιν τοῦδε τοῦ κόσμου ἀποκριθῆναι καὶ τινα ἐκ τούτου φλογὸς σφαῖραν περιφυῆναι τῷ περὶ τὴν γῆν ἀέρι ὡς τῷ δένδρῳ φλοιόν· ἥστινος ἀπορραγείσης καὶ εἰς τινὰς ἀποκλεισθείσης κύκλους ὑποστῆναι τὸν ἥλιον καὶ τὴν σελήνην καὶ τοὺς ἀστέρας. Diels, op. cit., p. 83.

<sup>49</sup>Kirk takes the γόνιμον as a vague expression used by Theophrastus to cover his own doubts about Anaximander’s first stages of cosmogony, p. 133. Kahn agrees that γόνιμον is probably not original but from Theophrastus. The term is found elsewhere in Theophrastus. Kahn believes the idea is old.

<sup>50</sup>Kahn, p. 156, makes the connection of ἀποκρίνεται to the secretion of eggs, arguing for generation in a biological terms and not by vortex motion. Both Kahn and Kirk (p. 132) cast doubt on the witnesses to its circular motion in ancient sources and the interpretation of vortex motion in Anaximander by Cornford.

<sup>51</sup>On the meaning of ἀήρ in Anaximander, see Kahn. Kahn credits Anaximander with changing ἀήρ from its epic sense of “mist” to its more general sense of “air” (pp.143–154).

<sup>52</sup>Anaximander included the sea in the realm of the earth (Diels, A.27).

the second clause. The reading is also consistent with Anaximander's cosmology, in which air acts as the mediator between the realms of hot and cold. It opens to allow heat and light through to the lower realms and as it feeds the fires of the upper realms.

The air-egg in Anaximander's cosmology probably derives from the air-egg of Egyptian Heliopolitan creation as we saw it explained in the Coffin Texts, while Anaximander's ἄπειρον resembles Amun in its infinity and indeterminacy. As we also saw, the Hermopolitan Amun theology took over elements from the Heliopolitan creation account, including the cosmic egg. Anaximander probably came to know a syncretistic Amun theology.

Additionally, Anaximander's teaching of the governance of the world by justice is prefigured by the cosmic role of *Maat*, truth, in Egyptian thought. Like Δίκη, *Maat* has a judicial role, serving to adjudicate disputes, even the dispute between the god Osiris and his brother, Seth. In addition, she is the balance in the universe between the forces of being and destruction, serving as an aid to the Sun in his nightly struggle with Nun and darkness.

### **Anaximenes**

Of Anaximenes' life little more is known other than that he was a Milesian and follower of Anaximander. Anaximenes simplified the system of Anaximander by doing away with the mysterious infinite, substituting for it infinite air:

Anaximenes the Milesian, son of Eurustratus, companion of Anaximander, says the underlying nature was one and infinite, just as Anaximander did, but he did not say it was indefinite as Anaximander did, but that it was definite, namely it was air. It differed in rarefaction and in density through all substances. Rarefied, it becomes fire, condensed, it becomes wind then cloud,

still further condensed, it becomes water, then earth, then stones and other things come about from these. (Diels A.5)<sup>53</sup>

Similar to the water and the infinite of his predecessors, Anaximenes used air for original matter, surround and supporter of the earth. Air was indefinite enough to fulfill Anaximander's requirements of being a hidden base for other manifestations, but it is more intuitive and physical than Anaximander's undefined infinite.

Theophrastus' account of elemental transformations would seem to provide the outline of a cosmogony similar to Anaximander's. Anaximenes dispensed with the infinite and argued that density was the dynamic force rather than temperature.<sup>54</sup> Air rarefied on one side and condensed on the other produced a realm of fire on the outside and a realm of earth and stones on the inside. Air, wind, and clouds remained in the middle.<sup>55</sup> So understood,

<sup>53</sup>Αναξιμένης δὲ Εὐρυστράτου Μιλήσιος, ἑταῖρος γεγονῶς Ἀναξιμάνδρου, μίαν μὲν καὶ αὐτὸς τὴν ὑποκειμένην φύσιν καὶ ἄπειρόν φησιν ὥσπερ ἐκεῖνος, οὐκ ἀόριστον δὲ ὥσπερ ἐκεῖνος, ἀλλὰ ὠρισμένην, ἀέρα λέγων αὐτὴν διαφέρειν δὲ μανότητι καὶ πυκνότητι κατὰ τὰς οὐσίας, καὶ ἀραιούμενον μὲν πῦρ γίνεσθαι, πυκνούμενον δὲ ἄνεμον, εἶτα νέφος, ἔτι δὲ μᾶλλον ὕδωρ, εἶτα γῆν, εἶτα λίθους, τὰ δὲ ἄλλα ἐκ τούτων. Diels, op. cit., p. 91.

<sup>54</sup>Anaximenes provided an argument by the example of breath upon the lips (Diels, B.1).

<sup>55</sup>A different account of Anaximenes' cosmogony is preserved by Pseudo-Plutarch:

Everything came about by its [air's] condensation and subsequent rarefaction. Motion exists from everlasting. As air was felted, earth, which is flat, came about first, therefore by this account it floats upon air. The sun, moon, and stars have the beginning of their generation from earth. For he said that the sun was earth. By the speed of its motion and strong heat, it became kindled (Diels A.6).

γεννάσθαι τε πάντα κατὰ τινα πύκνωσιν τούτου καὶ πάλιν ἀραιώσιν. τὴν γε μὴν κίνησιν ἐξ αἰῶνος ὑπάρχειν· πιλουμένου δὲ τοῦ ἀέρος πρώτην γεγενῆσθαι λέγει τὴν γῆν πλατεῖαν μάλα· διὸ καὶ κατὰ λόγον αὐτὴν ἐποχεῖσθαι τῷ ἀέρι· καὶ τὸν ἥλιον καὶ τὴν σελήνην καὶ τὰ λοιπὰ ἄστρα τὴν ἀρχὴν τῆς γενέσεως ἔχειν ἐκ γῆς. ἀποφαίνεται γοῦν τὸν ἥλιον γῆν, διὰ δὲ τὴν ὀξεῖαν κίνησιν καὶ μάλ' ἴκανῶς θερμὴν ταύτην καῦσιν λαβεῖν. Diels, op. cit., p. 91.

In this cosmogony, air condenses to its limit. The final stage of condensation is earth, which

Anaximenes' cosmogony is similar to Anaximander's, minus the indefinite boundless. Anaximenes begins with the air egg which produces both fire and earth.

Anaximander also modified the biomorphism of his predecessors to a more anthropomorphic picture:

Anaximenes the Milesian, son of Eurustratus asserted that air was the principle of beings; for from it all things arose and into it they dissolve. "As our soul," he says, "being air controls us, so also wind and air contains the whole cosmos." (Diels B.2)<sup>56</sup>

Anaximenes in making the human soul the model for the cosmos opened new vistas in cosmological exploration that were to have profound impact throughout Greek philosophical tradition.

The notion of air as a soul at work in the world bears striking similarity to the account of the air god Shu which we saw in the Coffin Texts. Shu was not only the first creature of the world, but was also described as *Ba* soul whose strength supports heaven above earth. As we also saw, the Hermopolitan theologians took over many aspects of Heliopolitan thought. As a result, produces heat and fire by its motion. The accounts of Pseudo-Plutarch and Theophrastus cannot be harmonized as Kirk tried to do. He interpreted Theophrastus' version as the account of normal processes of the world and Pseudo-Plutarch's as the account of cosmogony (p. 152). However, the physical processes involved in Pseudo-Plutarch's account are distinct from those in Theophrastus.' In Theophrastus' account rarefaction produces heat; in Pseudo-Plutarch's motion does. The Milesians and later Greek philosophers do not present different natural processes in cosmogony and in the course of the world. Cosmogony is presented as the natural forerunner of the natural course of the world. Worse still, the accounts bear irreconcilable contradictions. Pseudo-Plutarch claims that "sun was [composed of] earth." What sense would this make in the Theophrastus version where fire and earth stand in opposition to each other by their defining characteristics, namely their densities? Since we must make a choice, we should follow the more generally reliable Theophrastus, and accept an account of cosmogony according to progressive separation of opposites from air.

<sup>56</sup>Αναξιμένης Εϋρυστράτου Μιλήσιος ἀρχὴν τῶν ὄντων ἀέρα ἀπεφάνετο· ἐκ γὰρ τούτου πάντα γίγνεσθαι καὶ εἰς αὐτὸν πάλιν ἀναλύεσθαι· οἶον ἢ ψυχὴν, φησὶν, ἢ ἡμετέρα ἀήρ οὔσα συγκρατεῖ ἡμᾶς, καὶ ὅλον τὸν κόσμον πνεῦμα καὶ ἀήρ περιέχεις.' Diels, op. cit., p. 95.



Anaximenes could have gotten his ideas of air as a soul in the world directly or indirectly from either a Heliopolitan or a Hermopolitan source.

Looking back over the three Milesian cosmologists it is possible to trace their work as a progressive development in understanding or interpreting Egyptian thought, from Thales' adoption of the physical aspect of Nun, to Anaximander's appropriation of the hiddenness of the boundless Amun and then to Anaximenes' account which unified the hidden cosmic force and the human soul in the form of air.

What the Milesians learned from the Egyptians would serve as the framework for cosmological speculation in the Greek world for centuries. The proposition that the world came into being from the same material that it would perish into would be accepted by almost all the Greek philosophers in general terms, although the unity and the sufficiency of matter would be challenged. Matter was here to stay as a principle of cosmogony and cosmology. The old succession myth, by which Zeus had defeated and left his progenitors powerless, had gone the way of Ouranos and Kronos. The teaching of a finite world springing from and supported by an infinite source would become a point of contention, as some taught infinite worlds. The anthropomorphism of cosmos, and the relation between the cosmic macrocosm and human microcosm would continue to serve as a basic analogy of cosmology.

The ways in which the Milesians departed from the Egyptian thought would serve as points of departure for further cosmic speculation in Greece. Anaximander and Anaximenes were more physicalist than the Egyptians. The Egyptians did not educe universal physical properties to explain transformations, whereas Anaximander and Anaximenes explained transformations on the basis of differences in temperature or density. The

Milesians also modified the Egyptian and Greek mythic habit of collocating many explanations by introducing a quest for a single explanation. Each of the Milesian cosmologists sought to establish his own principle as the one explanation of the origin of the cosmos in preference to that of his predecessors. The speed at which new cosmological speculations were produced left the Egyptians behind.

Nevertheless, the Egyptians had provided a larger yet more unified world view than previous Greeks had known, which the Milesians could use and develop. It was larger than Hesiod's three realmed world of heaven, earth, and underworld and more unified in its single cosmic principle and in the continuity from origin to present course. The Milesians got a basic plot structure, characters, and settings from Egypt, but changed the dramatic action. The changes focused on the mechanics of the physical operations. Together with their refusal to syncretize one account of creation with another, these changes led to a scientific revolution.

## Chapter 2, Matter in Plato, Aristotle, and Their Successors: Eternal realm of change or passing illusion

As we saw in chapter 1, the Milesians developed the notion of a single material/divine source of the world under influence from Egypt. It was a world governed by order, but destined to return to its origins. They did not distinguish the material for the world and the agent of creation, because the original agent of creation could transform itself into the requisite material for the cosmos. The principle of being manifested itself in the changes in the world.

Parmenides of Elea in Southern Italy (born ca. 510 B.C.E.)<sup>1</sup> drove a wedge between being and change which the Egyptians and Milesians did not recognize. His view that being and change were antithetical undid the system of the Milesians which was predicated upon a single principle of being and change. They were happy to see change as the prerogative of being. Parmenides argued that being was “ungenerated and imperishable, entire, unshakable, and endless, it neither was nor will be, but is now, whole and together, one and continuous.”<sup>2</sup> To be is to be eternal, timeless, and unchangeable.

After Parmenides no Greek philosopher could unite being, unity, and change in the way that the Milesians had. According to Parmenides, the

<sup>1</sup>Kirk and Raven, *op. cit.*, p. 263 f.

<sup>2</sup>ὡς ἀγέννητον ἐὼν καὶ ἀνώλεθρόν ἐστιν,  
ἐστι γὰρ οὐλομελές τε καὶ ἀτρεμές ἡδ' ἀτέλεστον·  
οὐδέ ποτ' ἦν οὐδ' ἔσται, ἐπεὶ νῦν ἔστιν ὁμοῦ πᾶν,  
ἔν, συνεχές. Diels, B 8, 3–6 a, p. 235.

For comment, see Kirk and Raven, p. 273 ff.

For a recent and extensive bibliography on Parmenides, see Scott Austin, *Parmenides: Beings, Bounds, and Logic*, New Haven: Yale University Press, 1986.

world was one undifferentiated reality. All change and plurality were illusory. Parmenides' work immediately effected a multiplication of material principles in Empedocles, Anaximander, and the atomists, as they tried to by-pass Parmenides' conclusion by introducing a plurality of material principles.<sup>3</sup> Subsequently, Parmenides' work led to finer distinctions in the notion of being. Plato's distinction between true being versus phenomenal being denied the reality of the realm of change. Aristotle's act-potency distinction allowed him to find being in becoming. The Stoics adopted a categorical distinction of being to distinguish the one material substance of the cosmos from its qualitative changes.

Surprisingly, even among Platonists in the following centuries, the Stoic and Aristotelian views of matter and the ontology of the realm of becoming carried the day. Yet, Plato's dualism continued in a modified form in the teachings of the Neopythagoreans.

Neither Parmenides nor his followers had a notion of matter as an unqualified ontological principle distinct from form. Such a dualism would be developed by Plato and Aristotle. To consider the development of the notion of matter as a distinct ontological principle, we will pass over Parmenides and his followers and proceed directly to the realm of change in Plato, Aristotle, the Stoics, and their followers.

### **Matter in Plato**

One of the great ironies of the history of Greek philosophy is that one of the main sources for the understanding of the doctrine of matter in later

<sup>3</sup>For the effects of Parmenides teachings on Empedocles, Anaxagoras, and the atomists, see Kirk and Raven: "Each of these systems is, in its own way, a deliberate reply to Parmenides," p. 319. On Empedocles in particular, see pp. 323–25. On Anaxagoras, see pp. 368–70. On Zeno's effect on Anaxagoras, see pp. 370–72. On the atomists, see pp. 404–409.

Greek philosophy did not believe in the stuff himself. Even though Plato's (428/7–348/7 B.C.E.) *Timaeus* was one of the key texts informing the Middle-Platonist and Neoplatonist notions of matter, there is no matter in Plato's system. I say this not just because he antedates Aristotle's development of the notion, and not just because for Plato the physical world is mere appearance. Physical bodies are not even what they appear. Bodies are twice removed from true being in that they are only constructs of phenomenal mathematical figures. They are mere constructs of mere phenomena.

The depth of Plato's idealism has been overlooked from antiquity. Among the Middle-Platonists and Neoplatonists, Plato's position was assimilated to Aristotle's. They assumed that Plato's receptacle of change was matter in the Aristotelian sense and they freely glossed the term as matter.<sup>4</sup> Although most recent commentators have come to accept that the Aristotelian notion does not fit the text of the *Timaeus*, modern commentators have not

<sup>4</sup>Aristotle first made the identification of Plato's receptacle and his matter (*de Generatione et Corruptione* B 1). The Middle-Platonist Plutarch, *de Iside* 372 E (matter is the πανδεχες) and Albinus, *Didaskalikos*, ch. 8 followed suit, see below.

Plotinus makes the same identification (*Enneads* 2.4.1, 1).

Also Calcidius in his commentary on the *Timaeus*, 308, ed. John Wrobel, *Platonis Timaeus, interprete Chalcidio cum eiusdem commentario*, Leipzig: Teubner, 1876, p. 336 f.

The identification was preserved into the medieval period in Bernard of Chartres' commentary on the *Timaeus*, *Glosae super Platonem*, ed. Paul Dutton, Toronto: Pontifical Institute of Mediaeval Studies, 1991, c. 8, 127f., p. 222.

Recent conveyors of this tradition include I. M. Crombie. Crombie regards the receptacle as a constituent of things and an active player in the cosmos, *Plato's Doctrines*, London: Routledge, 1963, pp. 219 f. He argues that the designation space should be taken metaphorically because the receptacle can move, cf. p. 223. But for Plato takes the notion of the receptacle moving is in philosophical terms a "Cambridge change." The receptacle moves as phenomena enter and leave it. It remains without change.

Plato identifies the receptacle as space. It is the necessary location for movement and change, but it remains unaffected by change. Neither does it enter into composition as Aristotle's matter does. Plato has no doctrine of act-potency composition, central to Aristotelian doctrine of matter (see below).

Cornford agrees that the receptacle is that in which change occurs, not that from which change occurs, *Plato's Cosmology*, London: Paul, Trench, Trubner, 1937, p. 181.

accepted that Plato constructed bodies and their properties solely from geometrical figures.<sup>5</sup> As if moved by pity, they have contributed other entities to Plato's rather empty ontological plate. Some have added simple bodies from which to construct the elements. Others have looked to recurrent properties distinct from the triangles which come and go in unexplained relationship to the geometrical figures.<sup>6</sup>

<sup>5</sup>Morrow accepts the picture and calls the triangles elements, but offers no explanation of the ontological status of the triangles. "Necessity and Persuasion in Plato's *Timaeus*," *Studies in Plato's Metaphysics*, edited by Reginald E. Allen, London, Routledge & Kegan, 1965, pp. 421–437, p. 427. He takes the powers of the elements as primitive conditions faced by the demiurge, which the demiurge arranged, but in no way created, p. 431.

<sup>6</sup>There is no need to multiply entities, not only beyond need, but also beyond the strict divisions of the text. Plato outlines three genera, forms, imitations, and space. Cherniss adds a fourth, the determinate characteristics of phenomena that enter and leave the receptacle. They are distinct from the forms, which are "emphatically said not to enter anything," and the phenomena that are "the apparent alterations of the receptacle as a result of their continual entrance into it and exit from it," "A Much Misread Passage of the *Timaeus*," *American Journal of Philology* 75, 1954, pp. 113–130, see p. 128 f. Republished in Harold Cherniss, *Selected Papers*, ed. Leonardo Taran, Leiden: Brill, 1977, pp. 346–363.

Allan Silverman, "Timaeian Particulars," *The Classical Quarterly* n. s. 42, 1992, pp. 87–113, tried to balance a desire to keep the primitives of Plato's ontology to three with a desire to construct elements so as not to be stoicheia or syllables, Silverman develops a rather elaborate ontology: "The reflections or recurrent attributes are consequences of the mere existence of the receptacle and the Forms. The geometrical configurations provide dimensional cross sections of time and space and thereby provide places for the recurrent attributes to enter and exit the receptacle," p. 94. His elements are composites of properties and regions of the receptacle that are "construct(s) of the receptacle and a geometrical configuration" p. 95.

Silverman acknowledges that he has no explanation for the coincidence of properties and particular geometrical configurations: "He [Plato] is saddled with the inexplicable coincidence of geometrical bodies occupying space and properties entering and exiting the place defined by those bodies." p. 112. At that point Silverman abandons his first concern, by positing an infinite number of primitive phenomenal coincidences. He also neglects Plato's statements that properties follow the geometrical constructions of the elements, see below.

The relation between geometrical structures and properties is not coincidental or inexplicable, see below.

The composite nature of the elements he uses to justify his construction is a non-problem. Plato says elements are constructed from triangles, which are themselves not simples. Therefore, the elements are not syllables.

Gill used the same concern for the non-simplicity of the elements to justify importing simple bodies into Plato's ontology. These simple bodies are the components of the elements: "A simple — whatever it turns out to be — will be called by its name a "τὸ τοιοῦτον." It is like a form because it shares the same nature but is distinct from it because it constantly moves around

None of these systems fits Plato's explicit threefold ontology: forms, phenomena, and receptacle. Neither do they take into account Plato's analysis of the properties of the elements in terms of the shapes and sizes of their geometrical structures. By so doing they miss Plato's mathematical idealism. I use the term idealism in the sense that physical bodies are derived from non-physical principles, in Plato's case geometrical.

### elements and properties as constructed from triangles alone

In the *Timaeus*, Plato divides everything into three genera: the forms; the phenomena; and the receptacle:

It must be admitted that one has the form of sameness, ungenerated, and indestructible, receiving nothing else from elsewhere into itself, neither going into another, it is unseen and otherwise unsensed. It is this which intellection is allotted to examine. A second [genus] is homonymous and similar to the first, sensible, generated, tossed constantly, arising in a place (τοπω) and then destroyed from there, grasped by opinion together with sense. A third genus is that of space (χωρας) which never receives corruption, but provides a seat for all that has generation. It is itself reached by a certain bastard reason without sensation, hardly reliable, to which we look in a dream and say that it is necessary for every being to be in a place and to occupy space, and that there is nothing which is neither in earth nor in heaven. (52 A 1-B 5; cf. 52 D 3; 50 D 1)<sup>7</sup>

through space," "Matter and Flux in Plato's *Timaeus*," *Phronesis* 32, 1987, pp. 34–53, see p. 51. To escape a non-problem, Gill imports an entity that contradicts Plato's own classification. If it is a body in space it is in the realm of becoming. It can neither be simple nor unchanging like a form.

<sup>7</sup>ὁμολογητέον ἔν μὲν εἶναι τὸ κατὰ ταῦτὰ εἶδος ἔχον, ἀγέννητον καὶ ἀνώλεθρον, οὔτε εἰς ἑαυτὸ εἰσδεχόμενον ἄλλο ἄλλοθεν οὔτε αὐτὸ εἰς ἄλλο ποιῶν, ἀόρατον δὲ καὶ ἄλλως ἀναισθητόν, τοῦτο δὲ δὴ νόησις εἴληχεν ἐπισκοπεῖν· τὸ δὲ ὁμώνυμον ὁμοίον τε ἐκείνῳ δεύτερον, αἰσθητόν, γεννητόν, πεφορημένον αἰεὶ, γιγνόμενόν τε ἔν τινι τόπῳ καὶ πάλιν ἐκεῖθεν ἀπολλύμενον, δόξῃ μετ' αἰσθήσεως περιληπτόν· τρίτον δὲ αὐτὸ γένος ὄν τὸ τῆς χώρας αἰεὶ, φθορὰν οὐ προσδεχόμενον, ἔδραν δὲ παρέχον ὅσα ἔχει γένεσιν πᾶσιν, αὐτὸ δὲ μετ' ἀναισθησίας ἀπτόν λογισμῷ τινι νόθῳ, μόγις πιστόν, πρὸς δὲ δὴ καὶ ὄνειροπολοῦμεν βλέποντες καὶ φαμεν ἀναγκαῖον εἶναι πού τὸ ὄν ἅπαν ἔν τινι τόπῳ καὶ κατέχον χώραν τινά, τὸ δὲ μήτ' ἔν γῆ μήτε πού κατ' οὐρανὸν οὐδὲν εἶναι. ed. John Burnet, *Platoni Opera*, Oxford: Clarendon Press, 1902.

The forms are true beings. They remain forever and unchangeably what they are. Phenomena come and go as mere shadows of the forms. They are the realm of becoming which Plato refers to simply as generation (γένεσις). Generation is the effect of the forms in the receptacle (50 C 7). The receptacle does not change itself, neither does it have its own character. It only appears to become that which enters into it:

It always receives all things, but it does not ever in any way take a form similar to any of the things which enter into it. It remains as a tablet for every nature. Moved and shaped by the things which enter it, it appears to be changed by them at different times—those which enter and leave are always imitations of the true beings, impressed by them in a way that is both amazing and difficult to understand. (50 B 8-C 6)<sup>8</sup>

Plato identifies the third genus as space (52 D 3). The receptacle is not a material substrate which enters into composition with the phenomena. It is merely a stage for all the world. Motion “appears” in the receptacle as phenomena come and go. The receptacle itself remains unchanged. It does not enter into composition with the phenomena which appear in it. Plato lacks a doctrine of act-potency such as Aristotle has to explain such composition.

Plato expressly denies that the elements are constructed from the receptacle:<sup>9</sup>

<sup>8</sup>δέχεται τε γὰρ αἰεὶ τὰ πάντα, καὶ μορφήν οὐδεμίαν ποτὲ οὐδενὶ τῶν εἰσιόντων ὁμοίαν εἴληφεν οὐδαμῆ οὐδαμῶς· ἐκμαγεῖον γὰρ φύσει παντὶ κεῖται, κινούμενον τε καὶ διασχηματιζόμενον ὑπὸ τῶν εἰσιόντων, φαίνεται δὲ δι' ἐκεῖνα ἄλλοτε ἄλλοιον τὰ δὲ εἰσιόντα καὶ ἐξιόντα τῶν ὄντων αἰεὶ μιμήματα, τυπωθέντα ἀπ' αὐτῶν τρόπον τινὰ δύσφραστον καὶ θαυμαστόν.

<sup>9</sup>so Cornford, loc. cit.

Richard Mohr, “Image, Flux, and Space in Plato’s *Timaeus*,” *Phoenix* 34, 1980, pp. 138–152, contrasts the Platonic receptacle with Aristotelian matter in five ways:

1) The receptacle is not a material cause out of which objects are made, pp. 147 f.



Therefore, the mother and receptacle of the visible becoming and of everything sensible, let us not call neither earth nor air nor fire nor water, neither is it what arises of these [elements] neither is it that from which these [elements] arise. (51 A 4–6)<sup>10</sup>

Plato's first bodies are the Empedoclean elements: fire, air, earth, and water. As "pure, first bodies" (ἄκρατα καὶ πρῶτα σώματα, 57 C 7), they cannot be said to be mixed or constructed from other bodies. They serve as the ingredients for the construction of the body of the cosmos (32 C 5). Even though there are no bodies below them and those above them are constructed from them, Plato refuses to grant them the status of true elements, or even syllables, as he puns the literal sense of *stoixeia*: letter (48 B 8 f.). That is to say they are neither simples nor are they constructed from simples. (Still, for ease of reference I will use the common term elements. Plato terms them the four kinds [γένη]). Even though they are constructs, they are the first bodies, because they are constructed from non-bodies. They are formed from four different solid figures which are themselves formed from triangles:

First, it is at least clear to everyone that fire, earth, water, and air are bodies. Every form of body has depth. Further, it is always necessary that depth includes the nature of the plane. The flat base of the plane is composed of triangles. (53 C 4–8)<sup>11</sup>

2) The receptacle is not a principle of individuation, pp. 148 ff.

3) The receptacle is not a subject of predication, pp. 150 f.

4) The receptacle is not a substrate for change, p. 151.

5) The receptacle is not a principle of existence, p. 151.

<sup>10</sup>διὸ δὴ τὴν τοῦ γεγονότος ὄρατοῦ καὶ πάντως αἰσθητοῦ μητέρα καὶ ὑποδοχὴν μήτε γῆν μήτε ἀέρα μήτε πῦρ μήτε ὕδωρ λέγωμεν, μήτε ὅσα ἐκ τούτων μήτε ἐξ ὧν ταῦτα γέγονεν·

<sup>11</sup>Πρῶτον μὲν δὴ πῦρ καὶ γῆ καὶ ὕδωρ καὶ ἀήρ ὅτι σώματά ἐστι, δῆλόν που καὶ παντί· τὸ δὲ τοῦ σώματος εἶδος πᾶν καὶ βάθος ἔχει. τὸ δὲ βάθος αὐτῶν πᾶσα ἀνάγκη τὴν ἐπίπεδον περιειληφέναι φύσιν· ἡ δὲ ὀρθὴ τῆς ἐπιπέδου βάσεως ἐκ τριγώνων συνέστηκεν.

The triangles are themselves constructed from angles (57 D 1) and presumably from lines. The triangles move and change in the realm of becoming and must therefore be imitations of mathematical forms. Thus, the elements are constructed from mathematical phenomena which are themselves constructed.

In the analysis of bodily properties which follows, Plato traces all the properties of the first bodies to their shapes, sizes, and mutual interactions. He analyzes weight, mobility, hardness, wetness, and heat all in terms of the relative sizes and the shapes of the elemental bodies. There are no bodies nor bodily properties which Plato does not trace back to his geometrical constructions.<sup>12</sup>

Fire is the smallest and sharpest body, which explains its movements:

The sharpest form belongs again to fire, the second most to air, and the third most to water. Since of these all, the one having the fewest bases must be the most mobile, because it is most incisive, and sharpest of all in everyway. Further it is the lightest, because it is constructed from the smallest parts. (56 A 5-B 2)<sup>13</sup>

Earth is the opposite. It has the largest particles and largest base making it the most stable and unmovable of the elements (55 D 8-E 3). The other elements are more mobile than earth and less mobile than fire.

Fire's mobility has consequences of its own as it helps to determine the heat of fire:

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<sup>12</sup>The properties are not distinct from bodies, otherwise none of Plato's analysis would make sense, contra Silverman (see above); also contra Cornford, who takes "the contents of the figures as qualities or 'motions and powers.'" *op. cit.*, p. 229.

<sup>13</sup>καὶ τὸ μὲν ὀξύτατον αὖ πυρί, τὸ δὲ δεύτερον ἀέρι, τὸ δὲ τρίτον ὕδατι. ταῦτ' οὖν δὴ πάντα, τὸ μὲν ἔχον ὀλιγίστας βάσεις εὐκίνητότατον ἀνάγκη πεφυκέναι, τμητικώτατόν τε καὶ ὀξύτατον ὄν πάντη πάντων, ἔτι τε ἐλαφρότατον, ἐξ ὀλιγίστων συνεστός τῶν αὐτῶν μερῶν.

First, knowing its division and incision which befalls our body, let us see by investigating here why we say fire is hot. Almost everyone feels it as a sharp effect. Those who remember the origin of its shape must consider the fineness of the sides, the sharpness of the angles, the smallness of the parts, and the speed of its travel by which it always quickly cuts that which with it comes in contact when it is strong and sharp. Because most of all that nature and not any other divides and chops up our bodies into small pieces. (61 D 5–62 A 5)<sup>14</sup>

By contrast, hardness results from the large and firm square base of earth's cubic structure (62 B 8-C 2). Wet bodies have relatively small bodies, which are displaced by larger bodies as they sink (62 A 6 ff).

Plato's account of weight depends upon the sizes of the elemental bodies. He argues that the most stable bodies seek the most stable part of the cosmos, the center. Their size and immobility allows them to force the smaller and more mobile particles to the outside. Thus, earth occupies the center of the cosmos and fire is displaced to the outer edge (63 D 1 ff.). Taking the center position is what it is to be heavy and being displaced to the outside position is what it is to be light.

Plato also examines the interactions and composition of the elements in the same terms as the shapes and sizes of the elements. It should be clear enough that the regular shapes are the basis of the properties of the elements. But what about the properties found in the pre-cosmic stew, before the demiurge constructed the regular geometrical forms? The traces of the elements in the pre-cosmos have proven intractable for exegetes. The existence of the properties

<sup>14</sup>πρώτον μὲν οὖν ἢ πῦρ θερμὸν λέγομεν, ἴδωμεν ὧδε σκοποῦντες, τὴν διάκρισιν καὶ τομὴν αὐτοῦ περὶ τὸ σῶμα ἡμῶν γιγνομένην ἐννοηθέντες. ὅτι μὲν γὰρ ὀξύ τι τὸ πάθος, πάντες σχεδὸν αἰσθανόμεθα· τὴν δὲ λεπτότητα τῶν πλευρῶν καὶ γωνιῶν ὀξύτητα τῶν τε μορίων σμικρότητα καὶ τῆς φορᾶς τὸ τάχος, οἷς πᾶσι σφοδρὸν ὄν καὶ τομὸν ὀξέως τὸ προστυχὸν αἰεὶ τέμνει, λογιστέον ἀναμιμνησκομένους τὴν τοῦ σχήματος αὐτοῦ γένεσιν, ὅτι μάλιστα ἐκείνη καὶ οὐκ ἄλλη φύσις διακρίνουσα ἡμῶν κατὰ σμικρά τε τὰ σώματα κερματίζουσα.

prior to the construction of the elements has led commentators to posit the independence of properties from bodies.<sup>15</sup> If the properties can exist before the elements, then properties appear independent of the elemental bodies. Properties independent from bodies are unsatisfactory, unjustified by the text, and unnecessary.

I believe that the same analysis of the properties holds in the pre-cosmos as in the cosmos. Pre-cosmic properties of weight, heat, wetness all follow from the relative sizes and the shapes of the elemental traces found in the pre-cosmos. The properties are not any more independent than they are in the cosmos. In the cosmic order, the elements have regular sizes and shapes and thus, determinate relations one to another, allowing the construction of an orderly cosmos. In the pre-cosmos, the properties follow from the relative sizes of the bodies, even though the bodies have not yet been given regular sizes and shapes. Thus, no regular relations between properties or cosmic order is possible.

#### **pre-cosmic chaos**

Plato characterizes the precosmic realm of becoming as existing without similar powers or without balance:

The nurse of generation was made wet and fiery and received the shapes of earth and air and suffered whatever consequences follow these, and appeared variegated to sight, and because it was not filled by similar or balanced powers, it was not balanced in any of its ways, but unevenly balanced everywhere, it was shaken by them and as it was moved, it shook them as well. The things which were moved were constantly borne elsewhere and separated, as things shaken by winnowing fans and by tools for

<sup>15</sup>Independent properties in pre-cosmos turn up in the interpretations of Cornford, Silverman, and Cherniss.

the winnowing of grain and the dense and heavy things are winnowed out and the thin and light things are carried to another place. Thus the four elements were shaken by the receiver which moved like a tool for shaking. It divided the most dissimilar from each other more, while it drove the similar together. Therefore, each had a different place, before the universe, which was ordered out of them, came about. The universe before this one contained all of these things without reason or measure. Before the universe was begun to be ordered, fire, water, earth, and air, each having the vestiges of itself, and disposed in every possible way as is the likeness of everything when god is absent from it. Thus, the things which were first shaped by forms and numbers. God composed them into this universe as beautiful and as excellent as possible from that which was not so. (52 D 4–53 B 6)<sup>16</sup>

The powers were not regularized by regular shapes for the elements. Neither was an overall cosmic balance to be found. Nevertheless, there were traces of the elements and their properties. What precisely the traces are, Plato never says. But it is most consistent with the rest of the *Timaeus* to read them as irregular bodies. The great disorder that Plato describes indicates that they were not just slightly deformed figures, but a great variety of dissimilar shapes jostling each other in the absence of any clear direction.<sup>17</sup>

<sup>16</sup>τὴν δὲ δὴ γενέσεως τιθήνην ὑγραιομένην καὶ πυρουμένην καὶ τὰς γῆς τε καὶ αἴρος μορφᾶς δεχομένην, καὶ ὅσα ἄλλα τούτοις πάθη συνέπεται πάσχουσιν, παντοδαπὴν μὲν ἰδεῖν φαίνεσθαι, διὰ δὲ τὸ μήθ' ὁμοίων δυνάμεων μήτε ἰσορροπῶν ἐμπίμπλασθαι κατ' οὐδὲν αὐτῆς ἰσορροπεῖν, ἀλλ' ἀνωμάλως πάντη ταλαντούμενην σειέσθαι μὲν ὑπ' ἐκείνων αὐτήν, κινουμένην δ' αὐτὴν πάλιν ἐκεῖνα σειεῖν· τὰ δὲ κινούμενα ἄλλα ἄλλοσε αἰεὶ φέρεσθαι διακρινόμενα, ὥσπερ τὰ ὑπὸ τῶν πλοκάνων τε καὶ ὀργάνων τῶν περὶ τὴν τοῦ σίτου κάθαρσιν σειόμενα καὶ ἀνικμώμενα τὰ μὲν πυκνὰ καὶ βαρῆα ἄλλη, τὰ δὲ μανὰ καὶ κοῦφα εἰς ἑτέραν ἵζει φερόμενα ἔδραν· τότε οὕτω τὰ τέτταρα γένη σειόμενα ὑπὸ τῆς δεξαμενῆς, κινουμένης αὐτῆς οἷον ὀργάνου σεισμὸν παρέχοντος, τὰ μὲν ἀνομοιότατα πλείστον αὐτὰ ἀφ' αὐτῶν ὀρίζειν, τὰ δὲ ὁμοιότατα μάλιστα εἰς ταῦτόν συνωθεῖν, διὸ δὴ καὶ χάραν ταῦτα ἄλλα ἄλλην ἴσχειν, πρὶν καὶ τὸ πᾶν ἐξ αὐτῶν διακοσμηθὲν γενέσθαι. καὶ τὸ μὲν δὴ πρὸ τούτου πάντα ταῦτ' εἶχεν ἀλόγως καὶ ἀμέτρως· ὅτε δ' ἐπεχειρεῖτο κοσμεῖσθαι τὸ πᾶν, πῦρ πρῶτον καὶ ὕδωρ καὶ γῆν καὶ αἶρα, ἴχνη μὲν ἔχοντα αὐτῶν ἅττα, παντάπασί γε μὴν διακείμενα ὥσπερ εἰκος ἔχειν ἅπαν ὅταν ἀπῆ τινος θεός, οὕτω δὴ τότε πεφυκότα ταῦτα πρῶτον διεσχηματίσατο εἶδει τε καὶ ἀριθμοῖς. τὸ δὲ ἦ δυνατὸν ὡς κάλλιστα ἀρισταῖ τε ἐξ οὐχ οὕτως ἐχόντων τὸν θεὸν αὐτὰ συνιστάει.

<sup>17</sup>Steven Strange, "The Double Explanation in the *Timaeus*," *Ancient Philosophy* 5,

If we take the elemental traces for bodies which have not yet been regularized, the analysis which Plato applied to the cosmic properties still holds. Heat results from the sharpness and speed of the smallest particles. Larger particles display the firmness and immobility of earth. The weight of the various bodies also follows from their relative sizes.<sup>18</sup>

But in the absence of regular cosmic and elemental structure, the traces of elements behave erratically. Without regular bodies, there is little regularity found in "similar powers." Fieriness would not consist in the regular shape of a pyramid, but in relatively small and sharp pieces (53 A 8).

Since the cosmic sphere had not yet been constructed, there was no center point in which the largest bodies could congregate. As a result they were free to congregate anywhere, without a clearly demarcated region as earth has in the present cosmos. Similarity of sizes would tend to draw like to like, but without regular structures the similarity of the pre-cosmic bodies is only partial. As a result they continue to move and shake.<sup>19</sup>

The demiurge imposed order by limiting the number of shapes to four basic kinds, which allowed predictable interactions and recombinations and determinate regions to be established. Necessity existed before and after because 1985, pp. 25–39, n. 14, argues that the pre-cosmic particles must have weight to make the winnowing basket analogy (52 E–53 A) work. To have weight, he argues, they must "resemble fairly closely the regular geometric shapes" the demiurge gives them, p. 33. I find no basis for this. Weight follows from the relative sizes of the particles and the tendency for like to go to like. There is no need for much regularity in Plato's account of weight.

<sup>18</sup>Plato does not analyze the particles in this way in the pre-cosmos, but it is more consistent to maintain the same analysis of the properties in the pre-cosmos and cosmos than to import a new set of independent properties into the ontology.

<sup>19</sup>According to Cherniss, pre-cosmic motions are the comings and goings of imitations in the receptacle, "The Sources of Evil in Plato," *The Proceedings of the American Philosophical Society* 98, 1954, pp. 23–30, p. 25.

Glen Morrow says that the pre-cosmic motions should be attributed to a soul, which the demiurge trains into the cosmic order. "Necessity and Persuasion in Plato's 'Timaeus,'" in R. E. Allen, *Studies in Plato's Metaphysics*, London: Routledge & Kegan, 1965.

the demiurge is working with a plurality of bodies in space.<sup>20</sup> Of necessity some are smaller, sharper, and faster than others.

After the cosmic ordering, that necessary interaction finds reasonable limits and governance:

Because he wished everything to be good and nothing to be bad, to the extent possible, god took the whole which was visible but which was not quiet but moved discordantly and without order, and led it to order from disorder, judging order to be better than disorder in every way. (30 A 2–6)<sup>21</sup>

There was a limit to his work. The material realm was governed by necessity as well as by reason. Necessity was imposed upon it by the limitations of the spatio-temporal world of change, and the world was subject to change, struggle, and ultimately corruption. The cosmos itself and the celestial bodies were eternal because they were the direct work of the demiurge (41 A 7 f., cf. 43 A 2), but on the level of the microcosm, the struggles in the material realm would eventually lead to the corruption of each body, including the human body.

The human has two natures (42 A 1 f.): a soul made by the demiurge and descended from the stars; a body made by the created gods. Human suffering and death result from the soul being placed into a body (42, 44, 81 C).

[The gods] taking the deathless principle of the mortal animal, imitating their own demiurge, they borrowed from the cosmos parts of fire and earth, water and air, which would be repaid. They joined them together not with the unlooseable bonds by

<sup>20</sup>on necessity, see Strange, Mohr, and Silverman, art. cit.

<sup>21</sup>βουληθεῖς γὰρ ὁ θεὸς ἀγαθὰ μὲν πάντα, φλαῦρον δὲ μηδὲν εἶναι κατὰ δύναμιν, οὕτω δὴ πᾶν ὅσον ἦν ὁρατὸν παραλαβὼν οὐχ ἡσυχίαν ἄγον ἀλλὰ κινούμενον πλημμελῶς καὶ ἀτάκτως, εἰς τάξιν αὐτὸ ἤγαγεν ἐκ τῆς ἀταξίας, ἡγησάμενος ἐκεῖνο τούτου πάντως ἄμεινον.

which they themselves were held, but they fused them together with bonds invisible because of their small size. From all they finished each body as a unit and bound the cycles of the immortal soul into a body of ebb and flow. Those which were bound to a river neither controlled nor were controlled, but are borne by force and bore others by force, so also the whole animal moved, unordered wherever it happens to advance and unreasoned because it has all six motions [i.e., up and down, forward and back, right and left]. (42 E 7–43 B 2)<sup>22</sup>

The soul has its own perfect circular movement but it is buffeted by the erratic motions of matter. In the struggle against contrary motions, the body eventually gives out (81 C). Upon the corruption of the body, a soul trained by reason returns to the stars, while an evil soul, forgetting its own origins, descends further into existence as a beast (42 B).

### Aristotle

Aristotle (384/3–322/1) said from the beginning that matter was not knowable in itself (*Metaphysics*, 7.10, 1036 a 9–10). Given the disputes that have arisen among his 20th century interpreters, it seems Aristotle has been completely vindicated on this point. The medieval scholastics defined matter as pure potency in the category of substance<sup>23</sup> or in a modern restatement,

<sup>22</sup>καὶ λαβόντες ἀθάνατον ἀρχὴν θνητοῦ ζῶου, μιμούμενοι τὸν σφέτερον δημιουργόν, πυρὸς καὶ γῆς ὕδατός τε καὶ ἀέρος ἀπὸ τοῦ κόσμου δανειζόμενοι μόρια ὡς ἀποδοθησόμενα πάλιν, εἰς ταῦτόν τὰ λαμβανόμενα συνεκόλλων, οὐ τοῖς ἀλύτοις οἷς αὐτοὶ συνείχοντο δεσμοῖς, ἀλλὰ διὰ σμικρότητα ἀοράτοις πυκνοῖς γόμοις συντήκοντες, ἐν ἑξ ἀπάντων ἀπεργαζόμενοι σῶμα ἕκαστον, τὰς τῆς ἀθανάτου ψυχῆς περιόδους ἐνέδουν εἰς ἐπίρρυτον σῶμα καὶ ἀπόρρυτον. αἱ δ' εἰς ποταμὸν ἐνδεθεῖσαι πολὺν οὔτ' ἐκράτουν οὔτ' ἐκρατοῦντο, βία δὲ ἐφέροντο καὶ ἔφερον, ὥστε τὸ μὲν ὄλον κινεῖσθαι ζῶον, ἀτάκτως μὴν ὅπη τύχοι προίεναι καὶ ἀλόγως, τὰς ἑξ ἀπάσας κινήσεις ἔχον·

<sup>23</sup>Aquinas said that prime matter was commonly understood as potency in the category of substance: *id communiter materia prima nominatur, quod est in genere substantiae ut potentia quaedam intellecta praeter omnem speciem et formam et etiam praeter privationem, quae tamen susceptiva et formarum et privationum*, (*Unica Quaestio de Spiritualibus Creaturis*, 1 co.).

The Cambridge Commentary on Aristotle's *Physics* defines matter simply as pure potency:



pure indeterminacy.<sup>24</sup> The traditional view has been challenged in the last half century by those who argue that there is no prime matter in Aristotle. King, Charlton, and Jones each argue that only substances are subjects (ὑποκείμενα) for change and that the four elements (earth, air, fire, and water) are the lowest and primary subjects for change.<sup>25</sup> The revisionists have made persuasive challenges to the philosophical plausibility of the traditional *Materia secundum se est pura potentia, id est, neque actus, nec aliquid ex potentia et actu compositum. Haec assertio est tam Peripateticae quam Patonicae scholae communis, (Commentarii in octo libros Physicorum Aristotelis, Cambridge, 1592, I, 9, 3, 1).*

<sup>24</sup>Joseph Owens, C. Ss. R., "Matter and Predication in Aristotle," *The Concept of Matter*, ed. Ernan McMullin, Notre Dame: Notre Dame, 1963, 99–113: "Aristotle removed from it all determinations and so all direct intelligibility," p. 99.

John J. FitzGerald, "'Matter' in Nature and Knowledge of Nature: Aristotle and the Aristotelian Tradition," *The Concept of Matter*, pp. 79–98: "We have seen that Aristotle distinguished between primary matter, the first subject of coming-to-be, unique in its sheer indetermination, and nature-matter (second-matter), the first subject of coming-to-be, not simply, but as this or that distinctive natural product (element, compound or organism)," p. 95, cf. p. 85, 88.

Norbert M. Luyten, O.P., "Matter as Potency," *The Concept of Matter*, pp. 122–133: "This pure indetermination of primary matter must be seen in its connection with determination. We might call it the constitutive of fundamental inadequacy of substantial determination. Expressed in a more concrete way: a material reality is what it is in such a way that it bears in itself the possibility of simply not being what it is," p. 128.

<sup>25</sup>H. R. King sounded the opening salvo of the forty year war in 1956 in "Aristotle without prima materia," *Journal of the History of Ideas* 17, 1956, pp. 370–89. He argued that, "The notion of a characterless matter dropping one form and taking on another is a travesty of his doctrines of becoming, potentiality," p. 375. He said there was no first matter except the four elements. "They are 'as one,' the underlying, common matter of all composite bodies. But specifically, this first matter is differentiated into four elements, each different in nature, but each sharing a contrariety in common with another and each capable of generation from the others. And it is just because these elements are 'simple,' having no composite body of their own, that Aristotle can make them receptive of any and all form," p. 384 f. King does not explain how simple bodies can share properties and it looks like a contradiction in his interpretation.

Wm. Charlton in an appendix to his Commentary, *Aristotle's Physics, Books I and II*, Oxford: Clarendon Press, 1970, also said that the four elements were prime matter. He denied the need for any substrate to persist through change: "We do not say that the first thing has passed away into nothing, but into the second, and we say that the second has come into being, not out of nothing, but out of the first. Yet we cannot say that there is something that remained throughout and underwent these transformations, unless we can find some description under which this thing can be identified throughout," p. 140. See also "Prime Matter: A Rejoinder," *Phronesis* 28, 1983, pp. 197–211, in which Charlton focuses on the readings of disputed passages.

See also B. Jones, "Aristotle's Introduction of Matter," *The Philosophical Review* 83, 1972, pp. 474–500, who also denies the existence of a remnant through change.

interpretation, but their readings of the text of Aristotle have not borne up under criticism.<sup>26</sup>

C. J. F. Williams and D. Graham have taken a new tack. They agree that the traditional interpretation is the best reading of Aristotle, but they agree with the revisionists that the traditional doctrine of matter is inconsistent. They lay the blame squarely on Aristotle, saying that Aristotle's account was problematic from the beginning.<sup>27</sup>

Graham's careful studies bring forth the incoherence of the traditional account. Graham stated that Aristotle's account of matter is inconsistent, for it teaches that matter exists as a definite substratum for substantial change while also teaching that matter is indefinite. If indefinite, matter cannot be understood as a substratum. Moreover, if it is indefinite, to posit its existence as a substratum merely begs the question that change requires a substrate:

Likewise, if prime matter is to function as a bona fide substratum it must have some features in virtue of which we can explain

<sup>26</sup>F. Solmsen in "Aristotle and Prime Matter," *Journal of the History of Ideas* 19, 1958, pp. 243–52, challenges King's interpretation of the texts, but does not address King's philosophical challenges to the notion of prime matter.

See also A. R. Lacey, "The Eleatics and Aristotle on Some Problems of Change," *Journal of the History of Ideas* 26, 1965, pp. 451–68.

H. M. Robinson in "Prime matter in Aristotle," *Phronesis* 19, 1974, pp. 168–88, defends the view that "prime matter is nothing other than a potentiality," p. 168. He directs a defence against Charlton's denial of persistence of matter through substantial change based upon the texts of Aristotle.

<sup>27</sup>C. J. F. Williams in an appendix to *Aristotle's De generatione et corruptione*, Oxford: Clarendon Press, 1982, pp. 211–219, also rejects Charlton's interpretation. He also argues that what is not actual is nothing, therefore Aristotle's notion of matter as a being in potency is a misconception, p. 219.

Daniel Graham in "The Paradox of Prime Matter," *Journal of the History of Philosophy* 25, 1987, pp. 475–90, says: "The opponents of prime matter have a legitimate basis for criticizing the tradition, for there is something fundamentally wrong with the doctrine. Given Aristotle's assumptions and commitments, the doctrine of prime matter is not only dialectically inevitable but also systematically incoherent," p. 476. See also Graham, *Aristotle's Two Systems*, Oxford: Clarendon Press, 1987, particularly chapter 8, "The Paradoxes of Substance," pp. 207–232.

the change. It must *be* something. If prime matter has no characteristics besides the powers—which are not essential to it, since it need not have any given pair of them—it is essentially indeterminate.

For the Eleatic then, prime matter is a nothing, a mere *flatus vocis* invented ad hoc to save appearances. It is a something-I-know-not-what conjured up to beg a question. (Graham, 1987, p. 228)

In effect Graham is accusing Aristotle of playing a metaphysical shell game. He says that there must be a substrate for change, but when you ask him to produce that ultimate substrate for change, he shows you an absolutely indeterminate and unknowable substrate. The cup is empty.

Graham is right to challenge the notion of a pure potency and matter as absolute indeterminacy. I agree with Graham that there are no such things as pure potencies in reality, but also I do not think there are any in Aristotle.

The notion of a pure passive potency makes no sense. A passive potency is the ability to suffer change. That ability like all others must be the ability of a subject. In the case of a passive potency, it is the ability of a subject to suffer change. There are no such things as pure potencies floating around independently. They are not even imaginable, much less possible. There is no ability to die apart from a living creature which can undergo that change.

Potencies rest in subjects and are not indefinite. They are determinate abilities of a subject. Water can be made into definite things based upon what it is now. I can boil it and make it air (according to the Aristotelian science) but it has no indefinite potency to be made into anything we might imagine. In Aristotle's science, it can never become the matter for a planet or a star.

I believe the traditional account has gotten the definition of matter exactly backwards. Rather than potency in the category of substance (οὐσία),

matter is substance (τόδε τι) in potency,<sup>28</sup> as Aristotle states in *Metaphysics* H 1, δυνάμει τόδε τι. Stated this way around, Aristotle's doctrine avoids the inconsistencies which Graham and the revisionists have pointed out.

Matter is a composite which can be analyzed from substance. It is substance in potency and has to be understood in the analysis of substance. As δυνάμει τόδε τι, matter does what Aristotle asks of it. It serves quite nicely as a substrate for substantial change.

The substantial form is the organizing principle of the substance. Matter is that which is organized. That which is organized can be organized otherwise, resulting in a substantial change. The organization has changed but that which is organized remains. That is the sense in which matter is a substrate for substantial change. We will look first to the analysis of substance, then to matter as substrate, and finally to the ultimate substrate, prime matter.

#### **matter in the analysis of substance**

Matter is that which is arranged and ordered by form. It is not the arrangement by itself, therefore it both accepts and needs arrangement. As such it is in potency: "I call matter that which is not substance in act, but is substance (τόδε τι) in potency" (*Metaphysics* H. 1, 1042 a 27 f.).

Aristotle gives several examples of composite substances in the near context: a road is "wood or stone laid out in a certain way;" "a house is bricks or boards laid out in a certain way;" "ice is water hardened in a certain way;" "harmony is a certain mixture of high and low tones;" wind is "a movement in a quantity of air;" a calm is "an evenness of the sea" (*Metaphysics* H. 2,

<sup>28</sup>I use the translation "substance" for τόδε τι because in this context Aristotle is discussing in what sense matter can be said to be substance (οὐσία). Τόδε τι is used as a designation for the category of substance in both the *Metaphysics* and in the *de Anima*: Met Z 4, 1030 b 11, Z 13, 1038 b 24, A 2, 1069 b 11, N 2, 1089 a 11, b 32; de Anima A 1, 402 a 24, A 5, 410 a 14, B 4, 416 b 13.

1043 a 7–11, 23–25.). Wood, stone, and bricks are obvious materials, but Aristotle also explains that water can be material for ice, tones are the material for harmony, air for wind and the sea for a calm. In each example, the matter is that which is arranged in a certain way to produce that which is being defined.

Aristotle provides a threefold analysis of substance: (1) matter is substance in potency; (2) form is substance in act; and (3) the composite of form and matter is substance as independent existent (*Metaphysics* H 1, 1042 a 26–31; H 3, 1043 a 30 f.). The composite substance is matter arranged by an actual form. Although the substance can be analyzed as form and matter, it would be a mistake to distinguish numerically form and matter. They are one: “The final matter and the form are one, one in potential and the other in act” (*Metaphysics* H 6, 1045 b 18 f., cf *de Generatione et Corruptione* 320 b 14).

They are distinguished as act and potency, not as two independently existing things. There is only one independently existing thing: the composite. Aristotle explains that they are one in number but two in account (*Physics* A 7, 190 b 20 ff.).<sup>29</sup> They are two in account because the being of the form is not the being of the matter. I take it that by this he means that the being of the matter can persist through a substantial change, which is the end of the being of that particular substantial form.

Even though their beings differ, neither form nor matter can exist independently. Composite form will always be in matter, and matter will always exist in composition with one form or another.

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<sup>29</sup>Williams, art. cit., p. 217 f. tries to make the separability of form and matter into Frege’s sense/reference distinction. But Aristotle’s distinction is based not in a referential, but an ontological difference. Although he says that form and matter are different in account (λόγῳ), he bases the difference in account on the difference of being between the form and matter.

## **matter as substrate**

Matter serves as the substrate for substantial change, but matter is never an independent substrate. Even as substrate, matter is in composition with form. A substrate is that which persists (1) through a change from one opposite to another or (2) from the lack to the presence of a feature or (3) from a presence to a lack. Aristotle developed the notion of a substrate by observation of accidental change. White does not simply become black. A white surface becomes a black surface. There is a surface which persists through the change. In accidental change, the substance is the obvious substrate. But what happens when the substance changes? Aristotle refuses to accept that it arises from nothing and vanishes into nothing. It must arise from something. For Aristotle this means both that something was there which has now become a new substance and that something of the old substance persists in the new substance.<sup>30</sup>

Aristotle develops the notion of substrate for change in the first book of the *Physics*. He explicitly states his use of analogy in applying the notion of substrate to substantial change:

The underlying nature is understood by analogy. As bronze is to a statue or wood to a bed or matter which is formless is to anything else which has form (before it receives form), so the underlying nature is to substance and to the particular and to being. (*Physics* A 7, 191 a 8–12)<sup>31</sup>

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<sup>30</sup>Charlton tries to draw a firm distinction between the upokeimenon and the upomenon. He takes the upokeimenon as the substance from which change arises exclusively, and the upomenon as that which persists through change, Charlton, 1970, p. 131 f. Aristotle however does not observe a strict distinction in his use of the term upokeimenon.

<sup>31</sup>ὥς γὰρ πρὸς ἀνδριάντα χαλκὸς ἢ πρὸς κλίνην ξύλον ἢ πρὸς τῶν ἄλλων τι τῶν ἐχόντων μορφήν [ἢ ὕλη καὶ] τὸ ἄμορφον ἔχει πρὶν λαβεῖν τὴν μορφήν, οὕτως αὕτη πρὸς οὐσίαν ἔχει καὶ τὸ τόδε τι καὶ τὸ ὄν. ed. W. D. Ross, Oxford: Clarendon Press, 1950.

In accidental change, the subject for change is clearly composed between substance and accidental feature which changes. Aristotle uses the term ὑποκείμενον (substrate) to refer to the composite of substance and accident:

It is necessary that something always is a substrate, that which becomes and even if this is one in number, formally (εἶδει) it is not one (I say that “formally” and “in account” (λόγω) are the same). For the being of the human and the being of uneducated are not the same, and [after the change] one remains and the other does not. (*Physics* A 7 190 a 14–18)<sup>32</sup>

Even though the person and his educational status are numerically identical in the substantial unity of the person, they are not the same formally. The being of each is distinct. To be human is not to be educated or uneducated and, therefore, the educational status of a person can change, while remaining human. Since their being differs, Aristotle can distinguish between the substance which remains (τὸ ὑπόμεινον) and the accidental form which does not. Together in composition they are the subject of change, the ὑποκείμενον.

The same distinction applies analogously to substantial change:

Everything comes to be from a substrate and from form (μόρφῃ). For the educated person is somehow composed of the person and being educated. For you will analyze the whole into accounts of each. It is clear that when things become, they are composed of these. There is a substrate which is one in number and formally two (first there is the person or the gold or in general, the numerically distinct matter. For it is more particular and it is not accidental that that which becomes becomes from it. The privation or the opposite form is accidental). (*Physics* A 7 190 b 19–27)<sup>33</sup>

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<sup>32</sup>ὅτι δεῖ τι αἰεὶ ὑποκεῖσθαι τὸ γιγνόμενον, καὶ τοῦτο εἰ καὶ ἀριθμῶ ἐστὶν ἓν, ἀλλ' εἶδει γε οὐχ ἓν· τὸ γὰρ εἶδει λέγω καὶ λόγῳ ταυτόν· οὐ γὰρ ταυτόν τὸ ἀνθρώπῳ καὶ τὸ ἀμούσῳ εἶναι. καὶ τὸ μὲν ὑπομένει, τὸ δ' οὐχ ὑπομένει·

<sup>33</sup>ὅτι γίγνεται πᾶν ἐκ τε τοῦ ὑποκειμένου καὶ τῆς μορφῆς· σύγκειται γὰρ ὁ μουσικὸς

Here Aristotle draws an analogy, made obscure because he mixes the analogues together. The form which changes is either a privation or an opposite form. “Opposite form” should be understood as a term only in the accidental change analogue. Aristotle makes it clear a little later that the component with matter in the case of substantial change is the privation of the new substantial form (191 a 14). When Aristotle says the subject is composed of matter and privation, privation must be understood not absolutely but in relation to the new substantial form. The subject for change is composed of matter and the privation of the new substantial form. Whatever the matter is beforehand, it cannot be the same substance which it is to become without contradicting the genesis of a new substance. At the same time the privation cannot be absolute, because there is no matter without some form. The plant is generated from a non-plant, namely a seed, not from something absolutely formless.

Aristotle uses the term ὑποκείμενον both for the whole substance out of which the new substance is made and for the material component alone which persists through change (e.g., *Physics* A 7, 190 b 2 & 14).<sup>34</sup> For clarity I will refer to the composite ὑποκείμενον as “subject” and refer to the material component as “substrate.”

Before and after substantial change, matter is the δυνάμει τόδε τι. It is that which is potentially both substance and privation. It can become a new substance and it can subsequently lose its new substantial form.

ἄνθρωπος ἐξ ἀνθρώπου καὶ μουσικοῦ τρόπον τινά· διαλύσεις γὰρ [τοὺς λόγους] εἰς τοὺς λόγους τοὺς ἐκείνων. δῆλον οὖν ὡς γίγνεται ἂν τὰ γινόμενα ἐκ τούτων. ἔστι δὲ τὸ μὲν ὑποκείμενον ἀριθμῶ μὲν ἓν, εἶδει δὲ δύο (ὁ μὲν γὰρ ἄνθρωπος καὶ ὁ χρυσὸς καὶ ὅλως ἡ ὕλη ἀριθμητή· τόδε γὰρ τι μᾶλλον, καὶ οὐ κατὰ συμβεβηκὸς ἐξ αὐτοῦ γίγνεται τὸ γινόμενον· ἢ δὲ στέρησις καὶ ἢ ἐναντίωσις συμβεβηκός).

<sup>34</sup>Alan Code, “The Persistence of Aristotelian Matter,” *Philosophical Studies* 29, 1976, pp. 357–67, distinguishes “the primary substratum of the change” (matter) from “the substratum of the change” (lack and matter), p. 364.



Aristotle states in quite general terms that all change is from a being in potency. He includes substantial, quantitative, qualitative, and locomotive changes in the domain of his principle:

Since being is double, everything changes from being in potency to being in act, as from white in potency to white in act. (*Metaphysics* Λ 2, 1069 b 15 ff)<sup>35</sup>

White doesn't come from just anything, but only from that which is potentially white. In Aristotle's analysis, it comes only from its opposites or from something in the middle (1069 b 3 f.). In this case opposite should be taken quite broadly, in the sense of opposites as those "differences of a genus which cannot exist in the same subject together" (*Metaphysics* Δ 10, 1018, 26 f.) and not in the more narrow sense as the greatest differences of a genus (27 f.). Aristotle doesn't mean that black only comes from white and vice versa, but that white can come from its direct opposite (black), from alternative colors (reds and blues), or even from the absence of color (white smoke in clear air). In the last case, colored is the opposite of colorless. In short, white must come from something that is not white, but of the same genus as white. It must be from some surface, colored or colorless. It does not come from sound or from another genus (*Metaphysics* Λ 2, 1069 b 5).

Aristotle argues that since change is from opposites, there must be a *ὑποκείμενον* for the opposites. Opposites cannot produce each other because they are not potentially each other. White cannot be black and black cannot be white, but there can be a surface which can be white or black. The surface is

<sup>35</sup>ἐπεὶ δὲ διττὸν τὸ ὄν, μεταβάλλει πᾶν ἐκ τοῦ δυνάμει ὄντος εἰς τὸ ἐνεργεῖα ὄν (οἷον ἐκ λευκοῦ δυνάμει εἰς τὸ ἐνεργεῖα λευκόν . . .). ed. W. Jaeger, Oxford: Clarendon Press, 1957, p. 244.

the ὑποκείμενον for the two opposites in a change. Matter as substance in potency might or might not be the new substance. It can be the substance if so informed. It can also be without the new information i.e., privation of the new substance which allows it to be the subject of the generation for the new substance and the subject of its eventual decay (*Metaphysics* H 1 1042 b 2).

### **prime matter**

As δυνάμει τόδε τι, matter is determined by the substance to which it is in potency. The analysis of a substance can be repeated through the various things out of which a substance is made:

Earth is not yet a statue in potency, but only after it changes, will it be bronze. It seems that we say it is not "this" but "of that stuff," as a boat is not wood but wooden, neither is wood earth but earthen. Again, by the same token, earth is not another thing but "of that stuff." Always the thing in potency is that which is just posterior, as the boat is not earthen, nor earth, but wooden. This is the boat in potency and the matter of the boat, both in general and this particular wood of this particular thing. If there is something first, of which is no longer said as the "of that stuff," this is prime matter. (*Metaphysics* Θ 7, 1049 a 17–25)<sup>36</sup>

The boat can be analyzed first into wood as its material component. The material component itself can be analyzed into its material component: earth. The process of analysis is repeatable because we are dealing with material which persists through substantial changes. As such it can be understood as if it were an independent substance, until one reaches the final step.

<sup>36</sup>ὥσπερ ἡ γῆ οὕπω ἀνδριάς δυνάμει (μεταβαλοῦσα γὰρ ἔσται χαλκός). ἔοικε δὲ ὁ λέγομεν εἶναι οὐ τόδε ἀλλ' ἐκείνινον -- οἷον τὸ κιβώτιον οὐ ξύλον ἀλλὰ ξύλινον, οὐδὲ τὸ ξύλον γῆ ἀλλὰ γῆινον, πάλιν ἡ γῆ εἰ οὕτως μὴ ἄλλο ἀλλὰ ἐκείνινον -- αἰεὶ ἐκείνο δυνάμει ἀπλῶς τὸ ὑστερόν ἐστιν. οἷον τὸ κιβώτιον οὐ γῆινον οὐδὲ γῆ ἀλλὰ ξύλινον· τοῦτο γὰρ δυνάμει κιβώτιον καὶ ὕλη κιβωτίου αὕτη, ἀπλῶς μὲν τοῦ ἀπλῶς τουδὶ δὲ τοδὶ τὸ ξύλον. εἰ δὲ τί ἐστι πρῶτον ὁ μηκέτι κατ' ἄλλο λέγεται ἐκείνινον, τοῦτο πρῶτη ὕλη· ed. Jaeger, p. 186.

At the final step one asks what the elements are made of and the answer is a very indefinite “of that stuff.” When one can no longer analyze the material further, then one has reached prime matter. For Aristotle, that occurs when one reaches the level of the elements. All bodily differences can be traced to the elements, because they are the most basic bodies. Once you have reached them, there can be no further analysis to other independent materials. Because the elements can change into each other, they have a common material which is water in potency and air in potency, etc.

Prime matter is simply the elements in potency, nothing more, nothing less. The elements in potency are not pure potency. They are in potency to each other. They are not absolute indeterminacy; they have determinate potencies. They can be made into each other but not just into anything else in the hierarchy of bodies. Earth must first be made into bronze or another suitable material before it can be made into a statue (*Metaphysics* Θ 7, 1049 a 17). The potency of the elements is further limited in that they cannot be made into the celestial bodies.

Prime matter is not extension.<sup>37</sup> Matter is the elements in potency, not

<sup>37</sup>Richard Sorabji, *Matter, Space, and Motion : Theories in antiquity and their sequel*, Ithaca, N.Y.: Cornell University Press, 1988, has given a very detailed argument for matter as indefinite extension in antiquity. Sorabji has found in Simplicius an interpretation of matter as indefinite extension, which he sees as more advantageous than the traditional view of prime matter as an ultimate indefinite subject. Sorabji does not feel that Aristotle went as far as to teach matter as indefinite extension, because he never makes the claim explicit. Sorabji’s main objection to traditional prime matter is that it leaves us with an ultimate subject that is a “certain I know not what,” to borrow Locke’s phrase. (pp. 3–5) In Sorabji’s interpretation Simplicius invites us to think of indefinite extension, “What is left in our thoughts is the *extension* of the table but with its particular feet and inches ignored.” (p. 7) Sorabji argues that matter understood as indefinite extension has the advantage over traditional matter of being “perfectly familiar.” (p. 8) But indefinite matter is no more familiar in the world than pure potency. I can think of the extension of the sofa without attending to its exact measurements, but this indefinite extension exists only in my thoughts. In the world the sofa exists with its own very definite extension.

Several other scholars have made similar claims about indefinite extension in recent years but applied them to Aristotelian matter:

extension. In recent years extension has been taken up as an alternative definition to matter as pure potency. But it is not consistent with the text, in which Aristotle denies that matter is body or space:

They err who make a single matter besides the ones mentioned, which is both bodily and independent. For it is impossible for this body to be sensible contrariety. (*de Generatione et Corruptione* B 1, 329 a 8–13)<sup>38</sup>

Neither is matter a plane:

It is impossible for the nurse and prime matter to be geometrical planes. We say that there is some matter of sensible bodies, but it is not independent, but always exists with contrariety, from which the elements come about. (*de Generatione et Corruptione* B 1, 329 a 23 ff.)<sup>39</sup>

J. W. Dye goes as far as to call matter body in "Aristotle's Matter as a Sensible Principle," *International Studies in Philosophy* 10, 1978, pp. 59–84. "The form of these elementary substances consists in irreducible tactile qualities, attached to an existing body; so if the form be abstracted, just body remains — pure space-filling extension," p. 70. But Aristotle specifically denies that prime matter is body, (*de Generatione et Corruptione* B 1, 329 a 8–13, see below). It would mean that transformation between the elements was not a substantial change.

S. Cohen cites extension as one of several essential determinations of matter. Matter is "essentially spatially extended and capable of motion and rest, for it will never be asked to become something that is not spatially extended or that is not capable either of moving or of being at rest," in "Aristotle's Doctrine of the Material Substrate," *The Philosophical Review* 93, 1994, pp. 171–94, see pp. 179 f. But just because matter must be possibly extended, does not mean that it must itself be extended. Prime matter is the four elements in potency, each of which must be extended. Matter is a body in potency, not body.

R. Sokolowski in "Matter, Elements, and Substance in Aristotle," *Journal of the History of Philosophy* 8, 1970, pp. 263–88, maintains that: "the matter left over is something bounded by determinate dimensions. In itself it does not have any specific dimensions, but it is capable of receiving them, i.e., capable of being marked off into determinate sizes." p. 277. His view of matter as an indeterminate "fill" comes closest to Sorabji's interpretation of Simplicius.

<sup>38</sup>ἀλλ' οἱ μὲν ποιούντες μίαν ὕλην παρὰ τὰ εἰρημένα, ταύτην δὲ σωματικὴν καὶ χωριστὴν, ἀμαρτάνουσιν· ἀδύνατον γὰρ ἄνευ ἐναντιώσεως εἶναι τὸ σῶμα τοῦτο αἰσθητῆς· ed. Charles Mugler, Paris: Belles Lettres, 1966, p. 46.

<sup>39</sup>ἀδύνατον δὲ τὴν τιθῆναι καὶ τὴν ὕλην τὴν πρώτην τὰ ἐπίπεδα εἶναι. ἡμεῖς δὲ φασὲν μὲν εἶναι τινα ὕλην τῶν σωμάτων τῶν αἰσθητῶν, ἀλλὰ ταύτην οὐ χωριστὴν ἀλλ' αἰεὶ μετ' ἐναντιώσεως, ἐξ ἧς γίνεται τὰ καλούμενα στοιχεῖα. ed. Mugler, p. 46.

Since it is not body or space, it has been argued that matter is indefinite extension.<sup>40</sup> That solution seems worse than the problem of pure indeterminacy. Indefinite extension has the same problems of indeterminacy which afflict pure potency, with the added bonus of paradoxical relation of extension and indeterminacy.

If prime matter is taken as the elements in potency, it is also body in potency (δυνάμει σωμα, *de Generatione et Corruptione* B 1 329 a 33), as the elements are the first bodies. All bodily forms including extension will follow the potency to the first bodies. All bodily differences reduce to the four opposites (*de Generatione et Corruptione* B 2, 330 a 24 f.) and matter is the ὑποκείμενον for the four opposites (*de Generatione et Corruptione* B 1, 329 a 30 f.). Extension must be included as a bodily difference. As a quantity it will follow the substantial forms of the elements:

I call matter that which by itself is neither said to be substance, nor quantity nor any of the other categories by which being is divided. There is something of which each of these is predicated, whose being is distinct from each of the categories. For the other categories are predicated of substance, and substance of matter, so that as the final thing it is neither substance nor quantity nor anything else. (*Metaphysics* Z 3, 1029 a 20–25)<sup>41</sup>

Extension follows the substantial form of the elements, it does not precede them. As Aristotle observed, a change in extension results from the substantial change of water into air. A container of water will burst when boiled due to

<sup>40</sup>Sokolowski, loc. cit., argues for matter as indefinite extension. Although Sorabji finds matter as indefinite extension in Simplicius, he does not believe that Aristotle drew the same conclusion, op. cit., p. 12.

<sup>41</sup>λέγω δ' ὕλην ἢ καθ' αὐτήν μήτε τι μήτε ποσὸν μήτε ἄλλο μηδὲν λέγεται οἷς ὠρίσται τὸ ὄν. ἔστι γάρ τι καθ' οὗ κατηγορεῖται τούτων ἕκαστον, ᾧ τὸ εἶναι ἕτερον καὶ τῶν κατηγοριῶν ἑκάστη (τὰ μὲν γὰρ ἄλλα τῆς οὐσίας κατηγορεῖται, αὕτη δὲ τῆς ὕλης), ὥστε τὸ ἔσχατον καθ' αὐτὸ οὔτε τι οὔτε ποσὸν οὔτε ἄλλο οὐδὲν ἐστίν.

the expansion of the air which follows substantial change (*de Caelo* 3.7).

Bodily qualities belong to the substance. Prime matter cannot have any bodily differences of its own, including extension. If matter were a body, then two bodies, matter and element, would occupy the same space. If prime matter were a body, then it would be in space. Aristotle expressly states that any thing which is in space, is one of the elements (*de Caelo* 3.6).

Finally, extension does a poor job of serving as the subject for change, because extension will change as a consequence of substantial change.<sup>42</sup> The larger extension of boiled water follows upon the substantial change into air and cannot be its subject, because it does not persist through change.

In the end the view of prime matter as extension is undertaken to rescue matter from the shadows of pure potency. I think this is an unnecessary step, given that prime matter can be understood as the elements in potency. Were Aristotle asked to show what he meant by prime matter, he would only need produce a pot of water. There is nothing more to understanding prime matter than realizing that the water can be made to boil and change into air.

As with other substances Aristotle analyzed, the elements are composed of form and matter. If they were not, they would have no potency for change. Unlike the other substances, there is no perceptible subject for change. Wood is perceptibly made of earth, but there is nothing perceptible below the level of the elements and their matter is imperceptible as Aristotle acknowledged (*de Generatione et Corruptione* B 5). Nevertheless that there is such a thing as water in potency is as obvious as the rain which falls on your head. Rain water comes from air which is water in potency. Prime matter is no more

<sup>42</sup>Sorabji considers this objection, op. cit., p. 13.

mysterious than the ability of air and the other elements to change into each other.

### **Stoics, Middle-Platonists and Neopythagoreans**

In the centuries that followed, Aristotle's doctrine of matter had a profound impact upon both the followers of Plato and upon the Stoa. So much so that, even among Platonists, Plato's own doctrine was radically modified in an Aristotelian direction. The impact is evident in the universal acceptance of the term "matter." Of course, the notion went through change in its new habitats, but something of the Aristotelian substance in potency remained, along with the analysis of change to a basic substrate. Nevertheless, there was a group that preserved the Platonist mathematical idealism: the Neopythagoreans.

### **Stoa**

The Stoa's simultaneous reliance on and modification of Aristotle's cosmology has been presented in careful philosophical and textual detail by Hahm. Hahm argues that the Stoa depended on Aristotelian argumentation and notions, but differed from Aristotle inasmuch as they sought a more general consensus of philosophical views. They introduced a unified theory of nature based on biological models whereas Aristotle had distinguished sciences and methods.<sup>43</sup> There is no need for us to go over in detail the same ground which has been so well covered by Hahm, although some of high points of the Stoic doctrines of matter and the cosmos will serve to illustrate

<sup>43</sup>David Hahm, *The Origins of Stoic Cosmology*, Columbus: Ohio State University Press, 1977. For example on the Stoic archai, Hahm argues that the Stoics took the venerable notion of the cosmos as a living being, turned to Aristotle's biology for guidance and adapted his notion of an active and passive principle to the two principles of the cosmos, p. 47.

their key role in Greek natural thought.

Although the influence of Aristotle's theory of matter is apparent in the Stoic version, there are significant differences. The Stoics agree that matter is without its own quality and passive. Rather than Aristotle's substance in potency, Stoic matter was substance:

It appears to them that there are two principles of all things, the active and the passive. The passive is qualityless substance, matter. The active is reason in matter, god. (Diogenes Laertius, 7.134; 44 B)<sup>44</sup>

The substitution of substance for substance in potency has some interesting consequences for the Stoic system. First, it implies the substantial unity of all things. Next, since matter is substance, there are no immaterial substances. There is no Aristotelian generation in the world, just a continual process of qualitative changes in the one eternal material substance:

Zeno said this essence was finite and that it was the single, common substance of all that is. It is also divisible, and changeable forever. Its parts change but do not perish, as if they were consumed from existence into nothing. As of innumerable different wax figures, he did not perceive any proper form or figure or any quality at all of the matter fundamental to all things, although it was always and inseparably joined to some quality. Because it is without arising just as it is without perishing, since it does not subsist from the non-existent neither is it consumed into nothing, it does not lack spirit or vigor eternally, to move it rationally, occasionally wholly but usually partially. (Cicero, *in Timaeum* 292; Long and Sedley 44 D)<sup>45</sup>

<sup>44</sup>Δοκεῖ δ' αὐτοῖς ἀρχάς εἶναι τῶν ὄλων δύο, τὸ ποιῶν καὶ τὸ πάσχον. τὸ μὲν οὖν πάσχον εἶναι τὴν ἄποιον οὐσίαν τὴν ὕλην, τὸ δὲ ποιῶν τὸν ἐν αὐτῇ λόγον τὸν θεόν. ed. A. A. Long and D. N. Sedley, *The Hellenistic Philosophers*, v. 2: *Greek and Latin Texts*, Cambridge: Cambridge University Press, 1987, p. 265.

<sup>45</sup>Zeno hanc ipsam essentiam finitam esse dicit unamque eam communem omnium quae sunt esse substantiam, dividuam quoque et usque quaque mutabilem. partes quippe eius verti sed



Like Aristotle, Zeno (331/30–233/2 or 231 B.C.E.) taught that matter was joined inseparably with active principle. The Stoa adapted the Aristotelian doctrine of categories to their own purpose, changing the description of the categories in the process. For Aristotle's ten categories, they substituted four, substance (i.e., matter), quality (the active force), relation, and place.

Creative fire was the active element and god of the Stoic cosmos:

The Stoics assert that god is intelligent, a creative fire, proceeding methodically to the generation of the cosmos, having contained in itself the rational seeds by which everything comes about through fate. God is a spirit pervading the entire cosmos while participating in appellations according to the changes in matter through which it has gone. (Aetius 1.7.33; Long and Sedley 46 A)<sup>46</sup>

Occasionally fire moved the cosmos totally resulting in ἐκπύρωσις. Even in its total dominance, the active quality of fire still existed in matter as its substance. Active quality did not displace matter as substance, rather it took over from more passive qualities.

They use "the cosmos" in three ways: for god himself, the peculiar quality in all substance, who is imperishable and ungenerated, since it is the demiurge of the cosmic order, who in the cycles of time draws to itself the entire substance and gives it birth again from itself. They also call this cosmic order "cosmos,"

*non interire, ita ut de existentibus consummantur in nihilum. sed ut innumerabilium diversarum etiam cerearum figurarum, sic neque formam neque figuram nec ullam omnino qualitatem propriam fore censet fundamenti rerum omnium silvae, coniunctam tamen esse semper et inseparabiliter cohaerere alicui qualitate. cumque tam sine ortu sit quam sine interitu, quia neque de non existente subsistit nec consumetur in nihilum, non deesse ei spiritum ac vigorem ex aeternitate, qui moveat eam rationabiliter totam interdum, non numquam pro portione.* Long and Sedley, p. 267.

<sup>46</sup>οἱ Στωικοὶ νοερὸν θεὸν ἀποφαίνονται, πῦρ τεχνικὸν ὁδῶ βαδίζον ἐπὶ γενέσει κόσμου, ἐμπεριεληφός <τε> πάντας τοὺς σπερματικούς λόγους καθ' οὓς ἅπαντα καθ' εἰμαρμένην γίνεται, καὶ πνεῦμα μὲν ἐνδιήκον δι' ὅλου τοῦ κόσμου, τὰς δὲ προσηγορίας μεταλαμβάνον κατὰ τὰς τῆς ὕλης, δι' ἧς κεχώρηκε, παραλλάξεις. Long and Sedley, p. 271 f.

and third they call that which is composed of both. (Diogenes Laertius 7.137, Long and Sedley 44 F)<sup>47</sup>

While the Stoics did not share Aristotle's belief in the eternity of the present cosmos, they agreed on the eternity of the cosmic cycle and the eternity of forms. Forms did not always exist in act but sometimes only as *λογοι σπερματικοι*. By means of categorical distinctions of being, the Stoics succeeded in presenting a monistic account of the cosmos as one material substance, in which god and matter were not substantially distinct.

### Middle-Platonists

Middle-Platonists all looked to Plato's *Timaeus* for their cosmology, but they saw there rather different things. Some saw the *Timaeus* as a myth and the teaching of order drawn from disorder as a figure drawn by Plato for educational purposes. They accepted Aristotle's arguments for the eternity of the cosmos. They accepted the Aristotelian notion of matter as "body in potency." Others took a more literal reading of the *Timaeus* and held to creation in time. Their reading left them with the difficult task of explaining the pre-cosmic chaos in the receptacle.

### eternal cosmos

Among those who taught the eternity of the cosmos was Albinus, who lectured to Galen between 149 and 157 C.E.<sup>48</sup> He had a modified Aristotelian

<sup>47</sup>λέγουσι δὲ κόσμον τριχῶς· αὐτόν τε τὸν θεὸν τὸν ἐκ τῆς ἀπάσης οὐσίας ἰδίως ποιόν, ὃς δὴ ἀφθαρτός ἐστι καὶ ἀγέννητος, δημιουργὸς ὢν τῆς διακοσμήσεως, κατὰ χρόνων ποιᾶς περιόδους ἀναλίσκων εἰς ἑαυτὸν τὴν ἅπασαν οὐσίαν καὶ πάλιν ἐξ ἑαυτοῦ γεννῶν· καὶ αὐτὴν δὲ τὴν διακόσμησιν [τῶν ἀστέρων] κόσμον εἶναι λέγουσι· καὶ τρίτον τὸ συνεστηκὸς ἐξ ἀμφοῖν. Long and Sedley, p. 268.

<sup>48</sup>Dillon, op. cit., p. 267.

Among those who taught the eternity of the cosmos was Albinus, who lectured to Galen between 149 and 157 C.E.<sup>48</sup> He had a modified Aristotelian view of matter as potential for body which influenced his reading of *Timaeus*:

- 1) It is fitting for the all-receiver, matter, if it is going to receive all forms, that it not have the nature of any of them, but that it be without quality and formless so as to be the receptacle of forms.
- 2) Thus, it is neither corporeal nor incorporeal, it is body in potential, as we understand that bronze is a statue in potential, because once it receives the form, it is a statue. (*Didascalicus* 8, 163, 4 ff.)<sup>49</sup>

Sentence 1 echoes the description of the receptacle in the *Timaeus* “without quality” and all-receiver (51 A 1–3, 50 D 4–E 1, and 4–5). Sentence 2 hearkens back to Aristotle’s description of matter in *de Generatione et Corruptione* (B 1, 329 a 33). In the collocation of the two doctrines, Plato’s receptacle loses its independence and becomes part of an Aristotelian composite substance, because it is no longer an independent body, but merely a body in potential.

Apuleius of Maudera, born ca. 123 C.E., famed for his novel *The Golden Ass*, held doctrines similar to Albinus.<sup>50</sup> On the question of matter he takes a position similar to Albinus’, although he does not quote the Aristotelian formulation. In *de Platone* (p. 312, Clouard), he argues that matter is neither corporeal, as it lacks the properties of bodies, nor incorporeal, because it always exists in bodies. Apuleius argues for the eternity of the world along Aristotelian

<sup>48</sup>Dillon, op. cit., p. 267.

<sup>49</sup>Προσῆκει δὲ καὶ τῇ πανδεχεῖ ὕλη, εἰ μέλλει κατὰ πᾶν δέχεσθαι τὰ εἶδη, μηδεμίαν αὐτῶν φύσιν ἔχειν [ὑποκεῖσθαι], ἀλλὰ ἀποιόν τε εἶναι καὶ ἀνείδεον πρὸς ὑποδοχὴν τῶν εἰδῶν· τοιαύτη δ’ οὐσα οὔτε σῶμα ἂν εἴη οὔτε ἀσώματον, δυνάμει δὲ σῶμα, ὡς καὶ τὸν χαλκὸν ὑπακούομεν δυνάμει ἀνδριάντα, διότι τὸ εἶδος δεξάμενος ἀνδρίας ἔσται. ed. John Wittaker, Paris: Belles Lettres, 1990, p. 20.

<sup>50</sup>Dillon argues that there is no evidence for the existence of a school of Gaius that included Albinus and Apuleius, op. cit., p. 340.

lines, proceeding from its incorruptibility to its non-generation (p. 314 ff.).

### **temporal creation**

Plutarch (born ca. 45 C.E.), the best known and best preserved of the Middle-Platonists, shows the familiar syncretism of Middle-Platonism between Pythagoreanism, Stoicism, and the teachings of Plato and Aristotle.<sup>51</sup> Plutarch's syncretism delves into Greek, Egyptian, and Iranian mythology. He understands Plato's receptacle as matter. Like the Neopythagoreans, Plutarch teaches opposite principles, the one and the aoriston dyad (*de Defectu Oraculorum* 428 F). But unlike the Neopythagoreans and Plato, Plutarch does not teach that matter is derived from prior principles. Matter stands between the one and the dyad, unified by the one and made many by the dyad (429 C). He teaches that both matter and soul are ungenerated, eternal principles.

The substance and matter from which the cosmos came about did not itself come about. It always lay subject to the demiurge for arrangement and ordering and for making it like him as much as it was possible to subject it. For generation was not from nothing but from that which was not well or sufficiently disposed, as in the becoming of a house, garment, or statue. The state before the generation of the world was disorder. Disorder was not bodiless, unmoved, or soulless, but it had an unformed, unstable body and confused, irrational movement. This was the discord of the soul which did not have reason. God did not make the bodiless into body neither did he make the soulless into soul. Just as we do not expect the harmonic and rhythmic man to make voice or motion, but to make voice harmonious and movement rhythmic, so god himself made neither the tangible and resistant body nor the imaginative and mobile powers of the soul. (*de Animae Procreatione in Timaeo* 5, 1014 B 2-C)

<sup>51</sup>On the life and times of Plutarch, see Dillon, *op. cit.*, pp. 184–192.

3)<sup>52</sup>

The presence of a soul in the pre-cosmos is apparently Plutarch's own innovation. He teaches that matter/soul dualism is a primitive eternal with which the demiurge must deal. The untrained soul produced the disordered motions of the pre-cosmos. Through training in the forms, the demiurge brought the world soul into the well-ordered motions of the cosmos. His explanation of the training of the cosmos in terms of harmonics is suggested by the description of the motions of the pre-cosmic disorder in *Timaeus* 30 A as inharmonious (πλημμελῶς).

Plutarch teaches that matter is qualitiless and could not have motions without the influence of a soul. Matter is "formless and unshapen" and "devoid of its own quality and power" (ἄμορφον καὶ ἀσχημάτιστον ... πάσης ποιότητος καὶ δυνάμεως οἰκείας ἔρημον, *de Anima Procreatione in Timaeo* 1014 F 2-4, ed. Hubert, p. 149 f.). Throughout he makes reference to matter as body. Most of the Middle-Platonists insisted that matter was not body, but body in potency just because it had no qualities including bodily (see above). Plutarch does not make the same point, so his doctrine of matter draws closest to the Stoic doctrine of body without quality.<sup>53</sup>

<sup>52</sup>τὴν δ' οὐσίαν καὶ ὕλην, ἐξ ἧς γέγονεν, οὐ γενομένην ἀλλ' ὑποκειμένην αἰεὶ τῷ δημιουργῷ εἰς διάθεσιν καὶ τάξιν αὐτὴν καὶ πρὸς αὐτὸν ἐξομοίωσιν ὡς δυνατόν τὴν ἐμπαρασχεῖν. οὐ γὰρ ἐκ τοῦ μὴ ὄντος ἢ γένεσις ἀλλ' ἐκ τοῦ μὴ καλῶς μηδ' ἰκανῶς ἔχοντος, ὡς οἰκίας καὶ ἰματίου καὶ ἀνδριάντος. ἀκοσμία γὰρ ἦν τὰ πρὸ τῆς τοῦ κόσμου γενέσεως· ἀκοσμία δ' οὐκ ἀσώματος οὐδ' ἀκίνητος οὐδ' ἄψυχος ἀλλ' ἄμορφον μὲν καὶ ἀσύστατον τὸ σωματικὸν ἐμπληκτον δὲ καὶ ἄλογον τὸ κινήτικόν ἔχουσα· τοῦτο δ' ἦν ἀναρμοστία ψυχῆς οὐκ ἐχούσης λόγον. ὁ γὰρ θεὸς οὔτε σῶμα τὸ ἀσώματον οὔτε ψυχὴν τὸ ἄψυχον ἐποίησεν, ἀλλ' ὡς περ ἀρμονικὸν ἄνδρα καὶ ῥυθμικὸν οὐ φωνὴν ποιεῖν οὐδὲ κίνησιν ἐμμελῆ δὲ φωνὴν καὶ κίνησιν εὐρυθμον ἀξιοῦμεν, οὕτως ὁ θεὸς οὔτε τοῦ σώματος τὸ ἀπτόν καὶ ἀντίτυπον οὔτε τῆς ψυχῆς τὸ φανταστικὸν καὶ κινήτικόν αὐτὸς ἐποίησεν. ed. C. Hubert, *Plutarchi Moralia*, v. 6.1, Leipzig: Teubner, 1954, p. 148.

<sup>53</sup>Even Plutarch's argument echoes Sextus' account of the Stoic view that matter was motionless and unshapen (ἀσχημάτιστος) by itself and therefore required an active causal principle, Sextus M. 9.75

He also looks to Greek and foreign mythologies as expressions of his doctrines. He likens his opposite principles to Ohrmazd and Areiman of Zoroastrianism (*de Iside* 369 E). He likens matter and forms to Isis and Osiris (*de Iside* 372 E–373 A). He looks to Hesiod for confirmation of the pre-cosmic chaos (374 C). Plutarch's colorful use of mythical material seems to have been an inspiration to the Gnostics who would follow. They adopted much of the same imagery and their reliance upon myth is well known.

Atticus (floruit 176 C.E. according to Eusebius) is reported by Proclus (fr. 23) to have also held that pre-cosmic matter was moved by an irrational soul before the forming of the world at which time the world soul was tamed by the demiurge.<sup>54</sup>

Middle-Platonists of both camps, eternal cosmologists and temporal creationists, all agreed that matter was eternal, distinct from forms, primitive, and irreducible. Their Aristotelian and Stoic understanding of matter modified the receptacle into a qualitless material principle.

### **Pythagoreans**

The Neopythagorean revival of the last century B.C.E.<sup>55</sup> brought with it a revival of Platonic geometrical construction of the cosmos. Like Plato, the Neopythagoreans constructed bodies from geometricals. Like Plato they saw the physical world as a product of non-physical principles. Unlike Plato, they traced everything back to just two principles: the one and the infinite dyad. There was also a minority that went so far as to seek a principle behind the one and the infinite dyad. Calcidius explains the distinction:

<sup>54</sup>Dillon, *op. cit.*, p. 247, on Atticus.

<sup>55</sup>See Dillon, *op. cit.*, on the Neopythagorean revival and its influence upon Middle Platonism, p. 117; p. 184 f.; p. 341; p. 383.

Numenius ... said that Pythagoras called god singularity and matter dyad. That dyad which was unbounded and unproduced, he said became limited and generated: that is before it was adorned and when it was deprived of form and order, it was without origin and generation. Once it was ordered and arranged, it was generated by the creator god. Thus, because the accident of generation was later, only as unordained and ungenerated should it be understood as being coeval with god, by whom it was ordered. But some Pythagoreans did not follow the force of reason and believed that the unbounded and immeasurable dyad was established by the unique singularity as it departed from its own nature and moved into a state of duality. (*in Timaeu m 295*)<sup>56</sup>

Numenius (second half of second century C.E.) introduces a distinction between being produced (*genita*) and being generated (*generata*). Duality is unproduced by god in its unformed and unlimited state. Once it is ordered and limited, then it can be said to be generated. Numenius' terminology is distinct, but he is in accord with Plutarch and Atticus' theory of temporal creation from disordered matter.

Calcidius' (first half of fourth century) account originates from Numenius' own. Numenius, himself a dualist, attacked the monists for teaching that the one departed from its own nature. He charged that to depart to duality would contradict the nature of the monad.

Sextus Empiricus (ca. 250 C.E.) also notes the monistic teaching, but in

<sup>56</sup>Numenius ... ait Pythagoran deum quidem singularitatis [*nomine*] nominasse, siluam vero duitatis. Quam duitatem indeterminatam quidem minime genitam, limitatam vero generatam esse dicere: hoc est, antequam exornaretur quidem formamque et ordinem nancisceretur, sine ortu et generatione, exornatam vero atque inlustratam a digestore deo esse generatam. atque ita, quia generationis sit fortuna posterior, inornatum illud minime generatum aequaeuum deo, a quo est ordinatum, intellegi debeat. Sed non nullos Pythagoreos vim sententiae non recte adsecutos putasse dici etiam illam indeterminatam et inmensam duitatem ab unica singularitate institutam, recedente a natura sua singularitate et in duitatis habitum migrante. ed. J. Wrobel, *Platonis Timaeus interprete Chalcidio cum eiusdem Commentario*, Leipzig: Teubner, 1876, p. 324. Photostatic reprint, Frankfurt: Minerva, 1963.

On Numenius, see Dominic J. O'Meara, *Pythagoras Revived: Mathematics and Philosophy in Late Antiquity*, Oxford: Clarendon Press, 1989, pp. 10–14.

less tendentious terms:

Some say that the body is constructed from a single point. This point flowed and completed a line and the line flowed and completed a plane. This moved to the depth and generated three dimensional body. This party of Pythagoreans differs from that of the earlier ones. They made numbers from two principles, from the monad and the infinite dyad. Then from the numbers they made points, lines, plane figures, and solids. The new party fashions everything from a single point. (*adversus Mathematicos* 10.281 f.)<sup>57</sup>

The sect Sextus describes originated everything from a single point. In addition to positing a single source, they also differed from the other Neopythagoreans in asserting the primacy of geometricals. They overthrew the elaborate hierarchy that the other Neopythagoreans used: monad, dyad, numbers, geometricals, and then sensibles (*adversus Mathematicos* 10. 258–262, 282). They started directly from the geometricals and from them they derived sensible bodies. It is significant that the geometricals needed the help of numbers to produce sensible bodies, but Sextus does not explain if the numbers themselves were derived.

To get the process going, the point flowed to duality. In the process it produced a line. The word flow (ῥεῖν) is the base of the compound word emanation (ἐρρεῖν), used by the Neoplatonists. Unfortunately, because of the obscurity of the doctrine and the paucity of textual evidence, we have very little to go on to try to determine what caused the point to flow.

<sup>57</sup> τινὲς δ' ἀπὸ ἑνὸς σημείου τὸ σῶμα φασὶ συνίστασθαι· τοῦτι γὰρ τὸ σημεῖον ῥυέν γραμμὴν ἀποτελεῖν, τὴν δὲ γραμμὴν ῥυείσαν ἐπίπεδον ποιεῖν, τοῦτο δὲ εἰς βάθος κινηθὲν τὸ σῶμα γεννᾶν τριχῆ διαστατόν. διαφέρει δὲ ἡ τοιαύτη τῶν Πυθαγορικῶν στάσις τῆς τῶν προτέρων. ἐκεῖνοι μὲν γὰρ ἐκ δυεῖν ἀρχῶν, τῆς τε μονάδος καὶ τῆς ἀορίστου δυάδος, ἐποιοῦν τοὺς ἀριθμούς, εἴτ' ἐκ τῶν ἀριθμῶν τὰ σημεία καὶ τὰς γραμμάς τὰ τε ἐπίπεδα σχήματα καὶ τὰ στερεά· οὗτοι δὲ ἀπὸ ἑνὸς σημείου τὰ πάντα τεκταίνουσιν. ed. Hermann Mutschmann, Leipzig: Teubner, 1914, rpr. 1984, p. 360 f.



Plutarch does record a moral interpretation of the departure. According to Plutarch some Pythagoreans taught that the departure from the monad resulted from presumption, τόλμα (*de Iside*, 381 F).<sup>58</sup> No one can say if Plutarch is describing the same doctrine Sextus did, or if there was a distinct group teaching a moral version of the departure of the one into duality. In any case it is hard to see whence τόλμα arose in the monad. The theory merely moves unexplained diversity back into the monad itself.

We have much more evidence to go on in the case of a named monist: Moderatus of Gades (first century C.E.). Moderatus developed a notion of a unified account (λόγος) which was the source of everything. Moderatus gives a much more detailed account than Sextus does. The theory is also quite distinct. Moderatus begins from a logos, not a point. Nothing emanates from the logos. It withdraws, leaving behind a deprivation.<sup>59</sup> Moderatus presupposes an initial complexity in the prime “unified” logos which is separated out and accounts for the plurality in the cosmos.

Moderatus’ analysis of origins from a prime logos rather than the Neopythagorean One or point is hardly accidental. Moderatus understood

<sup>58</sup>Also reported in Iamblichus, *Theologoumena Arithmeticae*, ed. Victorius de Falco, Stuttgart: Teubner, 1975, p. 7, 19; p. 9, 5–6.

Also noted by Proclus, in *Alcibiadem* 104 E, ed. A. Ph. Segonds, Paris: Belles Lettres, 1985, p. 110.

For other references and a bibliography, see Segonds note, *op. cit.*, p. 202.

<sup>59</sup>Eudorus, as quoted by Simplicius, records a similar teaching for the Pythagoreans: “The One, the principle of all leaves, and in another way the two opposite elements [the monad and the dyad] enter,” Simplicius, *In Aristotelis Physicorum Libros*, ed. H. Deils. *Commentaria in Aristotelem Graeca* 9–10. Berlin: Reimer, 1882, p. 181, 22 ff.

Other monistic accounts include:

The anonymous account of Alexander Polyhistor preserved by Diogenes Laertius, I. 8.24;

Archainetus (who Thesleff takes as Archytas), Brotinus, and Philolaus preserved in Syrianus, *In Metaphysica Commentaria*, ed. William Kroll, *Commentaria in Aristotelem Graeca* 6.1, Berlin: Reimer, 1902; Thesleff, *The Pythagorean Texts of the Hellenistic Period*, Åbo: Åbo Akademi, 1965, pp. 48, 56.

traditional Pythagorean numbers as mere illustrations of accounts and forms (In Porphyry's *Life of Pythagoras*, 52 f.). Unfortunately that innovation has been overlooked by recent interpreters. Most focus on a fragment of Moderatus preserved by Simplicius, who relied on Porphyry for his information about Moderatus.<sup>60</sup>

If we look at the passage of Simplicius (sixth century C.E.), we see that the account comes in two distinct sections. The tone and terminology of the two sections are quite distinct. The ontology of the first section is expressed in terms of distinctions of the One. The second section refers to the unified account and the λόγοι of the subsequent things. Given Moderatus' avowed preference for accounts and forms over numbers, it would seem that section two gives a more faithful representation of his teaching. Quite likely he did talk in terms of the One as other Pythagoreans did, but he gave greater importance to the account according to forms.

Rather than a Neoplatonic emanation from the One, Moderatus presents a cosmic fission of the prime "unified logos." The fission is based upon a categorical understanding of being:

(section 1)

He asserted that according to the Pythagoreans, the first one is

<sup>60</sup>E. R. Dodds, "The *Parmenides* of Plato and the Origin of the Neoplatonic 'One,'" *Classical Quarterly* 22, 1928, pp. 129–142. Dodds (after Zeller) understands Simplicius to be providing an account of Moderatus' teaching via Porphyry. He quotes only section one and argues that Moderatus' reading of the *Parmenides* is the source of the "Neoplatonic" One, pp. 136–140.

Philip Merlan, in *The Cambridge History of Later Greek and Early Medieval Philosophy*; edited by A. H. Armstrong, London: Cambridge University Press, 1967, pp. 90–94, attributes both sections one and two to Moderatus, giving him credit for anticipating the "very backbone of the Plotinian system."

See also J. M. Rist, "Monism: Plotinus and Some Predecessors," *Harvard Studies in Classical Philology* 69, 1965, pp. 339–44.

So also Dillon, *op. cit.*, 349.

above being and every substance. They said the second one which is true being and intelligible, is the forms. The third, whatever is psychic, participates in the one and the forms. The final nature from this, which belongs to the sensibles, does not participate but is ordered according to the reflection of the former ones. It is the shadow of matter in them, the matter of things which were not at first, matter which was in the quantity of being and is even further inferior to this one. (Simplicius, *In Physicorum A 7*, 230.36–231.5)<sup>61</sup>

(section 2)

In the second book of his work, "On Matter," Porphyry cites these teachings of Moderatus and writes: Unitary reason—as Plato somewhere says—having willed the constitution of the generation of beings from itself, by self-deprivation it departed, taking away from the quantity of all things its own reasons and forms. This quantity he called unformed, indivisible, and unshapen, rather receiving form, shape, division, quality, and everything of this kind. (Simplicius, *In Physicorum A 7*, 231.7–12)<sup>62</sup>

The original logos had all accounts unified into one, but it emptied itself of quantity. The logos then remained as the accounts of all things but without quantity. What it left behind was quantity without any other forms or λόγοι. Simplicius is careful to distinguish the quantity of the fission from the quantity of things, which is always definite. The first quantity is absolutely indefinite.

As the paradigm for matter, it is also distinct from matter:

<sup>61</sup>οὗτος γὰρ κατὰ τοὺς Πυθαγορείους τὸ μὲν πρῶτον ἐν ὑπὲρ τὸ εἶναι καὶ πᾶσαν οὐσίαν ἀποφαίνεται, τὸ δὲ δεύτερον ἐν, ὅπερ ἐστὶ τὸ ὄντως ὄν καὶ νοητὸν, τὰ εἶδη φησὶν εἶναι, τὸ δὲ τρίτον, ὅπερ ἐστὶ τὸ ψυχικόν, μετέχειν τοῦ ἐνὸς καὶ τῶν εἰδῶν, τὴν δὲ ἀπὸ τούτου τελευταίαν φύσιν τὴν τῶν αἰσθητῶν οὐσαν μὴδὲ μετέχειν, ἀλλὰ κατ' ἔμφασιν ἐκείνων κεκοσμηθῆσθαι, τῆς ἐν αὐτοῖς ὕλης τοῦ μὴ ὄντος πρῶτως ἐν τῷ ποσῷ ὄντος οὐσης σκίασμα καὶ ἔτι μᾶλλον ὑποβεβηκυίας καὶ ἀπὸ τούτου. ed. H. Deils, Berlin: Reimer, 1882, pp. 230 f.

<sup>62</sup>ταῦτα δὲ ὁ Πορφύριος ἐν τῷ δευτέρῳ Περὶ ὕλης τὰ τοῦ Μοδεράτου παρατιθέμενος γέγραπεν ὅτι "βουλευθεὶς ὁ ἐνιαῖος λόγος," ὡς πού φησιν ὁ Πλάτων, τὴν γένεσιν ἀφ' ἑαυτοῦ τῶν ὄντων συστήσασθαι, κατὰ στέρησιν αὐτοῦ ἐχώρησε τὴν ποσότητα πάντων αὐτὴν στερήσας τῶν αὐτοῦ λόγων καὶ εἰδῶν. τοῦτο δὲ ποσότητα ἐκάλεσεν ἄμορφον καὶ ἀδιαίρετον καὶ ἀσχημάτιστον, ἐπιδεχομένην μὲντοι μορφήν σχῆμα διαίρεσιν ποιότητα πᾶν τὸ τοιοῦτον. ed. H. Deils, p. 231.

This quantity, he said, and image understood by the deprivation of the unified account which received all the accounts of beings in itself, is the paradigm of the matter of bodies. (Simplicius, *In Physicorum* A 7, 231.15–18)<sup>63</sup>

Like the Stoic monism, Moderatus traces plurality back to categorical distinctions of being. Stoic matter is a single οὐσία with a plurality of qualities. Moderatus, though, uses Aristotelian categories and traces difference to the category of quantity. In a unique twist, Moderatus teaches that the categories can be separated from each other into separate principles. His system is also notable for the complexity of its principle. The unified logos contains many separable accounts. Evidently Moderatus makes no attempt to explain how the unified logos became unified. He takes it for a primitive condition and necessary to explain the material and formal diversity of the cosmos.

Moderatus leaves the only detailed account of Neopythagorean monism, which interestingly enough does lend itself to Numenius' polemic cited above. In departing from quantity, the logos does depart from its own nature, as Numenius charged. It is also evident that Moderatus had a rather weak monism. Even though he traced everything back to a single source, that source was not itself simple.

Given that they taught that all things including matter derived from a single principle, did the monistic Pythagoreans teach *creatio ex nihilo*? Both Moderatus and the point-principle Pythagoreans taught that the first principle generated diversity out of its own nature. It was the abandoned quantity of the unified logos that was the principle of diversity and of matter in Moderatus'

<sup>63</sup>αὕτη δὲ ἡ ποσότης, φησί, καὶ τοῦτο τὸ εἶδος τὸ κατὰ στέρησιν τοῦ ἐνιαίου λόγου νοούμενον τοῦ πάντας τοὺς λόγους τῶν ὄντων ἐν ἑαυτῷ περιειληφότος παραδείγματα ἐστὶ τῆς τῶν σωμάτων ὕλης. ed. H. Deils, p. 231.

system. That same quantity was part of the unified logos from the first. In the system described by Sextus, the point departed into the dyad. Diversity resulted from a change in the first principle. In this way the Neopythagoreans had returned to the Milesian notion that creation came out of the first principle. Change and diversity resulted from a prior potency for change in the monad. Theirs was a generation *ex monadi* not *creatio ex nihilo*.

It is not a far cry from Neopythagorean emanationism to the generation of matter in Valentinian Gnosticism (of the early second century C.E.) in which matter results from a defect or a flaw in the fullness of the divine principles.<sup>64</sup> Valentinian metaphysical views on first principles are spun in myth, but Hippolytus makes it clear that some Valentinians did teach that everything was generated from a single principle, the ungenerated Father, or the monad.<sup>65</sup> In this sense, Valentianism is monistic,<sup>66</sup> although Hippolytus provides no explanation of the generation of plurality from the monad other than a biological analogy. The Father is perfect and productive (γόνιμον). He expresses (προέβαλεν) Intellect and Truth, which in turn generate Word and Life.<sup>67</sup> In all, thirty divine principles are generated and are known collectively as the pleroma.

#### Matter results from the pain of Wisdom, one of the divine pleroma

<sup>64</sup>Einar Thomassen has argued for Neopythagorean influence on Valentinianism in a paper presented to the Gnosticism and Neoplatonism group of the American Academy of Religion, in November, 1993, "The Derivation of Matter in Monistic Gnosticism." Abstract published in *Abstracts: American Academy of Religion, Society of Biblical Literature*, Missoula, Montana: Scholars Press, 1993, p. 52.

On the various sources for Valentinus, see the discussion of Gerhard May, *Creatio ex Nihilo: The Doctrine of 'Creation out of Nothing' in Early Christian Thought*, trans., A. S. Worall, Edinburgh: Clark, 1994, pp. 85–94.

<sup>65</sup> Hippolytus, *Refutatio Omnium Haeresium*, liber 6.29.

<sup>66</sup> So Hans Jonas, *The Gnostic Religion*, 2nd ed., Boston: Beacon Hill Press, 1958, p. 105.

<sup>67</sup> Hippolytus, loc. cit.

who tried to create without consort, in imitation of the Father's initial, unaided generation. Her creation is without form and imperfect and causes disturbance in the pleroma. To restore peace to the pleroma, the Father and Christ separate Wisdom and her formless creation from the pleroma. Wisdom's fear and pain at the separation create psychic and material being respectively.<sup>68</sup>

Matter does not have its own independent existence as it does in Middle-Platonist dualism. As in monistic Neopythagoreanism, matter is an accidental and undesirable byproduct of the plurality of first principles. Unlike *creatio ex nihilo* as it would come to be formulated, Valentinian matter is neither intended nor in the control of the first principles. Its relation to the created world is also different. In Valentinianism, matter is ontologically prior and independent of the cosmos. As in Middle-Platonism, the demiurge was faced with the limitations of matter in fashioning the cosmos. Matter is not the chosen venue of cosmic creation, rather the cosmos is the best that could be managed given the constraints of matter.<sup>69</sup>

### common Greek positions

To recap the teachings on matter:

Plato: the receptacle, space, is the stage for change which happens among spatially distended images of the forms. Physical matter as we know it is the

<sup>68</sup>Hippolytus, liber 6.30–32.

See also Irenaeus's account of Valentinianism, which is much more compressed, *Adversus Haereses* 1.2–4; 2.10.

In the untitled Nag Hammadi treatise called by moderns *On the Creation of the World*, matter is described as a shadow of the pleroma, 98.17–27 (a term also found in Moderatus, in Simplicius, *In Physicorum*, 231. 4–5, ed. Diels).

In the *Tripartate Tractate* also from Nag Hammadi, the Word, not Wisdom, creates diverse matters, Nag Hammadi 1.5, 85.10.

<sup>69</sup>on the Gnostic teacher Basilides, see below, chapter 4.

geometrical ordering of these images.

Aristotle: matter is substance in potency. Prime matter is the analysis of the elements as they have the potency to transform one into another.

Stoa: matter is the characterless substance of the world, subject to different properties, heat, cold, wetness, dryness, etc.

Middle-Platonism: matter is body in potency.

Despite their manifold appearance, Greek philosophers from the time of Plato and Aristotle and into Late Antiquity shared some basic metaphysical understandings. They believed in the eternity of unchangeable being or beings. For the Stoics matter was eternal, characterless, and in itself unchanging. Aristotle taught that forms and separate substances each in themselves were eternal and unchanging. For Plato the forms and the receptacle were both eternal and change only happened in the world of becoming which used the receptacle as a stage for its impersonations of the forms.

They all believed in the eternity of change. In the case of the Peripatetics, the unique cosmos and its life forms and processes were eternal. The Stoics also believed in an eternal succession of cosmoi, each one limited temporally and spatially, but throughout eternity, change within and between cosmoi continued. Even Platonists who believed in a temporal creation of one cosmos, as did Plutarch and Atticus, believed that change existed eternally before the cosmos in disordered movements of the world soul in the receptacle.

Everyone also agreed that one needed eternal distinctions in being to explain change, distinctions of active and passive principles. Minimally, the distinction could be merely categorical as in the Stoa, which distinguished the matter of the world as substance from the active and changing quality of the

world. Plato and Aristotle distinguished forms from matter, but differed in the degree of distinction with regard to the independence of forms and receptacle or of form and matter.

Each school also recognized a moral crisis for the human trapped in matter. Matter explained the potential for change in the world and was corruptible in its manifestations although eternal in itself and in these ways acted as the limit to the goodness of the world and the human condition. The material limitation was either to be accepted and endured or escaped.

The Christian teaching of *creatio ex nihilo* violated two of these basic metaphysical beliefs. It taught that change had a specific beginning, and it taught that no being in the realm of change was eternal. It is easy to see why the teaching of *creatio ex nihilo* was the object of scorn by the educated Hellenist. It is much more difficult to see why the Christians adopted such a radical position. This is especially true because one does not find the origin of the teaching where one would expect. If one looks to the Jewish, biblical, and Near Eastern background to Christian teachings, one does not find *creatio ex nihilo* expressly taught. On the contrary, one can only find expressions of the opposite. Early Jews and Christians both expressly state that God formed the world from formless matter. Philo, Justin Martyr and Hermogenes all make that point, the last making a strong exegetical case for his position from the opening of *Genesis*. Before we can determine why Christians formulated *creatio ex nihilo*, we need first to consider the background for Christian teaching in Early Judaism, the Hebrew Scriptures, and the Ancient Near Eastern world.



### Chapter 3, Cosmogony and Material in the Near East, Biblical Texts, and Early Judaism

In Egypt, natural and artificial images of creation exist side by side. They coexist even in the same text (Papyrus Leiden, see ch. 1). Amun brings forth by birth and by fashioning and even by speech.

In Mesopotamia, nature and artifice become deadly enemies. In the *Enuma Elish*, natural causation begins all in the birthing of the gods. But nature in the persons of the primal mother and father is capricious, and soon nature threatens her own offspring. Only the work of wisdom and artifice of Ea saves the gods as he forms the hero Marduk and equips him with skilful weapons and magic. After the battle, the world is constructed in wisdom from the slain corpse of Tiamat, the natural progenitor of the gods. Artifice slays nature.

In biblical texts the triumph of art over natural progeny is complete. Signs of the battle are merely faint traces. Word and wisdom predominate. Whereas production by birth precedes art in the *Enuma Elish*, in biblical accounts God's creative speech and work precede creation by birth.<sup>1</sup> Only

<sup>1</sup>Claus Westermann in *Genesis 1-11: A Commentary*, trans. John Scullion, S.J., Minneapolis: Augsburg, 1984, pp. 26-39, in treating creation motifs in general distinguishes creation by birth from creation by conflict, creation by action, and creation by word.

Jon Levenson in *Creation and the Persistence of Evil*, San Francisco: Harper and Row, 1988, traces the sublimation of creation by conflict to creation by sovereign word in the Bible.

I see creation by conflict as a secondary motif that develops in the *Enuma Elish* only as two other motifs, nature and art, collide. In the *Enuma Elish* nature precedes art, in the Bible the process is reversed.

Many have sought to distinguish between two traditions in *Genesis 1*, creation by word and creation by deed, see Westermann, op. cit., pp. 82 f.

Also on the contrast of creation by word and by deed, see W. H. Schmidt, *Der Schöpfungsgeschichte der Priesterschrift*, Wissenschaftliche Monographien zum Alten und Neuen Testament 17, Neukirchen-Vluyn: Neukirchener 1964, pp. 73-149. Schmidt develops the contrast through all six days of creation.

after God speaks light into existence and fashions the heavens and uncovers the earth, does the earth “bring forth” vegetation. The seas and the sky teem with fish and birds. “These are the generations of heaven and earth when they were created” (*Genesis* 2.4). They are all subject to the creative act of God. Although it is not yet an explicit doctrine, creation by artifice paves the way for *creatio ex nihilo*.

Biblical writings expressly teach neither *creatio ex nihilo* nor creation from a specific material. Early in the Common Era, when the Rabbis considered the question of what came before the creation, some said that the question should not be answered in public. Others read biblical passages fairly literally and said that the heaven and earth were created from waters or from chaos (*tohu wawohu*). Other early Jewish writers who were more engaged by Greek Philosophy, such as Philo and the author of the deuterocanonical book, the *Wisdom of Solomon*, accepted the Platonic position that the world was created from formless matter. No one formulated a doctrine of *creatio ex nihilo*. Some statements have been interpreted as teaching *creatio ex nihilo* (such as *2 Maccabees* 7.28 and *Bereshit Rabba* 1.9, see discussion below), but closer examination reveals that they are not making that claim, and no one presents any argument to support the doctrine.

No one in Early Judaism had the motivation to produce an argument for *creatio ex nihilo*. The philosophically minded writers would not have floundered in the face of philosophical teaching without cause. The more biblically minded Rabbis even went so far as to disallow questions that went back before the beginning of the world. They expressly forbade treading where biblical

The motifs are clearly distinct, but their combination is fairly standard. It happens in Egypt (see ch. 1), the *Enuma Elish* (see below), and elsewhere in the Bible, *Psalms* 148.5 and *Isaiah* 48.13. Word and building are both works of wisdom and we should be careful about overemphasizing the distinction.

texts did not lead. Therefore, they would not have made such a bold claim about what did or did not precede the heaven and earth, since scripture was silent therein.

To begin our examination of the teachings of the biblical writings and Early Judaism, we will go back to examine the biblical material by way of Babylon, in order to set some of the Near Eastern context for the biblical materials.

## Babylon

The creation of the world from waters finds its best expression in a late document. Even though the *Enuma Elish* represents the fullest expression of cosmogony from Mesopotamia or anywhere else in the Ancient Near East, it should not be universalized to a general Babylonian position or even worse, Ancient Near Eastern position.<sup>2</sup>

The *Enuma Elish* itself is a late document by Mesopotamian standards, which presents a strong polemical tone. Based on alleged ideological developments, the *Enuma Elish* was once dated to the old Babylonian period (early second millennium). However, Lambert has convincingly argued that the *Enuma Elish* should be dated to the late second millennium.<sup>3</sup> The *Enuma Elish* is not a speculative text. It has a strong ideological bent as it tries

<sup>2</sup>On the *Enuma Elish* in general, see Alexander Heidel, *The Babylonian Genesis*, Chicago: University of Chicago Press, 1951.

On its relation to the Bible, see W. G. Lambert, "A New Look at the Babylonian Background of Genesis," *Journal of Theological Studies* 16, 1965, pp. 287-300.

For a full bibliography, see Claus Westermann, *op. cit.*, pp. 70 f.

<sup>3</sup>W. G. Lambert, says that the *Enuma Elish* should not be dated earlier than 1100 B.C.E., *art. cit.*, pp. 297-8.

See also Tzvi Abusch, "Merodach," in *Harper's Bible Dictionary*, ed. Paul J. Achtemeier, San Francisco: Harper and Row, 1985, p. 627.

to establish Babylon's god, Marduk, as the chief of the Mesopotamian pantheon. Cosmogony is an ancillary concern of the text which focuses primarily on Marduk's exaltation over the older gods. It served as a text in the cult, being recited year after year in the Babylonian New Year, *Akitu*, festival, presumably to renew Marduk's beneficent creation.

In the *Enuma Elish*, Marduk takes over from the old storm god, Enlil, as the most powerful god of the Mesopotamian pantheon. The succession of leading gods was not new. Enlil himself had taken over from his father Anu, the sky god. But with the *Enuma Elish*, Babylon, the center of the cult of Marduk, made a play for the center of the Mesopotamian religion over the ancient center of Enlil's cult, Nippur.

The *Enuma Elish's* relatively late date and its own ideological angle recommend caution against attributing its doctrines to early periods of Mesopotamian history. Its status as an internal cult document, which unlike *Gilgamesh*, never had circulation outside of Mesopotamia, should prevent us from freely seeking relationships to other Near Eastern texts.

This is particularly true in the case of the *Enuma Elish's* creation from the defeated Tiamat. Parallels have long been drawn between the *Enuma Elish* and biblical accounts. More recently Ugaritic materials have been added to the mix.<sup>4</sup> In its association of the slaying of the sea deity narrative to the

<sup>4</sup>Gunkel in 1895 began a new era of biblical criticism based upon reading conflict and creation in the Bible as dependents of the *Enuma Elish*, *Schöpfung und Chaos in Urzeit und Endzeit*, Göttingen: Vandenhoeck and Ruprecht, 1895.

Mitchell Dahood takes the Leviathan as primaeval mythical material that has been interspersed with historical material, *Psalms II, 50-100*, Anchor Bible, v. 17, Garden City, N.J.: Doubleday, 1968, 205-206.

For a very complete study of the Leviathan material, particularly with respect to Ugaritic influences, see John Day, *God's Conflict with the Dragon and the Sea*, Cambridge: Cambridge University Press, 1985.

Ugaritic parallels are also drawn by Cyrus Gordon in "Leviathan: Symbol of Evil," in *Biblical*

creation story, the *Enuma* is unique.<sup>5</sup> Mythological combat was known from Sumerian times in the form of Enki's combat with Kur, but it is not associated with creation. Likewise, the combat of Bel and the sea god Yam in Ugarit is not associated with creation. The *Enuma Elish* uses the threat of combat as the occasion for the older gods to cede all power to their young hero Marduk. His triumph confirms his position as the lord and leads to his beneficent creation of the world as a temple for his senior gods and the creation of humans to serve them. In short the cosmic battle is introduced to explain the exaltation of Marduk. In examining the brief references to God's triumph over the Leviathan in the biblical passages, no context of creation should be assumed. Biblical texts as texts composed outside of the Marduk priesthood are more likely to reflect the general view of combat after creation known from Ugarit and Ancient Mesopotamia than the doctrine of the late and idiosyncratic *Enuma Elish*.

In this work we will examine the *Enuma Elish* simply as an expression of a shared cultural milieu where concepts of pre-cosmic oceans and divine architects were common property. We will not assume direct influence.<sup>6</sup>

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*Motifs*, Cambridge, MA, Philip H. Lown Institute of Advanced Judaic Studies; Studies and Texts III; Harvard University, 1966, 1-9.

<sup>5</sup>Westermann notes that the cosmic battle is part of the creation story neither in Sumerian literature nor in Ugarit and therefore warns against presuming that the traces of conflict found in the Bible should be associated with creation, op. cit., pp. 30-33.

Contra Levenson, op. cit., pp. 12 f., who argues that the cosmic battle cannot really be distinguished from creation because they are part of the same perpetual tension between chaos and order.

<sup>6</sup>Westermann does not assert literary dependence of the Bible upon the *Enuma Elish*. Rather he looks to contact in the preliterate history of *Genesis*, p. 89.

Lambert, art. cit., pp. 293-296, also argues against any direct connection between the *Enuma Elish* and the Bible.

## Enuma Elish: Marduk the king

Marduk was created by Ea and appointed by the gods to overcome their mother, Tiamat, the goddess of the sea who threatened them with destruction. The gods were born from Tiamat and Apsu, the salt and fresh waters which sorted themselves from an undifferentiated beginning (*Enuma Elish* 1. 1–12). The differentiation of the waters into two bodies, salt and fresh, allowed biological generation. The fecundity of waters had a long history in Mesopotamia going back to Sumerian times. In Sumerian, human semen is called water; procreation is called *a-ri-a*, literally the mixing of waters. Creation from the waters is a common theme in creation stories. Nammu, an ancient Sumerian goddess of the sea was called the mother of the heaven and earth.<sup>7</sup> Enki, the Sumerian god of water and wisdom, is one of the Sumerian creator gods.<sup>8</sup> In the *Enuma Elish*, he retains a central role in the narration under his Akkadian appellation, Ea. He overcomes the first threat to the gods from Apsu by means of his knowledge of magic. Then he builds his temple on the Apsu, where he begets Marduk (*Enuma Elish* 1. 47–85).

In the *Enuma Elish* the offspring of the waters produce so much noise that Apsu plots to destroy his offspring. Apsu's defeat and death provoke Tiamat to threaten her children as well. The gods meet in assembly and promise Marduk the tablets of fate if he acts their hero. Marduk overcomes Tiamat by distending her body with the wind he controls and piercing her. From her body he constructs the heavens over the Apsu as a temple for the gods. In his construction of the world he acts just as the conquering Mesopotamian king, who returns from his conquests to honor the gods:

<sup>7</sup>Kramer, *Sumerian Mythology*, Philadelphia: The American Philosophical Society, 1944, p. 39.

<sup>8</sup>Kramer, *op. cit.*, pp. 54–62.

The lord stopped and inspected her [Tiamat's] body.  
He divided the miscarriage and worked wonders.  
He split her in two like a fish for drying,  
And set up half of her and overshadowed the heavens.  
He drew the line and established guards,  
And ordered them not to let her waters out.  
He crossed heaven and examined the sky.  
He made the seat of Annugimmud equal to that of Apsu  
He made it like the form of Apsu.  
Eshgalla its equivalent he established and Esharra,  
Eshgalla and Esharra which he built in the heavens.  
He settled Anu, Enlil, and Ea in their sanctuaries.

[Tablet 5]

He established stations for the great gods.  
He returned the stars and erected the Lumashu  
He set the year, and drew the plans. (4. 135-5.3)<sup>9</sup>

In constructing the world Marduk acts as *baru*, the Babylonian haruspex, "The lord stopped and inspected (*baru*, "to inspect" in the manner of a haruspex) her [Tiamat's] body" (4. 135). He acts as an architect consulting the drawings (5.3), and he settles the gods into their new home.

Marduk's roles of conquering hero, temple architect, and haruspex coalesce because he is king. Each of these roles is preformed by the kings in their service to the gods. They build temples consulting both plans and omens and finally move the image of the god into his new home. These kingly activities can be witnessed early in dedicatory inscriptions of Gudea in the Sumerian period and late in those of Nabonaidus, the last king of Babylon. Although Marduk is the new lord of the gods, he still acts in piety toward his parents and in a kingly manner.

In the end, it is Ea's and Marduk's skill and art which overcome the

<sup>9</sup>For cuneiform text, see appendix.

birth mother. In contrast to Egypt, where the birth of the gods leads to good things like the sun which gives life to the world, in Mesopotamia, birth is uncontrolled and leads to disorder and destruction. Nature tends to disorder and requires the strong guidance of a king. After all the *Enuma Elish* is not just about the exaltation of Marduk, it is a strong argument and model for a powerful king to bring order to a dangerous world. The king needs all the skills of seer, architect, fighter, and magician to protect the world from the forces of nature.

There is a profound ambivalence about the sea and the forces of nature. The sea is recognized as the ultimate source of life. It gives birth to the gods and its body provides the material for creation. The material source rather than being passive, is active and hostile and must be overcome and constantly governed, just as the myth of Marduk was recited year by year in the *Akitu* festival to reactualize his triumph over nature.

### **biblical materials**

Biblical texts nowhere state or argue for *creatio ex nihilo*. It is a doctrine which must be interpreted into biblical texts. In fact, biblical texts are strangely quiet about the material for the cosmos. They neither identify nor deny any material for the world. As in Egypt and Babylon, the waters do play a role in the creation. It is a theme most developed in *Genesis* and in *Job*, but also touched upon in other loci. However, in contrast to both Egypt and Babylon, *Genesis* prioritizes the art of God over the generative power of the waters.

Biblical materials are remarkably consistent in describing God's creative acts in terms of building, a motif which recurs in the Pentateuch, the Prophets, the *Psalms* and the Wisdom literature. Recent studies have also brought to



light the view of the world as a temple,<sup>10</sup> an aspect which biblical literature shares with Mesopotamian. In biblical literature, the building analogy would prove more fruitful than the biological in the consideration of the skill and knowledge demonstrated in the construction of the world.

As in Mesopotamia, the heavens and earth were viewed as a temple, i.e., a dwelling place for god. *Isaiah* 66 makes clear the view of the world as the divine palace:

Thus said Yahweh:  
The heavens are my throne and the earth my footstool.  
Where is the house which you built for me, and where is my resting place?  
My hand made all these things, so that all these things came about, says Yahweh.  
To this one I look, to the humble, the broken spirit, and the one who fears my word. (*Isaiah* 66. 1–2)<sup>11</sup>

The heaven and earth obviate any need for a human built house for God,

<sup>10</sup>Jon D. Levenson, op. cit., pp. 78–99, argues for the temple as microcosm in biblical and post-biblical material.

L. R. Fisher, "Creation at Ugarit and in the Old Testament," *Vetus Testamentum* 6, 1965, pp. 313–324, finds the temple as microcosm in the *Enuma Elish*, p. 318. His reading of *Psalm* 93 provides an interesting parallel to the reading of *Enuma Elish* presented here. He finds in the *Psalm*, "conflict, kingship, order, and temple," p. 322.

Westermann, op. cit., p. 29, does not find Fisher's association of temple building and creation in the *Enuma Elish* persuasive, but he does not give any critique.

11

כֹּה אָמַר יְהוָה  
הַשָּׁמַיִם כִּסֵּאִי וְהָאָרֶץ תַּרְסָנִי  
אֵיזָה בַּיִת אֲשֶׁר תִּבְנֶנּוּ לִי וְאֵיזָה מְקוֹם מְנוּחָתִי:  
וְאֵת־כָּל־אֱלֹהֵי יָדַי עָשָׂתָה וַיְהִיוּ כָל־אֱלֹהֵי גֹאֲם־יְהוָה  
וְאֵל־יְזָה אֲבִישׁ אֶל־עֵינַי וְנִכְחַדְרוּחַ וְחָרַד עַל־דְּבָרַי:

ed. K. Elliger, et. al., *Biblia Hebraica Stuttgartensia*, Stuttgart: Deutsche Bibelgesellschaft, 1983.

because they are his temple.

Architectonic language carries over into the descriptions of the construction of heaven and earth. Again from *Isaiah*:

Thus says God, Yahweh,  
Who created the heavens and stretched them out, who  
hammered out the earth and its produce.  
Who gave breath to the people upon the earth, and spirit to  
those who walk on it. (*Isaiah* 42.5)<sup>12</sup>

God's activities in creating the heaven and earth are terms used to describe the construction of the tabernacle and temple, which serves to reinforce the view of heaven and earth as a temple. The heavens are stretched out (נִשְׂטִיָּהֶם) just as the tabernacle was (*Exodus* 33.7).

This view of the construction of the heavens finds a close parallel in the *Enuma Elish*, where Marduk spreads the heavens as a canopy (4.139, quoted above). Meanwhile, the earth is stamped down (רָקַעַ) as the overlay for the altar was (*Numbers* 17.3–4). More often the earth is described as having been founded (יָסַד).<sup>13</sup>

*Job* gives the building analogy its most dramatic expression:

Gird yourself as a hero and I will ask you, and you will instruct me.  
Where were you when I founded the earth? Tell me, if you have understanding.  
Who set its measure, if you know, and who stretched a line across it?

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<sup>12</sup>

כֹּה־אָמַר הָאֱלֹהִים  
בֹּרָא הַשָּׁמַיִם וְנִשְׂטִיָּהֶם רָקַעַ הָאָרֶץ וְצִאֲצְאֶיהָ  
נָתַן נְשֻׁמָּה לָעָם עָלֶיהָ וְרוּחַ לַהַלְכִים בָּהּ:

<sup>13</sup>See *Isaiah* 51.13, 48.13; *Amos* 9.6; *Zechariah* 12.1; *Psalms* 78.69, 89.12, 102.26, 104.5.

Upon what were its pylons sunk, and who planted its  
 cornerstone?  
 When the dawn stars rejoiced together and all the children of  
 God shouted,  
 And the sea was shut up with doors, as it burst forth from the  
 womb.  
 As I placed a cloud as its garment, and darkness as its swaddling-  
 band,  
 I set my limit upon it, and I placed bars and doors.  
 I said "this far shall you go, and no further. Here will your  
 waves set themselves at their height." (*Job* 38. 3–11)<sup>14</sup>

Here we perceive the same ambivalence toward the force of the waters  
 as found in Egypt and Babylon. The waters must be controlled in order to  
 allow the earth to appear and give life. *Job* uses the building analogy to  
 establish the superiority of divine knowledge over human. God's power and  
 wisdom are demonstrated in his architectonic control of the waters.

*Job* is not alone in his use of the building analogy to develop the theme  
 of God's wisdom. The themes of wisdom and building recur together in  
*Jeremiah* (10.12–13; 31.37; 32.17; 51.15–16), but attain their most poetic expression  
 in *Proverbs* 8:

Yahweh possessed me at the beginning of his way, at the  
 beginning of his works then.

14

אֶזְרָא כְנָבֵר חֲלָצִיהָ וְאִשְׁאֲלֶהָ וְהוֹדִיעַנִי:  
 אֵי־עַל־מָה אֲרָנִיהָ הִשְׁבַּעוּ אוֹ מִי־יָרָה אֲבֵן פְּנֵתָהּ:  
 מִי־פָרֵן יֶחֶד כּוֹכְבֵי בֶקֶר וַיִּרְעוּ כָּל־בְּנֵי אֱלֹהִים:  
 עֵינֵי־סֶדֶד בְּרִלְתִּים יָם בְּגִיחוֹ מֵרַחֵם יֵצֵא:  
 בּוֹבְשׁוּמֵי עֵגֶן לִבְשׁוֹ וְעֵרְפֵל חֲתָלְתּוֹ:  
 וַיִּנְוֹאֲשֶׁר עָלָיו חֲקֵי וְאֲשִׁים בְּרִיחַ וּדְלָתִים:  
 בְּנֹאמֵר עַד־פֶּה תִּבּוֹא וְלֹא תִסְיַף וּפֹאֲלִישִׁית בְּנֹאזֵן גְּלִיף:  
 וַאֲשֶׁר עָלָיו חֲקֵי וְאֲשִׁים בְּרִיחַ וּדְלָתִים:  
 וְאֹמֵר עַד־פֶּה תִּבּוֹא וְלֹא תִסְיַף וּפֹאֲלִישִׁית בְּנֹאזֵן גְּלִיף:

From old I was installed first from the beginning of the earth.  
 When the depths were not, I danced, when the founts were not  
 heavy with water.  
 Before the mountains were sunk, before the hills, I danced.  
 When he had not yet made the earth and its exterior, and the  
 top of the dust of the world.  
 When he established the heavens, I was there, when he set the  
 limit on the face of the depth.  
 When he bound the clouds above, and fixed the founts of the  
 depth,  
 When he set his law on the sea, that the waters should not  
 violate its decree,  
 When he set the foundation of the earth, I was with him as an  
 advisor.  
 I was a delight every day, I laughed before him the entire time.  
 I laughed in the whole of the earth and my delight was with  
 the human children. (*Proverbs 8.22–31*)<sup>15</sup>

Wisdom is personified and set with God in the construction of the heavens,  
 earth, and depths.

The most familiar passage concerning creation is also the most difficult  
 to understand. *Genesis* chapter 1 has been interpreted both as teaching *creatio*  
*ex nihilo*<sup>16</sup> and creation from chaotic waters.<sup>17</sup> The theological difference

<sup>15</sup>

יְהוָה קִנְנִי רִאשִׁית דְּרָכָיו קָדָם מִפְּעֻלְיוֹ מֵאִז׃  
 מֵעוֹלָם נִסְכַּתִּי מִרֹאשׁ מִקְדְּמֵי־אָרֶץ׃  
 בְּאֵין־תְּהִמּוֹת חוֹלְלָתִי בְּאֵין מַעֲיִנוֹת נִכְבְּדֵי־מַיִם׃  
 בְּטָרָם הַרִים הִטְבַּעוּ לִפְנֵי גְבְעוֹת חוֹלְלָתִי׃  
 עַד־לֹא עָשָׂה אֶרֶץ וְחוֹצוֹת וְרֹאשׁ עֲפָרוֹת תֵּבֵל׃  
 בְּהִכְיֵנו שָׁמַיִם שָׁם אָנִי בְּחֻקּוֹ חֹגַג עַל־פְּנֵי תְהוֹם׃  
 בְּאֲמָצוֹ שְׁחָקִים מִמַּעַל בְּעִזּוֹ עֵינוֹת תְּהוֹם׃  
 בְּשׁוֹמוֹ לַיִם אֶחָקוּ וּמַיִם לֹא יַעֲבְרוּ־בִּי  
 בְּחֻקּוֹ מוֹסְדֵי אֶרֶץ׃ וְאֵהִי אֶצְלוֹ אֲמוֹן  
 וְאֵהִי שֹׁשְׁעִים יוֹם אֶיּוֹם מִשְׁחָקָת לִפְנֵי בְּכָל־עַת׃  
 מִשְׁחָקָת בְּתֵבֵל אֶרְצוֹ וְשֹׁשְׁעִי אֶת־בְּנֵי אָדָם׃ פ

cf. *Proverbs 3.19*.

<sup>16</sup>Gerhard von Rad, *Genesis: A commentary*, trans. John H. Marks, 2nd ed, Philadelphia:

can be traced to a difference in readings of the sequence of the first three verses of *Genesis*.<sup>18</sup> Traditionally verse 1 and 2 of *Genesis* 1 were read in sequential order. First, God created the heaven and earth (i.e., the universe) and they were in a dark and chaotic state until God created light. At least from the time of Rashi (*Commentary*, ad loc.), commentators have questioned the sequential ordering of verses 1 and 2. Rashi and many modern commentators read verse 1 as a temporal clause, “In the beginning of God’s creating heavens and earth.” Verse 2 follows either as the main clause or as a continuation of the temporal clause. In either case verse 2 describes the chaotic state of the waters, upon which God begins to act in verse 3 by creating light.

The traditional ordering reads:

In the beginning God created heavens and earth,  
 2) and the earth was empty and void.  
 Darkness was upon the waters and the divine wind stirred upon  
 the depth,  
 3) and God said let there be light, and there was light.<sup>19</sup>

The alternative reads:

Westminster Press, 1972, p. 49.

<sup>17</sup>E. A. Speiser, *Genesis*, Anchor Bible, vol. 1, Garden City, N.Y.: Doubleday, 1964, p. 13.

<sup>18</sup>For an extensive discussion and bibliography concerning the sequence of the first three verses, see Westermann, op. cit., pp. 93–98. Westermann takes verse 1 as an independent sentence, but separates it from the rest of the narrative as a heading, p. 94. This leaves the *waw* (and) at the beginning of verse 2 to hang on nothing. Neither the traditional nor temporal-clause reading of verse 1 leaves verse 2 dangling in this way.

<sup>19</sup>

בְּרֵאשִׁית בָּרָא אֱלֹהִים אֶת הַשָּׁמַיִם וְאֶת הָאָרֶץ:  
 וְהָאָרֶץ הָיְתָה תֵהוֹ וְבָהוּ וְחָשֶׁךְ עַל־פְּנֵי תְהוֹם וְרוּחַ אֱלֹהִים  
 מְרַחֶפֶת עַל־פְּנֵי הַמַּיִם:  
 וַיֹּאמֶר אֱלֹהִים יְהִי אוֹר וַיְהִי־אוֹר:

In the beginning of God's creating heavens and earth,  
2) the earth was empty and void, etc.

or:

In the beginning of God's creating heavens and earth,  
2) the earth being empty and void,  
darkness being upon the waters and the divine wind stirring  
upon the waters,  
3) then God said let there be light, and there was light.

According to version one, God first creates the world which is dark and empty and light follows as the second act of creation. Version two and three both suggest that the darkness and emptiness of verse 2 are prior to the first act of God's creation: the formation of light. As such, the pre-cosmic waters would be a precondition to God's acts of creation.

In the attempt to discern whether verse 1 should be taken as an independent sentence or as a temporal clause, much discussion has focused on whether the first word, בְּרֵאשִׁית, is construct or absolute. If it is construct, the clause is temporal. If absolute, it introduces a main clause. Morphologically, it is impossible to tell. רֵאשִׁית has the same form in both construct and absolute states. Some have argued that it is a construct because it does not have an article,<sup>20</sup> but the mere absence of the article is not decisive. The absence of an article can indicate either a construct or an indefinite noun.

Even if verse 1 is read as a temporal clause, verse 2 cannot describe a state of affairs which is prior to the creation of heaven and earth. Verse 2

<sup>20</sup>So Speiser, op. cit., p. 12.

See the bibliography in Westermann, op. cit., pp. 95 f.

begins with a noun followed by a preterite tense verb. That should indicate action which precedes or is concomitant with the previously described action. But verse 2 cannot describe action that is prior to verse 1 because it describes the state of the earth and that cannot precede the creation of the earth. Thus, verse 2 describes a state which is concomitant with verse 1: i.e., the state of the earth at the instant of creation. A close parallel is found at the beginning of *Genesis* chapter 2:

- 4) On the day in which Yahweh God made earth and heavens,
- 5) no plant of the field was yet upon the earth and no green of the field had yet sprouted because Yahweh God had not sent rain upon the earth and there was no human to work the land,
- 6) and a fount went up from the earth and watered the face of the land,
- 7) then God formed a human from the dust of the land.<sup>21</sup>

Verse 4 is a temporal phrase describing the creation of the earth, followed by a description of the initial incomplete state of the earth (vv. 5–6), followed by a subsequent act of creation (v. 7). Chapter 1, verses 1–3 have a parallel structure: a temporal clause (v. 1), followed by a description of the empty state of the earth (v. 2), followed by the next act of creation: the creation of light (v. 3). In each passage, the second verse describes the condition of that which was created in the first verse, and must therefore be concomitant or consequent upon the first verse. The verb in *Genesis* 1.2 is a preterite indicating concomitance with

<sup>21</sup>

בְּיוֹם עָשׂוֹת יְהוָה אֱלֹהִים אֶרֶץ וְשָׁמַיִם:  
וְכָל וְשִׁיחַ הַשָּׂדֶה טָרֵם יְהִי בָאָרֶץ וְכָל־עֵשֶׂב הַשָּׂדֶה טָרֵם  
יִצְמַח כִּי לֹא הִמְטִיר יְהוָה אֱלֹהִים עַל־הָאָרֶץ וְאָדָם אֵין לַעֲבֹד  
אֶת־הָאֲדָמָה:  
וְאֵד יַעֲלֶה מִן־הָאָרֶץ וְהִשְׁקָה אֶת־כָּל־פְּנֵי־הָאֲדָמָה:  
וַיִּצְרֶה יְהוָה אֱלֹהִים אֶת־הָאָדָם עָפָר מִן־הָאֲדָמָה וַיִּפַּח בְּאַפָּיו

verse 1. The verb in *Genesis* 2.5 is imperfect, indicating a consequential state.<sup>22</sup>

Read in this way *Genesis* 1 neither affirms nor denies *creatio ex nihilo*. The empty state of verse 2 is not prior to creation. On the other hand, the text does not explain the origination of the waters. The waters may have always been present and the empty earth was created in their midst: *creatio ex aquis*.

Just as easily, verse 2 could describe the first created state of both the earth and the heaven. As heaven and earth of verse 1 describe the created universe, verse 2 describes the state of that universe. The lower part of the universe, the earth, is empty and void, because it is covered by waters. Once the waters are cleared from it plants begin to grow upon it (*Genesis* 1. 10–11). The heaven is dark and watery. The heaven has not yet been formed as the firmament between the waters (*Genesis* 1. 6–7).

While *Genesis* 1 nowhere describes the creation of the waters, they do not play the active role they do in Mesopotamia. Instead they are subject to division and gathering by God into the super-and sub-caelic waters and into the seas. They do not bring forth life except at the command of God, in direct contrast to the priority of the fecundity of the waters in the Enki myths and the *Enuma Elish*. In *Genesis*, biology follows artifice. The triumph of artifice over nature provides the material for the doctrine of creation from nothing, but it had yet to find expression.

Some passages, like the passage from *Job* 38 quoted above and *Genesis*

<sup>22</sup>Speiser, op. cit., p. 12, also notes the parallels between *Genesis* 1.1–3 and *Genesis* 2.4–7. He argues that *Genesis* 1.2 and *Genesis* 2.5–6 are both parenthetical clauses, but does not note the sequence of tenses.

Westermann is not fond of the parallel. He argues that the *Genesis* 1.1 differs from 2.4 b “inasmuch as 2.4 b gives an indication of time and is saying something different from v. 7,” p. 97. But *Genesis* 1.1 also has a time word and it also says something different from v. 3.



1, appear to presuppose the existence of waters at the foundation of the earth. Given the Near Eastern parallels, it would seem to be quite natural to take waters as the prime material for the creation. On the other hand, *Proverbs 8* makes it clear that wisdom was with God before the waters.

In fact the biblical literature presents a range of views: from the hostile forces of water in *Job 38*, which demonstrate the closest parallel to the *Enuma Elish*; to the passive waters of *Genesis 1*, where the fecundity of the waters follows God's art (in contrast to the order of the Enki myths and the *Enuma Elish*); to the preexistence of wisdom in *Proverbs*.

Even in *Job 38*, God's construction over the waters does not parallel the *Enuma Elish* in that the construction does not follow upon battle with or slaying of the waters. In fact it is the abiding presence of the power of the waters which speaks to the ingenuity of God's design.

The building analogy would seem to imply the use of building materials, as it does in the *Enuma Elish* and even in Plato's *Timaeus*, yet biblical accounts are silent about the material for creation. Although depths can be interpreted as the material, nowhere are they or anything else explicitly identified as the material for the cosmos. The closest to an expression of *creatio ex nihilo* is found in the wisdom passage from *Proverbs 8* quoted above, which puts wisdom before the depths. It does not go as far as *ex nihilo*. It does teach that even the waters are subject to divine wisdom, but the priority of wisdom over the ordered manifestations of sea, earth, and heaven does not imply creation without any material or chaotic origin. Verses 27 to 29 make clear that it is the ordered forms of the depths which wisdom helps to establish and to demarcate. Wisdom was present before the ordering of heaven, depths, and earth, not necessarily prior to any chaotic stuff. The text is not discussing the

presence or absence of any disordered or hostile material. It tells us nothing about the material for creation, only its wise construction.

### post-biblical and deuterocanonical texts

Among twentieth century scholars, *creatio ex nihilo* has sometimes been attributed to some figures of Early Judaism, but the texts cited to support such attribution are ambiguous at best, while in other places, *creatio ex materia* is clearly stated. The alleged statements of *creatio ex nihilo* do not display the sufficient clarity or argumentation that would have been required to establish a completely novel idea. *Creatio ex nihilo* would have been a unique position and could never have been justified without considerable explanation or argumentation. A priori, we should be suspicious of the single line statements that are supposed to represent the first expressions of *creatio ex nihilo*.

### non-rabbinic Early Judaism

Hellenized Jews could easily accept the common Greek teaching of the qualitless matter.<sup>23</sup> The writer of the *Wisdom of Solomon*, dated to the reign of Caligula, 37–41 C.E. by David Winston,<sup>24</sup> clearly accepted the notion of creation from matter:<sup>25</sup>

<sup>23</sup>John MacDonald, *The Theology of the Samaritans*, London: SCM Press, 1964, p. 118–123, argued that Marqah, the fourth century Samaritan thinker, was so Hellenized as to develop an emanationist theory of creation.

MacDonald's view has not been supported in a recent study of Marqah, Alexander Broadie, *A Samaritan Philosophy*, Leiden: Brill, 1981, p. 81.

<sup>24</sup>David Winston, *The Wisdom of Solomon*, Anchor Bible Series, Garden City, NY: Doubleday, 1979, p.3.

<sup>25</sup>So Winston, art. cit., p. 192.

Also Winston, *Wisdom*, pp. 38–40.

Contra J. Reider, *The Book of Wisdom*, New York: Harper & Brothers, 1957, p. 145. He argues that as a Jewish text *Wisdom of Solomon* must have tacitly held that a *creatio ex nihilo*

For your omnipotent hand found no difficulty even in creating the world from formless matter. (*Wisdom of Solomon* 11.17a)<sup>26</sup>

There are no examples of writers from the period challenging the prevailing opinions by introducing *creatio ex nihilo*. Sometimes *2 Maccabees* 7.28, dated between 78 and 63 B.C.E. by Jonathen Goldstein,<sup>27</sup> is cited as an example, but a close reading does not support the assertion:<sup>28</sup>

I pray you, son, look to heaven and earth and seeing everything in them, know that God made them from non-being, and the human race began in the same way. (*2 Maccabees* 7.28)<sup>29</sup>

Non-being refers to the non-existence of the heavens and earth before God's creative act. It does not express absolute non-existence, only the prior non-existence of the heavens and earth. They were made to exist after not existing. The use of ἐκ οὐκ ὄντος in this relative sense can be found in Aristotle who refers to the generation of a new substance ἐκ οὐκ ὄντος (*de Generatione Animalium* 741 b 22 f.), although he denies that something can come from absolutely nothing (*Physics* 187 b 26 ff., for discussion see below, chapter 4).

occurred before the stated *creatio ex materia* because the author could not have accepted the Greek notion of eternal, formless matter. At best this begs the question. At worst it ignores the evidence for *creatio ex materia* found in Midrash and Philo.

<sup>26</sup>οὐ γὰρ ἠπόρει ἡ παντοδύναμός σου χεὶρ  
καὶ κτίσασα τὸν κόσμον ἐξ ἀμόφου ὕλης.

ed. Alfred Rahlfs, *Septuaginta*, Stuttgart: Deutsche Bibelgesellschaft, 1935.

<sup>27</sup>Jonathen Goldstein, *Second Maccabees*, Anchor Bible vol 41A, Garden City, NY: Doubleday, 1983, p. 83.

<sup>28</sup>Wolfson, *Philo* 1, pp. 302–3, holds that the text is inconclusive with respect to *creatio ex nihilo*.

<sup>29</sup>ἀξιῶ σε, τέκνον, ἀναβλέψαντα εἰς τὸν οὐρανὸν καὶ τὴν γῆν καὶ τὰ ἐν αὐτοῖς πάντα ἰδόντα γινῶναι ὅτι οὐκ ἐξ ὄντων ἐποίησεν αὐτὰ ὁ θεός, καὶ τὸ τῶν ἀνθρώπων γένος οὕτω γίνεται. ed. Alfred Rahlfs.

## Philo

*Creatio ex nihilo* has long been a debate in Philonic scholarship.<sup>30</sup> Wolfson tried to settle the debate by comparing the teachings concerning matter in Plato and Philo, whose career probably ended before 40 C.E.<sup>31</sup> Wolfson claimed that Plato taught two types of matter, “matter in which” (the receptacle) and “matter from which” (the elements). Wolfson then proceeded to cite texts which show that Philo taught that space (the receptacle) and bodies were created (*de Opificio Mundi* 7.29; *de Confusione Linguarum* 27.136). Therefore, Philo would have taught the creation of both kinds of matter.<sup>32</sup>

However, Wolfson's argument misses the mark, because his distinction of “matter from which” and “matter in which” cannot be supported from the text of Plato. As we have seen, Plato did not use the term matter, and it is misleading to apply it to the receptacle. The receptacle does not change into anything, but merely provides a locus for change. Plato also argued that the four traditional elements were not elemental bodies, but were constructed. They are not prime matter for Plato.

There is also no indication that Philo distinguished “matter in which” from “matter from which.” Philo seems to have understood matter in Stoic terms, as a passive principle in contrast to intellect as an active principle:

<sup>30</sup>David Winston has argued that Philo does not teach *creatio ex nihilo* in “Philo's Theory of Cosmogony,” *Religious Syncretism in Antiquity*, ed. B. A. Pearson, Missoula: Scholars Press, 1975, pp. 157–171. Winston cites several Philonic texts that state that God creates from formless matter (*de Opificio Mundi* 2.8, *de Specialibus Legibus* 4.187) and argues that matter could not have been created from nothing because it is “unlovely” and a principle of disorder in Philo's cosmos. Philo also expressly denies that anything can come about from non-being and pass into non-being (*de Aeternitate Mundi* 5).

<sup>31</sup>Wolfson, *Philo*, p. 4.

<sup>32</sup>Wolfson, *Philo*, pp. 303–309.

For Moses having reached the very summit of philosophy and learned of the most useful and essential things of nature, knew that it was most necessary that among beings there be an active and a passive cause, and that the active cause, the intellect of all is most pure and unmixed, greater than virtue, greater than understanding, greater than the good itself, and than the beautiful itself. The passive is soulless and motionless of itself, but when moved and shaped and ensouled by the intellect it changed into the perfect work, this cosmos. (*de Opificio Mundi* 2.8–9)<sup>33</sup>

Philo description of matter parallels that of the Stoics of Diogenes Laertius' account (Long and Sedley 44 B, quoted above, chapter 2).

The best textual evidence for uncreated matter comes from *Quis Rerum Divinarum Heres Sit*, where Philo explicitly excludes matter from the things God praises at the consummation of creation. God praises all the things which he has created, but Philo notes that does not include matter:

There is nothing of value among material things with God. He communicates the same art to all, equally. Concerning which it says in the holy scriptures, "God saw all that he had made, and behold they were very good" (*Genesis* 1.31). Those things which received the same praise from the Praiser are of completely equal value. But God did not praise the matter which was fashioned, which was without soul and wayward and dissolute, even corrupted by itself, uneven and unequal, but he praised his own artful works which were perfected according to one equal, even power and similar, or even the same, understanding. (*Heres* 159 f.)<sup>34</sup>

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<sup>33</sup>Μωσῆς δὲ καὶ φιλοσοφίας ἐπ' αὐτὴν φθάσας ἀκρότητα καὶ χρησιμοῖς τὰ πολλὰ καὶ συνεκτικώτατα τῶν τῆς φύσεως ἀναδιδαχθεὶς ἔγνω δὴ, ὅτι ἀναγκαιότατόν ἐστιν ἐν τοῖς οὐσι τὸ μὲν εἶναι δραστήριον αἴτιον, τὸ δὲ παθητόν, καὶ ὅτι τὸ μὲν δραστήριον ὁ τῶν ὄλων νοῦς ἐστὶν εἰλικρινέστατος καὶ ἀκραιφνέστατος, κρείττων ἢ ἀρετῆ καὶ κρείττων ἢ ἐπιστήμῃ καὶ κρείττων ἢ αὐτὸ τὸ ἀγαθὸν καὶ αὐτὸ τὸ καλόν, τὸ δὲ παθητόν ἄψυχον καὶ ἀκίνητον ἐξ ἑαυτοῦ, κινήθην δὲ καὶ σχηματισθὲν καὶ ψυχωθὲν ὑπὸ τοῦ νοῦ μετέβαλεν εἰς τὸ τελειότατον ἔργον, τόνδε τὸν κόσμον· ed. Leopold Cohn, *Philonis Opera*, v. 1, Berlin: Reimar, 1896, p. 2 f.

<sup>34</sup>τίμιον δ' οὐδὲν τῶν ἐν ὕλαις παρὰ θεῶν διὸ τῆς αὐτῆς μετέδωκε πᾶσι τέχνης ἐξ ἴσου. παρὸ καὶ ἐν ἱεραῖς γραφαῖς λέγεται· "εἶδεν ὁ θεὸς τὰ πάντα ὅσα ἐποίησεν, καὶ ἰδοὺ

All that God has created is good and praiseworthy. Matter is the source of corruption in the world and it is not praiseworthy because it is not created. Despite his many borrowings from the Stoics, Philo has retained the dualism of Plato, and like Plato makes eternal and intractable matter the source of difficulty and necessity in the world. Difficulty and evil does not flow from the source of good and reason. It is not from God.<sup>35</sup>

καλὰ λίαν," τὰ δὲ τοῦ αὐτοῦ τυγχάνοντα ἐπαίνου παρὰ τῷ ἐπαινοῦντι πάντως ἐστὶν ἰσότιμα. ἐπήνεσε δὲ ὁ θεὸς οὐ τὴν δημιουργηθεῖσαν ὕλην, τὴν ἄψυχον καὶ πλημμελῆ καὶ διαλυτὴν, ἔτι δὲ φθαρτὴν ἐξ ἑαυτῆς ἀνώμαλόν τε καὶ ἄνισον, ἀλλὰ τὰ ἑαυτοῦ τεχνικὰ ἔργα κατὰ μίαν ἴσην καὶ ὁμαλὴν δύναμιν καὶ ἐπιστήμην ὁμοίαν καὶ τὴν αὐτὴν ἀποτελεσθέντα. ed. Paul Wendland, *Philonis Opera*, v. 3, p. 36 f.

<sup>35</sup>Richard Sorabji has also argued that Philo taught *creatio ex nihilo*, at least in one text, in *Time, Creation, and the Continuum: Theories in Antiquity and the Early Middle Ages*, Ithaca, N.Y.: Cornell University Press, 1983, pp. 203–209. Sorabji interpreted a passage from Philo's *de Providentia* to say that, "There was no period of idleness when matter already existed, but God had not yet imposed order" (p. 206). *De Providentia* 1.7, in Aucher's Latin translation of the Armenian, certainly does appear to teach that God created form in matter without time preceding the ordering of the cosmos. But given that he saw matter as motionless in itself, it would have been atemporal before it had form. Philo said that time was created with the cosmos, so the cosmos could still have been constructed from a motionless, timeless matter.

However, Sorabji's reading is not supported by C. Hannick's recent German translation of the Armenian published in Baltes, *Die Weltentstehung des platonischem Timaeos nach den antiken Interpreteten*, I, Leiden: Brill, 1976, p. 89.

Naturally there are great difficulties in dealing with Latin and German translations of an Armenian version of Philo's lost Greek original. Those difficulties become apparent when dealing with the question of *creatio ex nihilo*.

Later in book one of *de Providentia*, Philo affirms *creatio ex materia*. In chapter 20, he notes that Plato and Moses both taught creation from prior material:

Haec Plato a Deo facta fuisse novit; et materiam per se ornatu carentem, in mudo cum ornatu ipso prodiisse; hac enim erant primae causae, unde et mundus fuit. Quoniam et Iudaeorum Legislator Moyses aquam, tenebras, et chaos dixit ante mundum fuisse. Plato autem materiam. ed. Mireille Hadas-Lebel, Paris: Editions du Cerf, 1973, p. 146.

In chapter 23 Philo lists the four causes of creation, one of which is matter:

Verum enim vero creationis eius pulchras asseruere causas: nempe Deum, *A quo*; materiam, *Ex quo*; instrumentum, *Per quod*. Instrumentum autem Dei est Verbum. *Ad quid* denique? ut sit argumentum. Creaturarum ergo causa est Deus, ut Creator: corruptionis autem, ut ludex. ed. Hadas-Lebel, p. 148.

The apparent contradictions have led Henry Chadwick to suspect *de Providentia* 1.7 has been

## Midrash

Midrashim<sup>36</sup> by their very nature show great care to follow the biblical text, but this is especially true when dealing with creation, where the Rabbis were careful not to go beyond the biblical text as they understood it.

The collection of Midrash on *Genesis, Bereshit Rabba*, was probably compiled and written in its present form around 400 C.E.<sup>37</sup> The Rabbis to whom the individual Midrashim are attributed are dated by their generations in two major divisions, the Tannaim and Amoraim. The former are thought to be before 220 C.E. and the latter are between 200 C.E. and 500 C.E.<sup>38</sup>

As we shall see, in discussing the creation of the world three overriding concerns surface again and again. 1) The Rabbis were concerned not to inquire about things before the beginning (*Bereshit Rabba* 1.10).<sup>39</sup> 2) They were studious in their opposition to any attribution of helpers to God in the creation (*Bereshit* reworked by Christians, "St Paul and Philo of Alexandria," *Bulletin of the John Rylands Library* 48, 1965–66, pp. 286–307, p. 292, n. 6. It is also possible that something has gotten lost in all the translations. Given the obscurities of the various versions and the manifest contradictions in Aucher's translation, if Sorabji's interpretation is followed, it seems better to rely on other portions of the Philonic corpus.

As Sorabji admits, "Outside the *de Providentia*, Philo does not always stick to the view that matter has a beginning," *op. cit.*, p. 208.

<sup>36</sup>Alexander Altmann, "A Note on the Rabbinic Doctrine of Creation," *Journal of Jewish Studies* 6/7, 1955–56, pp. 195–206, recognizes that many of the Rabbis did not teach *creatio ex nihilo*, but he finds it in *Bereshit Rabba* 1.9. For discussion, see below.

David Winston, "The Book of Wisdom's Theory of Cosmogony," *History of Religions* 11, 1971, pp. 185–202, argues that the Rabbis did not teach *creatio ex nihilo*, see below.

<sup>37</sup>See Jacob Neusner, *Midrash an Introduction*, Northvale, NJ: Aronson, 1990, p. 143. According to Neusner, *Bereshit Rabba* came to a close within 50 years of 400 C.E.

<sup>38</sup>See Hermann Strack, *Introduction to the Talmud and Midrash*, New York: Harper, 1931, pp. 107–134. Strack dates the second generation of Tannaim to ca. 90–130 C.E. and the third generation to ca. 130–160. He lists seven generations of Amoraim, from 210–476 C.E.

<sup>39</sup>On the limits of acceptable speculation, see David Halperin, *The Merkabah in Rabbinic Literature*, New Haven, Connecticut: American Oriental Society, 1980, p. 53. Halperin argues that the Gnostics served as a warning to the Rabbis concerning the dangers of speculation about cosmogony.

Rabba 1.3, 1.14). 3) Likewise they warned against ascribing an evil material origin of the cosmos.

The existence of material at the beginning of the world was within the realm of acceptable debate. The scriptures could be interpreted to teach the creation of all the visible world including the waters. But there was no need to affirm *creatio ex nihilo*. In fact the injunction against prying into what came before kept one from inventing a theory of *creatio ex nihilo*. Creation from a passive material already avoided concerns 2) and 3). To go beyond that and posit *creatio ex nihilo* would be in danger of violating concern 1) by speculating about the origins beyond scriptural warrant.

The Early Jewish writers, who were more philosophically inclined than the Rabbis, were quite comfortable adopting the least threatening philosophical position, creation from formless matter, the position chosen by both Philo and the author of the *Wisdom of Solomon*.

The Rabbis' concern about going back before the origin of the world was expressed in the Talmud in the form of a dialogue with the chief of all Hellenizers, Alexander himself:

He [Alexander] said to them, "Were the heavens or the earth made first?" They [the elders of the Negev] answered, "The heavens were made first as it says: 'In the beginning God created the heavens and the earth.'" He asked them, "Was light made first or darkness?" They said, "There is no solution for this thing. If they said to him that darkness was made first, as it is written, 'And the earth was chaos and darkness' and then 'God said let there be light and there was light,' they thought perhaps he would ask, 'What is above and what is below, what is before and what is after.' (B. *Tamid* 32 a)<sup>40</sup>

<sup>40</sup>

אמר להן שמים נבראו תחלה או הארץ אמרו שמים נבראו תחלה  
שנא' בראשית ברא אלהים את השמים ואת הארץ אמר להן אור



The question of the priority of light or darkness appears to be one which would have been a point of conflict between the Rabbis following the *Genesis* narrative and Greek philosophers who taught that darkness was a deprivation of light and only explicable in terms of light. The Rabbis avoid the question of priority not because they could not answer it but because they felt themselves being drawn into a progression of questions which would lead them back before "In the beginning." In two questions they have progressed from the origin of the heavens, the work of day two of creation, to the creation of light, the work of the first day, and there was no place left to go next, so they broke off the debate altogether.

The same concern not to go above, below, before, or after is expressed in the Midrash. Rabbi Yona (A 5)<sup>41</sup> in the name of Rabbi Levi (A 3) taught:

Rabbi Yona said in the name of Rabbi Levi, "Why was the world created by Bet? [ב the first letter of *Genesis*] What is Bet? It is closed on its sides and open in its face. Thus, you have no authority to preach what is above, what is below, what is before, and what is after." (*Bereshit Rabba* 1.10)<sup>42</sup>

נברא תחלה או חשך אמרו לו מילתא דא אין לה פתח ונימרו  
 ליה חשך נברא תחלה דכתיב והארץ היתה תהו ובהו וחשך והדר  
 ויאמר אלהים יהי אור ויהי אור סברי דילמא אחי לשיולי מה  
 למעלה ומה למשח מה לפנים ומה לאחור

*Babylonian Talmud*, v. 19, New York: Otzar Hasefarim, 1965.

The *Babylonian Talmud* was probably completed in the mid-sixth century, Strack, op. cit., p. 71.

<sup>41</sup>I.e., fifth generation Amoraim, see Strack for these and other generational identifications, loc. cit.

<sup>42</sup>

ר' יונה בשם ר' לוי למה נברא העולם בב', מה ב' זה סתום  
 מצדדיו ופתוח מלפניו כך אין לך רשות לדרוש מה למעלה  
 ומה למשח מה לפנים ומה לאחור

Note that it also prohibits speculation about what comes after. In contrast to Stoic speculations concerning cosmic cycles and infinity of worlds, no speculation went to what worlds came before or after. Speculation about the plans and purposes of God were engaged in but not about worlds or about matter and its roles.

The Rabbis forcefully denied that God had active helpers in creation, be they angels or cosmic powers. Rabbi Lulyani bar Tavry in the name of Rabbi Isaac said that both sides of the Rabbinic argument as to whether the angels had been created on the second or fifth day made the point that angels provided no assistance for the creation of the heavens and the earth on the first day (*Bereshit Rabba* 1.3). Rabbi Akiva (T 2) noted that the heaven and earth were specifically marked as objects in the first verse of *Genesis* lest any one could say that they had aided in creation (*Bereshit Rabba* 1.14). The Rabbis were loath to have anyone ascribe divinity or glory due to God to other agents. Their arguments could apply to Greeks (philosophically minded or otherwise), Iranians, Gnostics, and Christians.<sup>43</sup>

They did not go so far as to deny that God had used matter, even evil matter, in creation. They warned against making the statement but did not deny it outright:

Rab said, "Let him have none of 'your great goodness' (*Psalms* 31.20), in the manner of the world, as the king of flesh and blood who built a palace in a place of sewers, filth, and garbage. Would not anyone who came and said, 'this palace is built in a

ed. J. Theodor, Berlin: Itzkowsky, 1912, p. 8.

<sup>43</sup>Winston has argued that the opponents in these various debates included Gnostics and Manichaeans, p. 187–91.

Hans-Friedrich Weiss also points to Gnostics as the opponents and draws parallels to the Christian response to the same opponents, *Untersuchungen zur Kosmologie des Hellenistischen und Palästinischen Judentums*, Berlin: Akademie, 1966, pp. 86–92.

place of sewers, filth, and garbage' suffer injury. Thus, would not anyone who comes and says 'this world is created in the midst of chaos (תהו ובהו) and darkness' suffer injury."

Rabbi Huna in the name of bar Qapora said, "Were it not written, how would I interpret 'God created the heaven and the earth' from these: from 'the earth was chaos, etc.'" (*Bereshit Rabba* 1.5)<sup>44</sup>

The parable only serves to warn against making the ascription. It is inadvisable to make the statement even if it were true. Obviously the best policy is to avoid such speculation altogether. There was no proof that they could bring to deny such a claim. The parallel between "sewers, filth, and garbage" and *tohu wawohu* (תהו ובהו) shows that the latter no longer had the sense of "emptiness and void" as they did in *Genesis*, but had taken on a more corrupt aspect (hence the translation "chaos").

Rab Huna (T 5),<sup>45</sup> in the name of bar Qappara (T 5), felt that on the basis of *Genesis* 1.2, creation from chaos had to be accepted, even though he is hardly enthusiastic in expressing it. He shares the concern about speculation about what came before the world and does so only on the basis of the biblical text.

As for visible elements before the foundation of the world, opinion

<sup>44</sup>

רב אמר אל יהי לו במה רב טובך, בנוהג העולם מלך בשר ודם  
בונה פלשין במקום הביבין והאשפה והסיריות, כל מי שיבוא  
לומר פלשין זו בנויה במקום הביבין והאשפה והסיריות אינו  
פוגם אתמהא, כך כל מי שהוא בא לומר העולם הזה נברא מתוך  
תהו ובהו וחושך אינו פוגם אתמהא, ר' הונא בשם בר קפרא  
אילולי הדבר כת' אי אפשר לאומר וברא אלהים את השמים  
ואת הארץ מן הן, מן הארץ היתה תהו וגו'

ed. Theodor, p. 3.

<sup>45</sup>I.e., fifth generation Tannaim.

although divided, stayed within the bounds set by Scripture. Yehuda bar Simon (bar Pazzi of Lydda, A 4) used other biblical passages to explain how the heavens and the earth were created:

Rabbi Yehuda said in the name of Rabbi Simon, "From the beginning of his creation of the world is 'He reveals the obscure, etc.' (*Daniel* 2.22), as it is written, 'In the beginning God created the heavens,' and it is not interpreted. How is it interpreted? By these words: 'Who stretched out the heavens as a veil' (*Isaiah* 40.22). 'And the earth,' and it is not interpreted. How is it interpreted? By these words: 'As he says to the snow, become earth, etc.' (*Job* 37.6). 'And God said let there be light,' and it is not interpreted. How is it interpreted? By these words: 'He wrapped himself in light as a garment'" (*Psalms* 104.2). (*Bereshit Rabba* 1.6)<sup>46</sup>

In the Talmud (*Yerushalmi Hagigah* 2.1) Rabbi Yehuda bar Pazzi (A 4) presents a similar exegesis, presenting the biblical texts according to a natural progression of transformation from the original waters:

Rabbi Yudah bar Pazzi preached that at the beginning, the universe was waters upon waters. What is the proof. "And the spirit of God was borne over the waters" (*Genesis* 1.2). Then he made it into snow, "casting its ice as morsels" (*Psalms* 147.17). Then he made it into earth, "To the snow he says 'become earth'" (*Job* 37.6). And the earth stands upon the waters, "In order to spread the earth upon the waters" (*Psalms* 136.6).<sup>47</sup>

<sup>46</sup>

אמר ר' יהודה בר' סימון מתחילת ברייתו של עולם הוא גלי  
עמיקתא וגו' דכת' בראשית ברא אלהים את השמים ולא פירש,  
איכן פירש להלן הנוטה כדוק שמים ואת הארץ ולא פירש, איכן  
פירש להלן כי לשלג יאמר הוי ארץ וגו', ויאמר אלהים יהי אור  
ולא פירש, איכן פירש להלן עוטה אור כשלמה

*Talmud Yerushalmi*, v. 4, Jerusalem, 1966.

*Talmud Yerushalmi* probably took its present form at the beginning of the fifth century, Strack, op. cit., p. 65.

<sup>47</sup>

In contrast to bar Pazzi, Rabbi Gamaliel argues that the depths and waters were created (T 2):

A philosopher asked Rabban Gamaliel, "Your God was a great artist, but he found for himself good materials which helped him." Rabban Gamaliel replied, "What are these?" The philosopher said, "Chaos, darkness, waters, wind, and depths" [see *Genesis* 1.2]. Rabban Gamaliel replied, "May the breath go forth from this man. It is written concerning each of these. Concerning the creation of chaos, 'Who made peace and created evil' (*Isaiah* 45.7). Concerning darkness, 'Who formed the light and created darkness' (*ibid.*). Concerning the waters, 'Praise him, heaven of heavens and the waters, etc.' (*Psalms* 148.4). Why? Because, 'He commanded and they were created' (v. 8). Concerning the wind, 'For behold he forms the mountains and creates the wind' (*Amos* 4.13). Concerning the depths, 'When the depths were not, I danced'" (*Proverbs* 8.24). (*Bereshit Rabba* 1.9)<sup>48</sup>

His position that all the cosmic forces listed in *Genesis* 1.2 are created should not be taken as a statement of *creatio ex nihilo*. As David Winston has

דרש ר' יודה בר פזי בתחילה היה העולם מים במים. מה טעמא ורוח אלהים מרחפת על פני המים. חזר ועשאו שלג משליך קרחו כפיתים. חזר ועשאו ארץ כי לשלג יאמר הוי ארץ. והארץ עומדת על מים. לרוקע הארץ על המים

ed. Theodor, p. 4.

<sup>48</sup>

פילוסופוס אחד שאל את רבן גמליאל אמר לו צייר גדול היה אלהיכם אלא מצא לו סמנים טובים שסייעוהו, אמר לו מה אינון, אמר ליה תהו ובהו וחשך ומים ורוח ותהומות, אמר ליה תיפח רוחיה דההוא גברא, כולם כת' בהם בריאה תהו ובהו עושה שלום ובורא רע, חשך יוצר אור ובורא חשך, מים הללוהו שמי השמים והמים וגו' למה כי הוא צוה ונבראו, רוח כי הנה יוצר הרים ובורא רוח, תהומות באין תהומות חוללתי

ed. Theodor, p. 8.

argued, in responding to a charge that God had helpers in creation, Gamaliel denies that any of the cosmic forces aided God in creation.<sup>49</sup> He does not deny that there was a passive material, merely that there was any material which aided God in the construction of the cosmos.

The Rabbis were quick to deny that God had assistance, but they were not willing to go beyond the biblical text to speculate about what came before the world, material or otherwise. Gamaliel makes no claim as to what preceded the cosmic forces of *Genesis* 1.2. They could accept passive matter, but lacking a clear statement in Scripture they could not go as far as to devise a theory of *creatio ex nihilo*.

So neither in the Rabbis nor in Philo do we find *creatio ex nihilo*. Given that it was not found in either the Greek or Jewish heritage, its appearance among the second century Christians remains mysterious.

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<sup>49</sup>Winston, art. cit., pp. 187 f.

#### Chapter 4, Early Church: The origins of *creatio ex nihilo*

*Creatio ex nihilo* appeared suddenly in the latter half of the second century C.E. Not only did *creatio ex nihilo* lack precedent, it stood in firm opposition to all the philosophical schools of the Greco-Roman world. As we have seen, the doctrine was not forced upon the Christian community by their revealed tradition, either in Biblical texts or the Early Jewish interpretation of them. As we will also see it was not a position attested in the New Testament doctrine or even sub-apostolic writings. It was a position taken by the apologists of the late second century, Tatian and Theophilus, and developed by various ecclesiastical writers thereafter, by Irenaeus, Tertullian, and Origen. *Creatio ex nihilo* represents an innovation in the interpretive traditions of revelation and cannot be explained merely as a continuation of tradition. Inasmuch as it was a radical departure from the intellectual traditions of the larger culture and violated its manifest truths, it must have been a position which was strongly motivated.

*Creatio ex nihilo* can best be explained as a defense of the most controversial part of the Christian kerygma, the resurrection of the dead. It took a point as controversial yet essential to the Christian message as the resurrection to force the Christians to an equally controversial position as *creatio ex nihilo*. Bodily resurrection made no sense in any of the Greek philosophical understandings of the material world. For all the Greek systems of thought, sublunary matter was eternally subject to change and could not be incorporated into an eternal body. Humans had either to submit to the necessity of their own corruption or try to escape from matter as immaterial souls (see chapter 2). A hope of resurrection was not only deluded expectation of the

impossible, for the Platonists it was misguided in that it sought to preserve the most unpleasant aspect of the human condition, the corporeal. In attempting to take their message to the larger culture, the Christians either needed to modify their teaching of resurrection or they needed to make inroads into the Greek understandings of the material world. Some Gnostics took the first approach and maintained that the resurrection was not bodily.<sup>1</sup> Tatian and Theophilus took the opposite tack and vigorously defended the bodily resurrection while attacking the Greek philosophical teachings about the material creation, linking God's creative power to his ability to raise the dead. In contrast to Tatian, Theophilus also turned *creatio ex nihilo* into an offensive weapon, to buttress the leading line of the Christian kerygma, the uniqueness of God. Theophilus and Tertullian after him charged the Greeks with introducing another God and with limiting the sovereignty of God by introducing matter as a power equal to God.

Gerhardt May's careful and well documented study, *Schöpfung aus Nichts*,<sup>2</sup> shows that *creatio ex nihilo* did not appear in Christian writings until the second century C.E. Although May does not consider or refute Dörrie and Merlan's claims that Neopythagoreans taught *creatio ex nihilo*,<sup>3</sup> he is right on the timing of *creatio ex nihilo*. As we saw in chapter 2, the Neopythagoreans did not teach a *creatio ex nihilo*. However, May's explanation of the causes of *creatio ex nihilo* are unsatisfactory. May argues that *creatio ex*

<sup>1</sup>See the *Treatise on the Resurrection*, Nag Hammadi Codex I, Coptic Text, translation, and commentary in *The Gnostic Treatise on Resurrection from Nag Hammadi*, Missoula, Montana: Scholars Press, 1979.

<sup>2</sup>Gerhard May, *Schöpfung aus dem Nichts: Die Entstehung der Lehre von der Creatio ex Nihilo*. Walter de Gruyter: Berlin, 1978. Translated by A. S. Worall, *Creatio ex Nihilo: The Doctrine of 'Creation out of Nothing' in Early Christian Thought*, Edinburgh: Clark, 1994.

<sup>3</sup>Stead in a review of May's book, JTS 30, 1979, p. 589, noted that May had not considered Eudorus as possible background for *creatio ex nihilo* (see above, chapter 2).



*nihilo* developed naturally when the scriptural teachings of the unity, freedom, and omnipotence of God met Greek philosophical doctrines. It is first documented in the writings of Tatian:

Tatian is the first Christian theologian known to us who expressly advanced the proposition that matter was produced by God. We are concerned here with an idea which sooner or later had to be drawn from the biblical belief in creation, as soon as Christian thought engaged in a critical debate with the philosophical doctrine of principles.<sup>4</sup>

According to May, the Gnostic crisis of the second century forced orthodox Christians to examine and refine their teachings on creation which led to *creatio ex nihilo*,<sup>5</sup> although the conclusion was predetermined by the tradition of revelation.<sup>6</sup>

Contra May, the importance of opposition to Gnostic teachings is not evident in as much as *creatio ex nihilo* first developed in the context of anti-Greek apologies not in anti-gnostic writings. Gnosticism does not figure in the arguments of Tatian and Theophilus or in their application of *creatio*

<sup>4</sup>May, 1994, p. 150.

At this point, May curiously seems to exclude Basilides, who by his own account first taught *creatio ex nihilo* (see below). I think May's statement here is correct, because I do not feel that Basilides should be interpreted as teaching *creatio ex nihilo* (see below).

<sup>5</sup>May, 1994, p. 152, "Tatian developed his teaching about the creation of matter in the course of controversy with gnostic positions."

cf. p. 117, "the gnostic speculations about the origins of matter provided an essential spur to the church theologians to seek on their part an answer to this problem.

<sup>6</sup>May, 1994, p. 132, "the dynamic of the Christian concept of God practically compelled acceptance of the doctrine of *creatio ex nihilo*, on the other hand how monstrously difficult it was for the thought stamped with the philosophical tradition to take in the biblical idea of creation to its full implications."

Hans-Friedrich Weiss makes a similar argument with respect to the Rabbis, *Untersuchungen zur Kosmologie des Hellenistischen und Palästinischen Judentums*, Berlin: Akademie, 1966, p. 91 f.

*ex nihilo*.<sup>7</sup>

Neither can *creatio ex nihilo* be viewed as merely a natural development of the tradition of revelation. Revelation did not naturally lead to *creatio ex nihilo* in Philo or Midrash. The Biblical teachings which May cites as leading to *creatio ex nihilo*, the unity, freedom, and omnipotence of God, were all doctrines shared by the Middle-Platonists, but Middle-Platonists also held the eternity and ontological independence of matter (see chapter 2). They did not view the inability of God to create *ex nihilo* or fully to subject matter to order as limitations in God, rather they were limitations and necessities of matter.

<sup>7</sup>May notes that the early second century Gnostic teacher, Basilides, taught that God creates the world out of nothing (ἐξ οὐκ ὄντων). May takes Basilides to be teaching *creatio ex nihilo* (May, 1994, p. 75, 77), but by historical accident Basilides' teaching did not influence Tatian's and Theophilus' later formulations of *creatio ex nihilo* (May, 1994, p. 84).

Contrary to May, I do not think that Basilides' formulation bore anything but a terminological similarity to the teaching of Theophilus. For Basilides ἐξ οὐκ ὄντων is not a denial of a material substrate as it is in Theophilus. Basilides' statement expresses a strict idealism resulting from an ontological reading of Aristotle's *Categories*. By his reading of the *Categories*, genera have no independent existence but constitute the individual:

If neither animal, which I predicate of all particular animals, nor accidents, which are found in that in which they are accidents, can come about by themselves, but from these individuals are composed, then the three-fold substance was composed of that which does not exist and not from anything else.

Εἰ δὲ οὔτε τὸ ζῶον, ὃ κατὰ πάντων λέγω τῶν καθ' ἕκαστα ζῶων, οὔτε τὰ συμβεβηκότα, ἃ ἐν πᾶσιν οἷς συμβέβηκεν εὐρίσκεται, δυνατόν αὐτὰ καθ' αὐτὰ γενέσθαι, ἐκ τούτων δὲ συμπληροῦνται τὰ ἄτομα, ἐκ τῶν οὐκ ὄντων καθέστηκεν ἡ τριχῆ διηρημένη οὐσία οὐκ ἐξ ἄλλων συνεστῶσα. *Refutatio Omnium Haeresium* 7.18. ed. Dunker and Schneidewin, p. 352.

For Basilides the non-existent God created the general seed of the world that contained the genera of all things, ἐν ᾧ ὄντως ἔχει ἐν ἑαυτῷ πολλὰς οὐσιῶν πολυμόρφων καὶ πολυχρωμάτων καὶ πολυσυστάτων ιδέας, *Refutatio* 7.21, Dunker, p. 358. Neither the most general seed nor the genera existed. From the non-existent genera, the non-existent God created the existent particulars.

On the question of the authorship of the *Refutatio*, see Gérard Vallée, *A Study in Anti-Gnostic Polemics: Irenaeus, Hippolytus, and Epiphanius*, Waterloo, Ontario, Canada: Published for the Canadian Corporation for Studies in Religion by Wilfrid, 1981, pp. 41–47.

The Christians agreed with the Middle-Platonist doctrine of God in large measure. It was not the doctrine of God which led them to contrary positions concerning matter. It was the limitations and necessities in matter that the Christians did not want to accept because they made the resurrection of the body impossible and undesirable.

Jonathan Goldstein noticed the connection between *creatio ex nihilo* and resurrection but confessed his inability to explain it.<sup>8</sup> He attempted to explain *creatio ex nihilo* as a way out of the two-body paradox:

Jews and Christians did not insist on creation *ex nihilo* until driven to it by the paradox and its challenge to the doctrine of resurrection.<sup>9</sup>

By the two-body paradox, Goldstein means the challenge raised to the bodily resurrection which stated that one human could directly or indirectly eat the flesh of another human, rendering the bodily resurrection of both an impossibility. As he himself noted, his theory was weak in that the two-body paradox has not been documented as a second century problem (p. 192). Even if the problem could be found in second century texts, the two-body paradox is too incidental to explain sufficiently the total redefinition of matter which *creatio ex nihilo* represented. Many less drastic approaches could have been taken to solve the two-body paradox. As we shall see, the concept of matter in the Greek system presented more central problems to the Christian apologists and *creatio ex nihilo* was developed as a fundamental redefinition of the

<sup>8</sup>Jonathan Goldstein, "Creatio Ex Nihilo: Recantations and restatements," *Journal of Jewish Studies* 38 (1987), no. 2, pp. 187–194. Goldstein first published his theory in "The Origins of the Doctrine of Creation Ex Nihilo," *JJS* 35 (1984), pp. 127–135. He published his "Restatement" under criticism from David Winston in "Creation Ex Nihilo Revisited: A reply to Jonathan Goldstein," *JJS* 37 (1986), no. 1, pp. 88–91.

<sup>9</sup>Goldstein, 1987, p. 192.

material realm in relation to God.

First we turn to the New Testament and sub-apostolic writings to establish that *creatio ex nihilo* was not expounded there. Second, we will consider some Christians of the second century who adopted Platonist dualism to show that dualism remained a viable option for Early Christians. These writers prove that *creatio ex nihilo* was not just a natural outgrowth of the revealed tradition. Then, we will examine the development of *creatio ex nihilo* in the work of Tatian, Theophilus of Antioch, and Irenaeus.

### New Testament

2 *Peter* 3.5 represents a New Testament text which is clearly in tune with the Near Eastern traditions which we saw in chapter 3:

For they willingly forget that the heavens existed of old and the earth was formed from waters and by waters through the word of God. (2 *Peter* 3.5)<sup>10</sup>

2 *Peter* shows continuity with the tradition of the creation from waters, but uses the creation in a new polemic, to justify the teaching of the end of the world and judgement. Already the polemical connection between creation and final judgement had been made.

Several New Testament texts have been educed as evidence of *creatio ex nihilo*. None makes a clear statement which would have been required to establish such an unprecedented position, or which we would need as evidence of such a break with tradition. None is decisive and each could easily be

<sup>10</sup>λανθάνει γὰρ αὐτοὺς τοῦτο θέλοντας ὅτι οὐρανοὶ ἦσαν ἔκπαλαι καὶ γῆ ἐξ ὕδατος καὶ δι' ὕδατος συνεστῶσα τῷ τοῦ θεοῦ λόγῳ. ed. Barbara Aland, et al., *Novum Testamentum Graecum*, Nestle, 27th ed., Stuttgart: Deutsche Bibelgesellschaft, 1993.

accepted by a proponent of *creatio ex materia*.

In the beginning was the word and the word was with God and the word was God. He was in the beginning with God. All things came about through him and without him not one thing came about, which came about. (*John* 1.1–3)<sup>11</sup>

The punctuation of the last verse becomes critical to its meaning. Proponents of *creatio ex materia* could easily qualify the creatures of the Word to that “which came about,” excluding matter. Proponents of *creatio ex nihilo* could place a period after “not one thing came about” and leave “which came about” to the next sentence. The absence of a determinate tradition of punctuation in New Testament texts leaves room for both interpretations. Neither does creation by word imply *ex nihilo* (contra Bultmann) as we have seen in Egypt (chapter 1), Philo, and Midrash Rabba (chapter 3), and even in 2 *Peter* 3.5, where the word functions to organize pre-cosmic matter.

*Hebrews* 11.3 has also been cited as an example of *creatio ex nihilo* in the New Testament:<sup>12</sup>

By faith we understand that the ages were ordered by the word of God, so that the visible came about from the unmanifest. (*Hebrews* 11.3)<sup>13</sup>

However, the notion of creation *μη ἐκ φαινομένων* was comfortable for Platonic dualists or Stoics, because it lacked all qualities.

<sup>11</sup>Ἐν ἀρχῇ ἦν ὁ λόγος, καὶ ὁ λόγος ἦν πρὸς τὸν θεόν, καὶ θεὸς ἦν ὁ λόγος. οὗτος ἦν ἐν ἀρχῇ πρὸς τὸν θεόν. πάντα δι’ αὐτοῦ ἐγένετο, καὶ χωρὶς αὐτοῦ ἐγένετο οὐδὲ ἓν ὃ γέγονεν.

<sup>12</sup>R. M. Grant, *Miracle and Natural Law in Graeco-Roman and Early Christian Thought*. Amsterdam: North Holland, 1953, p. 139f.

<sup>13</sup>Πίστει νοοῦμεν κατηρτίσθαι τοὺς αἰῶνας ῥήματι θεοῦ, εἰς τὸ μη ἐκ φαινομένων τὸ βλεπόμενον γεγονέναι.

Because all things in heaven and on earth were created in him, the visible and the invisible; whether thrones or dominions, whether principalities or powers, all things were created through him and for him. (*Colossians* 1.16)<sup>14</sup>

Colossians would eventually provide strong support for proponents of *creatio ex nihilo*, but for proponents of *creatio ex materia* the creation of all things visible and invisible is limited to what immediately precedes and follows in the verse: “all things in the heavens and upon earth.” The invisible are the angelic powers: the thrones, dominions, principalities, and powers.

Paul attributes the cause of the blessings of Abraham to his faith in God:

Just as it is written, “I established you as the father of many nations,” because he trusted in God who raises the dead and calls the non-existent as existent. (*Romans* 4.17)<sup>15</sup>

The verse’s “non-existent” need not be understood in an absolute sense of non-being. Μη ὄντα refers to the previous non-existence of those things which are now brought into existence. There is no direct reference to the absence or presence of a material cause.

In sub-apostolic writings one text above all others has been cited as evidence of *creatio ex nihilo*:<sup>16</sup>

<sup>14</sup>ὅτι ἐν αὐτῷ ἐκτίσθη τὰ πάντα ἐν τοῖς οὐρανοῖς καὶ ἐπὶ τῆς γῆς, τὰ ὄρατά καὶ τὰ ἀόρατα, εἴτε θρόνοι εἴτε κυριότητες εἴτε ἀρχαὶ εἴτε ἐξουσίαι· τὰ πάντα δι’ αὐτοῦ καὶ εἰς αὐτὸν ἔκτισται·

<sup>15</sup>καθὼς γέγραπται ὅτι πατέρα πολλῶν ἐθνῶν τέθεικά σε, κατέναντι οὗ ἐπίστευσεν θεοῦ τοῦ ζῶντος τοὺς νεκροὺς καὶ καλοῦντος τὰ μὴ ὄντα ὡς ὄντα·

<sup>16</sup>So Grant, *Miracle and Natural Law*, p. 140.

For background on Hermes, see Norbert Brox, *Der Hirt des Hermas*, übersetzt und erklärt von Norbert Brox, Göttingen: Vandenhoeck & Ruprecht, 1991. He dates the writings of Hermes to

First of all one must believe that God is one and that he has created and ordered and made them from the non-existence into existence, and contains all, but is alone uncontained. (*Hermes Mandate 1*)<sup>17</sup>

Once again, ἐκ μὴ ὄντος alone cannot be taken as absolute denial of material substrate. By itself the phrase is insufficient to carry the burden of a decisive and well-defined position because both ἐκ and ὄν are notoriously equivocal. Ἐκ does not necessarily designate material cause, but it can be used temporally. Ὅν does not necessarily refer to not absolute non-being, but the non-existence of what later came to be. To read it as *creatio ex nihilo* in *Hermes* goes far beyond the warrant of the text, which makes no clear claims to the presence or absence of material and provides no discussion of the position.

The use of the phrase ἐκ τοῦ μὴ ὄντος in both a relative and absolute sense can be illustrated from the writings of Aristotle. He uses it in a relative sense to describe natural generation:

For generation is from non-existence into being, and corruption from being back into non-existence. (*de Generatione Animalium* B 5, 741 b 22 f.)<sup>18</sup>

Here Aristotle uses ἐκ τοῦ μὴ ὄντος to refer to the previous non-existence of that which is generated. He does not mean to deny the material cause for approximately 140 C.E., p. 25.

Brox, p. 191, takes *Mandate 1* as teaching *creatio ex nihilo* based on the parallel Jewish teaching of 2 *Maccabees* 7:28, see above chapter 3.

<sup>17</sup> πρῶτον πάντων πιστευσον ὅτι εἷς ἐστὶν ὁ Θεός, ὁ τὰ πάντα κτίσας καὶ καταρτίσας, καὶ ποιήσας ἐκ τοῦ μὴ ὄντος εἰς τὸ εἶναι τὰ πάντα, καὶ πάντα χωρῶν, μόνος δὲ ἀχώρητος ὢν. ed. Robert Joly, Paris: Editions du Cerf, 1958, p. 144.

<sup>18</sup> ἔστι γὰρ ἡ μὲν γένεσις ἐκ τοῦ μὴ ὄντος εἰς τὸ ὄν, ἡ δὲ φθορὰ ἐκ τοῦ ὄντος πάλιν εἰς τὸ μὴ ὄν. ed. H. J. Droussaart Lulofs, Oxford: Clarendon Press, 1965, p. 74 f.

generation.

To take ἐκ τοῦ μὴ ὄντος in the stronger absolute sense requires a clear context which denies a material cause for generation or creation. That cannot be found in *Hermes* or the *Wisdom of Solomon* (see chapter 3) or any other text before the second century C.E.<sup>20</sup>

In the later second century, the positions with respect to matter in creation became better defined. Nevertheless, it is clear that the position was not predetermined, as both *creatio ex materia* and *creatio ex nihilo* were taught by Christian writers of the second century. Some Christians, Justin and Hermogenes, accepted the dualism of the Middle-Platonists with its eternal matter.

## Justin Martyr

Justin Martyr in the middle of the second century taught<sup>21</sup> that Plato

<sup>19</sup>ἔοικε δὲ Ἀναξαγόρας ἄπειρα οὕτως οἰηθῆναι διὰ τὸ ὑπολαμβάνειν τὴν κοινὴν δόξαν τῶν φυσικῶν εἶναι ἀληθῆ, ὡς οὐ γιγνομένου οὐδενὸς ἐκ τοῦ μὴ ὄντος. ed. Ross, op. cit.

<sup>20</sup>Georg Schuttermayr in "'Schöpfung aus dem Nichts' in 2 Makk 7, 28?" *Biblische Zeitschrift* n.f. 17, 1973, pp. 203–228 presents a very careful study of use of οὐκ ἐκ ὄντων in early Christian authors, also referring to Philo and some Greek uses. He concludes that one must be careful in reading Greek causation into biblical and deuterocanonical texts.

<sup>21</sup>On the life and works of Justin Martyr, see Saint Justin, *Apologies*, ed. André Wautelle, Paris: Études Augustiniennes, 1987, pp. 9–53.

Wautelle, p. 56 claims Justin does not answer the question of whether matter was eternal or not. Given that the alternative to eternal matter had not yet been formulated, it seems strange to consider it an unspoken option for Justin. His claim that God created from formless matter should therefore be taken as clear enough evidence that he believed in the common Platonist formula of creation from eternal matter.

L. W. Barnard in *Justin Martyr, His Life and Thought*, Cambridge: Cambridge University Press, 1967, pp. 112, argues that Justin has "no particular theory of the origin and nature of matter."

Henry Chadwick, *Early Christian Thought*, Oxford: Clarendon Press, 1966, p. 12, also feels that Justin "had not thought the problem out."

On faith and reason in Justin and other apologists see Robert Joly, *Christianisme et Philosophie: études sur Justin et les apologistes grecs du deuxième siècle*, Bruxelles: Éditions de l'Université de Bruxelles, 1973.



had learned about creation from Moses:

Hear what was spoken by Moses himself, who as has been shown, was the first prophet and earlier than the authors of Greece, in order that you may learn that Plato received from our teachers (which we say by the word given by the prophets) the saying that God formed the world by rotating (στρέψαντα) matter which was formless. Through Moses, the prophetic spirit revealed how God fashioned the principle (ἀρχή) and from what things he fashioned the cosmos. He said, "In the beginning God made the heaven and the earth. The earth was invisible and unestablished and darkness was on the abyss and the spirit of God bore itself over the waters. And God said, 'Let light come about,' and thus it came about." Thus, by the word of God, the whole cosmos came about from the substrates which were first set forth by Moses and Plato. (1 *Apology* 59, 1–5)<sup>22</sup>

The subjects from which the world came about were the invisible and formless earth understood as matter and darkness:

Since it was the first day on which God created the cosmos by turning darkness and matter. (1 *Apology* 67.8)<sup>23</sup>

Rotating (στρέψαντα) and turning (τρέψας) echo Plato's Timaeus (34 A, B 36

For an overview of some of the key issues in the speculation concerning creation in the thought of Justin, Hermogenes, Theophilus of Antioch, Tertullian, and Origen, see Pierre Nautin, "Genèse 1, 1–2, de Justin à Origène," in *In Principio: Interpretations des premiers versets de la Genèse*, ed. Paul Vignaux, Paris: Études Augustiniennes, 1973, pp. 61–94.

<sup>22</sup>Ἴνα δὲ καὶ παρὰ τῶν ἡμετέρων διδασκάλων, λέγομεν δὲ τοῦ λόγου τοῦ διὰ τῶν προφητῶν, λαβόντα τὸν Πλάτωνα μάθητε τὸ εἰπεῖν, ὕλην ἄμορφον οὖσαν στρέψαντα τὸν Θεὸν κόσμον ποιῆσαι, ἀκούσατε τῶν αὐτολεξεῖ εἰρημένων διὰ Μωϋσέως, τοῦ προδεδηλωμένου πρώτου προφήτου καὶ πρεσβυτέρου τῶν ἐν Ἑλληνιστῶν συγγραφέων, δι' οὗ μηνύον τὸ προφητικὸν Πνεῦμα, πῶς τὴν ἀρχὴν καὶ ἐκ τίνων ἐδημιούργησεν ὁ Θεὸς τὸν κόσμον, ἔφη οὕτως: "Ἐν ἀρχῇ ἐποίησεν ὁ Θεὸς τὸν οὐρανὸν καὶ τὴν γῆν. Ἡ δὲ γῆ ἦν ἀόρατος καὶ ἀκατασκεύαστος, καὶ σκότος ἐπάνω τῆς ἀβύσσου: καὶ Πνεῦμα Θεοῦ ἐπεφέρετο ἐπάνω τῶν ὑδάτων. Καὶ εἶπεν ὁ Θεός: Γενηθήτω φῶς. Καὶ ἐγένετο οὕτως." "Ὡστε λόγῳ Θεοῦ ἐκ τῶν ὑποκειμένων καὶ προδηλωθέντων διὰ Μωϋσέως γεγενῆσθαι τὸν πάντα κόσμον, καὶ Πλάτων. ed. André Wartelle, *Saint Justin, Apologies*. Études Augustiniennes: Paris, 1987, p. 178–180.

<sup>23</sup>ἐπειδὴ πρώτη ἐστὶν ἡμέρα, ἐν ἣ ὁ Θεὸς τὸ σκότος καὶ τὴν ὕλην τρέψας κόσμον ἐποίησε. Wartelle, p. 192.

E) where the demiurge creates the cosmos by setting the world soul in rotation. By the same act the body of the world, i.e., matter, is also brought into order. Like Philo, Justin had no difficulty interpreting *Genesis* in Platonistic terms, even though both Philo and Justin thought Plato was imitated Moses.

From the writings of Tertullian, we have testimony of another early Christian who taught *creatio ex materia*. Hermogenes wrote just before Tertullian, either late in the second or early in the third century. Therefore, he comes after the first formulations of *creatio ex nihilo* in Tatian and Theophilus and might represent a early response to the new teaching. According to Tertullian, Hermogenes argued for creation from eternal matter from the existence of evil:

But we find evil things made by him, although not by choice or will. Because if they were made by his choice of will, he would have made something inconsistent or unworthy of himself. What he does not make by his choice, must be understood to be made by the fault of another thing: from matter without doubt. (*adversus Hermogenem*, 2.5)<sup>24</sup>

Hermogenes' argument relied on Middle-Platonist notions of the goodness of God and the evil in matter. But it is impossible to tell from Tertullian's scant testimony whether he believed that the evil motions in pre-cosmic matter were caused by an untrained, pre-cosmic world soul (pace Plutarch and Atticus). In any case, Hermogenes' heavy reliance on Middle-Platonist metaphysics shows their continued sway in the Christian tradition to the end of the second century.

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<sup>24</sup>Inveniri autem et mala ab eo facta, utique non ex arbitrio nec ex voluntate; quia si ex arbitrio et voluntate, [nihil] incongruens et indignum sibi faceret. Quod ergo non arbitrio suo fecerit, intellegi oportere ex vitio alicuius rei factum, ex materiae sine dubio. ed. E. Dekker, *Corpus Christianorum Series Latinorum* (CCSL) 1, Turnhout: Brepols, 1954, p. 398.

## **creatio ex nihilo**

It was not until the last quarter of the second century that Justin's disciple, Tatian, formulated a teaching of *creatio ex nihilo* and employed it as a justification of the resurrection of the dead. But we cannot even tell if the Christians were the first to make the connection between creation and resurrection. Celsus in his polemic against the Christians, the *Alethes Logos*, made the linkage in his arguments against the Christian doctrine of resurrection. Tatian's *Oratio ad Graecos* and Celsus' *Alethes Logos* have both been dated to 177<sup>25</sup> and neither shows any dependence on the other. In order to show the opposition that the Christian doctrine of resurrection generated we will first look to Celsus' work in the context of pagan opposition to Christianity.

## **opposition**

When they heard of the resurrection of the dead, some scoffed, others said, "We will hear from you on this matter later." So Paul left them. (*Acts 17.32f.*)<sup>26</sup>

In the account of *The Acts of the Apostles*, the mention of the resurrection ended Paul's dialogue with the Areopagite assembly in Athens. The resurrection of the dead, both of Jesus and his followers, was the part of the kerygma most likely to offend the sensibilities of the Greek audience. It had

<sup>25</sup>R. M. Grant, *Greek Apologists of the Second Century*, Philadelphia: Westminster Press, 1988. The date for Celsus is merely "possible," p. 136. The date for Tatian is "probably" 177 or 178 C.E., p.113.

Henry Chadwick ed., *Origen Contra Celsum*, Cambridge: Cambridge University Press, 1965, p. xxviii dates the *True Doctrine* to 177-180 C.E.

<sup>26</sup> Ἀκούσαντες δὲ ἀνάστασιν νεκρῶν οἱ μὲν ἐχλεύαζον, οἱ δὲ εἶπαν· ἀκουσόμεθά σου περὶ τούτου καὶ πάλιν. οὕτως ὁ Παῦλος ἐξῆλθεν ἐκ μέσου αὐτῶν.

no place either in traditional or philosophical Greek thought. Early on pagan writers noted the peculiarity of the belief and connected it to the Christians' willingness for martyrdom:

The poor fools persuade themselves that they will be deathless entirely and that they will live forever, and so they despise death and many give themselves up willingly. (Lucian, *Peregrinus* 13)<sup>27</sup>

"Entirely" sets the contrast with the Platonist view that the soul alone is immortal and the "foolish" Christian view that body and soul were resurrected.

Later when Celsus and Porphyry developed responses to Christian teaching, they seized upon the teaching of the resurrection as the height of folly:

What sort of human soul would desire a body even though it had rotted? . . .

What sort of body completely corrupted is able to come back to its prior nature and to its first composition from which it was loosed? Having no response, they flee to the most impossible way out, that all is possible with God. But God in no way is able to do shameful things, neither does he wish things contrary to nature. Not even if you long for something repulsive because of your own depravity, is God able to do it nor should you believe that it will be. For God is the author not of the discordant drive and wandering disorder, but of right and just nature. Even if he can provide the soul with everlasting life, "the dead body," says Heraclitus "is more to be cast off than refuse." God is not willing or able irrationally to make everlasting the flesh which is full of things which are not beautiful. He himself is the reason of all things. He is not able to do anything irrational or contrary to his own nature. (in Origen, *Contra Celsum*, 5.14)<sup>28</sup>

<sup>27</sup> πεπείκασι γὰρ αὐτοὺς οἱ κακοδαίμονες τὸ μὲν ὅλον ἀθάνατοι ἔσθαι καὶ βιώσεσθαι τὸν αἰὲ χρόνον, παρ' ὃ καὶ καταφρονοῦσι τοῦ θανάτου καὶ ἐκόντες αὐτοὺς ἐπιδιδῶσιν οἱ πολλοί. ed. C. Jacobitz, *Luciani Opera*, v. 3, Leipzig: Teubner, 1853, p. 275.

<sup>28</sup> ποία γὰρ ἀνθρώπου ψυχὴ ποθήσειεν ἔτι σῶμα σεσηπός; . . .

Celsus not only appealed to the implausibility of the body coming back together, he also presented an argument based on a metaphysical dualism.<sup>29</sup> God as the reason of the world and the author of order was eternally opposed to the disorder of matter. Matter is an “discordant (πλημμελῶς) drive and wandering disorder (ἀκοσμία)” eternally opposed to God’s will. Celsus’ dualism and doctrine of creation echo Plato’s in the use of the term *πλημμελῶς* to describe the inherent motions of matter (cf. *Timaeus* 30A and discussion in chapter 2). The combination of *πλημμελῶς* and *ἀκοσμία* echoes Plutarch’s description of the motions of pre-cosmic matter (*de Animae Procreatione*, 1016 c 9, see chapter 2).

For Celsus, matter has its own desires which are not subject to reason. There is no reason for a person to want to stay in a material body. The Christian hope of resurrection not only asks the impossible, it foolishly seeks to remain in the condition which the wise should endeavor to escape.

Nearly a century later Porphyry also attacked the resurrection in

ποῖον γὰρ σῶμα πάντη διαφθαρὲν οἶόν τε ἐπανελεῖν εἰς τὴν ἐξ ἀρχῆς φύσιν καὶ αὐτὴν ἐκείνην, ἐξ ἧς ἐλύθη, τὴν πρώτην σύστασιν; οὐδὲν ἔχοντες ἀποκρίνασθαι καταφεύγουσιν εἰς ἀτοπωτάτην ἀναχώρησιν, ὅτι πᾶν δυνατόν τῷ θεῷ. ἀλλ’ οὔτι γε τὰ αἰσχροῦ ὁ θεὸς δύναται οὐδὲ τὰ παρὰ φύσιν βούλεται· οὐδ’ ἂν σύ τι ἐπιθυμήσῃς κατὰ τὴν σαυτοῦ μοχθηρίαν βδελυρόν, ὁ θεὸς τοῦτο δυνήσεται, καὶ χρὴ πιστεῦναι εὐθὺς ὅτι ἔσται. οὐ γὰρ τῆς πλημμελοῦς ὀρέξεως οὐδὲ τῆς πεπλανημένης ἀκοσμίας ἀλλὰ τῆς ὀρθῆς καὶ δικαίας φύσεως ὁ θεὸς ἐστὶν ἀρχηγέτης. καὶ ψυχῆς μὲν αἰώνιον βιοτὴν δύναιτ’ ἂν παρασχεῖν· “νέκυες δέ”, φησὶν Ἡράκλειτος, “κοπρίων ἐκβλητότεροι.” σάρκα δὲ, μεστήν ὣν οὐδὲ εἰπεῖν καλόν, αἰώνιον ἀποφῆναι παραλόγως οὔτε βουλήσεται ὁ θεὸς οὔτε δυνήσεται. αὐτὸς γὰρ ἐστὶν ὁ πάντων τῶν ὄντων λόγος· οὐδὲν οὖν οἶός τε παράλογον οὐδὲ παρ’ ἑαυτὸν ἐργάσασθαι. ed. Paul Koetschau, *Origenes Werke*, v. 2.2, *Die Griechischen Christlichen Schriftsteller der ersten drei Jahrhunderte*, Leipzig: Hinrichs, 1899, p. 15.

<sup>29</sup>For background on Celsus, see *On the True Doctrine: A discourse against the Christians*, translated and introduced by R. Joseph Hoffmann, New York: Oxford University Press, 1987.

On anti-Christian polemics in general, see pp. 5–29.

On the theology and text of Celsus, see Chadwick op. cit., pp. xvi–xxiv.

arguments paralleling Celsus' (fr. 94, Harnack).<sup>30</sup> He elaborated the difficulties of bringing bodies back together, once eaten or scattered in the seas. He noted that God cannot do the impossible, like changing the past or making  $2 \times 2 = 5$ . In each case he illustrated what Celsus had already said, but he did not make Celsus' dualist argument, because by Porphyry's day, Platonism had changed. Neoplatonism was monistic (see below, chapter 5). The view of matter had changed, so Porphyry does not object on the basis of material as Celsus had done. Instead, in considering Christian eschatology, Porphyry argues that it does not make sense for God to bring the heavenly bodies to an end while raising humans. The Christian eschatology upset the hierarchy of beings of the Neoplatonists.

Back in the second century, the view of matter was the metaphysical sticking point for the Christian teaching of resurrection, and Tatian knew it.

## Tatian

Tatian was more confrontational than his teacher, Justin.<sup>31</sup> Not content to defend Christians from charges of immorality and atheism, Tatian took the case directly to the Hellenistic culture and their intellectual tradition, attacking the trustworthiness and laud of the philosophers, although he adopted a philosophically technical style of his own.

Tatian begins his positive doctrine by asserting the absolute *μοναρχία* of God:

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<sup>30</sup>For background see Porphyry's *Against the Christians: the literary remains*, edited and translated with an introduction and epilogue, by R. Joseph Hoffmann, Buffalo, N.Y.: Prometheus Books, 1994.

<sup>31</sup>For a discussion of Tatian's life, education, and theology, see Tatian, *Oratio ad Graecos and Fragments*, ed. Molly Whittaker, Oxford: Clarendon Press, 1982, introduction and bibliography pp. ix–xxv.

See also Grant, *Greek Apologists*, pp. 113–132.

Our God does not have origin in time, he alone is without beginning, while he is the beginning of all. (*adversus Graecos* 4)<sup>32</sup>

The ἀναρχον of God was a key element of the Christian kerygma and apologetic. With it Aristides began his apology a generation before Tatian. Tatian expands the formula to the sole ἀναρχον of God and uses it to attack the Stoic view of God and matter as twin principles. He also denies that God as a spirit “pervades matter” (διηκον διὰ τῆς ὕλης) in language nearly reproducing Aetius’ version of the Stoic doctrine of God: πνεῦμα μὲν ἐνδιηκον δι’ ὅλου τοῦ κόσμου (Long and Sedley 46A; Aetius 1.7.33). While he directs his words against the Stoics, his position lies contrary to the Middle-Platonists as well. Middle-Platonists had adopted a view of God as transcendent and utterly independent, while limiting his activity in the world and creation by matter and its necessities. Tatian captured a new vision of God utterly alone in his power and able to create matter itself. He thus becomes the first person in recorded history expressly to teach *creatio ex nihilo*.

Tatian immediately enlists *creatio ex nihilo* in the defense of the resurrection:

Neither is matter without cause as is God, nor is it equal in power to God because it is without cause. It was generated and it was not generated by anyone else, but it was expressed only by

<sup>32</sup>θεὸς ὁ καθ’ ἡμᾶς οὐκ ἔχει σύστασιν ἐν χρόνῳ, μόνος ἀναρχος ὧν καὶ αὐτὸς ὑπάρχων τῶν ὄλων ἀρχή. ed. Molly Whittaker, op. cit., p. 8.

Tatian has much stricter requirements for bodily resurrection than Paul showed in I *Corinthians* 15. Tatian requires that the body be returned to its pristine state. Paul allowed that God could give the resurrected any sort of body he wanted, even a heavenly one, I *Corinthians* 15: 47 f.

Paul says that the resurrection body will be incorruptible (v. 42), spiritual (v. 44), and heavenly as Christ was from heaven (v. 48).

the demiurge of all. Therefore, we believe that there will be a resurrection of bodies after the consummation of everything, not as the Stoics who dogmatize about cycles of things becoming and the same things becoming again without purpose. When the ages are once completed for us at the end, there will be a resurrection of humans alone for ever for the purpose of judgement. (*adversus Graecos* 5–6)<sup>33</sup>

Tatian makes the connection of creator and judge, just as we saw in 2 *Peter*. 2 *Peter* 3.5 uses the balance of beginning and end to argue that God who brought the world about can bring it to an end. Tatian's argument goes further. He argues for the end of the age and the resurrection of the dead on the grounds (διὰ τοῦτο) that matter is not ἄναρχον. For the Stoics a personal resurrection made no sense in that everything was bound for ἐκπύρωσις. Even in the ἐκπύρωσις, matter bore the necessity for further cycles in the λόγοι σπερματικοί. Tatian's rejection of matter as an ἀρχή alongside of God removes the necessity of ἐκπύρωσις and subsequent cycles. But Tatian does not stop there. Tatian extends the Petrine argument to the micro level, to the individual human. He denies that matter imposes any such necessity on God with respect to individual bodies, as well as with respect to the cosmos:

God the regent, when he wills, will completely restore the substance which is visible alone to him to its original state.

<sup>33</sup>οὔτε γὰρ ἄναρχος ἡ ὕλη καθάπερ καὶ ὁ θεός, οὔτε διὰ τὸ ἄναρχον καὶ αὐτὴ ἰσοδύναμος τῷ θεῷ, γενητὴ δὲ καὶ οὐχ ὑπὸ ἄλλου γεγονυῖα, μόνου δὲ ὑπὸ τοῦ πάντων δημιουργοῦ προβεβλημένη. καὶ διὰ τοῦτο καὶ σωμάτων ἀνάστασιν ἔσεσθαι πεπιστεύκαμεν μετὰ τὴν τῶν ὅλων συντέλειαν, οὐχ ὡς οἱ Σταϊκοὶ δογματίζουσι κατὰ τινος κύκλων περιόδου γινομένων ἀεὶ καὶ ἀπογινομένων τῶν αὐτῶν οὐκ ἐπὶ τι χρήσιμον, "ἅπαξ" δὲ "τῶν" καθ' ἡμᾶς "αἰώνων" πεπερασμένων καὶ εἰς τὸ παντελὲς διὰ μόνων τῶν ἀνθρώπων τὴν σύστασιν ἔσεσθαι χάριν κρίσεως. Whittaker, p. 10.

May misses the connection Tatian makes between *creatio ex nihilo* and the bodily resurrection. May attributes to Tertullian the first use of *creatio ex nihilo* as a proof of God's power to resurrect the dead, May, 1994, p. 137.



(*adversus Graecos* 6)<sup>34</sup>

Tatian uses the individual creation to justify the individual resurrection. Tatian argues that the task of restoring a dead person who no longer exists is no more difficult than creating him from nothing to begin with.

Although Tatian is quite clear that matter comes about by the work of God, he is not clear about the process. Matter is expressed or cast forth (προβεβλημένη) by God. προβεβλημένη is the same term used to express Gnostic emanations within the pleroma according to Irenaeus' account (1.1.1–2). In Irenaeus the term is used biologically as the first principle, the Depth, is cast forth into silence as a seed (1.1.1). However, the term is not used by Irenaeus to recount the Gnostic view of the generation of matter.

Tatian uses the word προβάλλω in its more common sense of expressing words, thoughts, or questions. Earlier in the same chapter he refers to the casting forth of the voice (προβαλλόμενος δὲ τὴν ἑμαυτοῦ φωνήν, Tatian, *adversus Graecos* 5, Whittaker, p. 10). The picture of vocal expression of matter would seem to be an extension of Tatian's Logos theology. Tatian himself draws an express parallel between the generation of the divine Logos and the creation:

The word which was generated in the beginning, in turn generated our creation, himself for himself, as he had fashioned matter.  
(*adversus Graecos* 5)<sup>35</sup>

Although the analogy is not fully developed, it seems reasonable that Tatian

<sup>34</sup>θεὸς δὲ ὁ βασιλεύων, ὅτε βούλεται, τὴν ὁρατὴν αὐτῷ μόνον ὑπόστασιν ἀποκαταστήσει πρὸς τὸ ἀρχαῖον. Whittaker, p. 12.

<sup>35</sup>ὁ λόγος ἐν ἀρχῇ γεννηθεὶς ἀντεγέννησε τὴν καθ' ἡμᾶς ποίησιν αὐτὸς ἑαυτῷ, τὴν ὕλην δημιουργήσας. Whittaker, p. 10.

understands the Logos as the internal reason and matter as part of the subsequent vocal expression. Even though he uses emanationist language and draws a parallel to the generation of the Logos and the material cosmos, Tatian maintains a distinction between God and the material cosmos (see above).

The coincidence of the *μοναρχία*, the need to defend the resurrection and the Logos theology conspired to produce an entirely new understanding of the material cosmos and its dependence upon God in Tatian's work. His new vision was seized upon almost immediately by other Christian writers and soon became the new orthodoxy.

### Theophilus of Antioch

Theophilus, writing shortly after Tatian, (after 180) for he mentions the death of Marcus Aurelius in his chronology<sup>36</sup>) followed Tatian in adopting *creatio ex nihilo* and using the creative power of God as an apology for the resurrection (*ad Autolyicum* 1.13).<sup>37</sup> However, he went further than Tatian in developing metaphysical arguments for *creatio ex nihilo* based both on the nature of God and matter. In contrast to Tatian, who directed his barbs mainly against the Stoics, Theophilus directed his arguments against the Middle-Platonists. Theophilus' own doctrine of God owed much to the Platonists and he directed the Middle-Platonist doctrine of God against their teaching concerning matter:

Plato and those of his school agree that God is ungenerated and

<sup>36</sup>Grant, *Greek Apologists*, p. 143.

<sup>37</sup>For background on Theophilus' times and theology, see *Theophilus of Antioch, Ad Autolyicum*, text and translation by Robert M. Grant, Oxford: Clarendon Press, 1970, introduction pp. ix–xxv.

See also Grant, *Greek Apologists*, pp. 140–174.

the father and maker of all. Then, they suppose matter is divine and ungenerated and they say that it was flourishing with God. If God is ungenerated and matter is ungenerated, no longer is God the maker of all as the Platonists say, neither is the sovereignty of God shown, by their own account. Further, just as God is changeless because he is ungenerated, so also, if matter is also ungenerated, it is also changeless and equal to God. For that which is generated is mutable and changeable. The ungenerated is immutable and unchangeable.

For how is it so great, if God made the cosmos from subject matter? For even the human artisan when he receives matter from someone, can make what he wants from it. The power of God is made manifest in this, that he made what he wanted from the non-existent. (ἐξ οὐκ ὄντων, *ad Autolyicum* 2.4)<sup>38</sup>

In contrast to the earlier examples we have seen, Theophilus' use of the phrase ἐξ οὐκ ὄντων stands in express opposition to the eternity of matter. The phrase clearly does express *creatio ex nihilo* in the sense of denying an independent material cause for the cosmos.

Theophilus attacks the consistency of an all-creating God (Apuleius, *de Platone et eius Dogmate* p. 312, Clouard and other examples) and the Platonists' God/matter dualism. The attack demonstrates little more than Theophilus' prioritization of theology over physics.

Theophilus also charges the Middle-Platonists with their own anthropomorphic notion of the creator. The force of the charge derives from

<sup>38</sup>Πλάτων δὲ καὶ οἱ τῆς αἰρέσεως αὐτοῦ θεὸν μὲν ὁμολογοῦσιν ἀγένητον καὶ πατέρα καὶ ποιητὴν τῶν ὄλων εἶναι· εἶτα ὑποτίθενται θεὸν καὶ ὕλην ἀγένητον καὶ ταύτην φασὶν συνηκμακεῖναι τῷ θεῷ. εἰ δὲ θεὸς ἀγένητος καὶ ὕλη ἀγένητος, οὐκ ἔτι ὁ θεὸς ποιητὴς τῶν ὄλων ἐστὶν κατὰ τοὺς Πλατωνικούς, οὐδὲ μὴν μοναρχία θεοῦ δείκνυται, ὅσον τὸ κατ' αὐτούς. ἔτι δὲ καὶ ὡσπερ ὁ θεὸς, ἀγένητος ὢν, καὶ ἀναλλοίωτός ἐστιν, οὕτως, εἰ καὶ ἡ ὕλη ἀγένητος ἦν, καὶ ἀναλλοίωτος καὶ ἰσόθεος ἦν· τὸ γὰρ γενητὸν τρεπτὸν καὶ ἀλλοιωτὸν, τὸ δὲ ἀγένητον ἄτρεπτον καὶ ἀναλλοίωτον.

Τί δὲ μέγα, εἰ ὁ θεὸς ἐξ ὑποκειμένης ὕλης ἐποίει τὸν κόσμον; καὶ γὰρ τεχνίτης ἄνθρωπος, ἐπὶ ὕλην λάβη ἀπὸ τινος, ἐξ αὐτῆς ὅσα βούλεται ποιεῖ. θεοῦ δὲ ἡ δύναμις ἐν τούτῳ φανεροῦται ἵνα ἐξ οὐκ ὄντων ποιῇ ὅσα βούλεται, καθάπερ καὶ τὸ ψυχὴν δοῦναι καὶ κίνησιν οὐχ ἑτέρου τινός ἐστιν ἀλλ' ἢ μόνου θεοῦ. ed. Robert M. Grant, 1970, p. 26.

the Middle-Platonists own program of de-anthropomorphism of the poetic and popular vision of deity. According to Theophilus, they had not gone far enough in their own program.

From the side of matter, Theophilus develops a contradiction from Plato's basic premises for the cosmology of the *Timaeus*, where Plato taught that what is eternal is changeless (27 E–28 A). No response to Theophilus has been preserved, but Plato himself stated that the receptacle itself was unchanging (see above, chapter 2) Nevertheless, it was at least paradoxical that the substrate for change was itself unchanging.

With respect to his own teaching, Theophilus does not here or elsewhere say how God creates, he merely denies the need for matter. In effect, he places God's creative act into the realm of negative theology. Theophilus' own argument for *creatio ex nihilo* depended on a commonplace assertion of the Middle-Platonists, the self-sufficiency of God (Apuleius, *de Platone et eius Dogmate* p. 312, Clouard):

And first they [the prophets] taught us in harmony that he made all things from non being, for nothing is as ancient as God, but he is his own locus and without need and existing before the ages, he wished to make the human so that he would be known by him. For him he prepared the cosmos. For the generated is needy, the ungenerated needs nothing. (*ad Autolyicum* 2.10)<sup>39</sup>

Theophilus agrees with Tatian that the world had been created for the sake of humans. For Tatian and Theophilus humanity was the goal of creation of the cosmos. The Platonists, both Middle and Neo, saw humanity as inhabitants

<sup>39</sup>Καὶ πρῶτον μὲν συμφώνως ἐδίδαξαν ἡμᾶς, ὅτι ἐξ οὐκ ὄντων τὰ πάντα ἐποίησεν. οὐ γὰρ τι τῷ θεῷ συνήκμασεν· ἀλλ' αὐτὸς ἑαυτοῦ τόπος ὢν καὶ ἀνεκδεής ὢν καὶ ὑπάρχων πρὸ τῶν αἰώνων ἠθέλησεν ἄνθρωπον ποιῆσαι ᾧ γνωσθῆ· τούτῳ οὖν προητοίμασεν τὸν κόσμον. ὁ γὰρ γενητὸς καὶ προσδεής ἐστίν, ὁ δὲ ἀγένητος οὐδένοσ προσδεῖται. Grant, p. 38.

of the lowest realm. The teaching remained a target in anti-Christian polemic, but it shows the close link between creation and anthropology which the Christians preserved from the Hebrew tradition.

Theophilus does not make the same explicit connection between creation and resurrection that Tatian does, but his discussions of resurrection and creation show strong parallelism in language and argumentation. He argues for creation ἐξ οὐκ ὄντων and argues that God can raise the person whom he created ἐξ οὐκ ὄντος (*ad Autolyicum* 1.8). He draws an express parallel between God's life-giving and creative power:

It is God who heals and gives life by his own word and wisdom.  
God by his word and wisdom created all things. (1.7)<sup>40</sup>

It is precisely God's ability to create and resurrect matter which set Theophilus and Tatian against the Platonist and Stoic views of the necessity of the material realm.

Theophilus used the Platonist doctrine of God not only to attack their view of matter but to develop a new view. In choosing the Middle-Platonist doctrine of God over their view of nature, he left nature entirely subject to God. As a result, although his doctrine is Middle-Platonist in its expression, it is steadfastly non-Middle Platonic in its outcome, both in its monism and in the radical dependence of nature upon God. Theophilus foreshadows the coming of monism to Platonist philosophy in the next century in the work of Plotinus. But as yet an account of the creation of the material realm by God had not been worked out.

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<sup>40</sup>ὁ θεός, ὁ θεραπεύων καὶ ζωοποιῶν διὰ τοῦ λόγου καὶ τῆς σοφίας. ὁ θεὸς διὰ τοῦ λόγου αὐτοῦ καὶ τῆς σοφίας ἐποίησε τὰ πάντα. Grant, p. 10.

## Irenaeus

Irenaeus, writing shortly after Tatian and Theophilus, adopted *creatio ex nihilo*, probably from Theophilus, as his writings show many similarities with Theophilus.<sup>41</sup> Like Theophilus, his teachings on *creatio ex nihilo* form part of his polemic against the Platonists. In his work, *creatio ex nihilo* moved from extramural apologetic to intramural anti-heretical writing. As the extramural weapon became useful inside the church, it helped establish a new orthodoxy.

Irenaeus dismissed the Gnostic versions of the generation of the elements from the passions of Sophia as ridiculous myths. To the contrary:

We will not err in saying this about the substance of matter, that God brought it forth. For we teach from the scriptures that God holds primacy over all things. Whence and how he emitted matter, neither does any Scripture explain, neither is it fitting for us to imagine, guessing infinite things about God by individual opinions. This knowledge must be left to God. (*adversus Haereses* 2.28.7)<sup>42</sup>

In the end, Irenaeus thinks the Greek poets and philosophers are to blame for the errors of Gnostics. He accuses Anaxagoras, Empedocles, Plato, and the

<sup>41</sup>For background on Irenaeus see R. Grant, *Greek Apologists*, pp. 182–186.

Also Gérard Vallée, *A Study in Anti-Gnostic Polemics: Irenaeus, Hippolytus, and Epiphanius*, Waterloo, Ontario, Canada: Published for the Canadian Corporation for Studies in Religion by Wilfrid, 1981.

See also A. Orbe, "San Ireneo y la creación de la materia," *Gregorianum* 59, 1978, pp. 71–127. Orbe does not treat Irenaeus' argument for *creatio ex nihilo*, rather he sees Irenaeus as taking the statement of Hermes' *Mandate* as his rule faith, "El logion de HERMAS pasa a la 'regula veritatis,' con leves cambios redaccionales frente a los gnósticos," p. 73. Orbe's position is similar to May's discussed above.

<sup>42</sup>Hoc autem idem et de substantia materiae dicentes, non peccabimus, quoniam Deus eam protulit: didicimus enim ex Scripturis principatum tenere super omnia Deum. Unde autem vel quemadmodum emisit eam, neque Scriptura aliqua exposuit, neque nos fantasmari oportet, ex opinionibus propriis infinita conicientes de Deo, sed agnitionem hanc concedendam esse Deo. ed. Adelin Rousseau and Louis Doutreleau, S. J., S. C., v. 294 Paris: Editions du Cerf, 1982, p. 284.

Stoics of deifying matter:

They say everything by necessity departs into those things from which they are made, and God is the slave of this kind of necessity, so that he cannot add immortality to the mortal or grant incorruptibility to the corruptible, but each departs into the matter appropriate to its nature. (*adversus Haereses* 2.14.4)<sup>43</sup>

Irenaeus focused on necessity, the ἀνάγκη of the *Timaeus*, making a direct link from the cosmogonic necessity to the corruptibility of the body. Just as Tatian and Tertullian, Irenaeus shows not just idle concern for creation, but a concern bound with Christian anthropology and the hope of resurrection.

In the following century *creatio ex nihilo* was adopted by many Church writers, most notably, Tertullian and Origen, while *creatio ex materia* would disappear from orthodoxy. *Creatio ex nihilo* found a weakness in the Hellenistic systems which made it extremely successful both inside and outside the Church. It displaced from the Church those who sought a more conciliatory approach to Greek intellectual traditions, such as the Gnostics. Outside the church, it heralded the replacement of the Middle-Platonist dualist system by Neoplatonist monism, a change which it probably helped to instigate. Still the ecclesiastical writers of the second and even the third centuries were still a long way from explaining the process by which matter was created. That was a challenge not taken up in the Church until Augustine.

<sup>43</sup>Quod autem ex necessitate unumquidque in illa secedit ex quibus et factum esse dicunt, et huius necessitatis servum esse Deum, ita ut non possit mortali immortalitatem addere vel corruptibili incorruptelam donare, sed secedere unumquemque in similem naturae suae substantiam. Rousseau, p. 136.

## Chapter 5, Plotinus and Augustine: Evil and the generation of matter

Plotinus' break with earlier Greek philosophy was decisive. He taught the generation of all plurality from a single principle, with no passive potency presupposed. The Platonists and Peripatetics both presupposed matter as a passive principle eternally distinct from forms. Plato himself presupposed the receptacle. The Stoics presupposed a passive potency in the single material substance of the universe. The Neopythagoreans presupposed a passive potency in the monad itself. Plotinus<sup>1</sup> (204/5–270 C.E.) saw passive potency of all generated things as derivative from the perfection of the first principle, rather than from a passive potency within or without the One.

To explain the production of plurality from initial unity, Plotinus transformed the Neopythagorean notion  $\rho\epsilon\acute{\iota}\nu$  into  $\epsilon\pi\pi\epsilon\acute{\iota}\nu$ , emanate. The change was more than lexical. Plotinus' new doctrine of emanation eliminated the charge Numenius had laid against Neopythagorean monism, the One "departed

<sup>1</sup>On the monism of Plotinus, see J. M. Rist, "The Infinite Dyad and Intelligible Matter in Plotinus," *Classical Quarterly*, n.s. 12, 1962, pp. 99–107. Rist does not draw the distinction between Plotinus and his predecessors made here.

On the intellectualism of Plotinus' system of emanation, see A. C. Lloyd, "Plotinus on the Genesis of Thought and Existence," *Oxford Studies in Ancient Philosophy* 5, 1987, pp. 155–186.

For an overview of emanation, see A. H. Armstrong, *The architecture of the intelligible universe*, Cambridge: Cambridge University Press, 1940, chs. 4 & 5.

An interesting study on the intellect's generation from and contemplation of the One can be found in J. R. Bussanich, *The One and its Relation to the Intellect in Plotinus: A commentary on selected texts*, Leiden: Brill, 1988.

The question of whether matter was generated was a debate that never should have happened. See O'Brien's very thorough defense of eternal generated matter in Plotinus, "Plotinus on Evil, a study of matter and the soul in Plotinus' conception of human evil," *Le Néoplatonisme*, Paris: Centre national de la recherche scientifique, 1971, pp. 114–146.

O'Brien gives a very detailed response to Schwyzer's arguments that matter is ungenerated, from Schwyzer, "Zu Plotins Deutung der sogenannten Platonischen Materie," *Zetesis* (Festschrift E. de Strycker), Antwerp, 1973, pp. 266–280, esp. pp. 275 ff.

Also see O'Brien, art. cit., for a review of Kevin Corrigan's "Is there more than one Generation of Matter in the Enneads?," *Phronesis* 31, 1986, pp. 167–181.



from its own nature." Plotinus' emanation from the One did not require that the One "become two by difference" or "remove itself from quantity" as the Neopythagorean monists had done. For Plotinus plurality came not from the One flowing out from its own nature, but from the overflow of the One's own perfection. The One's very perfection which was production, not its self-deprivation.

Whatever else, Plotinus deserves the title of systematic thinker. Plotinus produced a single system of emanation under consistent principles which explain all the successive stages of emanation. The system explains the generation of matter and its evil moral valence. Recent treatments of moral valuation which Plotinus assigns to matter have driven a wedge between Plotinus the metaphysician and Plotinus the ethicist.<sup>2</sup> I think this is unwarranted. Plotinus' moral valence of matter is not only consistent with his metaphysics, it flows quite naturally from it. This only becomes clear when one examines the principles of the system of emanation.

<sup>2</sup>A. H. Armstrong, calls the difference between matter as product of the one and matter as principle of evil "a well known contradiction," in "Dualism Platonic, Gnostic and Christian," *Hellenic and Christian Studies*, Aldershot: Variorum, 1990, art. 12, p. 38, treats matter as a limit of reality and therefore a principle of evil: "But it is the inevitable cosmogonic approach, which is necessarily movement away from being and form, to this absolute non-existence which makes ὕλη the principle of cosmic evil, and the approach closer than is needed, by weaker individual souls not perfectly under the command of their higher souls, which enables it to become the principle of moral evil." Armstrong drives a wedge between cosmic and moral evil, and does not note that the principle of evil for matter and soul is the same, the *aoristia* of emanation. In the case of the soul, *aoristia* is redeemable to the extent it participates in nous. Matter is absolute *aoristia* and it is irredeemable. The problem for soul is not just its propinquity to matter, it is rather its own *aoristia* in which it remains, unless it participates in nous.

E. Costello, "Is Plotinus Inconsistent on the Nature of Evil," *International Philosophical Quarterly* 7, 1967, pp. 483-97, distinguishes Plotinus' ethical from metaphysical teachings on matter: "Matter's metaphysical function is good; matter is evil only when it is taken as an object for the souls' orientation," p. 497. He reads treatise 1.8 as an entirely ethical treatise and so takes its statements of the evil of matter as hortatory ethical statements.

O'Brien in "Plotinus on Evil," attempts to resolve the problem by making matter only a partial cause of evil: "Plotinus' conception of matter and the soul's weakness as part causes of sin is skilful and consistent," p. 146.

The unifying principles of emanation recur at every level of derivation: 1) that the perfect necessarily produces something other than itself; 2) that that which is different from the perfect is necessarily indefinite, *ἀόριστον*, lacking its own positive nature in itself and 3) therefore, it is dependent on the perfect for its definition and being through participation. Plotinus' notion of participation is so strong that the perfect is wholly present in the participant. So that in the end the emanated is fully contained in the source. These principles are repeated at the level of nous (intellect), soul, and matter in the scheme of emanation. Furthermore, they explain why matter is evil and why the soul is in peril to evil.

### **fertility of the One**

In a break with his predecessors, Plotinus found difference not in primitive contrast to perfection or in the self-deviation from perfection, but difference resulted from the nature of perfection itself. It is the very nature of perfection to produce something other than itself. Emanation is the overflow of the perfection of the One. Even in an early treatise, Plotinus had come to this conclusion. The arguments for such an abstract and universal principle appeal to empirical observation:

We see whatever of the others which advances to perfection, generates and does not suffer to remain by itself, but makes another. This is so not only for that which exercises choice, but also those which grow without choice. Even things without a soul share of themselves as much as they are able, as fire heats and snow chills and drugs work on another as they do. All things imitate the principle unto goodness forever as they are able. How then could the most perfect and first good stay in itself as if it were jealous of itself or the power of all things be impotent? How would it still be a principle? (*Enneads* 5.4.1,

Plotinus draws his major premise from induction. The observation of powers in nature convinces one that the more perfect is the more productive. Production is a necessity which results from the perfection of the One.<sup>4</sup>

Plotinus draws the figures of fire and snow. They are productive of heat and cold, respectively. Each admits grades of perfection. A weak fire produces very little heat. The greater the perfection of the fire, the greater heat it produces.

Elsewhere, Plotinus cites the example of the sun:

It is an illumination from the One all around, as the One remains, just as light around the sun is always generated in a circuit while the sun remains. And while they remain, all beings from their own substance give their necessary and fit reality around themselves, outside themselves, from the available power, being an image of archetypes from which it grows. Fire gives heat from itself. And snow does not only retain coldness. Fragrances especially testify to this. As long as they are, something advances from them and around them which the bystander enjoys. Everything which is perfect generates and the eternally perfect generates eternally. It generates something lesser than itself. (5.1.6, 28–39)<sup>5</sup>

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<sup>3</sup>ὅ τι δ' ἂν τῶν ἄλλων εἰς τελείωσιν ἴη, ὁρώμεν γεννῶν καὶ οὐκ ἀνεχόμενον ἐφ' ἑαυτοῦ μένειν, ἀλλ' ἕτερον ποιοῦν, οὐ μόνον ὅ τι ἂν προαίρεσιν ἔχη, ἀλλὰ καὶ ὅσα φύει ἄνευ προαιρέσεως, καὶ τὰ ἄψυχα δὲ μεταδιδόντα ἑαυτῶν καθόσον δύναται· οἷον τὸ πῦρ θερμαίνει, καὶ ψύχει ἢ χιών, καὶ τὰ φάρμακα δὲ εἰς ἄλλο ἐργάζεται οἷον αὐτὰ -- πάντα τὴν ἀρχὴν κατὰ δύναμιν ἀπομιμούμενα εἰς ἀιδιότητά τε καὶ ἀγαθότητα. πῶς οὖν τὸ τελεώτατον καὶ τὸ πρῶτον ἀγαθὸν ἐν αὐτῷ σταίη ὥσπερ φθονῆσαν ἑαυτοῦ ἢ ἀδυνατῆσαν, ἢ πάντων δύναμις; πῶς δ' ἂν ἔτι ἀρχὴ εἴη; ed. Paul Henry and Hans Rudolf Schwyzer, *Plotini Opera*, vv. 1–3, Oxford: Clarendon Press, 1964–82, v. 2, p. 235.

cf. 5.1.6, 28 ff., 5.2.1, 7–9.

<sup>4</sup>A. C. Lloyd, art. cit., traces the origin of this principle to a model from Aristotle's physics, "every entity, once it reaches perfection, generates something additional," p. 158.

<sup>5</sup>περίλαμψιν ἐξ αὐτοῦ μὲν, ἐξ αὐτοῦ δὲ μένοντος, οἷον ἡλίου τὸ περὶ αὐτὸ λαμπρὸν ὥσπερ περιθέον, ἐξ αὐτοῦ αἰεὶ γεννώμενον μένοντος. καὶ πάντα τὰ ὄντα, ἕως μένει, ἐκ τῆς αὐτῶν οὐσίας ἀναγκαίαν τὴν περὶ αὐτὰ πρὸς τὸ ἔξω αὐτῶν ἐκ τῆς παρούσης δυνάμεως

The sun is a better illustration of the One than fire or snow, because it produces light without changing itself (as an incorruptible heavenly body). The production of the sun is inseparable from its nature. It remains in its perfection as it produces light. It produces as long as it is and without any variation in its nature.

### **production of the other/undefined/defined**

Being productive implies making something different (ἕτερον ποιοῦν, 5.4.1, 28). To be a producer, the producer must make something which differs from itself. Plotinus distinguishes an act of the substance of a cause from an act which originates from a cause.<sup>6</sup>

There is one act of the substance and another which originates from the substance of each thing. Everything is the first act of its substance. The second act, which originates from the first, necessarily follows in every case, must be different from it. As in the case of fire, the first act is that which completes the substance of heat, by which time the second act will already come about from the substance, while the fire actualizes that which is natural to its substance as long as remaining fire. So it is also in that realm. Much prior, the One remains there in its own nature while the act which is generated from its perfect and unified act receives its existence. (5.4.2, 27–33)<sup>7</sup>

δίδωσιν αὐτῶν ἐξηρητημένην ὑπόστασιν, εἰκόνα οὖσαν οἶον ἀρχετύπων ὧν ἐξέφυ· πῦρ μὲν τὴν παρ' αὐτοῦ θερμότητα· καὶ χιῶν οὐκ εἴσω μόνον τὸ ψυχρὸν κατέχει· μάλιστα δὲ ὅσα εὐώδη μαρτυρεῖ τοῦτο· ἕως γὰρ ἐστὶ, πρόεισί τι ἐξ αὐτῶν περὶ αὐτά, ὧν ἀπολαύει ὑποστάντων ὁ πλησίον. καὶ πάντα δὲ ὅσα ἤδη τέλεια γεννᾷ· τὸ δὲ αἰεὶ τέλειον αἰεὶ καὶ αἰδίον γεννᾷ· καὶ ἕλλατον δὲ ἑαυτοῦ γεννᾷ. Henry and Schwyzer, v. 2, p. 194.

<sup>6</sup>Lloyd argues that Plotinus follows Aristotle's principle that "the actualized movement or process in an agent was the same 'in subject/substrate' as the one it caused in the patient but that they differed in 'being/essence,'" art, cit., p. 168. Lloyd himself notes himself that Plotinus differs with Aristotle in that the effect has a lower degree of reality, loc. cit. Once that is conceded, there is very little left of the Aristotelian causal theory in Plotinus.

<sup>7</sup>ἐνέργεια ἡ μὲν ἐστὶ τῆς οὐσίας, ἡ δ' ἐκ τῆς οὐσίας ἐκάστου· καὶ ἡ μὲν τῆς οὐσίας αὐτό ἐστὶν ἐνέργεια ἐκάστου, ἡ δὲ ἀπ' ἐκείνης, ἣν δεῖ παντὶ ἔπεσθαι ἐξ ἀνάγκης ἕτεραν

The first act of ones nature is its own growth in perfection or the actualization of its substance, as a fire can grow in its own internal heat. The second act, which originates from one's nature, communicates act outside of one's own substance, as fire causes heat in another thing. The act which the agent produces in the effect is distinct from its own substance.

Because the One remains in its own perfect nature, any product cannot be of its nature. Its nature is perfect and its act is not only its own actualization, but also an external operation.

Necessarily, the product is inferior to the One. Since the first principle is perfect, it cannot make something greater than itself, therefore it makes something less:

For being perfect it had to generate, for being such it could not be sterile. Even there the product could not be greater, but being less, it was an image of nous, indefinite also, but defined by the producer as if it was made as a likeness. (5.1.7, 37)<sup>8</sup>

In another figure, the difference between the One and plurality which result from it is set out in terms of motion out and back:

Therefore it is inferior to the One, because to the degree it is plural, it is so much worse than the One. But plurality does not

οὐσαν αὐτοῦ· οἷον καὶ ἐπὶ τοῦ πυρὸς ἢ μὲν τίς ἐστι συμπληροῦσα τὴν οὐσίαν θερμότης, ἢ δὲ ἀπ' ἐκείνης ἤδη γινομένη ἐνεργοῦντος ἐκείνου τὴν σύμφυτον τῇ οὐσίᾳ ἐν τῷ μένειν πῦρ. οὕτω δὴ κάκει· καὶ πολὺ πρότερον ἐκεῖ μένοντος αὐτοῦ ἐν τῷ οἰκείῳ ἤθει ἐκ τῆς ἐν αὐτῷ τελειότητος καὶ συνούσης ἐνεργείας ἢ γεννηθεῖσα ἐνέργεια ὑπόστασιν λαβοῦσα. Henry and Schwyzer, v. 2, p. 237.

<sup>8</sup>καὶ γὰρ τέλειον ὄντα γεννᾶν ἔδει, καὶ μὴ δύναμιν οὐσαν τοσαύτην ἄγονον εἶναι. κρείττον δὲ οὐχ οἷόν τε ἦν εἶναι οὐδ' ἐνταῦθα τὸ γεννώμενον, ἀλλ' ἔλαττον ὄν εἶδωλον εἶναι αὐτοῦ, ἀόριστον μὲν ὡσαύτως, ὀριζόμενον δὲ ὑπὸ τοῦ γεννήσαντος καὶ οἷον εἰδοποιούμενον. Henry and Schwyzer, v. 2, p. 196 f.

cf. 5.1.6, 38 f.

have the nature of that one, but as it departed, it became inferior. It was respectful to that one, and the multitude turned toward the One and remained. (6.6.3, 7–9)<sup>9</sup>

Plotinus states that any motion or difference from the first is ἀόριστον (indefinite):

Movement and difference from the first is indefinite (ἀόριστον) and stands in need of that first for definition. It is defined when it turns to the first. (2.4.5, 31 ff.)<sup>10</sup>

Ἄοριστία is opposite to definition. The principle that any difference from the first is ἀόριστον is critical to Plotinus' whole scheme of emanation. The first is a limit and departure is a direct opposite. In a late treatise (1.8) Plotinus refers to the One as "measure and limit" (μέτρον πάντων καὶ πέρας, 1.8.2, 5).<sup>11</sup> Any departure from the One is a departure from the nature of the One into ἀοριστία.

We can say that it is less one than the One:

It is clear that this one [the intellect] after the wholly One must be many, or else it would not be after that One, but it would be that One. It is also not possible that the one after that One be greater than that One, rather it must be inferior to that One. Since the best is One, it must be more plural than the One, for plurality consists in lack [of perfection]. (6.7.8, 17–22)<sup>12</sup>

<sup>9</sup>καὶ διὰ τοῦτο δὲ ἐλαττοῦται τοῦ ἑνός, ὅτι πλῆθος ἔχει, καὶ ὅσον πρὸς τὸ ἓν χεῖρον· καὶ οὐκ ἔχον δὲ τὴν φύσιν ἐκείνου, ἀλλὰ ἐκβεβηκός, ἡλάττωται, τῷ δ' ἐνὶ παρ' ἐκείνῳ τὸ σεμνὸν ἔχει, καὶ ἀνέστρεψε δὲ τὸ πλῆθος εἰς ἓν καὶ ἔμεινε. Henry and Schwyzer, v. 3, p. 155.

<sup>10</sup>ἀόριστον δὲ καὶ ἡ κίνησις καὶ ἡ ἑτερότης ἢ ἀπὸ τοῦ πρώτου, κακείνου πρὸς τὸ ὀρισθῆναι δεόμενα· ὀρίζεται δέ, ὅταν πρὸς αὐτὸ ἐπιστραφῇ· Henry and Schwyzer, v. 1, p. 170.

<sup>11</sup>Note contrast to Plotinus' own statement that the One imposes limit, but it is not a limit itself (6.7.7, 15).

<sup>12</sup>ὅτι μὲν οὖν πολλὰ δεῖ τοῦτο τὸ ἓν εἶναι ὄν μετὰ τὸ πάντῃ ἓν, δῆλον· ἢ οὐκ ἂν ἦν

The product is inferior to the One because it lacks the definition of the One. Since it is less defined than the One and other than the One, it is a plurality. It is indefinite in itself:

The simple which is before this plurality is the cause of being and the cause of it being plural. It makes number. Number is not primary. For before the dyad is the One. The dyad is second and after having been generated from the One it has that One as its limit, for it is *ἀόριστον* in itself. (5.1.5, 4–8)<sup>13</sup>

The dyad is the first plurality. It was generated first as an indefinite, only to receive limit from the One. Because it is other than the perfection and unity of the One, the *ετερον* is *ἀόριστον*. In itself it lacks all definition and positive being. In itself it is only difference from the One, a difference which is itself dependent upon the One.

The product does not remain *ἀόριστον* (indefinite). As *ἀόριστον* it is dependent on the One for all its definition. It desires the perfection of the One. By participating in that perfection it becomes defined and limited. In definition and limit derived from the One, it finds being.

### participation

Plotinus has a much stronger notion of participation than does Plato.

μετ' ἐκείνο, ἀλλ' ἐκείνο. μετ' ἐκείνο δὲ ὄν ὑπὲρ μὲν ἐκείνο πρὸς τὸ μᾶλλον ἐν γενέσθαι οὐκ ἦν, ἐλλείπον δ' ἐκείνου· τοῦ δ' ἀρίστου ὄντος ἐνός ἔδει πλέον ἢ ἐν εἶναι· τὸ γὰρ πλήθος ἐν ἐλλείψει. Henry and Schwyzer, v. 3, p. 193.

cf. 6.2.15, 14.

<sup>13</sup>ὁ ἀπλοῦς καὶ ὁ πρὸ τοιούτου πλήθους, ὁ αἴτιος τοῦ καὶ εἶναι καὶ πολὺν εἶναι τοῦτον, ὁ τὸν ἀριθμὸν ποιῶν. ὁ γὰρ ἀριθμὸς οὐ πρῶτος· καὶ γὰρ πρὸ δυάδος τὸ ἐν, δεύτερον δὲ δυάς καὶ παρὰ τοῦ ἐνός γεγεννημένη ἐκείνο ὀριστὴν ἔχει, αὐτὴ δὲ ἀόριστον παρ' αὐτῆς· Henry and Schwyzer, v. 2, p. 192.

For Plato, participants were unreal imitations of real forms. Plotinus emphasizes that if a participant does not receive the whole of a form, it receives none of it, for forms are wholly, uniformly, and unchangeably what they are. To receive a part would be to have nothing of the form:

So if it is able to participate, it would participate to the extent of its ability in the whole of it. The participants must share it, just as it has not shared in another, because it does not belong to them. Thus, it would remain whole in itself even in those in which it appears. If it were not whole, it would not be it. (6.4.8, 39–45)<sup>14</sup>

It is not what they receive but how they receive it that differentiates participants, both from each other and from the participated. At each level of emanation, the definition which belongs to the One is received differently by the participants. Nous receives definition, not by being perfect unity as the One is, but through contemplation. In the duality of knower and known, nous attains the unity through true knowledge, wherein the knower becomes the known. Soul receives definition, but only through motion, as it continually seeks after contemplation of the One. Matter receives definition only through composition with form.

Despite the limited potency of the receiver, the participated is fully present in the participant. Being, also known as “the all” is fully present in all its participants:

The entire all is not able to abandon itself, but it has fulfilled itself, even as it was equal to itself. It is the source of the all, for

<sup>14</sup>ὥστε εἰ καὶ δύναται μεταλαβεῖν, ὅλου ἂν αὐτοῦ καθόσον δύναται μεταλαμβάνοι. δεῖ οὖν τὰ μεταλαμβάνοντα αὐτοῦ οὕτως ἔχειν αὐτοῦ, ὡς οὐ μετέλαβε, μὴ ἰδίου αὐτῶν ὄντος· οὕτως γὰρ ἂν μένοι αὐτὸ ἐφ' ἑαυτοῦ ὅλον καὶ ἐν οἷς ὁράται ὅλον. εἰ γὰρ μὴ ὅλον, οὐκ αὐτό. ed. Henry and Schwyzer, v. 3, p. 125.



it is the all. Absolutely, if anything is established in the all as something other than that, it participates in the all and meets it. It draws strength from the all, not by dividing it, but by finding that in itself as it comes to it, because the all does not happen outside itself. (6.4.2, 14–21)<sup>15</sup>

Being is not participating in by that which is outside of it. It is participated by that which is within it. There is nothing outside of being. Plotinus adds that non-being cannot contain being, but being can contain non-being.

Where there is being, there is also the One (6.4.11, 16). Nous and the One are present in all as a soul is fully present in the entire body, different parts of the body do not share different parts of the soul, but it is fully present in each part of the body (6.4.2, 46 f.).

Plotinus asks himself, if nous is wholly present in all and soul wholly present in all bodies, how can there be a multiplicity of souls and intellects? Plotinus answers that one can contain many (6.4.4, 41), as there are multiple understandings in a soul (6.4.4, 44–46). Each understanding is different, but they are all of the soul.

As the emanations gain their definition from the source, we learn that they are not really distinct from the source. The source is all in all. The emanations are truly overflows of its perfection, and not distinct entities.

That by which the emanations differ is the overflow of the perfection of the source. It is the second act originating from the substance of the source. But as the emanations participate in the source, they truly receive the source in its fullness, such that they are contained in the source. Just as distinct

<sup>15</sup>πᾶν δὴ τὸ πᾶν οὐκ ἔστιν ὅπως ἀπολείπεται ἑαυτοῦ, ἀλλ' ἔστι τε πεπληρωκὸς ἑαυτὸ καὶ ὄν ἴσον ἑαυτῷ καὶ οὐ τὸ πᾶν, ἐκεῖ αὐτό· τὸ γὰρ πᾶν αὐτό ἐστιν. ὅλως τε, εἴ τι ἐν τῷ παντὶ ἰδρῦθη ἄλλο ὄν παρ' ἐκεῖνο, μεταλαμβάνει αὐτοῦ καὶ συντυγχάνει αὐτῷ καὶ ἰσχύει παρ' αὐτοῦ οὐ μερίζον ἐκεῖνο, ἀλλ' εὕρισκον αὐτὸ ἐν ἑαυτῷ αὐτὸ προσελθὼν ἐκείνῳ ἐκείνου οὐκ ἔξω ἑαυτοῦ γενομένου· ed. Henry and Schwyzer, v. 3, p. 116.

thoughts in the mind, they are fully contained in the source that generates them.

#### nous, soul, matter as emanations

In specific terms, Plotinus explained the emanation of the world from the One. First, the One generated intellect and being, whence came soul:

Because nothing was in the One, everything came from it. In order that being be, it was not, but it was generative of being. This was first as if it was generation. Being perfect, not seeking anything, nor having anything, nor lacking anything, but as an overflow and an over-fullness of itself it made something other. That which came about turned back to it, and was filled and arose while looking at it, and this was intellect. Its station toward that [the One] made being, and its contemplation of itself became intellect. For it stood toward it in order to see, then intellect and being came about together. Because it is like its source, it made similar things by pouring out great power—this was its form—just as that which is prior to it poured it forth. This was the actuality of the soul which originated from substance, even while that one remained. For nous came about even as the One, which was before it, remained. The soul produced an image not as it remained, but as it moved. When it looked to whence it had arisen and was completed, it came forth in an opposite movement and then produced an image of itself, i.e., sensation and the nature which is in plants. (5.2.1, 5–21)<sup>16</sup>

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<sup>16</sup>ἢ ὅτι οὐδέν ἦν ἐν αὐτῷ, διὰ τοῦτο ἐξ αὐτοῦ πάντα, καὶ ἵνα τὸ ὄν ἦ, διὰ τοῦτο αὐτὸς οὐκ ὄν, γεννητῆς δὲ αὐτοῦ· καὶ πρώτη οἶον γέννησις αὕτη ὄν γὰρ τέλειον τῷ μηδὲν ζητεῖν μηδὲ ἔχειν μηδὲ δεῖσθαι οἶον ὑπερερρῦη καὶ τὸ ὑπερπλήρες αὐτοῦ πεποίηκεν ἄλλο· τὸ δὲ γενόμενον εἰς αὐτὸ ἐπεστράφη καὶ ἐπληρώθη καὶ ἐγένετο πρὸς αὐτὸ βλέπον καὶ νοῦς οὗτος· καὶ ἡ μὲν πρὸς ἐκεῖνο στάσις αὐτοῦ τὸ ὄν ἐποίησεν, ἡ δὲ πρὸς αὐτὸ θέα τὸν νοῦν. ἐπεὶ οὖν ἔστη πρὸς αὐτό, ἵνα ἴδῃ, ὁμοῦ νοῦς γίγνεται καὶ ὄν. οὗτος οὖν ὢν οἶον ἐκεῖνος τὰ ὅμοια ποιεῖ δύνάμιν προχέας πολλήν—εἶδος δὲ καὶ τοῦτο αὐτοῦ—ὡσπερ αὐτὸ αὐτοῦ πρότερον προέχεε· καὶ αὕτη ἐκ τῆς οὐσίας ἐνέργεια ψυχῆς τοῦτο μένοντος ἐκείνου γενομένη· καὶ γὰρ ὁ νοῦς μένοντος τοῦ πρὸ αὐτοῦ ἐγένετο. ἡ δὲ οὐ μένουσα ποιεῖ, ἀλλὰ κινηθεῖσα ἐγέννα εἰδωλον. ἐκεῖ μὲν οὖν βλέπουσα, ὅθεν ἐγένετο, πληροῦται, προελθοῦσα δὲ εἰς κίνησιν ἄλλην καὶ ἐναντίαν γεννᾷ εἰδωλον αὐτῆς αἴσθησιν καὶ φύσιν τὴν ἐν τοῖς φυτοῖς. Henry and Schwyzer, v. 2, p. 203 f.

## nous (intellect)

Even at the first stage of emanation, the product of the One is ἀόριστον. Nous is ἀόριστον in itself (5.1.5, 8, 5.4.2.5), but it eternally and unchangeably considers the One, thereby gaining definition. It is made perfect as it considers the One:

This plurality came about from One, and knowing this, it saw it and then it became active vision. This is already nous, when it possesses and it possesses as nous. Before this it is mere yearning and vision lacking impression. This nous applied itself to that one, and when it received, it became nous. It was always disposed and became nous, being, and intellection, when it understood. (5.3.11, 9–16)<sup>17</sup>

Nous by itself is like vision without visual impressions, sight awaiting its object. “It looked as one without a mind” (6.7.16, 14). There is not a temporal distinction between the mind before and after knowledge, but a real distinction between knower and known. The nous in itself is mere knower. It requires an object for knowledge for there to be intellection and for the nous truly to exist (5.1.7, 24). Nous is not simple (6.7.13, 1), but a composite of seer and seen (5.3.11, 29 f.). However, in true knowledge, the knower and known become one.

It is made as a potency in itself, so to receive its information from the One. The One is said to cause the potency and information of the nous like the sun both causes the eye to be and to see (6.7.16, 21–35). In other places the

<sup>17</sup>οὗτος δὲ πολὺς ἐξ ἑνὸς ἐγένετο, καὶ οὕτως γνοὺς εἶδεν αὐτό, καὶ τότε ἐγένετο ἰδοῦσα ὄψις. τοῦτο δὲ ἤδη νοῦς, ὅτε ἔχει, καὶ ὡς νοῦς ἔχει· πρὸ δὲ τούτου ἔφεσις μόνον καὶ ἀτύπωτος ὄψις. οὗτος οὖν ὁ νοῦς ἐπέβαλε μὲν ἐκείνω, λαβῶν δὲ ἐγένετο νοῦς, αἰὶ δὲ ἐνδιάμενος καὶ γενόμενος καὶ νοῦς καὶ οὐσία καὶ νόησις, ὅτε ἐνόησε· Henry and Schwyzer, v. 2, p. 222.

cf. 5.1.7, 9–17; 6.7.17, 14.

nous is given more credit for doing the work of contemplation and producing its own noesis (6.5; 6.7.15).<sup>18</sup> But however expressed, nous is indefinite in itself, and only informed by eternally contemplating the One.

Because of its own derived perfection, nous must produce something beyond itself. It produces soul:

Nous generated soul, nous being perfect. For being perfect it had to produce, and being such a great power it could not be sterile. (5.1.7, 36–38)<sup>19</sup>

Thus, in accord with the first principle one of emanation, nous produces, because it is perfect.

### soul

Following along in the same passage, we see that the principles of emanation hold at the second stage as well:

Even there the product could not be greater, but being less, it was an image of nous, indefinite also, but defined by the producer as if it was made as a likeness. The offspring of nous is a certain reason and existence, i.e., that which is thought. This is what moves around nous, the light given off from nous and the completed trace of that one. In that realm it is gathered to that one and in this way it is filled and enjoys and shares in that and understands, but in this realm, it is affected by those things which come after it. It generates itself those things which must be less than soul. (5.1.7, 38–48)<sup>20</sup>

<sup>18</sup>See A. C. Lloyd, art. cit., p. 174.

<sup>19</sup>Ψυχὴν γὰρ γεννᾷ νοῦς, νοῦς ὧν τέλειος. καὶ γὰρ τέλειον ὄντα γεννᾶν ἔδει, καὶ μὴ δύναμιν οὐσαν τοσαύτην ἄγονον εἶναι. Henry and Schwyzer, v. 2, p. 196.

<sup>20</sup>κρεῖττον δὲ οὐχ οἶόν τε ἦν εἶναι οὐδ' ἐνταῦθα τὸ γεννώμενον, ἀλλ' ἔλαττον ὄν εἶδωλον εἶναι αὐτοῦ, ἀόριστον μὲν ὡσαύτως, ὀριζόμενον δὲ ὑπὸ τοῦ γεννήσαντος καὶ οἶον εἰδοποιούμενον. νοῦ δὲ γέννημα λόγος τις καὶ ὑπόστασις, τὸ διανοούμενον· τοῦτο δ' ἐστὶ τὸ περὶ νοῦν κινούμενον καὶ νοῦ φῶς καὶ ἵχνος ἐξηρητημένον ἐκείνου, κατὰ θάτερα μὲν συνηγμένον

The soul is produced as *ἀόριστον*, and gains information from nous. The soul is less perfect than its producer. Unlike nous it is subject to motion. Neither does it contemplate the One directly. Nous mediates the One to the soul, nous makes soul rational, giving it vestiges of the One (6.7.17, 36–39).

The soul is perfect enough to produce something itself, matter.

### **matter**

As indicated above, soul produces that which comes after it (5.1.7, 47). But what soul creates is absolute indeterminacy (3.4.1, 11). It is irrational and incomprehensible (3.9.3, 10). Even at earlier stages, Plotinus refers to the indefiniteness of nous and soul as “matter.” Final matter is distinguished from intellectual matter by its absolute indeterminacy. In contrast to intellectual matter, it is dead (2.4.5, 18). It cannot move, think, live or produce. It cannot take on the definition from above. It cannot have any definition in itself, but only receives definition in a composition with form:

Just as everything which was came about before it, it came about formless, and was informed by turning back to its generator as if it were being nourished. So also that which was generated from there was not the form of soul, for it no longer had life, but was completely indefinite. If there is indefiniteness in the prior things, it is only in form. They are not completely indefinite, but only with respect to their perfection. The new one is completely indefinite. It became body when it was perfected by receiving form which came upon potency. It is a receptacle of the generator and nourisher. (3.4.1, 8–16)<sup>21</sup>

ἐκείνω καὶ ταύτη ἀπομιπλάμενον καὶ ἀπολαῦον καὶ μεταλαμβάνον αὐτοῦ καὶ νοοῦν, κατὰ θάτερα δὲ ἐφαπτόμενον τῶν μετ' αὐτό, μᾶλλον δὲ γεννῶν καὶ αὐτό, ἃ ψυχῆς ἀνάγκη εἶναι χείρονα: Henry and Schwyzer, v. 2, p. 197.

<sup>21</sup>ἢ, ὡς περ πάν, ὅσον πρὸ τούτου ἐγεννᾶτο, ἀμόρφωτον ἐγεννᾶτο, εἰδοποιεῖτο δὲ τῷ ἐπιστρέφειν πρὸς τὸ γεννῆσαν οἷον ἐκτρέφόμενον, οὕτω δὴ καὶ ἐνταῦθα τὸ γεννηθὲν οὐ ψυχῆς ἔτι εἶδος—οὐ γὰρ ἔτι ζῆ—ἀλλ' ἀοριστίαν εἶναι παντελῆ. εἰ μὲν γὰρ κἂν τοῖς προτέροις

Soul not only creates the ἀοριστία of matter, it is also subject to suffering from the indefiniteness of matter. Because the indefiniteness of matter is intractable, soul ends up pouring itself into ἀοριστία (2.4.11, 31).

Because it is absolutely indefinite, matter is evil:

Because when something is completely lacking, i.e., matter, then it is truly evil and has no portion of the good. Neither does matter have being that it may thereby share in the good, but its being is homonymous. Truly said it does not exist. Simple lack is in the state of being not good. Evil is complete lack. (1.8.5, 8ff.)<sup>22</sup>

At each level of emanation there is a progression of ἀοριστία. At each stage, the product departs from the source as ἀόριστον, and returns to the source for definition. At each stage a new greater ἀόριστον is generated, until the product becomes too imperfect to reproduce and the process of emanation ceases.

evil

As absolute ἀόριστον, matter is said to be “true evil, without share of the good” (1.8.5, 9). At first blush matter as totally evil seems paradoxical to the monistic system of Plotinus. How can the necessary product of the perfect One be evil? Is evil matter a dualistic holdover in Plotinus’ thought?

Puech postulated a progression in Plotinus’ thought from matter as

ἡ ἀοριστία, ἀλλ’ ἐν εἶδει· οὐ γὰρ πάντα ἀόριστον, ἀλλ’ ὡς πρὸς τὴν τελείωσιν αὐτοῦ· τὸ δὲ νῦν πάντα. τελειούμενον δὲ γίνεται σῶμα μορφὴν λαβὼν τὴν τῆ δυνάμει πρόσφορον, ὑποδοχὴ τοῦ γεννήσαντος καὶ ἐκθρέψαντος· Henry and Schwyzer, v. 1, p. 283.

<sup>22</sup>ἀλλ’ ὅταν παντελῶς ἐλλείπη, ὅπερ ἐστὶν ἡ ὕλη, τοῦτο τὸ ὄντως κακὸν μηδεμίαν ἔχον ἀγαθοῦ μοῖραν. οὐδὲ γὰρ τὸ εἶναι ἔχει ἡ ὕλη, ἵνα ἀγαθοῦ ταύτη μετεῖχεν, ἀλλ’ ὁμώνυμον αὐτῇ τὸ εἶναι, ὡς ἀληθὲς εἶναι λέγειν αὐτὸ μὴ εἶναι. ἡ οὖν ἔλλειψις ἔχει μὲν τὸ μὴ ἀγαθὸν εἶναι, ἡ δὲ παντελής τὸ κακόν· Henry and Schwyzer, v. 1, p. 113.

evil in his early thought to matter as good in his later thought.<sup>23</sup> That theory cannot be maintained in light of the very negative picture of matter as the source of evils in Plotinus fourth to last tractate (1.8). Others postulate a difference between Plotinus' moral and metaphysical teaching. Plotinus saw matter as a metaphysical good but as a moral evil.<sup>24</sup> Such a divide cannot be maintained either.

Plotinus' ethical view of matter is the natural product of his system of emanation. At each stage of emanation, potency precedes actuality, ἀόριστον precedes definition. Nous is the indefinite knower which gains definition only in contemplating the One. The potency of the knowing subject does not temporally precede the actuality of nous, but in Plotinus' account, it is the indefiniteness of nous which explains the definition which it receives from the One. It is generated as an indefinite knower and dependent upon the One for information. The soul itself is created in ἀοριστία. It can move toward nous and the One or can descend into the greater ἀοριστία of matter (1.8.4, 25–32). The soul is subject to descend into evil because of its own mutability which results from its own ἀοριστία. Matter comes as the last stage as an ἀόριστον which cannot become defined. As such it is both a principle of evil and a natural progression of the outflow of ἀοριστία which is emanation. The principle of emanation and the principle of evil are the same: ἀοριστία of the emanated. Plotinus' metaphysics and his ethics are founded on the same principle of ἀοριστία and difference from the One.

The ἀοριστία of the product is not an accidental by-product of emanation. It is the principle of distinction which makes the everything proceed from the

<sup>23</sup>Henri-Charles Puech, *Les sources de Plotin: Entretiens sur l'antiquité classique*, V, Vandoeuvres-Geneva: Fondation Hardt, 1960, pp. 182–85.

<sup>24</sup>See note to Armstrong, Costello, and O'Brien above.

One. At its heart, Plotinus' metaphysics contains the seeds of evil.

### Augustine

By Augustine's time (354–430) Plotinus had already deposed matter as the fundamental metaphysical principle of diversity. Augustine went further than Plotinus by also casting matter down from its position as principle of evil. Augustine followed Plotinus in arguing that it was the perfection of power of the first principle that explained its ability to create beings other than itself. For Augustine *creatio ex nihilo* was the expression of God's omnipotent ability to create without need of supporting causes. But Augustine departed from Plotinus' view of matter as principle of evil. Plotinus argued that evil only entered at the last stage of emanation, in the absolute depravity of matter. Augustine countered that because every created intelligence had its origin *ex nihilo*, it also had to look beyond itself for its end. Every creature lacked God's perfection of being and was therefore mutable. Because it was mutable it could fall away from that end and become evil. Augustine centered blame on angelic and human wills. As created will turned to itself for beatitude rather than to God, sin entered into the cosmos. Matter was left as a passive bystander in the drama.

In spite of the many points of comparison between Plotinus' and Augustine's systems, they are fundamentally distinct.<sup>25</sup> Although Plotinus'

<sup>25</sup>The question of Augustine's Neoplatonic sources is still open. O'Meara has argued for Porphyry's influence in "Augustine and Neoplatonism," *Recherches Augustiniennes* 1, Paris: Études Augustiniennes, 1958, pp. 91–111. To establish Porphyry's doctrines he turns to Augustine's own citations. See also "The Neoplatonism of Saint Augustine," *Neoplatonism and Christian Thought*, ed. D. J. O'Meara, Albany: State University of New York Press, 1982, pp. 34–41.

For a defense of Plotinus as the most important source for Augustine's Neoplatonism, Robert J. O'Connell, *St. Augustine's Early Theory of Man*, A. D. 386–391, Cambridge, Mass.: Belknap Press of Harvard University Press, 1968, pp. 20–26. O'Connell downplays Porphyry as an independent thinker.



nous is eternally generated and comparable to the Logos of the Trinity for Augustine, the Father and Son for Augustine are of the same substance while Plotinus' One and nous are substantially distinct. Plotinus' One is beyond being. Unlike Plotinus' One, Augustine's God is being, life, and intelligence. Whereas Plotinus develops emanation as a unfolding in stages, Augustine's creation is simultaneous and completely in the power of God. God creates everything without intermediaries.

Augustine's doctrine of simultaneous creation also introduced a fundamental change into Christian teaching.<sup>26</sup> Theophilus of Antioch had introduced a notion of a two stage creation. God first created formless matter, from which he created the cosmos. The two stage creation truncated the theories of the Middle-Platonist creationists. It denied the eternity of matter, but maintained the temporal priority of matter over the cosmos. Augustine's

The comparison is made difficult because none of Porphyry's relevant works survive.

For fragments of Porphyry preserved in Victorinus, see Pierre Hadot, *Porphyre et Victorinus*, Paris: Etudes Augustiniennes, 1968.

<sup>26</sup>For an overview of several issues treated by Augustine with respect to creation see, William A. Christian, "Augustine on the Creation of the World," *The Harvard Theological Review*, 46, 1953, pp. 1-25.

For a discussion of Augustine's arguments for creation, see Christopher Kirwan, *Augustine*, London: Routledge, 1989, pp. 151-166.

None of these works treats Augustine's doctrine of *creatio ex nihilo* extensively. Peters' work focuses on Augustine's the question cited in its title. Christian and Kirwan give brief attention to *creatio ex nihilo* in Augustine, Christian, art. cit., pp. 18-22, and Kirwan, op. cit., p. 155. Neither discusses the development of the doctrine throughout Augustine's career, nor his relation to earlier Christian thinkers.

Aimé Solignac in "Exégèse et Métaphysique. Genèse 1, 1-3 chez saint Augustin," in *In Principio: Interpretations des premiers versets de la Genèse*, ed. Paul Vignaux, Paris: Études Augustiniennes, 1973, pp. 153-171, presents a chronological review of Augustine's exegetical treatment of the opening of *Genesis*.

On the question of God's alleged idleness before creation, see Edward Peters, "What Was God Doing Before He Created the Heavens and Earth?" *Augustiniana*, 34, 1984, pp. 53-74.

For more on the question of God's activities before creation see, Richard Sorabji, *Time, Creation, and the Continuum: Theories in antiquity and the early middle ages*, Ithaca, N.Y.: Cornell University Press, 1983, pp. 232-38.

understanding of matter as absolutely qualityless made the two-stage creation unworkable. As a result he introduced a simultaneous creation. However his move from two-stage to simultaneous creation came in stages.

At first he pictured precosmic matter as the confused stuff in terms similar the standard Middle-Platonist readings of Plato's *Timaeus*. In the *Confessions*, he adopted a picture of absolutely qualityless matter which led him to posit an atemporal creation of matter. Finally, he moved to a concreation of form, matter, and of the entire cosmos in *de Genesi ad litteram*.<sup>27</sup> In the end, Augustine's concreation of form and matter and the simultaneous creation of the cosmos would remain the principle alternative to the two stage creation of earlier Christian thinkers throughout the Medieval church.

#### *de Fide et Symbolo* (393)

In 393 while serving as an assistant to the Bishop of Hippo, Augustine wrote *de Fide et Symbolo*, an exposition of the Apostles' Creed and anti-Manichaean polemic. In opposition to Manichean dualism, Augustine argues that the omnipotent God of the Scriptures creates *ex nihilo*. The *creatio ex materia* of the Manichaeans contradicted God's omnipotence:

Thus they do not understand the creator of the world to be omnipotent, if he could not have made the world, unless some nature not created by him, like matter, helped him. (*de Fide et Symbolo* 2.2)<sup>28</sup>

<sup>27</sup>For Augustine's use of Scripture in the discussion of creation see, Gilles Pelland, *Cinq études d'Augustin sur le début de la Genèse*, Tournai: Desclée, 1972.

See also Aimé Solignac, "Exégèse et Métaphysique. Genèse 1.1–3 chez saint Augustin," In *Principio, Interprétations des premiers versets de la Genèse*, Paris: Études Augustiniennes, 1973, pp. 153–171.

<sup>28</sup>Ita intellegunt fabricatorem mundi non esse omnipotentem, si mundum fabricare non posset, nisi eum aliqua non ab illo fabricata natura tamquam materies, adiuveret. ed. Joseph Zycha, *Corpus Scriptorum Ecclesiasticorum Latinorum*, v. 41, Prague: Tempsky, 1900, p. 5.

In arguing for *creatio ex nihilo* from the omnipotence of God Augustine was following Theophilus and Tertullian. However, Augustine went further in his analysis of matter than Theophilus and Tertullian. They had simply argued that the co-eternity of matter would make it a co-arche and equal power to God. Augustine understood matter as potency and argued that even potency depended on God:

In no way is it to be believed that matter itself from which the world was made could have existed by itself, co-eternal and coeval with God, whether unformed, invisible, or in any other way. But whatever mode it had that it could be in whatever way and could receive the forms of distinct things, it did not have except by the omnipotent God. By his beneficence is not only every formed thing, but also everything formable. (*de Fide et Symbolo* 2.2)<sup>29</sup>

As a potency, matter has some being, even if merely potential being. At the early stage, however, he still held the two stage creation of the cosmos. He relied on *Wisdom of Solomon* 11.28 (see above, chapter 3), which claimed that God created the world from *materia invisibilis* or *informis*, which Augustine understood to teach that God first created the unformed matter, from which he then created the world.

#### *de Genesi liber imperfectus*

In *de Genesi liber imperfectus*, written shortly after *de Fide et Symbolo*,

<sup>29</sup>nullo modo credendum est illam ipsam materiam, de qua factus est mundus, quamvis informem, quamvis invisibilis, quocumque modo esset, per se ipsam esse potuisse tamquam coaeternam et coevam deo; sed quemlibet modum suum, quem habebat, ut quoquo modo esset et distinctarum rerum formas posset accipere, non habebat nisi ab omnipotente deo, cuius beneficio est res non solum quaecumque formata, sed etiam quaecumque formabilis. Zycha, p. 5.

Augustine expressly maintains the two stage creation. Matter was created in a primal state of confusion reminiscent of Plato's *Timaeus*. Augustine explained *Genesis* 1:1–2:

This earth which God made, was invisible and not composed, until it was divided from the same and composed in a definite order of things from confusion. (*de Genesi liber imperfectus* 4)<sup>30</sup>

Two-stage creation was soon to change under pressure from Augustine's Neoplatonism.

### *Confessions* (397)

In the *Confessions*, written in 397, shortly after Augustine's elevation to Bishop of Hippo, Augustine took *Genesis* 1:1–2 to teach the atemporal creation of matter.

The change in his exegesis followed from a change in view of the *informitas* of matter. In place of the Middle-Platonist precosmic confusion, Augustine adopted the absolute indefinite matter of the Neoplatonists:

It is true that everything changeable conveys to our note some formlessness, by which it receives form and by which it is changed and is altered. . . . It is true that formlessness, which is almost nothing, cannot have succession of time. It is true that whence anything comes about, can have the name of that thing from which it comes in some kind of speech. Therefore, that heaven and earth can be called some formlessness from which the heaven and earth are made. . . . It is true that everything that is made from something formless, is first unformed and then formed.

<sup>30</sup>haec autem terra, quam deus fecit, invisibilis erat et inconposita, donec ab eodem ipso discerneretur et ex confusione in rerum certo ordine constitueretur. ed. Joseph Zycha, CSEL 28.1, 1894, p. 465.

(*Confessions*, 12.19.28)<sup>31</sup>

Absolutely formless matter implies its atemporality. Augustine takes the formlessness in *Genesis* 1:2 in the strong sense, as absolute lack of form, thus implying the atemporality of the creation of matter.<sup>32</sup> Since absolute formlessness could have no time, matter could not temporally precede the cosmos.

Obviously there can be nothing in the text of *Genesis* which would move Augustine to such a firm insistence on the absolute formlessness of *Genesis* 1:2. Augustine's reasons for rejection of a two-stage creation go deeper than the meaning of a single word. Augustine had moved away from the view of matter as a primitive difference which was inherent in the Middle-Platonist view of precosmic matter. He had moved to the view of the Neoplatonists which saw matter as a consequence of difference. For Middle-Platonists matter was a primitive difference to the forms, which explained phenomena-form and body-soul dualism. For Neoplatonists, matter came at the last stage of differentiation from the One.

Augustine had rejected the Middle-Platonist view of matter as independent primitive and hence the view that it was created as a prime principle later to be formed into a cosmos made little sense.

<sup>31</sup>et verum est quod omne mutabile insinuat notitiae nostrae quandam informitatem, qua formam capit vel qua mutatur et vertitur. . . . verum est informitatem, quae prope nihil est, vices temporum habere non posse. verum est quod, unde fit aliquid, potest quodam genere locutionis habere iam nomen eius rei quae inde fit: unde potuit vocari caelum et terra quaelibet informitas unde factum est caelum et terra. . . . verum est omne quod ex informi formatur prius esse informe, deinde formatum. ed. James J. O'Donnell, Oxford: Clarendon Press, 1992, p. 174.

<sup>32</sup>For the relation of Augustine's discussion of creation to his theory of time, see Joseph Moreau, "Le temps et la création selon saint Augustin," *Giornale di Metafisica*, Torino, 1965, pp. 276–299. Republished in *Stoïcisme, Epicurisme, Tradition Hellénique*, Paris: J. Vrin, 1979, pp. 167–181.

Augustine took matter for the cosmos not as a matter *out of which*, but as matter *in which* a composite exists. Silver is the material out of which something new is made. Voice is a component in which the song exists. Voice does not and cannot preexist the composite:

So, matter is prior to that which was made from it. It is not prior because it made the world, rather it came about. Neither was it prior by some intervening time. For we do not first produce formless sounds without song and then join or compose them to the form of a song as we do with the boards from which chests are made, or with silver from which a vessel is made. For such materials precede even in time the forms of the things which come about from them. But it is not that way with song. For when it is sung, its sound is heard. It does not sound first without form and then become formed into a song. Whatever first sounds is gone, and you cannot find anything from it which you can recover and compose by art. Therefore the song is developed in its sound, which is its matter. (*Confessions*, 12.29.40)<sup>33</sup>

Like the voice in a song, matter did not exist prior to the creation of the cosmos. It exists only in composition with the cosmos. But in the *Confessions*, Augustine referred to the atemporal creation of matter. He had not yet taken the next step to which their co-dependence would lead him.

### *de Genesi ad literam*

Augustine economized his theory in the *Literal Commentary on Genesis* where he abandoned the atemporality of formless matter in favor of the

<sup>33</sup>sic est prior materies quam id quod ex ea fit, non ea prior quia ipsa efficit, cum potius fiat, nec prior intervallo temporis. neque enim priore tempore sonos edimus informes sine cantu et eos posteriore tempore in formam cantici coaptamus aut fingimus, sicut ligna, quibus arca, vel argentum, quo vasculum fabricatur. tales quippe materiae tempore etiam praecedunt formas rerum quae fiunt ex eis, at in cantu non ita est. cum enim cantatur, auditur sonus eius, non prius informiter sonat et deinde formatur in cantum. quod enim primo utcumque sonuerit, praeterit, nec ex eo quicquam reperies quod resumptum arte componas. et ideo cantus in sono suo vertitur, qui sonus eius materies eius est. O'Donnell, p. 174.

concreation. The concreation of form and matter was part of the simultaneous creation of the whole creation. In the *Literal Commentary* Augustine argues that the work of the six days was done simultaneously, adopting Philo's argument that narration of six days served only as a symbol for the order of creation. (*Literal Commentary*, 5.5, p. 145 f.)

Again he drew his illustration from vocalization:

Not because formless matter is temporally prior to formed things, since both are created simultaneously, both that from which something is made and that which is made. Just as voice is the matter of words ("words" indicate formed voice), but the speaker does not first emit a formless voice so that he can then bind it and form it into words. So also God, the creator, did not at a prior time make formless matter and then form it by the order of each nature as if by afterthought. He created matter informed. (*Literal Commentary on Genesis*, 1.15)<sup>34</sup>

Again relying on the figure of the spoken word, this time Augustine is ready to draw the full implication of the co-dependence of form and matter. Not only is a formless voice atemporal, it is non-existent. Matter cannot exist without any form. Therefore, it must be created with form.

Augustine himself presented the best summary of his teaching in *Contra Adversarium*:

Matter is not completely nothing because it is said to be formless, neither is it co-eternal with God inasmuch as it is made from nothing, neither did another make it so that God could have something from which to make the world. It is impossible that

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<sup>34</sup>Non quia informis materia formatis rebus tempore prior est, cum sit utrumque simul concreatum, et unde factum est, et quod factum est — sicut enim vox materia verborum est, verba vero formatam vocem indicant, non autem qui loquitur prius emittit informem vocem, quam possit postea conligere atque in verba formare: ita et deus creator non priore tempore fecit informem materiam et eam postea per ordinem quarumque naturarum quasi secunda consideratione formavit: formatam quippe creavit materiam. ed. Joseph Zycha, CSEL 28.1, 1894, p. 21.

the omnipotent one be said unable to create unless he found that from which he created. Therefore, God made matter. Neither is it to be considered evil because it is unformed, but it is to be understood as a good, because being formable is the capacity. For if form is something of the good, being capable of the good is something of the good. Just as a confused voice is a clamor without words, an articulated voice comes about when it is formed into words. Therefore, the former is formable and the latter is formed. The former receives form and the latter has form. It is clear which of these is that from which something comes about. No one says that the sound of the voice comes from words, but who does not understand that spoken words come about from the voice.

Neither is it to be thought that God first made unformed matter and then after an interval of time formed that which he had made unformed. But as sounding words come about from the speaker, when the originally unformed voice does not later receive form, but it is produced formed, so God should be understood to have made the world from formless matter, so as to have concreated it with the world(1. 8. 11–9.12).<sup>35</sup>

Augustine asserts that matter has some share of the Good, if only as a potency.

As a capacity for good, it is created.

In Augustine's theory, the pride of created intelligences dethrones matter made prince of evil by the Platonists. Souls and angels become evil by delighting in themselves as their own end rather than seeking their end in God. The

<sup>35</sup>Non ergo quia informis dicta est, omnino nihil est, nec deo fuit vel ipsa coaeterna, tamquam a nullo facta, nec alius eam fecit, ut haberet deus, de qua faceret mundum. Absit enim ut dicatur omnipotens non potuisse facere, nisi unde faceret inveniret. Ergo et ipsam deus fecit. Nec mala est putanda, quia informis, sed bona est intellegenda, formabilis id est formationis capax. Quoniam si boni aliquid est forma, nonnihil est boni esse capacem boni. Sicut vox confusa est clamor sine verbis, vox vero articulata fit cum formatur in verba. Est ergo illa formabilis, ista formata, illa, quae formam capit, ista, quae habet. Nam quid horum unde fiat, in promptu est. Neque enim quisquam dixerit de verbis fieri sonum vocis, sed potius de voce fieri verba sonantia quis non intellegat?

Nec putandus est deus informem prius fecisse materiam et intervallo aliquo interposito temporis formasse, quod informe prius fecerat, sed sicut a loquente fiunt verba sonantia, ubi non prius vox informis post accipit formam, sed formata profertur, ita intellegendus est deus de materie quidem informi fecisse mundum, sed simul eam concreasse cum mundo. ed. Klaus-D. Daur, Corpus Christianorum Series Latina 49, Turnholt: Brepols, 1985, p. 44 f.



attention of the soul is not merely diverted by matter, rather it is the soul's own distinction from God that both requires it to look to God for this end and allows it to slip away from him.

Only God is true being, perfect, and unchanging. The creature is not from God (*de Deo*), it is not God and does not have God's nature:

God is the highest good who has no superior. Therefore he is the unchangeable good, and therefore eternal and immortal. All other goods are by (*ab*) Him but not of (*de*) Him. That which is of him is that which is he himself. The things made by him are not that which he is. Therefore, if he alone is unchangeable, all which he made is changeable, because he made it from nothing. He is so omnipotent that he could create good things, both large and small, celestial and terrestrial, spiritual and corporeal of (*de*) nothing, that is out of (*ex*) that which did not exist at all. (*de Natura Boni*, 1)<sup>36</sup>

Augustine argues both from God as supreme good and as *ipse esse*. As supreme good, God is immutable. As *ipse esse*, he is who he is. The creature is not what God is, therefore it is not immutable or eternal as God is.

Augustine's use of the term *ipsum esse* is Platonic. Like the Platonists' distinction between the forms and the phenomena, Augustine postulates a complete distinction between God and creature. Unlike Plato, there is no receptacle which is eternally distinct from the forms. The difference is created. God makes something distinct from himself *de nihilo*. It is the omnipotence

<sup>36</sup>Summum bonum, quo superius non est, deus est; ac per hoc incommutabile bonum est; ideo vere aeternum et vere immortale. cetera omnia bona non nisi ab illo sunt, sed non de illo. de illo enim quod est, hoc quod ipse est; ab illo autem quae facta sunt, non sunt quod ipse. ac per hoc si solus ipse incommutabilis, omnia quae fecit, quia ex nihilo fecit, mutabilia sunt. tam enim omnipotens est, ut possit etiam de nihilo, id est ex eo, quod omnino non est, bona facere, et magna et parva, et caelestia et terrena, et spiritalia et corporalia. ed. Joseph Zycha, CSEL 25.2, 1892, p. 855.

cf. Sed iam tibi dictum est, quia quod fecit, non de ipsius natura est, sed ex nihilo fecit, quia omnipotens est. non erat, et fecit, non de se, non de aliqua re, quam ipse non fecerat, sed ex nihilo. *contra Felicem* 2.19; ed. Joseph Zycha, CSEL 25.2, 1892, p. 849.

of God that creates difference. God's omnipotent creative power echoes Plotinus' perfection which produces difference.

Creatures are not of the essence of God. They are created *de nihilo*:

I say that the created rational nature could sin because it was made from nothing. What other reason could it sin other than it was not of the nature of God? For if it were not made of nothing, it would naturally be of God, whatever it were. If it were made naturally from God, it would be of God's nature. If it were God's nature, it could not sin. Therefore, it could sin even though it was made by God, because it was made of nothing and not of God. (*contra Iulianum Pelagium* 5.38)<sup>37</sup>

The creatures differ absolutely from God. None is of God's nature or perfection, therefore none is immutable.

In a new twist to the teaching of *creatio ex nihilo*, Augustine uses the maxim of *creatio ex nihilo* as the principle of evil in creatures. *Creatio ex nihilo* implies that the creature's end is not natural. The creature needs God, because just as it is not sufficient for its own beginning neither is it sufficient for its own end. Nothing in the creature contributed to its beginning, therefore, its end is also not in the creature. It must seek an end which is higher than itself. Because the end is higher than itself, the creature can fall away from that end. It does not naturally find its end:

Although not every creature can be blessed (for neither beasts,

<sup>37</sup>hoc dico ego, naturam quae rationalis creata est, propterea peccare potuisse, quia ex nihilo facta est: quod aliud quid est, quam propterea peccare potuisse, quia natura Dei non est? si enim de nihilo facta non esset, de Deo naturaliter esset, quidquid esset: si naturaliter de Deo esset, Dei natura esset: si Dei natura esset, peccare non posset. ideo igitur peccare potuit, quamvis facta sit a Deo, quia de nihilo facta est, non de Deo. ed. Migne, *Patrologia Latina* 45, 1475 f.

cf. cum enim deus summa essentia sit, hoc est summe sit, et ideo inmutabilis sit: rebus, quas ex nihilo creavit, esse dedit, sed non summe esse, sicut est ipse; et aliis dedit esse amplius, aliis minus, atque ita naturas essentiarum gradibus ordinavit. *de Civitate Dei* 12.2; ed. Bernard Dombart and Alphonse Kalb, CCSL 48, 1955, p. 357.

nor trees, nor stones, nor anything of this kind attains or receives this gift) that creature which can, cannot do so from itself, because it is created from nothing, but it can from him by whom it was created. If God is received, the creature is blessed, if he is lost, the creature is miserable. God is not blessed by another but by himself, and therefore cannot be miserable because he cannot lose himself. Therefore, we say that only the one, true, blessed God is the immutable good. All things which he makes are good because they are by him, but they are changeable, because they are not made of him, but of nothing. (*De Civitate Dei*, 12.1)<sup>38</sup>

The creature can find its end only in God. If it turns away from God it becomes sinful and miserable. The fault lies in itself, not in matter. It is imperfect in itself to begin with and requires God as an end. It becomes sinful when it looks to itself as its end rather than to God. Its pride in itself is the principle of evil:

If the cause of the misery of the evil angels is sought, it happened justly, because they turned from him who ultimately is and turned into themselves, who are not ultimately. What else should this vice be called other than pride. "Pride is the beginning of every

<sup>38</sup>Ita quamvis non omnis beata possit esse creatura (neque enim hoc munus adipiscuntur aut capiunt ferae ligna saxa et si quid huius modi est), ea tamen, quae potest, non ex se ipsa potest, quia ex nihilo creata est, sed ex illo, a quo creata est. Hoc enim adepti beati, quo amisso misera est. Ille vero qui non alio, sed se ipso bono beatus est, ideo miser non potest esse, quia non se potest amittere. Dicimus itaque inmutabile bonum non esse nisi unum verum beatum Deum; ea vero, quae fecit, bona quidem esse, quod ab illo, verum tamen mutabilia, quod non de illo, sed de nihilo facta sunt. CCSL 48, p. 355 f.

cf contra Iul.: catholica fides, Dei tantummodo sine initio naturam praedicat, summi scilicet atque incommutabilis boni, hoc est, illius ineffabilis Trinitatis: a quo summo, ut dictum est, atque incommutabili bono universam conditam dicit esse creaturam, naturasque omnes bonas, quamvis impares Creatori, quia ex nihilo creatas, ideoque mutabiles: ita ut omnino nulla natura sit, quae non aut ipse sit, aut ab ipso facta sit; ut quantacumque aut qualiscumque natura sit, in quantum natura est, bonum sit. Quaerunt itaque a nobis, unde sit malum. Respondemus, Ex bono, sed non summo et incommutabili bono. Ex bonis igitur inferioribus atque mutabilibus orta sunt mala. Quae mala licet intelligamus non esse naturas, sed vitia naturarum: tamen simul intelligimus ea, nisi ex aliquibus et in aliquibus naturis esse non posse; nec aliquid esse malum, nisi a bonitate defectum. *contra Iulianum Pelagium* 1.8.36–37; ed. Migne, *Patrologia Latina* 45.666).

sin" (*Sirach* 10.13). (*De Civitate Dei*, 12.6)<sup>39</sup>

Augustine stands in such a unique position as the preserver and conveyor of Classical and Early Christian thought to the medieval world and beyond, sometimes it is hard to see the differences between his own thought and that which preceded. In the doctrine of creation, he did not pass on Classical and Patristic thought just as he had found it. He made deep changes to both traditions. He brought an end to matter as a primary metaphysical principle. It was a consequence of creation, not a primitive cause of generation. Neither was it the cause of evil. When one considers that it had served as the principle of evil from the time of Plato and that it had been universally despised by the dogmatic schools of Philosophy, Augustine's exoneration of matter stands as no small feat.

At the same time, Augustine's treatment of creation left a nagging question unanswered. Augustine was clear that God had created matter and everything else, but he provided no explanation of the relation of the creature to God. One finds Augustine painfully aware of the problem in his *Confessions*. After his conversion and baptism, he still is left to wonder how he as a temporal creature can approach the eternal God. The eternal truly is what it truly is, while the temporal constantly slips from the future which does not yet exist and into the past which no longer exists; from nothing into nothing. Facing such a great gulf from God, teetering on the brink of non-existence, sometimes Augustine seems to have left the created world further from true being than Plato had.

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<sup>39</sup>Cum vero causa miseriae malorum angelorum quaeritur, ea merito occurit, quod ab illo, qui summe est, aversi ad se ipsos conversi sunt, qui non summe sunt; et hoc vitium quid aliud quam superbia nuncupetur? *Initium quippe omnis peccati superbia*. CCSL 48, p. 359.

## Chapter 6, Being and Difference: *Creatio ex nihilo* and participation in Aquinas

When Aquinas (1224/5–1274) set out to explain the Christian doctrine of *creatio ex nihilo*, he came face to face with a problem which his Christian predecessors<sup>1</sup> had simply not addressed, how to explain the relation of the being of the creature to the being of God. Because *creatio ex nihilo* was long established as orthodox, Aquinas could not accept Aristotle's position that god, the separate substances, celestial bodies, and sublunary matter were eternally existent, distinct, and that none caused the being of the other. Neither

<sup>1</sup>Augustine set the limit of speculation concerning creation in the western Christian tradition [With the exception of John Scotus Eriugena, who under influence of Pseudo-Dionysius developed a very non-Augustinian view of creation. His work was so distinct that it did not attract any imitators in the western tradition. On Eriugena's theory of creation, see John J. O'Meara, *Eriugena*, Oxford: Clarendon Press, 1988, pp. 93–104]. Some followed Augustine very closely as did Taio Caesaraugustinus who became Bishop of Saragon in 646. He adopted Augustine's simultaneous creation of the whole cosmos and Augustine's arguments for simultaneous creation of form and matter (*Sententiarum* 1.6, Migne, Patrologia Latina, 80.48 f.). Bede (673–735) accepted the same arguments for simultaneous creation of form and matter, but he retreated from Augustine by taking the work of the six days of creation described in *Genesis* as successive works. Unlike Augustine, he did not interpret the phrase "the earth was formless and void" (*Genesis* 1.2) as an expression for unformed matter, but for the unfinished state of the world (as before him had Ambrose in *Hexaemeron* 1.7, hom. 2. 25 & 27, Migne, 14.147 f., Basil in *Hexaemeron* hom. 2, Migne, 29. 33, and Chrysostom, *In Genesis* hom. 2, Migne, 53.31). Bede found all four traditional elements described in *Genesis* 1.2, "and the earth was formless and void and the waters covered the earth." In addition to earth and water that were named, Bede found fire and air hidden in the earth, citing the observable phenomena of vapors that still proceed from the earth and fire that heats underground fountains (*Hexaemeron* 1, Migne, 91.13–15).

Bede's reading was accepted by Rabanus Maurus (bishop of Fulda, 856) who quoted it in his *Commentary on Genesis* nearly verbatim (on *Genesis* 1.2, Migne, 107.446). As late as the 12th century the scholast Honorius Augustoduensis still offered a paraphrase of Bede's explanation in his *Hexaemeron* (1, Migne, 172.255).

Other commentators followed Bede in principle with some modifications in detail. Remigius Antissiodorensis (d. 908) agreed that fire was hidden in the earth but claimed that the heavens created in *Genesis* 1.1 should be understood as air (*Commentarius in Genesim* ad loc., Migne, 131.55). Hugo of Saint Victor (d. 1142) made the most creative modifications, arguing that on the surface of the earth lay the other three elements all mixed together in a cloud, a theory reminiscent of some of the early Greek cosmologists (*Adnotationes Elucidatorines in Pentateuchon*, *In Genesim* 5, Migne, 175.34).

None of these writers pursued the question of the creation of matter any further than Augustine had and confined their explanations of the origin of matter to locating the four elements in the creation account of *Genesis*.

could he accept that the being of the creature was the being of god, as Plotinus had argued. What emerged as a solution to the problem was unique to Aquinas' own metaphysics.

Given that the being of the creature derives entirely from God, how can one explain that the being of the creature differs from God? There is nothing in the creature which is not of God, by what does the creature differ from God? Further, if God is *ipsum esse subsistens* (being itself subsisting) as Aquinas was wont to say, how can there be a subsistent being which is not God?

Aquinas argues that if God is *esse per se*, his esse will be unique:

Everything which is in something not according to the being of the thing itself, is in it through some cause, as pallor is in a human. For what does not have a cause is primary and immediate. It is therefore necessary that it be absolutely (*per se*) and be inasmuch as it is its very self. It is impossible that some one thing be in two things and be inasmuch as each is itself. For that which is said of a thing inasmuch as it is its very self, does not exceed it, as having three angles equal to 180° does not exceed a triangle, of which it is predicated, but is convertible with the same. (*Summa contra Gentiles* 2.15)<sup>2</sup>

God is *esse* inasmuch as he is. There can only be one such being. Since this *esse* is unique, other beings must not be *per se esse*, but have *esse* in another sense. Aquinas' challenge becomes to give an explanation of the being of the creature such that it does not have God's being, without positing some other being or potency independent from God by which to differentiate the creature

<sup>2</sup>Omne enim quod alicui convenit non secundum quod ipsum est, per aliquam causam convenit ei, sicut *album* homini: nam quod causam non habet, primum et immediatum est, unde necesse est ut sit per se et secundum quod ipsum. Impossibile est autem aliquod unum duobus convenire et utriusque secundum quod ipsum. Quod enim de aliquo secundum se ipsum dicitur, ipsum non excedit: sicut habere tres angulos duobus rectis aequales non excedit triangulum. ed. Leonine, Roma: 1918, p. 294 f.

from God.

*Creatio ex nihilo* had already eliminated from consideration Plato's receptacle and Aristotle's matter as principles of difference. Plato argued that the receptacle as space underlay all change in the physical world as an independent principle of change and becoming. Aristotle introduced the term "matter" to describe the principle underlying change in the world. Aristotle argued that matter could not exist independently as Plato's receptacle did. Nevertheless, matter was distinct from the forms which appeared in it and from the separate substances as well. Matter was not caused by form, even though it could not exist without one form or another. Matter helped explain the differences between the celestial and terrestrial realms because Aristotle argued that celestial bodies were eternal and required a different matter from the matter of the earthly bodies. The Middle-Platonists, e.g., Atticus, Plutarch, Albinus, and Apuleius, borrowed from both the Aristotelian and Platonic positions. They argued that matter was a principle of change, eternally distinct from god which explained the limited goodness of the creature.

Christian *creatio ex nihilo* as developed in the second century moved most directly against the Middle-Platonist solution. Matter was created, not an independent principle.

Neither could later Christians could accept the Plotinian solution, even though Plotinus' Neoplatonism eliminated matter as an underived principle of difference. As a thorough-going monist, Plotinus derived matter and all else from the One, as a single principle of all being. But there was only one being in the Plotinian cosmos, participated in by all. Being was fully and wholly present in each of the participants, so in a sense one could say that the being of the creature was the being of the divine. Aquinas was familiar with

the Neoplatonists in the works of Proclus and the Arabic Neoplatonist, Avicenna, but Plotinus' solution was not acceptable within Christian orthodoxy, which from early on preached complete distinction between the creature and Creator (*Romans* 1.25).

Augustine offered no adequate explanation of the relation of the creature to God. Even though Augustine was very clear that God had created all being, including matter. He also made it clear that the mutable nature of the creature was distinct from the eternal being of God. But he had no positive explanation of the relation of the being of the creature to God beyond an exemplarism, which explained that the nature of creatures imitated ideas in the divine intellect.

When Aquinas came to the problem of relating the being of the creature to the being of God, reliant as he was on Aristotle, the Neoplatonists and Augustine on so many points, the solution he forged was uniquely his own and unprecedented.

His solution can be stated in a word: participation.

The creature participates in God's being. Stripping the term of its Platonic, Aristotelian, and Plotinian meanings, Aquinas filled the term "participation" with his own unique meaning. Plato had introduced the term participation to explain the relation of things to the forms. Participants were deficient likenesses of wholly transcendent forms. The forms were so transcendent that they were not at all realizable by participants, who shared the form only denominatively and not by any real likeness. Neither did the transcendent forms cause their likenesses in the world. The demiurge modeled his work after the forms and the participant strove to imitate the forms, but the forms themselves remained utterly distinct, unchanged, and inactive.



Aristotle had a weak notion of participation by which different subjects could be said to share a form, in that they were each of the same kind. But Aristotelian participation made no claims as to the transcendence of one form over the other.

Plotinian participation was far too strong in the likeness of participant to participated, in that the being of the participant was in some sense the being of the participated.

For Aquinas, the creature's participation in the being of God implied at once: that the creature's being was at most analogously like God's being; that the creature was wholly dependent upon God for its entire being and its being was entirely caused by God; that it was the transcendence<sup>3</sup> of God beyond the creature that required that the creature be wholly dependent upon God. The merely analogous likeness of the creature to God meant more complete dependence than the specific or generic likenesses found in other participation relations among other causes and effects. It was precisely the difference of the creature from God that signalled its absolute dependence upon God in all aspects of its being, showing creation to be absolutely *ex nihilo*.

### *creatio ex nihilo*

Aquinas believes that *creatio ex nihilo* is rationally demonstrable and that it had been proven by philosophers as well as revealed by faith. By contrast, the temporal finitude of the created world is not demonstrable and

<sup>3</sup>By transcendence here I mean that the likeness of the creature to God is less than likeness of things sharing the same species and even less than likeness of things in the same genus. A stone and a person share the generic likeness of being corporeal. Two white surfaces share the same specific color, even if there are differences in the intensity of the color. God is not in any species or genus so no creature can share a specific or generic likeness with him, but only an analogous likeness.

rests upon the claims of revelation alone.<sup>4</sup> Aquinas does not believe that one could not prove the temporal finitude of the world from *creatio ex nihilo* as Bonaventure tried (*Sententiarum* 2.1.1.1, q. 2.6). In his late work, *On the Eternity of the World against Grumblers*, Aquinas argues that the eternity of the world does not contradict *creatio ex nihilo*:

The question rests upon this, whether being created by God to the full extent of ones substance contradicts not having a beginning of duration or not. That they are not contradictory is proven thus: (*de Aeternitate Mundi contra Murmurantes*)<sup>5</sup>

Aquinas argues that *creatio ex nihilo* does not imply non-being temporally preceded being. *Ex nihilo* does not mean that there must first have been nothing before there was something. *Ex nihilo* only denies that there was a material or passive potency from which God created the world.

Aquinas took time to argue that the eternity of the world did not contradict *creatio ex nihilo*, because if they were contradictory, the eternity of the world would be demonstrably false, because *creatio ex nihilo* was demonstrably true by reason:

If it were understood that something could have existed forever besides God, as if there could be something eternal besides him,

<sup>4</sup>Jaroslav Pelikan sets the eternity of the world against *creatio ex nihilo* as contrary positions. He quotes Aquinas' discussion of the eternity of the world in *Summa Theologiae* I 46.2 as evidence that Aquinas held that "*creatio ex nihilo* could be known only by revelation and that therefore the question lay beyond the competence of reason and philosophy to decide," *The Growth of Medieval Theology (600–1300)*, Chicago: University of Chicago Press, 1978, p. 291.

In the passage cited, Aquinas only argues that the eternity of the world, cannot be disproved by reason, but that does not show that *creatio ex nihilo* is unprovable, because the eternity of the world and *creatio ex nihilo* are compatible positions (see below, in text).

<sup>5</sup>In hoc ergo tota consistit quaestio, utrum esse creatum a Deo secundum totam substantiam, et non habere durationis principium, repugnet ad invicem, vel non. Quod autem non repugnet, sic ostenditur. Opera v. 16, Parma: Fiacador, 1865. p. 318.

which was not made by him, this would be an abominable error not only in faith, but also among the philosophers, who agreed and proved that everything which is in any way, cannot be unless it be caused by God, who maximally and truly has being. (*de Aeternitate Mundi contra Murmurantes*)<sup>6</sup>

In the *de Potentia Dei*, Aquinas names Plato, Aristotle, and Avicenna as those who have proved that God was the universal cause of being and therefore showed *creatio ex nihilo*. Historically it is better to say that Aquinas developed arguments for *creatio ex nihilo* from the writings of Plato and the second book of the *Metaphysics* (which is probably not by Aristotle). In any case, Aquinas believes that *creatio ex nihilo* was provable from the philosophy of Plato and Aristotle independent from revelation.

He considers the reasons for *creatio ex nihilo* to be necessary:

It was demonstrated above (q. 44 a. 1, 2) that no entity can be that is not from God, who is the universal cause of entire being. Hence, it is necessary to say that God produces things from nothing (*ex nihilo*) into being. (*Summa Theologiae* I 45.2)<sup>7</sup>

By *creatio ex nihilo* Aquinas does not only deny that any matter is presupposed to the creative act of God, but also that any essence, nature, form, act, potency, or order is presupposed to creation:

That, therefore, which is the cause of things inasmuch as they are beings, must be the cause of things not only inasmuch as they are things in such states by accidental forms, and not only

<sup>6</sup>Si enim intelligatur quod aliquid praeter Deum potuerit semper fuisse, quasi possit esse aliquid aeternum praeter eum, ab eo non factum; error abominabilis est non solum in fide, sed etiam apud philosophos, qui confitentur et probant quod omne quod est quoquo modo, esse non possit nisi causatum ab eo qui maxime et verissime habet esse. ed. Parma, v. 16, p. 318.

<sup>7</sup>Ostensum est autem supra quod nihil potest esse in entibus quod non sit a Deo, qui est causa universalis totius esse. Unde necesse est dicere quod Deus ex nihilo res in esse producit.

inasmuch as they are of such a kind by substantial forms, but also according to all that which pertains to their being in any way whatsoever. Thus, we must also affirm that prime matter is created by the universal cause of beings. (*Summa Theologiae* I 44.2)<sup>8</sup>

God creates all that pertains to being in any way whatsoever. Thus the potency of matter by which material beings exist as individuals is created by God. The forms which give them being are created by God. The essences by which creatures are what they are, are created by God. The natures by which their essences are displayed in operation are created by God. Their accidents, the order of subsisting things one to another, everything that in any way is, is created by God.

#### God creates *esse*

Aquinas' definitions of creation each define creation as the production of *esse* or *ens*:

1) We say this is to create, namely to produce a thing in being according to its entire substance. (*Scriptum super Libros Sententiarum* 2.1.1.2)<sup>9</sup>

2) emanation of the entire being from a universal cause, and this emanation we designate by the name of creation. (*Summa Theologiae* I 45.1)<sup>10</sup>

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<sup>8</sup>Hoc igitur quod est causa rerum in quantum sunt entia, oportet esse causam rerum, non solum secundum quod sunt *talia* per formas accidentales, nec secundum quod sunt *haec* per formas substantiales, sed etiam secundum omne illud quod pertinet ad esse illorum quocumque modo. Et sic oportet ponere etiam materiam primam creatam ab universali causa entium. ed. Leonine, Opera v. 4, Roma: 1888, p. 458.

<sup>9</sup>Hoc autem creare dicimus, scilicet producere rem in esse secundum totam suam substantiam. ed. R. P. Mandonnet, O. P., v. 2, Paris: Lethielleux, 1929, p. 18.

<sup>10</sup>emanationem totius entis a causa universali, quae est Deus: et hanc quidem emanationem designamus nomine creationis. ed. Leonine, v. 4, p. 464.

Pursuant to the definition, Aquinas explains that the proper object of creation is the existing substance, that which exists per se. The substance is created as a package, which includes its principles (form and matter), and its accidents. Form and matter are principles of the substance and do not have independent being any more than accidents do. There is no immaterial form of a dog running loose any more than there is a color red existing independent of any surface.

Neither matter nor form nor accident is properly said to become, but that which becomes is the subsisting thing. Since becoming terminates in being, becoming properly belongs to that to which being belongs by itself, that is to the subsistent thing. Hence, neither matter nor form nor accident is properly said to be created, but to be concreated. Properly, the subsisting thing is created, whatever it is. (*de Potentia Dei* 3.1 ad 12)<sup>11</sup>

God creates matter, but only in conjunction with form in a substance. Matter considered by itself is in potency. To say that a merely potential being exists in act is a contradiction:

To say that matter proceeds without form, is to say that a being is in act without act, which implies a contradiction. (*Summa Theologiae* I 66.1)<sup>12</sup>

Although he is clear that matter is only created informed, Aquinas

<sup>11</sup>neque materia neque forma neque accidens proprie dicuntur fieri; sed id quod fit est res subsistens. Cum enim fieri terminetur ad esse, proprie ei convenit fieri cui convenit per se esse, scilicet rei subsistenti: unde neque materia neque forma neque accidens proprie dicuntur creari, sed concreari. Proprie autem creatur res subsistens, quaecumque sit. ed. P. Bazzi, et. al., *Quaestiones Disputatae*, v. 2, Taurini: Marietti, 1965, p. 40.

cf. *Summa Theologiae* I 45.4, *de Potentia Dei* 3.8, *de Ver* 27.3 ad 9.

<sup>12</sup>Dicere igitur materiam praecedere sine forma, est dicere ens actu sine actu: quod implicat contradictionem. ed. Leonine, *Opera* v. 5, Roma: 1889, p. 154.

refuses to choose between the two prevailing Christian theological accounts of the creation of the material world: the two stage creation and Augustine's simultaneous creation. He notes that both accounts agree that matter cannot be created without any form whatsoever. Therefore, the doctors of two stage creation, Basil and Ambrose (see above), understood formless matter of the first stage of creation as relatively formless. What is first created is not absolutely formless but only formless with respect to its later internal formation and place within the cosmos.

As for forms, Aquinas accepts no pre-substantial or eternal forms. As we have seen, forms come into being only in the created substance. The same is true for essences of things. Contrary to a common modern interpretation (of Gilson, Wippel, and Dewan), the essences of things do not exist prior to creation as distinct ideas in the mind of God eternally.<sup>13</sup> According to this interpretation, some of these ideas serve as models for the things which are actually created, while others are merely possible. This interpretation, the exemplarist position, has been successfully challenged by Ross, who has argued that essences are created with things. He explains Aquinas' talk of ideas in the mind of God as Aquinas adoption of the "going" terminology, but a literal interpretation does not fit Aquinas' metaphysics. Ross argues that Aquinas is a voluntarist who claims that God chooses the universe and things he creates and creates the essences of things with things. I will not summarize Ross' arguments, many of which challenge the consistency of any exemplarist position

<sup>13</sup>See Etienne Gilson, *History of Christian Philosophy in the Middle Ages*, Random House, New York, 1955, p. 373.

John Wippel, "Thomas Aquinas, Henry of Ghent and Godfrey of Fontaines on the Reality of Nonexisting Possibles," ch. 7 of *Metaphysical Themes in Thomas Aquinas*, Washington, D. C.: The Catholic University of America Press, 1984, pp. 163–90. Originally published in *Review of Metaphysics* 34, 1981, pp. 729–58.

Dewan, *American Catholic Philosophical Quarterly*, 65, 1991, pp. 221–234, see note below.

in general.<sup>14</sup> I will offer additional textual evidence for the voluntarist reading of Aquinas.

To begin, contra the exemplarist reading of Aquinas, ideas and created essences are distinct. Ideas are the essence of God, the essences of things are not. God knows things in a more excellent way than they exist in their own essences. He knows them through the perfection and in the unity of his own essence. He does not need ideas which are distinct from his essence to know or to create his creatures. Aquinas clearly distinguishes the essences of creatures from the essence of God:

It must be that that by which there is cognition of a thing is united to the knower. Hence, the essence of created things, since it is separate from God, must not be the medium by which God knows the things themselves. But he knows them through a more noble medium, namely through his essence. Therefore, he knows them more perfectly and in a more noble way, because nothing but his essence is the principle of his cognition. (*Scriptum*

<sup>14</sup>James Ross, "Aquinas's Exemplarism; Aquinas's Voluntarism," *American Catholic Philosophical Quarterly*, 64, 1990 pp. 171–198.

See responses to Ross by A. Maurer and L. Dewan, *American Catholic Philosophical Quarterly*, 65, 1991, pp. 213–220 and 221–234.

Maurer argues that Ross has read Gilson and Maurer's positions unfairly, because they all agree that God's essence is his one idea. However Ross argues that multiplicity is only said of the divine ideas ad extra, Maurer seems to smuggle plurality back into the divine essence: "Plurality enters into the ideas through God's knowledge of himself as capable of being participated in many ways by creatures," p. 216.

Dewan unabashedly claims that there are a plurality of divine ideas and that Aquinas is a photo-exemplarist, p. 221, and: "The multiplication of divine ideas by denomination from creatures is *not* from *actual* creatures, or even from creatables which have been 'tagged' to be created, but from creatables themselves, prior to the intention of the divine choice to create," p. 222 (emphasis Dewan's).

See Ross' reply to Maurer and Dewan, *American Catholic Philosophical Quarterly*, 65, 1991, pp. 235–243.

For another critique of exemplarism, particularly with respect to ideas for the possibles, see W. Norris Clarke, "What is Really Real?" *Progress in Philosophy: Philosophical studies in honor of Rev. Doctor Charles A. Hart*, Bruce: Milwaukee, 1955, pp. 61–90. Clarke argues that real existence of mere possibles would violate *creatio ex nihilo* and divine simplicity, p. 87.

*super Libros Sententiarum* 1.36.2.1 ad 3)<sup>15</sup>

Created essences, unlike ideas are “separate” and distinct from the essence of God. Unlike God’s essence, essences of created things are created with things:

Because being is attributed to an essence, not only the being, but the essence itself is said to be created, because before it had being, it was nothing, except perhaps in the intellect of the creator, where it is not a creature, but a creating essence. (*de Potentia Dei* 3.5 ad 2)<sup>16</sup>

Divine ideas cannot be identified with created essences, for Aquinas identifies them with the essence of God:

Therefore, it must be said that in the divine wisdom there are accounts of all things, which we above (q. 15 a. 1) called *ideas*, that is exemplar forms existing in the divine mind. Although these are multiplied with respect to things, in reality they are not other than the divine essence, for his similarity can be participated by diverse things in diverse ways. Thus, God himself is the first exemplar of all things. (*Summa Theologiae* I 44.3)<sup>17</sup>

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<sup>15</sup>oportet illud per quod est cognitio rei, esse unitum cognoscenti; unde essentia rerum creaturarum, cum sit separata a Deo, non potest esse medium cognoscendi ipsas res a Deo; sed cognoscit eas nobiliori medio, scilicet per essentiam suam; et ideo perfectius cognoscit et nobiliori modo; quia sic nihil nisi essentia eius est principium suae cognitionis. Parma, v. 6, Parma: Fiaccador, p. 292.

<sup>16</sup>quod ex hoc ipso quod quidditati esse attribuitur, non solum esse, sed ipsa quidditas creari dicitur: quia antequam esse habeat, nihil est, nisi forte in intellectu creantis, ubi non est creatura, sed creatrix essentia. ed. Bazzi, p. 49.

cf. *de Veritate* 5.9: omnem naturam immediate esse a Deo conditam. ed. Bazzi, op. cit., p. 164.

<sup>17</sup>Et ideo oportet dicere quod in divina sapientia sunt rationes omnium rerum: quas supra diximus *ideas*, id est formas exemplares in mente divina existentes. Quae quidem, licet multiplicentur secundum respectum ad res, tamen non sunt realiter aliud a divina essentia, prout eius similitudo a diversis participari potest diversimode. Sic igitur ipse Deus est primum exemplar omnium. ed. Leonine, v. 4, p. 460.

cf. *Summa Theologiae* I 15.1 ad 3.



Ideas really are “nothing other than the divine essence.” The same cannot be said of created essences. How could ideas equal both the essence of God and created essences? How could other ideas be merely possibles while the essence of God is in no way potential?

As the passage makes clear, God himself is the exemplar of all things. All creatures are likenesses of him. They all participate in his being, but they also imitate him in their essences, only by a different mode. Both the *esse* and the essence of the creature are similitudes of God. There is one exemplar of all creatures, but it is infinitely imitable by diverse creatures, because of its perfection in being.

How do we get to talk of many ideas? The ideas are “multiplied” with respect to things. In reality they are only one: the divine essence. They are only many because the ideated things are many. There are many things which are made as likenesses of God. There are infinite ways he can and is copied. Therefore, there are many ideas. The multiplicity of ideas arises only from the multiple and diverse copying of the single divine essence. Talk of ideas presupposes that something is made which is an image of the divine essence. If there were no creation, there would be no ideas. The term *idea* refers to the divine essence with respect to something which is a copy of the divine essence, just as *creator* refers to God with respect to the work of creation (*Summa Theologiae* I 13.7). Whereas *creator* refers to the whole of creation and is therefore singular, the relation of *idea* is different according to the diversity of kinds of creatures and is therefore plural. But the plurality signifies the multiplicity of copies, not in a multiplicity of the essence of God.

Hence, this name *idea* names the divine essence according as it is the exemplar imitated by the creature. The divine essence will

be the proper idea of this thing according to a determined mode of imitation. Because diverse creatures imitate it in other ways, it is said that it is another idea or account by which human and horse are created. Hence, it follows that with respect to many things which imitate the divine essence in different ways, there is a plurality among ideas, although the imitated essence is one. (*Scriptum super Libros Sententiarum* 1.36.2.2)<sup>18</sup>

God creates essences in substances. In Aquinas' creationist and substantialist system, there is no room and no need for distinct ideas as models for creation.

### order of nature

Just like essences, the whole order of nature (or laws of nature) is created and instituted by God (*de Potentia Dei* 6.1 ad 6; *Summa Theologiae* I 25.5 ad 3). Here as elsewhere, Aquinas' substantialism comes through. Laws of nature do not float around as disconnected abstractions. The course or law of nature consists in the ordering of creatures one to another, that is in the exercise of the power of one substance over another: "cursus autem naturae est secundum ordinem unius creaturae ad aliam" (*de Potentia Dei* 6.1 ad 3).

The universal governing principles of the cosmos rest in the power of the highest created substances, separated intelligences, i.e., angels. The higher in the order of the universe the creature, the more universal its effects:

The higher any substance, the more universal is its power. The

<sup>18</sup>Unde cum hoc nomen *idea* nominet essentiam divinam secundum quod est exemplar imitatum a creatura, divina essentia erit propria idea istius rei secundum determinatum imitationis modum. Et quia alio modo imitantur eam diversae creaturae, ideo dicitur quod est alia idea vel ratio qua creatur homo et equus; et exinde sequitur quod secundum respectum ad plures res quae divinam essentiam diversimode imitantur, sit pluralitas in ideis, quamvis essentia imitata sit una. Parma, v. 6, p. 293.

cf. de Veritate 3.2 co, ad 2.

power of an intellectual substance is more universal than the power of a body. The higher intellectual substances have powers which are not explicable by any corporeal power. Therefore, they are not united to any body. (*Summa contra Gentiles* 3 80)<sup>19</sup>

Since the separate intellectual substances are more universal than bodies, they have power over all bodies:

Particular powers are naturally able to be moved by universal powers, as is clear as much in art as in nature. It is right that intellective power is more universal than any other operative power, for intellective power contains universal forms. Every operative power is only from some proper form of the operator. It is therefore necessary that every other creature is moved and ruled by intellectual powers. (*Summa contra Gentiles* 3 78)<sup>20</sup>

These are the immutable intellectual principles of the universe. They govern everything that happens in the physical realm, both heavenly and terrestrial.

They govern the motions of the heavenly bodies:

Elements therefore act by the power of the celestial bodies and the celestial bodies by the power of the separate substances. Hence, when the activity of the separate substances ceases, then the activity of the heavenly body must cease. When it ceases, the activity of the elemental body must cease. (*de Potentia Dei* 5.8)<sup>21</sup>

<sup>19</sup>quanto aliqua substantia est superior, tanto virtus eius est universalior; virtus vero intellectualis substantiae est universalior virtute corporis: superiores quidem inter intellectuales substantias habent virtutes non explicabiles per aliquam virtutem corpoream, et ideo non sunt corporibus unitae. ed. Leonine, v. 14, Roma: 1926, p. 232.

cf. *Summa Theologiae* I 110.1.

<sup>20</sup>Virtutes particulares natae sunt moveri a virtutibus universalibus: ut patet tam in arte quam in natura. Constat autem quod virtus intellectiva est universalior omni alia virtute operativa: nam virtus intellectiva continet formas universales, omnis autem virtus operativa tantum est ex aliqua forma propria operantis. Oportet igitur quod per virtutes intellectuales moveantur et regantur omnes aliae creaturae. ed. Leonine, v. 14, p. 230.

<sup>21</sup>*Elementa ergo* agunt in virtute corporum caelestium et corpora caelestia agunt in virtute substantiarum separatarum; unde cessante actione substantiae separatae, oportet quod cesset actio corporis caelestis; et ea cessante oportet quod cesset actio corporis elementaris. ed. Bazzi,

Their effects in the lower bodies are only mediated through the motion of the heavenlies (*de Veritate* 5.8). Through the heavenlies, the separated substances have very specific effects on earth:

Such forms proceed from separate substances as from first principles, which by the mediation of the power and motion of heavenly bodies, impress forms which are intellectual with them into corporeal matter. (*de Operationibus Occultis Naturae*)<sup>22</sup>

The forms which Aquinas mentions are the forms found in the hierarchy of nature above the virtues of the elements and minerals and below the human soul. These include the forms of minerals, plants, and animals. Aquinas attributes the forms of minerals, plants, and animals to the agency of the heavenly bodies (see below), but they can be traced further back to more universal causes: the separated substances. Aquinas gives specific examples of this in the *de Anima*:

Above these forms are again the souls of plants, which have a similarity not only to the heavenly bodies, but also to the movers of the heavenly bodies, inasmuch as they are the principles of any motion for all which move themselves. Further above these are the souls of beasts which have a similarity to the substance moving the heavenly bodies, not only in the operation by which they move bodies, but also because they are cognitive in themselves, even though the knowledge of beasts is only of material things and is material itself, in that it needs material organs. (*de Anima* 1 co.)<sup>23</sup>

p. 152.

<sup>22</sup>Procedunt tales formae a substantiis separatis sicut a primis principiis, quae mediante virtute et motu caelestium corporum imprimunt formas apud se intellectas in materiam corporalem. ed. Leonine, Opera v. 43, Roma: 1976, p. 184.

<sup>23</sup>Super has autem formas sunt iterum animae plantarum, quae habent similitudinem non solum ad ipsa corpora caelestia, sed ad motores corporum caelestium in quantum sunt principia cuiusdam motus, quibusdam seipsa moventibus. Super has autem ulterius sunt animae brutorum,

In good Aristotelian tradition, the motors of the celestials are separated substances. The similarities referred to here are the forms of plants and animals and are among the forms referred to as the effects of the separate substances in the passage from the *de Operationibus Occultis Naturae* quoted above. Thus, the similarity here is not accidental, but it is a participation caused by the separated substances themselves. They produce the power of motion in plants and animals as their own likeness in the material realm.

The changes suffered by the effects of the separated substances in the material realm are due to the mediation of the motions of the celestial bodies which introduce alteration into the lower realm (*Summa Contra Gentiles* 3 91.4). The celestial bodies cause generations and corruptions in the material realm (*Summa Theologiae* I 115.3 co, ad 2).

Thus Aquinas establishes a hierarchy of substances by which higher substances produce both forms and orders in lower realms. There are no absolute, abstract laws of nature in his system. The “laws” governing the cosmos are all effects of substances. Both substances and their subsequent order are produced by God *ex nihilo*.

Even mathematical truths follow from the creation of things. Mathematics are not independent entities but abstracted from the motion and matter of things:

**Mathematicals do not subsist as independent beings. Because if they subsisted, there would be some good in them, namely their being. But mathematical are independent only in reason, as they are abstracted from motion and material. (*Summa***

**quae similitudinem iam habent ad substantiam moventem caelestia corpora, non solum in operatione qua movent corpora, sed etiam in hoc quod in seipsis cognoscitivae sunt; licet brutorum cognitio sit materialium tantum, et materialiter, unde organis corporalibus indigent. ed. Bazzi, op. cit., p. 284.**

*Theologiae* I 5.3 ad 4)<sup>24</sup>

Mathematics are abstracted from things. Truth and impossibility in mathematics and even in logic rest only in the formal reason of things:

The logician and mathematician consider things only according to formal principles. Hence, nothing is impossible in logic or mathematics, except that which is contrary to the formal reason of a thing. (*de Potentia Dei* 6.1 ad 11)<sup>25</sup>

There is no independent truth to numbers, only that which is grounded in the reality of things from which they are abstracted. Had God made different things, then the truths of mathematics would have been different. We know that different geometries are possible merely by varying principles such as the definition of straight lines. Given a universe not based on three dimensions or extension in space as we know it, it is easy to imagine that the truths of mathematics would be quite different.

### participation

Aquinas' discussions of *creatio ex nihilo* tell only part of the story of the creature's dependence upon God. For a fuller picture of the relation of the creature to God, we need to consider the meaning of the term "participation."

The term is very important in Aquinas' works, occurring over 3000 times in his writings (in both noun and verb forms: participation and to

<sup>24</sup>mathematica non subsistunt separata secundum esse: quia si subsisterent, esset in eis bonum, scilicet ipsum esse ipsorum. Sunt autem mathematica separata secundum rationem tantum, prout abstrahuntur a motu et materia. ed. Leonine, v. 4, p. 59.

<sup>25</sup>logicus et mathematicus considerant tantum res secundum principia formalia; unde nihil est impossibile in logicis vel mathematicis, nisi quod est contra rei formalem rationem. ed. Bazzi, p. 160.

participate). It also occurs at very key points in the presentation of both of Aquinas' longest and most systematic presentations of Christian doctrine, the *Summa Contra Gentiles*<sup>26</sup> and the *Summa Theologiae*.<sup>27</sup>

In the past, the Platonist overtones of the term led many Thomas scholars to relegate it to secondary importance. That changed with the work of Fabro and Geiger, two scholars who rightly estimated the importance of the doctrine and successfully brought it to the forefront of Thomistic studies.<sup>28</sup>

<sup>26</sup>*Summa Contra Gentiles*, lib. 1 c. 16 n. 5; c. 17 n. 7; c. 22 n. 9; c. 23 n. 2; c. 25 n. 6; c. 28 n. 4; c. 29 n. 5; c. 32 n. 6; c. 32 n. 7; c. 38 n. 4; c. 38 n. 5; c. 40 n. 3; c. 41 n. 3; c. 43 n. 8; c. 43 n. 9; c. 60 n. 4; c. 75 n. 3; c. 75 n. 4; c. 78 n. 3; c. 81 n. 4; c. 89 n. 12; c. 96 n. 3; c. 98 n. 4; c. 102 n. 4; lib 2 c. 2 n. 4; c. 8 n. 3; c. 15 n. 5; c. 32 n. 9; c. 35 n. 7; c. 35 n. 8; c. 52 n. 8; c. 53 n. 4; c. 59 n. 3; c. 98 N.10.

<sup>27</sup>*Summa Theologica, Prima Pars*, q. 3 a. 2 co.; q. 3 a. 4 co.; q. 3 a. 8 co.; q. 4 a. 2 co.; q. 4 a. 2 ad 3; q. 4 a. 3 co.; q. 4 a. 3 ad 3; q. 5 a. 2 ad 1; q. 5 a. 3 ad 3; q. 6 a. 1 co.; q. 6 a. 1 ad 2; q. 6 a. 4 co.; q. 9 a. 1 ad 2; q. 10 a. 2 ad 1; q. 10 a. 2 ad 2; q. 10 a. 3 co.; q. 10 a. 3 ad 1; q. 10 a. 5 ad 1; q. 11 a. 1 ad 2; q. 12 a. 11 ad 3; q. 12 a. 2 co.; q. 12 a. 2 ad 1; q. 12 a. 4 co.; q. 12 a. 6 co.; q. 12 a. 6 ad 3; q. 13 a. 10 co.; q. 13 a. 3 ad 1; q. 13 a. 5 ad 1; q. 13 a. 9 co.; q. 13 a. 9 ad 1; q. 13 pr.; q. 14 a. 6 co.; q. 14 a. 9 ad 2; q. 15 a. 2 co.; q. 18 a. 4 ad 3; q. 19 a. 2 co.; q. 22 a. 2 co.; q. 23 a. 4 ad 1; q. 24 a. 2 ad 3; q. 25 a. 3 ad 3; q. 33 a. 3 ad 1; q. 41 a. 3 ad 4; q. 42 a. 1 ad 2; q. 43 a. 3 co.; q. 44 a. 1 co.; q. 44 a. 1 ad 1; q. 44 a. 3 co.; q. 44 a. 3 ad 2; q. 44 a. 4 ad 3; q. 45 a. 5 co.; q. 45 a. 5 ad 1; q. 47 a. 1 co.; q. 47 a. 2 ad 2; q. 48 a. 6 co.; q. 49 a. 3 ad 4; q. 54 a. 1 co.; q. 57 a. 1 co.; q. 57 a. 3 ad 4; q. 57 a. 4 ad 3; q. 61 a. 1 co.; q. 63 a. 3 co.; q. 64 a. 1 ad 4; q. 65 a. 4 co.; q. 65 a. 4 ad 2; q. 68 a. 4 co.; q. 75 a. 5 ad 1; q. 75 a. 5 ad 4; q. 77 a. 7 co.; q. 79 a. 2 ad 2; q. 79 a. 3 co.; q. 79 a. 4 co.; q. 79 a. 4 ad 1; q. 79 a. 4 ad 5; q. 80 a. 1 co.; q. 84 a. 1 co.; q. 84 a. 4 co.; q. 84 a. 4 co.; q. 84 a. 4 ad 1; q. 84 a. 5 co.; q. 84 a. 6 co.; q. 85 a. 1 co.; q. 85 a. 3 ad 1; q. 85 a. 8 co.; q. 86 a. 4 ad 2; q. 87 a. 1 co.; q. 88 a. 1 co.; q. 89 a. 1 ad 3; q. 89 a. 4 co.; q. 90 a. 1 ad 2; q. 90 a. 2 ad 1; q. 93 a. 2 ad 1; q. 93 a. 3 ad 3; q. 94 a. 1 co.; q. 96 a. 1 co.; q. 96 a. 1 ad 4; q. 103 a. 2 ad 2; q. 103 a. 4 co.; q. 104 a. 1 co.; q. 105 a. 5 co.; q. 106 a. 4 co.; q. 107 a. 2 co.; q. 108 a. 5 co.; q. 108 a. 5 ad 2; q. 108 a. 5 ad 4; q. 109 a. 4 co.; q. 110 a. 2 co.; q. 113 a. 3 ad 3; q. 113 a. 6 co.; q. 115 a. 1 co.; q. 115 a. 1 ad 4; q. 115 a. 3 ad 2; q. 117 a. 1 co.

<sup>28</sup>L.-B. Geiger, O. P., *La participation dans la philosophie de S. Thomas d'Aquin*, Paris: 1942.

Cornelius Fabro first made his distinction between transcendental and predicamental participation in *La nozione metafisica di partecipazione secundo S. Tommaso d'Aquino*, Torino: 1939, 2nd ed., 1950.

See also Fabro, *Participation et causalité selon s. Thomas d'Aquin*, Louvain-Paris, 1961, which, in spite of its title, is also in Italian.

For my discussion I am relying on Fabro, "Intensive Hermeneutics of Thomistic Philosophy: The notion of participation," *Review of Metaphysics* 27, 1974, trans., B. M. Bonansea, pp. 449-491.

Check also C. A. Hart, "Participation and the five Ways," *The New Scholasticism* 26, 1952, pp. 267-282. Hart interprets participation in *esse* as an essence participating in the act of *esse*: "He thus establishes his own unique doctrine of participation by making the act of existence the supreme act which is participated in various kinds of existing beings by a distinct limiting

The systematic presentations of Fabro and Geiger played key roles in elucidating the term. However, neither properly took into account the equivocacy of the term in Aquinas' text. Given its complex history and Aquinas' proclivity to use rather than reform the terminology of his predecessors, equivocation was almost bound to occur in Aquinas' use of the term.

### Fabro and Geiger

Fabro and Geiger each presented his own two-fold system of participation. Geiger distinguished two systems of participation: 1) participation by composition and 2) participation by similarity also known as participation by formal hierarchy. In the first, composition is the cause of the limited perfection of the participant. In the second, participation by similarity, composition is consequent to formal limitation in the participant.<sup>29</sup> Geiger draws his distinction based on his study of Aquinas' discussion of participation in the *Commentary on the de Hebdomadibus* of Boethius. There Aquinas distinguishes three readings of the term participation, which in general means to possess a part.<sup>30</sup> Aquinas says that the recipient possesses only a part because it receives 1) a universal as a particular; 2) an abstract as a concrete subject; or 3) a cause as an effect. As examples of case 1 Aquinas cites a species principle of potential existence designated as essence," p. 282. The picture of an essence participating in an act of *esse* is misleading. No prior potential essence exists in order to participate.

Aquinas does refer to natures participating in being when he is discussing separate substances as a way of explaining the real distinction between essence and existence (*de Spiritualibus Creaturis 1, de Substantiis Separatis*), but this is not his general way of discussing participation.

<sup>29</sup>Si la composition *explique* la limitation, nous sommes en présence de la participation par composition. . . . Si la limitation est *antérieure, naturellement*, à la composition, encore qu'elle puisse l'impliquer, et même nécessairement, à titre de conséquence, nous avons affaire à la participation par hiérarchie formelle. Geiger, *op. cit.*, p. 29.

<sup>30</sup>Est autem participare quasi partem capere. *in Librum Boetii de Hebdomadibus, Expositio 2*, ed. Parma, v. 17, Parma: Fiacador, 1864, p. 341.



participating in a genus (e.g., human in animal), and an individual participating in a species (e.g., Socrates in human). As examples of concrete subjects (case 2) Aquinas uses matter participating in form and a subject in accidents. Effects are said to participate in their causes (case 3) especially when they are not adequate to their causes (as in the case of air participating in the light of the sun).

Geiger takes the first example as proof that participation can occur without composition, for species and genus are not composed, rather they form a substantial unity (p. 50). Their participation is by similarity and dissimilarity with respect to a form.<sup>31</sup>

Material diversity in the world is based on composition, and formal multiplicity is based on formal hierarchy (p. 68). Aquinas took Aristotelian participation, that by composition, as the base for the sensual knowledge of the world and superimposed on it a modified Platonic participation of similarity which explained the formal diversity of the world as the creation of God (p. 455).

Fabro takes issue with Geiger's distinction between participation by composition and similarity, charging that to do so "is to break the Thomistic synthesis at its center which is the assimilation and mutual subordination of the couplets of act-potency and *participatum-participans* in the emergence of a new concept of *esse*."<sup>32</sup> Fabro himself distinguishes a fundamental division of participation between transcendental and predicamental participation. "The former is concerned with *esse*, with the pure perfections that are directly

<sup>31</sup>Mais le point de vue formel qui définit la participation et qui permet de l'étendre aux rapports entre le genre et l'espèce, comme à ceux de l'espèce et de l'individu, c'est bien la relation de similitude ou de dissimilitude entre les états différents d'une même forme. Geiger, op. cit., p. 49.

<sup>32</sup>Cornelio Fabro, "Intensive Hermeneutics," p. 469.

grounded in it; the latter is concerned with univocal formalities, such as genera with respect to species and species with respect to individuals" (p. 471). Transcendental and predicamental participation can each be further divided into static and dynamic participation. Static is the act-potency distinction between essence and *esse* in the case of transcendental participation. In the case of predicamental, it is the act-potency distinction between matter and form and substance and accidents. "Parallel to the division of static participation and dependent on it, is the division of dynamic participation as causality, inasmuch as being by participation stems from being that exists by its very nature" (p. 473). Created *esse* is act with respect to the created essence, which itself derives "from the divine essence through divine Ideas" (p. 474). "Causality as predicamental participation, on the other hand, is concerned with *fieri*, which is the becoming or development of created reality within the order of genera and species" (p. 474). I don't think Fabro or Geiger succeeded in dividing participation according to the proper criteria. Each system misses the distinctions which Aquinas maintains in his usage. Geiger's division by composition and similarity seeks to divide two of the key features which are shared by all participation. All participation involves composition and similarity.

Fabro's fundamental distinction between transcendental and predicamental leaves out a whole class of non-transcendental, non-predicamental participations which are the prime examples Aquinas uses to explain participation in the being of God. These are equivocal causal participations, such as air participating in the light of the sun or water participating in heavenly motions. They are not transcendental predicates, but neither do they fit individual/species or species/genus participation of

Fabro's predicamental participation. Neither do they fit the predicamental participation in that their causation is not a causation of *fieri* as is the case in Fabro's predicamental participation.

By failing to divide participation properly Fabro and Geiger give a wrong picture of the participation of the creature in God. It is fundamentally unlike the participation of individuals in species and species in genera.

There is a fundamental distinction in participation which cuts across both Fabro's and Geiger's distinctions. It is a distinction which Aquinas never makes very directly, but it does emerge quite clearly upon consideration of Aquinas's use of the term. More importantly the distinction does help to elucidate some of the interpretative difficulties presented by Aquinas' text. Grammatically speaking the distinction is between transitive and intransitive participation. In intransitive participation, the participants share a form with each other. The object of participation is logical only. There is no species or genus external to the individuals which are said to participate in them. In transitive, the participant shares a form with its cause. The cause really exists beyond the participants.

For example, consider "Socrates and Plato participate in humanity" versus "Socrates participates in the being of God." In each case participation means to share, but in each usage, the minimum conditions for sharing differ. Intransitive participation requires a plurality of participants, as the notion of sharing arises from the mutuality of the participated among the participants. In transitive, only one participant is required as the notion of sharing arises from the participated communicating something of itself with the participant. In intransitive participation, no hierarchy between participants is implied. Socrates and Plato can share humanity equally. In transitive, the participated

is the cause and the participant has a diminished likeness of the actuality of the participated.

Because of the distinction between mutuality and hierarchy, intransitive will henceforth be called horizontal participation, and transitive will be called vertical. Horizontal and vertical participation share little more than a name and should be considered equivocal. Each participation requires its own definition. When one considers the definition which Aquinas gives for participation, it becomes clear that it applies only to vertical participation, not to horizontal. Aquinas gives a definition for participation in only one place:

To participate is nothing other than to receive partially from another. (*Commentary in de Caelo et Mundo*, 2.18)<sup>33</sup>

The definition fits the sense of vertical participation in that it makes explicit reference to reception from an external cause. It does not fit horizontal participation. Socrates does not receive anything partially from humanity. Aquinas never makes this distinction in participation directly, but he does distinguish two types of similarity which makes the distinction we are looking for:

Things can be said similar in two ways. They either participate in one form, as two white things participate in whiteness, . . . or one which has a form by participation imitates that which has it essentially, as if a white body were said to be similar to separate whiteness, or the body mixed with fire were similar to fire itself. A creature can have such a similarity which places composition in one and simplicity in the other, with respect to God, as it participates in goodness or wisdom or anything of this kind, each of which is in God as his essence. (*Scriptum super Libros*

<sup>33</sup>nam participare nihil aliud est quam ab alio partialiter accipere. ed. Leonine, v. 3, Roma: 1886, p. 193.

In one similarity, similar things share a common form. In the other, one shares the form which the other has essentially. These are the two types of sharing or participation which we have been discussing. Notice too that the example of sharing whiteness is really a case of horizontal participation although Aquinas uses a counter-factual case of independent whiteness as an example of vertical participation. In the real world sharing whiteness is horizontal participation, but Aquinas uses it counter-factually to illustrate vertical participation. He uses this type of counter-factual example frequently, even though he does not believe in an independently existing form of whiteness or heat. Because these types of examples muddle the lines between the two kinds of participation, they are a source of a good deal of confusion. Because they are juxtaposed here, the true whiteness of horizontal participation can be easily distinguished from the counter-factual independent form of whiteness that would be required to make sharing whiteness a true case of vertical participation.

Participation in the *esse* of God is a case of vertical participation. Cases of horizontal participation, such as participation in humanity or whiteness, tell us very little about participation in the being of God. In the main, Aquinas uses examples of vertical participation to illustrate participation in the *esse* of God. On rare occasion he will use an example of horizontal participation in

<sup>34</sup>Contingit autem aliqua dici similia dupliciter. Vel ex eo quod participant unam formam, sicut duo albi albedinem. . . .

Vel ex eo quod unum quod participative habet formam, imitatur illud quod essentialiter habet. Sicut si corpus album diceretur simile albedini separatae, vel corpus mixtum igneitate ipsi igni. Et talis similitudo quae ponit compositionem in uno et simplicitatem in alio, potest esse creaturae ad Deum participantis bonitatem vel sapientiam vel aliquid huiusmodi, quorum unumquodque in Deo est essentia eius. ed. Parma, v. 6, p. 375 f.

connection with participation in the *esse* of God. That does not nullify the distinction which Aquinas himself makes. It rather illustrates his ability to use analogous illustrations.

Again, Aquinas' defines to participate etymologically as: to possess partially from another.<sup>35</sup> His definition can be more fully explained as: to receive act (form or being) in a limited way from an agent. The participant does not receive the form of the agent equally with the agent, but according to some limitation. The greater the limitation, the less the similarity.

At the closest level the participant shares the form of the cause according to a material limitation. A material limitation is not great enough to make the shared form of a different species. At the next level, the shared form is so limited so as to bear only a generic likeness with the agent. At the lowest level of similarity, the being of God transcends specific and generic comparison with the being of the creature, so that the creature is only analogously like the being of God.

Aquinas illustrates the generic and specific similarity among corporeal causes and effects:

Of the forms which come into act in matter through the activity of a corporeal agent, some are produced according to the perfect account of the species and according to perfect being in material, just as the form of the generator. Therefore, contrary principles do not remain in the matter and forms of this kind remain after the activity of the generator, until the time of their corruption. But some forms are produced according to a perfect account of the species but not according to perfect being in material, just as the heat which is in heated water has the perfect species of heat, but not perfect being, because it is from the application of the form to matter. Therefore, a form contrary to this quality remains

<sup>35</sup>The use of *partialiter* and *capere* in the definition are clearly based upon an etymology of *parti-cipere*. The definition of participation in Aquinas' commentary on Boethius' *de Hebdomadibus* 2 is even more directly etymological: *partem capere*.

in the matter. Forms of this kind remain for a time after the activity of the agent, but they are prevented from remaining for long by the contrary principle which is in the matter. Some forms are produced in matter according to an imperfect species and according to imperfect being, as light in the air from a lighted body. For light is not in the air by a natural and perfect form as it is in the lighted body, but through an intentional mode. Hence, the appearance of a person remains in a mirror only as long as it is opposite the person. Thus, the light is not in the air, except in the presence of the lighted body. Intentions of this kind depend upon natural forms of bodies absolutely, and not only accidentally. Therefore their being does not remain when the activity of the agent ceases. (*de Potentia Dei* 5.1 ad 6)<sup>36</sup>

When heat is received by water, it receives a materially limited form of heat, not a formally limited form of heat. It is still the species of heat even though water does not receive the act of heat with the same perfection by which the heat exists in the fire. Because water is by nature cold, opposition to the heat of the fire remains in the matter of the water. Still the heat exists in the same specific nature of heat and behaves as the heat in the fire does, tending upwards, heating others and the like.

Because the water does not fully have the form of heat, even though it has heat according to the same formality, it is said merely to participate in the

<sup>36</sup>formarum quae incipiunt actu esse in materia per actionem corporalis agentis, *quaedam* producuntur secundum perfectam rationem speciei et secundum perfectum esse in materia, sicut et forma generantis, eo quod in materia non remanent contraria principia, et huiusmodi formae remanent post actionem generantis, usque ad tempus corruptionis. *Quaedam* vero formae producuntur quidem secundum perfectam rationem speciei, non autem secundum perfectum esse in materia, sicut calor qui est in aqua calefacta, habet perfectam speciem caloris, non tamen perfectum esse, quod est ex applicatione formae ad materiam, eo quod in materia remanet forma contraria tali qualitati. Et huiusmodi formae possunt ad modicum remanere post actionem agentis; sed prohibentur diu permanere a contrario principio, quod est in materia. *Quaedam* vero producuntur: in materia et secundum imperfectam speciem et secundum imperfectum esse, sicut lumen in aëre a corpore lucido. Non enim lumen est in aëre sicut *quaedam* forma naturalis perfecta prout est in corpore lucido, sed magis per modum intentionis. Unde sicut similitudo hominis non manet in speculo nisi quamdiu est oppositum homini, ita nec lumen in aëre, nisi apud praesentiam corporis lucidi: huiusmodi enim intentiones dependent a formis naturalibus corporum per se, et non solum per accidens; et ideo esse eorum non manet cessante actione agentium. ed. P. Bazzi, p. 132.

form of heat.

By contrast an image of a person in the mirror does not have the same specific form as the person has. The person in the mirror is not a living, breathing animal, even though it shares something of the appearance of a living breathing animal. Although the image in the mirror shares nothing of the substance of the person, it does share something of the quality and quantity of the person. Thus, there is some shared generic likeness according to the genera of quality and quantity.

To say that the creature participates in the being of God is to speak of even a greater limitation. The being of God is not of a different species or genus, but transcends all species and genus. The being received by the creature is only analogously like God's being, and not merely limited by being of a different species:

Since every agent makes that which is similar to itself inasmuch as it is an agent, and every agent acts according to its form, it is necessary that a likeness of the form of the agent is in the effect. Therefore, if the agent is contained in the same species as the effect, there will be a likeness between maker and made in form according to the same specific account, just as a human generates a human. If the agent is not contained in the same species, there will be a likeness, but not according to the same specific account, just as the things which are generated by the power of the sun. They do not receive the form of the sun in a specific likeness, but in a generic likeness.

If, therefore, there is an agent which is not contained in any genus, its effects will even more remotely approximate a likeness of the form of their agent, not by participating in a likeness of the form of the agent according to a specific or generic likeness, but by a certain analogy, just as being itself is common to all. Such are those which are from God. Inasmuch as they are beings, they are like him as the prime, universal principle of entire being. (*Summa Theologiae* I 4.3)<sup>37</sup>

<sup>37</sup>Cum enim omne agens agat sibi simile in quantum est agens, agit autem unumquodque secundum suam formam, necesse est quod in effectu sit similitudo formae agentis. Si ergo agens



The sun causes heat in terrestrial bodies, but according to Aquinas, the heat caused by the sun on the earth is not of the same mode as heat in the sun (*Summa contra Gentiles* I 29). In Aristotelian physics, the heat in earthly bodies tends upwards, heat in the sun does not. The sun does not have motion from the center, but only its eternal circular orbit. Even though they are not of the same specific formality, the heat in both sun and earth are corporeal effects, and they share a generic likeness.

God transcends genus and species, therefore no creature shares a specific or generic likeness with God. Nevertheless there is a real likeness, albeit analogous. Thus common predicates applied to God and creatures are only analogous (*Summa Theologiae* I 13.5).

Aquinas illustrates by citing the notion of *ipsum esse*, which he says is common to all. But it cannot be common to all by shared specific or generic likeness, since it applies to all genera. It bears only an analogous likeness across genera. Thus to say “exist” in the statement that grams exist (in the genus of quantity) is only analogous to existence in the statement that a dog exists (in the genus of substance). To say “exist” in “the relationship of paternity exists between a father and his daughter” (in the genus of relation) is only analogous to saying “exist” in “the daughter exists.” The existence in the relationship is consequent upon the substantial existence of the child.

sit contentum in eadem specie cum suo effectu, erit similitudo inter faciens et factum in forma, secundum eadem rationem speciei; sicut homo generat hominem. Si autem agens non sit contentum in eadem specie, erit similitudo, sed non secundum eandem rationem speciei; sicut ea quae generantur ex virtute solis, accedunt quidem ad aliquam similitudinem solis, non tamen ut recipiant formam solis secundum similitudinem speciei, sed secundum similitudinem generis.

Si igitur sit aliquod agens, quod non in genere contineatur, effectus eius adhuc magis accedent remote ad similitudinem formae agentis: non tamen ita quod participant similitudinem formae agentis secundum eandem rationem speciei aut generis, sed secundum aliqualem analogiam, sicut ipsum esse est commune omnibus. Et hoc modo illa quae sunt a Deo, assimilantur ei in quantum sunt entia, ut primo et universali principio totius esse. ed. Leonine, v. 4, p. 54.

To say that any creature exists is only analogously like saying God exists.

Comparison is further restricted in that the creature can be said to be like God, not God like the creature:

Because that which is perfectly in God is found in other things by some deficient participation, that by which similarity is noted, belongs to God absolutely, not to the creature. Thus, the creature has something that is of God and is thus rightly said to be like God. It cannot be said that God has something that is of the creature. Hence, God cannot consistently said to be like the creature, just as we do not say a person is like an image, but the image is rightly said to be like the person. (*Summa contra Gentiles* I 29)<sup>38</sup>

The creature shares a likeness with God, not God with the creature. We use similar conventions in speech today. For example, we say that a daughter is like or takes after her mother, not that a mother takes after her daughter.

Creation is not from any passive potency in God. There is no passive potency in God:

That which is in potency, is not brought into act except by a being in act. It was shown (q. 2 a. 3) that God is the first being. It is impossible that there is any potency in God. (*Summa Theologiae* I, 3.1)<sup>39</sup>

Creation is not a actualization in God from potency to act. In Aquinas'

<sup>38</sup>Quia igitur id quod in Deo perfecte est, in rebus aliis per quamdam deficientem participationem invenitur, illud secundum quod similitudo attenditur, Dei quidem simpliciter est, non autem creaturae: Et sic creatura habet quod Dei est, unde et Deo recte similis recte dicitur. Non autem sic potest dici Deum habere quod creaturae est. Unde nec convenienter dicitur Deum creaturae similem esse, sicut nec hominem dicimus suae imagini esse similem, cui tamen sua imago recte similis enuntiatur. ed. Leonine, v. 13, p. 90.

<sup>39</sup>quod est in potentia, non reducitur in actum nisi per ens actu. Ostensum autem est igitur quod Deus est primum ens. Impossibile est igitur quod in Deo sit aliquid in potentia. ed. Leonine, v. 4, p. 35 f.

metaphysics act precedes potency and nothing is brought from act to potency except by a being in act. A creator who moved from potency to act would require another being in act to move it from potency to act, which would contradict the concept of creator. Creation is not a change in God.

For Aquinas creation is not a change at all, for a change implies difference in something, before and after. In creation there is no change in God, neither is there a change in the creature properly speaking:

In every change or motion, there must be "something which is in a different state now than before. This is what the name 'change' means" (Aristotle, *Physics* A 7). When the entire substance of a thing is produced in being, there cannot be anything which is in different states, because that thing would not be produced, but presupposed to production. Therefore, creation is not a change. (*Summa contra Gentiles* 2.17)<sup>40</sup>

Since there was nothing to change from, there is no change in creation. Creation is a newness of being in the creature with relation to the creator, not a change from an earlier state:

Hence, in creating God produces things without motion. When motion is removed from action and passion, nothing remains except relation, as was said (a. 2, ad 2). Hence, it remains that creation is only in the creature as a certain relation to the creature as to the principle of its being. (*Summa Theologiae* I 45.3)<sup>41</sup>

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<sup>40</sup>In omni mutatione vel motu oportet esse *aliquid aliter se habens nunc et prius: hoc enim ipsum nomen mutationis ostendit*. Ubi autem tota substantia rei in esse producitur, non potest esse aliquod idem aliter et aliter se habens: quia illud non esset productum, sed productioni praesuppositum. Non est ergo creatio mutatio. ed. Leonine, v. 13, p. 304.

cf. ST I 45.2 ad 2.

<sup>41</sup>Unde Deus, creando, producit res sine motu. Subtracto autem motu ab actione et passione, nihil remanet nisi relatio, ut dictum est. Unde relinquitur quod creatio in creatura non sit nisi relatio quaedam ad Creatorem, ut ad principium sui esse. ed. Leonine, v. 4, p. 467.

Creation is only a real relation in the creature. In God it is merely a rational relation. Aquinas argues that when things are not of the same order, then the relation can be real on one side and merely rational on the other. For example, sensible and intellectual being in the senses and mind are not of the same order as their objects in the world. The sense is ordered to the knowledge of the object and when the sense comes to know its object it stands in a real relation to its object. The object has only a rational relation to the sense (*Summa Theologiae* I 13,7). When I look at the moon, I stand in a real relation to the moon as a perceiver. The moon does not stand in a real relation to me, but only in a rational relation as that to which my sight is directed.

God is outside of all created order and therefore does not stand in a real relation to any created thing:

Since God is outside the entire order of the creature, and all creatures are ordered to him, and not the reverse, it is clear that creatures are really referred to God. But in God there is no real relation to creatures, but only a rational relation, inasmuch as creatures are referred to him. (*Summa Theologiae* I 13.7)<sup>42</sup>

The creature is ordered to God as its creator, he is not ordered to the creature.

Since creation is only a rational relation in God, names such as creator and governor when applied to God are applied by external denomination. Such terms are vantaged from the creation as it is ordered to God, not from any ordering of God to the cosmos (*Summa Theologiae* I 13.7).

Any difference which may have occurred in the creation is similarly

<sup>42</sup>Cum igitur Deus sit extra totum ordinem creaturae, et omnes creaturae ordinetur ad ipsum, et non e converso, manifestum est quod creaturae realiter referuntur ad ipsum Deum; sed in Deo non est aliqua realis relatio eius ad creaturas, sed secundum rationem tantum, in quantum creaturae referuntur ad ipsum. ed. Leonine, v. 4, p. 153.

vantaged from the creature, and implies no difference in God. Had God made a different world, that does not mean that he would have acted differently. On the question of whether God could have created *melius* (better or something better), Aquinas responds that taken as the object of creation, God could have created something better, but:

If “better” is an adverb, and it implies manner on the side of the doer, God cannot do better than he does, because he cannot act from greater wisdom or goodness. (*Summa Theologiae* I, 25.6 ad 1)<sup>43</sup>

Thus, even had God made a better cosmos, he would not have acted better. A better world does not a better God make. His work is still perfect, despite the quality of the universe, because he creates from nothing according to his infinite goodness and power.

The being of God is absolute in itself and uncaused by any other. God’s being is his nature and essence. God exists *per se*. Because he exists *per se*, his being is uniqueness. No other being is its being, but is a participated being:

Everything which is in something not according to the being of the thing itself, is in it through some cause, as pallor is in a human. For what does not have a cause is primary and immediate. It is therefore necessary that it be absolutely (*per se*) and be inasmuch as it is its very self. It is impossible that some one thing be in two things and be inasmuch as each is itself. For that which is said of a thing inasmuch as it is its very self, does not exceed it, as having three angles equal to 180° does not exceed a triangle, of which it is predicated, but is convertible with the same. (*Summa contra Gentiles* 2.15)<sup>44</sup>

<sup>43</sup>Si vero *ly melius* sit adverbium, et importet modum ex parte facientis, sic Deus non potest facere melius quam sicut facit: quia non potest facere ex maiori sapientia et bonitate.

<sup>44</sup>Omne enim quod alicui convenit non secundum quod ipsum est, per aliquam causam convenit ei, sicut *album* homini: nam quod causam non habet, primum et immediatum est, unde necesse est ut sit *per se* et secundum quod ipsum. Impossibile est autem aliquod unum duobus convenire et utriusque secundum quod ipsum. Quod enim de aliquo secundum quod ipsum dicitur,

To say that God is *per se* is to say that:

- 1) His being does not depend upon another.
- 2) His being is not limited.<sup>45</sup>
- 3) His being is unique.

Anything which is *per se*, is unique, because that which is *per se* true of a thing does not exceed the thing. A *per se* feature is not true of anything else. It is a predicate or feature convertible with its subject. Thus, if you have a regular, Euclidean, plane figure whose interior angles are 180°, you have a triangle. For Aquinas a human is *per se* rational. By its nature a human is rational and it is the only thing which is rational. If you have a rational being, you have a human being.

A *per se* feature is unlimited and absolute. God can be said to be understanding *per se*, eternal *per se*, life *per se*, etc. In each of these acts, he is infinite and unrestricted.

A *per se* feature however is not the logical complement of a feature by participation. Not everything which is participated in by another is a *per se* feature. Material participata, such as the heat of fire, do not belong exclusively to their subjects. There can be many fires and many hot things. Thus even though fire is hot by nature, it is not hot *per se*. Likewise the sun gives light by nature (*lucens per naturam*), but it does not give light *per se*, because many stars give off light by their natures. In contrast, the moon only gives off light by participation in the light of the sun.

*ipsum non excedit: sicut habere tres angulos duobus rectis aequales non excedit triangulum, de quo praedicatur, sed eidem convertibiliter est.* ed. Leonine, v. 13, Roma: 1918, p. 294 f.

<sup>45</sup>*Summa contra Gentiles* 2. 52: *Esse autem subsistens oportet esse infinitum, quia non terminatur aliquo recipiente. Impossibile est igitur esse aliquod esse per se subsistens praeter primum.*

Aquinas says the same would be true of heat if it were immaterial. An immaterial heat would be per se hot, and would be unique. It would not be limited to a definite material subject as is the heat of fire. Neither could it be multiplied among many subjects as material heat is multiplied in the sun and in different fires:

The being of God itself is distinguished and individuated from any other being because it is being subsisting by itself and it is not appropriate for any nature which is other than being itself. Every other being which is not subsisting, must be individuated by a nature and a substance which subsists in such a being. And in these it is true that this being is different from his being, because it is of another nature, just as if there were a single heat existing per se without matter or subject, by this it would be distinguished from every other heat, although heat existing in a subject is not distinguished except by its subjects. (*de Potentia Dei* 7.2 ad 5)<sup>46</sup>

If there were a heat existing per se, it would be unique and unrestricted in its heat. Any other heat would be a participation of that heat. The same would be true of an immaterial, per se white, as Aquinas says:

It is impossible to understand that there are many separated whitenesses. If there were a whiteness separated from every subject and recipient, it would be unique. (*de Spiritualibus Creaturis* 1)<sup>47</sup>

The same is true of any separate form: “Neither can any form, if it is considered

<sup>46</sup>ipsum esse Dei distinguitur et individuatur a quolibet alio esse, per hoc ipsum quod est esse per se subsistens, et non adveniens alicui naturae quae sit aliud ab ipso esse. Omne autem aliud esse quod non est subsistens, oportet quod individuatur per naturam et substantiam quae in tali esse subsistit. Et in eis verum est quod esse huius est aliud ab esse illius, per hoc quod est alterius naturae; sicut si esset unum calor per se existens sine materia vel subiecto, ex hoc ipso ab omni alio calore distingueretur: licet calores in subiecto existentes non distinguantur nisi per subiecta. ed. Bazzi, p. 192.

<sup>47</sup>impossibile est intelligere quod sint plures albidines separatae; sed si esset albedo separata ab omni subiecto et recipiente, esset una tantum.

as separate, be more than one" (*de Substantiis Separatis*).<sup>48</sup>

Since God is immaterial, his being is not multiple among different material subjects, he is *per se* subsists.

Not every participation relation is between that which is *per se* and that which is *per participationem*, to try to explain all participation in these terms is too restrictive.<sup>49</sup> Such an interpretation loses the force of the examples of participations in material things which Aquinas uses so frequently. The proper contrast is between that which is *per participationem* and *per naturam*:

It is necessary to say that everything which is in any way is by God. For if anything is found in anything by participation, it is necessary that it is caused by that which has it essentially, as iron becomes fired by fire. It was shown above (q. 3 a. 4) when treating the divine simplicity that God is his own being, subsisting by himself. It was also shown (q. 7 a. 1 ad 3: a. 2) that subsisting being could only be one, just as if whiteness were subsistent, it could only be one, as whiteness is multiplied by recipients. It remains therefore that everything other than God is not being, but participates in being. It is therefore necessary that everything which is diversified by diverse participations in being, such that they are more and less perfect, are caused by one first being, which is most perfect. (*Summa Theologiae* I 44.1)<sup>50</sup>

<sup>48</sup>sicut nec aliqua forma, si separata consideretur, potest esse nisi una.

<sup>49</sup>See W. Norris Clarke, "The meaning of participation in St. Thomas Aquinas," *Proceedings of the American Catholic Philosophical Association* 26, 1952, pp. 147-157. Clarke gives a clear but brief presentation of participation. He defines it as the "the limited reception by the participans of a perfection that exists in its source in a state of illimitation or infinity." This is true for participation in God's *esse*, but not for the participations of the terrestrials in the celestials, nor for more run of the mill participations upon earth.

<sup>50</sup>necesse est dicere omne quod quocumque modo est, a Deo esse. Si enim aliquid invenitur in aliquo per participationem, necesse est quod causetur in ipso ab eo cui essentialiter convenit; sicut ferrum fit ignitum ab igne. Ostensum est autem supra, cum de divina simplicitate ageretur, quod Deus est ipsum esse per se subsistens. Et iterum ostensum est quod esse subsistens non potest nisi unum: sicut si albedo esset subsistens, non potest esse nisi una, cum albedines multiplicentur secundum recipientia. Relinquitur ergo quod omnia alia a Deo non sint suum esse, sed participant esse. Necesse est igitur omnia quae diversificantur secundum diversam participationem essendi, ut sint perfectius vel minus perfecte, causari ab uno primo ente, quod perfectissime est. ed. Leonine, v. 4, Roma: 1888, p. 455.



## hierarchy of participation

In considering preservation of being in *Summa Theologiae* I, 104, Aquinas first devotes considerable space to a discussion of the notion of causation. In the process he develops quite explicitly an hierarchy of participation.

Aquinas notes that every effect depends on its cause. While some effects depend on their causes only for their becoming, others depend on their causes for both their being and their becoming. This is the basis of his distinction between the *causa essendi* and *causa fiendi*. To be a *causa essendi*, a cause must be a cause of form, because *esse* follows form. If a cause is not cause of form then it is merely *causa fiendi*. To determine what type of cause is in view Aquinas analyzes the nature of the form in the effect. Does the form of the effect follow from the virtues of the material, as occurs in the case of artifacts?

Every effect depends upon its cause, inasmuch as it is its cause. It must be considered that some agent is the cause of its effect only with respect to its becoming and not directly with respect to its being. This happens both in artifacts and in natural things. The builder is the cause of the house only with respect to its becoming and not with respect to its being directly. It is clear that the being of the house follows its form, for the form of the house is its composition and order. This form follows the natural powers of certain things. Just as the cook cooks food by applying a certain natural, active power, namely fire, so also the builder makes the house by applying cement, stones, and wood, which are receptive of and maintain such a composition and order. So the being of the house depends upon the natures of these things, just as the becoming of the house depends upon the activity of the builder. (*Summa Theologiae* I 104.1)<sup>51</sup>

<sup>51</sup>Omnis enim effectus dependet a sua causa, secundum quod est causa eius. Sed considerandum est quod aliquod agens est causa sui effectus secundum fieri tantum, et non directe secundum esse eius. Quod quidem contingit et in artificialibus, et in rebus naturalibus. Aedificator enim est causa domus quantum ad eius fieri, non autem directe quantum ad esse eius. Manifestum

In the case of artifacts, the form of the effect follows upon the arrangement of the virtues of the material. As such the form of the artifact does not depend on the agent, and hence the being of the artifact does not depend on the agent either. It is a clear case of *causa fiendi*.

In natural causation, the form of the agent is reproduced in the effect, e.g., fire produces fire or human generates human. In these cases the natural agent reproduces its own form in other material. But it cannot be said to be the cause of the form of the effect, because that is also its own form. Nothing can be the cause of its own form. Aquinas does not explain why here, but since *forma dat esse*, to be the cause of one's own form would be to be the cause of one's own being (see *de Ente et Essentia* 4) which is contradictory. The cause of its own being would be actual and potential in the same respect and at the same time.

—By similar reason we must consider natural things. Because if an agent is not the cause of the form inasmuch as it is of this kind, it will not be the absolute cause of the being which follows such a form, but it will only be the cause with respect to becoming. It is clear that if two things are of the same species, one cannot be the absolute cause of the form of the other, inasmuch as it is such a form, because then it would be the cause of its own form, as they have the same account. But it can be the cause of this kind form inasmuch as it is in matter, that is that this matter acquires this form. This is a cause with respect to becoming, as a human generates a human, and fire generates fire. Therefore, whenever a natural effect is able to receive the form of the agent according to the same account by which it is in the agent, then the becoming of the effect will depend upon the agent and not its

est enim quod esse domus consequitur formam eius: forma autem domus est compositio et ordo; quae quidem forma consequitur naturalem virtutem quarundam rerum. Sicut enim coquus coquit cibum adhibendo aliquam virtutem naturalem activam, scilicet ignis; ita aedificator facit domum adhibendo caementum, lapides et ligna, quae sunt susceptiva et conservativa talis compositionis et ordinis. Unde esse domus dependet ex naturis harum rerum, sicut fieri domus dependet ex actione aedificatoris. ed. Leonine, v. 5, Roma: 1889, p. 464.

being.<sup>52</sup>

Aquinas next turns to a consideration of the only possible candidate for cause of being, the equivocal cause. Aquinas is careful to note that an equivocal cause may be a cause of being, not that it must be.

—But sometimes the effect is not able to receive the impression of the agent according to the same account by which it is in the agent, as is clear in all agents which do not make something similar in species, as the celestial bodies are the cause of generation of the lower bodies which are dissimilar in species. Such an agent can be the cause of the form according to the account of such a form and not only inasmuch as it is received in this matter. Therefore it is the cause not only of the becoming but of the being.<sup>53</sup>

Aquinas does not spell out what among the celestial bodies' effects are caused to be and which are merely caused to become. It is a problem because the celestial bodies are responsible for so much in Aquinas' science. Celestial bodies are responsible for terrestrial generation and corruption (*Summa Theologiae* I 115 ad 3) and for the forms of everything above the level of the

<sup>52</sup>— Et simili ratione est considerandum in rebus naturalibus. Quia si aliquod agens non est causa formae in quantum huiusmodi, non erit per se causa esse quod consequitur ad talem formam, sed erit causa effectus secundum fieri tantum.

Manifestum est autem quod, si aliqua duo sunt eiusdem speciei, unum non potest esse per se causa formae alterius, in quantum est talis forma: quia sic esset causa formae propriae, cum sit eadem ratio utriusque. Sed potest esse causa huiusmodi formae secundum quod est in materia, id est quod haec materia aquirat hanc formam. Et hoc est esse causa secundum fieri; sicut cum homo generat hominem, et ignis ignem. Et ideo quodcumque naturalis effectus est natus impressionem agentis recipere secundum eadem rationem secundum quam est in agente, tunc fieri effectus dependet ab agente, non autem esse ipsius. ed. Leonine, v. 5, p. 464.

<sup>53</sup>— Sed aliquando effectus non est natus recipere impressionem agentis secundum eandem rationem secundum quam est in agente: sicut patet in omnibus agentibus quae non agunt simile secundum speciem; sicut caelestia corpora sunt causa generationis inferiorum corporum dissimilium secundum speciem. Et tale agens potest esse causa formae secundum rationem talis formae, et non solum secundum quod aquiritur in hac materia: et ideo est causa non solum fiendi, sed essendi. ed. Leonine, v. 5, p. 464.

elements up to but not including the human soul (*de Operationibus Occultis Naturae*). Each of these effects are equivocal, but for which are the celestials the *causa essendi*?

If we use the same analysis which Aquinas gave for natural and artificial causes and apply his test of dependence, the issue becomes clearer. The celestials do not cause the being of the four elements, because their virtues merely follow the material dispositions of matter. The human soul is not caused by celestial body but by a higher cause. It is created by God and its rational activity exceeds the virtues of material bodies (*de Operationibus Occultis Naturae*). Therefore, the soul cannot be caused by material beings, even celestial ones.

The heavenly motions are the cause of generation and corruption of elements and humans, not of their forms. If the heavenly motions cease, then generation and corruption of elements and of humans will cease, but the elements and human souls will continue (*de Potentia Dei* 5.7, see below).

Forms which exceed the virtues of the elements, but are lower than the human soul are caused by heavenly bodies. That includes the forms of minerals, magnets, plants, and beasts (*de Operationibus Occultis Naturae; de Potentia Dei* 5.9). The motions of the heavenly bodies are the cause of the forms of each of these, and hence the cause of their being. They pass the test that Aquinas demands for the cause of being: if the activity of the agent ceases, the being of the effect ceases. As Aquinas argues in the *de Potentia Dei*, if the motions of the heavenlies cease, then each of these forms and creatures will cease to exist (*de Potentia Dei* 5.9).

In *Summa Theologiae* I 104, Aquinas does not discuss any of these examples rather he cites the example of light in air:

Just as the becoming of a thing cannot remain, if the activity of the cause of becoming ceases, so also the being of a thing cannot remain, if the action of the agent which is not only of becoming but also of being ceases. This is the reason why heated water retains its heat when the activity of the fire ceases, but air does not remain illuminated, not even for a moment, when the action of the sun ceases. The matter of the water is receptive of the heat of the fire according to the same account by which it is in the fire, hence if it is perfectly led to the form of fire, it will retain heat always. If, however, it participates imperfectly in something of the form of fire in a certain mere beginning, the heat will not remain forever, but for a time, because of its weak participation in the form of fire. Air, however, is in no way able to receive light by the same account by which it is in the sun, that it might receive the form of the sun, which is the principle of light. Therefore, because it has no root in the air, the light ceases immediately, when the activity of the sun ceases.<sup>54</sup>

Aquinas contrasts examples of *causa fiendi* and *essendi*: fire as a cause of heat in water; and sun as a cause of the illumination of air. In each case, the effect, be it being or becoming, depends on the action of the cause and will cease in the absence of the cause. Water cannot *become* hot without fire, but air can neither *become* nor *be* illuminated without the sun. Water can *be* hot for a time after the fire is removed but water will eventually lose its heat, because of the contrary condition of its nature, which is wet and cold (see *de Potentia Dei* 5.1 ad 6, see below). By air becoming illuminated, Aquinas means the

<sup>54</sup>Sicut igitur fieri rei non potest remanere, cessante actione agentis quod est causa effectus secundum fieri; ita nec esse rei potest remanere, cessante actione agentis quod est causa effectus non solum secundum fieri, sed etiam secundum esse. Et haec est ratio quare aqua calefacta retinet calorem, cessante actione ignis; non autem remanet aer illuminatus, nec ad momentum, cessante actione solis. Quia scilicet materia aquae susceptiva est caloris ignis secundum eandem rationem qua est in igne: unde si perfecte perducatur ad formam ignis, retinebit calorem semper; si autem imperfecte participet aliquid de forma ignis secundum quandam inchoationem, calor non semper remanebit, sed ad tempus, propter debilem participationem principii caloris. Aer autem nullo modo natus est recipere lumen secundum eandem rationem secundum quam est in sole, ut scilicet recipiat formam solis, quae est principium luminis: et ideo, quia non habet radicem in aere, statim cessat lumen, cessante actione solis. ed. Leonine, v. 5, p. 464.

blue glow of the sky in sunlight, not merely the intentional light which air carries as a medium for perception. Fire causes an intentional light in the air which allows the eye to see the fire, but the intervening air does not itself become illuminated.

Although the heat in the water is less intense, it is univocal with the heat of the fire, because it occurs in the same material substrate. Since water is of the same matter as fire, under the right conditions it can be transformed into air and then fire. Because it is a univocal cause, fire cannot be the cause of the being of the heat in water, merely of its becoming.

By contrast sunlight in the air is equivocal with the light of the sun. As Aquinas states, it exists according to a different account. Air does not receive the form of the sun, neither does it receive the formal ability to illuminate as the sun does. Celestial forms cannot be produced in terrestrial matter. Terrestrial matter is subject to contraries, while celestial forms are not. Because the effect is in a different matter, it is equivocal.

Aquinas makes a further distinction in the *de Operationibus Occultis Naturae* between equivocal causes:

It must be considered that an inferior agent acts or is moved by the power of a superior agent in two ways. In one way, the activity proceeds from the inferior agent by a form or a power which is impressed upon it by the superior agent, as the moon is illuminated by the light which is received from the sun. In the other way, the agent acts only through the power of the superior agent, with no form received for activity, but the agent is only moved by the motion of the superior, as a carpenter uses a saw for cutting. The cutting is principally the activity of the artisan and secondarily of the saw inasmuch as it is moved by the artisan and not because the activity follows any form or power which remains in the saw after the motion of the artisan. (*de Operationibus Occultis Naturae*)<sup>55</sup>

<sup>55</sup>aliquid agens inferius secundum superioris agentis virtutem dupliciter agit vel movetur.

Here Aquinas distinguishes receiving a form by which the inferior may act, as the moon receives the formal ability to illuminate, from merely receiving action as an instrument. Further on Aquinas cites the example of sea water which receives wave motions from the motions of heavenly bodies. It does not receive the ability to move itself, merely the act of motion (*de Operationibus Occultis Naturae*). Since motion is an accidental form, the waters do receive a form, but not *forma ad agendum*. Similarly, air receives illumination, but not a form by which it may illuminate on its own.<sup>56</sup>

Other earthly bodies, such as magnets and minerals, receive *formas ad agendum* from heavenly bodies. Even though they receive *formas ad agendum*, the forms they receive are still equivocal. They are received in terrestrial matter, which is distinct in the Aristotelian science from celestial. Because they are in different matter, the forms received by magnets and minerals are equivocal with the celestial agents.

The example of light in the air is thus doubly removed from the light in the sun. Sunlight in the air is equivocal with the light of the sun and the air is illumined but it does not receive a form by which it can illumine. Thus, when the sun goes down, the air has no formal ability to illuminate in itself and it loses its light immediately. In contrast, the water does receive a form of heat which exists for a time in it in the absence of fire.

Uno quidem modo in quantum actio procedit ab eo secundum formam vel virtutem sibi impressam a superiori agente, sicut luna illuminat per lumen a sole receptum. Alio vero modo inferius agens agit per solam virtutem superioris agentis, nulla forma recepta ad agendum, sed per solum motum quo a superiori agente movetur; sicut carpentator utitur serra ad secandum, quae quidem sectio est principaliter actio artificis, secundo vero serrae in quantum ab artifice movetur, non quod talis actio sequatur aliquam formam vel virtutem quae in serra remaneat post motionem artificis. ed. Leonine, v. 43, Roma: 1976, p. 183.

<sup>56</sup>Even though air does illuminate, it does not have its own form by which it illuminates, see de Veritate 5.8, the sun causes illuminata et illuminanta.

Since the form of light is caused by the sun, the being of the light depends on the sun, and its existence ceases upon the cessation of the activity of the sun. Sun light in the air is not something the air has taken on as its own form, it is merely the passive transparent conduit for sun light.

Aquinas next draws the conclusion he has been heading for by comparing the air's participation in sunlight to creature's participation in the being of God:

Thus is every creature with respect to God, as the air is to the illuminating sun. Just as the sun lights by its own nature, but air becomes luminous by participating in light from the sun, not by participating in the nature of the sun, so also only God is being in his essence, because his being is his essence, and every creature is a being by participation, not because his being is its essence.<sup>57</sup>

Along the way Aquinas has shown in great detail five different causal relations, three of which he refers to as participation relations. He referred to artificial and natural substantial causation, neither of which he called participation. He reserved the term "participation" for 1) natural accidental causation, e.g., heated water; 2) equivocal causation, e.g., illuminated air; and 3) creation.

In each case of participation, the form of the agent is not reproduced in the effect. The effect has a limited version of the act of the cause. The light of the sun in the air is both formally and materially limited. It does not have a specific likeness of the sun, but only a generic likeness, as a generically corporeal effect. Air is terrestrial matter and cannot receive the specific likeness of the

<sup>57</sup>Sic autem se habet omnis creatura ad Deum, sicut aer ad solem illuminantem. Sicut enim sol est lucens per suam naturam, aer autem fit luminosus participando lumen a sole, non tamen participando naturam solis; ita solus Deus est ens per essentiam suam, quia eius essentia est suum esse; omnis autem creatura est ens participative, non quod sua essentia sit eius esse. ed. Leonine, v. 5, p. 464.



sun, which only exists in celestial material. The being of the creature is limited even further. The creature's likeness is only analogous.

*Summa Theologiae* I 104.1 shows that at each level of similarity, the less the similarity, the greater the dependence of the participant upon the cause. At the greatest level of similarity, the heat in the water depends only upon the fire for its becoming, not for its being. Any specific likeness will be at most dependent for becoming alone, because a nothing can cause its own specific form to be.

At the next level, the light in the air depends upon the sun for its being, because it does not share a specific likeness with the sun. The sun can cause the light to be because that light is not of its specific nature. The sun cannot cause the being of the air as a body, because sun and air share a generic corporeal nature and are both dependent upon a more universal cause.

At the highest level, the creature shares no specific or generic likeness with God, and is therefore dependent upon God for its entire being. God transcends all genus and species, therefore he can cause the being of everything whatever its species or genera. The creature has nothing which is not specific or generic in nature. They all depend upon God for their being.

All creatures, despite their hierarchy among themselves, depend entirely upon God. The creature is compared to other creatures according to its genus and species and God is the cause of each in whatever genus or species it is in. Therefore, each creature and the hierarchy among them depends entirely upon God.

#### **matter and the resurrection of the dead**

As we have seen the world in all its order depends upon the creative

will and act of God. Even so Aquinas considers the present order only temporary and headed for a consummation once the number of the elect is completed. Then God will establish a new order, in which created matter still has a role to play.

Aquinas seeks to explain how matter which is pure potency to change, can exist in everlasting bodies. By so doing he completes the account of problem of the resurrection that *creatio ex nihilo* was designed to overcome over 1000 years before his time.

In the world to come, the essential parts of the universe will remain, but since human generation has already produced the full number of the elect, there will no longer be any need for motion. The essential parts of the universe include angels, the heavens, the elements, and humans, body and soul (*Compendium* I 170; *de Potentia Dei* 5.9).

The celestial motions can cease because contrary to the teachings of Greek science, they do not move by nature. Aquinas argues that movement by nature tends to a determinate end, which the circular motions of the heavenlies do not. Neither do they move merely for the sake of motion but for some purpose, a purpose which cannot be less noble than themselves. Aquinas gives two possible ends for the celestial motions: 1) motions could exist to be a similitude of God by causing other things, which is the position of some philosophers, but not the position of faith; 2) the motions could exist to produce the full number of the elect, which is Aquinas' position and the position of faith. Even though it cannot be established by reason, it is more probable than position 1 because of the nobility of the human soul:

We propose that the motion of heaven is for fulfilling the number of the elect. For the rational soul is more noble than any body,

even heaven itself. (*de Potentia Dei* 5.5)<sup>58</sup>

Motions cause generations of humans, until the number of elect is fulfilled. Then their job is done and they should cease because they have accomplished their end. Once they cease, generation and corruption will also cease, although the elements will remain:

Because the heavenly body has an exterior active principle of its motion, it can be that its motion cease while it remains, without violence, as was said above. Thus, it can be that the corruption of elements cease while their substances remain, because the exterior corruptive ceases, which must be traced to the motion of heaven as to the first principle of generation and corruption. (*de Potentia Dei* 5.7)<sup>59</sup>

The elements will remain because they are essential for human bodies. They are also essential for the physical realm. Any physical world will require the elements, whose natures follow from their positions in the universe, the heaviest in the center and the lightest on the outside. There is no such need for mixed bodies:

In that renewal of the world, no mixed body will remain besides the body of humans. (*de Potentia Dei* 5.9)<sup>60</sup>

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<sup>58</sup>Ponimus enim quod motus caeli est propter implendum numerum electorum. Anima namque rationalis quolibet corpore nobilior est, et ipso caelo. ed. Bazzi, p. 143.

<sup>59</sup>quia corpus caeleste principium sui motus activum habet extra, potest esse quod eius motus cesset ipso manente, absque violentia, ut supra dictum est; ita potest esse ut corruptio elementorum cesset eorum substantiis manentibus, exteriori corruptivo cessante, quod oportet reducere in motum caeli sicut in primum generationis et corruptionis principium. ed. Bazzi, p. 150.

<sup>60</sup>in illa mundi innovatione nullum corpus mixtum remanebit praeter corpus humanum. ed. Bazzi, p. 153.

Mixed bodies are ordered to the benefit of humans who will no longer need them. Neither will humans need plants and animals:

Every being of plants and animals is to live, which does not happen in corporeal things without motion. Hence, animals die when the motion of the heart ceases, and plants when nutrition ceases. In these things there is no principle of motion which does not depend on prime mobility, because the souls of animals and plants are totally subject to the impressions of the heavenly bodies. Hence, when the motion of heaven ceases, neither will motion be able to remain in them nor life. (*de Potentia Dei* 5.9)<sup>61</sup>

As we have seen, the forms of plants and animals are caused by separated substances through the motions of the heavenlies, and they will cease to exist without those motions.

#### conclusion

The present world order exists for the generation of the elect, the new will be for their beatitude. Aquinas has given us a picture which extends beyond the present world order, but brings both the present and the coming world order together in a common purpose and account. From beginning to end his presentation of the creation speaks of the same purpose of divine goodness shared out to rational and intellectual creatures headed for divine beatitude.

I have argued in chapter 4 that the teaching of *creatio ex nihilo* began as

<sup>61</sup>esse enim plantarum et animalium quoddam vivere est, quod in rebus corporalibus sine motu non existit; unde animalia deficiunt cessante motu cordis, et plantae cessante nutrimento. In his autem rebus non est aliquod motus principium non dependens a primo mobili, quia ipsae animae animalium et plantarum totaliter subiiciuntur impressionibus caelestium corporum. Unde motu caeli cessante, non poterit in eis motus remanere, nec vita. ed. Bazzi, p. 154.

a defence of the resurrection. Before Aquinas, it was limited to defending God's sovereignty over matter. If God could make matter, he could resurrect the body and allow it to live per perpetuity. No one ever explained how it would work, until Aquinas explained it as part of the created order, in which the motions of the heavenlies and everything else headed for a definite purpose. Once their created end was accomplished, the motions would cease and elemental and human bodies would persist unto their new end, everlasting beatific rest.

## Appendix

Coffin Text 80, ed. A. de Buck, *The Egyptian Coffin Texts*, Chicago, 1935, v. 2.  
Transliteration by author according to Coffin B 1 C.

- 27 d i Ḥmnyw ipw m ḥḥ n ḥḥw  
šnnw pt m ʿwy-sn
- 28 a s3ḳw pt 3kr n gb  
ms-n-tn Šw m Ḥḥw m Nw m Tnmw m Kkw
- 33 e sk-wi w3-kwi  
ḥnʿ Nw m [nnwt] (so in B 2 L, B 1 P)  
n gm-n-i bw ʿḥʿ-i im n gm-n-i bw ḥms-i im  
n grg-t In wnn-i im-f
- 34 a n ts-t Mḥw ḥms-i ḥr-f  
n ir-t pt wn-s ḥr tp-i
- 34 c [missing in B 1 C]
- 34 d n msy-t ḥt tpt  
n ḥpr-t psdt p3tt  
wn-in-sn ḥnʿ-i  
ḡḡ-in Tm n Nw  
iw-i ḥr mḥt wrd-k(w)i wrt  
p ʿt-i nni  
in s3 ʿnh ts ib-i
- 35 a sʿnh-f ḥ3ty-i s3ḳ-n-f ʿwt-i iptn wrd wrt
- 35 j ms-n-f wi m sn-f
- 36 a pr-n-i m ms3dty-f  
wd wi r bʿnt-f sn-f wi ḥnʿ snt-i M3ʿt  
wbn-f hrw nb pr-f m swḥt-f  
ms-t nṯr prt
- 37 a N ʿnh ts tpw smn wsrwt sʿnh ḥtw  
iw-i ts-i Tm  
iw smn-i tp n 3st ḥr nhbt-s  
ts-n-i bḳsw n Ḥpr n-f  
N i3ḥw-i pḡ nmtwt in ḥrt n Tm r šrt Rʿ hrw nb  
iwt-i šm-i  
wp-i w3t n Rʿ sḳd-f r 3ḥt imntt

Papyrus Leiden, Hieroglyphic text ed. A. Gardiner, "Hymns to Amun from a Leiden Papyrus," ZÄS 42, 1905, pp. 12-42.  
Transliteration by author.

c. 40 ḥmw sw nn rh̄ k̄iw-f  
inw nfr ḥprw m bs ḏsr  
k̄d sšmw-f k̄mꜣ sw ḏs-f  
šḥm nfr snfr ib-f  
ts mꜣy-f (sic) ḥnꜣ ḏt-f  
r šḥprw swḥt-f m ḥnw-f šꜣw  
ḥprw ḥprw twt mswt  
mnk̄ sw [ . . . ] mꜣꜣ [ . . . ] ḥmw ḥm

c. 80 Ḥmnwy ḥprw-k tpy  
r k̄m-k nn iw-k wꜣ-ti  
sšꜣw ḏt-k m mꜣ smsw  
imn-n-tw m Imn m ḥꜣt nꜣrw  
iry-k ḥprw-k m Tꜣ twnn  
r sms pꜣwt psdt m pꜣwt psdt-k tpt

c. 200 (iv 13) Rꜣ ḏs-f smꜣw m ḏt-f  
ntf pꜣ smsw imy ꜣn  
iw ḏdy-tw Tꜣ-twnn r-f  
Imn pr m Nw  
sšmw-f ḥrw  
ky ḥprw-f m Ḥmnwy  
pꜣwt bꜣḥ pꜣwt psdt sms Rꜣ  
tm-f sw m Tmw ḥꜣ wꜣ ḥnꜣ-f  
ntf nb r ḏr šꜣꜣ wnnt

Coffin Text 80. ed. de Buck.

27d  
 BC  


28a  


33e  


33g  


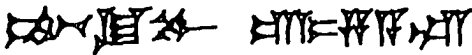



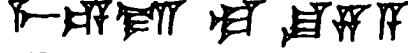
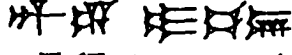
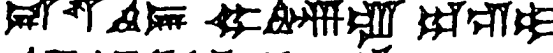


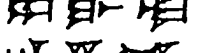

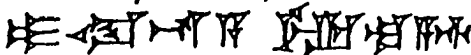




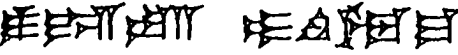
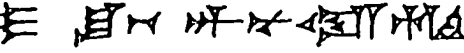




34a  


34e  




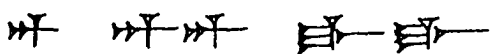





34i  
𓆎𓆏𓆐𓆑𓆒𓆓𓆔𓆕𓆖𓆗𓆘𓆙𓆚𓆛𓆜𓆝𓆞𓆟𓆠𓆡𓆢𓆣𓆤𓆥𓆦𓆧𓆨𓆩𓆪𓆫𓆬𓆭𓆮𓆯𓆰𓆱𓆲𓆳𓆴𓆵𓆶𓆷𓆸𓆹𓆺𓆻𓆼𓆽𓆾𓆿𓇀𓇁𓇂𓇃𓇄𓇅𓇆𓇇𓇈𓇉𓇊𓇋𓇌𓇍𓇎𓇏𓇐𓇑𓇒𓇓𓇔𓇕𓇖𓇗𓇘𓇙𓇚𓇛𓇜𓇝𓇞𓇟𓇠𓇡𓇢𓇣𓇤𓇥𓇦𓇧𓇨𓇩𓇪𓇫𓇬𓇭𓇮𓇯𓇰𓇱𓇲𓇳𓇴𓇵𓇶𓇷𓇸𓇹𓇺𓇻𓇼𓇽𓇾𓇿𓈀𓈁𓈂𓈃𓈄𓈅𓈆𓈇𓈈𓈉𓈊𓈋𓈌𓈍𓈎𓈏𓈐𓈑𓈒𓈓𓈔𓈕𓈖𓈗𓈘𓈙𓈚𓈛𓈜𓈝𓈞𓈟𓈠𓈡𓈢𓈣𓈤𓈥𓈦𓈧𓈨𓈩𓈪𓈫𓈬𓈭𓈮𓈯𓈰𓈱𓈲𓈳𓈴𓈵𓈶𓈷𓈸𓈹𓈺𓈻𓈼𓈽𓈾𓈿𓉀𓉁𓉂𓉃𓉄𓉅𓉆𓉇𓉈𓉉𓉊𓉋𓉌𓉍𓉎𓉏𓉐𓉑𓉒𓉓𓉔𓉕𓉖𓉗𓉘𓉙𓉚𓉛𓉜𓉝𓉞𓉟𓉠𓉡𓉢𓉣𓉤𓉥𓉦𓉧𓉨𓉩𓉪𓉫𓉬𓉭𓉮𓉯𓉰𓉱𓉲𓉳𓉴𓉵𓉶𓉷𓉸𓉹𓉺𓉻𓉼𓉽𓉾𓉿𓊀𓊁𓊂𓊃𓊄𓊅𓊆𓊇𓊈𓊉𓊊𓊋𓊌𓊍𓊎𓊏𓊐𓊑𓊒𓊓𓊔𓊕𓊖𓊗𓊘𓊙𓊚𓊛𓊜𓊝𓊞𓊟𓊠𓊡𓊢𓊣𓊤𓊥𓊦𓊧𓊨𓊩𓊪𓊫𓊬𓊭𓊮𓊯𓊰𓊱𓊲𓊳𓊴𓊵𓊶𓊷𓊸𓊹𓊺𓊻𓊼𓊽𓊾𓊿𓋀𓋁𓋂𓋃𓋄𓋅𓋆𓋇𓋈𓋉𓋊𓋋𓋌𓋍𓋎𓋏𓋐𓋑𓋒𓋓𓋔𓋕𓋖𓋗𓋘𓋙𓋚𓋛𓋜𓋝𓋞𓋟𓋠𓋡𓋢𓋣𓋤𓋥𓋦𓋧𓋨𓋩𓋪𓋫𓋬𓋭𓋮𓋯𓋰𓋱𓋲𓋳𓋴𓋵𓋶𓋷𓋸𓋹𓋺𓋻𓋼𓋽𓋾𓋿𓌀𓌁𓌂𓌃𓌄𓌅𓌆𓌇𓌈𓌉𓌊𓌋𓌌𓌍𓌎𓌏𓌐𓌑𓌒𓌓𓌔𓌕𓌖𓌗𓌘𓌙𓌚𓌛𓌜𓌝𓌞𓌟𓌠𓌡𓌢𓌣𓌤𓌥𓌦𓌧𓌨𓌩𓌪𓌫𓌬𓌭𓌮𓌯𓌰𓌱𓌲𓌳𓌴𓌵𓌶𓌷𓌸𓌹𓌺𓌻𓌼𓌽𓌾𓌿𓍀𓍁𓍂𓍃𓍄𓍅𓍆𓍇𓍈𓍉𓍊𓍋𓍌𓍍𓍎𓍏𓍐𓍑𓍒𓍓𓍔𓍕𓍖𓍗𓍘𓍙𓍚𓍛𓍜𓍝𓍞𓍟𓍠𓍡𓍢𓍣𓍤𓍥𓍦𓍧𓍨𓍩𓍪𓍫𓍬𓍭𓍮𓍯𓍰𓍱𓍲𓍳𓍴𓍵𓍶𓍷𓍸𓍹𓍺𓍻𓍼𓍽𓍾𓍿𓎀𓎁𓎂𓎃𓎄𓎅𓎆𓎇𓎈𓎉𓎊𓎋𓎌𓎍𓎎𓎏𓎐𓎑𓎒𓎓𓎔𓎕𓎖𓎗𓎘𓎙𓎚𓎛𓎜𓎝𓎞𓎟𓎠𓎡𓎢𓎣𓎤𓎥𓎦𓎧𓎨𓎩𓎪𓎫𓎬𓎭𓎮𓎯𓎰𓎱𓎲𓎳𓎴𓎵𓎶𓎷𓎸𓎹𓎺𓎻𓎼𓎽𓎾𓎿𓏀𓏁𓏂𓏃𓏄𓏅𓏆𓏇𓏈𓏉𓏊𓏋𓏌𓏍𓏎𓏏𓏐𓏑𓏒𓏓𓏔𓏕𓏖𓏗𓏘𓏙𓏚𓏛𓏜𓏝𓏞𓏟𓏠𓏡𓏢𓏣𓏤𓏥𓏦𓏧𓏨𓏩𓏪𓏫𓏬𓏭𓏮𓏯𓏰𓏱𓏲𓏳𓏴𓏵𓏶𓏷𓏸𓏹𓏺𓏻𓏼𓏽𓏾𓏿𓐀𓐁𓐂𓐃𓐄𓐅𓐆𓐇𓐈𓐉𓐊𓐋𓐌𓐍𓐎𓐏𓐐𓐑𓐒𓐓𓐔𓐕𓐖𓐗𓐘𓐙𓐚𓐛𓐜𓐝𓐞𓐟𓐠𓐡𓐢𓐣𓐤𓐥𓐦𓐧𓐨𓐩𓐪𓐫𓐬𓐭𓐮𓐯𓐰𓐱𓐲𓐳𓐴𓐵𓐶𓐷𓐸𓐹𓐺𓐻𓐼𓐽𓐾𓐿𓑀𓑁𓑂𓑃𓑄𓑅𓑆𓑇𓑈𓑉𓑊𓑋𓑌𓑍𓑎𓑏𓑐𓑑𓑒𓑓𓑔𓑕𓑖𓑗𓑘𓑙𓑚𓑛𓑜𓑝𓑞𓑟𓑠𓑡𓑢𓑣𓑤𓑥𓑦𓑧𓑨𓑩𓑪𓑫𓑬𓑭𓑮𓑯𓑰𓑱𓑲𓑳𓑴𓑵𓑶𓑷𓑸𓑹𓑺𓑻𓑼𓑽𓑾𓑿𓒀𓒁𓒂𓒃𓒄𓒅𓒆𓒇𓒈𓒉𓒊𓒋𓒌𓒍𓒎𓒏𓒐𓒑𓒒𓒓𓒔𓒕𓒖𓒗𓒘𓒙𓒚𓒛𓒜𓒝𓒞𓒟𓒠𓒡𓒢𓒣𓒤𓒥𓒦𓒧𓒨𓒩𓒪𓒫𓒬𓒭𓒮𓒯𓒰𓒱𓒲𓒳𓒴𓒵𓒶𓒷𓒸𓒹𓒺𓒻𓒼𓒽𓒾𓒿𓓀𓓁𓓂𓓃𓓄𓓅𓓆𓓇𓓈𓓉𓓊𓓋𓓌𓓍𓓎𓓏𓓐𓓑𓓒𓓓𓓔𓓕𓓖𓓗𓓘𓓙𓓚𓓛𓓜𓓝𓓞𓓟𓓠𓓡𓓢𓓣𓓤𓓥𓓦𓓧𓓨𓓩𓓪𓓫𓓬𓓭𓓮𓓯𓓰𓓱𓓲𓓳𓓴𓓵𓓶𓓷𓓸𓓹𓓺𓓻𓓼𓓽𓓾𓓿𓔀𓔁𓔂𓔃𓔄𓔅𓔆𓔇𓔈𓔉𓔊𓔋𓔌𓔍𓔎𓔏𓔐𓔑𓔒𓔓𓔔𓔕𓔖𓔗𓔘𓔙𓔚𓔛𓔜𓔝𓔞𓔟𓔠𓔡𓔢𓔣𓔤𓔥𓔦𓔧𓔨𓔩𓔪𓔫𓔬𓔭𓔮𓔯𓔰𓔱𓔲𓔳𓔴𓔵𓔶𓔷𓔸𓔹𓔺𓔻𓔼𓔽𓔾𓔿𓕀𓕁𓕂𓕃𓕄𓕅𓕆𓕇𓕈𓕉𓕊𓕋𓕌𓕍𓕎𓕏𓕐𓕑𓕒𓕓𓕔𓕕𓕖𓕗𓕘𓕙𓕚𓕛𓕜𓕝𓕞𓕟𓕠𓕡𓕢𓕣𓕤𓕥𓕦𓕧𓕨𓕩𓕪𓕫𓕬𓕭𓕮𓕯𓕰𓕱𓕲𓕳𓕴𓕵𓕶𓕷𓕸𓕹𓕺𓕻𓕼𓕽𓕾𓕿𓖀𓖁𓖂𓖃𓖄𓖅𓖆𓖇𓖈𓖉𓖊𓖋𓖌𓖍𓖎𓖏𓖐𓖑𓖒𓖓𓖔𓖕𓖖𓖗𓖘𓖙𓖚𓖛𓖜𓖝𓖞𓖟𓖠𓖡𓖢𓖣𓖤𓖥𓖦𓖧𓖨𓖩𓖪𓖫𓖬𓖭𓖮𓖯𓖰𓖱𓖲𓖳𓖴𓖵𓖶𓖷𓖸𓖹𓖺𓖻𓖼𓖽𓖾𓖿𓗀𓗁𓗂𓗃𓗄𓗅𓗆𓗇𓗈𓗉𓗊𓗋𓗌𓗍𓗎𓗏𓗐𓗑𓗒𓗓𓗔𓗕𓗖𓗗𓗘𓗙𓗚𓗛𓗜𓗝𓗞𓗟𓗠𓗡𓗢𓗣𓗤𓗥𓗦𓗧𓗨𓗩𓗪𓗫𓗬𓗭𓗮𓗯𓗰𓗱𓗲𓗳𓗴𓗵𓗶𓗷𓗸𓗹𓗺𓗻𓗼𓗽𓗾𓗿𓘀𓘁𓘂𓘃𓘄𓘅𓘆𓘇𓘈𓘉𓘊𓘋𓘌𓘍𓘎𓘏𓘐𓘑𓘒𓘓𓘔𓘕𓘖𓘗𓘘𓘙𓘚𓘛𓘜𓘝𓘞𓘟𓘠𓘡𓘢𓘣𓘤𓘥𓘦𓘧𓘨𓘩𓘪𓘫𓘬𓘭𓘮𓘯𓘰𓘱𓘲𓘳𓘴𓘵𓘶𓘷𓘸𓘹𓘺𓘻𓘼𓘽𓘾𓘿𓙀𓙁𓙂𓙃𓙄𓙅𓙆𓙇𓙈𓙉𓙊𓙋𓙌𓙍𓙎𓙏𓙐𓙑𓙒𓙓𓙔𓙕𓙖𓙗𓙘𓙙𓙚𓙛𓙜𓙝𓙞𓙟𓙠𓙡𓙢𓙣𓙤𓙥𓙦𓙧𓙨𓙩𓙪𓙫𓙬𓙭𓙮𓙯𓙰𓙱𓙲𓙳𓙴𓙵𓙶𓙷𓙸𓙹𓙺𓙻𓙼𓙽𓙾𓙿𓚀𓚁𓚂𓚃𓚄𓚅𓚆𓚇𓚈𓚉𓚊𓚋𓚌𓚍𓚎𓚏𓚐𓚑𓚒𓚓𓚔𓚕𓚖𓚗𓚘𓚙𓚚𓚛𓚜𓚝𓚞𓚟𓚠𓚡𓚢𓚣𓚤𓚥𓚦𓚧𓚨𓚩𓚪𓚫𓚬𓚭𓚮𓚯𓚰𓚱𓚲𓚳𓚴𓚵𓚶𓚷𓚸𓚹𓚺𓚻𓚼𓚽𓚾𓚿𓛀𓛁𓛂𓛃𓛄𓛅𓛆𓛇𓛈𓛉𓛊𓛋𓛌𓛍𓛎𓛏𓛐𓛑𓛒𓛓𓛔𓛕𓛖𓛗𓛘𓛙𓛚𓛛𓛜𓛝𓛞𓛟𓛠𓛡𓛢𓛣𓛤𓛥𓛦𓛧𓛨𓛩𓛪𓛫𓛬𓛭𓛮𓛯𓛰𓛱𓛲𓛳𓛴𓛵𓛶𓛷𓛸𓛹𓛺𓛻𓛼𓛽𓛾𓛿𓜀𓜁𓜂𓜃𓜄𓜅𓜆𓜇𓜈𓜉𓜊𓜋𓜌𓜍𓜎𓜏𓜐𓜑𓜒𓜓𓜔𓜕𓜖𓜗𓜘𓜙𓜚𓜛𓜜𓜝𓜞𓜟𓜠𓜡𓜢𓜣𓜤𓜥𓜦𓜧𓜨𓜩𓜪𓜫𓜬𓜭𓜮𓜯𓜰𓜱𓜲𓜳𓜴𓜵𓜶𓜷𓜸𓜹𓜺𓜻𓜼𓜽𓜾𓜿𓝀𓝁𓝂𓝃𓝄𓝅𓝆𓝇𓝈𓝉𓝊𓝋𓝌𓝍𓝎𓝏𓝐𓝑𓝒𓝓𓝔𓝕𓝖𓝗𓝘𓝙𓝚𓝛𓝜𓝝𓝞𓝟𓝠𓝡𓝢𓝣𓝤𓝥𓝦𓝧𓝨𓝩𓝪𓝫𓝬𓝭𓝮𓝯𓝰𓝱𓝲𓝳𓝴𓝵𓝶𓝷𓝸𓝹𓝺𓝻𓝼𓝽𓝾𓝿𓞀𓞁𓞂𓞃𓞄𓞅𓞆𓞇𓞈𓞉𓞊𓞋𓞌𓞍𓞎𓞏𓞐𓞑𓞒𓞓𓞔𓞕𓞖𓞗𓞘𓞙𓞚𓞛𓞜𓞝𓞞𓞟𓞠𓞡𓞢𓞣𓞤𓞥𓞦𓞧𓞨𓞩𓞪𓞫𓞬𓞭𓞮𓞯𓞰𓞱𓞲𓞳𓞴𓞵𓞶𓞷𓞸𓞹𓞺𓞻𓞼𓞽𓞾𓞿𓟀𓟁𓟂𓟃𓟄𓟅𓟆𓟇𓟈𓟉𓟊𓟋𓟌𓟍𓟎𓟏𓟐𓟑𓟒𓟓𓟔𓟕𓟖𓟗𓟘𓟙𓟚𓟛𓟜𓟝𓟞𓟟𓟠𓟡𓟢𓟣𓟤𓟥𓟦𓟧𓟨𓟩𓟪𓟫𓟬𓟭𓟮𓟯𓟰𓟱𓟲𓟳𓟴𓟵𓟶𓟷𓟸𓟹𓟺𓟻𓟼𓟽𓟾𓟿𓠀𓠁𓠂𓠃𓠄𓠅𓠆𓠇𓠈𓠉𓠊𓠋𓠌𓠍𓠎𓠏𓠐𓠑𓠒𓠓𓠔𓠕𓠖𓠗𓠘𓠙𓠚𓠛𓠜𓠝𓠞𓠟𓠠𓠡𓠢𓠣𓠤𓠥𓠦𓠧𓠨𓠩𓠪𓠫𓠬𓠭𓠮𓠯𓠰𓠱𓠲𓠳𓠴𓠵𓠶𓠷𓠸𓠹𓠺𓠻𓠼𓠽𓠾𓠿𓡀𓡁𓡂𓡃𓡄𓡅𓡆𓡇𓡈𓡉𓡊𓡋𓡌𓡍𓡎𓡏𓡐𓡑𓡒𓡓𓡔𓡕𓡖𓡗𓡘𓡙𓡚𓡛𓡜𓡝𓡞𓡟𓡠𓡡𓡢𓡣𓡤𓡥𓡦𓡧𓡨𓡩𓡪𓡫𓡬𓡭𓡮𓡯𓡰𓡱𓡲𓡳𓡴𓡵𓡶𓡷𓡸𓡹𓡺𓡻𓡼𓡽𓡾𓡿𓢀𓢁𓢂𓢃𓢄𓢅𓢆𓢇𓢈𓢉𓢊𓢋𓢌𓢍𓢎𓢏𓢐𓢑𓢒𓢓𓢔𓢕𓢖𓢗𓢘𓢙𓢚𓢛𓢜𓢝𓢞𓢟𓢠𓢡𓢢𓢣𓢤𓢥𓢦𓢧𓢨𓢩𓢪𓢫𓢬𓢭𓢮𓢯𓢰𓢱𓢲𓢳𓢴𓢵𓢶𓢷𓢸𓢹𓢺𓢻𓢼𓢽𓢾𓢿𓣀𓣁𓣂𓣃𓣄𓣅𓣆𓣇𓣈𓣉𓣊𓣋𓣌𓣍𓣎𓣏𓣐𓣑𓣒𓣓𓣔𓣕𓣖𓣗𓣘𓣙𓣚𓣛𓣜𓣝𓣞𓣟𓣠𓣡𓣢𓣣𓣤𓣥𓣦𓣧𓣨𓣩𓣪𓣫𓣬𓣭𓣮𓣯𓣰𓣱𓣲𓣳𓣴𓣵𓣶𓣷𓣸𓣹𓣺𓣻𓣼𓣽𓣾𓣿𓤀𓤁𓤂𓤃𓤄𓤅𓤆𓤇𓤈𓤉𓤊𓤋𓤌𓤍𓤎𓤏𓤐𓤑𓤒𓤓𓤔𓤕𓤖𓤗𓤘𓤙𓤚𓤛𓤜𓤝𓤞𓤟𓤠𓤡𓤢𓤣𓤤𓤥𓤦𓤧𓤨𓤩𓤪𓤫𓤬𓤭𓤮𓤯𓤰𓤱𓤲𓤳𓤴𓤵𓤶𓤷𓤸𓤹𓤺𓤻𓤼𓤽𓤾𓤿𓥀𓥁𓥂𓥃𓥄𓥅𓥆𓥇𓥈𓥉𓥊𓥋𓥌𓥍𓥎𓥏𓥐𓥑𓥒𓥓𓥔𓥕𓥖𓥗𓥘𓥙𓥚𓥛𓥜𓥝𓥞𓥟𓥠𓥡𓥢𓥣𓥤𓥥𓥦𓥧𓥨𓥩𓥪𓥫𓥬𓥭𓥮𓥯𓥰𓥱𓥲𓥳𓥴𓥵𓥶𓥷𓥸𓥹𓥺𓥻𓥼𓥽𓥾𓥿𓦀𓦁𓦂𓦃𓦄𓦅𓦆𓦇𓦈𓦉𓦊𓦋𓦌𓦍𓦎𓦏𓦐𓦑𓦒𓦓𓦔𓦕𓦖𓦗𓦘𓦙𓦚𓦛𓦜𓦝𓦞𓦟𓦠𓦡𓦢𓦣𓦤𓦥𓦦𓦧𓦨𓦩𓦪𓦫𓦬𓦭𓦮𓦯𓦰𓦱𓦲𓦳𓦴𓦵𓦶𓦷𓦸𓦹𓦺𓦻𓦼𓦽𓦾𓦿𓧀𓧁𓧂𓧃𓧄𓧅𓧆𓧇𓧈𓧉𓧊𓧋𓧌𓧍𓧎𓧏𓧐𓧑𓧒𓧓𓧔𓧕𓧖𓧗𓧘𓧙𓧚𓧛𓧜𓧝𓧞𓧟𓧠𓧡𓧢𓧣𓧤𓧥𓧦𓧧𓧨𓧩𓧪𓧫𓧬𓧭𓧮𓧯𓧰𓧱𓧲𓧳𓧴𓧵𓧶𓧷𓧸𓧹𓧺𓧻𓧼𓧽𓧾𓧿𓨀𓨁𓨂𓨃𓨄𓨅𓨆𓨇𓨈𓨉𓨊𓨋𓨌𓨍𓨎𓨏𓨐𓨑𓨒𓨓𓨔𓨕𓨖𓨗𓨘𓨙𓨚𓨛𓨜𓨝𓨞𓨟𓨠𓨡𓨢𓨣𓨤𓨥𓨦𓨧𓨨𓨩𓨪𓨫𓨬𓨭𓨮𓨯𓨰𓨱𓨲𓨳𓨴𓨵𓨶𓨷𓨸𓨹𓨺𓨻𓨼𓨽𓨾𓨿𓩀𓩁𓩂𓩃𓩄𓩅𓩆𓩇𓩈𓩉𓩊𓩋𓩌𓩍𓩎𓩏𓩐𓩑𓩒𓩓𓩔𓩕𓩖𓩗𓩘𓩙𓩚𓩛𓩜𓩝𓩞𓩟𓩠𓩡𓩢𓩣𓩤𓩥𓩦𓩧𓩨𓩩𓩪𓩫𓩬𓩭𓩮𓩯𓩰𓩱𓩲𓩳𓩴𓩵𓩶𓩷𓩸𓩹𓩺𓩻𓩼𓩽𓩾𓩿𓪀𓪁𓪂𓪃𓪄𓪅𓪆𓪇𓪈𓪉𓪊𓪋𓪌𓪍𓪎𓪏𓪐𓪑𓪒𓪓𓪔𓪕𓪖𓪗𓪘𓪙𓪚𓪛𓪜𓪝𓪞𓪟𓪠𓪡𓪢𓪣𓪤𓪥𓪦𓪧𓪨𓪩𓪪𓪫𓪬𓪭𓪮𓪯𓪰𓪱𓪲𓪳𓪴𓪵𓪶𓪷𓪸𓪹𓪺𓪻𓪼𓪽𓪾𓪿𓫀𓫁𓫂𓫃𓫄𓫅𓫆𓫇𓫈𓫉𓫊𓫋𓫌𓫍𓫎𓫏𓫐𓫑𓫒𓫓𓫔𓫕𓫖𓫗𓫘𓫙𓫚𓫛𓫜𓫝𓫞𓫟𓫠𓫡𓫢𓫣𓫤𓫥𓫦𓫧𓫨𓫩𓫪𓫫𓫬𓫭𓫮𓫯𓫰𓫱𓫲𓫳𓫴𓫵𓫶𓫷𓫸𓫹𓫺𓫻𓫼𓫽𓫾𓫿𓬀𓬁𓬂𓬃𓬄𓬅𓬆𓬇𓬈𓬉𓬊𓬋𓬌𓬍𓬎𓬏𓬐𓬑𓬒𓬓𓬔𓬕𓬖𓬗𓬘𓬙𓬚𓬛𓬜𓬝𓬞𓬟𓬠𓬡𓬢𓬣𓬤𓬥𓬦𓬧𓬨𓬩𓬪𓬫𓬬𓬭𓬮𓬯𓬰𓬱𓬲𓬳𓬴𓬵𓬶𓬷𓬸𓬹𓬺𓬻𓬼𓬽𓬾𓬿𓭀𓭁𓭂𓭃𓭄𓭅𓭆𓭇𓭈𓭉𓭊𓭋𓭌𓭍𓭎𓭏𓭐𓭑𓭒𓭓𓭔𓭕𓭖𓭗𓭘𓭙𓭚𓭛𓭜𓭝𓭞𓭟𓭠𓭡𓭢𓭣𓭤𓭥𓭦𓭧𓭨𓭩𓭪𓭫𓭬𓭭𓭮𓭯𓭰𓭱𓭲𓭳𓭴𓭵𓭶𓭷𓭸𓭹𓭺𓭻𓭼𓭽𓭾𓭿𓮀𓮁𓮂𓮃𓮄𓮅𓮆𓮇𓮈𓮉𓮊𓮋𓮌𓮍𓮎𓮏𓮐𓮑𓮒𓮓𓮔𓮕𓮖𓮗𓮘𓮙𓮚𓮛𓮜𓮝𓮞𓮟𓮠𓮡𓮢𓮣𓮤𓮥𓮦𓮧𓮨𓮩𓮪𓮫𓮬𓮭𓮮𓮯𓮰𓮱𓮲𓮳𓮴𓮵𓮶𓮷𓮸𓮹𓮺𓮻𓮼𓮽𓮾𓮿𓯀𓯁𓯂𓯃𓯄𓯅𓯆𓯇𓯈𓯉𓯊𓯋𓯌𓯍𓯎𓯏𓯐𓯑𓯒𓯓𓯔𓯕𓯖𓯗𓯘𓯙𓯚𓯛𓯜𓯝𓯞𓯟𓯠𓯡𓯢𓯣𓯤𓯥𓯦𓯧𓯨𓯩𓯪𓯫𓯬𓯭𓯮𓯯𓯰𓯱𓯲𓯳𓯴𓯵𓯶𓯷𓯸𓯹𓯺𓯻𓯼𓯽𓯾𓯿𓰀𓰁𓰂𓰃𓰄𓰅𓰆𓰇𓰈𓰉𓰊𓰋𓰌𓰍𓰎𓰏𓰐𓰑𓰒𓰓𓰔𓰕𓰖𓰗𓰘𓰙𓰚𓰛𓰜𓰝𓰞𓰟𓰠𓰡𓰢𓰣𓰤𓰥𓰦𓰧𓰨𓰩𓰪𓰫𓰬𓰭𓰮𓰯𓰰𓰱𓰲𓰳𓰴𓰵𓰶𓰷𓰸𓰹𓰺𓰻𓰼𓰽𓰾𓰿𓱀𓱁𓱂𓱃𓱄𓱅𓱆𓱇𓱈𓱉𓱊𓱋𓱌𓱍𓱎𓱏𓱐𓱑𓱒𓱓𓱔𓱕𓱖𓱗𓱘𓱙𓱚𓱛𓱜𓱝𓱞𓱟𓱠𓱡𓱢𓱣𓱤𓱥𓱦𓱧𓱨𓱩𓱪𓱫𓱬𓱭𓱮𓱯𓱰𓱱𓱲𓱳𓱴𓱵𓱶𓱷𓱸𓱹𓱺𓱻𓱼𓱽𓱾𓱿𓲀𓲁𓲂𓲃𓲄𓲅𓲆𓲇𓲈𓲉𓲊𓲋𓲌𓲍𓲎𓲏𓲐𓲑𓲒𓲓𓲔𓲕𓲖𓲗𓲘𓲙𓲚𓲛𓲜𓲝𓲞𓲟𓲠𓲡𓲢𓲣𓲤𓲥𓲦𓲧𓲨𓲩𓲪𓲫𓲬𓲭𓲮𓲯𓲰𓲱𓲲𓲳𓲴𓲵𓲶𓲷𓲸𓲹𓲺𓲻𓲼𓲽𓲾𓲿𓳀𓳁𓳂𓳃𓳄𓳅𓳆𓳇𓳈𓳉𓳊𓳋𓳌𓳍𓳎𓳏𓳐𓳑𓳒𓳓𓳔𓳕𓳖𓳗𓳘𓳙𓳚𓳛𓳜𓳝𓳞𓳟𓳠𓳡𓳢𓳣𓳤𓳥𓳦𓳧𓳨𓳩𓳪𓳫𓳬𓳭𓳮𓳯𓳰𓳱𓳲𓳳𓳴𓳵𓳶𓳷𓳸𓳹𓳺𓳻𓳼𓳽𓳾𓳿𓴀𓴁𓴂𓴃𓴄𓴅𓴆𓴇𓴈𓴉𓴊𓴋𓴌𓴍𓴎𓴏𓴐𓴑𓴒𓴓𓴔𓴕𓴖𓴗𓴘𓴙𓴚𓴛𓴜𓴝𓴞𓴟𓴠𓴡𓴢𓴣𓴤𓴥𓴦𓴧𓴨𓴩𓴪𓴫𓴬𓴭𓴮𓴯𓴰𓴱𓴲𓴳𓴴𓴵𓴶𓴷𓴸𓴹𓴺𓴻𓴼𓴽𓴾𓴿𓵀𓵁𓵂𓵃𓵄𓵅𓵆𓵇𓵈𓵉𓵊𓵋𓵌𓵍𓵎𓵏𓵐𓵑𓵒𓵓𓵔𓵕𓵖𓵗𓵘𓵙𓵚𓵛𓵜𓵝𓵞𓵟𓵠𓵡𓵢𓵣𓵤𓵥𓵦𓵧𓵨𓵩𓵪𓵫𓵬𓵭𓵮𓵯𓵰𓵱𓵲𓵳𓵴𓵵𓵶𓵷𓵸𓵹𓵺𓵻𓵼𓵽𓵾𓵿𓶀𓶁𓶂𓶃𓶄𓶅𓶆𓶇𓶈𓶉𓶊𓶋𓶌𓶍𓶎𓶏𓶐



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### TABLET V

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