

ARISTOTLE'S TEMPORAL INTERPRETATION OF NECESSARY COMING-TO-BE AND STOIC DETERMINISM

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ANCIENT PHILOSOPHERS FROM ARISTOTLE through the Hellenistic period were perhaps as much concerned as their contemporary counterparts with the issue of determinism and freedom of the will. However, to the contemporary reader much of the ancient discussion of determinism seems peculiarly beside the point.¹ Recognition of the fact that the ancient philosophical conceptions of the alethic modalities (necessity, possibility, and their contradictories) do not always coincide with our own modal concepts is important in attaining a clearer understanding of the ancient forms of logical determinism or fatalism.

This paper attempts to elucidate certain puzzling features of Stoic determinism by arguing that the Aristotelian-Megarian *temporal* conception of the modalities may well have influenced the form of that determinism. More specifically, the present paper argues that the temporal understanding of the modalities helps to clarify Cicero's discussion of Chrysippus' determinism and to explain the relevance of the cosmological doctrine of eternal recurrence (the ἀποκατάστασις) to his determinism. My principal suggestion is that the doctrine of eternal recurrence is an expression of Stoic fatalism in terms of the Peripatetic identification of necessary coming-to-be with eternally recurrent coming-to-be. In the first part of the paper I discuss the Aristotelian and Megarian temporal accounts of the alethic modalities, while in the second part I apply the results of this discussion to an analysis of Chrysippus' fatalism.

I. ARISTOTELIAN AND MEGARIAN TEMPORAL ACCOUNTS OF THE MODALITIES AND NECESSARY COMING-TO-BE

It is fairly clear that Aristotle's fundamental conception of the alethic modalities was temporal. As Jaakko Hintikka has argued in some detail,

¹See, for example, R. W. Sharples, "Aristotelian and Stoic Conceptions of Necessity in the *De Fato* of Alexander of Aphrodisias," *Phronesis* 20 (1975) 247-274. As Sharples points out, Alexander of Aphrodisias in his *De Fato* apparently argues against "those [preeminently, the Stoics] who say that everything occurs of necessity" by arguing for the presence of *variability* in nature. Sharples helps to explain this odd method of argumentation by identifying it with "a typically Peripatetic approach to questions of necessity" (258). It seems clear, as Sharples also points out (259), that the conceptual basis of Alexander's method of argumentation is the identification of "the necessary" with "what is always the case."

"in passage after passage, [Aristotle] explicitly equates possibility with sometime truth and necessity with omnitemporal truth."² Although it is arguable that Aristotle was later forced to modify the conception of the modalities just quoted due to his adoption of truth-value gaps in *De Int.* 9,³ he never seems to have abandoned a temporal conception of the modalities. In the case of the modality of necessity, an especially explicit statement occurs in *De Gen. et Corr.* 2.11: "so that if something exists of necessity, it exists eternally, and if eternally, then of necessity."⁴

Furthermore, a temporal conception of the modalities was not confined in antiquity to Aristotle or the Peripatetic school. The account of the modalities attributed to Aristotle's younger contemporary the Megarian Diodorus Cronos is quite similar to the account suggested by Aristotelian passages when the latter account is cast in the formal mode. Boethius gives the following report of Diodorus' definitions of the modalities: "Diodorus defines the possible as that which either is or will be [true], the impossible as that which, being false, will not be true, the necessary as that which, being true, will not be false, and the non-necessary as that which is already or will be false."⁵ Thus, necessity is, for Diodorus, "omnitemporal truth" limited to present and future time; possibility is "sometime truth" limited to the same present and future time.

By the mid-third century B.C., then, the interpretation of necessity (and the other alethic modalities) in temporal terms was common. However, this temporal semantic account of necessity gives rise to a difficulty with respect to necessary "coming-to-be" (γένεσις), a problem that Aristotle himself addresses in *De Gen. et Corr.* 2.11. In this chapter,

²Jaakko Hintikka, "The Once and Future Sea Fight: Aristotle's Discussion of Future Contingents in *De Interpretatione* 9," in *Time and Necessity: Studies in Aristotle's Theory of Modality* (Oxford 1973) 151.

³The logical import of *De Int.* 9 is a notoriously controversial topic. Hintikka (147–178) has advanced an interpretation of the passage which insures that there, as well as in other parts of the Aristotelian corpus, necessity can be straightforwardly identified with omnitemporal truth and possibility with sometime truth. However, if the traditional interpretation of the passage is accepted, i.e., if Aristotle is read as denying the logical principle of bivalence for some propositions pertaining to the future (so that not *all* propositions are either true or false at *all* times), a modification of his temporal account of the modalities is required. I have presented such a modified account, which relativizes the modality of propositions to time in a way similar to that in which Aristotle apparently relativizes the truth value of propositions to time, in a paper "Aristotle and Temporally Relative Modalities," *Analysis* 39 (1979) 88–93.

⁴*De Generatione et Corruptione* 338a1–2: ὥστ' εἰ ἔστιν ἐξ ἀνάγκης, αἰδιὸν ἔστι, καὶ εἰ αἰδιὸν, ἐξ ἀνάγκης.

⁵In *Librum Aristotelis De Interpretatione, Editio secunda* III, in J. P. Migne (ed.), *Patrologiae Cursus Completus* 64 (Paris 1847) 511: Diodorus possible esse determinat, quod aut est aut erit, impossibile quod cum falsum sit, non erit verum, necessarium quod cum verum sit non erit falsum. Non necessarium, quod aut iam est aut erit falsum.

he equates necessity with eternity in the case of coming-to-be as well as in the case of being: "and if, further, the coming-to-be of something [as contrasted with its "being"] occurs of necessity, then its coming-to-be is eternal; and if its coming-to-be is eternal, then it occurs of necessity."⁶

But what can be meant by the "eternal genesis" of something or the "eternal occurrence" of an event,⁷ such as Fabius' being born? Obviously, the eternal coming-to-be of something or the eternal occurrence of an event cannot be equated with that thing's coming-to-be, that event's occurrence, at each and every successive instant. Such an interpretation, if it makes sense at all, would equate fatalism or absolute logical determinism (in the sense of the necessary occurrence of all events, of all *geneiseis*) with *no change* or *variation* at all.⁸ I believe that Alexander of Aphrodisias is making some such point when he, in his *De Fato*, says that if "necessarily true" is equated with "eternally true," a proposition (*ἀξίωμα*) expressing the coming-to-be of something *of necessity* is precluded from itself being necessarily true "by the mere fact of the thing's [which is the subject of the proposition] coming-to-be."⁹

How, then, does Aristotle regard necessary coming-to-be? As the beginning of *De Gen. et Corr.* 2.11 makes clear, he conceives of the question of necessary coming-to-be as arising in the context of what might be called a "temporal nexus" or "flow of events:" "among those things that are continuously changing with respect to coming-into-being or alteration, or any sort of change in general, we observe 'the succeeding thing,' one thing occurring *after* another in such a way that there is no temporal gap. We must investigate whether there is something that will occur of necessity. . . ."¹⁰ Aristotle's investigation issues in the opinion

⁶338a2-3: καὶ εἰ ἡ γένεσις τοίνυν ἐξ ἀνάγκης, αἰδῖος ἡ γένεσις τούτου, καὶ εἰ αἰδῖος, ἐξ ἀνάγκης.

⁷As the beginning of *De Gen. et Corr.* 2.11 (337a34ff., quoted in note 10 below) makes clear, Aristotle's discussion of necessary coming-to-be is not limited to substantial generation but pertains to any kind of change. Thus, throughout this paper I equate "instance of coming-to-be" with "occurrence of an event," the latter representing some form of change (i.e., coming-to-be) with reference to the preceding "world state."

⁸In *Metaphysics Theta* 3 Aristotle argues that total abolition of change is a consequence of Megarian fatalism, i.e., the early Megarians' refusal to distinguish actuality and necessity.

I have discussed some of the logical-philosophical aspects of Aristotle's criticism of the Megarians in an article "Aspects of Megarian Fatalism: Aristotelian Criticisms and the Stoic Doctrine of Eternal Recurrence," forthcoming in the *Canadian Journal of Philosophy*.

⁹*Supplementum Aristotelicum* 2.2 ed. I. Bruns (Berlin 1892) 10.177.15-19: οὐτε γὰρ πᾶν τὸ ἐξ ἀνάγκης γιγνόμενον ἀναγκαῖον, εἰ γε τὸ μὲν ἀναγκαῖον αἰδῖον, τὸ δὲ ἐξ ἀνάγκης γινόμενον ὑπ' αὐτοῦ τοῦ γίνεσθαι τοιοῦτον εἶναι κεκώλυται, οὐτε τὸ ἀξίωμα τὸ τοῦτο λέγον ἀναγκαῖον, εἰ γε μὴ τὸ ὑπ' αὐτοῦ σημαίνόμενον τοιοῦτον.

¹⁰337a34-b2: Ἐπεὶ δ' ἐν τοῖς συνεχῶς κινουμένοις κατὰ γένεσιν ἢ ἀλλοίωσιν ἢ ὅλως μεταβολὴν ὁρῶμεν τὸ ἐφεξῆς ὄν καὶ γινόμενον τόδε μετὰ τόδε ὥστε μὴ διαλείμειν σκεπτέον πότερον ἐστὶ τι ὃ ἐξ ἀνάγκης ἐσται

that of things that come-to-be, events that occur, some but not all come-to-be of necessity. However, a prior conclusion, one that is more relevant to the purposes of this paper, is that coming-to-be that is necessary in an absolute sense is equivalent to coming-to-be that is eternally cyclical, i.e., coming-to-be that “bends back” or returns upon itself (*ἀνακάμπτειν*).¹¹

Aristotle’s argument for this equation, insofar as it can be made out, seems to involve a process of elimination.¹² It also requires some “filling in.” Coming-to-be must occur in a temporal nexus that either has a limit (*πέρας*) or does not have a limit. If the nexus does not have a limit, it must be either rectilinear (“straight”—*εἰς εὐθὺ*) or cyclical. But only a cyclical nexus provides for the eternality of coming-to-be. Therefore, since eternality is to be equated with necessity, only a cyclical nexus provides for *necessary* coming-to-be.¹³

But why does Aristotle assume that a cyclical nexus explains the eternality of coming-to-be? The following may capture something of his implicit reasoning. If one assumes an instance of coming-to-be or the occurrence of an event *x* either in a finite or infinite rectilinear nexus, it is not *always* true to make the claim that “*x* will occur” (or that “*x* has occurred”). However, in an eternal cyclical nexus it is always true to make either claim. This fact can easily be verified with the aid of a minimal amount of logical formalism. Let a proposition expressing an instance of coming-to-be or the occurrence of an event at time *t* be represented by ‘*p*(*t*)’, and a “simple future operator” ‘*F*’ be introduced such that *Fp*(*t*) if and only if $\exists t'(t < t' \cdot p(t'))$ [“it will be the case that *p*” is true at *t* if and only if there is a time *t'* “later” than *t* such that “it is the case that *p*” is true at *t'*]. If the event represented by ‘*p*’ occurs in an eternal cyclical temporal nexus, then *Fp*(*t*) is *always* true, true at all times *t* (since there will be a “future” time *t'* at which ‘*p*(*t'*)’ is true). Analogous results obtain for a “simple past operator” ‘*P*’. Thus, in the case of necessary coming-to-be, i.e., the necessary occurrence of events, as opposed to necessary being, what is eternal, given the temporal conception of necessity, is the fact that *x* will occur (and the fact that *x* has occurred): since it is *always* true that *x* will occur (and that *x* has occurred), then, by the identification of necessary truth with eternal truth, it is necessarily true that *x* will occur (and that *x* has occurred).

Aristotle, of course, holds that only some *genesis* or “occurrences” are eternally cyclical and, thus, necessary in an absolute sense.¹⁴ Others are

¹¹338a4–5: *Εἰ ἄρα τινὸς ἐξ ἀνάγκης ἀπλῶς ἡ γένεσις, ἀνάγκη ἀνακυκλεῖν καὶ ἀνακάμπτειν.*

¹²Cf. W. J. Verdenius, *Aristotle on Coming-to-Be and Passing-Away: Some Comments* (Leiden 1966) 71–73.

¹³338a15–17: *ἄρα κινήσει καὶ γενέσει ἐστὶ τὸ ἐξ ἀνάγκης ἀπλῶς καὶ εἴτε κύκλῳ, ἀνάγκη ἕκαστον γίνεσθαι καὶ γεγονέναι, καὶ εἰ ἀνάγκη, ἡ τούτων γένεσις κύκλῳ.*

¹⁴In this chapter Aristotle distinguishes absolute necessity from conditional necessity. Event *B* is conditionally necessary, given the occurrence of event *A*, if it is impossible

not: for example, “men and animals do not return upon themselves so that the same one comes to be again.”¹⁵ He further implies that in the case of necessary coming-to-be there is something like reciprocal (efficient?) causation among the necessarily generated members of the cyclical temporal nexus. If A, B, and C constitute a nexus of events that are necessary in the absolute sense, they possess the requisite sort of eternality *because* A brings about B, B brings about C, and *C brings about A again, ad infinitum*. Thus, “if there is to be a cloud, it is necessary that it rain, and if it is to rain, it is necessary that there be a cloud.”¹⁶ However, while it is true that if I am to be born, it is necessary that my father be born, it is not necessary that I be born in order that my father be born.¹⁷ The latter example does not illustrate *reciprocal* causal action (even through “intermediate steps”). Consequently, we do not have here an eternally alternating sequence of events, and neither my birth nor that of my father is necessary in the absolute sense.¹⁸

II. CHRYSIPPUS’ DETERMINISM: THE ETERNAL RECURRENCE AND NECES- SITAS FATI

While Aristotle held that not all instances of coming-to-be are necessary in the absolute sense, some form of determinism is generally ascribed to most members of the Stoic school. Diogenes Laertius reports that the doctrine that “all things come-to-be or occur according to fate” was held by Chrysippus, Posidonius, Zeno, and Boethus.¹⁹ This doctrine seems to have been logically stronger than some form of relative determinism, i.e., the doctrine that every event has a cause, which is a sufficient condition of that event’s occurring. Rather, it seems more akin to what today is called fatalistic or logical determinism: the doctrine that it is necessary,

(or, by the temporal interpretation of the modalities, *never* the case) that A should occur but not B. Most contemporary discussions of causal determinism are concerned with what Aristotle would call conditional necessity. In *De Gen. et Corr.* 2.11, however, Aristotle is primarily concerned with giving a temporal account of *absolute* necessity.

¹⁵338b8–9: ἀνθρωποι δὲ καὶ ζῶα οὐκ ἀνακάμπουσιν εἰς αὐτοὺς ὥστε πάλιν γίνεσθαι τὸν αὐτόν.

¹⁶338b7–8: καὶ εἰ μὲν νέφος ἔσται, δεῖ ὕσαι, καὶ εἰ ὕσει γε, δεῖ καὶ νέφος.

¹⁷338b9–11: οὐ γὰρ ἀνάγκη, εἰ ὁ πατήρ ἐγένετο, σὲ γενέσθαι· ἀλλ’ εἰ οὐ, ἐκείνων. Cf. *Problemata* 17.3: ὥσπερ ἐπὶ τοῦ οὐρανοῦ καὶ ἐκάστου τῶν ἄστρον φορᾶ κύκλος τίς ἐστιν, τί κωλύει καὶ τὴν γένεσιν καὶ τὴν ἀπώλειαν τῶν φθαρτῶν τοιαύτην εἶναι, ὥστε πάλιν ταῦτα γίνεσθαι καὶ φθείρεσθαι; (916a25–29).

¹⁸Aristotle holds that two events in an eternal cyclical nexus are absolutely necessary and stand in a reciprocal causal relation regardless of the number of intervening events between them “in either direction.” See 338a13–14.

¹⁹7.149: καθ’ εἰμαρμένην δὲ φασὶ τὰ πάντα γίνεσθαι Χρύσιππος ἐν τοῖς Περὶ εἰμαρμένης καὶ Ποσειδωνίου ἐν δευτέρῳ Περὶ εἰμαρμένης καὶ Ζήνων, Βόηθος δ’ ἐν τῷ πρώτῳ Περὶ εἰμαρμένης.

in the absolute sense, that every event that occurs occurs. Cast in the formal mode, this doctrine is encapsulated in the claim that from the truth of a proposition p , it follows that $\Box p$ (it is necessary that p), while from the falsity of p , it follows that $\sim \Diamond p$ or $\Box \sim p$ (it is not possible that p or it is necessary that it is not the case that p).

Since the Stoics were, in a sense, the heirs of the Megarian tradition²⁰ and were also undoubtedly influenced by the Peripatetic school, one might perhaps expect that their fatalism would get interpreted in temporal terms. In other words, if every event or instance of coming-to-be is necessary in the absolute sense, we might expect (given the temporal account of necessary coming-to-be) that for every such event x , it is *always* the case that x will occur (and that x has occurred). *Every* event, that is, would be included in the eternal cyclical temporal nexus.

Precisely this doctrine of eternal recurrence was attributed to the Stoics in antiquity. Early Christian apologists, in particular, seized upon the doctrine as an *ad hominem* rebuttal to the sneers of intellectual pagans at Christian dogma, especially the doctrine of the resurrection of the body. For example, Origen in his *Contra Celsum* attributes to "the Stoics" the doctrine that "a conflagration (ἐκπύρωσις) of the universe periodically occurs and after that a restoration of order (διακόσμησις) in which everything is indistinguishable with respect to the former restoration."²¹ Arnim places this and similar passages in the Chrysippus section of his *Fragmenta*; and in Lactantius' *Divinae Institutiones* there is an explicit attribution to Chrysippus of the doctrine of the reestablishment of the form of individual persons in successive *periodoi*.²² Thus, my suggestion is that the doctrine of eternal recurrence is an expression of Stoic fatalism in terms of a common ancient temporal conception of necessity in general, and necessary coming-to-be in particular.

The picture, however, is complicated by what is known of the Stoics'

²⁰For a short summary of the historical connections between the Old Stoa and the Megarians, see Benson Mates, *Stoic Logic* (Berkeley 1961) 5–8. Additionally, for one view of Stoic reaction to the "Master" (κυριεύων) Argument of Diodorus Cronos, see P. M. Schuhl, *Le Dominateur et les Possibles* (Paris 1960) 59–64.

²¹*Contra Celsum* 5.20: φασι δὴ οἱ ἀπὸ τῆς Στωᾶς κατὰ περίοδον ἐκπύρωσιν τοῦ παντός γίνεσθαι καὶ ἐξῆς αὐτῇ διακόσμησιν πάντ' ἀπαράλλακτα ἔχουσιν, ὡς πρὸς τὴν προτέραν διακόσμησιν. Reproduced in J. von Arnim, *Stoicorum Veterum Fragmenta* (Leipzig 1903) 2 frag. 626. (Citations from this work are hereafter made in the form *SVF* 2.626.)

See also *Contra Celsum* 4.68 (*SVF* 2.626): μετὰ γὰρ τὴν τοῦ παντός ἐκπύρωσιν, ἀπειράκις γενομένην καὶ ἀπειράκις ἐσομένην, ἡ αὐτὴ τάξις ἀπ' ἀρχῆς μέχρι τέλους πάντων γέγονέ τε καὶ ἔσται.

²²*Div. Inst.*, ed. Laubmann and Brandt (Leipzig 1890) 7.23.656: *Melius Chrysippus . . . : qui in libris quos de providentia scripsit cum de innovatione mundi loqueretur, haec intulit: τούτου δὲ οὕτως ἔχοντος ὁῦλον, ὡς οὐδὲν ἀδύνατον καὶ ἡμᾶς μετὰ τὸ τελευτῆσαι πάλιν περιόδῳ τινὶ χρόνον εἰς τοῦτο <έν> ᾧ νῦν ἐσμέν ἀποκαταστήναι σχήμα (=SVF 2.623).*

account of the alethic modalities and by Cicero's report that Chrysippus attempted "to escape necessity but to retain fate."²³

Chrysippus' attempt to distinguish necessity (*necessitas*: ἀνάγκη) and fate (*fatum*: εἰμαρμένη), Cicero tells us, rested upon his distinction between "perfect and principal" (*perfectae et principales*) causes and "assisting and proximate" (*adiuvantes et proximae*) causes.²⁴ The former type of cause is aptly characterized by Margaret Reesor as being "part of the nature of an object."²⁵ Causes of the latter type are the "antecedent" causes that are identified in Cicero's account of Chrysippus' doctrine with the action of fate.²⁶ Reesor comments that "since every actual event requires an initiating cause, every actual event is according to fate. Initiating causes of various types form a network of causes external to the principal causes. They are also the antecedent causes of an event. This pattern of causes and effects was called fate."²⁷ J. M. Rist's characterization of Chrysippus' view of fate as "the sequence of events which will in fact take place"²⁸ also seems valid: the *events* (instances of coming-to-be) that actually take place depend on the action of antecedent assisting causes.

Although it seems fairly clear, according to Cicero, that Chrysippus attempts to distinguish fate from necessity by locating it in the temporal nexus of external, assisting causes, it is difficult to determine *precisely* the manner in which he tries to effect this distinction. Examination of Chrysippus' conceptions of the alethic modalities may prove helpful in attempting to reconstruct his strategem.

A set of "Stoic" definitions of the modalities has been derived by Martha Kneale by collating information from Diogenes Laertius (*Vitae* 7.75) and Boethius (*Commentarii in Librum Aristotelis, Περὶ Ἑρμηνείας, secunda editio*, ed. Meiser, pages 234–235) and bringing to bear certain

²³*De Fato* 41: *Chrysippus autem cum necessitatem improbareret et nihil vellet sine praepositis causis evenire, causarum genera distinguit, ut et necessitatem effugiat et retineat fatum.*

²⁴*Ibid.* 'causarum enim' inquit 'aliae sunt perfectae et principales aliae adiuventes et proximae.'

²⁵Margaret E. Reesor, "Fate and Possibility in Early Stoic Philosophy," *Phoenix* 19 (1965) 288.

²⁶*De Fato* 41: 'quam ob rem cum dicimus omnia fato fieri causis antecedentibus, non hoc intelligi volumus: causis perfectis et principalibus, sed causis adiuvantibus [antecedentibus] et proximis.'

²⁷Reesor 288.

²⁸J. M. Rist, *Stoic Philosophy* (Cambridge 1969) 121. Cf. Josiah B. Gould, *The Philosophy of Chrysippus* (Albany 1970) 143: "Chrysippus, then, appears to mean by fate a vast causal nexus from which nothing that happens is excluded." Also A. A. Long, "Freedom and Determinism in the Stoic Theory of Human Action," *Problems in Stoicism*, ed. A. A. Long (London 1971) 178: "By destiny the Stoics meant an eternal nexus of causes."

logical considerations.²⁹ This account, Kneale claims, can be safely attributed to Chrysippus.³⁰ I quote the definitions of "possibility" and "necessity" for future reference: "The possible is that which admits of truth or that which, while admitting of truth, is not prevented from being true by external circumstances" "The necessary is that which is true and does not admit of falsehood or that which, while admitting of falsehood, is prevented by external circumstances from being false."³¹

It seems plausible that the first clause in each definition is somehow connected with the "principal and perfect" causes and, thus, the "internal nature" or essence of things, while the second clause in each definition pertains to "fate," i.e., to the temporal nexus of external, "assisting" causes.³² Now, let us consider the illustration adduced by Cicero of the relation between a "sense-presentation" and an act of assent. The power of giving or withholding assent seems to be the "perfect and principal" cause of a particular act of assent and to be located in the internal nature or essence of the individual person.³³ The occurrence of a particular sense-presentation is an "assisting and proximate" cause of a particular act of assent.³⁴

What is the logical relation between the sense-presentation and the act of assent? Cicero seems to say that Chrysippus holds that the occurrence of a sense-presentation is a sufficient but *not* a necessary condition of the act of assent.³⁵ This conclusion is susceptible to at least

²⁹William Kneale and Martha Kneale, *The Development of Logic* (Oxford 1962) 123–126. The "logical considerations" I mention pertain to the "square of modal opposition:" most importantly, the possibility of *p* should be the contradictory of the necessity of not-*p*, and the necessity of *p* should be the contradictory of the possibility of not-*p*.

³⁰*Ibid.* 123: "In any case the view called 'Stoic' by Boethius can safely be attributed to Chrysippus, although he was probably not the only one to hold it."

³¹*Ibid.* 124.

³²Long ([above, n. 28] 195 n. 15) has come to a similar conclusion: "As we shall see, Chrysippus drew an important distinction between fate or destiny, and necessity. This is not the place to expound that distinction in detail, but it seems to be parallel or identical to a distinction he drew between external antecedent causes (fate) and the internal nature of a thing (necessity)."

³³*De Fato* 42. The claim that the Stoics held that the power of giving and withholding assent is a "principal and perfect" cause, inherent in the nature of man, seems to be supported by passages from Alexander's *De Fato*: 13.181.13 ff. and 26.196.13 ff. (*SVF* 2.979 and 2.984, respectively). See also the comments of Reesor (above, n. 25) 287.

³⁴Cicero, *De Fato* 42: *tamen cum id visum proximam causam habeat, non principalem . . .*

³⁵*Ibid.* 44: *neque enim Chrysippus—concedens ad sensationis proximam et continentem causam esse in viso positam—[neque] eam causam esse ad ad sentiendum necessariam concedet*. Cf. the discussion in Gould (above, n. 28) 148–152. Long (above, n. 28) argues, in effect, that a sense-presentation *plus* a particular "character" constitute a sufficient condition for the occurrence of a given act of assent. See especially 182: "it is an axiom of Stoic psychology, as we shall see (p. 187), that environment and character determine acts of choice." So, according to Long's view, the occurrence of a particular sense-

two interpretations. According to one, it means, simply, that not *every* act of assent need be preceded by this particular sense-presentation or by this particular sort of sense-presentation. This claim is surely true but seems irrelevant to the determination of whether this particular act of assent is necessary or not. According to the other interpretation, what is being claimed is that the occurrence of this sense-presentation, or of a sense-presentation just like this one in a set of circumstances just like these (e.g., to a person with a disposition [διάθεσις] just like this person's character), is not a necessary condition of the occurrence of this particular act of assent, or of an act of assent just like this one in a set of circumstances just like these.

If the latter is Chrysippus' intended claim, it does indeed distinguish fate from necessity. The act of assent, he is in effect claiming, is *conditionally* necessary, given the occurrence of the sense-presentation. But we have no reason to think that the occurrence of the sense-presentation is anything more than conditionally necessary itself, dependent on the occurrence of some *other* event. "Absolute necessity" is avoided.

This conclusion seems satisfying until we recall that the doctrine of eternal recurrence has been attributed to Chrysippus.³⁶ Since *every* event is part of the great cycle, the act of assent becomes a necessary condition (with a great number of intervening "steps" of course) of the occurrence of the sense-presentation, as well as vice versa. Thus, since it is *always* true that this particular act of assent (or one "indistinguishable" [ἀπαράλλακτος] from it)³⁷ will occur (and has occurred), it is necessary, in the absolute, unconditional sense.

presentation would not, *of itself*, constitute a sufficient condition for the occurrence of a particular act of assent. The acceptance of Long's quite plausible view is compatible with the argumentation in the remainder of this paper.

³⁶Long ([above, n. 28] 188–189) recognizes the presence of the doctrine of eternal recurrence in Stoic thought but does not connect it with the issue of necessary coming-to-be: "History, according to them [the Stoics], repeats itself identically over infinite time. The nature of this queer belief need not concern us here. But . . . the theory says that given the same external situation and an absolutely identical human character then at time *t* in cycle *p* action *x* is the same as the action performed in cycle *p*¹ at time *t*¹. The theory does not say anything that is relevant to action now." It is the contention of this paper, however, that this doctrine of eternal recurrence represents the very semantic condition that, within the context of the common ancient temporal conception of necessity, insures that the action *x* performed "now" is a necessary event, i.e., an instance of necessary coming-to-be.

³⁷ἀπαράλλακτος seems to have been a technical term for whatever recurs in the eternal *apokatastaseis*, connoting, among other things, the lack of *numerical* identity of the "recurrent individuals." The term may have been broad enough, in its technical usage, to cover those cases where, according to Origen (*Contra Celsum* 5.20), those "embarrassed" by the doctrine of the *identical* recurrence of every detail permitted a very "little deviation" (ὀλίγην . . . παραλλαγὴν). Origen goes on to speak of even those adhering to this modification as holding that Socrates again will be born to Sophroniscus

What, then, are we to make of Chrysippus' supposed attempt to "escape necessity but retain fate"? Cicero thought that this attempt resulted merely in something like a verbal distinction between the two terms,³⁸ and our argument suggests that he was correct in this assessment. We might follow Kneale in her implied suggestion that the two disjuncts in each Stoic definition of an alethic modality really represent two sets of modal concepts.³⁹ One concept of necessity, the one associated with the first disjunct of the definition, depends entirely on the "inner," essential nature of things. This seems a sense of "necessity" properly associated with being. The second disjunct of the definition, however, is appropriate to instances of coming-to-be, i.e., to the temporal nexus of initiating, assisting causes identified by Reesor and others with the Stoic conception of fate. When a person who possesses a given character or fixed disposition encounters a certain sense-presentation, it is thus determined, for example, that he will not withhold his assent, although neither the character itself (without an appropriate sense-presentation) nor the sense-presentation itself (without the assumption of a specific sort of character) is sufficient to effect the act of assent. So, in the case of acts of assent, "necessity of being" (the character or disposition of the individual) and "necessity of coming-to-be" (the occurrence of an assisting, initiating cause, e.g., a sense-presentation) *together* provide the

and Phaenarete, etc.; so the permitted deviation must have been very slight indeed. (Part of the preceding passage is reproduced in *SVF* 2.626.) It is interesting to note the similarity of the concept of the *aparallaktos* to that of a "counterpart" in certain technical "possible world" semantic theories for quantified modal logic. E.g., see David Lewis, "Counterpart Theory and Quantified Modal Logic," *Journal of Philosophy* 65 (1968) 113-126.

Professor Reesor has pointed out in a personal communication that the foregoing passage from Origen may be read as implying that the second, "ὀλίγη παραλλαγή" group of Stoics, while admitting "an element of variability and contingency in each cosmic cycle," nonetheless insisted upon absolute determinism with respect to the *logos* and what is subject to the *logos*. Consequently, Socrates must have the same parents in each cycle because the act of begetting follows upon an act of assent of the sort that is the function of the *logos*. As Reesor further notes, it is possible, for this second group of Stoics, to maintain her distinction between what is "attributable to us" (ἐφ' ἡμῖν)—that which is determined by our character or fixed disposition (διάθεσις) plus an appropriate initiating cause (e.g., a φαντασία ὁρμητική)—and what is not attributable to us. See Margaret E. Reesor, "Necessity and Fate in Stoic Philosophy," in *The Stoics*, ed. John M. Rist (Berkeley 1978) 187-202.

³⁸See *De Fato* 39 and 44-45.

³⁹Kneale ([above, n. 29] 126) comments: "But the definitions give rise to two separate squares of opposition, one for the modal terms understood absolutely [in terms of 'being,' the 'perfect and principal' causes, I have claimed], which is identical with the Philonian square, the other for the terms understood as relative [in terms of 'coming-to-be,' which depends on 'assisting and proximate' causes, according to the interpretation of this paper]."

sufficient condition for the occurrence of the act of assent. With the added postulate of eternal recurrence, the conditional necessity that obtains between the sense-presentation and the act of assent of a person with a particular character is transformed into an absolute necessity of coming-into-being: it is *always* true that the act of assent *will* occur and *has* occurred. It is thus rendered necessary in the Peripatetic "absolute" sense of necessary coming-to-be.

The preceding discussion may perhaps be useful in solving a puzzle concerning Cicero's account of Chrysippus' views. As Rist has noted,⁴⁰ although Cicero claims that Chrysippus attempted to *distinguish* necessity and fate, he nonetheless accuses Chrysippus, in introducing an "everlasting series of causes" (*causarum seriem sempiternam*), of "chaining the mind of man by the *necessity of fate*" (*necessitate fati*).⁴¹ Rist concludes (126) that Cicero perhaps employs the phrase *necessitas fati* merely to emphasize his opinion that Chrysippus had not made good his claim to distinguish fate from necessity. Cicero, it seems, did not think that Chrysippus had made good his claim. In what way, however, does Chrysippus' system remain "absolutely determined"?

I suspect that it is no accident that Cicero conjoins the phrase *causarum seriem sempiternam* with *necessitate fati*. Chrysippus has separated the necessity of "being" (which is derived from the essential nature of things) from the realm of events or instances of coming-to-be (which require the concurrence of external assisting causes). Nonetheless, fate or that temporal nexus of events is evidently eternally recurrent. Events in this nexus thus possess the sort of eternality that renders them absolutely necessary, according to the doctrine of Aristotle's *De Gen. et Corr.* In terms of the identification of necessity with eternality, specifically the identification of necessary coming-to-be with eternal recurrence, the claim that Chrysippus binds everything *necessitate fati* seems quite apt. Chrysippus may be correct in arguing that the sort of "necessity of being" that derives *solely* from the essential nature of things is not appropriately applied to fate. Yet the eternal recurrence of events constituting the "world's history" indicates that he has not "escaped" the sort of absolute necessity appropriate to the realm of coming-to-be, i.e., the *necessitas fati*.

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⁴⁰(Above, n. 28) 123–125.

⁴¹*De Fato* 20. In this passage Cicero distinguishes two types of consideration that had been thought to entail some form of fatalism. The view that "what is future" is immutable and that a true future [proposition] cannot be changed into a false one (the type of consideration that seems to have troubled Aristotle in *De Int.* 9) does not, according to Cicero, establish *fati necessitatem*, but merely explains the meaning of terms (*verborum vim*). Those who introduce *causarum seriem sempiternam*, however, do fall prey to the necessity of fate. See also *De Fato* 38.