3

Chain of Causes

What is Stoic Fate?

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One of the main theses of Stoic natural philosophy is that everything happens by fate (εἱμαρμένη; Latin, *fatum*):[1]

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> That everything comes to be by fate is stated by Chrysippus in his 'On Fate', by Posidonius in the second book of his 'On Fate', by Zeno, and by Boethus in the first book of his 'On Fate'. (Diogenes Laertius 7. 149 = *SVF* 2. 915)

But what is fate? The canonical Stoic answer is that is a chain or string (εἱρμός; Latin: *series*) of causes:[2]

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> The Stoics say fate is a chain of causes (εἱρμὸν αἰτιῶν), that is an inviolable order and binding together. (Aetius, *Plac*. 1. 28. 4 = *SVF* 2. 917 = LS 55J; cf. Alex. *Mantissa* 185. 1–5 = *SVF* 2. 920)
>
> By fate (*fatum*) I mean what the Greeks call εἱμαρμένη, that is, an order and string of causes (*ordinem seriemque causarum*), since the connection of cause to cause generates things from itself. (Cic. *Div*. 1. 125 = LS 55L; cf. *Fat*. 20)

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[1] For other attributions of the thesis, see Aulus Gellius, *Noctes Atticae* 7. 2. 15 = *SVF* 2. 977; Cic. *Fat*. 21 = LS 38G; *Fat*. 41 = LS 62C5; *Div.* 1. 127 = LS 55O; Alexander, *Fat*. 164. 17–20, 171. 26–7, 181. 8–9; cf. 210. 15; Plutarch, *De Stoic. Rep.* 1050a–b.

[2] Other versions of the definition include: Nemesius, *De Nat. Hom*. 37 (*SVF* 2. 918): 'fate is an inviolable chain of causes (εἱρμός τις αἰτιῶν)—for this is how the Stoics define it, that is, as an order and binding together that is ineluctable'; Critolaus in Philo, *Aet. Mund*. (*SVF* 2. 913): 'Fate is without beginning or end, stringing together (εἴρουσα) unfailingly and seamlessly the causes of each thing . . .'; DL 7. 149 (*SVF* 2. 915): 'Fate, they define as a strung-together cause (αἰτία εἱρομένη) of things'; Cic. *Fat*. 27: 'One cause strung together with another (*causa causam serens*) from eternity.' See also Calcidius, *In Tim.* 144 (*SVF* 2. 933).

This picture of fate goes back at least as far as Chrysippus, who proposed an etymological connection between εἱμαρμένη ('fate') and εἰρομένη ('strung together') (Eusebius, *Praep. Evang.* 6. 263 = *SVF* 2. 914).[3] Alexander of Aphrodisias, four centuries later, reports that it states the essence (οὐσία) of fate for the Stoics (Alex. *Fat.* 193. 4–8). Thus we have here an enduring piece of orthodox Stoic doctrine. To understand the thesis of fate we must grasp what they mean by the chain of causes.

Now, strictly speaking, an εἱρμός is not a chain, but a string, as of beads in a necklace. Later in antiquity, however, the term 'chain' (ἁλύσις; Latin *catena*) was used to refer to the Stoic εἱρμός,[4] and it is typical of readers today to refer to it as a 'chain of causes'. I shall defer to this usage, even though it invites a misconception which it is my project, in this chapter, to dispel. The potential for error arises because we too employ the metaphor of a causal chain, and thinking of the Stoic *heirmos* as a chain invites us to suppose that the Stoics understand the metaphor in the same way we do. The root of the error, however, lies not in the substitution of one metaphor for another (chain for string), but in our interpretation of the metaphor—be it string or chain. It has been argued that a crucial difference between the metaphor of the *heirmos* and that of the chain is that the former emphasizes the continuity of the conjoined causes, while the latter emphasizes their discreteness.[5] But the beads in the necklace are surely as distinct as the links in the chain. It is after all the necklace that is the *heirmos*, not the string that connects the beads.[6] The *heirmos* is a set of strung-together beads, just as the chain is a set of linked-together loops. They share the common feature of being interconnections of disparate items. This, I shall argue, is the operative feature in the Stoic metaphor; hence nothing important is lost in construing the *heirmos* as a chain.

[3] The etymology, also invoked in Arius Didymus in Eus. *Praep. Evang.* 15. 5 (*SVF* 2. 528), is of course false: εἱμαρμένη comes from the perfect passive participle of the verb μείρομαι (to apportion, to allot), while εἱρμός and the cognate verb εἴρω derive from the unrelated Indo-European root ϝερ, root also of the Latin *series*, as well as the Homeric Greek σειρή (chain). Chrysippus' invocation of the etymology shows that he too accepts the characterization of fate as an εἱρμός, even if, as Bobzien claims, he does not accept it as proper definition (Bobzien 1998: 50).

[4] Alex. *Fat.* 193. 5–8, 195. 13–16; Gellius 7. 2. 1–2 (quoted and discussed by Hankinson 1996: 192, 201–3); Eustathius also uses the term ἄλυσις to characterize the Stoic εἱρμός in a passage highly reminiscent of the passages in Alexander just cited (*Commentaria ad Homeri Iliadem* 2. 514. 25; cf. 515. 5 (van der Valk).

[5] Hankinson 1996: 192–3, 201–3.

[6] The continuity that Hankinson takes to be invoked by the metaphor of the *heirmos* is admittedly prominent in another Stoic metaphor, that of the rope. As the Stoic speaker in Cicero's *On Divination* explains, 'nothing that is going to be happens spontaneously (*subito*); rather, the passage of time is like the uncoiling of a rope (*quasi rudentis explicatio*), bringing about nothing new and unfolding nothing original' (Cic. *Div.* 1. 127 = LS 55O; tr. Long and Sedley; quoted and discussed by Hankinson 1996: 204). However, the rope is not invoked as an explanation of the *heirmos*; rather, it is presented as a metaphor for the passage of time from the past through the present and to the future. Now, *we* might suppose that such a sequence of events is a causal chain *par excellence*; however, the issue before us is not how we, but how the Stoics, conceive of a causal chain.

The Stoic chain of causes is, at the very least, a system of interconnected causes. Just what sort of interconnection the Stoics have in mind is the question this chapter addresses. I shall argue that a causal chain of the modern variety is not at all what the Stoics have in mind as an *heirmos* of causes, and that a better model for understanding the relation between causes in the Stoic chain is provided by the Stoic doctrine of cosmic sympathy, which posits a complex set of relations of mutual causal influence between the various bodies in the cosmos.

The metaphor of the causal chain is so central to our understanding of causality today that we tend to lose sight of the fact that it is a metaphor. As we understand it, a causal chain is a sequence of events, each of which is cause to its successor and effect of its predecessor—as when striking a match leads to a fire which burns down the house. This interpretation is not, however, licensed by the metaphor of the chain itself, for the links in a literal chain are no more related by temporal succession than the beads in a literal necklace are. We interpret the contemporaneous and symmetrical relation of connection and contiguity between the links in a literal chain as a temporal relation of succession and asymmetrical causal dependence between events. The naturalness of this interpretation is due not to the metaphor itself, but to our background assumptions about causality: in particular, to the view that causes are events and that causation is an asymmetrical relation between successive events.

To determine how the Stoics interpreted their own causal chain we must accordingly identify their background assumptions about causality, and their theoretical motivation for invoking the metaphor of the chain. The first of these tasks is the subject of the next section, where we will see that causes and effects, as the Stoics conceive of them, do not stand in the iterated relation of temporal succession characteristic of the modern conception of a causal chain. The second task will be the burden of the rest of the chapter, which argues that the relation between causes in the Stoic chain is that of mutual influence, and that the Stoic conception of fate as a chain of causes has its theoretical basis in their famous doctrine of 'cosmic sympathy'.

STOIC CAUSES

The fundamental causal relation recognized by the Stoics is that between the principles *logos* and matter. *Logos*, which they identify with god, pervades every body in the universe and quite literally holds them together:

> [The Stoics] think there are two ultimate principles (*ἀρχαί*) of the universe (*τῶν ὅλων*), that which acts (*τὸ ποιοῦν*) and that which is acted upon (*τὸ πάσχον*). That which is acted upon is unqualified substance, that is matter; that which acts is the reason (*λόγος*) in it, that is, god. For this, since it is everlasting, constructs every single thing throughout all matter. (DL 7. 134 = LS 44B; tr. Long and Sedley; cf. Sextus, *AM* 9. 75 = LS 44C)

Thus any body can be analysed into its passive matter and the active *logos* that holds it together. This latter principle is what the Stoics call a cause:

> [The Stoics] say that there are two things in nature from which everything is made—cause and matter. Matter lies passive, receptive of anything, but idle if nothing moves it. Cause, on the other hand, that is reason (*ratio*; sc. = λόγος), forms matter in whatever way it wishes, and produces from it all kinds of products. Thus for anything, there is that from which it is made, matter, and that by which it is made, cause. (Seneca, *Epistles* 65. 2 = LS 55E)

And indeed only such an active principle (*id quod facit*) is a cause (Seneca, *Ep.* 65. 4).

As we shall see in more detail later on, the Stoics maintain that the divine *logos* permeates the cosmos as a corporeal 'breath' (*pneuma*) (Stob. *Ecl.* 1. 79. 1–2 = LS 55M) which manifests itself to different degrees in different kinds of bodies. While in its simplest manifestation this corporeal *logos* is the 'tenor' (*hexis*) that holds bodies together, its effects are not limited to mere cohesion. The *logos* in living things is the nature (*phusis*) responsible for their growth and development, and in animals it is the soul (*psuchê*) that causes activities such as perception and locomotion (Galen, *Intr.* 14. 726. 7–11 = LS 47N; Philo, *Quod Deus Sit Immutabilis* 35–6 = LS 47Q; *Leg. Alleg.* 2. 22–3 = LS 47P; Sextus, *M*. 9. 81). Causes of this sort are σπερματικοί or 'seminal' *logoi*—so called because their effects typically unfold in an orderly sequence of events, as in the case of the unfolding morphogenesis of a plant from seed to maturity (Aetius 1. 7. 33 = LS 46A).[7] This sequence of events, however, is not one of cause and effect, on the Stoic paradigm. Rather, the entire sequence of events is the effect, while the cause is the nature or soul that persists through the sequence.[8] A cause, so conceived, is not succeeded by its effects, but exists simultaneously with them.

The Stoics extend this model of causation to cases where one unified body acts on another:

> The Stoics say that every cause is a body which becomes the cause to a body of something incorporeal. For instance, the scalpel, a body, becomes the cause to the flesh, a body, of the incorporeal predicate 'being cut'. And again the fire, a body, becomes the cause to the wood, a body, of the incorporeal predicate, 'being burnt'. (Sextus, *M*. 9. 211 = LS 55B; tr. Long and Sedley)

In contrast with the original model, where the active and passive principles are aspects of a single unified body, the agent and patient in these changes are

[7] On the σπερματικοὶ λόγοι and the divine principle in matter, see also Gourinat (pp. 00–00 above).

[8] Hankinson rightly emphasizes the fact that, on the Stoic view, these unfolding sequences are unified and continuous processes (1996: 192–4). He takes the metaphor of the εἱρμός to capture this continuity, while that of the chain, he claims, emphasizes the discrete identity of the successive events. But this would seem to imply that the successive events in the process are the causes linked in the *heirmos*—which Hankinson himself rejects as contrary to Stoic doctrine (p. 200).

different unified bodies (for example, the scalpel and the knife), as a result of which, the cause need not exist simultaneously with its effect. The scalpel, for example, exists even before it cuts the flesh and it could continue to exist without ever making the cut. However, as in the case of the divine *logos* and the seminal *logoi*, the cause is not succeeded by the effect it produces. The scalpel does not pass out of existence upon cutting the flesh.

An objector keen to show that Stoics causes are succeeded by their effects might object that the scalpel's activity of cutting the flesh is succeeded by the existence of the wound. This activity, however, is not what the Stoics identify as the cause. One might suppose that, strictly speaking, it must be, given the Stoic view that all causes are manifestations of the active principle, *logos*.[9] But this is a mistake, for the kind of 'activity' essential to the active principle is contrasted with passivity, not with latency or potentiality.[10] The Stoic cause is distinctively 'active' in that it is the agent (*τὸ ποιοῦν*), as opposed to the patient (*τὸ πάσχον*), of change. Even if this cause is in *activity* (*ἐνέργεια*) while bringing about that change, so too is the body on which it exercises its agency (Clement, *Stromata* 8. 9. 26. 3 = LS 55C), and these two activities are simultaneous. We do not have here an example of a Stoic cause being succeeded by its effect.

Now, the Stoics do employ the notion of an 'antecedent cause' and explicitly invoke such causes in articulating the consequences of their thesis of fate:

> If all things come to be by fate, it does indeed follow that everything comes about by antecedent causes (*causis antepositis*) . . . (Cic. *Fat.* 41; cf. 9, 21, 23, 31; cf. Alex. *Fat.* 192. 8–11 = LS 55N2)

One might expect that these causes, at any rate, are succeeded by their effects. This expectation, however, is not borne out by the Stoics' own application of the notion. Chrysippus, for example, famously claims that the person who pushes a cylinder and thereby sets it in motion is the antecedent cause of its rolling (Cic

[9] Thus Salles 2005: 4–5. Bobzien 1998: 51 also argues, on different grounds, that the cause exists only at the time when the body is exercising its influence. Causes are not simply bodies, she claims, but 'bodies *while* and insofar as they actively produce . . . an effect in a body' (ibid.). While Bobzien is right to insist that Stoic causes are 'relatives' (e.g. the knife is a cause only in relation to the flesh and the effect it produces—cf. Sextus *M*. 9. 207, discussed by Bobzien 1998: 19), it does not follow from this that they exist only as long as their causal activity does. Father too is a relative notion, but fathers do not (typically) expire upon completion of their fathering activities. That X is a cause of Y even when it is not engaged in bringing about Y is an important presupposition of the Stoic view, if Frede is right that the Stoic doctrine of causes reflects their interest in ascribing responsibility (Frede 1980: 225).

[10] Frede 1980: 218–19 conflates the active nature ascribed to Stoic causes (that they *ποιοῦσιν* as opposed to *πάσχουσιν*) with their being in activity (*ἐνέργεια*). But the latter surely applies to the passive affection of bodies as well as to the agency of the bodies that affect them. Indeed, *ἐνέργεια* is explicitly classified as an incorporeal at Clement, *Stromata* 8. 9. 26. 3 (LS 55C), which would disqualify it from being a Stoic cause. To be sure, the Stoics do insist that a cause engages in activity (*ἐνεργεῖν*)—thus Frede cites Sextus, *PH* 3. 14 and Clement, *Strom.* 1. 17. 82. 3)—but I take this to be an additional requirement to that of agency (*ποιεῖν*). The distinctively 'active nature' of a Stoic cause consists in its being the agent, as opposed to the patient, of change.

FN:11 *Fat.* 43).[11] This is to contrast the pusher's causal role with that of the cylinder's own 'force and nature' (*suapte vi et natura*)—presumably the *logos* internal to and constitutive of it. But while the push is antecedent to the rolling (or at any
FN:12 rate to most of the rolling[12]), it is the pusher who is identified as the cause, and he continues to exist throughout the cylinder's rolling. (It is presumably because the push is antecedent to (most of) the rolling that the pusher is classified as
FN:13 an antecedent cause.[13]) We will return to the topic of antecedent causes and their role in the chain of causes; the salient point for our present purposes is that, for the Stoics, not even antecedent causes need be succeeded by their effects.

On the modern conception of a causal chain, by contrast, causes *are* succeeded by their effects. This is one serious presumption against supposing that the Stoic conception of the chain of causes is the same as ours. Another objection to such an interpretation arises from the fact that in a causal chain of the modern variety the effects of causes function, in turn, as causes of further effects. This is at odds with two fundamental tenets of Stoic causal doctrine: first, that causes are bodies (Aetius, *Plac.* 1. 11. 5 = *SVF* 2. 340 = LS 55G) and, second, that the effects of causes are not bodies; in the canonical causal locution, 'Body A is the cause to Body B of incorporeal C' (Sextus *M*9.211). From these two theses it follows that the effects of Stoic causes cannot themselves function as causes of further
FN:14 effects.[14] The modern notion of the causal chain, by contrast, presupposes that each link in the sequence is both cause of the next item and effect of the previous one. This reflects the modern understanding of causes as events that give rise to other events. On this conception of causality, the fundamental causal relation (famously problematized by Hume) is that of one event producing another. The Stoics, by contrast, conceive of causes as bodies that act on other bodies. The fundamental unanalysed causal relation, on this picture, is that between agent and patient: one body acting on another. An event may be the product of this interaction, but not being a body itself, it cannot act on any body to produce a
FN:15 further event.[15]

[11] The objection to which he is responding in making this example (Cic. *Fat.* 40) concerns antecedent causes, so it is safe to conclude that the example Chrysippus offers is of antecedent causation. Aulus Gellius' report of the example concurs in identifying the person who pushes (rather than the push) as the antecedent cause (*Noctes Atticae* 7. 2. 11).

[12] Presumably, both the hand and the cylinder move together during the push and then the latter continues on its way even after the former has stopped moving.

[13] Here I follow Bobzien (1998: 20–1).

[14] A point often noted: Long and Sedley 1987: i. 343; Sandbach 1989: 81–2; Hankinson 1996: 194; Bobzien 1998: 18, 50.

[15] Thus Frede writes, 'it is only in a very metaphorical sense that an event could be said to produce an effect' (1980: 218). Such considerations are presumably what the Stoics have in mind when they explain the incorporeal status of the effect by invoking its status as an activity (ἐνέργεια) of a body (Clement, *Strom.* 8. 9. 26. 3 = LS 55C, discussed above in n. 10). Interestingly, they do not thereby imply that the motion induced in a body is an incorporeal, if Galen is right that, for the Stoics, the motions of bodies are themselves bodies (*Qual. Inc.* 6 = *SVF* 2. 385).

This is not to say that, on the Stoic view, the relation between events and their successors (such as the activity of the scalpel and the resulting incision) is mysterious or inexplicable. We share with the Stoics the core idea that the scalpel cutting the flesh is an instance of causality. We differ from them, however, in the philosophical articulation we give to this idea—in particular, in how we use the vocabulary of cause and effect. While *we* might articulate the causal relation via 'the activity of the scalpel is the cause of the incision', the Stoics do so via 'the scalpel is the cause to the flesh of being cut'. While it is possible to translate the Stoic causal *locutions* into our own causal idiom *salva veritate*, we risk serious error if we interpret their causal *notions* (such as that of the *heirmos*) in the light of our own conception of causality. Authentically Stoic causes and effects cannot be related in the sort of iterated transitive relation envisaged by the modern interpretation. Whatever is a cause cannot be an effect, and whatever is an effect cannot be a cause.

Sextus is not our only source for this crucial piece of Stoic causal doctrine. Clement of Alexandria articulates explicitly what is implicit in the view that Sextus reports: a cause cannot have a cause:

> Causes are not causes *of* each other, but they are causes *to* each other. For the pre-existing condition of the spleen is the cause, not of the fever, but of the fever's coming about; and the pre-existing fever is the cause, not of the spleen, but of its condition's being intensified. In the same way . . . the stones in the vault are causes *to* each other of the predicate 'remaining', but they are not causes *of* each other. And the teacher and the pupil are causes *to* each other of the predicate 'making progress'.
>
> Causes are said to be causes *to each other* sometimes of the same [effect], as the merchant and retailer are the causes to each other of making a profit; but sometimes of different [effects], as in the case of the knife and the flesh; for the knife is the cause to the flesh of being cut, while the flesh is the cause to the knife of cutting. (Clement, *Strom*. 8. 9. 30. 1–30 = LS 55D; tr. Long and Sedley)

Clement's first example here might appear to license a modern interpretation of the Stoic causal chain. Even though Stoic causal notions do not permit us to say that the splenetic condition is the cause of the fever (both of these being bodies, in their view) they do permit us to say that the former is the cause of the latter's coming to be. This indicates that while the Stoics would object to causal locutions of the form

(II) Body A is the cause *of* body B,

they do not object to the paraphrase

(III) Body A is the cause of the coming-to-be of body B.

Thus even if, strictly speaking, Stoic causes, being bodies, do not have causes, they still can have causes for their suitably incorporeal coming-into-being. These observations might lead one to suppose that corresponding to every incorporeal effect is the coming-into-being of something suitably corporeal to function as a cause, and thus that causal notions of bona fide Stoic provenance can consistently be used to

describe an iterated series of causes and effects: Body 1 (by acting on another body) causes the coming to be of Body 2, which (by acting on another body) causes the coming to be of Body 3, and so on.[16] Let us concede this for the sake of argument. At most it answers our second objection to construing the Stoic causal chain as an iterated sequence of cause and effect. It fails however, to provide any positive reason to suppose that this is what the Stoics have in mind as the *heirmos* of causes.

Indeed, if we look to our passage in Clement for guidance about how to interpret the Stoic causal chain,[17] rather than plunder it for materials out of which to construct an analogue of a modern causal chain, we find no evidence of a Stoic concern with iterated sequences of causes producing other causes. Instead we find a preoccupation with *causes acting on each other*—the disease that gives rise to a fever, which in turn affects the course of the disease; the stones in the arch that hold each other in place; the merchant and the retailer who execute a mutually profitable transaction. Such relations of mutual influence are in fact naturally captured by the metaphor of the εἱρμός, which we moderns are so quick to interpret as an asymmetrical temporal relation of succession. In a non-metaphorical necklace, each of the beads has an effect, more or less directly, on the others. Like the stones in an arch, the beads 'are causes *to* each other of the predicate ''remaining'' '. Might a system of reciprocal causal influence be what the Stoics have in mind as the εἱρμός of causes that they identify with fate?[18] Attention to the cosmological dimensions of the thesis of fate will give us good reason to suppose that they do.

STOIC COSMOLOGY

A fruitful route to discovering how the Stoics understood the claim that fate is an '*heirmos* of causes' is to pursue one of their alternative characterizations of fate, which identifies it with Zeus or god:[19] 'God, intelligence, fate, and Zeus are all one, and many other names are applied to him' (Diogenes Laertius 7.135; tr. LS 46B). One of these other names is *logos*:

> They say that the very fate, nature and rationale (λόγος) in accordance with which the all is governed is god. It is present in all things which exist and happen, and in this way

[16] Long and Sedley 1987: i. 343 sketch a version of such a proposal.

[17] While Clement is not writing as a Stoic, he is evidently relying on Stoic notions. Indeed, his clarification in this passage of the sort of relations that obtain between causes addresses a question that naturally arises for the interpretation of the Stoic *heirmos*: in what relation do its constituent causes stand to one another?

[18] Bobzien identifies the 'interconnection' (ἐπιπλοκή) of causes with such a nexus (1998: 51, 95, 169, 219, 269), but distinguishes this from the εἱρμός, which she interprets as a linear sequence of causation (269). In response, I would point out that the metaphor of the *heirmos* does not demand a temporal interpretation (any more than the metaphor of interweaving does). Once we recognize this, it is easy to appreciate the *heirmos* as a metaphor for mutual interconnection.

[19] On fate as Zeus or god, see also Cicero, *ND* 1. 39 = LS 54B; Plut. *De Stoic. Rep.* 1056c = LS 55R.

uses the proper nature of all existing things for the government of the all. (Alex. *Fat.* 192. 25–8 = LS 55N4; tr. Long and Sedley)

Logos, we have seen, is the active causal principle that holds each thing together and is the cause of its activities. In an individual body it is the particular tenor (*hexis*), nature (*physis*), or soul (*psuchê*) that holds its material together and is responsible for its activities. According to Stoic cosmology, all such instances of *logos* are portions of a *pneuma* (breath) that pervades the universe (Aetius 1. 11. 5 = LS 55G).[20] Zeus, the *logos* of the world, is accordingly identified with this *pneuma*:[21]

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The Stoics made god out to be intelligent, a designing fire which methodically proceeds towards creation of the world, and encompasses all the seminal principles (σπερματικοὶ λόγοι) according to which everything comes about according to fate, and a breath (πνεῦμα) pervading the whole world, which takes on different names owing to the alterations of the matter through which it passes. (Aetius 1. 7. 33 = LS 46A; tr. Long and Sedley)

The identification of Zeus with the cosmic *pneuma* means not simply that the divine *logos* is distributed throughout the cosmos into the individual tenors, natures, and souls of its constituents. The Stoics insist that the cosmos itself is a unified (ἡνωμένον) body.[22] And it is the *pneuma*, on a cosmic scale, that unifies it:

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[Chrysippus] first assumes that the whole of substance is unified (ἡνῶσθαι) by a breath (πνεῦμα) which pervades it all, and by which the universe is sustained (συνέχεται) and stabilized (συμμένει) and made sympathetic with itself (συμπαθὲς . . . αὑτῷ). (Alex. *De Mixtione* 216. 14–16 = LS 48C; tr. Long and Sedley, slightly altered; cf. 223. 26–7, 227. 8–9 = *SVF* 2. 475)

Just as each individual body, plant, or animal in the cosmos has unity (ἑνότης) in virtue of its particular tenor, nature, or soul, the cosmos as a whole is unified (ἡνῶσθαι) by its all-pervading *pneuma*. In fact, the Stoics argue, the cosmic *pneuma* is a rational soul; the universe is a living rational animal with the divine *logos* as its governing principle.[23]

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Since the Stoics identify fate, the chain of causes, with Zeus, and Zeus with the *pneuma* that unifies the cosmos, we might suppose that they identify fate with this *pneuma*. In fact, Chrysippus is reported to have written, in his work 'On the

[20] On the nature of the *pneuma*—about which there is some ambiguity in our sources—see Hahm 1985 as well as Cooper (pp. 000–00 below).

[21] See also Origen, *Cels.* 6. 71 (Borret ed. 358. 17–19), quoted by Bobzien 1998: 52 n. 95.

[22] Sextus, *M.* 9. 79–80; Alex. *Fat.* 191. 30–1, 192. 11–12 (LS 55N1, 2); DL 7. 140, 143; cf. also Proclus, *In Tim* (*SVF* 2. 533); Epictetus, *Diss.* 1. 14. 1; Alex. *Mixt.* 227. 8–9.

[23] Sextus, *M.*9.81–5 (*SVF* 2. 1013); cf. also Cic. *ND* 1. 37, 39; DL 7. 139, 142–3. Some of these texts refer to the cosmic *pneuma* not as soul but as 'nature' (*phusis*): Cleomedes, *Circul. Doctr.* 1. 1. 11 (Todd) = *SVF* 2. 546; [Plutarch], *De Fato* 11. 574d (*SVF* 2. 912). See also Alex. *Fat.* 192. 25–6; Cic. *ND* 2. 33 and *passim*. It seems particularly characteristic of Cicero's discussions of Stoic fate to identify the unifying force of the cosmos as *natura*.

Cosmos', that 'fate is a pneumatic power (δύναμιν πνευματικήν) governing the order of the whole' (Stob. 1. 79. 1 = *SVF* 2. 913) and Plotinus reports that those who posit 'a cause which penetrates all things, not only moving but also making each thing' call this principle 'fate' (εἱμαρμένη) (*Ennead* 3. 1. 2 = *SVF* 2. 946).[24] That the Stoics take the cosmos to be unified by fate is independently attested by Alexander of Aphrodisias, whose presentation of the Stoic thesis of fate makes it explicit that if the thesis is false 'the cosmos would be torn asunder and no longer be a unity, governed eternally by a single order and government' (Alex. *Fat*. 192. 11–12 = LS 55N2). The unifying function of fate is also reflected in the Stoics' frequent characterization of fate as an interweaving or interconnection:

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> Everything comes to be from a naturally linked binding together and interweaving (*omnia naturale conligatione conserte contexteque fiunt*) (Cic. *Fat*. 31).
>
> [Chrysippus] says that what is fated is no different from what is necessitated . . . according to a conjoined interweaving (ἐπιπλοκή) of things. (Aetius, *Plac*. 1. 27. 2 = *SVF* 2. 916)

Such a characterization is naturally understood as an explanation of the metaphor of fate as an *heirmos*.[25] Plotinus evidently assumes so when he describes the (presumably Stoic) 'principle (ἀρχήν) that interweaves (ἐπιπλέκουσαν) and as it were strings together (συνείρουσαν) all things with each other' (*Enn*. 3. 1. 7 = *SVF* 2. 986). Aetius confirms that the items thus 'interwoven' are the individual causes causes and *logoi* encompassed by Zeus:

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> The primary fire [sc. Zeus] is as it were the seed which possesses the principles (λόγους) and causes (αἰτίας) of what has come to be, is coming to be, or will come to be. The interweaving (ἐπιπλοκή) and following of these is fate . . . (Aristocles in Eus. *Praep. Evang*. 15. 14. 2 = LS 46G; tr. Long and Sedley; cf. Plotinus, *Ennead* 3. 1. 4 = *SVF* 934; 3. 1. 2 = *SVF* 2. 946)

There is thus considerable overlap between the doctrine that fate is a chain of causes, and the doctrine that the divine *pneuma* connects all the causes in the cosmos into a unity. This gives us reason to expect that the connection between causes involved in the Stoic chain will be that by which *pneuma* unifies the various elements in the cosmos. So let us return to the *pneuma*, and see how it unifies the disparate causes that it encompasses.

SYMPATHY

Many texts indicate that the disparate bodies in the cosmos are unified in virtue of a relation that the Stoics dub 'sympathy' (συμπάθεια). While the doctrine

[24] On the relation between fate and *pneuma*, see Bobzien 1998: 45–7.

[25] Bobzien prefers to distinguish the metaphor of interweaving from that of the *heirmos*, attributing the former to Chrysippus and the latter to later Stoics (1998: 50). But once we abandon the assumption that the *heirmos* is a transitive temporal sequence (as Bobzien explicates it: pp. 51, 95; cf. 269), it is easy to see how it too is a kind of interconnection.

of cosmic sympathy has its most famous proponent in Posidonius, it goes back at least as far as Chrysippus. For example, in a passage we have already seen, Alexander of Aphrodisias attributes to Chrysippus the view that the divine *pneuma* unifying the cosmos makes it 'sympathetic' with itself (*συμπαθὲς . . . αὑτῷ*) (Alex. *De Mixtione* 216. 16 = LS 48C). A few pages later, when enumerating the Stoic doctrines that he says depend ultimately on their account of mixture, Alexander refers to their view of 'the unity (*ἕνωσις*) and mutual sympathy of the whole with itself (*συμπάθεια πρὸς αὑτό*)' (*Mixt.* 227. 8–9 = *SVF* 2. 475).

Other reports indicate that whether the cosmos is governed by a single nature is closely connected, by the Stoics, to the question of whether it is has internal sympathies:

> The universe is governed (*διοικεῖσθαι*) by nature (*φύσει*), agreeing with itself and having sympathy with itself (*σύμπνουν καὶ συμπαθῆ αὐτὸν αὑτῷ ὄντα*). (Ps.-Plutarch, *De Fato* 11. 574d = *SVF* 2. 912)
>
> If the substance of the whole were not naturally suffused throughout the whole, neither would the universe be able to be held together (*συνέχεσθαι*) and governed (*διοικεῖσθαι*) by nature (*ὑπὸφύσεως*), nor would there be any sympathy (*συμπάθεια*) among its parts. (Cleomedes, *Caelestia* 1. 1. 69–71 (Todd) = *SVF* 2. 546)

Shortly before this passage, Cleomedes points to the 'sympathy' between its parts as one of the signs that the universe is governed by a single nature (*Caelestia* 1. 1. 11–13 (Todd) = *SVF* 2. 534).

Indeed, in reports of Stoic doctrine, the question of the unity of the cosmos and that of its internal sympathy regularly come in the same breath, as in Epictetus, *Diss.* 1. 14. 1–2, where the question, 'Is the whole a unity?' (*ἡνῶσθαι τὰ πάντα*) is immediately followed by 'Are terrestrial things in sympathy with the heavens?' The Stoic-leaning Philo of Alexandria cites approvingly those who unify the universe 'by showing the sympathy and community of its parts with each other'.[26] Cicero too points out that the proponents of cosmic unity appeal to natural sympathy in support of their claim (Cic. *De Div.* 2. 33–4). Marcus Aurelius, when discussing the affinity rational creatures should have for each other, indicates that unity (*ἕνοσις*) is to be achieved through sympathy (*Meditations* 9. 9. 2).

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Sextus Empiricus lists several examples of such sympathies in his report of Stoic arguments for the unity of the cosmos:

> [78] Some bodies are unified (*ἡνωμένα*), others are formed of things joined together (*ἐκ συναπτομένων*), others of separate things (*ἐκ διεστώτων*). Unified bodies are those controlled by a single tenor (*ἕξις*), like plants and animals. Bodies made of parts joined together . . . are for example cables, turrets, and ships. Those made of separate things . . . are like armies and flocks and choruses.

[26] Philo, *De Migr. Abr.* 179: *τῇ τῶν μερῶν πρὸς ἄλληλα κοινωνίᾳ καὶ συμπαθείᾳ*/. Marcus Aurelius too mentions sympathy as a reason to attribute an organizing principle to the cosmos (*Meditations* 4. 27). Both passages are discussed by Laurand 2005: 522–3.

[79] Since the universe is a body, it must be either unified, or made from conjoined or separate parts. We can prove that it is not made of conjoined or separate parts from its various sympathies (ἐκ τῶν περὶ αὐτὸν συμπαθειῶν). For **according to the waxings and wanings of the moon, many animals on land and sea decline and grow, and the tide ebbs and flows in certain parts of the sea. In the same way, in accordance with certain risings and settings of the stars all sorts of changes take place in the surrounding atmosphere** . . . These things make it clear that the universe is a unified body.

[80] For in bodies formed of conjoined or separate things, the parts do not 'sympathize' with each other (οὐ συμπάσχει τὰ μέρη ἀλλήλοις). For example, if all the soldiers in an army perish, the sole survivor does not suffer anything passed on to him from the others (κατὰ διάδοσιν). But in the case of unified things there is a kind of sympathy (συμπάθειά τις); for example, when the finger is cut, the whole body shares its condition. So the universe is a unified body. (Sextus Empiricus, *M*. 9. 78–9 = *SVF* 2. 1013; tr. adapted from Bury)

The sympathies here cited in 9. 79 involve, at the very least, regular correlations between celestial and terrestrial phenomena. Other reports make it clear that the Stoics take these correlations to be causal. Seneca, writing as a Stoic, says so explicitly: the course of the tides is due to the influence of the moon (*Prov*. 1. 2. 4). Similarly, Cicero confirms that, for the Stoics, the tides are 'governed (*gubernantur*) by the motion of the moon' (Cic. *Div*. 2. 34; quoted in full below). And the Stoic spokesman Balbus in Cicero's *De Natura Deorum* 2. 50 indicates that the plant cycles are due to celestial cycles: 'Many things flow and issue from [the moon], which nourish animals and cause them to grow, and cause plants to flourish, and attain maturity'.[27]

FN:27

Although the most famous putative examples of cosmic sympathy are Posidonius' invocations of celestial influence over the terrestrial (Augustine, *Civ. Dei* 5. 2), the scope of the causal sympathies invoked by the Stoics is much broader. For example, Cicero's criticisms of the Stoic belief in divination (whose efficacy they claimed rested on underlying causal sympathies: *Div*. 2. 124, 142) shows that some of the sympathies that they invoke are entirely within the sublunary realm. When discussing divination from entrails (in which, for example, fissures in the liver of a sacrificial animal might be taken to predict the discovery of buried treasure), Cicero writes:

What connection (*cognationem*) could these [e.g. fissures in the liver] have with the nature of things? Even if nature is joined together (*iuncta*) and continuous (*continens*; sc. συνεχομένη) by a single harmony (*uno consensu*), which is the view of the physicists, especially those who claim that everything is a unity (*qui omne quod esset unum esse*

[27] Here I disagree with Laurand, who claims that the bodies involved in cosmic sympathy do not act on each other, the divine *pneuma* being the only cause of the correlations (pp. 525–30). The divine *pneuma*, however, does not exert causal efficacy except through the causality of the constituents of the cosmos. The only exception would be the period of the conflagration when these bodies have been consumed (Origen, *Cels*. 4. 14 = LS 46H), but συμπάθεια is not a feature of this part of the cosmic cycle.

dixerunt), what possible connection (*coniunctum*) could the cosmos have to the discovery of treasure? If an increase in my fortune is indicated by the entrails, and nature brings this about, then the entrails must be connected to the universe (*coniuncta mundo*), and the nature of things must be in control of my fortune. Are not the physicists ashamed to claim such things?

Let us suppose there is some connection (*contagio*) between things in nature, which I am prepared to concede—for the Stoics collect many examples of these:

i. the livers of mice are supposed to get larger in the winter;
ii. the dry pennyroyal blooms and its seed pods burst on the shortest day;
iii. apple seeds enclosed within the fruit reverse their orientation [sc. on that day];
iv. when some strings of a lyre are struck, others resonate;
v. oysters and all shellfish increase and decrease in size with the waxing and waning of the moon;
vi. trees are opportunely felled when the moon is waxing since then the sap is dry.

[34] Why should I add the examples of

vii. the tides of springs and seas, whose ebb and flow are governed by the motion of the moon?

Innumerable examples can be given to illustrate the natural connection (*cognatio naturalis*) between distinct things. Nonetheless, these have no bearing on my present contention: if there is a fissure in some liver, does this indicate wealth? By what natural connection (*coniunctione naturae*) and as it were harmony and mutual agreement (*concentu atque consensu*), which the Greeks call *συμπάθεια*, can there be coordination (*convenire*) between the fissure in a liver and my small fortune, or between my small profit and heaven, the earth, and the nature of things? (Cicero, *Div.* 2. 33–4 = *SVF* 2. 1211)

While most of the examples of sympathies conceded here by Cicero are instances of celestial influence over the terrestrial, the fourth example (resonance of strings within a lyre) concerns causal influence between terrestrial entities, as does the contested example of divination from entrails—the alleged sympathy between the sacrificial entrails and the discovery of treasure. Similarly terrestrial (or at any rate sublunary) is Chrysippus' citation of the atmospheric influence on human bodily and intellectual temperament:

[7] . . . Let us reply to [Chrysippus] about the connection between things itself (*de ipsa rerum contagione*) . . . We can see how great a difference there is in the natures of different regions; some are healthy, others are plague-ridden, in some people are phlegmatic and as it were overflowing with moisture, in others they are dried up and parched; and there are many other things which differ greatly between one place and another. At Athens the air is thin, and for this reason the people of Attica too are thought to be more sharp-witted, while at Thebes it is dense, and for this reason the Thebans are stupid but strong. However, that thin air will not make anyone listen to Zeno or Arcesilaus or Theophrastus; nor will that thick air make anyone seek victory at Nemea rather than at the Isthmus . . . [8] What influence can the nature of the place have over our walking in Pompey's portico rather than in the Campus Martius, with you rather than with someone else, on the Ides rather than on the Kalends? (Cic. *Fat.* 7–8; tr. Sharples)

Further examples of putative terrestrial sympathies include cases where one item influences or causes another—for example, a sexual dream that has an effect on a man's bladder disease (Cic. *Div*. 2. 143), or the relation between a disease and it symptoms (*Div*. 2. 142–3). They also include cases where the phenomena in question are linked by a common cause or other mediating condition: the tree whose blooming signals the right time to plough (Cic. *Div*. 1. 16); the coordination of the tides in the Atlantic and Mediterranean, or in a harbour and its sea;[28] the heron's flight and the coming tempest that it signals (*Div*. 1. 14).

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In addition to celestial-terrestrial sympathies and entirely terrestrial sympathies, some Stoic examples of putative sympathies concern causal influences entirely within the celestial world—for example, the *concentus*[29] of the planets with the sun and moon mentioned by the Stoic spokesman Balbus at *De Natura Deorum* 2. 119. Still others show that the influence of heavens on earth is reciprocated:

FN:29

> The stars are of a fiery nature, and for that reason are nourished by the vapours of the land, sea, and waters, which the sun raises up out of the fields and waters that it warms. When they have been nourished and renewed by these, the stars and the whole aether pour them back down, and then draw them back again from the same source . . . (Cic. *ND* 2. 118)

The heavens produce rain, which moistens the earth, and in turn the vapours rising from the moistened earth nourish the stars.

Our textual evidence thus shows that the 'sympathies' cited by the Stoics encompass a considerable diversity of relations of causal influence, not necessarily direct, holding between a wide range of the elements in the universe. The broad scope of these sympathies should not be surprising, since, as we have seen, the Stoics insist that the sort of unity characteristic of the cosmos is an instance of the complex system of interdependence displayed by the different parts of a living organism (Sextus, *M*. 9. 81–5; cf. DL 7. 139, 142–3). Indeed, Plotinus reports a Stoic view according to which the fate that governs the universe is like the nature governing a plant, whose parts are in mutual interaction (*πρὸς ἄλληλα συμπλοκή, ποίησίν τε καὶ πεῖσιν*) with each other (Plotinus *Enn*. 3. 4. 5–10). In the same vein, the Stoic speaker in Cicero's *De Natura Deorum*, immediately after insisting that the unity of the cosmos approximates that of an organism (2. 82), goes on to give a detailed illustration of the complex system of mutual influence he has in mind:

> If those things that are sustained by roots in the earth live and flourish due to the art of nature, certainly the earth herself is sustained by the same force—she who, when impregnated with seeds gives birth in abundance to all things out of herself and nourishes and causes to grow the roots in her embrace. She herself is nourished in turn by the upper

[28] Priscianus Lydus, *Solutiones ad Chosoem* 6 (p. 69. 19–76. 20 Bywater ed.) = Posidonius Fragment 219 (Edelstein and Kidd).

[29] At *Div*. 2. 34, Cicero explicitly identifies the Latin *concentus* as the rendering of the Greek *συμπάθεια*.

and outer natures, while her exhalations nourish the air, the aether, and all the higher things. Thus if the earth is sustained by nature, the same principle holds for the rest of the universe: for if roots depend on the earth, animals are sustained by breathing in air, and the air itself is implicated in our seeing, hearing, and making sounds, since none of these things can be done without it. And it even moves along with us: whenever we go anywhere or make a movement it seems as if to part and make way for us. (Cic. *ND* 2. 83)

Just as the heavens and the earth influence each other, so do the air and the various constituents of the world. Cicero's source makes a point of invoking a wide range of mutual causal influence. The stars and other 'higher and outer' natures are part of a causal nexus with the earth, the air, and animals and plants; all directly or indirectly affect or are affected by the others. The celestial bodies affect air directly (2. 118) and, via air, they influence animal life, perceptions, and activity (2. 83). The animals and plants in turn affect air directly, and so indirectly affect the celestial bodies and the earth that is nourished by it. In this way the universe approximates the system of mutual influence in a natural organism.

What light does this conception of the universe shed on the doctrine that fate is a *heirmos* of causes? We have seen that, according to the Stoics, this complex system of mutual causal influence, which they dub 'sympathy', makes a unity of the disparate parts of the cosmos. In addition, they maintain that it is through such sympathies that *pneuma* unifies the cosmos, and that fate, like the divine *pneuma*, links together all the causes in the world. Therefore, it seems reasonable to conclude that precisely this system of mutual influence is the 'chain of causes' that the Stoics identify with fate. In fact, there is direct ancient testimony linking fate and causal sympathy. Pseudo-Plutarch tells us that one of the main points in Chrysippus' discussion of fate is the claim that 'the universe is governed (διοικεῖσθαι) by nature (φύσει), agreeing with itself and having *sympathy* with itself (σύμπνουν καὶ συμπαθῆ αὐτὸν αὑτῷ ὄντα)' ([Plutarch], *De Fato* 11. 574d = *SVF* 2. 912). The evidence therefore converges in support of the conclusion that the Stoic chain, or string, of causes is the complex system of mutual causal influence among the bodies in the cosmos.[30]

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ANTECEDENT CAUSES, FATE, AND SYMPATHY

The precise scope of this system of interaction is not evident. Whether, for example, every body in the cosmos is supposed to be directly affected by every other (the maximal possibility) is unclear from our sources. The organic conception of the cosmos, for example, does not require it; within an organism there can be independent subsystems that are only indirectly related, via their

[30] Bobzien notes a connection between the nexus of causes and sympathy (1998: 169, 219) but does not develop the point.

causal relation with other parts. One dimension of the system of sympathy that can, however, be inferred with confidence, is that it extends seamlessly from the past into the present and the future.

Alexander's report of the Stoics makes this clear. After reporting their doctrine that the cosmos is unified by a principle that operates 'in the manner of an orderly chain' (*κατὰ εἱρμόν τινα καὶ τάξιν*: *Fat.* 192. 1), he elaborates:

> [A] The prior things become causes to those that come to be after them (*τοῖς μετὰ ταῦτα γινομένοις*), and in this way all things are bound to each other (*συνδεομένων ἀλλήλοις*). [B] And it never happens that something comes to be in the world that does not have something else that follows it and is bound fast to it as to a cause. [C] Nor is any of the things that come to be later (*τῶν ἐπιγινομένων*) able to be severed (*ἀπολελύσθαι*) from what came before, so as not to follow one of them (*τινι ἐξ αὐτῶν ἀκολουθεῖν*) as if bound fast to it (*ὥσπερ συνδεόμενον*). [D] Rather, for everything that comes to be there is something else that follows it (*ἐπακολουθεῖν*), being bound to it of necessity as to a cause. [E] And everything that comes to be has something prior to which it is bound as to a cause. (Alex. *Fat.* 192. 2–8 = LS 55N; tr. revised from LS)

This passage testifies to a Stoic preoccupation with the fact that the chain of causes is temporally extended. An unwary reader might be tempted, especially by all the invocations of 'following' (*ἀκολουθεῖν*), to suppose that Alexander is here describing a sequence of events each of which is cause of its successor and effect of its predecessor.[31] However, although 'following' (*ἀκολουθία*) evidently is an important feature of the Stoic *εἱρμός* (Alexander, *Mantissa* 185. 1–5; Aristocles in Eusebius 14 = LS 46G; Gellius 7. 2. 3 = LS 55K), it need not indicate temporal succession. In its non-logical uses, *ἀκολουθεῖν* (or, less often, *ἕπεσθαι*)[32] describes the causal influence of one entity on another—as when I follow the nurse into the doctor's office. Plutarch describes Zeno as following (*ἀκολουθεῖν*) the Peripatetics in his account of happiness (*Comm. Not.* 23. 1, 1069–70; *SVF* 1. 183).[33] Indeed, in the common Stoic examples of cosmic sympathy, it is natural to say that the tides follow the moon.

The two causal theses expressed in our passage fit very well with the thesis of cosmic sympathy.[34] First of all, we are told, everything in the cosmos is a cause 'to' some later thing ([A], [B], and [D]). Second, everything has some earlier thing 'to which it is bound as to a cause' ([C], [E]). Alexander here employs the

[31] Indeed, Alexander cites temporally successive events (e.g. night following day) as counterexamples to the Stoic claims just quoted (*Fat.* 194. 27–195. 1). I agree with Hankinson (1996: 194–5) that this is a polemical misconstrual on Alexander's part.

[32] Logical uses: '"It is light" follows "It is day"', but not the other way around (DL 7. 73; *SVF* 2. 215); cf. Sextus, *M*. 8. 276.

[33] Following the laws, or being enslaved to a leader, are also unproblematic examples of 'following' (*ἀκολουθεῖν*), as is the influence of one part of the mind on another (e.g. appetite following reason). Following laws or principles: Arius Didymus in Eus. *Praep. Evang.* 15 (*SVF* 2. 528); Stob. *Ecl.* 2. 7 (*SVF* 3. 613); slave following master: Plotinus, *Enn.* 3. 1. 2 (*SVF* 2. 946); appetite following reason: Plut. *Vir. Mor.* 9. 449c (*SVF* 3. 384).

[34] Hankinson (1996: 195) agrees that the doctrine of causal sympathy is reflected in this passage.

causal dative ('*x* is the cause to *y*'), which in the canonical Stoic causal locution expresses the influence of one body over another. The two theses thus affirm that every body in the cosmos affects and is affected by at least one other body. The successive iterations of this relation of influence yield an extended connection of 'cause to cause'—precisely what the Stoic *heirmos* is supposed to be.

Alexander's report emphasizes that these causal connections occur across time: the causes in each case are in some sense 'prior' to their effects. Such temporal qualifications cannot mean that the influencing body is succeeded by the body it affects, since one body cannot affect another except at a time when they both exist. Presumably, therefore, these are intended as instances of what the Stoics call antecedent causation. As in the case of the rolling cylinder of Cicero, *Fat.* 41, discussed above, the 'antecedent cause' of the rolling is the person who sets the cylinder in motion by giving it a push (and it is presumably the temporal priority of the push to the rolling that underlies the classification of the pusher as 'antecedent cause').

Antecedent causality, so understood, is the influence of one cause on another. In the present example the causes in question are the person (whose soul gives rise to his various activities) and the cylinder (whose own 'force and nature' gives rise to its simple activity: rolling). Neither the cylinder will roll, nor the person push, Chrysippus tells us, without being first affected by an external cause (Cic. *Fat.* 42). The cylinder's actually rolling at a given time requires an interaction between these two distinct causes, one of them acting as a 'cause to' the other. Antecedent causation, therefore, is the mechanism whereby the activities of individual causes are integrated into the fabric of fate. To claim that something has an antecedent cause is to affirm that its cause is part of the causal nexus.[35] FN:35

Here is may be useful to distinguish between explaining an event and saying that it is fated. To say that the cylinder rolls because of its nature (or that the plant grows because of its nature) is simply to state the cause of the rolling (or growing). To say that the rolling (or growing) is fated, by contrast, is to say that the cause cited in the explanation was itself acted on by an antecedent cause which precipitated its causal activity.

Having noted this connection between antecedent causation and the doctrine of causal influence, we should not find it problematic that Chrysippus is reported to have described fate as a system of antecedent causes.[36] This does not imply FN:36 that he thinks some causes are exempt from the influence of fate. To see why not, we need only consider the first of the causal theses insisted on in Alexander's

[35] On the relation between fate and antecedent causes, I agree with Hankinson 1996: 196–9. Where I diverge from him is in concluding that antecedent causation, construed as an external body precipitating the activity of another body, constitutes the connection between causes in the Stoic εἰρμός. Hankinson, by contrast, locates the connection in the continuity of the processes generated by the *spermatikoi logoi.*

[36] Cic. *Fat.* 41; cf. Plut. *De Stoic. Rep.* 1056b–c = LS 55R; cf. Cic. *Top.* 59. For discussion, see Hankinson 1996: 198; Frede 1980: 240; Bobzien 1998: 301–14.

report above, which amounts to the claim that everything is an antecedent cause. (Indeed, the conjunction of the two theses in the passage amounts to the doctrine that everything both is and has an antecedent cause.) To quantify over antecedent causes, therefore, is to quantify over all causes. Even construed as a system of antecedent causation, fate leaves no cause outside its scope.

Let me conclude by sketching how the chain of causes applies in the case of human action. According to the thesis of fate, we have seen, such action arises from a nexus of causes. This is, of course, not to say that it is governed by the moon. On the contrary, the Stoics claim, our actions are governed by our souls. A person's character (a particular tension of her soul) causes her action in the paradigmatic way in which the *logos* of a body is the cause of its activities.[37] But any particular action also has an antecedent cause, the Stoics insist (and in so insisting subsume the action under the thesis of fate). The antecedent cause is an external body that makes an impression on the soul. It may, for example, be an untended valuable that elicits in an observer of a thievish disposition the impulse to steal. The soul, on this picture, is both agent (in causing the action) and patient (in being acted on by the external object). Thus we have an instance of the relation of 'cause to cause' that makes up the fabric of fate. To claim that the action is fated, on this view, is to insist that this cause (the character) does not operate in isolation from and unaffected by other causes. That is, even when we exercise our causality as agents, we are subject to the influence of other causes.

Since it is the influence of external causes that enmesh our actions in the nexus of fate, it is not surprising that ancient critics of Stoic fate allege that it has the unwelcome consequence that we are 'compelled by external causes'.[38] In contrast with modern expressions of incompatibilism, this worry does not focus on causal determination *per se*, but on external influence.[39] The Stoics' critics are not objecting that our actions would be *determined* by external factors (for it is the combination of the external and internal causes that determine actions).[40]

[37] Thus Zeno says that temperate activity (*σωφρονεῖν*) is caused by the virtue of temperance (*σωφροσύνη*) (Stob. *Ecl.* 1. 138. 20 = LS 55A3). Frede, by contrast (1980: 245–6), like Long and Sedley, construes *σωφρονεῖν* as the condition of 'being temperate'; thus he concludes that its relation to the cause, the virtue of temperance, is one of 'conceptual necessity'. Instead, I take *σωφρονεῖν* to refer to the activities that display temperance; on this reading, Zeno is invoking the standard causal role of *logos* (as it is manifested in the soul) producing an activity.

[38] Plut. *De Stoic. Rep*. 23. 1045b; cf. Alex. *Mantissa* 174. 28–30; *Fat*. 185. 18–19. Epicurus expresses a similar worry in the letter to Menoeceus, when he refers to the 'fate of the philosophers' as a 'mistress' (*δεσπότις*) to which we would be 'enslaved' (*δουλεύειν*) (DL 10. 133–4: cf. Plotinus, *Enn*. 3. 1. 2). Here I disagree with Boys-Stone 1996: 81.

[39] It is easy to slip into the assumption that the 'antecedent causes' in question causally determine the effect (thus Frede 1980: 234–5). But as Chrysippus' examples (Cic. *Fat*. 42–3) show, and as Hankinson has noted (1996: 199), the so-called antecedent causes are external bodies that precipitate the activity of the primary cause (as in the case of the person who pushes the cylinder and thus sets into motion).

[40] Boys-Stone 1996: 81, by contrast, takes the objection to be that external causes determine our actions, and thus infers that it is not legitimately raised against the Stoic thesis of fate. But he does so on the assumption that the Stoic chain of causes is a sequence of determining conditions.

FN:41 Nor are they worried about alternative possibilities.[41] Rather, in keeping with the Stoic conception of causality as an interaction between agent and patient, they worry that human agents would be 'patients' relative to the agency of external forces. It is beyond the scope of this chapter to explore the Stoic response to this objection. For our present purposes, it suffices to note that the objection focuses on precisely the aspect of fate that, I have argued, is captured in the metaphor of the *heirmos*. For a cause to be part of the Stoic *heirmos* is for it to be acted on by other causes.

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[41] A point developed at length by Bobzien 1998: 276–90 and discussed in my review (Meyer 2003). Salles, by contrast, argues that the existence of alternative possibilities is at issue in the ancient debate (Salles 2005: 51–68, 78–81).

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