

Spinoza's Metaphysics

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[From Don Garrett (ed), *The Cambridge Companion to Spinoza* (Cambridge University Press, 1996), pp. 61–88.]

In this chapter I shall present two problems which dominate Spinoza's metaphysics (sections 1–2), and then present his solution of one of them through his doctrine that there is only one extended substance (sections 3–61). After a brief interlude looking at his views about necessity and time (sections 7–8), I then turn to Spinoza's treatment of the second problem, in his theory about how mentality fits into the universe (sections 9–14). Most of the references are to the *Ethics* Part I and the first few propositions of Part 2.

1. Some underlying assumptions

The main outlines of Spinoza's metaphysical system are his response to two problems inherited from Descartes's philosophy. They existed as problems for him because of certain assumptions that he made at too deep a level for him to recognize them as items of doctrine. I shall pick out four of these.

(1) Explanatory rationalism. There is a satisfying answer to every 'Why?' question. (Leibniz was also a rationalist in this sense; Descartes was not.) Associated with this is a view about, or attitude toward, causation. Spinoza did not distinguish what is absolutely or logically necessary from what is merely causally necessary. In his way of thinking,

there is a single relation of necessary connection, which links causes with effects in real causal chains and premises with conclusions in valid arguments. Those of us who do distinguish these will want to know how Spinoza collapses them into one. Does he regard absolute necessity as weaker than it really is, or does he regard causal necessity as stronger than it really is? There may be no clearcut answer to this, but the latter is closer to the truth than the former.

(2) Concept dualism. The concepts pertaining to the material aspects of things have no overlap with the concepts pertaining to thought. No fact about the realm of thought has any logical relations with any fact about the realm of matter. This intensely Cartesian assumption of Spinoza's is expressed by him in the statement that mentality and materiality (or, as he said, thought and extension) are 'attributes', that is, fundamental and mutually nonoverlapping ways that things can be.

(3) Impact mechanics. Bodies affect one another only through impact—there are pushes but no pulls, repulsive forces but no attractive ones. Spinoza shared this assumption with Descartes; it was also accepted by Locke and Leibniz, the former recanted in face of the evident success of Newton's *Principia*, but Leibniz held firm even then. The price to be paid for denying 'traction' was high: It included a complete inability to explain 'cohesion', i.e. the fact that some

portions of matter clump together to form separate things. But there was a reason for it, namely that traction cannot be explained by the basic nature of matter, whereas repulsion can. From the supposedly necessary truth that bodies are mutually impenetrable it follows that if body A moves into a region which contains body B, the latter must move away. That does not yield any particular laws, but it does yield—as absolutely necessary—the result that there is such a causal phenomenon as impulse, this being required by the essence of body as such; whereas there is no comparable reason why there must be traction. As Leibniz said, if there is traction it is 'miraculous'. In his mind as presumably in Spinoza's, explanatory rationalism is at work in this area.

(4) Size neutrality. There is nothing special about being small. It was common ground in the seventeenth and eighteenth centuries that small things differ from large ones only in size. C. D. Broad called this a blank check that philosophers wrote on Nature's bank and that did not visibly bounce until late in the nineteenth century.

2. Two problems

The two biggest problems that Spinoza's metaphysics was meant to solve are these:

(i) What material substances are there? That modest question poses a problem for anyone who believes, as did many seventeenth-century philosophers and physicists, (a) that whatever is material is spatially extended, (b) that any extended thing, however small, is splittable into parts which can go their separate ways, and (c) that if something is splittable it is not a substance but, at best, an aggregate of substances. It seems to follow that there are no material substances, which is to say that if the world is made up of basic things they are not bits of matter. Since it looks as though the world is made up of bits of matter, this is

a problem. Premise (a) comes from the assumption of size neutrality, which stopped philosophers from thinking of the possibility—which did occur to Kant—that extended things might be made up of physical points, and that the extension of familiar matter results from each point's exerting force throughout a region. Premise (b) is true if impact mechanics is the whole of physics, but otherwise might be false. Premise (c) does not need much explaining; but observe that it overlooks the possibility that there are no substances (basic things) although there is substance (basic stuff). I shall begin expounding Spinoza's solution to this problem in section 3.

(ii) The facts about the world in its mental aspects clearly have something to do with the facts about it under its material aspects: It is not a coincidence that a person's sensory states correlate somewhat with how things are in his material environment, or that physical damage is associated with pain, or that wanting something is more likely to be associated with getting closer to it than moving away from it. Something systematic is going on here; what is it? The obvious answer is that it is causal interaction: Sensory states are caused by the environment, pain is caused by damage, bodily movements are caused by desires. That answer, however, is forbidden to Spinoza. His strong understanding of causal connection implies that there are causal links only where there are what we would call conceptual connections: Minds do not act upon bodies or vice versa unless there are suitable conceptual overlaps between the two realms. Conceptual dualism is precisely the denial that there are such overlaps. Spinoza boldly concluded that the mental and material realms are causally fenced off from one another, but he needed to explain the appearance of interaction as something other than an absurd, brute-fact series of coincidences. He had, therefore, a problem: There is a systematic relation, and it is not causal; so what is it? I shall

start on this topic in section 10.

3. Substance monism

According to Spinoza there is only one substance, namely the whole world, which he usually calls 'Nature' or 'God'. His official argument for this substance monism (1p14d) has satisfied nobody. It goes like this:

- (a) There is a substance that has every attribute.
- (b) There cannot be two substances that have an attribute in common.
- (c) There cannot be a substance that has no attributes.

Therefore:

- (d) There cannot be two substances.

The argument is valid, and premise [c] seems 'to be true. But [a] depends on a special version of the 'ontological argument' for the existence of God (E rpr rd), which is no sounder than any of the other versions of that notorious paralogism. It infers God's existence from God's being by definition a substance. Spinoza accepted the then standard view that no substance can depend on anything else for its existence; so any substance must depend on itself for its existence. This sounds like self-causation, which is not clearly meaningful, but Spinoza found a way of interpreting it that, he thought, enabled it to make sense. He takes the self-dependence of a substance in a logical rather than a causal way, saying that the existence of any substance is explained by the substance's nature, by which he means that the substance has a nature which absolutely must be instantiated. (In Spinoza's terminology, the essence of a substance involves existence.) So God, or a substance which. . . etc., necessarily exists.

As for the argument for [b]: Even Spinoza scholars for whom charity comes first agree that this argument (E rpsd]

seems to be confined to substances that have only one attribute each. Two such substances that shared an attribute would [trivially] share every attribute, but that does not yield the substance monism that Spinoza wants. There could be hundreds of substances, each with a different selection of attributes and only one having all the attributes.

However, there is a much better route than *Ethics* 1p14d to the conclusion that there is only one substance—an argument that goes by respectable moves from premises for which Spinoza had reasons. One premise in this unofficial argument says that there is only one extended substance. The second premise says that any thinking that gets done must be done by extended substances. Those two premises entail that the world of thought and extension consists of only one substance, which both thinks and is extended. I believe that this route to his substance monism was at work in Spinoza's mind; otherwise it is a sheer coincidence that a solid Spinozistic case can be made for a doctrine for which Spinoza offered such a rickety official argument. In this respect as in some others, I submit, his official apparatus of 'demonstrations' is not a good guide to his actual reasons for his metaphysical doctrines.

The better argument, which I shall start on in section 4, involves two of the world's 'attributes', namely extension and thought. However, Spinoza seems to imply that there are others—he says indeed that God or Nature has 'infinite attributes'. Surprising as it may seem, there are reasons to think that by this Spinoza did not mean anything entailing that there are more than two attributes. (i) Thought and extension are the only two attributes that play any active role in the *Ethics*. (ii) The role of infinity in *Ethics* 1p14d shows that Spinoza takes 'God has infinite attributes' to entail that God has all the attributes. This entailment does not hold when 'infinite' is used in our way; so Spinoza's meaning for

the term differs from ours, and the question is, 'How?' One possible answer is that he used 'infinite attributes' to mean 'all (possible) attributes', so that Nature's having infinite attributes is consistent with its having only two. **(iii)** Spinoza has a solid, intelligible reason for saying that Nature has all attributes: If there were an attribute—a basic way of being—that was not instantiated, nothing could explain this fact, and that conflicts with explanatory rationalism. There is on the other hand no respectable reason for Spinoza to say that Nature has (in our sense) infinitely many attributes. **(iv)** He gets 'infinite attributes' into the story through his statement that God has infinite attributes, and we should ask why. Spinoza's use of the term 'God' as one name for the natural world is evidently based on his believing that descriptions of God in the Judeo-Christian tradition come closer to fitting the natural world than to fitting anything else:

- infinite,
- not acted on from the outside,
- not criticizable by any valid standard,
- omniscient (in the sense of containing all the knowledge there could possibly be),
- omnipotent (in the sense of being able to do anything that it is possible for anything to do).

If in that spirit the attribution to God of 'infinite attributes' is to be justified, it must be through the tradition that God is the *ens realissimum*, the most real being, the being that exists in every basic way in which it is possible to exist. That leads us to God's having all (possible) attributes, and does not entail anything about how many of them there are.

On the other hand, it was a little perverse of Spinoza to say 'infinite' if he only meant 'all'. And in his last two letters he addresses the question of how it is that we do not know anything about any attributes except thought and

extension. The mere fact that he faces the question does not show that he was convinced that there are more than two attributes. He certainly did not rule out there being more than two, so that he needed to explain how it could happen that there are attributes with which we are not acquainted. (His explanation of this is bad.) Still, if he really thought that there might be only two, and did not mean to have implied otherwise, it is strange that he does not say so in these letters.

4. Monism about extended substance

Spinoza believed, and had good reason for believing, that there is just one extended substance, namely the entire extended world—not the totality of all matter, but the totality of everything that is extended. If space extends beyond the edges of the material world, then all that extra space is also part of the extended substance (and in that case the difference between matter and space does not show up at the level of basic metaphysics). This candidate for the role of 'an extended substance' is unique in not being splittable: It cannot be split from side to side, because it is infinite in all directions and has no sides, and it cannot have pieces taken away from it because there is nowhere for them to go. We can make divisions within it, but not of it.

This puts it in strong contrast with any lesser, finite portion of the material world. Every such portion is divisible, Spinoza thinks; there are no atoms. So every such portion is an 'aggregate' (and thus not a single substance), and can be destroyed by dissipation (and is thus not substantial); and can be acted upon from the outside (which Spinoza seems to think also disqualifies it as a substance). Whatever other reasons he may have had, the sheer divisibility of all matter put him under pressure to say that the whole world is the only extended substance.

If the extended world is the one extended substance, what is the status of ordinary finite bodies such as pebbles? One possible answer is that they are parts of the one substance, this being tolerable because in this one unique case a thing could have parts without being in any danger of being taken apart and thus without prejudice to its status as a substance, a basic thing, an item whose existence is not at the mercy of the existence of other items. The reasons Spinoza could have had for not handling finite bodies in that way are rather complex, and I am not sure that he ever actually considered this possibility. Anyway, I shall pass it by.

Spinoza's actual answer to the question 'What is the metaphysical status of a pebble?' is that a pebble is a 'mode' of the one substance. For Spinoza as for his contemporaries, a 'mode' of a thing is a property or quality of it. Descartes, for example, says that he uses 'mode' to mean 'exactly the same as what is elsewhere meant by attribute or quality', though he goes on to recommend reserving 'mode' for those aspects of a substance that it may gain and lose, retaining 'attribute' for such properties of it as it must have at all times when it exists at all (Descartes 1985: 1,56). This use of 'mode' to stand for what is predicable of a substance or possessed by or instantiated by a substance was standard in philosophical writing in the sixteenth and seventeenth centuries. Spinoza says nothing to suggest that he is using the term in any other way, and his definition—'By mode I understand the affections of a substance, or that which is in another through which it is also conceived'—strongly points to his using 'mode' in its normal meaning.

A mode was often thought of not as a universal property, but rather as a particular property instance. A blush is a mode: For a face to have a blush on it is just for the face to be red in a certain way; we do not have two things, a face and a blush, standing in a certain relation; rather, we have

a single thing, a face, and it is blushing; but there is such an item as the blush, it is this instance of blushingness. So even if you and I are blushing in exactly the same way, your blush is one item and mine is another: They are quality-like items, except that they are particular rather than universal. According to various theorists from Locke and Leibniz through to Jaegwon Kim and myself, modes or property-instances also figure as events: The fall of a sparrow is one particular instance of fallingness. I do not use 'instance of property P' to refer to the thing that instantiates P. If I did, I would be identifying the blush with the face, and the fall with the sparrow. The instances I am talking about are abstract particulars. Spinoza's view, then, is that a pebble relates to the entire extended world as a blush does to a face or a fall to a sparrow. .

How can this be? We grasp the grammar of the sentence, and we know what each of its words means, but that does not tell us what Spinoza is getting at, that is, how it could possibly be true that a pebble is a mode. Commentators on Spinoza have usually repeated his statement and superficially explained its meaning (as I have done) without seriously addressing the problem of what he can be getting at. It was left to Edwin Curley to challenge this procedure, saying that we should not understand Spinoza to have meant such a thing if we cannot tell a reasonable story about how it might be true. It may be false, but it must at least be intelligible and *prima facie* defensible.

Finding no way of presenting the doctrine in that light, Curley concluded that it has been a mistake to attribute to Spinoza the view that a pebble relates to the extended world as a blush does to a face (Curley 1969: 36-43). The term 'mode', Curley noted, was used in the seventeenth century to do two things at once: to call something a mode was both to classify it as an instance of a quality and to say

that it is a dependent entity, something that depends for its existence on another thing. (We have already seen this at work twice: in the self-dependence element in Spinoza's ontological argument for God's existence, and in the view that finite portions of matter are destructible and therefore not substantial.) In the absence of any coherent account of what it could really mean, in detail, to say that pebbles are 'modes' when that word is given its full meaning, Curley conjectured that Spinoza meant it to have only the second part of its meaning, namely that of 'dependent item'. That implies that Spinoza is using 'substance' to mean 'independent item', so that his substance monism, as applied to extension, becomes merely the thesis that the entire extended world is the only extended item that could not be destroyed from without.

That metaphysical position is almost certainly true, and I am sure that Spinoza held it. What is at issue is whether that was all he meant when he said that the whole world is the only extended substance and that finite bodies are modes of it. To say that it was is to credit him with good sense but not with boldness or originality, yet the latter virtues are commonly thought to be more typical of him. Curley's reading of substance monism has another count against it too: Nothing in Spinoza's uses of 'substance' and 'mode' prepare us for these terms' being stripped of what had hitherto' always been the more central and important part of their meaning. The main thing in Curley's favor was the lack of any story about how bodies could conceivably relate to the extended world as blushes do to faces.

That lack has been made good. Curley is on record as agreeing that in my *Study of Spinoza's Ethics* [Bennett 1984] I have presented a basically coherent metaphysical story according to which finite bodies do indeed relate to the extended world as blushes do to faces or as falls do to sparrows. Although he agrees that his challenge has been

met, Curley is not convinced that Spinoza really did mean to advance the metaphysic which I have attributed to him, and he stands by his theory that Spinoza thinned out the meanings of 'substance' and 'mode'. Our interchange on the issue occurs elsewhere, and will not be repeated here. [See Curley 1991b, and Bennett 1991.] In this chapter I stand by the interpretation of Spinoza presented in my book, the outlines of which I shall now present.

5. Finite bodies as modes

Start by thinking of the one extended substance as Space, which can be arbitrarily divided into regions shaped however you like and any size you like. [These regions do not compete with Space for the title of substance or most basic kind of thing because no region is privileged: There are no constraints on how finely or coarsely Space can be 'divided' into regions.] Now, consider a pebble P which exactly fills a certain region R. We think that R existed before P moved into it, and will exist when P moves on, but right now P and R exactly coincide. That makes it sound as though P and R are two extended items that have exactly the same coordinates, items of kinds that enable them to be precisely co-located, which we assume two material things could not be. If we do not like that account of the situation (and nobody does), it seems that we must give primacy to either P or R: Either there is a pebble here, and the so-called region is to be explained away, or there is a region, and the so-called pebble is to be explained away. Leibniz took the former option, Descartes and Spinoza the latter.

If primacy is given to the pebble (not necessarily saying that it is fundamentally real, but giving it more reality than the region), what is to be said about the region? Descartes anticipated one answer to this, namely that the region is nothing (Descartes 1985: II,18). He attacked this through an

argument that is approvingly echoed by Spinoza:

If the region is nothing, then if the pebble is annihilated there will be nothing between the pebbles that now touch its opposite edges; if there will be nothing between them then they will be in contact; since they are not now in contact, that means that they will have moved; so we get the result that the annihilation of one thing will absolutely necessitate the movement of something else; this is intolerable, so the premise is wrong, and the region is not nothing.

This argument, which is sometimes derided, seems to me sound, deep, and important. I have fleshed out its details a little, but the core of it is in Descartes and in Spinoza (for references to the latter, see section 6)

Leibniz had a different device for explaining away the region. He contended that every so-called region, and indeed Space as a whole, is an ideal entity—a logical construct out of relations between bodies. This account of space implies, for example, that the crucial fact about the two pebbles on opposite sides of P is not that **there is something between them** but rather that **they are apart from one another**; so we have the language of relations between bodies and (regions of) space, but it is to be understood as a way of expressing facts about relations among bodies. It is not easy to carry through in detail this relational view of space, and it has had a better press than any specific version of it has earned (Earman 1989, Chapter I). Still, it is a possibility, and it seems not to have occurred to either Descartes or Spinoza.

They, and especially Spinoza, went the other way: We should start with the region, and explain away the statement that there is a pebble in it. If there is (as we should ordinarily say) a pebble in region R, what makes this true is the fact that R is *pebbly*, where 'pebbly' stands for a certain monadic property that a spatial region can have. If the pebble moves

(as we should ordinarily say), what makes this true is the fact that there is a continuous change in which regions are pebbly. The so-called movement of a pebble through space is like the so-called movement of a panic through a crowd. Nothing literally moves, but there is a change in which people are calm and which are agitated. And if the pebble were to be annihilated, what would really be happening is that a region ceased to be pebbly and no adjoining region became pebbly; the going out of existence of the pebble is like the going out of existence of a blush or a panic or a freeze—nothing goes out of existence but something alters.

6. Some textual evidence

That is my interpretation of Spinoza's doctrine that there is only one extended substance, and that finite bodies are modes of it. It gives the doctrine a chance of being true, and uses the technical terms 'substance' and 'mode' in their entire normal meanings. Furthermore, it makes sense as nothing else does of the principal passage in the *Ethics* where this matter is actually discussed—as distinct from the apparatus of official 'demonstrations'. I refer to the wonderful *Ethics* 1p15s, which includes this:

Matter is everywhere the same, and parts are distinguished in it only through our conceiving it to have different qualities, so that its parts are distinguished only modally but not really. Water is divided and its parts separated from one another—*qua* water, but not *qua* corporeal substance. Again, water *qua* water can come into existence and go out of existence, but *qua* substance it can do neither.

The parts of matter are not separated really (that is, 'thing-wise', from the Latin *res*, meaning 'thing') but they are separated modally (that is, qualitywise). And the last sentence says that when water is annihilated no thing goes out

of existence, but a region of the one substance becomes unwatery. That is all just what Spinoza should say if he has the metaphysic that I have attributed to him; I can find no other basis for it.

Spinoza connects this with Descartes through his reference in *Ethics* 1p15s to an earlier treatment that he has accorded to 'vacuum'. The treatment is in his *Descartes's 'Principles of Philosophy'* 2p2,3, where Descartes's argument that space cannot be nothing is explicitly invoked.

One dramatic bit of evidence, that this really is Spinoza's position can be found in Letter 4. The passage consists of two sentences, of which the first is this: 'Men are not created, only generated, and their bodies existed before, although formed differently'. This sounds like a claim about the permanence of particles of matter: My body 'existed before' in the sense that its constituent atoms existed in 1929 although they did not then make up a human body; and that could be said by someone who did not accept the metaphysic I have been expounding. But I think that Spinoza did mean to be stating that metaphysic, implying that Space is basic and my body is not:

My body 'existed before' in the sense that my body at this moment is a certain Bennettish region of space, and that region existed in 1929 although it was not then Bennettish. (It was not Bennettish three minutes ago, either. I have [to speak idiomatically] moved to this position two minutes ago, which is true because [to speak with metaphysical strictness] this region became Bennettish at that time.)

That must be what Spinoza was getting at; otherwise, his next sentence is lunatic. He has just said that your beginning was not a true origination, and has implied that your ending will not be a true annihilation either. What, for him, would count as a true annihilation of an extended item? It would

have to be the annihilation of a region. But if there is just one Euclidean space, that would have to involve the annihilation of Space: It does not make sense to Suppose that a region might go out of existence leaving the rest of Space intact. Now look at the two sentences together: 'Men are not created, only generated, and their bodies existed before, although formed differently. From this it follows, as I freely acknowledge, that if one part of matter were annihilated, the whole of extension would also vanish at the same time.' On my interpretation of Spinoza, that second sentence is just right. I know of no other basis on which it makes any sense at all.

This metaphysical view, that the 'occupants' of Space are really modes of Space which is the one extended substance, has been sympathetically entertained by Plato, Descartes, Newton, Locke, Quine, and others. In attributing it to Spinoza, I am putting him in worthy company.

7. Surrounding details

A couple of 'matters arising' should be dealt with here, before we move to other topics.

(i) In the apparatus of lemmas etcetera that Spinoza inserts between *Ethics* 2P13 and 2P14, he presents an abstract physics, based on the view that the material world is made up of 'simplest bodies'. Many questions arise about these—questions that are not answered by Spinoza's characterization of them as items 'that are distinguished from one another only by motion and rest, speed and slowness' (IE 2PI3a2"). For present purposes, however, what mainly matters is that none of the material presented between 2p13 and 2p14 belongs at the most basic level of Spinoza's metaphysic. That basic level leaves open the possibility that the qualitative variations that are found in Space, the one substance, might be' such as not to support a physics of material particles at all; it might, for example, modally

differentiate regions from one another in wavelike rather than thing-like patterns. Spinoza as a child of his times accepted the 'corpuscularian hypothesis', and he had no good reason not to do so. I am a little sorry, though, that he was not inspired by his own metaphysic to see the possibility that the world at its next-to-basic level might have been unimaginably different from the world we think we have. The main point, however, is that the physics of simplest bodies does not compete with the substance monism; it belongs at a different, shallower level.

(ii) In addition to finite modes, says Spinoza, there are infinite modes. If modes are features or qualities of a substance, then the infinite modes of extension—described as Spinoza describes them—must be features of the extended world that it instantiates everywhere and always, features that it will continue to have no matter what alterations it undergoes. What could such features be? The only convincing answer to this that I know of is Curley's. He says that infinite modes are causal features of the world, and a statement attributing such a mode to the world would be a basic causal law (Curley 1969: 55–74).

That seems pretty clearly to be right, and Curley turns it to good effect in explaining 1p28,d. He interprets this passage as saying that each finite mode (thing or event) is caused by a previous finite mode, which means that the causal chain leading up to any particular thing that happens runs back to infinity; and each succession of one finite mode by another takes place by virtue of an infinite mode, that is, a causal law. Thus, as Curley felicitously puts it: 'The previously existing singular facts give us the infinite series of finite causes. The general facts [causal laws] give us the finite series of infinite causes, terminating in God' (Curley 1969: 661. Note, incidentally, that Curley must say that infinite modes depend on the one substance because they

are laws about it, while finite ones depend on it because they are causally at its mercy. On my more traditional account of 'mode' and 'substance', the notion of modal dependence is more unitary as well as being less central.

8. Necessity and contingency

Spinoza's account of the causation of particular events, namely through an infinite chain of earlier events linked through infinite and eternal causal laws, brings us to the question of his views about necessity and contingency. He certainly holds that causal laws are absolutely necessary: It is necessary, as strongly as you like, that if a world is extended then it conforms to such and such physical laws. From that, together with Spinoza's view—based on his peculiar ontological argument—that there absolutely must be an extended world, it follows that the laws of physics are themselves absolutely necessary. That satisfies the demands of explanatory rationalism so far as physical laws are concerned. If P is a causal law, then the answer to 'Why is it the case that P?' is that it could not possibly not be the case that P. Causal laws involve no element of brute fact.

What about particular matters of fact, such as the fact that a slate just fell from my roof? Well, it was caused to fall by a puff of wind, which was caused by some other movement of the air, which was caused by. . . , and so on backwards; strict determinism reigns, and the causal chain must run back forever. Furthermore, each link in it is supported by a causal law, which means that the link is absolutely necessary. Given that a gust like that occurred in precisely those circumstances, it was absolutely impossible for the slate not to fall.

So the fall of the slate, like every other matter of particular fact, was inevitable in the sense that: Given the previous history of the world, it could not possibly have not happened

exactly as it did happen. That, however, is not to say that such facts are necessary. The proposition about the slate might be inevitable yet contingent, which is just to say that the world might have had a different previous history, in which case the slate would not have fallen.

When Spinoza writes, 'Things could not have been produced by God in any other way or in any other order than they have been produced' (E IP331, one can reasonably take him to mean that the world could not have had a different history, which is to say that each matter of fact is absolutely necessary, or that this is the only possible world. But such a reading is not forced upon us, I think. Taken in context, *Ethics* Ip33 might express only the thesis that each particular matter of fact is (not necessary, but) inevitable, that is, necessitated by the previous history of the world.

Spinoza also writes: 'In nature there is nothing contingent' (E IP291. That might seem definitively to imply that this is the only possible world, but it does not because Spinoza does not mean by 'contingent' what we do. For him a contingent truth is one that is not necessary or even inevitable. His determinism implies that nothing is 'contingent' in that sense, because it implies that every particular matter of fact is inevitable. The question whether all such truths are judged by Spinoza to be in themselves necessary remains open.

I am not sure what his considered opinion was on this issue, this being a subject of disagreement among his interpreters. Some hold that he consistently maintained that all truths are absolutely necessary, some that he consistently denied this, and some that he inconsistently asserted-and denied it. I have been inclined to belong to the third camp, though I am swayed by the defense of the first position that Spinoza was a consistent necessitarian—in Garrett 1991.

The view that this is the only possible world seems on the face of it to be tremendously implausible—even more so than the view that each matter of particular fact is inevitable. Still, Spinoza is under pressure to adopt the necessitarian position, the pressure coming from his explanatory rationalism. The slate's fall was the latest event in an infinite causal chain—one that had no beginning, each item in it being caused by an earlier one. Any question of the form 'Why did E, occur?', where E is a member of that chain, can be answered by adducing some previous event and the laws of nature. But now consider the question 'Why did that whole causal chain occur?' There seems to be no way of answering this that will satisfy the demands of explanatory rationalism unless it can be said that the entire chain is absolutely necessary.

It would therefore not be surprising if it eventually turned out that Spinoza was an outright necessitarian, though I do not think it has yet been conclusively shown that he was. In addition to Garrett 1991, it might be worthwhile to read Bennett 1984, Chapters.

9. Time

The concept of absolute necessity is involved in Spinoza's use of the term 'eternal', and I make that my excuse for bringing in at this point the question of what Spinoza's view was about time. There has been disagreement and controversy about this too, but I contend that the situation is straightforward, untangled, and unambiguous.

(i) By 'eternal' Spinoza means 'absolutely necessary' (E Id8), and when he uses that word to express this concept it is because he is thinking of the fact that whatever is necessarily true is always true. (ii) By 'duration' Spinoza means the passage of time. (iii) By the Latin word *tempus* (usually translated as 'time') he means time thought of as cut or

divided in some way: The concept of *tempus* is at work in any proposition that distinguishes some part of time from some other. Thus, it is used in all statements about measured periods of time, all uses of tenses, and all statements about what happened before or after what else. The phrase 'an hour' involves *tempus* because it refers to a slice of time, a small amount of time cut out from the whole time-line; the phrase 'what color the sky *was*' involves *tempus* because it distinguishes one time as past from another that is present; and 'The rain ended before the snow began' involves *tempus*, quite apart from its past tense, because it distinguishes the time of the rain's ending from that of the snow's starting.

Spinoza says that duration 'can be made definite by *tempus*' (E SP23d), meaning that a statement involving the former concept can be made more specific by a use of the latter. For example, we can go from 'The Milky Way lasts [tenselessJ through time' to the more specific 'The Milky Way lasts [tenselessJ through at least a billion years'. In short, to attribute duration to an item is just to say that it lasts through time, saying nothing about how long its time of existence is, whether past or future, or how related to other times; any such further details involves *tempus*.

Eternity, as I have implied, involves sempiternity, that is, it involves something's being the case at all times. Spinoza says of the existence of an eternal thing that 'it cannot be limited by *tempus* or explained through duration' (E 5P23S). That it cannot be limited by *tempus* is something it shares with merely sempiternal things (if there are any), i.e. things that exist at all times though not necessarily. In talking about the time of existence of a sempiternal thing, we do not need tenses, clocks, calendars, or relating of times to other times. But sempiternity could be 'explained through duration', for it is just unlimited duration, or duration through all times. Eternity cannot be so explained, as it

involves not only sempiternity but also the additional concept of absolute necessity.

Some commentators have made heavy weather of all this. It is in fact simple and straightforward. The only tricky question has to do with which of these temporal concepts Spinoza is willing to apply to God or Nature. In his early *Metaphysical Thoughts* (published as an Appendix to Descartes's *Principles of Philosophy*) he said that God has no duration, which amounts to saying that no temporal concepts are applicable to the universe. His reasons for this were bad, and he seems to have changed his mind in the *Ethics*. He is of course committed to attributing duration to God given that he attributes eternity to God, because eternity is necessary sempiternity, which is a special case of duration.

What about *tempus*? In Letter 12 Spinoza speaks of it as 'nothing but a mode of the imagination', which ought to mean that in a true fundamental account of the whole of reality the concept of *tempus* would not be used. In the *Ethics*, however, it is not clear that Spinoza meant to go so far. When he speaks of *tempus* he usually has in mind the measurement of time, and he did think that all our measures—of time and space and of things spatial and temporal—are superficial and 'imaginative' and not part of the basic, objective story (see 1PI5S). I do not think that he seriously meant to declare that none of the other uses of the concept of *tempus* would come into a fundamental description, of the world.

If he did, then he must have held that the universe does not alter, and that apparent change is unreal. Some things he says could be taken in that way, especially 'God, or all of God's attributes, are immutable' (E Ip20c2l, but such remarks do not force us to conclude that Spinoza thought change to be unreal, and I am reluctant to attribute to him anything so manifestly false.

10. Three theses, especially parallelism

What happens to my body is systematically tied to states of my mind. This has to be explained, and Spinoza will not explain it causally. His explanation relies on a doctrine I shall call parallelism:

Mental items can be mapped onto bodily items in a way that preserves causal connectedness. That is, if M_1 causes M_2 , and B_1 corresponds to M_1 and B_2 to M_2 under the mapping, then B_1 causes B_2 . And conversely.

As Spinoza says: 'The order and connexion of ideas is the same as the order and connexion of things' (E 2P71). The mental correlate of any material item x is called 'the idea of x '. The most striking instance of this is that the mind of any human being is the 'idea of his or her body'.

This thesis of mind-body parallelism is supposed to explain why minds seem to interact with bodies. It seems to us that a stab causes a pain which causes a cry; but really the stab causes the bodily counterpart of the pain, which causes the cry; and the 'idea of the stab causes the pain which causes the 'idea of the cry'. There are two parallel causal chains; we are aware of bits of each, and we mentally assemble these into a single spurious chain—one that moves, impossibly, from extension to thought and back again.

It is wholly in character that Spinoza should see the correlations as complete rather than partial: There could not be a reason why some material items should have mental counterparts while others did not, and what cannot have a reason cannot be the case. Faced with the apparent fact that the mental world is partly harnessed to the world of matter, Spinoza is saying 'It's not a harnessing and it's not partial'.

As it stands, this is not much of an explanation of the facts as we find them! We know *what induces Spinoza to*

believe it, but it will not explain the facts unless he also says *what makes it true*. He says that parallelism follows from *Ethics* ra4, 'The knowledge of an effect depends on, and involves, the knowledge of its cause', though I think help is also supposed to come from 2P3, 'In God there is necessarily an idea of his essence and of everything that necessarily follows from his essence', together with substance monism, which says that there is only one substance, so that whatever it is that is extended is also whatever it is that thinks. This is discouraging. For one thing, the official argument for substance monism is weak (see section 3 above), and even with substance monism on board one cannot get, or even seem to get, parallelism out of *Ethics* Ia4 and 2p3. If one thinks that Spinoza was a genius, or even that he was a solidly competent philosopher, one must think that he could do better for parallelism than that. If he cannot, I give up: What remains is mere history, with not enough followable content to engage our philosophical interests. What is at stake here is the question of whether parallelism is sober metaphysics or a mere shot in the dark.

The clue to that is mode *identity*, i.e. the thesis that if M is correlated with B under the parallelism, then M is B . This startling statement is first made in 2p7S, and we cannot get any further without finding out what Spinoza means by it.

11. The mode-identity thesis

To understand Spinoza's doctrine that a mode of extension and the idea of it 'are one and the same thing', that is, that my body and my mind are one and the same thing, we have to take the term 'mode' seriously. According to Spinoza my body is a mode—that is, an 'affection' or state or quality—of the extended substance. This entails that the fact that

There is a body which is. . . ,

with the blank filled by a complete account of the physical nature and history of my body, is really the fact that

Space is F

for some complex value of F. The same applies *mutatis mutandis* for my mind: It is a mode of the thinking substance, the item that is to thought what Space is to extension, so that the fact that

There is a mind which is. . .

with the blank filled by a complete account of the nature and history of my mind, is really the fact that

The thinking substance is G

for some complex value of G. Those must be Spinoza's views if he seriously and literally holds that finite particular things are modes.

Now, when Spinoza says that my body is my mind, or that a circle and the idea of it are one and the same thing, he ought to mean that F is G. That is, what it takes for there to be a physical object such as my body is for there to be an extended substance that is F, and what it takes for there to be a mind such as mine is for there to be a thinking substance that is F—for the very same value of F. My mind is a mode, my body is a mode, and my mind is my body; so the mode that is my mind is the mode that is my body; and so the 'affection' or quality or state which, added to extension, yields the whole nature of my body is the very one which, added to thought, yields the whole nature of my mind. What Spinoza means by the mode identity thesis, therefore, is precisely what his words imply when understood in their complete standard meanings.

The doctrine is that each mode is a mode under all of the attributes; we should think of the mode that constitutes my body not as a complex quality that includes extendedness but rather as a complex quality that can be combined with extendedness and also with thinkingness. The modes are

trans-attribute, logically speaking; i.e. each is combinable with thought and with extension, and with any other attributes there may be.

Spinoza usually uses the term 'mode' differently from this, taking a mode to be a complex property that includes an attribute: 'The modes of each attribute involve the concept of their attribute', he says (E 2p6d). But in 2P7S he has changed his tune and now uses 'mode' to stand for what would remain if the attribute were removed. My interpretation of the mode-identity thesis brings this fact into the spotlight, but even if my interpretation is wrong the fact is undeniably there. Put together these: (a) concept dualism, (b) the thesis that modes of extension involve extension and modes of thought involve thought, and (c) our present thesis that a mode of extension is a mode of thought. If (c) is maintained, one of the others must be dropped or qualified. It cannot be (a) concept dualism, because that is a load-bearing part of the structure of the *Ethics*. So we must suppose that (b) is intermittent because Spinoza moves in 2p7S to using 'mode' in a special sense in which it refers not to attribute-involving modes but rather to modes from which the attribute has been deleted, the result being something which, he now says, could be combined with any attribute.

12. Explaining parallelism

Not only are these modes trans-attribute in the sense that each is combinable with any attribute; furthermore each mode actually *is* combined both with thought and extension. That is guaranteed by the substance monism doctrine, which says that there is just one substance that instantiates both the attributes. If there were two substances, one extended and one thinking, it would not follow from the fact that something is extended and F that anything is thinking and F. The potentially trans-attribute mode that combines with

extension to yield my body might not be possessed by the thinking substance, in which case my mind would not exist.

That is the key to explaining why parallelism is true. The doctrine of mode identity says that corresponding to any extended mode (F-and-extension) there could be a corresponding thinking mode (F-and-thought); the doctrine of substance monism says that any mode that is instantiated in combination with extension is also instantiated in combination with thought; put the two together and you get the thesis that corresponding to any actual mode involving one attribute there is a mode involving the other. Thus, from substance monism and mode-identity we get parallelism.

That pattern of argument exactly fits the details of 2p7S. In that scholium, Spinoza does the following things in the following order. (1) He reminds us that there is only one substance, so that the thinking substance and the extended substance are one and the same. (2) He goes straight on to say that any mode of extension is identical with the idea of it, i.e. with the corresponding mode of thought. For example, a circle and an actual idea of the circle are 'one and the same thing which is explained through different attributes'. He does not infer (2) from (1), but merely says they are similar, as indeed they are. Just as there is only one substance that is comprehended under this or that attribute, so also any thought-extension complex is only one mode, which can be explained through this or that attribute. (3) Having asserted (1) and (2), Spinoza says that 'that is why' (*ideo*) we shall find one and the same order and connection of causes, no matter which attribute we investigate Nature under. That is, he offers substance monism and mode-identity as *explaining* the parallelism that he has asserted in 2p7.

What comes after that in the scholium (its penultimate paragraph in Curley's layout) is puzzling if one pauses to look at it carefully. I shall explain the puzzle and the solution

in section 14, but first I must devote a part to the most formidable objection to the line of thought with which I have been crediting Spinoza.

13. A conjecture about trans-attribute modes

My interpretation of the three doctrines seems to conflict with Spinoza's thesis that there is no causal flow across any boundary between attributes. This is vital to many of his lines of thought, that is, his view that to explain human physical behavior we should resort not to psychology but to biology. The threatened conflict, however, does not result from anything controversial that I have said, but is plainly there on any un stupid reading of Spinoza's text. On the one hand: 'The modes of each attribute have God for their cause only insofar as he is considered under the attribute of which they are modes, and not insofar as he is considered under any other attribute' (E 2p6l. This clearly entails that what happens in my mind does not cause what happens in my body, and vice versa. On the other hand: 'A mode of extension and the idea of that mode are one and the same thing, but expressed in two ways' (E 2p7Sl. 'The object of the idea constituting a human mind is a human body' (E 2P13l. These two entail that my mind is my body. How can my mind be my body, and yet not be causally relevant to my body? The threat of absurdity comes straight out of Spinoza, with no exegetical help from me. Something must be done to render all this consistent.

The only remedy I can find requires me to accept a certain hypothesis about Spinoza's thought—a risky hypothesis, attributing to him a philosophical doctrine that he does not state explicitly. Still, I think the attribution is right: As well as removing the threatened inconsistency, it solves some textual and philosophical problems for which no other solutions have been offered, one being the problem of what

Spinoza is getting at in the strange later part of 2p7S.

Spinoza held, I conjecture, that the trans-attribute modes are not accessible to intellect in isolation, and can be thought only in combination with some attribute. One can think that the one substance is extended and P, thereby thinking the whole truth about my body; and one can think that the one substance is thinking and P, that being the whole truth about my mind. But no intellect—not even an unlimited or 'infinite' one—can dismantle either of those thoughts into its attribute component and its F component, conceptually isolating the trans-attribute mode.

That would give Spinoza a reason for saying that no explanation can run from one attribute through to another. To explain something across a boundary between attributes would be to go from the premises

- The one substance is extended and F, and
- The one substance is thinking,

to the conclusion

- The one substance is thinking and F.

That would get a conclusion about my mind from a premise about my body in conjunction with the thin premise that the universe has a mental aspect. But to conduct such a prediction or explanation, one must detach F from extension and bring it across into combination with thought. I conjecture that Spinoza believed that we cannot do that, which is why he said that no legitimate intellectual operation runs from premises under one attribute to a conclusion under another, and why this is consistent with the thesis that a single mode appears under both attributes. Tracking such a mode through would involve thinking certain concepts in abstraction from any attribute, and (according to my hypothesis) Spinoza holds that to be impossible.

14. Explanation and causation

That would explain how Spinoza, consistently with his doctrine of the identity of modes across the different attributes, can deny that there are followable explanations running from one attribute to another, but not how he can deny that there are entailments or causal chains running from one attribute to another. Indeed, he seems to be committed to there being entailments across attribute boundaries:

The trans-attribute modes create a system of logical relationships between the attributes, whether or not anyone can think them in abstraction. Or so one might think.

This looks like trouble for my interpretation, and for any other that takes Spinoza to be using 'mode' with its full normal meaning. In showing how the trouble can be dealt with, I shall not discuss the logical and causal possibilities separately, because Spinoza does not distinguish them. So the difficulty is this: My hypothesis reconciles mode identity with the denial that there are followable explanations that go across boundaries between attributes, but not, apparently, with the denial that there are causal chains that go across boundaries between attributes.

This difficulty, however, rests on a distinction which Spinoza rejects. When he says there are no causal chains which. . . etc., he means only that there are no followable explanations which. . . etc. He says as much, just where he needs to, namely at the point where an alert reader would start to suspect that the doctrine is inconsistent. This is the strange nearly final episode in *Ethics* 2p7s, to which I have referred [the emphases are mine]:

When I said that God is the cause of the idea. . . of a circle only insofar as he is a thinking thing, and the cause of the circle only insofar as he is an extended thing, this was only because the intrinsic being of the idea of the circle can be perceived only through another mode of thinking as its proximate cause,

and. . . so on to infinity. Hence, so long as things are considered as modes of thinking, we have to explain the order of the whole of nature, or the connection of causes, through the attribute of Thought alone. And insofar as they are considered as modes of Extension, the order of the whole of nature has to be explained through the attribute of Extension alone.

This passage picks up the doctrine about the causal insulation between the attributes and psychologizes it, explains it as meaning something about how things must be explained, perceived, considered. This is the place to do it. Spinoza has just finished explaining why the parallelism obtains; the explanation asserts the identity of modes across the attribute boundaries, which seems to offer a basis on which there could be a logico-causal flow across those boundaries; and Spinoza needs to explain why it does not. He does this by psychologizing the notion of causal flow.

This is the only place in the *Ethics* where Spinoza does such a thing, presumably because this is the only place where he needs to. It is just here, and nowhere else, that he explains the metaphysical underlay of the 2p7 parallelism; that explanation involves mode identity of a kind that *prima facie* threatens the causal separateness of the attributes; and Spinoza has to remove the threat. Notice that psychologizing causation removes the threat only with help from the premise that the trans-attribute modes cannot be thought in abstraction from any attribute. My hypothesis that Spinoza accepted that premise thus gets some confirmation from the penultimate paragraph of 2p7s. If the hypothesis is wrong, then so is my account of what the paragraph is there for. But then what other account can be given?

15. What is an attribute?

My hypothesis also lets me explain something that has

plagued Spinoza scholars for centuries, namely his strange definition of the term 'attribute'. The general outline of how things go in the *Ethics* seems to indicate that the items that are predicable of the one substance divide into the attributes, which are the basic ones, and the modes, which are all the rest. For example, to call something 'square' is to say that it is extended and. . . ; to call something 'afraid' is to say that it is thinking and. . . But to call something 'extended' or 'thinking' is not to assign it to some species of a still broader genus; there are no broader genera. That, I repeat, seems to be how Spinoza distinguishes attributes from modes.

But the official definition of 'attribute' says, strangely, that an attribute is 'that which intellect perceives of substance as its essence' (1d4). The term 'intellect' brings in just one of the attributes, namely thought. What special privilege does thought have that entitles it to help define 'attribute' generally? More urgent and more specific is the question:

If Spinoza does not think that attributes are essences, what does he think about them, and why does he explain the term 'attribute' in terms of something that is not true of attributes though it is perceived as being true of them? If on the other hand Spinoza holds that an attribute is an essence of any substance that has it, why does not he say so outright, instead of saying only that it is 'perceived as' an essence?

Or perceived as if it were an essence—the much debated difference between 'as' and 'as if' is of no importance. Either way, by bringing in what 'intellect perceives' Spinoza powerfully suggests that attributes are not really essences, and one wants to know why. An answer to this question falls out from the interpretation I have been offering for mode-identity and more generally for 2p7s.

Why does the *definiens* say that an attribute is 'perceived as', rather than that it is, an essence of the substance that

has it? Because according to Spinoza it is not an essence of the substance that has it. The relevant sense of 'essence' is the one given by Descartes:

Each substance has one principal property which constitutes its nature and essence, and to which all its other properties are referred. Thus extension in length, breadth and depth constitutes the nature of corporeal substance, and thought constitutes the nature of thinking substance. Everything else which can be attributed to body presupposes extension, and is merely a mode of an extended thing; and similarly, whatever we find in the mind is simply one of the various modes of thinking. (Descartes 1985: 1,53)

According to my hypothesis, Spinoza's attitude to this could be expressed as follows:

Setting aside the bit about 'one principal property', which is just a mistake, the rest of this account of the 'nature and essence' of a substance reports accurately on how the situation must be perceived by any intellect. If you start with the various specific features of an extended thing, and ask what they all have in common—what they are all specifications of—the answer will inevitably be *extension*. In fact, each feature consists of something of the form 'F and extended', where F could be combined also with other attributes; but that fact is not accessible to any intellect, and so extension will be perceived by any intellect as a Cartesian essence of the substance that has it. It is not really a Cartesian essence, however; it is not the most basic thing that is predicable of the substance. On the contrary, the trans-attribute modes are in a clear sense more basic, in that they can spread across all the attributes.

So what the definition of 'attribute' does is to permit us

to treat the attributes as basic in the way that Cartesian 'essences or natures' are said to be, while including a hint ('what intellect perceives. . .') that what makes this a safe procedure is a limitation on what intellect can do rather than a fact about how things stand in the rest of reality. Spinoza explains 'attribute' in this way because he has no other way of explaining it. That explains why Spinoza proceeds as he does in 1d4, and this explanation enables 1d4 to count as textual support for my hypothesis.

This account also explains why one attribute (thought) should be implicitly mentioned in a definition of 'attribute' in general. The definition gives a privileged status to one attribute because it has such a status in Spinoza's whole metaphysical structure: His account of attributes in general involves the concept of causation, which he ultimately cashes out in terms of thought, as he explains at the end of 2p7s.

When Spinoza puts 'what intellect perceives' into the definition of 'attribute', he distinguishes appearance from reality. That is what Wolfson said too, and refuting him has become a standard exercise for Spinoza scholars (Wolfson 1934: I,151ff). But he took Spinoza to hold that the attributes are not really distinct from one another though they are perceived by intellect as being so. That is altogether indefensible: It ignores the wording of the definition of 'attribute', which says nothing about distinctness. I interpret Spinoza as holding that the attributes are real, and really distinct, but that they are not really basic, are not really 'essences' in Descartes's sense. That fits the wording of the definition ('perceives as. . . its essence'), and harmonizes with my treatment of 2p7s.

If Spinoza really held that an attribute is an essence of the substance that has it, there is not only the puzzle about 'perceives as' in 1d4, but also the question of why he repeatedly says that each attribute expresses the (or an)

essence of God. (See, for example, E rds, rpi6d, and rprod.) I explain it as follows: The nearest Spinoza will come to using the concept of essence in a metaphysically serious way involves him in saying that the system of trans-attribute modes is the essence of God. We can get at this only in its combination with some attribute or other. So the role of the attributes is to combine with the trans-attribute modes to get the latter into a form in which we can think them. The attributes let the modes come through. It is as though the modes were words written in a script to which intellect is blind, and the attributes make the message of the modes accessible to intellect by reading them aloud, expressing them. ‘

There is another striking bit of evidence that this is right. At the start of 2p7s Spinoza reminds us of substance monism by saying that all the attributes belong to one substance. But instead of writing that every attribute pertains to one substance only, he writes, ‘Whatever can be perceived by an infinite intellect as constituting an essence of substance pertains to one substance only’. In this one place, and nowhere else in the *Ethics*, Spinoza replaces the word ‘attribute’ by its 1d4 definiens. Why do it at all? Why do it just here? I answer that this scholium is the only place in the work where the full force of 1d4 is relevant to what is going on. Throughout the rest of the work, we can proceed

as though the attributes were basic, i.e. were Cartesian ‘essences’; it is safe for us to do this, and indeed we have no alternative because our intellects are bound to perceive them as basic. Only here, where trans-attribute modes have to be introduced in Spinoza’s explanation of parallelism, does Spinoza need to admit that as a matter of sheer metaphysics the attributes are not really basic after all.

Another benefit of this line of interpretation is that it answers the old question as to what content there is to Spinoza’s substance monism. The statement that thought and extension are attributes of a single substance does not imply that they interact causally, Spinoza tells us, so what difference does it make whether they are possessed by one substance or two? I answer that there is a lot of content to the thesis: The unity of the one substance—its being one rather than two or more—is secured by the fact that the entire modal story about the whole of reality reappears under each of the attributes. The single ‘order and connection of things’ and ‘order and connection of causes’—that is, the entire network of trans-attribute modes—runs across, through, under all the attributes, giving the one substance its integrity, its unity, its wholeness. There is not the slightest threat that Nature, just because its attributes are so disconnected from one another, will conceptually fall apart.