

Two Ancient (and Modern) Motivations For Ascribing Exhaustive Definite Foreknowledge to God *A Historic Overview and Critical Assessment*

By Dr. Gregory A. Boyd

While there are a host of reasons that motivate Christians to conclude that God possesses exhaustively definite foreknowledge (EDF) there are three motivations that clearly seem more fundamental than others.¹ The first is *exegetical*: Christians who embrace EDF believe it is taught, or at least implied, in Scripture. The second is *philosophical*: Christians who embrace EDF assume that propositions about what “will” come to pass contradict propositions about what “will not” come to pass. Thus, propositions about what “will” and “will not” come to pass exhaustively describe the future: either “x will happen” or “x will not happen.” Since God is omniscient, God must know the future exhaustively in terms of what “will” and “will not” come to pass. And the third motivation is *theological*: Christians who embrace EDF generally assume that a God who possesses EDF has more providential control than a God who does not. Among other things, it is often argued that a God who did not know the future as exhaustively settled could not promise to always bring good out of evil, a point many find not only exegetically problematic, but existentially unacceptable.

In this paper I will briefly review and critically assess the second and third of these motivations.² Interestingly enough, both of these motivations predate Christianity, for

¹ By *exhaustively definite foreknowledge* I refer to the traditional view that, whatever else God knows, he knows the future exhaustively as a domain of what *will* and *will not* come to pass. In other words, he knows the future exhaustively as “definitely *this way*” and thus “definitely *not that way*” as opposed to any element of the future being “*possibly this way*” and “*possibly that way*.”

² The first motivation has been extensively covered. For works defending the openness position that contain significant exegetical discussions, see e.g. C. Pinnock, *Most Moved Mover: A Theology of God's Openness* (Grand Rapids: Baker, 2001); C. Pinnock R. Rice, J. Sanders, W. Hasker, and D. Basinger. *The Openness of God* (Downers Grove, Ill.: InterVarsity, 1994); R. Rice, *God's Foreknowledge and Man's Free Will* (Minneapolis: Bethany House, 1985). J. Sanders, *The God Who*

they are prevalent in Greco-Roman philosophical discussions on fate and moral responsibility. Indeed, while I cannot make the case now, I would argue that the misguided nature of both of the Christian motivations for ascribing EDF we will be examining were inherited directly from the Greco-Roman philosophical milieu in which Christian theology developed.³ I will therefore anchor my reflections in the Greco-Roman discussion about fate and moral responsibility.

I. The Philosophical Motivation

Five Ancient Views on the Truth Value of Propositions About Future Contingents. Central to the ancient Greco-Roman debate about fate and moral responsibility was the question of the truth value of propositions about future contingents (PFC's). Ancient

Risks: A Theology of Providence (Downers Grove, Ill.: InterVarsity Press, 1998); G. Boyd, *God at War: The Bible and Spiritual Conflict* (Downer's Grove, Ill.: InterVarsity Press, 1997); idem. *God of the Possible: A Biblical Introduction to the Open View of God* (Grand Rapids: Baker Book House, 2000); and idem. *Satan and the Problem of Evil: Constructing a Warfare Theology* (Downer's Grove, Ill.: InterVarsity Press, 2001). For works containing significant exegetical discussion written against the open view, see e.g. B. Ware, *God's Lesser Glory: The Diminished God of Open Theism* (Wheaton, Ill: Crossway Books, 2001); M. J. Erickson, *God the Father Almighty: A Contemporary Exploration of the Divine Attributes* (Grand Rapids: Baker Book House, 1998); D. A. Carson, "God, the Bible and Spiritual Warfare: A Review Article," *Journal of the Evangelical Theological Society* 42 (1999), 251-69; W. L. Craig, *The Only Wise God: The Compatibility of Divine Foreknowledge and Human Freedom* (Grand Rapids: Baker Book House, 1987); J. Frame, *No Other God: A Response to Open Theism* (Phillipsburg, NJ: Presbyterian & Reformed, 2001); N. Geisler and H. W. House, *The Battle for God: Responding to the Challenge of Neotheism*, (Kregel, 2001); S. Roy, "How Much Does God Foreknow? An Evangelical Assessment of the Doctrine of the Extent of the Foreknowledge of God in Light of the Teaching of Open Theism" (PhD dissertation, Trinity International University, 2000).

³ This essay is in essence a report on one aspect of an on-going research project I'm currently engaged in on the way in which Stoic and Platonic elements (primarily) influenced the Early Church's thinking on providence and evil. The research will be published in a work entitled *The Myth of the Blueprint: A Critical Assessment of the Hellenistic Influences on Early Christian Views of Providence and Evil* (Vol. III, *Satan and Evil* series) (Downers Grove, IL: InterVarsity, forthcoming). The specific material reported in this present essay is being developed for a book tentatively entitled *Foreknowledge, Divination and Free Will: The Debate Over the Openness of the Future in Greco-Roman Philosophy* (publication pending).

perspectives on this question can be loosely grouped into five categories or trajectories of thought (the last three of which, we shall see, are not mutually exclusive).⁴

1) Chyrrissipus and other Stoics argued that, since all propositions must be either true or false, all PFC's must be either true or false. In other words, the principle of bivalence applies to PFC's.⁵ On this (and other) grounds they concluded that it is impossible for the future to be other than it will be. Whatever will be *will certainly* be. The whole of the future, therefore, is fated and predetermined.⁶

2) Epicurus and his followers wanted to avoid determinism at all costs, primarily because they believed it undermined moral responsibility.⁷ The only way they could

⁴ Due to the space restrictions of this essay, the following overview of each of the five trajectories is extremely general.

⁵ Bivalence is the principle that stipulates that a proposition is either true or false ($T [P] \vee F [P]$). It is now customary to distinguish bivalence from the closely related law of the excluded middle that stipulates that either a proposition or its contradiction is true ($T [P]$ or $\neg T [P]$). So far as I can see, ancients did not consistently distinguish between these two principles, but as it concerns the truth value of future tensed propositions it seems to me they most often had bivalence in mind. Either its true that "x will occur" or its false that "x will occur" which, they (mistakenly, I shall argue) uniformly take to entail that either x will or will not occur.

⁶ On the Stoic argument for determinism on the basis of the principle of bivalence (and/or the law of excluded middle), see references in A.A. Long and D. N. Sedley, *The Hellenistic Philosophers*, Vol. 1: *Translations of the Principle Sources with Philosophical Commentary* (Cambridge: Cambridge University Press, 1987), 343. See also J. Gould, *The Philosophy of Chrysippus* (Albany: SUNY, 1970), 146; M. Ressor, "Necessity and Fate in Stoic Philosophy," in J. M. Rist, ed. *The Stoics* (Berkeley, Los Angeles, London: University of California Press, 1978), 187-202 (at 187); A. Long, *Hellenistic Philosophy: Stoics, Epicureans, Sceptics*, (Berkeley: University of California Press, 2nd ed., 1986 [1974]), 101-02; J. M. Rist, *Stoic Philosophy* (Cambridge: Cambridge University Press, 1969), Ch.7. See also R. W. Sharples' excellent succinct discussion in *Cicero: On Fate (De Fato) & Boethius: The Consolation of Philosophy iv.507, V (Philosophiae Consolationis)*, translation and commentary, R.W. Sharples (Warminster, England: Aris & Phillips Ltd, 1991), 12-15.

⁷ As is commonly noted, the point at stake in the ancient debate on fate and what we today call "free will" centered on a controversy about what is and is not entailed by saying something is "up to us" (*eph hemin*). The concept of a distinct faculty – a "will" -- being responsible for free choice did not come about until later – though there's no consensus on when exactly this "later" was. For several competing views, see S. Bobzien, "The Inadvertent Conception and Late Birth of the Free-Will Problem," *Phronesis* XLIII/2

see this could be done was to deny that bivalence applied to PFC's.⁸ Hence, in their view, PFC's are *neither* true nor false.

While most non-Stoic thinkers in the ancient world wanted to avoid Stoic-type determinism, most felt that denying the universal applicability of bivalence was too high a price to pay to accomplish this.⁹ The remaining three views were born out of attempts to avoid determinism while affirming bivalence.

(1998), 133-75; P. Hurby, "The First Discovery of the Free Will Problem," *Philosophy*, 43 (1967), 353-62; C. Kahn, "Discovering the Will: From Aristotle to Augustine," in J. M. Dillon and A. A. Long, eds. *The Question of "Eclecticism": Studies in Later Greek Philosophy* (Berkeley: Univ. of Cal. Press, 1988), 234-59; Richard Sorabji, "The Concept of the Will from Plato to Maximus the Confessor," in Thomas Pink and M. W. F. Stone, eds. *The Will and Human Action: From Antiquity to the Present Day* (London and New York: Routledge, 2004), 6-23; and especially Albrecht Dihle, *The Theory of Will in Classical Antiquity* (Berkeley and LA, 1982). Dihle persuasively argues that the concept of "free will" actually has its roots in the biblical tradition rather than the Greco-Roman tradition. More specifically, it arises out of the concept of humans being morally responsible *before God* (rather than in merely legal/ social terms). See esp. *ibid.*, 237.

⁸ See Cicero *On Fate* IX.18-9; X.21; XVI.37; *idem.*, *Academics*, II. 97, *idem.*, *On the Nature of the Gods*, I.25, 70. See also Gould, *Chrysippus*, 141; Sharples, *Cicero & Boethius*, 12., 185. This view was espoused not only by the Epicureans but arguably by Aristotle, Alexander of Aphrodisias (and other Peripatetics), the Christian Calcidius, Nicrostatus and, if Proclus is to be trusted, (*Comm.in Timaeus* 1.352.12) by Porphyry. See M. Mignucci, "Ammonius on Future Contingent Propositions," in M. Frede and G. Striker, eds. *Rationality in Greek Thought* (Oxford: Clarendon Press, 1996), 305-06; R. Sorabji, *Necessity, Cause and Blame: Perspectives on Aristotle's Theory*, (Chicago: University of Chicago Press, 1980), 93, 124; R. W. Sharples, "Alexander of Aphrodisias, *De Fato*, Some Parallels." in *Classical Quarterly*, 28 (1978), 243-66, at 260-63; *idem.*, *Cicero & Boethius*, 25. In contemporary times most (but not all) theologians who deny God possesses EDF have done so along Epicurean lines. Some, however, have done so along the lines of Carneades (see endnote #10). This paper is in essence advocating for a third alternative to these approaches.

⁹ It didn't help the Epicurean cause that their position became associated with the infamously indefensible postulation of a random "swerve" among atoms. . For discussions, see Sharples, *Cicero & Boethius*, 7-8 ; N. Gulley, "Lucretius on Free Will," *Symbolae Osloenses* 65 (1990) 37-52 [at 46-51]; J. Purinton, "Epicurus on "Free Volition and the Atomic Swerve," *Phronesis* XLIV/ 4 (1999). 293-99; D. N. Sedley, "Epicurus Refutation of Determinism," *Syzetesis* (Festschrift Giagante, 1983), 11-51 [esp. at pp. 29-36].

3) A third trajectory of thought was generated by Carneades when he in effect separated the *logical status* of future-tensed propositions from the *ontology* of the future itself.¹⁰ He argued that the fact that PFC's are eternally true or false does not affect the fact that the future is ontologically open and that what ends up coming to pass is largely up to our free decisions.

4) A fourth trajectory of thought goes back to Aristotle's famous discussion of a "sea battle" in chapter 9 of *On Interpretation*.¹¹ While the standard (but not universal) interpretation of this passage today understands Aristotle to be denying bivalence applies to PFC's, the dominant interpretation in the ancient world was that Aristotle affirmed that PFC's were true or false, but denied they were true or false in a *definite* way.¹² Unfortunately, none of Aristotle's interpreters (e.g. Alconius, Proclus,

¹⁰ On Carneades' view, see Cicero *On Fate*, XVII-XX, XXVII. For discussions, see Long, *Hellenistic*, 102-03; R. W. Sharples, trans. and commentary, *Alexander of Aphrodisias On Fate*, (Great Britain, Duckworth 2003 [1983]), 11. It should be noted that Carneades and Cicero both denied the gods possess EDF, but unlike the Epicureans, Alexander of Aphrodisias and (apparently) Calcidius, this wasn't because they denied bivalence to PFC, but because they didn't think the truth of PFC's was knowable.

¹¹ The crucial passage is *On Interpretation*. 9.19a36-38.

¹² For example, in his commentary on Aristotle's *de Interpretatione*, Ammonius writes, "[Aristotle] simply says that singular propositions concerning the future divide truth and falsity, but not in the same way as propositions concerning the present or the past. For it is not yet possible to say which of them will be true and which will be false in a definite way (*orismenos*), since before its occurring the thing can occur and not occur." *In Interpretatione*, 130.20.6, cited in M. Mignucci, "Ammonius," 281. As with many others, Ammonius feared that if the future is settled in a definite way, it would destroy moral responsibility and undermine providence. See also *In Interpretatione*. 130.23-33. On this, see Bobzien, "Inadvertent Conception," 155. Still, as Mignucci and others argue, it seems evident that Ammonius did not want to deny the universal applicability of bivalence (*ibid*, 298), though Dorthea Frede argues the contrary ["The Sea-Battle Reconsidered: A Defense of the Traditional Interpretation," *Oxford Studies in Ancient Philosophy*, 3 [1983], 43-45].]

On the dominant ancient interpretation see R. W. Sharples, *Alexander On Fate*, 11-12. *idem.*, "Some Parallels," 263-64; *idem.*, *Cicero & Boethius*, 29; R. Gaskin, "Alexander's Sea Battle: A Discussion of Alexander of Aphrodisias De Fato 10, *Phronesis*, Vol. 38.1 (1993), 75-94 (at 76). Sharples makes a strong case that the first to make use of the distinction between "definite" and "indefinite" truth was Alexander of Aphrodisias (*Quaestiones*, I. 4 12.13ff.) - though he seems to have understood "indefinite" to entail a denial of bivalence. See R. W. Sharples, trans. *Alexander of Aphrodisias: Quaestiones 1.1-2.15* (Ithaca, New York: Cornell University Press), 1992., p. 35, cf. 32. See also Sorabji, *Necessity*, 111-13, 124. There is much debate about whether *Quaestiones* I.4 actually goes back to Alexander himself or is the writing of one of his disciples, but the point need not concern us presently.

Ammonius or Boethius) succeeded in spelling out precisely what was meant and entailed by the distinction between “definite” and “indefinite” truth.¹³

5) Finally, and historically most importantly, Iamblichus, Proclus and Ammonius took Carneade’s distinction between the logical status of PFC’s and the ontology of the future as well as the distinction between definite and indefinite truth and applied them in an innovative, theologically motivated way. The question these three (and many others) were wrestling with was; How can the gods who are necessary and unchanging a perfectly know a world that is contingent and perpetually changing? They answered this question by postulating that divine knowledge must be understood not in terms of the nature of *what is known* but in terms of the nature of *the knower*.¹⁴ They thus

The literature discussing Aristotle’s *On Interpretation* 9 is massive. Several of the discussions I’ve found most helpful are R. Sorabji, *Necessity*, ch. 5; idem., W. Craig, *The Problem of Divine Foreknowledge and Future Contingents from Aristotle To Suarez* (Leiden: Brill, 1988), Ch.1. V. R. McKim, “Fatalism and the future: Aristotle’s way out,” *Review of Metaphysics* 25 (1972) 80-111; G. Anscombe, “Aristotle and the Sea Battle,” *Mind* 64 (1956), 1-15; C. Strang, “Aristotle and the Sea Battle,” *Mind* 69 (1960), 447-65; G. Fine, “Truth and Necessity in *De Interpretatione* 9,” *History of Philosophy Quarterly* 1, (1984), 23-47. J van Eck, “Another Interpretation of Aristotle’s *de Interpretatione* IX: A Support for the So-Called Second Oldest or ‘Mediaeval’ Interpretation,” *Vivarium*, 26 (1988), 19-38. See also Mignucci, “Ammonius,” 1996, esp. 302-03.

¹³ Mignucci, who offers the most detailed discussion of the concept I’ve found, argues that the concept refers to “a contingent proposition, i.e. a proposition which denotes an event whose outcome is not yet settled, and at the same time is a simply true proposition.” Mignucci, “Ammonius,” 1996, 302. Mignucci rightly notes that this entails that the truth of PFC’s is atemporal, and hence “the relation between propositions and facts is not a temporal relation.” “Ammonius,” 1996, 297. Hence the future could be ontologically (not just epistemologically) unsettled, and yet bivalence still apply to PFC’s. By contrast, Mignucci notes, Alexander of Aphrodisias and others who interpret Aristotle as denying bivalence applies to PFC’s held that “truth is a totally temporal notion” (*op. cit.*). I am not completely convinced of Mignucci’s argument. It’s clear why Alexander of Aphrodisias would say that the truth of PFC is indefinite, for he (apparently) denies bivalence. But if bivalence yet applies to PFC’s, as Alconious (possibly), Proclus, Ammonius and Boethius seem to want to maintain, how is the *truth* of PFC *indefinite*? One could of course say it’s indefinite *to us*, but as Mignucci himself argues, it does not seem that that any of these writers want to assert this (*ibid*, 288-89). They are each trying to preserve moral responsibility by denying that the future is *ontological* settled.

¹⁴ On the issue of who originated this view, why it was developed, and how it was modified by various parties, see the excellent article by M. Mignucci, “Logic and Omniscience: Alexander of Aphrodisias and Proclus,” *Oxford Studies in Ancient Philosophy* 3 (1985) 219-46. See also P. Huber, *Die Vereinbarkeit von göttlicher Vorsehung und menschlicher Freiheit in der Consolatio Philosophiae des Boethius* (Zürich, 1976), pp.20-59; H. R. Patch, “Necessity in Boethius and the Neoplatonists,”

concluded that the gods know changing reality in an unchanging way, the indefinite future in a definite way, the contingent future in a necessary way, and ultimately all of time in a non-temporal way. In this way Iamblichus, Proclus and Ammonius believed they reconciled EDF with an ontologically open future and thus with moral responsibility.

Through the influence of Augustine and especially Boethius, this view quickly established itself as the dominant view in the Christian tradition. Indeed, it arguably reigns up to the present time – which, incidentally, goes a long way in explaining why theological critics of Open Theism consistently present the openness debate as being about the *perfection of God's knowledge* rather than about the *content of reality* that (all agree) God perfectly knows.

An Unnoticed Assumption. Now, I would argue that, on a number of counts, all five of the above Hellenistic views are problematic. But for the purpose of this paper I wish to focus our attention on an unnoticed assumption that makes each of the views necessary in the first place. In a word, each of the above five views proceed on the assumption that propositions asserting “x will occur at t¹” logically *contradict* propositions asserting “x will not occur at t¹.”¹⁵ Since they’re contradictory, the two propositions exhaust the alternatives. Hence one must be true and the other false or bivalence must be deemed

Speculum 10 (1935), 399; P. Courcelle, *La Consolation de Philosophie dans la tradition littéraire*, (Paris: 1967) 216-21; Richard Sorabji, *Necessity*, 124; and Sharples, *Cicero & Boethius*, 26-27. On the concern for reconciling the immutable knowledge of the gods with transient reality, see e.g. Proclus, *Elements of Platonic Theology*, I. 15, 21, and the discussion in Mignucci, “Omniscience,” 237-39. I would contend that the foundation for this view can be traced back to Plato (*The Sophist* 248-49) who [unfortunately, in my view] argued that to know something is to *act on it* rather than to *be acted on* by it.. This view quickly become the standard Christian view, as Mignucci (ibid. 245) and Sharples (*Alexander on Fate*, 28-29) both note.

¹⁵ Cicero illustrates clearly the universally shared assumption when he writes, “...it is necessary in the case of two opposed things [*contrariis duabus*] – and by “opposed” [*contraria*] here I mean those one of which asserts something and the other denies it – it is necessary, against Epicurus’ wishes, that one of these be true, the other false, as ‘Philoctetes will be wounded’ was true for all ages beforehand, ‘he will not be wounded’ false...” *On Fate*, XVI.

inapplicable to PCF's. The assumption thereby forces one to either accept Stoic determinism, the Epicurean denial of bivalence, or one or more of the three positions that attempt to steer a middle course between these two views.

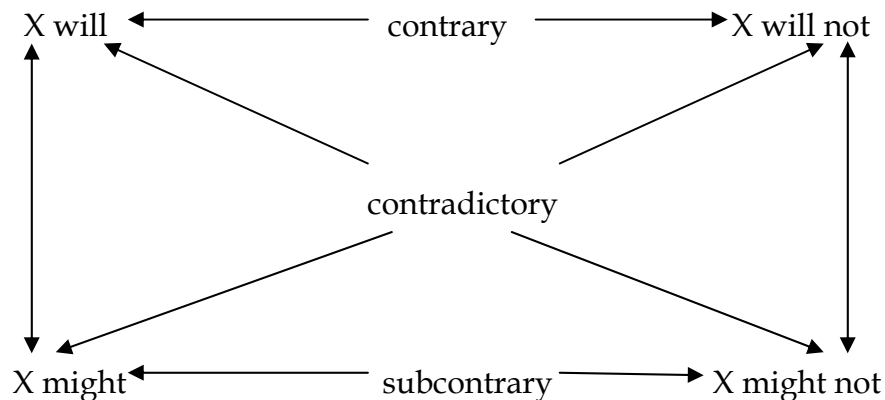
While the assumption that "will" and "will not" propositions contradict each other may *seem* obvious, I argue that it is not so from a strictly logical perspective. Consider, if "will" and "will not" propositions are logically contradictory and exhaust the alternatives, what are we to make of "might" and "might not" type propositions? If "x will occur" and "x will not occur" exhaust the alternatives, "x might occur" and "x might not occur" can only be interpreted as merely asserting the logical precondition of the "will" and "will not" type propositions. When we say "x might occur" we can only mean "x is *logically possible*" and/or "we *don't know* whether x will occur or not occur." "Might" and "might not" cannot mean that it is *historically possible* (viz. in the *actual* flow of history) that "x might and might not occur" – for, per this assumption, either "x will" or "will not" come to pass. From a strictly logical perspective, however, this restricted, non-ontological interpretation of "might" and "might not" is arbitrary.

One might of course offer *empirical* arguments to the effect that the future is exhaustively definable by "will" and "will not" type propositions. The Stoics, for example, based their deterministic view primarily on alleged evidence from divination, combined with arguments premised on the universality of causation [deterministically understood].¹⁶ What's interesting, however, is that the four non-Stoic positions do not argue in this fashion. They simply assume "will" and "will not" type propositions

¹⁶ On the Stoic use of divination to support their view of providence, see esp. Cicero *On Divination* I.38; I. 82. On the Stoic argument for determinism based on the universality of causality, see citations and discussion in Long, *Hellenistic*, 163-64; Mytton Dragona-Monachou, "Providence and Fate In Stoicism and Prae-Neoplatonism," *Philosophia* 3 (1973) 262-300 (esp. 262-67); Ressor, "Necessity," 200.

exhaust the field and then try to argue that it doesn't imply determinism. In this sense, this assumption drives all five views and lies behind all their problematic features.

*An Alternative Assessment of "Will" and "Will Not" Type Propositions.*¹⁷ An alternative way of analyzing "will" and "will not" type propositions – and thus, by implication, "might" and "might not" type propositions– is to understand "will" and "will not" not as contradictories, but as *contraries*. The contradictory of "x will" is not "x will not" but rather "*not* [x will]" which is logically equivalent to "*might not*." And the contradictory of "x will not" is not "x will" but "*not* [x will not]" which is logically equivalent to "*might*." On the traditional Aristotelian Square of Opposition, the four possible options with their logical relations appear as follows:



As contraries, "will" and "will not" cannot both be true at the same time, but they *can both be false* -- just in case it happens to be true that "might" and "might not" are *both true* at the same time, for subcontraries can be *conjointly true*.. If "x might" is true, its

¹⁷ My reflections in this section have been formed in dialogue with my good friends Thomas Belt and Alan Rhoda who share the credit for whatever merit the argument has. For a much further development of this theme, see our co-authored essays, "Open Theism, Omniscience and the Nature of the Future" (forthcoming in *Faith and Philosophy*), as well as "The Hexagon of Opposition: Thinking Outside the Aristotelian Box" (unpublished mss.). The only philosopher I know of who clearly anticipated the position proposed here is Charles Hartshorne in his *Insights and Oversights of Great Thinkers* (Albany, NY: State University of New York Press, 1983), 45.

contradictory “x will not” is necessarily false, and if “x might not” is true, its contradictory “x will” is necessarily false.

As I read them, this is precisely what Iamblichus, Proclus, Ammonius and others were groping toward with their vague concept of “indefinite” truth. Without denying bivalence, they were attempting to affirm something *in between* “will” and “will not.” Unfortunately, their assumption that “will” and “will not” are contradictory prevented them from doing so with logical consistency.

For example, in his commentary on Aristotle’s *de Interpretatione* 9, Ammonius says that what he is asking is “whether every contradiction divides truth and falsity in a definite way, or [whether] there is some contradiction which divides them in an indefinite way (*aoristos*).”¹⁸ He answers by asserting that propositions containing future contingents “divide...truth and falsity, however not in a definite but [in] an indefinite way.” Unfortunately, Ammonius, like everybody else, was yet considering “will” and “will not” as contradictories rather than contraries, as is clear from his very next sentence: “It is necessary that Socrates tomorrow *either will or will not* bathe and it is not possible that both or neither are true.”¹⁹

What Ammonius wants -- and what the concept of “indefinite truth” is *trying* to provide -- is a way both to affirm for the sake of bivalence and deny for the sake of free

¹⁸ *In Interpretatione*, 131.204, cited in Mignucci, “Ammonius,” 281. For an English translation of Ammonius’ commentary on Aristotle’s *On Interpretation* 9, see G. Seel, *Ammonius and the Seabattle: texts, commentary and essays*. Peripatoi, Bd. 18 (Berlin and New York, 2000).

¹⁹ *In Interpretatione*, 139.15-17, cited in Mignucci, *ibid.*, 282 (emphasis added). See also *In Interpretatione*, 139.32-140.4; 140.11-13. Frede attempts to argue that Ammonius’ concept of “indefinite truth” was actually just a rather diplomatic way of denying bivalence (“Sea-Battle Reconsidered,” 43). Given the logic of his system (as well as that of Alconius, Proclus, and Boethius) I grant that this is what Ammonius’ *should* have held-- granting the universally shared assumption that “will” and “will not” are contradictories. But passages such as *In Interpretatione* 139.15-17 as well as the fact that Ammonius clearly ascribes EDF to the gods (136.1-7, cf. 133.20) make her interpretation of Ammonius extremely unlikely.

will that it is settled that Socrates will or will not bathe tomorrow. Unfortunately, by applying bivalence to “will” and “will not” rather than “will” and “might not,” on the one hand, and “will not” and “might,” on the other, neither Ammonius nor anyone else who reflected along these lines could carve out a logical space to consistently have it both ways.

Once we reject the assumption that “will” and “will not” are contradictory and thus exhaust the alternatives regarding PFC’s, we can see that there are three, not just two, possible states of affairs regarding the future: “will,” “will not” and “might and might not.” As Tom Belt, Alan Rhoda and myself have elsewhere shown, when their contrary, subcontrary and subaltern relationships are illustrated, the traditional Square of Opposition is transformed into a hexagon of logical relations (comprised of three versions of the original square, as illustrated in the Appendix).²⁰

Positing a three-fold rather than a two-fold analysis of possible states of the future allows us to avoid Stoic determinism, but without biting the counter-intuitive Epicurean bullet of denying bivalence. Regarding all PFC’s we can affirm that either a proposition or its contradictory is true. That is, either “x will occur” or “x might not occur”; either “x will not occur” or “x might occur”; *and* either “x might and might not occur” or “x will or will not occur.” This also allows us to avoid determinism without having to accept the various philosophical conundrums associated with views 3-5.

What This Means for Omniscience. This analysis obviously has important ramifications for our understanding of the content of God’s knowledge. For if we grant that “might and might not” propositions may be conjointly true – and thus that “will or will not” type propositions may be conjointly false, then an omniscient being would perfectly know the future in terms of what may or may not come to pass, to the extent that the

²⁰ For a discussion on the superiority of the hexagon to the classic square as it concerns the logic of PFC’s, see Boyd, Belt and Rhoda, “The Hexagon of Opposition.”

future is comprised of events that are historically (not just logically) possible and thus may or may not come of pass; and God will know the future in terms of what will and will not come to pass, to the extent that the future is comprised of events that in fact will or will not come to pass.

The issue of the precise extent to which the future is at any given time open, comprised of “might and might not” historical possibilities, and the extent to which it is at any given time settled, comprised of “will or will not” settled facts, is one that must be resolved on empirical, not logical, grounds. But it can no longer be assumed that omniscience means, by definition, that God possesses EDF.

II. The Theological Motivation

We turn now to the theological motivation for ascribing EDF to God. If God does not know the future exhaustively as a realm of settled facts, does this not to some extent undermine his providential control of the world?

Foreknowledge and Providence in the Ancient World. As with the philosophical motivation, the theological motivation for embracing EDF did not originate with Christianity. To the contrary, the association of foreknowledge with providential assurance was a central aspect of the Hellenistic debate over the issue of divine foreknowledge.

Among other things, belief in divination was not only widespread in the Greco-Roman world; it was part of the social fabric of Greco-Roman culture, as Luther Martin and others have argued.²¹ While divination was occasionally criticized if not ridiculed by

²¹ Divination and other practices “established and maintained the structure of society, whereby the ‘rightness’ of the relationship was socially prescribed.” L. H. Martin, “Fate, Futurity and Historical Consciousness in Western Antiquity,” *Historical Reflections* 17 (1991) 151-69 (at 164). So too, Martin argues, “The social identity of Greece... was commemorated at its oracular shrines with their pan-Hellenic framework of cosmic fate and their practices of divination, a practice which continued to exemplify

certain skeptical philosophers (e.g. Carneades and Cicero), it was almost universally accepted by academics and lay people alike and was widely regarded as the main proof that the gods were concerned with and involved in human affairs.²² Indeed, as I noted above, the alleged success of divination was a central aspect of the Stoic argument that God's providential hand governs all things, determining the whole of the future.²³ One of the primary reasons few accepted the Epicurean open view of the future was that, not only did it require the counter-intuitive rejection of bivalence, but it was believed to contradict divination and therefore undermine divine providence.²⁴ And this undermining of providence understandably put fear in the hearts of many ancient Greeks and Romans, as it does people today. So highly was divination esteemed that, with very few exceptions, even many of those who espoused an open

popular piety until the establishment of Christianity, and beyond." *ibid.*, 168. This insightful essay is helpful in showing that our modern sense of history goes back not to the Greeks, who with few exceptions (e.g. Aristotle, Epicurus, Alexander of Aphrodisias) held at last by logical implication held to a settled future, but to the Hebrews who understood time to flow from a settled past to an open future, full of possibilities. For several studies on divination in the ancient Greco-Roman world, see W. R. Halliday, *Greek Divination: A Study of Its Methods and Principles*, (London, 1913); D. Collins, "Nature, Cause, and Agency in Greek Magic," *Transactions of the American Philological Association* 133 (2003) 17-49. See also the comment of C. W. Fornara, *The Nature of History in Ancient Greece and Rome* (Berkeley, 1983), 77. The best single source for the widespread practice of divination in the Greco-Roman world is of course Cicero's *On Divination*.

²² On the nearly universal acceptance of divination among philosophers, see Cicero, *On Divination*, I. 3-4, 6. On divination expressing the gods providential concern for humans, see *ibid.*, I. 6, 15-16, 35, 38, 41, 56. For Cicero's critical assessment of this connection, see II.8, 48-50.

²³ See e.g. Cicero, *On Divination*, I. 82-84. For other discussions, see Mignucci, "Omniscience," 1985, 225; M. Colish, *The Stoic Tradition From Antiquity to the Early Middle Ages* (Leiden: E. J. Brill, 1985), 31-33; S. Sambursky, *Physics of the Stoics* (London, 1959), pp. 65-71. D. Amand, *Fatalisme et Liberte dans Antiquite Grecque* (Louvain, 1945), pp. 571-86. Gould, *Chrysippus*, 1970, 144-45; Long & Sedley, *Translations*, 343. Sharples, "Parallels," 245-49. It's worth noting that Chrysippus wrote two books on divination as well as three works on fate, all of which unfortunately are lost.

²⁴ Mignucci illustrates the point when he writes: "Ammonius and the late Neoplatonic philosophers had a strong theological reason for admitting predictions. The gods are provident and they must know the world on which they exert their beneficial influence in such a detail that nothing escapes their attention. *Therefore* even future contingent events must be known to them, and Ammonius does not waver in maintaining that the gods know future contingent events and that predictions are possible." See Mignucci, "Ammonius," 1996, 299 (emphasis added).

future (including the Christian Calcidius!) were at pains to show how their philosophies could account for it's success and therefore provide an adequate account of divine providence.²⁵

This association of divination with providential security was widely adopted by the early church. To be sure, early orthodox Christians uniformly reject divination *practices* and, at least up until Augustine, vigorously attacked all forms of determinism. Yet the association of providence with the conviction that God knows the future exclusively in terms of what will and will not come to pass is almost uniformly adopted. When the early fathers refer to divine foreknowledge, it is almost always in a context where they're concerned with either proving Christ's deity from Old Testament prophecies (now understood along the lines of Hellenistic divination – that is, as prognostications) or in contexts where they're discussing God's providential control of the future.²⁶

²⁵ Calcidius insightfully argues that, far from undermining prophecies, they are given more practical value if interpreted as *conditional predictions* that will come to pass *if* things don't change; (J. Den Boeft, *Calcidius On Fate: His Doctrine and Sources* [Leiden: E. J. Brill, 1970], 34-35). This sort of reasoning is found at a number of points in Alexander of Aphrodisias *On Fate* e.g. VI 171.7.; XVII 188.11; XXXI 202.28. See also *Massima*. 179.16; 182.28; 185.33; 186.8. Cicero and Carneades make much of the argument that if prophecies tell us what *will certainly* come to pass, they are useless, at best, if not positively harmful. "For the prediction of an evil is only beneficial when we can point out some means of avoiding it or mitigating it." *On Divination*, II.25, cf. II.8. On the importance of accounting for divination and oracles in the ancient world (because of their widespread acceptance), see W. C. Greene, *Moirai: Fate, Good, and Evil in Greek Thought* (New York, Evanston: Harper & Row, 1944, 375-76; Mignucci, "Omniscience," 229-30, 235. This was a one of the central driving forces behind those who wanted to interpret Aristotle's *On Interpretation* 9 in a way that avoided denying bivalence (Mignucci, "Ammonius," 299-300).

²⁶ In sharp contrast to the Hellenistic understanding of prophecy, prognostication played a minor role in Hebrew prophecy, which was mostly concerned not with forecasting a certain future but with warning people about a possible future – one that will come to pass if people don't change their ways. See, e.g. Jere. 18:1-10. Nor is prognostication implied in most of the Gospel passages that present Jesus as "fulfilling" various Old Testament passages. Even a cursory examination of the Old Testament passages in question reveal that in most cases there's nothing predictive about them. As Paul Eddy and I have argued elsewhere, when Gospel authors claim Jesus "fulfilled" a passage, they usually (but not always) mean simply that Jesus fulfills or illustrates in a supreme way the meaning of the passage. See P. Eddy and G. Boyd, *The Jesus Legend* (Grand Rapids, MI: Baker, forthcoming), ch.10.

Foreknowledge and Providence Today. So far as I can see, the widespread Hellenistic assumption that the gods lose providential control if they don't know the future as exhaustively settled remains with us to this day. Aside from exegetical objections, the single most frequent criticism raised against the open view in the polemical literature is that it *undermines confidence in providence*.

To illustrate, this criticism permeates Bruce Ware's book, *God's Lesser Glory*. According to Ware, the open view of God posits a "limited, passive, hand-wringing God" who can do little more than hope for the best.²⁷ "[W]hat is lost in open theism," Ware contends,

... is the Christian's confidence in God....When we are told that God...can only guess what much of the future will bring...[and] constantly sees his beliefs about the future proved wrong by what in fact transpires....Can a believer know that God will triumph in the future just as he has promised he will?²⁸

In as much as the need for security strongly influences the faith of most people today, as it did in ancient Greece, this type of argumentation is psychologically and politically effective. But is it valid? I do not believe that it is.

Of course, it cannot be denied that a conception of God who meticulously *determines* the whole of history such as we find in Stoicism and in classical Calvinism provides more assurance to believers that everything is going "as planned" than can a God who limits his power by granting libertarian free will to agents. (Most non-Calvinist of course argue that this extra "assurance" comes at an unacceptably high price). But this is not what is at issue in this debate, for the debate is not between Calvinists and traditional

²⁷ B.Ware, *God's Lesser Glory: The Diminished God of Open Theism* (Wheaton, IL: Crossway Books, 2000) p. 216.

²⁸ *Ibid.*, pp. 20-21.

Arminians, but between Calvinists and (sometimes) Arminians, on the one hand, and Open Theists, on the other. The specific question raised by Ware's critique of Open Theism is: Does God loose providential control *simply by virtue of knowing the future to some extent as a domain of possibilities rather than exclusively in terms of settled facts?* And the answer to this specific question, I argue, is that he does not.²⁹

Of course, we humans are much less in control of a future we know to be comprised of possibilities than we are a future we know to be comprised only of settled facts. But the reason for this is that we only possess a finite amount of intelligence. Hence, the more possibilities we have to anticipate, the thinner we have to spread our limited intelligence to anticipate them. This is why playing a formidable opponent in chess is more stressful than (say) working on an assembly line.

By contrast, if God is omniscient, there is no limit to his intelligence. This entails that God does not have a finite amount of intelligence that must be "spread thin" to cover various possibilities. Rather, if God possesses *infinite* intelligence, God can attend to *each and every one* of a gazillion possibilities (to the gazillionth power!) as though each and every one was *the only possibility* - viz. as though each was an absolute certainty. For a God of infinite intelligence, therefore, there is no functional difference between anticipating a possibility and anticipating fa certainty. God anticipates "maybe's" as effectively as he does "certainties." Indeed, he anticipates "maybe's" *as though* each was a "certainty."

This means that, whatever comes to pass, the Open Theist can say as confidently as a person who embraces EDF that God had been anticipating *this very event* from before the foundation of the world (for possibilities are eternal, hence eternally known by God). It's just that the Open Theist is so confident of God's intelligence that she can add

²⁹ Space doesn't allow for a discussion of the different sorts of foreknowledge various thinkers

that God didn't need to foreknow the event as a certainty in order to anticipate it *as though* it was a certainty. Any number of other events could have occurred, and if they had, the Open Theist would be saying the exact same thing *about them*.

Among other advantages that come with this position, it means that the Open Theist can affirm that every event happens *with* a divine purpose without having to assert that everything happens *for* a divine purpose. God brings a perfectly prepared purpose *to* events, but God doesn't bring about (or specifically allow) all events *for* a purpose. The Open Theist can thus affirm Romans 8:28 as confidently as the classical theist, but in a way that avoids some of the most difficult aspects of the problem of evil.

It thus doesn't seem that a God of infinite intelligence loses any providential advantage if he faces a future partly comprised of possibilities as opposed to a future comprised exclusively of settled facts.³⁰ Indeed, it seems evident that only a God of

ascribe to God. Nor would such distinctions affect the thrust of my argument.

³⁰ One might argue that a God who prepares a response to a future event that is certain to come to pass rather than one that might or might not come to pass has the advantage of not having to *also* prepare a response for *other* possible events. God may not have to spread his *intelligence* thin to cover possibilities, in the open view, but, one could argue, he would have to spread his *resources* thin to cover future possibilities. While we can't provide a full response to this objection presently, a brief response may be offered. Even if the objection is granted, this would still leave us with a God who exercises significantly more providential control than the God who possesses *simple foreknowledge*, for a God who faces an eternally settled future has, by definition, no power to change it. Simply knowing what *is certainly* going to come to pass offers no advantage to the knower unless the knower can *do something* about it. But this requires that the future *not* be eternally and exhaustively settled. Molinism, of course, grants God a providential advantage by virtue of ascribing middle knowledge to Him, but I would argue that it offers God no more providential advantage than open theism and that, however the present objection applies to open theism, it also applies to classical Molinism. Both schools of thought posit a God who has to respond to the "givenness" of creation and work with the limited "resources" he finds in creation. The primary difference is that Molinism posits God responding to the "givenness of what free agents choose amidst "possible worlds" in a pre-creational "moment," while Open Theism posits God responding to the free agents in actual history. On the significant similarities between the open view and Molinism, See G. Boyd, "Neo-Molinism and the Infinite Intelligence of God," *Philosophia Christi*, V.1., 187-204 and idem., "Unbounded Love and the Openness of the Future: An Exploration and Critique of Pinnock's Theological Pilgrimage," in S. Porter and T. Cross, eds., *Semper Reformandum: Studies in Honour of Clark H. Pinnock* (Cumbria, U.K.: Paternoster, 2003), 38-58.

limited intelligence would gain any advantage by virtue of knowing a certainty as opposed to a possibility.

When Bruce Ware asserts that a God who faces possibilities must be a “limited, passive, hand-wringing God” who can do little more than “guess what much of the future will bring,” he is unintentionally telling us a great deal about *his view of God*, but absolutely nothing about a God of infinite intelligence. *His* God, apparently, would be anxiously wringing his hands if his creation included possibilities. And its no wonder that Bruce Ware, and all who share his limited view of God, are consequently struck with fear. But if we remain confident of God’s infinite intelligence, the last thing we can imagine God doing as he faces possibilities is wringing his hands and making guesses.

Conclusion. Both the philosophical and the theological motivations for ascribing EDF to God are rooted in ancient Hellenistic philosophical assumptions that are misguided. “Will” and “will not” are contraries, not contradictories. They thus do not exhaustively define the future. The future is also comprised of events that “might” and “might not” come to pass, and God, knowing all of reality exactly as it is, must know this open aspect of the future precisely in this way. But a God of infinite intelligence does not lose any providential advantage because of this fact.

Appendix

The Hexagonal Logic of an Open Future

From G. Boyd, T. Belt and A. Rhodes, “*The Hexagon of Opposition: Thinking Outside the Aristotelian Box*” (unpublished manuscript).

Let Z = “will;” Q = “might and might not;” S = “future state of affairs.” The three possible states of the future discussed in this paper (“will,” “will not,” and

“might and might not”) have a *contrary* relationship that can be illustrated as follows.

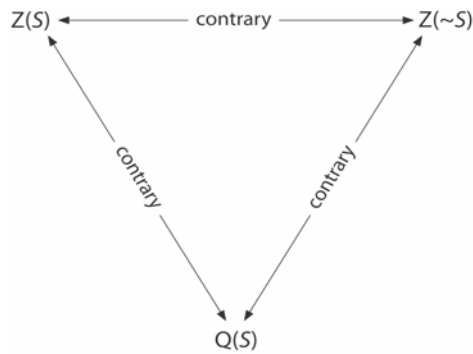


Figure 2: Triangle of Contrary Relations

The contradictory of each of these three possible future states have a *subcontrary* relationship with each other that can be illustrated as follows.

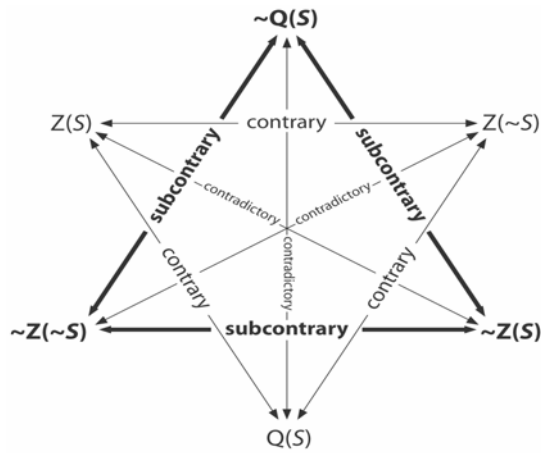


Figure 6: Triangle of Subcontrary Relations

Each of the six poles expressing the three possible future states and their contradictories have *subaltern* relations with each other than can be illustrated as follows:

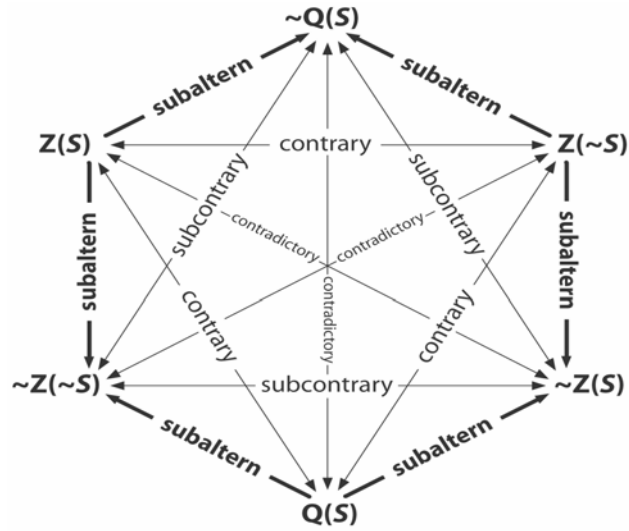


Figure 7: Hexagon of Subaltern Relations

One should notice that the original square of opposition is still present in the center of the Hexagon. Indeed, the Hexagon is in fact comprised by three versions of the square of opposition, each expressing the contradictory, contrary and subaltern relationships that pertain to each of the three possible future states.

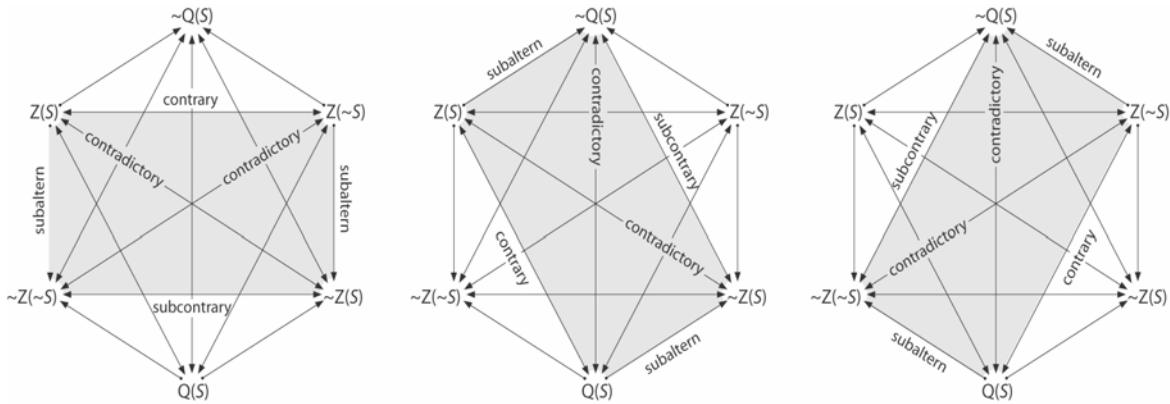


Figure 8: Three Squares of Opposition