

AN OFFPRINT OF

Topics in
Stoic Philosophy

edited by

KATERINA IERODIAKONOU

CLARENDON PRESS · OXFORD

1999

Chrysippus' Theory of Causes

SUSANNE BOBZIEN

We know very little about Chrysippus' theory of causation. Our textual evidence which names Chrysippus directly and can be straightforwardly considered as belonging to a theory of causes is this: a passage in Stobaeus (*Ecl.* 1.138.23–139.4) that presents Chrysippus' basic account of causation; a distinction of causes in Cicero's *On Fate* (*Fat.* 41–5); and an indirect reference to a distinction of causes in Plutarch's *On Stoic Self-Contradictions* (*Stoic rep.*, ch. 47).

There is far better evidence for later theories: in Cicero's *Topics*, various works by Galen, Sextus' *Outlines of Pyrrhonism* book 3 and *Against the Mathematicians* book 9, and Clement's *Miscellanies* book 8.9 we find excerpts and summaries of causal theories of medical, later Stoic, and Peripatetic origin. (A trace of a later Stoic theory of causes can be found in Alexander of Aphrodisias' *On Fate* 192.18–19.) The reports are mainly eclectic in character, often uncritically juxtaposing and mixing together various theories. But they have one thing in common: they treat the theories they report as finished taxonomies of causes. They present sets of technical terms that are used as names for mutually exclusive classes of causes, so that it is possible to assign any cause to precisely one class (and naturally there are no empty classes). In most cases, causes of more than one type are described as cooperating in one instance of causation.

I am very grateful to Catherine Atherton and Jonathan Barnes, who each provided me with valuable comments on an earlier version of this paper. Thanks are due also to Charles Brittain, who detected several mistakes in what I had taken to be the final version of the paper, and to Katerina Ierodiakonou for drawing my attention to several ambiguities in my formulations.

Based on Cicero's report of a Chrysippean distinction of 'genera' of causes (*Fat.* 41) it is the general view that Chrysippus aimed at developing a complete classification of causes, like those later ones, introducing names that express the class membership of a cause.¹ The assumption is that some of the later theories were derived from Chrysippus' theory, and efforts are then made to match Chrysippus' 'types of causes' with these later theories and to extract them from those later texts.

In contrast, my view is that Chrysippus neither developed a finished taxonomy of causes, nor intended to do so, and that he did not have a set of technical terms for mutually exclusive classes of causes, so that each cause can be assigned its class. Rather, Chrysippus made some conceptual distinctions. The various adjectives which he used for causes had the function of describing or explaining particular features of certain causes. Clarification, explanation, specification of particular philosophical points are his purposes—not the assignment of all causes to an already existent, exhaustive, classification, nor the construction of one; nor yet the empirical enterprise of dividing up into groups causes as they are found in the world. (Accordingly, the adjectives he uses are not mutually exclusive in their application to causes.) Chrysippus explained special features and functions of causes in ordinary language, wherever and to whatever degree this was needed in the relevant philosophical context—for example, in an argument for compatibilism. This approach to Chrysippus' causal theory leads to an interpretation of our main sources that differs from the received view.

The following reconstruction of Chrysippus' theory is grounded on the Stoic tenets that causes are bodies, that they are 'relative' (*πρός τι*), and that all causation can ultimately be traced back to the one 'active principle' (*ἀρχή ποιούν*) which pervades all things, and of which every case of causation is a manifestation. The reconstruction relies primarily on the reports of Chrysippus' own theory, secondarily on texts that uncontroversially present early Stoic doctrine. Later texts are generally adduced only to confirm certain suggestions further, not to establish points independently.

¹ e.g. A. A. Long and D. N. Sedley, *The Hellenistic Philosophers* (Cambridge, 1987), i. 342 (Long/Sedley); J. J. Duhot, *La Conception stoïcienne de la causalité* (Paris, 1989), 172.

I. DEFINITIONS AND ACCOUNTS

Chrysippus states that a cause is that because of which; and that the cause is an existent thing and a body, <and that of which it is a cause is not existent and is a predicate;> and that the cause is 'because', and that of which it is a cause is 'why?'. (Stob. *Ecl.* 1.138.23–139.2)²

the Stoics state that every cause is a body that becomes a cause, to a body, of something incorporeal; as the scalpel, which is a body, becomes a cause to the flesh, which is a body, of the incorporeal predicate 'being cut'. (SE *M* 9.211; cf. Clem. *Strom.* 8.9 96.18–97.1)³

Every instance of causation involves at least three main factors, two corporeal, one incorporeal. (For reasons of convenience, I individuate instances of causation by assuming one such instance per effect.) One corporeal is the cause, the other the object to which the effect happens. The effect—i.e. that which is caused—is immaterial and happens to the second corporeal. It is standardly determined as being a predicate (Stob. *Ecl.* 1.138–9). (Note that the early Stoics, as far as we know, had no special term for 'effect'. *Ἀποτέλεσμα*, which is the standard expression later, does not occur.) In cases in which different causes work together in one instance of causation the factors are multiplied.

The account of the cause as 'that because of which' (δι' ὃ) as well as the description of the pair of cause and effect as 'because'/'why?' (if the text is not corrupt here), and as 'cause'/'that of which it is a cause', emphasize that cause and effect are relative to each other, and inseparable: a cause is not a particular thing, but that thing *in so far as it produces its effect*. In fact, for the Stoics, cause is relative in two respects: 'They say that cause is a relative [πρός τι].

² Χρύσιππος αἴτιον εἶναι λέγει δι' ὃ. καὶ τὸ μὲν αἴτιον ὄν καὶ σῶμα, <οὐ δὲ αἴτιον μὴ ὄν καὶ κατηγορήμα>* καὶ αἴτιον μὲν ὅτι, οὐ δὲ αἴτιον διὰ τι.

* Some emendation is required. My suggestion is based on the parallel for Zeno (Stob. *Ecl.* 1.138.5–16) and Posidonius (Stob. *Ecl.* 1.139.7–8): both contrast αἴτιον as σῶμα with οὐ δὲ αἴτιον as κατηγορήμα and both provide positive characterizations of the οὐ δὲ αἴτιον. These parallels are not born out by Wachsmuth's emendation <οὐ δὲ αἴτιον μῆτε ὄν μῆτε σῶμα>, which has been taken over by von Arnim, *Stoicorum Veterum Fragmenta (SVF)*, ii. 336, and Long/Sedley, ii. 55A.

³ . . . Στωικοὶ μὲν πᾶν αἴτιον σῶμά φασι σῶματι ἀσωμάτου τινὸς αἴτιον γίνεσθαι, οἷον σῶμα μὲν τὸ σμιλίον, σῶματι δὲ τῇ σαρκί, ἀσωμάτου δὲ τοῦ τέμνεσθαι κατηγορήματος.

For it is cause of something and to something, as the scalpel is the cause of something, viz. the cutting, and to something, viz. the flesh' (SE *M* 9.207).⁴

Stobaeus' report on Chrysippus' concept of causation closes with the sentence 'αἰτίαν δ' εἶναι λόγον αἰτίου, ἢ λόγον τὸν περὶ τοῦ αἰτίου ὡς αἰτίου' (Stob., *Ecl.* 1.139.3-4). This has been variously translated as 'But an *aitia* . . . is an account of the *aition*, or the account of the *aition* as *aition*' and as 'an explanation [*aitia*] is the statement of a cause [*aition*], or statement concerning the cause qua cause'.⁵ The αἰτία has accordingly been interpreted as being a 'propositional item of a certain kind',⁶ or as explanation.⁷ It is taken to be incorporeal, and thus categorically different from the αἴτιον.

I believe that it is mistaken to place the Stoic αἰτία among the incorporeals, making it a proposition, or translating it by 'explanation'.⁸ The only evidence that has been given for this interpretation of the Stobaeus passage is the use of αἰτία, as apposed to αἴτιον, synonymously with 'the account about the αἴτιον' by the fourth-century BC doctor Diocles of Carystus, as reported by Galen, *Alim. fac.* 6.455-6 K (fr. 112 Wellmann).⁹ This appears to me insufficient to establish that for Chrysippus αἰτία was a propositional item or a kind of causal explanation. (We may also wonder why we hear nowhere (else) of this Stoic concept of explanation/αἰτία. Should it not have its place somewhere in Stoic Logic or epistemology? Would we not even expect it to be central there? But there is not a trace of such a concept of explanation/αἰτία anywhere in our sources on Stoic epistemology.)

⁴ τὸ αἴτιον τοίνυν, φασί, τῶν πρὸς τι ἐστίν· τινὸς γάρ ἐστιν αἴτιον καὶ τινί, οἷον τὸ σμῆλιον τινὸς μὲν ἐστὶν αἴτιον καθάπερ τῆς τομῆς, τινὶ δὲ καθάπερ τῆ σαρκί (SE *M* 9.207; cf. also SE *PH* 3.25, *M* 9.239 and see below). It is evident from the very close parallel in SE *M* 9.211, quoted above, that this is Stoic. The same example is used in largely the same formulation. Whether it goes back to Chrysippus we do not know.

⁵ M. Frede, 'The Original Notion of Cause' in J. Barnes, M. Burnyeat, and M. Schofield (eds.), *Doubt and Dogmatism* (Oxford, 1980), 217-249 at 222, and Long/Sedley, i. 333, respectively. Similarly, Duhot *La Conception*, 146: 'Αἰτία est le concept de cause, ou, si on préfère, le concept de cause entant que cause.'

⁶ Frede, 'The Original Notion', 222.

⁷ Long/Sedley, i. 333. I find the translation of λόγος as 'statement (of a cause)' unconvincing in itself. Λόγος meaning 'statement' is exceptionally rare in Stoic philosophy.

⁸ As Frede ('The Original Notion', 224-5), points out, the early Stoics are not interested in explanation; their concern is the attribution of responsibility.

⁹ Ibid. 222.

An alternative is, instead, to look at Chrysippus' own use of the word *αἰτία*, and how the Stoics used abstract feminine nouns in contrast with substantivized neuter singular adjectives. For, if Chrysippus was sensitive to the grammatical distinction *αἰτία/αἴτιον*, we should expect him to stick to his own philosophical interpretation of such distinctions. His use of *αἰτία* can be found in another passage in Stobaeus, *Ecl.* 1.79.5–12:

Fate is the reason of the universe, or the reason of the things in the universe governed by providence . . . And instead of “reason” he uses “truth”, “*αἰτία*”, “nature”, and “necessity”, and adds other terms, which apply to the same substance from different perspectives.¹⁰ (emphasis added)

Here Chrysippus uses *αἰτία* as coextensive with ‘reason’ (*λόγος*). And, for the Stoics in general, Seneca reports:

As you know, our Stoics state that there are two [principles] in the nature of things from which everything occurs: cause and matter. Matter . . . But cause, i.e. reason, moulds matter and turns it wherever it wants. (*Ep.* 65.2, emphasis added)¹¹

Αἰτία, and equally *ἀλήθεια* and *ἀνάγκη*, are hence in this context identified with fate, reason, and the active principle (*ἀρχὴ ποιούν*) of the universe, which are all one for Chrysippus, and which physically are *pneuma* (e.g. Stob. *Ecl.* 1.79.1–2). In particular, *αἰτία* is used synonymously for *λόγος* in Stobaeus, and *causa* for *ratio* in Seneca, just as in the passage under discussion (Stob. *Ecl.* 1.139.3–4). However, here reason is corporeal and consists of *pneuma*, being the world-reason, which pervades the universe as a whole, including all things

¹⁰ *Εἰμαρμένη ἐστὶν ὁ τοῦ κόσμου λόγος ἢ λόγος τῶν ἐν τῷ κόσμῳ προνοία διοικουμένων . . . Μεταλαμβάνει δ' ἀντὶ τοῦ λόγου τὴν ἀλήθειαν, τὴν αἰτίαν, τὴν φύσιν, τὴν ἀνάγκην, προστιθεὶς καὶ ἑτέρας ὀνομασίας, ὡς ἐπὶ τῆς αὐτῆς οὐσίας τασσομένης καθ' ἑτέρας καὶ ἑτέρας ἐπιβολάς.* Compare in Plutarch's *On Stoic Self-contradictions*, as Chrysippean names for fate: ‘the greatest cause’ (*ἡ μεγίστη αἰτία* (Stoic. *rep.* 1055E)), ‘the cause of all things’ (*πάντων αἰτία* (Stoic. *rep.* 1056B)), ‘invincible and unpreventable and unchangeable cause’ (*αἰτίαν ἀνίκητον καὶ ἀκάλυτον καὶ ἀτρεπτον* (Stoic. *rep.* 1056C)).

¹¹ *Dicunt, ut scis, Stoici nostri duo esse in rerum natura, ex quibus omnia fiunt, causam et materiam. Materia . . . Causa autem, id est ratio, materiam format et quocumque vult versat.*

Cf. also Marcus Aurelius 8.27 ‘divine cause’ (*θεία αἰτία*); 9.29 ‘the cause of the all’ (*ἡ τῶν ὅλων αἰτία*); 5.8 . . . οὕτως ἐκ πάντων τῶν αἰτίων ἡ εἰμαρμένη τοιαύτη αἰτία συμπληροῦται; Sen. *Nat. quaest.* 2.45 *causa causarum*. See also Plotinus, *Enn.* 3.1.2.17–22, *κυριωτάτη αἰτία* for fate as all-pervading, greatest cause of all things, reporting Stoic doctrine; and Stob. *Ecl.* 1.31.13–14, for Chrysippus: *Δία δὲ αὐτὸν* (i.e. god) *λέγουσιν, ὅτι πάντων ἐστὶν αἴτιος καὶ δι' αὐτὸν πάντα.*

in it.¹² Now in our initial quote (Stob. *Ecl.* 1.139.3-4) αἰτία and λόγος were not the world-cause and the world-reason, but they were αἰτία and λόγος of an individual cause (αἴτιον)—i.e. an individual material object. But the relation between world-cause and individual αἰτία is simple. Every object contains a portion of the world-pneuma or active principle. And these individual portions of pneuma, too, according to their various functions, were referred to with abstract feminine nouns, in correspondence with the names of the world-pneuma. For example, the feminine noun ἀλήθεια ('truth') is used also of an individual portion of pneuma in the human mind (e.g. SE PH 2.81). Equally, I suggest, an individual portion of the world-pneuma in an object, in so far as it is responsible for an effect, is referred to by the feminine noun αἰτία. (In contrast, the Stoics used the substantivized neuter singular τὸ ἀληθές and τὸ ἀναγκαῖον to refer to incorporeal, propositional items.¹³) This understanding of αἰτία also helps to make sense of the doxographical report that 'the Stoics hold that all causes are corporeal; for they are *pneumata*'.¹⁴ This sentence refers to the individual portions of pneuma in those objects that function as cause. The relation between individual αἰτίαι and the world-cause may also be expressed in Marcus Aurelius, when he says 'and just as the cosmos is made up into such a body from all bodies, so fate is made up into such a cause from all causes' (Marc. Aur. 5.8.1).¹⁵

All this suggests that Chrysippus' above-quoted statement about αἰτία (Stob. *Ecl.* 1.139.3-4) should be understood as follows: the λόγος mentioned in it is the 'pneumatic' world-reason. This—corporeal—λόγος penetrates all matter and is responsible for the qualities and movements of all material objects. The αἰτία of an αἴτιον is thus a portion of (rational) pneuma which permeates the αἴτιον. For instance, the pneuma in the αἴτιον knife which causes this bread being

¹² Cf. e.g., for Zeno, DL 7.134, for the Stoics in general, Orig. *Cels.* 6.71.5-7 (Borret), Stob. *Ecl.* 1.79.1-2, together with 5-12.

¹³ SE PH 2.81, DL 7.79; and, although for Chrysippus τὸ αἴτιον is clearly not incorporeal, or a propositional item, the fact that the feminine nouns ἀλήθεια and ἀνάγκη were reserved for corporeal entities points strongly in the direction that αἰτία was not an incorporeal, propositional item either, but, like ἀλήθεια and ἀνάγκη, corporeal, just as on the cosmic level.

¹⁴ [Plut.] *Epit.* 1.12; (Diels, *Doxogr. graec.*, p. 310.6-7), Οἱ Στωικοὶ πάντα τὰ αἴτια σωματικὰ πνεύματα γάρ. As in most later sources, the terminological distinction αἴτιον/αἴτια seems lost in this passage.

¹⁵ . . . καὶ ὥσπερ ἐκ πάντων τῶν σωμάτων ὁ κόσμος τοιοῦτον σῶμα συμπληροῦται, οὕτως ἐκ πάντων τῶν αἰτίων ἢ εἰαρμένη τοιαύτη αἰτία συμπληροῦται.

cut is the *αἰτία* of that knife (qua *αἴτιον* of this bread being cut). More precisely, it is a part or aspect of the pneuma which permeates the matter (ὕλη) of the *αἴτιον*, and together with the matter makes up the *αἴτιον*. Thus we can understand the sentence in Stobaeus, as '*αἰτία* is the reason in the cause, or the reason in respect of the cause as cause' ('cause as cause' serves as a reminder that causes are relative). In the example, that aspect or part of the pneuma in the knife that makes it cut this bread (as opposed to that aspect of the knife's pneuma which makes its handle green) is the reason in respect of the knife *qua* cause of this bread being cut. Although the whole knife is the cause of the cutting, strictly speaking, it is the pneuma in the knife that is responsible for the effect: strictly speaking, the pneuma in the knife is the only part that is active—the rest of the knife is active only through it.

The relation between active principle (*αἰτία*, *λόγος*) and cause (*αἴτιον*) is basic for Chrysippus' causal theory. Nothing is uncaused for Chrysippus.¹⁶ Every effect, and that is every change or motion (*κίνησις*) as well as every qualitative state (*σχέσις*) of a thing, requires a cause and can be traced back to some pneuma, and is caused by the active principle.¹⁷ Every cause, of whatever kind, contains this active power. This is the main reason why for the Stoics all causes are *active* causes (*ποιούν*, *ἐνεργούν*), and Aristotelian or Peripatetic formal, material, and final causes, as well as mere necessary conditions, do not qualify. For example Seneca writes 'The Stoics hold that there is one cause, viz. that which does something' (*Ep.* 65.4),¹⁸ and Sextus reports of all dogmatists, including the Stoics, that a cause is that 'because of which, it being active, the effect comes about' (*SE PH* 3.14).¹⁹ In an instance of causation, only those factors that actively contribute to the effect are causes proper. There is thus for the Stoics a difference between the cause or causes of an effect, and all the other factors involved, including those things that are necessary conditions for the effect, but do not actively contribute to it.

¹⁶ See e.g. Plut. *Stoic. rep.* 1045^c τὸ γὰρ ἀναίτιον ὄλως ἀνύπαρκτον εἶναι.

¹⁷ Plut. *Stoic. rep.* 1050C–D, 1056C, *Comm. not.* 1076E. For the Stoic *κίνησις/σχέσις* distinction, see further Stob. *Ecl.* 1.166.24–167.14, 2.73.1, 82.11–17, 95.6–8, DL 7.104, Orig. *Orat.* 2.368, Plot. *Enn.* 3.1.7, Cic. *Fin.* 3.33, *Simpl. in Cat.* 212–13. Cf. on the topic S. Bobzien *Determinism and Freedom in Stoic Philosophy* (Oxford, 1998), sects. 1.1.2 and 1.1.3.

¹⁸ Stoici placet unam causam esse, id quod facit.

¹⁹ Δι' ὃ ἐνεργούν γίνεται τὸ ἀποτέλεσμα See also Frede, 'The Original Notion', 225–6, on the Stoic conception of causes as active.

How does this square with Chrysippus' above-quoted account of cause as that 'because of which' ($\delta\iota' \omicron$)? It has been suggested that, when Chrysippus characterizes causes in this way, he allows for a very general notion of cause, which includes non-active causes, and which differs from his narrower concept, which is restricted to active causes.²⁰ I consider this unlikely, for the following reasons: the phrase $\delta\iota' \omicron$ itself can be understood in a wider sense (anything that helps explaining why something happened or is the case) and in a narrower one (asking for that which is in some stronger sense responsible for or contributing to the effect). Now, as Stobaeus presents the $\delta\iota' \omicron$ as a *definition* for both Zeno and Chrysippus, and the Stoic concept of cause is that of an active cause, and furthermore in the same passage Zeno gives a very narrow interpretation of $\delta\iota' \omicron$ indeed,²¹ I assume that by $\delta\iota' \omicron$ Chrysippus, too, meant to cover his philosophical, 'narrow', notion of cause, according to which a cause actively contributes to the effect.

But, of course, we do not know for sure what Chrysippus intended by the phrase $\delta\iota' \omicron$ in his account of cause. In any event, in the following I assume that, when Chrysippus deals with causation in philosophical context, he has active causes only in mind, and that in particular mere necessary conditions for an effect do not count as causes.

In which way, then, are Chrysippus' causes active? One important point here is that 'being active' does not mean 'actively bringing about some *change*'. For Chrysippus, the activity of causes is equally required for changes ($\kappa\omega\eta\sigma\epsilon\iota\varsigma$) and qualitative states ($\sigma\chi\acute{\epsilon}\sigma\epsilon\iota\varsigma$). The qualitative states of an object depend on the particular tension in its pneuma. Causes of a change actively contribute to something's changing. Causes of qualitative states actively contribute to something's keeping up or sustaining certain qualities. To understand this better, we may consider simple everyday observations such as: fire is needed to heat water up as well as to keep it hot. Muscles are needed to lift up a heavy object as well as to keep it lifted up. In that sense, very roughly, one can imagine that Chrysippus thought that the sustenance of qualitative states required some steady activity (to keep up a certain tension in the object); though in his view that which

²⁰ Frede, 'The Original Notion', 220.

²¹ Zeno held that 'being alive' occurs *because of* the soul, since it is impossible for someone who possesses a soul not to be alive (cf. Stob. *Ecl.* 1.138.5-16). The soul is pneuma and hence active. The same holds for Zeno's other examples.

is active is not external to the object that is in the qualitative state, but is the active principle in the object. Keeping something up in a certain state is thus doing something or being active just as making something change is.

The distinction between causes of qualitative states and causes of change is fundamental to Chrysippus' physics. Unlike qualitative states, every change or motion requires an *antecedent* cause (Cic. *Fat.* 21, 40, 41, 43). There is no need to assume that Chrysippus introduced antecedent causes as a specific *Stoic* type of cause, or that he had a technical term for them. Presumably, one of the words he used was *προηγούμενον*.²² None the less, since for the Stoics all causes are corporeal, some elucidation is needed for what it means for a *body* to be an antecedent cause. For in most cases of causation this body will exist before, during, and after the effect obtains; 'antecedent' thus cannot refer simply to the time at which the body exists. We need to take into account that as cause the body actively contributes to its effect, and that cause is a relative (*πρός τι*). The body *is* the antecedent cause only in so far as it actively contributes to the effect. I thus suggest that, as a minimal condition, *c* is an antecedent cause of a change *e*, if the period of time at which *c* is active in contributing to *e* precedes, at least in part, the period of time at which the effect obtains.

II. CICERO, *DE FATO* 41-5

Our main evidence for Chrysippus' distinction of causes deals with causes of change only. The most discussed text on Stoic causation is Cicero, *De fato* 41-5. In it a distinction between two types of causes leads up to Chrysippus' defence of his compatibilism by way of the notorious cylinder analogy. This passage is fraught with difficulties, which have led to numerous differing interpretations. It will be seen that most of the problems disappear once one realizes that the relation between Chrysippus' distinction of causes and the cylinder analogy is different from what has been traditionally assumed.

²² This is confirmed by [Plut.] *Fat.* 574E, which seems to be 'orthodox' Stoic, and is close to Chrysippus. The passage gives the principle *μηδέν ἀναιτίως γίνεσθαι ἀλλὰ κατὰ προηγούμενας αἰτίας* as backing up the Stoic principle that everything is fated. So too R. J. Hankinson, in 'Evidence, Externality and Antecedence: Inquiries into Later Greek Causal Concepts', *Phronesis*, 32 (1987), 80-100 at 90.

In *De fato* 41 Cicero reports that Chrysippus distinguished between proximate and auxiliary causes on the one hand, and perfect and principal causes on the other. In *De fato* 42-3 Cicero reports that Chrysippus maintained that, in instances of causation of certain types, two determining factors cooperate in bringing about the effect. One of these is an antecedent cause. The other is characterized as the main determining factor and is internal to the object to which the effect happens.

The standard interpretation of the relation between these two passages is (i) that the antecedent determining factor is a proximate and auxiliary cause and the internal main determining factor is a perfect and principal cause; (ii) that Chrysippus introduced the distinction between proximate and auxiliary causes and perfect and principal causes in order to make this point; and (iii), inferred from (i), that proximate and auxiliary causes and perfect and principal causes cooperate in one instance of causation, and that in *De fato* 42-3 only proximate and auxiliary causes are considered as candidates for antecedent causes.²³

²³ So e.g. S. Botros 'Freedom, Causality, Fatalism and Early Stoic Philosophy', *Phronesis*, 30 (1985), 274-304 at 283-5; A. Dihle, 'Zur Schicksalslehre des Bardesanes', in *Antike and Orient* (Heidelberg, 1984), 164-5; *The Theory of Will in Classical Antiquity* (Berkeley and Los Angeles, 1982), 103; J. M. Dillon, *The Middle Platonists* (London, 1977), 86; R. Dobbin, 'Προαίρεσις in Epictetus', *Ancient Philosophy*, 11 (1991), 111-135 at 119; P. L. Donini, 'Fato e volonta umana in Crisippo', *Atti dell'Accademia delle Scienze di Torino*, 109 (1974/5), 1-44; 'Plutarco e il determinismo di Crisippo', in I. Gallo (ed.), *Aspetti dello stoicismo e dell'epicureismo in Plutarco* (Ferrara, 1988), 21-32 at 31; Duhot, *La Conception*, 174-5, 179-80; M. Forschner, *Die stoische Ethik* (Stuttgart, 1981), 96-7; Frede, 'The Original Notion', 234-6; R. J. Hankinson, 'Evidence', 85; B. Inwood, *Ethics and Action in Early Stoicism* (Oxford, 1985), 46; A. J. Kleywegt, 'Fate, Free Will and the Text of Cicero', *Mnemosyne*, 26 (1973), 342-5 at 342-3; A. A. Long, 'The Stoic Concept of Evil', *Philosophical Quarterly*, 18 (1968), 340; 'Stoic Determinism and Alexander of Aphrodisias' *De Fato* i-xiv', *Archiv für Geschichte der Philosophie*, 52 (1970), 247-68 at 261-2; 'Freedom and Determinism in the Stoic Theory of Action', in A. A. Long (ed.), *Problems in Stoicism* (London, 1971), 173-99 at 182; 'Early Stoic Concept of Moral Choice', in *Images of Man in Ancient and Medieval Thought* (Festschrift for G. Verbeke) (Louvain, 1976), 77-92 at 84; Long/Sedley, i. 393; S. S. Meyer, 'Self-Movement and External Causation', in M. M. L. Gill and L. G. Lennox (eds.), *Self-Motion* (Princeton, 1994), 65-80 at 76; M. Pohlenz, *Die Stoa: Geschichte einer geistigen Bewegung* (Göttingen, 1959), 105; M. E. Reesor, 'Fate and Possibility in Early Stoic Philosophy', *Phoenix*, 19 (1965), 285-97; S. Sambursky, *Physics of the Stoics* (London, 1959), 62; D. N. Sedley, 'Chrysippus on Psychophysical Causality', in J. Brunschwig and M. C. Nussbaum (eds.), *Passions and Perceptions* (Cambridge, 1993), 313-31 at 322-3; R. W. Sharples, 'Necessity in the Stoic Doctrine of Fate', *Symbolae Osloensis*, 56 (1981), 81-97; 'Soft Determinism and Freedom in Early Stoicism', a reply to Botros, *Phronesis*, 31 (1986), 266-79 at 272-3; Cicero: *On Fate*

It seems to me that the relation between the two Cicero passages is rather as follows: In any one instance of causation either a proximate and auxiliary cause or a perfect and principal cause is involved, but not both—that is, they are not cooperating causes but alternative possibilities for any instance of causation. The difference between the two types of causes is such that both could in principle be conceived of as antecedent causes. For Chrysippus' compatibilist argument and the cylinder example, this means that the antecedent determining factor is a proximate and auxiliary cause (just as the standard interpretation assumes), but the internal main determining factor is not a perfect and principal cause.²⁴

The implications of this interpretation for our understanding of Chrysippus' compatibilism are not world-shattering. Its advantages are that it helps to dissolve some of the difficulties the standard interpretation encounters and fits better with our remaining evidence for Stoic causation. Generally, it sheds new light on some aspects of Chrysippus' theory of causation, and makes it possible to re-evaluate the relation between early Stoic and later ancient theories of causes.

I shall now, in a somewhat painstaking way, work my way through Cicero, *De fato* 41–5, recording what the sections say about Chrysippus' distinction between types of causes, and showing that this passage does not contain any compelling evidence for the standard interpretation. (Impatient readers may find summaries of my results on pages 211 and 217.)

Cicero's *De fato* 39–45 form a unit, with the tail missing. The subject is the question whether the motions of the soul (in particular impulse and assent) are necessitated by external factors, and hence

© Boethius: *The Consolations of Philosophy IV.5–7, V* (Warminster, England, 1991), 199–200; R. Sorabji, 'Causation, Laws and Necessity', in J. Barnes, M. Burnyeat, and M. Schofield (eds.), *Doubt and Dogmatism* (Oxford, 1980), 250–82 at 273; P. Steinmetz, 'Die Stoa', in H. Flashar (ed.), *Die Philosophie der Antike*, iv. *Die hellenistische Philosophie* (Basel, 1994), at 611; M. v. Straaten, 'Menschliche Freiheit in der stoischen Philosophie', *Gymnasium*, 84 (1977), 501–18 at 510–12; J. Talanga, *Zukunftsurteile und Fatum* (Bonn, 1986), 132–7; W. Theiler, 'Tacitus und die antike Schicksalslehre', in *Phyllobolia für P. von der Muehll* (Basel, 1946), 35–90 at 62.

²⁴ This view is shared by W. Görler, 'Hauptursachen bei Chrysipp und Cicero? Philologische Marginalien zu einem vieldiskutierten Gleichnis (*De fato* 41–44)', *Rheinisches Museum für Philologie*, 130 (1987), 254–74; S. Schröder, 'Philosophische und Medizinische Ursachensystematik und der stoische Determinismus', *Prometheus*, 16 (1990), 5–26; A. M. Ioppolo, 'Il concetto di causa nella filosofia ellenistica e romana', in W. Haase and H. Temporini (eds.), *Rise and Decline of the Roman World*, pt. II, 36.7 (1994), 4492–545.

not in our power.²⁵ *De fato* 39–40.1 and 44–5 form a kind of exegetical framework in which Cicero speaks, comparing Chrysippus' position with other philosophical views on that topic. *De fato* 41–3 is a report from Chrysippus. Cicero partly quotes (in Latin translation) from a Chrysippean text, presumably his second book *On Fate*,²⁶ and partly summarizes and paraphrases Chrysippus' argument. *De fato* 41–42.1 presents Chrysippus' reply to an argument which is presented in 40 and which challenges his theory of fate. This argument is designed to prove that the Stoic principle that everything is fated is untenable, by showing that it implies that our impulse and assent and consequently our actions are not in our power and thus that praise and blame for our actions are not just. The conclusion drawn is that, since the last statement is false, the initial assumption, that everything happens by fate, must be given up.²⁷

The main point of the argument of *De fato* 40 is that moral accountability is destroyed by fate. Accordingly, Chrysippus' reply combines a formal refutation of the argument (*Fat.* 41–42.1) with an exposition of some points from Stoic psychology which serves to determine where exactly in the complex process that leads to an action human responsibility for the action takes its origin (*Fat.* 42.2–43). The passage begins like this:

(1) But Chrysippus, since he both rejected necessity and insisted that nothing happens without preceding causes, distinguished kinds of causes, in order that he both escape necessity and retain fate. (*Fat.* 41)²⁸

Chrysippus made a distinction between types of causes. The reason for this distinction is that he both rejects necessity and wants to maintain his claim that (i) nothing happens without an antecedent cause.²⁹

²⁵ The general topic is the compatibility of Stoic determinism and theory of fate with moral responsibility. In this chapter I disregard the problems this Cicero passage poses for the interpretation of Chrysippus' compatibilism. I deal with the question in considerable detail in Bobzien, *Determinism and Freedom*, ch. 6.

²⁶ Cf. *ibid.*, sect. 6.1.1.1 for details.

²⁷ Cf. A. M. Ioppolo, 'Le cause antecedenti in Cic. De Fato 40', in J. Barnes and M. Mignucci (eds.), *Matter and Metaphysics* (Naples, 1988), 397–424; Bobzien, *Determinism and Freedom*, sect. 6.2.2 for two reconstructions of this argument.

²⁸ (1) Chrysippus autem, cum et necessitatem inprobaret et nihil veller sine prae-positis causis evenire, causarum genera distinguit, ut et necessitatem effugiat et retineat fatum.

²⁹ This principle, more often occurring in the form 'every event has an antecedent cause', was used by Chrysippus in the argument given in Cic. *Fat.* 21 and criticized by Carneades in Cic. *Fat.* 23, 24, 31, 33. Cf. [Plut.] *Fat.* 574E (see n. 22) for a Greek formulation of the principle in the same context.

(i) is a corollary of Chrysippus' principle that everything happens in accordance with fate. This is why Cicero says that Chrysippus insists on (i) in part in order to 'retain fate'.

The phrases 'to reject necessity' and 'to escape necessity' in passage (1) can be understood in two ways: Chrysippus claimed either that nothing that happens is necessary, or that (ii) not everything that happens is necessary. The context (*Fat.* 40) makes it clear that Chrysippus intended to deny that, if something is fated, it is necessary; in other words, he purports to show that fate does not entail necessity. In addition, we know that Chrysippus admitted that some things are necessary.³⁰ Hence I assume that in passage (1) Cicero refers to principle (ii). The reason why Chrysippus needs this principle is that he wants to retain the claim that assent, impulse and action are in our power; and only non-necessary things can be in our power—as was universally agreed in antiquity. Thus Chrysippus' distinction of causes is meant to ensure or clarify the compatibility of the principles (i) 'nothing happens without an antecedent cause' and (ii) 'not everything that happens is necessary'. The next sentence introduces the distinction:

(2) For, he says, some causes are perfect and principal, others auxiliary and proximate. (*Fat.* 41)³¹

Each type of cause is referred to by two adjectives. The wording of (2) alone does not permit us to decide whether the disjunction of types of causes is exhaustive. But it is clearly exclusive: one and the same thing cannot be both a perfect and principal and an auxiliary and proximate cause of the same effect. The text continues:

(3) Because of this, when we say that everything happens through fate by way of antecedent causes, we do not want this understood as 'by perfect and principal causes', but 'by auxiliary and proximate causes'. (*Fat.* 41)³²

Here Chrysippus applies his distinction to antecedent causes. The proponents of the argument in *De fato* 40, it is implied, treated all antecedent causes as if they were perfect and principal causes—i.e.

³⁰ Cf. S. Bobzien, 'Chrysippus' Modal logic and its Relation to Philo and Diodorus', in K. Döring and Th. Ebert (eds.), *Dialektiker und Stoiker* (Stuttgart, 1993), 63–84; Cic. *Fat.* 45; cf. also Augustine, *Civ. dei* 5.10.

³¹ (2) Causarum enim, inquit, aliae sunt perfectae et principales, aliae adiuvantes et proximae.

³² (3) Quam ob rem, cum dicimus omnia fato fieri causis antecedentibus, non hoc intellegi volumus: causis perfectis et principibus, sed: causis adiuvantibus et proximis.

including the antecedent causes of impulse and assent. Chrysippus points out that in the phrase 'everything happens through fate by way of antecedent causes' the Stoics (at least in the context of impulse and assent) understand antecedent causes as auxiliary and proximate causes only. This clarification of the Stoic position is followed by Chrysippus' formal reply to the argument of the opponents.

(4) (a) Thus he retorts in the following way to the argument which I presented a little while ago: (b) if everything happens through fate, it follows indeed that everything happens by preceding causes, but not by perfect and principal [preceding] causes, but by auxiliary and proximate [preceding] causes. (c) If these are not in our power, it does not follow that impulse also is not in our power. (d) But this would follow, if we said that everything happens by perfect and principal [preceding] causes, so that, since these causes are not in our power, neither would impulse be in our power. (*Fat.* 41)³³

Again, the whole passage discusses antecedent causes only. (My addition of 'preceding' in the translation only makes explicit what is clearly implied.) The opponents' mistake is that they understand the Stoic statement 'everything happens by antecedent causes' as 'everything happens by perfect and principal antecedent causes'. And a perfect and principal cause would not only itself not be in our power, but its effect, as being completely determined and necessitated by it, would not be in our power either.

The next sentence summarizes what Chrysippus thinks he has achieved by his counter-argument, linking up the distinction between causes with the concept of necessity which figures in the introductory sentence of *De fato* 41, and referring back to the opponents' argument in *De fato* 40:

³³ (4) (a) Itaque illi rationi, quam paulo ante conclusi, sic occurrit: (b) si omnia fato fiant, sequi illud quidem, ut omnia causis fiant antepositis, verum non principalibus causis et perfectis, sed adiuvantibus et proximis. (c) Quae si ipsae non sunt in nostra potestate, non sequitur, ut ne adpetitus quidem sit in nostra potestate. (d) At hoc sequeretur, si omnia perfectis et principalibus causis fieri diceremus, ut cum eae causae non essent in nostra potestate, ne ille quidem esset in nostra potestate.

(4) (b) repeats the first premiss of the opponents' argument from *Fat.* 40 (*si omnia . . . antepositis*)—which they in turn seem to have taken over from the Stoics—and explicates it by specifying that the type of antecedent causes in the consequent are proximate causes (*verum . . . proximis*). (4) (c) conveys that it is a consequence of this understanding of the antecedent causes that the third premiss of the opponents' argument, 'si causa adpetitus non est sita in nobis, ne ipse quidem adpetitus est in nostra potestate', is false.

(5) (a) Therefore, against those who introduce fate in such a way that they add necessity, the above argument will be valid; (b) but against those who will not claim that the antecedent causes are perfect and principal, it will not be valid. (*Fat.* 42.1)³⁴

Again, it is antecedent causes that are considered as possible candidates for being perfect and principal, and this time explicitly so. We can infer from passage (5)—and equally from (3)—that, if antecedent causes were perfect and principal, they would necessitate their effect, but when they are auxiliary and proximate only, they do not. And, since Chrysippus takes them to be auxiliary and proximate only (at least in the relevant cases of impulse and assent), the argument from *De fato* 40 either does not apply to his theory—namely, if it is assumed that all antecedent causes are perfect and principal, as the opponents wrongly assume; or the argument is not sound—namely, if it is assumed that there are antecedent causes that are auxiliary and proximate only, as Chrysippus actually assumes.

Passages (3), (4) (d), and (5) thus allow us to establish a further important point about the perfect and principal causes: these passages all imply that Chrysippus takes his opponents to assume that all antecedent causes are perfect and principal. Moreover, the text suggests that the opponents themselves neither made—or made use of—any distinction between causes (e.g. a distinction they picked up from the Stoic position they criticize), nor called the antecedent causes ‘perfect and principal’, nor reflected expressly on their being perfect and principal. Rather, Chrysippus makes explicit what he regards as an implicit assumption of his critics, and then, in making his distinction, contrasts *this* conception of antecedent causes with that of antecedent causes that are auxiliary and proximate only. If this is right, it follows that the concept of the causes which Cicero labels ‘perfect and principal’ was not a subtle, highly technical concept from Stoic physics that makes sense only in the context of Stoic philosophy. Rather, whatever expression(s) Chrysippus used for such causes, it must have been possible to use them for causes which non-Stoic philosophers like Chrysippus’ opponents³⁵ believed to be involved in ordinary, standard cases of causation.

³⁴ (5) (a) Quam ob rem, qui ita fatum introducunt ut necessitatem adiungant, in eos valebit illa conclusio; (b) qui autem causas antecedentes non dicent perfectas neque principales, in eos nihil valebit.

³⁵ Or, if these are fictitious, at least those non-Stoics whom Chrysippus addresses.

To recapitulate briefly, from *De fato* 41-42.1 we obtain the following information about Chrysippus' distinction of causes:

- the distinction is applied exclusively to antecedent causes in this context;
- perfect and principal antecedent causes necessitate their effect, auxiliary and proximate antecedent causes do not;
- the concept of perfect and principal causes is such that it cannot be a highly specialized Stoic technical concept, but must be such that non-Stoics such as Chrysippus' addressees would readily employ it for ordinary cases of causation.

After the refutation of the opponents' argument in *De fato* 41-42.1, Chrysippus sets out to make us understand how he thinks it is in the agent's power to assent to impressions—that is, how it is possible that acts of assent (and impulses) happen by antecedent causes without being necessitated by them.³⁶ For this purpose Chrysippus first employs his distinction of causes to the case of assent:

(6) (a) For as to the fact that assents are said to happen by means of preceding causes, Chrysippus believes that he can easily explain how this works. (b) For, even though an assent cannot occur unless set in motion by an impression, nonetheless, since the assent has this impression as proximate cause and not as principal cause, it has the reason, as Chrysippus holds, which I stated earlier: (c) it is not the case that assent can happen without being prompted by some force from outside—for it is necessary that an assent be set in motion by an impression . . . (*Fat.* 42.2)³⁷

In (6) (c) we are not given the full reason or explanation (*ratio*) Cicero talks about in (6) (b). The full reason includes, of course, the fact that the antecedent causes need not necessitate their effect—as had indeed been stated earlier, in *De fato* 41-42.1. This point is only made by way of analogy in *De fato* 43 (passage (7) below).

³⁶ *Fat.* 40 announces the topic to be assent, *Fat.* 41 mentions impulse only, *Fat.* 42-3 talks exclusively about assent. This does not mean that these passages discuss different topics. Rather, human impulse is sometimes treated by the Stoics as a kind of assent—namely, assent to an impulsive (*ὀρμητικῆ*) impression. Cf. S. Bobzien, 'Stoic Conceptions of Freedom and their Relation to Ethics', *BICS* suppl. (1997), 71-89 at 76-7; M. Frede 'The Stoic Conception of Reason', in K. J. Boudouris (ed.), *Hellenistic Philosophy*, ii (Athens, 1993), 50-63 at 58-60.

³⁷ (6) (a) Quod enim dicantur adensiones fieri causis antepositis, id quale sit, facile a se explicari putat. (b) Nam quamquam adensio non possit fieri nisi commota viso, tamen, cum id visum proximam causam habeat, non principalem, hanc habet rationem, ut Chrysippus vult, quam dudum diximus, (c) non ut illa quidem fieri possit ulla vi extrinsecus excitata—necesse est enim adensionem viso commoveri . . .

Still, in (6) we can see how Chrysippus made use of his distinction of causes in the case of assent. For my purposes it is of paramount importance to see that the distinction is here used in *exactly* the same way it was used in *De fato* 41–42.1: it is applied to antecedent or preceding causes only. The impression is identified as antecedent and proximate cause of the assenting, and is introduced as a necessary, but not sufficient, condition of it. Thus assent is one of the things that, although they have an antecedent cause, are not necessitated by it. There is one new element in Chrysippus' explanation: assent has to be prompted by some force *from outside*.³⁸ The rest of Chrysippus' exposition is given in the form of an analogy. Cicero writes:

(7) (a) . . . but Chrysippus turns to his cylinder and cone, which cannot start moving without being pushed. However, when this has happened, he believes that from then on the cylinder rolls and the cone spins by their own nature. (*Fat.* 42.3)³⁹

(b) As thus, he states, the person who shoved the cylinder gave it the beginning of its motion, but did not give it its roll-ability, so likewise, an impression, when encountered, will imprint and so to speak stamp its form on the mind, but assent [to it] will be in our power; and, just as was said in the case of the cylinder, being pushed from outside, for the rest it will move by its own power and nature. (*Fat.* 43.1)⁴⁰

The example is used as an explanatory analogy: in (6) it had been announced that it is meant to explain the function of the proximate antecedent cause in the case of acts of assent. A succession of

³⁸ There is another difficulty here: according to Stoic psychology, the impression itself is not external to the mind (*ἡγεμονικόν*), which is the place where assent occurs. Assent and impression are not spatially distinct, but are produced by different capacities of the mind. It is true, though, that the impressions are externally induced (most straightforwardly in the case of perceptual impressions) in that they require external objects in order to come into existence. Later sources such as Cicero and Plutarch often carelessly confound the internal impression (*φαντασία*) and the external object (*ὑποκείμενον κινούν ἡμᾶς; φανταστὸν; τὸ ποιοῦν τὴν φαντασίαν* (cf. [Plut.] *Epit.* 4.12.1–3 (Diels, *Doxogr. graec.* 401–2); *SE M* 7.241; *τὸ φαινόμενον* Plut. *Stoic. rep.* 1057B).

³⁹ (7) (a) . . . sed revertitur ad cylindrum et ad turbinem suum, quae moveri incipere nisi pulsa non possunt. Id autem cum accidit, suapte natura, quod superest, et cylindrum volvi et versari turbinem putat.

⁴⁰ (7) (b) Ut igitur, inquit, qui protrusit cylindrum, dedit ei principium motionis, volubilitatem autem non dedit, sic visum obiectum inprimet illud quidem et quasi signabit in animo suam speciem, sed adsensio nostra erit in potestate, eaque, quemadmodum in cylindro dictum est, extrinsecus pulsa, quod reliquum est, suapte vi et natura movebitur.

physical events involving movements of perceptible everyday objects is employed in order to make comprehensible the empirically inaccessible, non-observable, mental processes that take place in the mind. The instances of causation on the level of perceptible objects have the rolling of the cylinder and the spinning of the cone as their effects. On the level of the mind, the effect is the assenting of the person.

On either level, the instances of causation involve two cooperating determining factors. The first factors in each case, the person who pushes the cylinder and cone, and the impression, are external or externally induced, and can safely be assumed to be proximate causes; for the impression had been identified as proximate cause of the assent in *De fato* 42.2. The second factors are described each time as the nature of the object that actually moves—i.e. that in which the effect happens: the cylinder and the person or, more precisely, the person's mind. (For the Stoics there is a difference between a body and its nature. Both are corporeal, but the first consists of matter and form or active principle, the latter is restricted to that form or active principle. This nature of an object is *pneuma* and hence corporeal itself. Thus, the second determining factor is partly identical with the body in which the effect takes place, i.e. the cylinder and the person.)

Is the second determining factor a cause? That is, is the *volubilitas* a cause of the rolling, and the nature of the person a cause of the assenting? It is never called a cause in Cicero.⁴¹ But it satisfies the conditions for something's being a cause as set out in Chrysippus' account in Stobaeus (see above, Section I): it is a body (*pneuma*), and it is a 'that because of which', as the Latin ablatives (*suapte natura* (*Fat.* 42), *suapte vi et natura* (*Fat.* 43)) verify. Furthermore, it is the decisive factor, which is responsible for whether a particular effect ensues, and, in the case of assent, it is the reason why the person can be held morally accountable. Hence it must be a cause. (I shall consider the issue in which way it is active in Section V.)

The question that needs to be addressed next is how the perfect and principal causes are related to the analogy. The standard interpretation (see above) takes it for granted that the second determining factor is a perfect and principal cause of the effect and that it produces the effect in cooperation with the external auxiliary and proximate cause, which is a necessary condition for the effect. The perfect and principal cause is assumed to exist simultaneously with the effect, and to be

⁴¹ Nor is it called a cause in the parallel passage in Gell. *NA* 7.2.11.

internal to the object to which the effect happens.⁴² So the distinction of perfect and principal causes and auxiliary and proximate causes is regarded as corresponding to the distinction internal/external.

Now, it is no doubt correct that in the cases at issue there is a cooperation of an external and an internal causal factor which are somehow together responsible for the effect. But it is not stated anywhere that the internal factor is a perfect and principal cause. As said above, in the whole of passage (7) perfect and principal causes are not mentioned once. *A fortiori*, they are not identified with the internal factor.⁴³ This identification of the internal factor with the perfect and principal cause can—if at all—be obtained by inference only. But there is certainly nothing *in the passage* that compels one to infer this—or even suggests this in any way.

I shall come back to the analogy. But let me first present the rest of the Cicero passage. The last part of Cicero's report from Chrysippus comes rather abruptly, and why Chrysippus says what he says *in this place* is far from clear. (The section makes perhaps most sense if read as a very condensed final summary of Chrysippus' whole argumentation in *De fato* 41–3: since the opponents had attacked the principle that everything is fated (*Fat.* 40), *its* validity has ultimately to be defended, and this connection is drawn here.) The passage reads:

(8) If, then, anything were brought about without an antecedent cause, it would be false that everything happens through fate; if, however, it is plausible that everything that happens has a cause preceding it, what can one put forward for not conceding that everything happens through fate? One only has to understand the distinction and difference amongst causes. (*Fat.* 43.2)⁴⁴

It is not the details of this passage that concern us here, but rather how it relates to Chrysippus' distinction of causes. Note that the only

⁴² Cf. n. 23 for proponents of this view.

⁴³ The same holds for the parallel passage Gell. *NA* 7.2.11, where we also find the contrast of external and internal determining factors. Although the distinction of causes is central to the argument reported by Cicero, Gellius does not report it. If the distinction was in that context primarily between two types of antecedent causes, its absence from Gellius poses no major problem. In that case Gellius—or Chrysippus—just disregarded the distinction, since the analogy made it clear on its own that the antecedent causes were not necessitating.

⁴⁴ (8) Quod si aliqua res efficeretur sine causa antecedente, falsum esset omnia fato fieri; sin omnibus, quaecumque fiunt, verisimile est causam antecedere, quid adferri poterit, cur non omnia fato fieri fatendum sit? modo intellegatur, quae sit causarum distinctio ac dissimilitudo.

kinds of causes mentioned explicitly are again antecedent causes, and it is their relation to the principle that everything is fated that is at issue. The distinction and difference amongst causes must be that introduced by Chrysippus in *De fato* 41—i.e. that between perfect and principal causes and auxiliary and proximate causes. The sentence is neutral as to whether these causes are cooperative or alternatives. (The focus on antecedent causes and the stress on difference rather than on cooperation, more naturally suggests a distinction between causes that are alternatives.)

With *De fato* 43 ends Cicero's report from Chrysippus. In *De fato* 44–5 Cicero reverts to his framing story left off in *De fato* 39. These surrounding passages do not quote Chrysippus. In *De fato* 44–5 Cicero argues that Chrysippus and his libertarian opponents have factually the same view, and differ only in terminology. This passage is of relevance since it still talks about Chrysippus' theory of causation. Both *De fato* 44 and *De fato* 45 discuss two types of antecedent causes; I quote the relevant portions:

(9) As this is how these things are expounded by Chrysippus, if those who deny that assents happen through fate . . . admit that impressions precede, and nonetheless hold that assents do not happen through fate, since that proximate and cohesive cause does not bring about the assent, see whether they do not say the same thing. For while Chrysippus concedes that the proximate and cohesive cause of the assent is placed in the impression, he neither concedes that this cause is necessitating for the assenting, nor will he concede that, if everything happens through fate, everything must happen by antecedent and necessitating causes. (*Fat.* 44)⁴⁵

In this passage two types of causes are contrasted. First, there are proximate and cohesive (continens) causes. This type of cause is identical with the proximate and auxiliary cause: it is referred to as 'that' (*illa*) proximate and cohesive cause—which is a back reference to the proximate and auxiliary cause of *De fato* 41–2. Moreover, Chrysippus is said to hold that the impression is the proximate and cohesive cause of assent. Second, and contrasted with the first kind,

⁴⁵ (9) Haec cum ita sint a Chrysippo explicata, si illi, qui negant adsessiones fato fieri . . . concedunt anteire visa, nec tamen fato fieri adsessiones quod proxima illa et continens causa non moveat adsessionem, vide, ne idem dicant. Neque enim Chrysippus, concedens adsessionis proximam et continens causam esse in viso positam neque eam causam esse ad adsentendum necessarium, concedet ut, si omnia fato fiant, omnia causis fiant antecedentibus et necessariis.

are the necessitating causes.⁴⁶ The distinction between proximate and cohesive causes and necessitating causes is used of antecedent causes, and thus the causes are treated as alternative, not as cooperating. Chrysippus' claim that the impression is the proximate and cohesive, but not a necessitating cause of assent exactly mirrors his claim in *De fato* 42.2 (passage (6)) that the impression is proximate and auxiliary, but not perfect and principal cause of assent. This general parallelism, in tandem with the identity of auxiliary and proximate causes and proximate and cohesive causes, and the fact that *De fato* 41-2 implied that perfect and principal causes, if antecedent, necessitated their effect (see above), suggest very strongly that the necessitating causes in *De fato* 44 are the same as the perfect and principal causes from *De fato* 41-2 (and that the latter are hence not cooperating).

De fato 45 presents a distinction of antecedent causes in terms of what is in our power:

(10) Generally, then, there is the following distinction: in some things one can truly say that, since these causes preceded, it is not in our power to prevent from occurring those things of which they were the causes; but in other things, although causes preceded, it is still in our power that that thing should occur differently; this distinction is approved of by both parties . . . (*Fat.* 45)⁴⁷

There are antecedent causes whose effects (once the causes are in play) are not in our power, since the causes necessitate their effect; and there are antecedent causes where it is in our power that things turn out differently. These latter must correspond to the proximate and auxiliary or cohesive causes from *De fato* 41-2 and 44 respectively.

Here is a brief summary of the results of the analysis of Cicero *De fato* 41-5:

⁴⁶ See Cicero, *Top.* 60-2 for a related view of necessary and non-necessary causes. In *Top.* 61 we have an example of a necessitating cause that is external: 'At cum in Aiacis navim crispisulcans igneum fulmen iniectum est, inflammatur navis necessario', following 'causa necessaria' in *Top.* 60. Cicero, for one, does thus not consider the necessitating causes as cooperating with, but as an alternative to non-necessitating ones. Cf. R. W. Sharples, 'Causes and Necessary Conditions in the *Topica* and *De Fato*', in J. G. F. Powell (ed.), *Cicero the Philosopher* (Oxford, 1995), 247-71, for a detailed discussion of Cicero's conception of cause.

⁴⁷ (10) Omninoque, cum haec sit distinctio, ut quibusdam in rebus vere dici possit, cum hae causae antecessariae sint, non esse in nostra potestate, quin illa eveniant, quorum causae fuerint; quibusdam autem in rebus causis antecessis in nostra tamen esse potestate, ut illud aliter eveniat: hanc distinctionem utrique adprobant . . .

- *Fat.* 41–42.1 introduces the distinction between causes and applies it to antecedent causes, in order to refute the argument of *Fat.* 40.
- *Fat.* 42.2 applies the distinction of the two types of antecedent causes to the case of assent.
- *Fat.* 42.2–43.1 introduces the cylinder analogy, and two cooperating causal factors, one internal, one external. The first factor can be identified with the auxiliary and proximate cause. The second causal factor is the nature of the thing in which the effect takes place. Perfect and principal causes are not mentioned.
- *Fat.* 43.2 talks about fate and antecedent causes, and mentions the distinction of causes.
- *Fat.* 44 contains a distinction between proximate and cohesive antecedent causes and necessitating antecedent causes which corresponds to that between auxiliary and proximate antecedent causes and perfect and principal antecedent causes from *Fat.* 41–2.
- *Fat.* 45 presents a distinction between non-necessitating antecedent causes and necessitating antecedent causes. The first seem to be auxiliary and proximate causes.

Thus *De fato* 41–42.2, 44, 45 discuss *alternative* causes, *De fato* 41–42.2, 43.2, 44, 45 talk expressly only about *antecedent* causes. No section talks about a cooperation of causes in one instance of causation, nor of a distinction between causes in which one is an antecedent cause, the other is not. Given that this is the *Quellenlage*, why is it so consistently assumed (and generally not even argued for) that the perfect and principal causes are the second determining factor in the cylinder-and-cone analogy? A reply I have encountered more than once is: 'this is obvious'. Before I move on to our evidence in other texts, I shall say why this is *not* obvious.

In *De fato* 41.2–42.1 Chrysippus aims at refuting an argument designed to challenge the Stoic principle that every event is fated. His central point is that an antecedent cause need not necessitate its effect—having in mind in particular the case of impulse and assent. In order to show this, he introduces a distinction between causes of which one type, if antecedent, would necessitate its effect (the perfect and principal cause), the other does not (the auxiliary and proximate cause). In *De fato* 42.2–43 Chrysippus aims at explaining how those things which have a non-necessitating antecedent cause (in particular,

assents) are brought about, and why we can be held responsible for them. For *this* purpose he makes use of a second distinction between determining factors in causation: cooperating external and internal factors. The external factor is an auxiliary and proximate antecedent cause. The internal factor is not an antecedent cause.

Now it is certainly not *obvious* that the sort of cause which the antecedent cause of assent is *not*, even though Chrysippus' opponents assumed it to be such (i.e. the perfect and principal cause), is the same sort of cause which forms the second determining factor in the instance of causation where the (auxiliary and proximate) antecedent non-necessary cause is the first determining factor. Chrysippus makes two distinct points. For each point he draws on a distinction between determining factors. In the first, they are alternatives; in the second, they cooperate. Why should the alternative factor of the first point, which does not apply to assent, be identical with the cooperating factor in the second point?

III. PLUTARCH, ON STOIC SELF-CONTRADICTIONS 1055F–1056D

The second text in which we find a Chrysippean distinction of causes is Plutarch's *On Stoic Self-contradictions*. In chapter 47, two types of causes are distinguished: the self-sufficient (*αὐτοτελής*) cause and the procatartetic (*προκαταρκτηκός*) cause. In this chapter Plutarch's goal is to demonstrate that Chrysippus' theory of fate is incompatible with his theory of impression and assent. His argumentation is somewhat convoluted, but the main structure of the relevant section (*Stoic. rep.* 1055F–1056D) can by and large be sifted out.⁴⁸

Plutarch's general procedure is this: as basis of the 'Stoic self-contradiction' in question he uses a Chrysippean argument in which Chrysippus intends to prove that the impressions are not self-sufficient causes of human assent, and that the main responsibility lies with the assenting person, because of their moral character.⁴⁹ (Chrysippus uses as an example the false impressions which, in certain special circumstances, are caused in ordinary people by the

⁴⁸ For a detailed analysis of the structure of this passage and its relation to Chrysippus' fate theory, see Bobzien, *Determinism and Freedom*, sects. 6.1.1.3, 6.3.4, and 6.4.2.

⁴⁹ Cf. the reference to the person's badness and weakness in the parallel passage in Plut. *Stoic. rep.* 1057A–B.

sages.) Drawing on this argument, Plutarch develops a dilemma for Chrysippus. This dilemma is grounded in the assumption that fate, being a cause—namely, the cause of all things—for Chrysippus, is either a self-sufficient or a procatarctic cause of human assenting. It runs like this:

If, on the one hand, fate is a self-sufficient cause, it will not be the cause of all things: for, according to Chrysippus' argument, human assents do not have a self-sufficient antecedent cause, and hence fate would not be the cause of assent (*Stoic. rep.* 1056A–B, p. 55.8–18 (Teubner)). Or, supposing it were the self-sufficient cause of all things, then it would follow that nothing is in our power (*Stoic. rep.* 1056C–D, p. 56.7–9; 12–15). If, on the other hand, fate is a procatarctic cause, neither does it determine everything (*Stoic. rep.* 1056B–C, p. 55.18–56.2), nor is it invincible and unpreventable (*Stoic. rep.* 1056C; 1056D p. 56.2–7; 10–14; 15–16). Either way, Chrysippus contradicts himself: for elsewhere he holds that fate is the cause of all things, that there are things in our power, and that fate determines everything and is invincible and unpreventable.

We have good reason to assume that Plutarch has taken over the twofold distinction of causes from his Chrysippean source. First, the expression 'self-sufficient cause' (*αὐτοτελές αἴτιον*) occurs in the Chrysippean argument reported by Plutarch and should be definitely Chrysippus'. Then, in the passage under discussion, the term *αὐτοτελής* occurs six times and the term *προκαταρκτικός* four times. They are the only terms used for causes and are treated as a pair. This suggests both that Plutarch understood them as at least semi-technical terms and that he took them from his source—especially as it is Plutarch's distinctive habit in the *On Stoic Self-contradictions* constantly to weave in Stoic terms from his source.

Moreover, Plutarch's entire 'proof' of Chrysippus' inconsistency in *Stoic. rep.* 1055F–1056D is built on the distinction between causes: the validity of his argument depends on the assumption that fate, when functioning as antecedent cause, is either self-sufficient or procatarctic. In particular, Plutarch's argument has weight against Chrysippus only if Chrysippus agreed that the two types of causes form an exhaustive disjunction—at least in the context, as antecedent causes. For this Chrysippus must have had, if not the terms, at least the concepts of *both* kinds of causes.

What information does the text provide about the two types of causes? The expression *αὐτοτελής*, which I translated as 'self-sufficient', means

'self-sufficient' or 'self-complete'. Attributed to a cause, this must mean: sufficient in itself to bring about the effect. And, given that Chrysippus chose the term, its ordinary meaning should still be at least partly preserved in its more technical use.⁵⁰ Hence, we can assume that, according to Chrysippus, a self-sufficient cause is a cause that is by itself sufficient to produce its effect.

This is confirmed by the way in which Clement gives an account of the term 'self-sufficient' used of a cause: 'The cohesive cause is synonymously also called "self-sufficient", since it is self-sufficiently by itself productive of its effect' (Clem. *Strom.* 8.9.95.31–96.2, cf. 101.19–20).⁵¹

Equally, in Sextus' discussion of causation in *Against the Mathematicians* book 9 the adverb *αὐτοτελῶς* is used with respect to causes, with the meaning 'bringing about the effect self-sufficiently':

Furthermore, if there is such a thing as a cause, it is the cause of something either self-sufficiently and making use only of its own power, or it needs in addition the help of the affected matter, so that the effect is thought of as in accordance with a combination of both. (SE *M* 9 236–7, cf. 242)⁵²

The contrast here is clearly that between a cause bringing about the effect wholly by itself and the effect requiring a combination of causal or determining factors. Thus the very name of the self-sufficient cause, as well as the accounts of it in Clement and Sextus, rule out the possibility that, in order for it to bring about the effect, the cooperation of another *cause* is required.

It is more difficult to establish the meaning of *προκαταρκτικός*. It may have been coined by Chrysippus as a technical term. If we take it that usually the prefix *προκατα-* means something like 'beforehand', the whole term might translate (i) as 'that which commences [intr.] beforehand', i.e. before the effect occurs or before a second causal factor comes in;⁵³ or (ii) as 'that which initiates [tr.] beforehand',

⁵⁰ This is perhaps confirmed by the fact that instead of the adjective *αὐτοτελής*, at one point, he employs the adverb *αὐτοτελῶς*. This may indicate that the terms had not yet become rigid, and that the common meaning of the word was still partly retained.

⁵¹ *συνεκτικὰ δὲ ἅπερ συνονύμως καὶ αὐτοτελή καλεῖται, ἐπειδήπερ αὐτάρκως δι' αὐτῶν ποιητικὰ ἐστὶ τοῦ ἀποτελέσματος.*

For Clement's identification of *αὐτοτελής* with *συνεκτικός*, see below.

⁵² *Καὶ μὴν εἴ ἐστι τι αἴτιον, ἥτοι αὐτοτελῶς καὶ ἰδίᾳ μόνον προσχρῶμενον δυνάμει τινός ἐστιν αἴτιον, ἢ συνεργοῦ πρὸς τοῦτο δέεται τῆς πασχούσης ὕλης, ὥστε τὸ ἀποτέλεσμα κατὰ κοινὴν ἀμφοτέρων νοεῖσθαι σύνοδον.*

⁵³ Clem. *Strom.* 8.9. 101.17 states that the procatarctic cause ceases before the effect does.

e.g. initiates the effect before a second causal factor comes in.⁵⁴ Alternatively, (iii) if we assume that 'procatarctic' is understood as 'before the catarctic', the meaning would be something like 'that which precedes that which is the origin of the effect'.⁵⁵ All three interpretations make sense in the present context, and I do not see how one can decide between them. We cannot resort to the later medical and philosophical uses of the term *for a decision between them*, because it is quite clear that the later senses differ from the one Chrysippus has in mind.⁵⁶

But we find more information in the Plutarch passage itself. For in *Stoic. rep.* 1056C Plutarch provides an account of the procatarctic cause. (It is unlikely that Plutarch developed this account himself, since his argumentation is based on it, and for Chrysippus to be affected by the argument, he must have accepted this account. I hence assume that Plutarch took the account from his Chrysippean source.) He writes: 'the procatarctic cause is weaker than the self-sufficient cause, and it falls short when it is controlled by other [causes], which stand in the way . . . ' (*Stoic. rep.* 1056C).⁵⁷ This account proceeds by delimitation, distinguishing procatarctic causes from self-sufficient ones, which further confirms that the two kinds of causes formed part of one and the same theory. The characterization of the procatarctic cause as weaker than the other implies that no cause can be both self-sufficient and procatarctic cause of the same effect. The 'and' (καί) in the account may be expegetic, so that the second clause serves to explicate the weakness of the procatarctic cause: it is weaker in that the effect does not come about if the procatarctic cause is dominated by other things, presumably other causes, that obstruct it. (In Chrysippus' case of an impression as procatarctic cause, the things that might obstruct it include the nature and moral disposition of the person who has the impression.⁵⁸)

⁵⁴ Clem. *Strom.* 8.9.95.28–9 gives an account of 'procatarctic' as 'that which first contributes a starting-point for something to happen' (τὰ πρῶτως ἀφορμὴν παρεχόμενα εἰς τὸ γίνεσθαι τι).

⁵⁵ This was suggested by Frede 'The Original Notion', 243 n. 6; similarly O. Rieth, *Grundbegriffe der stoischen Ethik* (Berlin, 1933), 147.

⁵⁶ Often the procatarctic and the antecedent (προηγούμενα) causes are considered as different types that cooperate in one instance of causation. Cf. [Gal.] *Def. med.* 19.392, Gal. *Caus. cont.* 2 (LS 55F), *Caus. puls.* 9.2–3; see also Hankinson, 'Evidence', 86–9, Frede, 'The Original Notion', 241.

⁵⁷ . . . τὸ μὲν προκαταρκτικὸν αἴτιον ἀσθενέστερόν ἐστι τοῦ αὐτοτελοῦς καὶ οὐκ ἐξικνεῖται κρατούμενον ὑπ' ἄλλων ἐνισταμένων, (οἱ ἐξαισταμένων) . . .

⁵⁸ Cf. again the parallel passage in *Stoic. rep.* 1057A–B.

We can infer from the quoted account and its context that the characterization given does not hold for the self-sufficient cause. Hence, a self-sufficient cause never falls short, which should mean it always brings about its particular effect, and no other forces can prevent it from bringing about its effect. This harmonizes well with the information concerning its self-sufficiency which was discussed above.

It has become clear that the two Chrysippean types of causes in Plutarch are alternatives for, and not cooperative in, one instance of causation. The structure of Plutarch's argumentation implies this: fate is supposed first to be a self-sufficient cause, then to be a pro-catactic cause, and both times it would be an antecedent cause. Cooperation is not considered—there is no hint of it in the whole passage. On the contrary, both the name and the characterization of the self-sufficient cause preclude this. Being self-sufficient to produce the effect, it does not admit of another causal factor that works together with it, and *a fortiori* not of one that is a necessary condition for the effect.

IV. CICERO VERSUS PLUTARCH

Next I want to argue that the Chrysippean conceptual distinction between causes which we find in Plutarch is the same as that announced in Cicero, *De fato* 41, and in particular that the sort of cause Cicero labels 'perfect and principal' is the same as Plutarch's self-sufficient cause. This has been accepted by many,⁵⁹ but is not self-evident.

Consider first that the general context in which the distinction of causes is made is the same in both cases: In Cicero, *De fato* 41, we learn that Chrysippus introduced that distinction in the context of the debate about fate and moral responsibility in order to show that impressions do not necessitate human assents. The topic of chapter 47 of *De Stoicorum repugnantibus* is fate, assent, and that which is in our power, and Plutarch presents Chrysippus' argument with the introductory sentence that 'he [Chrysippus] wants to prove that the impression is not a self-sufficient cause of assent' (*Stoic. rep.* 1055F, τὴν γὰρ φαντασίαν βουλόμενος οὐκ οὔσαν αὐτοτελή τῆς

⁵⁹ So among others Rieth, *Grundbegriffe*; Theiler, 'Tacitus'; Pohlenz, *Die Stoa*; Frede, 'The Original Notion'; Duhot, *La Conception*.

συγκαταθήσεως αἰτίαν ἀποδεικνύειν). This is exactly the thesis which Chrysippus wants to demonstrate in Cicero, and which is illustrated and explained by the cylinder analogy. Moreover, the types of causes are assigned roughly the same function in both texts. One is the type of cause that externally induced impressions (or the external objects) are in the case of assents; it cooperates with a second causal factor, which is in the examples the assenting person's individual moral nature.⁶⁰ The other is a kind of cause which impressions are *not* in the case of assents, and which, if they were of this kind, would prevent moral responsibility for the assents lying with the person who assents.

We should, therefore, expect the distinction of causes to be the same in both authors. It would be surprising indeed if in the same context Chrysippus introduced two different distinctions, both for the same purpose, and in both of which the causes have the same function.

A very strong reason for the identification of Plutarch's self-sufficient cause with Cicero's perfect cause is that 'perfectus' would be a natural translation of *αὐτοτελής*. The identification finds additional confirmation in a passage in Origen in which the expression *αὐτοτελής αἰτία* is used in a context very much like that in Cicero and Gellius (Orig. *Princ.* 3.1.4). The passage draws heavily on Stoic philosophy, and deals with the issue of moral responsibility, emphasizing the point that assenting to evil-doing is not fully determined by external factors. This is illustrated with the example of adultery. The claim is that the woman is not the *αὐτοτελής* cause of the man's indiscretion; rather, it is implied, the man's assenting makes him himself responsible. This it is denied that the woman is a self-sufficient cause, just as the impression or the external object was denied to be a perfect and principal cause in Cicero (and a self-sufficient cause in Plutarch).

It may also be worth mentioning that Clement, after having introduced the procatarctic cause as that which first produces the starting point for something to happen (see n. 54), adds an example of the same family: 'to the licentious, beauty is the procatarctic cause of erotic love. In them it produces amorous inclinations, but it does not do so by necessity' (Clem. *Strom.* 8.9.95.29-31). The procatarctic cause thus pairs well with the self-sufficient one—as alternatives, not

⁶⁰ It is more obvious in Gell. *NA* 7.2.7-14 than in Cicero that moral nature is at issue in the cylinder analogy; in Cicero this can be established from the context, in particular *Fat.* 40.

co-operating—in examples like Cicero's and Gellius'. The denial of necessitation by the first causal factor in the Clement passage corresponds to Cicero, *De fato* 41–2 and 44.

Taking these various pieces of evidence together, I conclude that the distinctions of causes in Cicero and Plutarch are the same, and in particular that the Chrysippean concept of an *αὐτοτελής* cause as it occurs in Plutarch is the same as the one dealt with in Cicero under the name 'perfect and principal'. But *αὐτοτελής* means 'self-sufficient', and we established from the Plutarch passage that Chrysippus understood it in this way. In line with this, the Plutarch passage implied that a self-sufficient cause brings about its effect always and by itself—a characteristic that was confirmed by accounts in Clement and Sextus.

It follows that Cicero's perfect and principal cause, too, is self-sufficient and produces its effect without the cooperation of any other cause. But that means that the standard view—i.e. the view that perfect and principal causes cooperate with auxiliary and proximate causes in one instance of causation—is mistaken. It assumes that the perfect and principal causes of events are not self-sufficient, but require an auxiliary and proximate cause to be effective. And this is exactly what is precluded, if—as has been shown—a perfect and principal cause is self-sufficient. Hence, in addition to the lack of any positive evidence for the standard interpretation, here we have a strong argument against it. This fact has not gone unnoticed. It has led to a motley variety of *ad hoc* explanations, designed to explain away the unwelcome incongruity—none of them in my view successful.⁶¹

V. THE RELATIONS BETWEEN THE VARIOUS PROPERTIES OF CAUSES

There are, however, various factors which either have led scholars to adopt the standard interpretation or have been understood as confirming it, and which in any event complicate matters of interpretation. These centre on several of the terms for causes in Cicero

⁶¹ e.g. Theiler, 'Tacitus', 74 [62] n. 122; Long, 'Determinism and Freedom', 196 n. 32; Frede, 'The Original Notion', 236, 239; Sorabji, 'Causation Laws and Necessity', 260–1; Long/Sedley, i. 341; M. Wolff, 'Hipparchus and the Stoic Theory of Motion', in J. Barnes and M. Mignucci (eds.), *Matter and Metaphysics* (Naples, 1988), 471–545 at 538; Duhot, *La Conception*, 214. See Sharples, *Cicero*, 200, for an overview of some of them.

and Plutarch, and on the relation between cohesive (*συνεκτικός*) and self-sufficient causes, following the identification of these in Clement. Both issues in any case need sorting out if we are to paint a comprehensive picture of Chrysippus' causal theory.

First, we encounter the puzzling fact that Plutarch uses one term for each type of cause, whereas Cicero gives two, and, moreover, that, with the exception of the above-discussed pair *αὐτοτελής/perfectus*, they do not correspond very well. This raises the questions: what were the Greek terms which Cicero, or his source, translates? and are we to infer that Plutarch left two terms out, or rather that Cicero added two? Much has been written about this, and in fact any of the following situations could lie behind the discrepancy:

- Chrysippus distinguished two types of causes, and refers throughout to each of them with a pair of names.
- One of the Latin words is a translation of Chrysippus' term for the cause, the other translates a Greek term used by Chrysippus to explain his concepts.
- The Latin words both translate Greek terms Chrysippus used to explain his concepts.
- Cicero tried to translate by using two words for one.
- One of Cicero's terms is a translation, the other added by him (or a source) in order to explicate Chrysippus' terminology to contemporary readers.
- Cicero did not attempt to translate the Greek words strictly, preserving their general meaning, but chose expressions that he thought would properly describe the function of the causes in Chrysippus' theory.

The last two possibilities gain their plausibility from the fact that Cicero—like philosophers of his time generally—has at his disposal a large number of different concepts, classifications, and names of causes and would naturally seek to make Chrysippus' terminology comprehensible to those (like himself) who are acquainted with contemporary causal theories.⁶² The range of possible explanations of Cicero's terms makes it clear that, in the absence of additional evidence, we have to rely on conjecture for their Greek origin.⁶³

⁶² Cf. e.g. *Top.* 59; see also later authors such as Galen, Sextus, Clement (texts cited above).

⁶³ Sharples (*Cicero*, 199–201) gives a fairly comprehensive overview of suggestions that have been made in this context.

I shall neither attempt to decide between the possibilities nor make a definite suggestion for the underlying Greek words. Instead I shall show that Cicero's choice of terms, whatever its origin, in conjunction with our additional evidence on Stoic causal theory, does not support the standard interpretation, and that instead it points to a straightforward, simple, and consistent understanding of Chrysippus' theory of causes which has several advantages over the various versions of the standard interpretation.

There is, first, Cicero's term 'principalis', which is paired with 'perfectus'. It also occurs in *De fato* 9, a passage in which Cicero does not report Stoic doctrine, but speaks *in propria persona*. There the word is used in a way very similar to *De fato* 41-2: influencing factors such as the climate, which are admitted to be antecedent causes of some of our character traits, are denied to be principal causes of our individual actions. Thus, as in *De fato* 41-2, 'principalis' is used negatively only. Nothing suggests that a principal cause is the second factor in a cooperation of causes. On the contrary, *De fato* 7-9 suggests that the climate is seen by Cicero as a *principal and antecedent* cause of some of our general character traits. And this may reflect Chrysippus' view.⁶⁴

The phrase 'principalis causa' occurs again in the context of Stoic fate and modalities in Boethius:

Opposite to this view [i.e. the Peripatetic one that there are things that both can and cannot happen] is the one that states that everything happens through fate, which is taught by the Stoics. For what happens through fate occurs by way of principal causes; but if this is so, that which does not happen cannot be changed. (Boethius, *in Int.*² 197 M)⁶⁵

This is unlikely to be an adequate presentation of early Stoic theory. But it makes clear that principal causes were seen either to necessitate their effects, or at least fully to determine them. This squares well with what we learn about perfect and principal causes in Cicero (e.g. their being described as 'causae necessariae' in *De fato* 44) and about self-sufficient causes elsewhere.

⁶⁴ This has also been pointed out by Ioppolo, 'Il concetto', 4515; I disagree, however, with her assumption that *Fat.* 9 presents Chrysippus' argumentation.

⁶⁵ cui sententiae contraria est illa quae dicit fato omnia fieri cuius Stoici auctores sunt. quod enim fato fit ex principalibus causis evenit, sed si ita est, hoc quod non fiat non potest permutari.

'Principalis' has been repeatedly suggested to be a translation of κύριος, although there are no Stoic κυρία αίτία, or κυρίως αίτία which we know of. I am inclined to think that 'principal cause' was not a technical term for Chrysippus, nor presumably for Cicero; rather that it simply conveyed the idea that, in an instance of causation, something is the cause to which the main responsibility for the effect is to be attached. But this is, of course, speculative. Still, in this case, there could be principal causes that are not self-sufficient, and hence although a self-sufficient (or perfect) and principal cause brings about the effect all by itself, and does not admit of another cause as a necessary condition, a principal cause that is not self-sufficient *would* be one that cooperates with another cause.⁶⁶ On this assumption, the second determining factor in the cylinder analogy could be a principal cause, though not a self-sufficient cause.⁶⁷ And it is even conceivable that the first factor in a cooperation is a principal cause, and the nature of the object is only helping to bring about the effect.⁶⁸

'Principalis' has also been suggested to be a translation of συνεκτικός (cohesive),⁶⁹ mainly on the grounds that in Clement's exposition of causal theory in his *Stromata* we learn in two places that the cohesive causes were also synonymously called self-sufficient (*Strom.* 8.9.95.31-96.1 and 101.19-20). I do not believe that Cicero could have rendered the Greek word συνεκτικός with 'principalis'. There are any number of better Latin words to express σύνεξις (cohesion), and the assumption that Cicero picked out 'principalis' is too far-fetched.

More serious is the frequently propounded view that by 'principalis' Cicero refers to Chrysippus', or generally Stoic, cohesive causes.⁷⁰ This opens up the general question of the relation of the Stoic cohesive causes to the perfect and principal causes and the cylinder analogy. The main philosophical reasons why it has been

⁶⁶ In *Top.* 59 Cicero makes a similar distinction between efficient causes (*causae efficientes*): 'for there are some <efficient> causes which plainly produce the effect without anything helping them, and others which need to be helped' (*sunt enim aliae causae quae plane efficiunt nulla re adiuvante, aliae quae adiuvari velint*). Here we have efficient causes which only work with, and also those which work without help. The former could include those of the type of the second determining factor in the cylinder example; the latter could correspond to the self-sufficient ones.

⁶⁷ So also Ioppolo, 'Il concetto', 4514-15.

⁶⁸ Clem. *Strom.* 8.9.96.3-5 calls the pupil's nature a helping cause of the pupil's learning, though this is most certainly not Stoic.

⁶⁹ So e.g. Duhot, *La Conception*, 170-1.

⁷⁰ e.g. Frede, 'The Original Notion', 242-4, Long/Sedley, i. 341, Wolff 1988, 537, Duhot, *La Conception*, 170-1.

assumed that Cicero's perfect and principal cause *is* the Stoic cohesive cause, are: (i) that it has been taken for granted that the perfect and principal cause forms the second determining factor in the causal transaction which is initiated by the proximate and auxiliary cause; and (ii) that the second determining factor has been held to *be* a cohesive cause. This view has been backed up with the *textual* point mentioned above (iii) that Clement reports that the cohesive cause is synonymously called self-sufficient, and that in one case this is followed by an example of *cooperation* of procatarctic, cohesive, and helping (*συνεργόν*) cause (*Strom.* 8.9.96.2–5).

However, none of these points stands up to scrutiny. Point (i) has been dealt with above. Points (ii) and (iii) require some discussion of the Stoic concept of the cohesive cause and of its development. Originally, in early Stoicism, something would be described as a 'cohesive cause' if it caused a thing's being in a certain state, having certain essential properties, literally holding that thing (*qua* being *that* thing) together.⁷¹ This illustrates the fact that the Stoics required efficient causes not only of changes or movements (*κινήσεις*) but also of states (*σχέσεις*).⁷² A cohesive cause is the cause of a thing's qualities (*ποιότης*), as opposed to merely 'being qualified' (*ποιόν*). For the Stoics, such states involve the presence in the object of a particular tension of the pneuma, and this kind of tension is made up by a special sort of movement (*τονική κίνησης*). But this tensional movement does not count as a change proper (*κίνησις*) of the object and thus does not require an antecedent cause. When calling the pneuma in an object 'cohesive' the Stoics thus express a particular *function* of that pneuma, namely the function of holding the object, *qua* being that object, together. The term *συνεκτικὸν αἴτιον*, which is standard in later taxonomies of causes, is not attested for Chrysippus, or for the early Stoics in general. Rather, the cohesive function of pneuma is talked about in various forms of the verb *συνέχειν*.⁷³ On the assumption that Chrysippus had no worked-out classification of causes with technical terms for the different kinds, this is not surprising.

⁷¹ e.g. Gal. *Caus. cont.* 1.1–5 (7 K); *Plen.* 3 (7.535 K), Alex. *Mixt.* 223–4, Plut. *Stoic. rep.* 1053F.

⁷² See Section 1; for the Stoic *κίνησις/σχέσις* distinction, see in particular n. 17.

⁷³ Cf. the only passage (I have found) attributed to Chrysippus, Plut. *Stoic. rep.* 1053F: ὑπὸ τούτων [i.e. ἔξεις] γὰρ *συνέχεται* τὰ σώματα; καὶ τοῦ ποιόν ἕκαστον εἶναι τῶν ἐξεί *συνεχομένων* αἴτιος ὁ *συνέχων* αἴτιος ἔστιν . . . [οὐδὲ συνέχων αἴτιος αἴτιος ἔστιν]. Similarly Alex. *Mixt.* 233–4, reporting Stoic doctrine: *συνέχεσθαι, συνοχή, συνεχή, συνέχεια, συνέχον*.

Galen provides us with evidence that later non-Stoics used the expression 'cohesive cause' in a different way from the early Stoics:

However, it is above all necessary to remember how we said we were speaking of the cohesive cause—not in its strict sense, but using the appellative loosely. For no one before the Stoics either spoke of or admitted the existence of the cohesive cause in the strict sense. And what have before our time been spoken of as cohesive have been causes of something's coming about, not of existence. (Gal. *Syn. puls.* 9.458.8–14, trans. Long and Sedley, modified)⁷⁴

For the early Stoics cohesive causes are causes of something's existing, not of something's coming about. Galen here seems to contrast two kinds of effects: coming into being and existence.⁷⁵ Similarly, in *Caus. cont.* 1.5 Galen implies that the Stoics take the cohesive cause to be the cause of existing things.⁷⁶ I take this, in both passages, as short for 'being the cause of that object existing as that object'. On the other hand, the things that come about the things like diseases, in the sense that a person contracts a disease; that is, Galen talks about *changes* of bodies rather than about their coming into existence (*Caus. cont.* 2.1–4). Galen's distinction is thus roughly equivalent to the Stoic one of *σχέσεις* and *κινήσεις*. The quoted Galen passage then further suggests that later, and by non-Stoics, 'cohesive cause' was used in the loose sense of what causes something's coming about, and not in the original Stoic sense of something's existing as the object it is.⁷⁷ Clement (*Strom.* 8.9.96.2–5), when presenting the example of the cooperation of a cohesive cause with other causes, uses some such later, loose sense of 'cohesive cause'. The teacher is said to be the cohesive cause of the pupil's learning, and learning is a change, not a state. In any event, the example does not match the cylinder analogy, even in the standard interpretation: for in the standard interpretation we would expect the *pupil* to be the cohesive cause of his learning.

⁷⁴ Μεμνήσθαι μέντοι χρή πρὸ πάντων ὅπως ἔφαμεν ὀνομάζειν ἐνίοτε συνεκτικὸν αἰτίον, ὅτι μὴ κυρίως, ἀλλὰ καταχρώμενοι τῇ προσηγορίᾳ. Τὸ μὲν γὰρ κυρίως λεγόμενον αἰτίον συνεκτικὸν οὐτ' ὠνόμασέ τις ἄλλος πρὸ τῶν Στωικῶν οὐτ' εἶναι συνεχώρησε: τὰ δὲ καὶ πρὸ ἡμῶν οἶον συνεκτικὰ λεγόμενα γενέσεώς τινος, οὐχ ὑπάρξεως αἰτία.

⁷⁵ I do not take ὑπαρξίς as ὑπαρξίς in the Stoic sense (the obtaining of predicates of some object), since the Stoics hold that all causes are causes of an ὑπαρξίς in this sense, which fits the context in Galen badly.

⁷⁶ Vocantur autem a Stoicis non hec coniuncte cause entium, sed subtili partis substantia materialis <i.e. pneuma>. Cf. *ibid.* 1.3, about the pneuma: eius opus esse continere alia corpora physica et ea que animalium.

⁷⁷ See also Hankinson, 'Evidence', 82–3; Ioppolo, 'Il concetto', 4541–2.

In the strict, early Stoic, understanding of the cohesive cause, it is indeed self-sufficient: it is the sufficient cause of an object being that object, or being in the state of being that object. However, this does not mean that 'cohesive' and 'self-sufficient' were understood by Chrysippus as two alternative ways of expressing membership of a cause in a particular class. Rather, originally, the terms 'cohesive' and 'self-sufficient' were employed to describe *different*, conceptually independent, relational properties of causes. And, if one cause was both cohesive and self-sufficient, this was so contingently. (When, on the other hand, it is understood in the later, non-Stoic, loose way, as a cause of change, the cohesive cause is no longer self-sufficient to produce the effect.)

We can now see how the identification of Cicero's perfect and principal cause with the cohesive cause comes about and where it goes wrong. First, as I said above, Cicero's perfect and principal causes are wrongly identified with the second causal factor. Then, the second causal factor is wrongly identified with the cohesive cause in the following way: prompted by later sources which present the cohesive cause as a cause of change, the term 'cohesive cause' is understood not as a relational term that expresses a particular *function* (holding together), but as a term that refers to a particular *part* of an object (the object's nature), one of whose functions happens to be to hold the object together.

The reasoning that leads to the identification of the second, internal, causal factor with the cohesive cause can then be presented as follows: 'that which holds a thing together, i.e. its cohesive cause, is the pneuma in the thing. And the nature of the thing is also this very pneuma. But the nature of the thing is the second causal factor in the instance of causation in the cylinder analogy. Therefore, the cohesive cause is this second causal factor.'

This argumentation may *prima facie* appear valid. But it is not. What can be derived is at most that the thing that functions as a cohesive cause is the same thing as that which functions as the second determining factor in the kinds of causation at issue. For 'cohesive cause' is a functional term. It describes, elliptically, a relation between a cause and its effect: the pneuma is the cause; the state of that thing being that thing is the effect. From this it does not follow that the second causal factor of a change is a cohesive cause of this change.

The need to understand *συνεκτικόν*, or *συνεχές*, or *συνέχον αἴτιον* as describing a function becomes clearer when one examines the two

main lines of interpretation which, taking the cohesive cause to be *part of the object*, identify it with the second causal factor. First, it has been argued that the external cause will activate the pneuma in the object so that its tensional states change from being non-active to being 'active states'. By taking in energy from outside, the cohesive cause, when changed into an 'active state', becomes the cause of motion.⁷⁸ Alternatively, the assumption is that no such activation takes place, and that the second determining factor—again identified with the cohesive cause—is simply the shape or disposition of the object.⁷⁹ Thus, whereas in the first kind of interpretation the second causal factor is active in the sense that it is in a special 'active state', energy-laden from outside, and is thus an active force, in the second it can be called active only in so far as the form or disposition is the manifestation of the active principle (i.e. the pneuma) in the object. In both interpretations the identification of the cohesive cause with the second causal factor confounds two distinct functions of the pneuma in a changing object.

Take the case of the rolling cylinder. On the one hand, the pneuma is responsible for the cylinder remaining a cylinder while it is rolling: this is its nature *qua* cohesive cause of the cylinder being a cylinder—e.g. of its having cylindrical shape. And this is important: the Stoics need to be able to say: this same cylinder was first at rest, and then, having been pushed, it rolled. But it was a cylinder all along, and the very same one.

On the other hand, this same pneuma is *also* responsible for a certain kind of reaction of the whole body to a certain kind of external stimulus or antecedent cause. The effect here is a movement, not a state. In this case the function of the pneuma is not holding the object together, and hence it is not the pneuma *qua* cohesive cause, but it is the pneuma *qua* second causal factor of the rolling (i.e. depending on which interpretation one favours, either *qua* being activated to roll, or *qua* disposition to react in a certain way, if appropriately stimulated).

There is one way of interpreting the cylinder analogy in which the above mistake is avoided, and the second causal factor is nevertheless understood as both self-sufficient and cohesive of the rolling: 'the external push initiates the moving of the cylinder; but at the moment at which the cylinder has started to roll, its nature has

⁷⁸ The main exponent of this view is M. Frede in 'The Original Notion', 242.

⁷⁹ This view has been propounded e.g. by M. Wolff in Wolff, 'Hipparchus', 533-9.

changed from that of a cylinder at rest to that of a rolling cylinder. And the nature of the rolling cylinder is a self-sufficient cause of the cylinder's rolling.' But this kind of argumentation is unsatisfactory, for several reasons.

First, for the Stoics there is no such thing as the *nature* of the rolling cylinder, or analogously of the assenting person. There may be a particular 'being qualified' (*ποιόν*) of rolling, but the nature of a thing is what it always has, whether or not it is moving.⁸⁰ And Chrysippus maintains that the *nature* (and not any odd temporary 'being qualified') is the second causal factor. Even disregarding this point, it is the pneuma of the cylinder as it is both when at rest and when rolling (and not as it is only when it is rolling) which is responsible for its rolling: its shape (Gellius, *NA* 7.2.11) or perhaps its *volubilitas* (Gellius, *NA* 7.2.11; Cicero, *Fat.* 43). Furthermore, Chrysippus insists that every movement has a preceding cause, which is a cause of *that movement*; accordingly, the rolling of the cylinder requires an antecedent cause, and hence the internal causal factor cannot be self-sufficient in the strict sense.⁸¹

The argumentation is even less convincing when one considers the analogous case of the assenting person, where it would run like this: 'when the impression initiates the act of assent the person's nature changes to that of an assenting person (if such is the person's nature), and the nature of the assenting person (person-while-assenting) is the self-sufficient cause of the person's assenting.' This suggestion does not work, since, first, again, there is no such thing as the nature of the assenting person, as opposed to that of the person when not assenting; and, second, it is necessary for the attribution of moral responsibility that the nature of the person, as it exists independently of whether the person is in the course of assenting, be the second causal factor of the assent. Moral responsibility is to be attached to the person, not to the person-while-assenting. In the cylinder analogy it is thus the nature of the object (its pneuma as it exists independently of whether the object is moving) which is the second causal factor. It is hence neither a self-sufficient cause, nor a cohesive cause of the effect of assenting.

⁸⁰ Cf. Simplicius, *in Cat.* 212-13; *Alex. Fat.* 181.13-182.20.

⁸¹ Perhaps the being qualified (*ποιόν*) as rolling of the rolling cylinder is a self-sufficient cause of the cylinder's (being in the state of) being a rolling cylinder. But that seems very different from saying that the nature (*φύσις*) of the cylinder is a causal factor of the cylinder's (movement of) rolling—which is what our sources state.

To sum up, there is no direct evidence that the second causal factor in the cylinder analogy is a cohesive cause nor is there any compelling indirect evidence for this. The interpretation that the second causal factor is the cohesive cause has the disadvantages that it squares neither with the meaning of the word 'cohesive' (*συνεκτικός*, *συνεχής*, or *συνέχων*), nor with the evidence we have that for the Stoics cohesive causes are causes of states, not changes, and, further, it neglects the fact that causes are relative (*πρός τι*) and consequently confounds the *distinct functions* of the pneuma in an object of (i) holding the thing, *qua* that thing, together, and of (ii) being a co-cause of its movement. I conclude that the second causal factor is not a cohesive cause.

For the moment this may suffice with reference to the terms 'perfect', 'principal', 'self-sufficient', and 'cohesive', and the second causal factor. We are left with Cicero's terms for the antecedent cause which is necessary but not sufficient for bringing about the effect: 'proximus' and 'adiuvans'.

On 'proximus' I have nothing new to say. *Προσεχής* and *προκαταρκτικός* have been suggested as Greek equivalents.⁸² *Προκαταρκτικός* fits well with Plutarch, but can hardly be justified as a *translation*.⁸³ But then, Cicero may not be translating the Greek word in its general meaning, but—influenced by contemporary theories—he may be trying to convey the special meaning he thinks the word has in this context.⁸⁴ In any event, 'proximate' is not obviously helpful in describing the kind of cause the impression is in the case of assent—except perhaps, as picking out from the many antecedent factors that are necessary conditions of the effect the one that, besides being active, is temporally *closest* to the time at which the effect obtains.

The second term, 'adiuvans', is easier to make sense of. From the way the auxiliary and proximate causes are described in Cicero, and the procatarctic cause in Plutarch, 'helping' or 'auxiliary' would be adequate characterizations of one aspect of such causes: namely, that, being neither the main cause nor sufficient in themselves to bring about the effect, they none the less *assist* in bringing it about.

⁸² e.g. Frede, 'The Original Notion', 241; Duhot, *La Conception*, 172.

⁸³ Cf. Sharples, *Cicero*, 200.

⁸⁴ As Donini has observed (Donini, 'Plutarcho', 23), Cicero's 'some causes provide a preparation for bringing something about' (*praecursionem quandam adhibent ad efficiendum*) in *Top.* 59 could be an attempt to render *προκαταρκτικός*. See below for the context of this passage.

It has been noted that 'adiuvans causa' would be a natural translation of the Greek *συνεργὸν αἴτιον* (helping cause) which was used in later antiquity. However, the helping cause as described, for example, in Clement (*Strom.* 8.9.101.13–102.12) is clearly a different type of cause from Chrysippus' auxiliary and proximate (or procatactic) cause. In Clement it is *contrasted* with the procatactic cause, and it is not necessary for the effect, but only intensifies it (*loc. cit.*).

I assume that, if Chrysippus used a word like *συνεργός*, this was not yet in any technical sense and that he did not introduce a type of cause with the name *συνεργὸν αἴτιον*. A clearly non-technical use very similar to that in *De fato* can also be found in the passage on causation in Cicero's *Topics*:

In this group of causes, without which something is not brought about . . . some causes provide a preparation for bringing something about, and contribute things that are themselves helping, although they are not necessitating. (Cic. *Top.* 59)⁸⁵

These causes (like the ones described in Cic. *Fat.* 41–5 and Plut. *Stoic. rep.*, ch. 47) are necessary but not sufficient conditions for the result; 'adiuvans' is used to describe a general function of these causes, and is not part of the nomenclature of a taxonomy of causes.

In relation to the term 'adiuvans' we encounter a peculiarity in Cicero, *De fato* 41–5, which many have considered problematic: in *De fato* 41–2, Cicero consistently calls the non-sufficient antecedent cause an auxiliary and proximate cause; but in *De fato* 44 the same kind of cause is twice referred to as proximate and *continens* (i.e. cohesive or contiguous) cause.⁸⁶ This has been found puzzling on two counts: first, why should the same type of cause, in the same context be referred to in two different ways; second, on the assumption that 'continens' translates a Greek term such as *συνεκτικός* or *συνεχής*, with the meaning 'cohesive', it has been claimed that 'cohesive' is an inadequate name for or description of auxiliary and proximate, or procatactic, causes—for, the reasoning runs, it is only the pneuma

⁸⁵ huius generis causarum, sine quo non efficitur . . . alia autem praecursionem quandam adhibent ad efficiendum et quaedam afferunt per se adiuvantia, etsi non necessaria.

Ioppolo 'Il concetto', 4530–1 argues that Cic. *Top.* 58–9 is not Chrysippean. I agree on this point, but believe that Cicero is putting together various theories, perhaps from notes or from memory, and thus we may well find bits from Chrysippus' theory in the text, since he wrote about Chrysippus' distinction between causes only a month or so before he composed the *Topics*.

⁸⁶ Cf. Section II.

or nature in a thing which could be rightfully called 'cohesive' by the Stoics. But we are not confronted with a real problem here. Since any solution of the alleged difficulties will remain conjectural, I shall sketch two alternatives, leaving the ultimate choice to the reader.

My own favoured explanation of this discrepancy between *De fato* 41-2 and *De fato* 44 is that there was an underlying Greek word ambiguous between 'helping' and 'holding together', and translated in different ways in the two passages. Such a Greek word is *συνεργόν*. This can either come from the adjective *συνεργός*, cognate to the verb *συνεργέω*, 'to help', and meaning 'helping', 'auxiliary'. But it can also be the neuter singular present active participle from the verb *συνέργω* (*συνείργω*), 'to hold together', and accordingly meaning 'holding together'. This ambiguity holds only for accusative and nominative singular of the adjective *συνεργός* (from *συνεργέω*) and the participle *συνέργων* (from *συνείργω*). Appropriately, in *De fato* 44 the first occurrence of 'continens' is in the nominative singular, the second in the accusative singular. Hence both could be translations of *συνεργόν* (*αἴτιον*) when read as forms of the participle *συνείργων*.

But this explanation may appear too whimsical. If one insists that Cicero or his source translated an expression such as *συνεχής* or *συνεκτικός* which meant 'holding together' for the Stoics, there need still be no inconsistency. It is helpful to remember that these terms originally described the function of a cause. This even in Stoic physics antecedent causes can meaningfully be called 'cohesive'. All one has to do is apply the familiar Stoic distinction between level of everyday experience, and the cosmic level. The antecedent causes of individual motions can be looked at in two ways: as procatarctic causes they contribute to the motions of individual objects; but, if one considers their function in the universe as a whole, they serve to hold the universe *qua* universe together. This is, in fact, the reason why the Stoics do not permit events that have no antecedent causes: that would (so to say) explode the universe.⁸⁷ In this regard it is worth recalling that the whole context of Cicero, *De fato* 39-45, is that of

⁸⁷ Cf. Alex. *Fat.* 192.11. Evidence for the use of *συνέχειν*, etc., in this second sense, on the macro-level, in Stoic philosophy is: Alex. *Mixt.* 223-4, in particular, 223.26-7... τὸ πᾶν ἠνώσθαι τε καὶ συνέχεσθαι, πνεύματός τινος διὰ παντός διήκοντος αὐτοῦ... 224.7-8... συμμένειν τὰ σώματα αἴτιον τὸ συνέχον αὐτὰ πνεῦμα; cf. *Mant.* 131.5-10 and Clem. *Strom.* 5.8; Gal. *Plen.* 3.7. 525.10-14, 526-7 K (*SVF* ii. 439 and 440) for the use of *συνεκτικὴ αἰτία* in a related context; see also the heavily Stoicizing [Aristotle] *De Mundo* 6, about god, *περὶ τῆς τῶν ὄλων συνεκτικῆς αἰτίας* (397^b9); cf. 399^b15 ff. *συνέχεται*.

fate and causal determinism, and that the absence of any isolated events is a chief point of the Stoic theory of fate. Hence Cicero's use of *continens*, meaning 'cohesive', for auxiliary and proximate causes, would be in no way inconsistent, and not even un-Stoic.

VI. DOES CHRYSIPPUS' CAUSAL THEORY ADMIT OF SELF-SUFFICIENT CAUSES OF CHANGE?

For a full picture of Chrysippus' theory of causes one final question needs to be addressed: does the theory admit of any self-sufficient causes of change? We know that for Chrysippus all instances of change involve antecedent causes. But do all instances of causation of change involve two determining factors, one antecedent, the other internal to the object in which the effect takes place? Or are there cases in which the antecedent cause self-sufficiently produces the effect? Before I take another look at Cicero, I shall sketch three possible answers to this question which may seem plausible in the context of Stoic philosophy.

The first is based on the Stoic distinction between natural motions and other (non-natural or counter-natural) motions.⁸⁸ One may expect that in the case of every *natural* motion two determining factors are involved: first, an antecedent cause; second, the nature of the object to which the motion happens—as in the cases of the rolling cylinder and the assenting person. On the other hand, in the case of counter-natural motion, the antecedent, external cause would be self-sufficient in bringing about the effect, and the nature of the object is not a causal factor. For example, when you throw the cylinder in the air, its upward movement is not a natural movement, and—one may think—you would be the sufficient cause of its moving upward. (A variant of this suggestion could be formulated in terms of a distinction between forced and unforced motion.)

Second, one could adduce the Stoic distinction of motions into actions and affections. One may think that the nature of the object, as second causal factor, contributes to the effect only if the object

⁸⁸ Cf. Alex. *Fat.* ch. 13, and Nem. *Nat. hom.* 105–6 for a Stoic theory of natural motions. See also Clem. *Strom.* 8.9.101.14 *καὶ τὰ μὲν* (i.e. *τῶν αἰτίων*) *τοῦ κατὰ φύσιν*, *τὰ δὲ τοῦ παρὰ φύσιν*.

does something, whereas, when the object is only affected by the external, antecedent cause, this latter is the self-sufficient cause of the change. For instance, when I give assent, my nature is causally involved; but if, say, someone stabs me, the change (suffering being wounded) is something I am, it is true, affected by, but I am not *doing* anything, and hence I am not considered a causal factor of the effect.⁸⁹

Third, there is the possibility that in any kind of causation of change the nature of the object in which the change occurs is a causal factor, since it *always* depends on the nature of the object whether and what change occurs. Even when you throw a pebble into the air, although the upward movement is not natural to the pebble, it will depend on the nature of the pebble that it moves upwards—a generously sized rock would not, given the same antecedent effort of your making an attempt to throw it. Similarly, even when someone stabs me, the reason that I suffer being wounded is that I am a living being—not, for example, a piece of Camembert. So, although I am only affected and do not *do* anything, my nature still contributes to the effect—namely, my being wounded. Thus, even if the object does not do anything, or if the change is counter-natural, *the object's nature* (the active principle in the object) is still involved in producing the effect.

So much for the three possibilities. Which would most likely be Chrysippus' choice? Cicero, *De fato* 39–45, provides some information which points to the third. There are three sentences which imply that Chrysippus maintained that there are no perfect and principal *antecedent* causes:

(3) Because of this, when we say that everything happens through fate by way of antecedent causes we do not want this understood as 'by perfect and principal causes', but as 'by auxiliary and proximate causes'. (*Fat.* 41)

(4) (b) if everything happens through fate, it follows indeed that everything happens by preceding causes, but not by perfect and principal [preceding] causes, but by auxiliary and proximate [preceding] causes. (*Fat.* 41)

(5) (a) Therefore, against those who introduce fate in such a way that they add necessity, the above argument will be valid; (b) but against those who will not claim that the antecedent causes are perfect and principal [i.e. Chrysippus and like-minded Stoics], it will not be valid. (*Fat.* 42.1)

⁸⁹ A similar suggestion has been made by Frede, 'The Original Notion', 236–7.

But if there are no perfect and principal *antecedent* (or preceding) causes, then (since there is no change without an antecedent cause) all causation of change requires the cooperation of an antecedent cause and an internal cause.

There may be a way of arguing that *De fato* 41–2 is context dependent, that Chrysippus is in fact talking only about the motions of the soul impulse and assent, and that in *those* cases, when he says ‘antecedent causes’, he means ‘auxiliary and proximate antecedent causes’. This would allow interpretation along the lines of the first two suggestions. However, given the absence of any further evidence on this point, and given the fact that the formulations in Cicero are quite straightforward, I propose—tentatively—that my third suggestion, that there are no self-sufficient causes of change, is what Chrysippus had in mind. (Plutarch, *Stoic. rep.*, ch. 47, is of no help: in Chrysippus’ argument (1055F–1056A) no antecedent self-sufficient causes are postulated, and the dilemmatic assumption that fate is either a self-sufficient or a procatartec cause is presumably Plutarch’s own, but certainly not Chrysippus’.⁹⁰)

This interpretation may appear extreme. For instance, reusing my above example, one may think that—in parallel to the cylinder example—it entails that Chrysippus maintained that being stabbed is in my power and that I am morally responsible for it. However, this does not follow. There is no dispute over the fact that Chrysippus regarded the cylinder’s nature as second determining factor for its rolling, and still did not consider the rolling as in the cylinder’s power, nor the cylinder morally responsible for its rolling. Hence we have no reason to believe that he thought that the fact that the nature of an object is involved as a determining factor makes the object morally responsible for the effect or renders the effect to be in its power. The absence of a self-sufficient antecedent cause and the presence of an internal second causal factor are necessary conditions for moral responsibility—nothing more.⁹¹

Furthermore, in this interpretation, the existence of a second, internal, causal factor does not make this factor automatically the one

⁹⁰ Cf. Bobzien, *Determinism and Freedom*, sect. 6.4.2.

⁹¹ For the Stoics, any attribution of moral responsibility presupposes assent. One main point of the cylinder-and-cone analogy is to prove the agent’s responsibility by means of the fact that *different* people react *differently* to comparable externally induced stimuli (i.e. they give or withhold assent to different impressions). See Bobzien, ‘Stoic Conceptions’, 76–8; and, in more detail, Bobzien, *Determinism and Freedom*, sects. 6.3.3 and 6.3.5.

that bears the main causal responsibility. There is room for further distinctions: the internal second determining factor may be a main factor in cases of natural movements, or in those cases in which the object in question *does* something, but the external cause may be the main factor in other cases. For example, returning to Cicero, *De fato* 7–9, we saw that the passage suggests that the climate is the principal cause for the formation of some character traits. Here the nature of the person may be a mere auxiliary cause (assuming the climatic influence to be post-natal).

The involvement of the nature of the object as internal causal factor in all cases of change is less outlandish in a theory such as the Stoic one according to which causes are corporeal and the nature of things is active pneuma: given that the Stoics defined causal relations as involving two bodies and one predicate (see Section I), they may have recognized that (in the case of change) the effect is *always* a function of two factors, in that it is always dependent on the cooperation of the external body that initiates the change and the nature of the body in which the change takes place. The nature of the second body is always part of that 'because of which' ($\delta\iota' \delta\omicron$) the effect obtains. It is more than just a necessary condition of the effect. The nature of an object (which is pneuma and part of the active principle) includes its characteristic dispositional properties, and these concern equally the object's 'active' reactions (such as giving assent) and 'passive' reactions (such as suffering being wounded) to external triggers. The object's nature thus *actively* contributes to the effect in *all* cases of change: either in so far as the internal factor's active contribution consists in just this fact that it is a manifestation of the active principle, or pneuma;⁹² or in so far as—even in the cases of 'mere' affections—there is a 'transfer of energy' such that the external trigger makes the pneuma in the object change itself and consequently the object.⁹³

The interpretation suggested here has the additional advantage of making sense of Clement's statement that the cohesive ($\sigma\upsilon\nu\epsilon\kappa\tau\iota\kappa\acute{\omicron}\nu$) cause is synonymously called 'self-sufficient' ($\alpha\upsilon\tau\omicron\tau\epsilon\lambda\acute{\epsilon}\varsigma$). The standard interpretation (that the cohesive and self-sufficient cause cooperates with the procatarctic cause in cases of change) faces the difficulty that both terms, 'cohesive' and 'self-sufficient', would be used in a way alien to their ordinary meaning.

⁹² If one takes M. Wolff's position as a basis; cf. Section V.

⁹³ If one takes M. Frede's view as a basis; cf. Section V.

An alternative has recently been suggested⁹⁴ which considers the identification of cohesive and self-sufficient cause not to be Stoic. The explanation given of the identification is that, because the Stoics had no examples of a self-sufficient cause (since there were no such causes), later authors identified it with the cohesive cause as defined by medical writers. I do not find this explanation very plausible. The account of 'self-sufficient' in Clement does not fit the later medical concept of the cohesive cause, so that one wonders how someone could have got the idea of adding it as a second name to this cause.

It seems to me that, on the contrary, the best explanation of the claimed synonymy is the fact that at some point (namely, for the early Stoics) the two attributes 'cohesive' and 'self-sufficient', when used of causes, actually had the same extension. For according to the suggested interpretation, for Chrysippus the cohesive causes, being causes of states, are indeed the only causes that are self-sufficient in bringing about their effect. As I said above, 'self-sufficient' originally described only a certain feature of causes, and I suggest that later the term became an alternative class name for the class of cohesive causes, since in the Stoic system for causes it had the same extension as 'cohesive'.⁹⁵

It may be of interest in this context that Clement and Sextus both report from causal theories which (i) stress that the effect depends on the suitability or fitness (*ἐπιτηδείότης*) of the body at which the effect takes place, and hence the same thing becomes a cause of different effects at different objects;⁹⁶ (ii) maintain that every cause is that cause relative to the thing at which the effect takes place;⁹⁷ and (iii) state that suitability is a necessary condition and thus a *sine qua non* type cause of the effect.⁹⁸ I doubt that these theories are early Stoic. However, they still show that it was part of the debate over causation

⁹⁴ By Schröder, 'Philosophische und medizinische Ursachensystematik und der stoische Determinismus', *Prometheus*, 15 (1989), 237, followed by Ioppolo, 'Il concetto', 4542.

⁹⁵ That a self-sufficiently productive cause was later understood in a way that fits the Stoic cohesive cause well is shown in *SE M* 9.238 and 242, where it is implied that, if it is the nature of a cause to bring about an effect self-sufficiently and by using its own power, then it brings about its effect all the time. This is exactly what the early Stoic cohesive cause does.

⁹⁶ *Clem. Strom.* 8.9.100.20–101.3; cf. *SE M* 9.250–1.

⁹⁷ *Clem. Strom.* 8.9.98.25–30; cf. *SE M* 9.239 and 243.

⁹⁸ *Clem. Strom.* 8.9.98.7–12; cf. *SE M* 9.243.

that the suitability of the object (which is part of the object's nature) is a necessary condition *and a cause* of the change even in those cases where the change is a mere affection of the object. The difference between early Stoics and this later position seems to be this: whereas, for the orthodox Stoa, the internal causal factor is corporeal pneuma, and thus actively involved in bringing about the effect, for causal theories which do not postulate a corporeal active principle, the internal causal factor is demoted to a mere necessary condition—at least in those cases in which the object at issue is *affected* only, and not *doing* something.

VII. RESULTS

We end up with the following picture of Chrysippus' theory: if there is any basic Stoic distinction between causes, it is that between causes of states and causes of change. Causes of states are required in the Stoic system in particular in order to explain the existence and continuation of individual objects. These causes are *cohesive* (*συνεχῆ*, *συνεκτικά*, . . .) causes. It follows from their nature (i.e. active pneuma) and function of holding together objects *qua* being these objects that they are *self-sufficient* (*αὐτοτελής*, *perfectus*) in bringing about their effect. They presumably were thought to necessitate their effects.

On the other hand, any instance of causation of change requires the cooperation of at least two causal factors. Hence no cause of change is self-sufficient. Every change requires at least one *antecedent* cause (*προηγούμενον*, *antecedens*, . . .) to get the change started. Changes always take place in a body, and the nature of this object is always a second causal factor of the effect. Whether and what change occurs depends partly on the constitution of the object that changes or is changed. The second causal factor is not a cohesive cause (*συνεκτικὸν αἴτιον*) of the effect.

In the cases of change which Chrysippus discusses, the second causal factor is the cause to which the main responsibility for the effect is attached. Accordingly it *may* have been referred to as *principal* cause (*principalis*, *κύριος/κυρίως*?). When, as in Chrysippus' examples, the first causal factor is not the main cause, it is not a necessitating (*necessarius*) cause of the effect. It is only auxiliary (*adiuvans*, *συνεργός*?) in bringing about the effect. This is so in the cases of

human assent and the rolling of the cylinder. It is possible that Chrysippus allowed for cases in which the first causal factor, the antecedent cause, was the principal cause, whereas the nature of the object is only helping to bring about the effect. We do not know whether antecedent principal causes would have been thought to necessitate their effect.