

EPICURUS AND LUCRETIUS ON SAVING AGENCY

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I

IT IS SOMETIMES THOUGHT that the case against psychological determinism just has to be helped by the fact that motion at the most elemental level is not entirely predictable. But such hope seems to fade about as soon as it dawns. For our thoughts and actions could be just as strictly determined by “loose” physical laws as by rigid ones; indeed, physical randomness may only make the case for agency worse. And if we are not responsible agents when our behavior is governed by physical events, then how would the chances for our agency be any better when those events allow some irregularity or randomness?

This is a question raised by modern science. But it is also raised by ancient science, and Epicurus in particular had an answer. At least, that is what I shall argue here. According to Epicurus¹ (our ancient sources tell us), physical events are not entirely predictable and physical laws are not entirely rigid because the elemental particles, or atoms, are prone to “swerve.” That is, atoms will shift from their path of motion by a minimal unit of distance, at an undetermined place and time. Furthermore, Epicurus (we are told) appealed to this fact in order to support his case against psychological determinism. Straight away, then, a version of our question arises: how are the undetermined swerves of atoms supposed to bear on agency and responsibility?

On many traditional interpretations of Epicurus, the relation of the swerve to agency is, in some way or other, a causal one: the atoms in the soul are capable of swerving, and it is somehow through or via these swerves that the soul becomes capable of volition.² But many have complained, and rightly, that such a view has nothing to say when it faces our question. For the question remains how a random physical event could give rise to genuine volition.³ In what way could the swerve of atoms serve as a mechanism to bridge the gap between atomic events and agency?

More recent views hold that for Epicurus the swerve plays a much weaker role in the physical process of volition. For we might say that the swerve does not itself generate volition, but rather, on the one hand, that the swerve allows

¹ As is well known, we have no extant texts from Epicurus himself describing the swerve. However, to avoid unnecessarily cumbersome qualifications, I shall often attribute the swerve directly to Epicurus himself; this practice should be harmless so long as the reader remains aware of it.

² As we shall see (below, 236–238), the available accounts of the relation of the swerve to volition admit of great variety and subtlety; while I am painting in broad strokes here, finer brushwork lies ahead.

³ As Hankinson (1998: 226) puts it, “the Epicureans are left with the major task of showing how a random atomic event can make us free: randomness seems, if anything, even more inimical to freedom than determinism.”

volition some control over the mind's physical processes⁴ or, on the other, is simply one necessary factor among many jointly sufficient factors in the formation and execution of volition.⁵ However, while these views represent an important advance in sophistication, still the notion of "control" required by the former is, as we shall see (237–238), somewhat problematic. We shall also see that the latter view shares a further problem with more traditional views, namely that not even Epicurus' critics seem to have construed the swerve as playing any causal role in the formation or execution of volition.

By contrast, I argue that the swerve is not meant to be a causal or physical factor in volition at all. Rather, its role is dialectical and purely negative. Epicurus and Epicureans have an account of agency and a battery of arguments against psychological determinism, neither of which appeals to the swerve. The swerve enters the picture only to show that Epicurus can be consistent, as a materialist, in setting out to give an account of agency and an argument against psychological determinism; for it is not enough merely to argue against determinism, but one must also show that one's own physics does not itself entail determinism. In particular, the swerve allows Epicurus to avoid what he understood to be the greatest charge of psychological determinism against the atomist, namely that the rigid necessity of atomist physical systems implies that genuine agency is impossible. By introducing a carefully limited source of indeterminacy into his physical system, then, Epicurus can show that he is not liable to this particular charge of psychological determinism.

In saying that the swerve's role in Epicurean psychology is purely negative, I do not mean that it has a "weak" or "negative" function to play in the workings of volition—that is, that it is by swerves that volition controls the mind, or that it is one necessary causal factor among others in the formation and execution of volition. I mean to say that the swerve is not a causal factor or mechanism in volition at all, in either its formation or its execution. It is, instead, dialectical: it allows Epicurus to carve out a piece of dialectical space within which he can coherently assert the reality of agency, even though he argues within an atomist framework.

Much more remains to be said about this view. But there are two things in particular that we should note about it at the outset, which make this purely negative appeal to the swerve an effective line of defense for Epicurus against the charge of psychological determinism. First, although physical determinism is clearly not the only avenue by which one may become committed to psychological determinism, nonetheless Epicurus does believe that it is this avenue that presents a special problem for atomists. Hence by focusing his efforts on this potential source of psychological determinism, Epicurus does not address all potential sources, but then there is no special reason for him to direct his attention

⁴ See Sedley 1983.

⁵ See Sharples 1991–93.

so broadly. For as we shall see, Epicurus (for better or worse) holds that physical determinism is what commits Democritus, in the end, to psychological determinism. In other words, it is rigid physical necessity that Epicurus sees as raising a special problem for the atomist with respect to agency. Thus a purely negative account of the swerve—that is, the view that the swerve merely allows the atomist to avoid physical and hence psychological determinism—would not address all potential sources of psychological determinism, but it would seem to address the source most pressing for the atomist (by Epicurus' lights). We shall return to this below (230–235).

The second factor contributing to this defense of agency is the fact that a negative account such as this would be all the defense Epicurus would need. There are two reasons for this. First, neither Epicurus nor his rivals and critics found agency at all mysterious. Of course, we live in a world in which things like agency are often viewed as mysterious, and philosophers and scientists frequently desire a bottom-up explanation of agency in terms of the properties and behaviors of objects that do not themselves possess agency. To be sure, not every philosopher or scientist desires such an explanation, and it is a matter of considerable controversy whether it is reasonable to demand such an explanation. Nonetheless, it is tempting for us to think that, whatever one's physics, it must be able to demonstrate in physical terms just how such a thing as agency could obtain. And even philosophers who do not demand a bottom-up explanation of volition may still be inclined to think that the swerve must play some causal role in volition, if only out of the rather reasonable desire to understand why the swerve appears in Epicurus' psychology in the first place—why would it be there, if it were not part of the causal chain of volition?⁶ But it is far from clear that ancient philosophers and scientists thought this way, or expected these types of explanations of agency; on the contrary, Epicurus' ancient critics, ever vociferous in their dissatisfaction with Epicurean philosophy, did not criticize him for leaving the physical mechanisms of volition mysterious. Nor is this surprising, given the striking infrequency with which ancients attempted mechanical accounts of agency. This is not to say, of course, that Epicurus appealed to the swerve to avoid a special atomist problem regarding agency, and then retired with nothing more to say on the matter. As we shall see (233–234), he certainly did have more to say about agency. However, what he had to say apparently had nothing to do with the swerve, but with the agent understood on a level at which talk of the swerve seems out of place.

The second reason that this negative use of the swerve would allow Epicurus an adequate defense against psychological determinism is that it would avoid the (alleged) Democritean problem of rigid determinism without introducing a new problem in the form of radical indeterminism. There may be a worry that by introducing the swerve, physical necessity is avoided at the cost of introducing

⁶I thank Brad Inwood for this way of putting this concern.

physical chaos, and the latter is as much a threat to agency as the former. As we shall see, the very randomness of the swerve makes it quite hard to see how it could be a factor in volition that somehow introduces agency where there was none before. But on a purely negative account of the swerve, it is not meant to account for the appearance of agency anyway. And by limiting the scope of atomic swerves to minimal distances, the Epicurean seems to be able to kill two birds with one stone: since the swerve both removes rigid necessity and preserves general regularity, neither rigidity nor chaos can become a threat to agency. Indeed, the swerve by a minimum unit of space is a particularly insightful way of addressing these twin demands.

So the swerve is not part of the account of agency, but simply allows an atomist like Epicurus to deny that his atomism commits him to determinism. He is then free to explore the nature of agency and the swerve need not play any role in this further task. For while Epicurus may well need to speak further on the subject of agency—after all, there are plenty of things whose existence we do not doubt, but still desire to understand further—the important point is that the swerve does not have to be part of the account of agency that furthers our understanding of it.

We already have a quick answer to our question then: the swerve supports the case against psychological determinism by making atomism safe for agency. Providing an account of agency is a further step, and agency is not something to be explained by the swerve. Indeed, for Epicurus the burden of explanation rests on those who would deny agency—agency as such requires no particular argument in its support. The swerve serves simply to keep Epicureanism free of such an uncomfortable position.

In what follows I hope to make this quick answer clearer still.⁷ I shall argue not only that such an interpretation of the swerve in Epicurean psychology is the most sensible one, but also that there is evidence that Epicurus and Lucretius embraced it.

II

We can begin clarifying this negative, dialectical interpretation of the swerve by determining just what purposes, and how many, the swerve is meant to serve within Epicureanism. It is obvious that there is more than one role, as for instance Lucretius speaks of more than one in the second book of *De rerum natura* (2.216–293), and our sources attribute more than one role of the swerve to Epicurus himself. One is what we may call the swerve's "cosmogonical" role:

⁷It should be apparent already, however, that my closest ally will be Hankinson (1998: 227–231). For according to Hankinson, Epicurus' primary target was "fatalism" (i.e., determinism inimical to agency), and the swerve is best treated as a mechanism whereby Epicurus could deny bivalence for future contingent events, and in this way alone is the source of voluntary action. But I shall argue, as Hankinson does not, that there is some (defensible) evidence that Epicurus and Lucretius did understand the psychological role of the swerve in this way, not just that they should have.

it ensures that atoms have sufficient internal principles of motion to account for collisions between them. This role is very difficult, and the subject of much controversy, but fortunately in our present inquiry we shall not need to discuss it further.

As I said, it is obvious that the swerve has at least one other role; but just how many others does it have? By far the prevailing view⁸ is that, in addition to the cosmogonical role, there is just one other role, namely what we may call the swerve's "psychological" role, in which it is (somehow) relevant to the ability of sentient creatures to initiate their own motion. This is, of course, the role that will concern us here. But to be entirely precise, there is in fact a third role for the swerve, which on my view is crucial for understanding the psychological role.

I shall call this third role the "mechanical" role of the swerve, in which the swerve explains why physical events in general are not connected by rigid causal necessity. The swerve explains, that is, why what we may call "Laplacean determinism" is false. We may characterize Laplacean determinism roughly as the thesis that every event x is so causally related to the state of the world P preceding x and the state of the world F following x that, given that x occurs at time t_n , it cannot but be the case that P obtained at t_{n-1} and that F will obtain at t_{n+1} . This is a particularly jarring way of putting a common enough idea (in our time as well as in Epicurus'),⁹ namely that the world is law-governed in such a way that an event cannot but be as it is, given the way things were going prior to it. One role of the swerve is to provide a scientific basis for the denial of this thesis. For if atoms swerve, then the position of an atom at a given time does not allow us even in principle to predict with utter certainty the way things will be immediately following that time or retrodict the way they were immediately prior to that time.

Now the mechanical role is concerned with the refutation of determinism, as is the psychological role, but they are not concerned with the same kind of determinism. For Laplacean determinism entails psychological determinism, since psychological events comprise a proper subset of all events, over which Laplacean determinism ranges. However, the converse inference does not hold, since psychological events could be rigidly determined by all physical events even if the latter were completely random.¹⁰ Therefore, the mechanical role of the swerve would be distinct from its psychological role.

We can describe, then, three roles for the swerve: cosmogonical, mechanical, and psychological. As I shall argue, the mechanical role of the swerve is needed primarily to make the world safe for real agency; in fact, the psychological role of the swerve is really only an extension of the mechanical role. In other words, the mechanical role of the swerve ensures that Epicurus has dialectical space within which to make his further arguments rejecting the very notion of psychological

⁸ It is explicitly stated in, for example, Englert 1987: 49; Annas 1992: 181; Sharples 1996: 16, 42; O'Keefe 1996: *passim*; Sedley 1983: 11.

⁹ Sorabji (1980: 243–247) argues that such determinism was familiar even to Aristotle.

¹⁰ Cf. Annas 1992: 124–125; Sharples 1996: 65–66.

determinism. This is not, of course, to say that because Laplacean determinism is false, psychological determinism is, therefore, false too. For as we have just seen, Laplacean determinism implies psychological determinism, but not vice versa. It is simply to say that if one can refute Laplacean determinism, then to that extent one is not precluded from making refutations of psychological determinism; the former sort of refutation is not a substitute for the latter sort.

Although the rather sketchy nature of Epicurus' extant texts should temper our enthusiasm, there are interesting textual and philosophical reasons to ascribe this mechanical role to Epicurus' swerve, that is, to claim that Epicurus distinguished (what we may call) Laplacean from psychological determinism. It is also plausible to suppose that Epicurus directed the doctrine of the swerve against the former in order to avoid the latter, but employed separate arguments in order actually to refute the latter. If so, then it is reasonable to suppose that Epicurus saw the swerve as providing him room, as a materialist, to assert the reality of agency, rather than as a mechanism for a materialist account of agency; that is, that Epicurus saw that thanks to the swerve he was not precluded from asserting the reality of agency.

There are two chief considerations suggesting that Epicurus himself may well have taken the role of the swerve to be dialectical and negative in this way. First, Epicurus' criticisms of earlier atomists create for him a dialectical context that would require him to deny Laplacean determinism, in order to show that he is not himself subject to those very criticisms. In other words, if the earlier atomists' problem was describing the world in Laplacean terms, then Epicurus must show that he is not committed to such descriptions. In fact, this demand is even greater in light of the vigor with which Epicurus attacked the very idea of psychological determinism: if such a view is simply untenable, then Epicurus would need to show at the very least how he fares better than his predecessors in not being tied to a conception of the world that entails psychological determinism.

To see this, let us look at the philosophical grounds on which Epicurus denied psychological determinism, which clearly presuppose a rejection of Laplacean determinism. For one thing, Epicurus denied that all propositions about the future have truth-values (Cic. *Fat.* 21 = LS 20 E.1). For another, he claimed that the thesis of psychological determinism is self-undermining, since anyone who asserts the thesis to correct an opponent who denies it presupposes by his very act that the opponent can be blamed for his mistaken beliefs (Epicurus *On Nature* Book 25 [34.26–30 Arrighetti] = LS 20 C; cf. *Sent. Vat.* 40).¹¹ Furthermore, Epicurus argued simply that no right-thinking person would believe in fate, but rather would believe that some things happen by necessity, some by chance, and some by our agency; for praise and blame presuppose agency, and it is unthinkable that all things happen by necessity (Epicurus *Ep. Men.* 133–134).

¹¹ For a seminal discussion of these arguments in Epicurus, see Sedley 1983: 16–40. See also Annas 1992: 126–128; Huby 1970.

These arguments attack the very idea of psychological determinism, and they are fine as far as they go. However, they will ultimately be successful only if Epicurus can show that he himself is not precluded from making them and does not also incur these problems: for he must show that his own theory does not commit him to bivalence for all future statements, or to the kind of physical world-view that entails psychological determinism. This means that Epicurus would have to show what aspect of his philosophy there is in virtue of which these arguments will not simply turn on himself once he has made them. Consequently, if Epicurus took these arguments to refute a kind of determinism that conflates Laplacean and psychological determinism, then his arguments are much too quick and probably confused. It is not enough simply to make these arguments, but one must first have room for them within one's own physical theory.

This is especially true for Epicurus. For even if agency is not by itself in need of explanation and defense (as though it were a problematic notion), still it is not obvious that a materialist like Democritus or Epicurus has room to assert the reality of agency. Indeed, Epicurus thought that Democritus had no such room, on account of his brand of atomism.¹² Therefore, Epicurus would have to show in the first place that his account of the mechanics of atomic motion does not imply Laplacean determinism among atomic motions. This is the task of the swerve in its mechanical role. As we have just seen, Epicurus was aware that atomism can present problems for agency; unless Epicurus was confused about his argumentative context, then, he must argue that he, as an atomist, does not face such problems before he can proceed to underscore how terrible the problems are.

Now this does not prove that Epicurus distinguished Laplacean and psychological determinism, appealed to the swerve to avoid the former, and then made his independent arguments against the very idea of the latter. Nor am I sure that a proof as such could be given on either side of the question. Nonetheless, this does suggest an answer to the question, "What role could the swerve play in Epicurean psychology besides being part of the causes or sources of volition?" For if Epicurus was aware of the dialectical context which he himself set up, then whatever else the swerve may do, it must help him to avoid the Laplacean determinism of his atomist predecessors. This, then, is a role that the swerve ought to have played in Epicurean psychology, and clearly it is distinct from any causal role we might attribute to the swerve. Therefore, there is such a role, and Epicurus' clear need

¹² There is disagreement as to whether Democritus was in fact a psychological determinist, as he is sometimes called, since his ethical pronouncements do not at all appear fatalist. I think that the best account of the matter is that Democritus did not take himself to be a psychological determinist, but that Epicurus believed that Democritus' physics was in conflict with his non-fatalist ethical attitudes. This is the view of L. Edmunds, as reported in Laursen 1990: 20; cf. Huby 1967: 361; Furley 1967: 175. This view is supported also, I think, by Sorabji's claim (1980: 244) that Aristotle and most ancients would have seen "hard determinism"—i.e., determinism that implies fatalism or psychological determinism—as a very untoward result (if it be a result) of determinism; the report of Diogenes of Oenoanda (32.1.14–3.14 = LS 20 G; see below, n. 42), I think, points out that Epicurus saw "hard determinism" as a result of Democritean determinism.

for it within his own dialectical context should have made him aware of it; so it is not unreasonable to suppose that he was aware of it.

Of course, second, the question remains whether there was any further, causal role for the swerve within Epicurean psychology beyond this negative dialectical role. Did Epicurus put the swerve to any more work than this in his psychology, as a sort of mechanism of agency? Did Epicurus appeal to the swerve not only to ensure the possibility of agency, but also to give a physical account of what agency is? Perhaps the greatest reason to doubt that Epicurus did is the fact that the swerve seems quite unnecessary in Epicurus' account of agency.¹³ For Epicurus seems to have been satisfied to observe that our characters and dispositions develop in ways irreducible to the atomic level, and let that stand as an account of agency. Epicurus in a fragment of *On Nature* Book 25 seems to have thought of the soul on two levels or under two aspects, namely as a complex of "developments" (ἀπογεγεννημένα) and as a complex of atoms. As the whole changes and develops, it is the former aspect which is spoken of as the agent of the change, the latter simply as "matter."¹⁴ For Epicurus says that:

From the first beginning we have seeds directing us, some toward some things, others toward others, others toward both—in every case seeds, which may be many or few, of actions, thoughts, and dispositions. Thus it depends on us at first absolutely what becomes of what is already a development, whether of one or another kind, and the things which of necessity flow in from the environment through the pores depend on us when they come about at some time, and depend on our beliefs that come from ourselves. (*On Nature* Book 25 [34.26 Arrighetti] = LS 20 C.1, tr. Annas 1992: 129)

As Annas (1992: 129) notes, "Epicurus insists that our atomic constitution is to be distinguished from our 'development' (ἀπογεγεννημένον), which depends on us. It depends on me, not just my atoms, how I develop and what kind of a person I become; even though it is a truth of physics that I am my atoms." Thus in this rather difficult and condensed passage we get an indication of the direction in which Epicurus tended in his account of agency: agents are, of course, atoms, but the best way to understand their agency is not in terms of their atoms. Rather, atoms form the material basis of agents, but in understanding the behavior and growth of agents mere matter is insufficient.

Now in none of our extant texts, of course, does Epicurus invoke the swerve to explain the development of character.¹⁵ But more important than that, it is hard to see where Epicurus would invoke the swerve in this respect, since Epicurus' theory of character, quite independent of the swerve, preserves responsibility and

¹³ Cf. Hankinson 1998: 229. This same point can be made for Lucretius, as we shall see below, 238–241.

¹⁴ Annas 1992: 125–134; see also Annas 1993: 57–63. It is important, however, to distinguish Annas's view from that of Sedley, who treats the self as an emergent property of the soul-atoms; see below, n. 30.

¹⁵ On the absence of the swerve from Epicurus' extant works, see esp. Englert 1987: 9–11. I shall return to this issue briefly in the conclusion to this paper (see below, 241–242).

moral assessment just as much as (say) Aristotle's does.¹⁶ It is also difficult to see why Epicurus would have experienced any pressure—from Aristotelians? from Stoics?—to go beyond that theory, especially when he clearly believed that common sense was overwhelmingly in his favor. Furthermore, it would be odd if Epicurus attempted to explain agency and the development of agents in terms of atomic swerves, when in fact he thought that mere material causes were insufficient for an adequate understanding of agency. And Epicurus would have been not the least bit eccentric among his contemporaries in holding such a view. Since Epicurus has a basic account of agency that does not appeal to the swerve, or need to, it is likely that he did not appeal to the swerve in his psychology beyond demonstrating that he was not precluded as an atomist from asserting the reality of agency. And this is so even though he did go on to say more about the nature of agency within an atomist framework. For however unfortunately sparse we may find his extant comments in *On Nature* Book 25, it is clear that he saw the appropriate level of explanation of agency to be that of the soul as self, rather than that of the soul as moving atoms.

Furthermore, although Epicurus' theory of action and responsibility was subjected to stern criticism in the ancient world, critics did not claim that Epicurus failed to preserve or explain responsibility. They did, however, object that Epicurus had gone too far to preserve responsibility, by unnecessarily positing the swerve. For instance, Cicero (*Fat.* 23–25 = LS 20 E.4–7) tells us: "A more penetrating line was taken by Carneades, who showed that the Epicureans could defend their cause without this fictitious swerve." Carneades claimed that agency and volition are not in fact precluded by causal necessity, and thus that the swerve was unnecessary to preserve agency.¹⁷ Of course, the Epicureans never found this approach acceptable, for better or worse; but what is important for our purposes is that Carneades criticized the role of the swerve in Epicurean psychology not as an explanation of volition or agency, or even as a physical precondition for it, but simply as a logical or dialectical precondition for it.

So according to Epicurus' critics, his mistake lay in thinking that he must deny physical necessity in order to preserve agency, not in leaving the causal relation of the swerve to agency a mystery. There are two things we should notice here. First, if Epicurus' critics expected a physical explanation of volition in terms of the swerve, then either their expectations were completely satisfied, or they failed to notice or to mention that their expectations were unsatisfied; neither option seems credible. It is more likely, then, that they did not approach Epicurean psychology with the expectation of a swerve-based account of volition in the first place.

¹⁶ Cf. Furley 1967: 227–228.

¹⁷ This reading of Carneades' objection is rightly espoused by Sharples (1991–93: 181). I shall not comment in this paper on whether Carneades or Epicurus was right on this score; see Hankinson 1998: 224–226.

Second, this also points to the strangeness of our evidence. Epicurus had no apparent need for the swerve in his explanation of voluntary action and responsibility, but his critics as well as Lucretius make it clear that Epicurus did make some connection between voluntary action and the swerve. What are we to say about this? If the swerve is not part of the causal story about agency, then why did Epicurus import the swerve into his psychology?

This apparent strangeness can be removed if Epicurus reasoned as I claim he did, as follows.¹⁸ There are convincing arguments which show that psychological determinism is untenable in itself (for example, one cannot assert the thesis in word without presupposing in action that it is false). Therefore, the atomist (and the materialist generally) must make sure that his own physics does not imply psychological determinism, as Democritus failed to do (at least in Epicurus' opinion). For the best determinist objection against the atomist is that his physics represents a kind of (what we may call) Laplacean determinism, which implies psychological determinism. In order to avoid this objection as other atomists had not (in Epicurus' opinion), Epicurus said something that other atomists had not: the motion of the atom is not completely determined.

The swerve, then, allows Epicurus to avoid this objection. Since, as we have seen, his critics do not seem to have raised any objections claiming that he was committed to psychological determinism, by avoiding this "best" objection Epicurus apparently succeeded in avoiding the charge of psychological determinism altogether, by avoiding the atomist's greatest susceptibility to the charge of psychological determinism.¹⁹ Moreover, Epicurus did not go further to claim that the swerve, in addition to avoiding the determinist objection to which Democritus was liable, was also a mechanism in the soul whereby the soul acquired responsibility for character or engaged in voluntary action. For he already had an account sufficient to his purposes in the arguments against the very idea of psychological determinism and in his notion of the developing self. Epicurus had the burden of proving that he was not committed to determinism, but no more than that.

What about Lucretius? Did he see the swerve as negative and dialectical in Epicurean psychology or as more direct and causal? This is an especially important question, since our rather scant records of Epicurus' own views often must be supplemented by Lucretius' fuller discussions of the same topics—particularly when it comes to the swerve, which is absent from Epicurus' extant writings.²⁰ The swerve in its psychological role is discussed by Lucretius in a much-disputed

¹⁸I have benefited here from conversation with Mark LeBar.

¹⁹This addresses Sedley's (1983: 11–12) legitimate worry that it is not immediately clear how a proponent of psychological freedom (like Epicurus) is to take advantage of physical indeterminism to help make his case (for example, "it has become no clearer in the subsequent half-century just *how* the champions of free will are supposed to exploit this windfall [of Heisenberg's Uncertainty Principle]," 12). See also Asmis (1990: 291) and Huby (1967: 362), who claim that Epicurus leaves this question unanswered.

²⁰Cf. Hankinson 1998: 230–231.

passage (*De rerum natura* 2.251–293 = LS 20 F.1), in which he asks, “If all motion is always linked, and new motion arises out of old in a fixed order, and atoms do not by swerving make some beginning of motion to break the decrees of fate, so that cause should not follow cause from infinity, from where does this free volition exist for animals throughout the world?” As I shall argue, Lucretius here identifies the mechanical role of the swerve and its relation to the question of agency. For Lucretius’ description of the psychological role of the swerve is preceded by an observation about (what we are calling) Laplacean determinism: if all motion is eternally linked, Lucretius asks, in such a way that every motion is a fixed result of previous motion and atoms thus move in accordance with a rigid chain of causes, whence could there be *libera voluntas* (*Lucr. De rerum natura* 2.251–293)?²¹

If this is correct, then Lucretius was aware that the denial of Laplacean determinism is a dialectical precondition for the denial of psychological determinism and the possibility of *libera voluntas*. I shall defend this interpretation below (239–241). First, however, let us consider other (broadly) causal interpretations. Does the swerve have any further role in Lucretius’ psychology, providing an account of how *voluntas* is brought about by the swerve? Scholars have generally supposed that there is such a role for the swerve and have produced a plethora of competing explanations for the connection between the swerve and *voluntas*.²² I shall argue, however, that the swerve’s capacity as a precondition for the possibility of voluntary action exhausts its role in Lucretius’ psychology.

Let us return to the scholarly views of the matter which we only sketched at the beginning. With few exceptions, modern scholars interpret the role of the swerve in Epicurean psychology as playing some crucial role in particular instances of voluntary action, in one of two ways. First, some older scholars—most notably Giussani and Bailey—claim that the swerve is involved in the formation of volition in such a way that there is a break in the mechanical continuity between reception of images (in thought or in sense perception) and actions taken in response to them.²³ However, this view has the strange result that allegedly voluntary action, while not the result of purely mechanical processes, is based on the random behavior of atoms in the soul. It thus becomes difficult to see in what sense such “action” really is action and how the agent is to be held responsible for it in any case. After all, how could the swerving of the atom bring the agent any more control over her volitions than she would have had otherwise?²⁴ And why would only some swerves initiate volitions in the soul, and not others or even all of them?²⁵

²¹ I shall return to this text below, 239–240.

²² For a good review of many available suggestions, see Englert 1987: 2–5, 67–69; Englert’s own view is set out on pp. 119–145.

²³ See Giussani 1896: 135–141; Bailey 1928: 435. This view is also defended in Asmis 1990.

²⁴ Kieve 1980: 29; Furley 1967: 163–165.

²⁵ These objections are well articulated by Mitsis (1998: 155–156); see also Annas 1992: 183–185; Hankinson 1998: 227.

Consequently, many scholars have more recently embraced the view that the swerve is involved in an act of volition not in the formation of the volition but rather in its execution in physical activity, in one of two basic ways. First, swerves of atoms in the soul may allow the soul to exploit opportunities for action made possible by the broad range of possible atomic patterns in the soul.²⁶ Alternatively, the soul may actually be able to cause atoms to swerve or not to swerve on the atomic level through its activity of choice on the psychic level.²⁷

In either case, however, the alleged role of the swerve in the execution of volition faces serious difficulties. On the “exploitation” theory, it is mysterious how the random swerving of atoms will prove sufficiently reliable in order for volition to result in action, and action of the sort intended. What if no swerve is available, or no swerve that yields the kind of pattern necessary to carry out the desired action? Perhaps the frequency of swerves is so great that the requisite swerve is almost always available.²⁸ However, the more frequent the swerves, the less regular the behavior of the soul, and also the more swerves there will be to interfere with the execution of volition.²⁹ Moreover, there are problems also for the “causation” theory, namely that if the swerve is a random event, then it is difficult to see how it could also be caused by choice or volition at the psychic level. If the swerve caused by choice would not have come about otherwise, then it is not random,³⁰ and if the swerve would have come about otherwise, then its connection to choice seems coincidental.³¹

Furthermore, on both versions of the psychological role of the swerve as execution of volition, the swerve seems otiose. For, as Furley rightly noticed, the Epicurean theory of action parallels in important ways the Aristotelian theory, and seems to address the same issues concerning responsibility as Aristotle’s

²⁶ Fowler (1983: 341, 351) argues that the swerve is involved in the ἐπιβολή τῆς διανοίας upon certain images (leading to a φαντασία), once *voluntas* has formed. Saunders (1984: 41–51) argues that the swerve allows the soul to execute its volition for action which requires special effort. Englert (1987: 119–129) argues that the Epicurean *voluntas* employs the swerve to move the soul, much as Aristotelian ὁρεξις employs the σύμφυτον πνεῦμα; see also Kleve 1980: 29.

²⁷ Sedley 1983; cf. Sharples 1991–93: 176–177 and n. 8. See also Long and Sedley 1987: 110–111. Readers familiar with the view of Sharples (1991–93: 187–188) will notice that this dichotomy (which Sharples introduced) between “exploitation” and “causation” is ill suited to his own view (which he calls “correlation”); see below, n. 44.

²⁸ See, for example, Englert 1987: 128–129.

²⁹ See Mitsis 1998: 156; Sharples 1991–93: 176.

³⁰ Sedley (1983: 42–43) argues that the only requirement for the randomness of the swerve is that it have no physical cause, which leaves open the possibility of a non-physical cause. However, as Annas (1993: 58–59, n. 30) notes, the idea of a non-physical cause is quite difficult to reconcile with Epicurean metaphysics (*contra* Sedley 1988: 298; see also Hankinson 1998: 227–229). It is for this reason that I prefer Annas’s view discussed above (see n. 14), namely that the self and the atoms are two aspects of the soul; for on this view, *voluntas*—and in general the “developments” of *On Nature* 25 (see above, 233)—will be not an accidental property of the mind or the self, and thus an incorporeal, but rather the mind or the self insofar as it is active and deliberate.

³¹ See Sharples 1991–93: 176–177; see also Mitsis 1998: 155–156.

did. However, the swerve is not necessary to address Aristotle's concerns, since Aristotle himself argues that a (mature) agent is responsible for a given action not because each such action is undetermined, despite her character, but because the agent is responsible for the development of her character of which her action now is the result.³²

The idleness of the swerve in any explanation of voluntary action in Epicurean psychology is actually quite telling. Lucretius himself seems to resist any temptation to explain *voluntas* or *mens* in terms of the swerve, for the swerve is not mentioned at all in *De rerum natura* 4, which is dedicated to supplying an atomist account of the soul and its activities.³³ It is extremely odd that a discussion of the soul and its functions—including deliberate action and *voluntas* (see 4.883)—built up from atomist principles would omit the swerve if it is somehow through or via the swerve that sentient creatures are able to initiate motion. Furthermore, if Lucretius' quick comments in Book 2 are meant to suggest a psychology or physiology of *voluntas*, it is curious that he did not explain himself more fully in Book 4.³⁴

However, despite such silence there still may be a crucial role for the swerve to play in explaining agents' responsibility for voluntary action. For Furley argues that the contribution of the swerve to voluntary action is made not in particular cases of volition, but in the ability of the agent to develop and shape her character. For instance, Aristotle was also concerned to show that we are responsible for our characters and dispositions, and that they were not traceable to sources outside ourselves; and Epicurus' swerve, Furley argues (1967: 231–233), serves just the role of breaking the continuity between our characters and “external” (e.g., inherited) sources. Rather, the agent is able to develop through learning and persuasion, building dispositions that are reflected in the kinds of responses the atoms of the agent's soul gives to the images received in the soul.

Unfortunately, it seems that if the agent could not be responsible for her character prior to a swerve in the atoms of her soul, it would be quite arbitrary to claim that she would be responsible following the swerve.³⁵ In fact, as Furley (1967: 235–236) himself noticed, it is not the swerve itself that makes the agent responsible for her voluntary actions; it is rather her ability to develop her character and dispositions that renders her responsible.³⁶ As we have already seen, Epicurus seems to have noticed this too; for he addressed this issue by distinguishing agents from their matter, and not by appealing to the swerve. And in doing so, Epicurus' account of development is no more mysterious than (say) Aristotle's.

³² See Furley 1967: 191, 194, 222–225, 233–235.

³³ For the account of action proper, see *De rerum natura* 4.877–906; cf. 3.143–144.

³⁴ This oddity of Lucretius' reticence to account for the swerve's role in *voluntas* remains, and indeed is perhaps heightened, even if we suppose (as I do not) with Englert (1987: 123–124) that the claim that the soul *sese commovet* (4.886) is a reference to the swerve as discussed at 2.251–293.

³⁵ See Mitsis 1998: 158; see also Asmis 1990: 283.

³⁶ See also Annas 1992: 129–131; Annas 1993: 62–63.

So the swerve turns out to be otiose on this interpretation of its psychological role as well, an idle cog which more careful and economical reflection would have dismissed. This unfortunate result is simply avoided, however, if Lucretius' comments in Book 2 are not so ambitious as to attempt an account of volition in terms of the swerve, beyond making the simple point that the reality of *voluntas* logically presupposes the falsity of Laplacean determinism.

In fact, nothing more than this latter point is required by the text of 2.251–293. Consider the following passage, which is the most relevant for our purposes:

Therefore in the seeds too you must admit the same thing, that there is another cause of motion besides impacts and weights, from which this power is born in us, since we see that nothing can come into being out of nothing. For weight prevents all things from coming about by impacts, by a sort of external force. But that the mind should not itself possess an internal necessity in all its behaviour, and be overcome and, as it were, forced to suffer and to be acted upon—that is brought about by a tiny swerve of atoms at no fixed region of space or fixed time. (2.284–293 = LS 20 F.4)

In this passage, there is good reason not to think that Lucretius claims that the swerve gives rise to *voluntas*. For notice that Lucretius describes the relation between the swerve and *voluntas* in a negative way:³⁷ what is “brought about by the tiny swerve of atoms” is not *voluntas* itself, but the fact “that the mind should not itself possess an internal necessity in all its behavior, and be overcome and, as it were, forced to suffer and to be acted upon” (2.289–292). This says that the swerve is important for psychology not as a principle of *voluntas*, but as a principle simply in virtue of which it is false that animal behavior is necessitated.

Furthermore, this suggests that when Lucretius answers the question “from where does this free volition exist?” by saying that the swerve is necessary for *voluntas* “since we see that nothing can come into being out of nothing” (2.287), this need not mean any more than that if there exists *libera voluntas*, then physics must avoid making its existence dubious—and the atomist could discharge this duty simply by telling us that there is no physical necessity. This way of understanding Lucretius' question, and his answer, is also suggested by his initial formulation of the question at 2.251–256 (= LS 20 F.1):

Moreover, if all motion is always linked, and new motion arises out of old in a fixed order, and atoms do not by swerving make some beginning of motion to break the decrees of fate, so that cause should not follow cause from infinity, from where³⁸ does this free volition exist for animals throughout the world?

³⁷ Cf. Sedley (1983: 45 and nn. 61–62), who defends a “negative” use of the swerve for refuting psychological determinism. However, it is not negative in the way that I suggest. What Sedley means is that the swerve is not part of the volition itself, but is “the element of indeterminacy in atomic motion which enables volition . . . to exercise control over the mind's physical processes” (48). On this view the swerve, although “negative,” must be part of the account of the execution of volition; such a reading of the swerve as negative is importantly different, then, from the reading I am offering.

³⁸ It may seem tempting to understand the “from where” (*unde*) as asking for a source, cause, or account of the existence of volition. But Long and Sedley (1987: 2.111 *ad loc.*) give the following

Lucretius' point is clear. If all events were connected in a series of rigid causes, it would be false, rather than manifest, that sentient creatures have volition; therefore, events must not be so connected, and this is evidence for the swerve of atoms. Indeed, as this passage has taken on a life of its own within studies of Epicurean psychology, it is easy to forget the primary purpose of the passage: to provide evidence that atoms must swerve. The demand of Lucretius' question, and the larger purpose that prompts that question, can be satisfied by showing merely that since psychological indeterminism is apparent, Laplacean determinism must be false, and thus we have evidence that atoms swerve.

A further reason, then, to favor this negative interpretation of the psychological role of the swerve is that anything more goes well beyond the clear intent and force of Lucretius' discussion of the topic. Moreover, this is the only interpretation that is actually supported by Lucretius' avoidance of any explicit account of any function for the swerve in *voluntas* (either in formation or execution) itself, or character, in both *De rerum natura* 2 and 4.³⁹

So Lucretius' description of the relation between the swerve and *voluntas* demands no more than that the former is a logical precondition for the latter, as the swerve makes Laplacean determinism impossible.⁴⁰ And as we have seen, Lucretius would have had good reason so to limit his account of their relation. For once the Epicurean shows that Laplacean determinism is false, he has the dialectical space to make the sort of anti-determinist arguments that Epicurus did.⁴¹ If the Epicurean can show that, on his own theory, Laplacean determinism is false, then he need not admit that psychological determinism is true; he would then be in a position to argue further that in fact it must be false, since it cannot even be asserted coherently.⁴² Epicurus and Lucretius could, therefore, show that psychological determinism is false, without further appealing to the swerve to

sound advice: "Here and at 286 the swerve is that 'from which' free volition arises. This may be felt to imply a stronger relation between the two But *no* serious interpretation can make the swerve more than a necessary condition of free volition, and if that is the relation expressed by *unde* (as it is at 6A 383 [= *De rerum natura* 1.383]) it may be hard to squeeze any more information out of the word."

³⁹ As Sedley (1983: 48) notes, "Any interpretation must face the difficulty that Lucretius nowhere makes the precise contribution of the swerve [to voluntary action itself] explicit." For the interpretation I offer, this fact is not a difficulty, but a boon.

⁴⁰ Compare and contrast Hankinson (1998: 231), who claims that although such a view would have been the sensible one for Lucretius to have held, nonetheless Lucretius seems to have taken the swerve to be more directly the source of free action, perhaps due to confusion.

⁴¹ In particular the argument that the assertion of determinism undermines itself, on the grounds that the acts of asserting and reproving presuppose voluntary action.

⁴² I thank Julia Annas for impressing the importance of this argument on me. See also Diogenes of Oenoanda (32.1.14–3.14 Chilton = LS 20 G), who claims that if atomic motions are all necessitated, as Democritus says, then all praise and blame are removed. The fact that this argument (and ones like it), and not an appeal to the swerve, was the primary Epicurean argument against psychological determinism and for agency, is suggested by the fact that it is a favorite portion (preserved as *Sent. Vat.* 40) of one of the Epicureans' favorite texts from *On Nature* (preserved in at least three copies at Herculaneum); see Sedley 1998: 128.

show how the swerve might generate *libera voluntas*. Rather, the special behavior of sentient creatures could then be explained partially in terms of the special (even “nameless”) atoms of which their souls are composed—just as Lucretius suggests in Book 4.⁴³

Consequently, we can understand what connection Epicurus made between responsibility and the swerve and why he would have felt the need to make that connection; and we can see also that the swerve was not introduced as an explanation of volition and responsibility, where it would have been redundant. So the psychological role of the swerve, I claim, is really just an outgrowth of its mechanical role: the world is not a Laplacean one, and thus need not be an inhospitable one for agency. Epicurus thus cleared his path of (what he took to be) his predecessor’s mistake, making the way clear for himself to defend and elucidate agency further.

We can make superior sense, then, of our evidence for Epicurean psychology by interpreting the swerve as making the world safe for agency, rather than as somehow being a cause of agency. Epicurus’ answer to our initial question—how is physical indeterminacy to bear on the reality of agency?—is a rather modest and sensible one. If a determinist physical theory keeps one from consistently asserting the reality of agency, then one will need an indeterminist theory instead. The swerve is thus the beginning—and only the beginning—of a coherent atomist conception of agency and volition.⁴⁴

I conclude by noting one interesting and (I think) attractive result of this interpretation for another issue in Epicurean scholarship, namely the absence of the swerve from Epicurus’ extant letters. As I have argued, although the mechanical role of the swerve was indispensable for avoiding Laplacean determinism and making the world safe for agency, nonetheless the fact that the swerve plays such a role does not constitute Epicurus’ argument for the reality of agency. The swerve is not in the driver’s seat, as it were. Rather, Epicurus’ arguments for the reality of agency rely on the very untenability of psychological determinism itself, a thesis present in our extant texts from Epicurus.⁴⁵ It is, therefore, not surprising that the swerve in its mechanical or psychological role should not be included in such works as the *Letter to Herodotus* and the *Letter to Menoeceus*, for Epicurus’ primary argument against psychological determinism is not itself an appeal to the swerve. The swerve is crucial to explain why Epicurus is not, as (allegedly) Democritus

⁴³ See Annas 1992: 186–187.

⁴⁴ Once again, it is important to note how the view of Sharples (1991–93: 187–188; see also Sharples 1996: 66) differs from my own. For while Sharples also claims that the swerve is not a cause or explanation of volition and voluntary action, but only a precondition, he seems to mean this in quite a different sense, namely that the swerve is one necessary among many jointly sufficient factors in the formation and execution of volition, whereas I claim only that the swerve is a logical or dialectical precondition for Epicurus’ denial of psychological determinism (and not also a factor in the actual formation or execution of volition).

⁴⁵ See Epicurus *On Nature* Book 25 (34.26–30 Arrighetti) = LS 20 C.2–7; *Sent. Vat.* 40; *Ep. Men.* 133–134.

was, committed to determinism as a consequence of his atomism. But Epicurus would not need to tell that story until the Democritean problem should be raised in debate, whereas the letters contain primary doctrines of Epicureanism and not—appropriately enough—doctrines employed dialectically in their defense. So even though the mechanical role of the swerve is crucial for Epicurus' defense of agency, and thus is dutifully included in Lucretius' account, we can see nonetheless why it is not indispensable for the summary he provides in the letters.⁴⁶

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⁴⁶I would like to thank Scott LaBarge, Mark LeBar, Tim O'Keefe, David Sedley, and Michael White for helpful input to this paper, as well as Brad Inwood and two anonymous referees for *Phoenix*. Thanks especially to Julia Annas.

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