THREE

Infinite Modes

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Infinite modes are arguably the most original aspect of Spinoza's metaphysics. They are also the least understood. In the first part of Spinoza's *Ethics* we are right away given definitions of the main elements of Spinoza's metaphysics, which at least in name would have been familiar enough to his readers – substance, attribute, and mode. He tell us that by mode he means "the affections of substance, that is, that which is in something else and is conceived through something else" (EID5). There is only one thing that exists, one substance, but seemingly infinite modes (EIP16) and some of these modes are themselves infinite.[[1]](#footnote-1) These infinite modes "must have necessarily followed either from the absolute nature of some attribute of God or from some attribute modified by a modification which exists necessarily and as infinite" (EIP23). This seems to further divide the infinite modes into two kinds, the immediate (those that follow directly from the nature of an attribute of God) and the mediate (those that follow from an attribute of God through a modification of the attribute). Spinoza's readers would have expected him to talk about substance, attributes, and modes, but not infinite modes, and so we must expect that this newly invented concept served some important purpose in Spinoza's metaphysics. Undoubtedly, this purpose was to explain the connection between finite modes and substance, but unfortunately Spinoza says so little about infinite modes that they raise more questions than they answer. In this chapter I will propose a particular way of understanding infinite modes: the immediate infinite modes are in fact the attributes under a different name and the mediate infinite modes are totalities of finite modes. I will compare this understanding of infinite modes with the competing view that infinite modes are laws of nature. Both views, and any others that I know of, have their flaws, and ultimately how one understands infinite modes will depend mostly on how one reads all the other aspects of Spinoza's system.

THE INFINITE

In Spinoza's day it was very controversial whether something infinite could actually exist. Today we might regard this dispute as partly a semantic issue about the meaning of the infinite and it seems Spinoza (a defender of infinity) regarded it that way as well.[[2]](#footnote-2) In what came to the known as his Letter on the Infinite, Spinoza explains to Lodewijk Meyer that confusion about the infinite stems from a failure to make certain distinctions (Ep.12). In the letter Spinoza makes three distinctions: one between that which is infinite by nature, definition, or essence and that which is infinite by virtue of its cause; another between that which is called infinite because it is unlimited and that which is called infinite because its parts cannot be equated with any number; and finally between that which can be apprehended only by intellect and that which can be apprehended by the imagination as well. Without knowing for sure whether these distinctions overlap, we have potentially six different ways of being 'infinite' here. Which pertain to the infinite modes? We aren't told directly in the letter.

Spinoza makes clear that substance is infinite by nature, because we could not conceive of it as finite. This we know through our intellect, because thinking of substance as finite leads us to contradiction (as proved in E1P8). If substance was finite, it would have to limited by another substance of the same nature, but there cannot be two substances of the same nature (E1P5). But just because substance is infinite does not mean that it has an infinite number of parts (actually it has no parts) or in Spinoza's terms that it can be equated with an infinite number. As he explains in the letter, number for Spinoza is just a mode of imagining. It is a way for us to arrange things in our minds, but it does not exist in reality. So Spinoza's denial of the existence of infinite numbers is qualified by his denial of the existence of any numbers. Still, some things can be "equated with numbers" in our minds, while others cannot. (But not being equated with a number is not necessarily the same thing as being unlimited.) Something that is of unlimited or infinite quantity for Spinoza cannot be made up of finite parts, because this would force us into supposing that there are different sizes of infinity, something that Spinoza thought was absurd (E1P15Schol).

So for Spinoza substance is infinite by nature and also is of infinite or unlimited quantity, though it is not made up of finite parts. In what sense are the infinite modes infinite? We know that they are not infinite by nature; rather, they are infinite due to their cause. It is hard to understand what this means, but it does seem that infinite modes are not unlimited, for two reasons. The first reason is that Spinoza speaks of finite modes as being parts of infinite modes (see E2P11c in which the human mind is part of God's infinite intellect and E5P36 in which the mind's intellectual love of God is part of God's infinite love for himself) and an unlimited thing cannot be made up of finite parts. The second reason is that if infinite modes were unlimited, then this would make them the same as God and therefore not a modification of God. Towards the end of his letter on the infinite Spinoza repeats the earlier distinction and clarifies: "Certain things are infinite by nature and cannot in any way be conceived as finite, while other things are infinite by virtue of the cause in which they inhere; and when the latter are conceived in abstraction, they can be divided into parts and be regarded as finite.” So it is tempting to say that infinite modes, being infinite in virtue of their cause, are divisible and finite insofar as they are conceived as abstracted from their cause.

But if infinite modes are finite when considered on their own, what is the difference between infinite modes and finite modes? We can of course say that finite modes are part of infinite modes and so perhaps infinite modes are merely the totality of certain finite modes. [[3]](#footnote-3) This interpretation of infinite modes is in tension with the idea that there are an infinite number of finite modes, which is how many people interpret E1P16: "From the necessity of the divine nature there must follow infinite things in infinite ways.” For if there are an infinite number of finite modes, then at least one subset of finite modes that make up an infinite mode must be infinite. Then we would have at least one totality that can be considered finite that is made up of an infinite number of parts. Instead it might be more fruitful to read P16 as supporting the idea that there are an infinite number of infinite modes.[[4]](#footnote-4) So it may be that there are infinite things that follow from God's nature, but this would mean that there are an infinite number of totalities consisting of a finite number of finite modes.

Though this may seem promising, many others have thought that there are only four infinite modes, and some have thought there are only three. This is because when Tschirnhaus asks Spinoza (Ep.64) for examples of infinite modes he gives only three: two immediate infinite modes, one for each attribute and only one mediate infinite mode.[[5]](#footnote-5) His example of an immediate infinite mode of thought is "absolutely infinite intellect,” of an immediate infinite mode of extension is "motion and rest". His example of a mediate infinite mode is "the face of the whole universe, which, although varying in infinite ways, yet remains always the same".[[6]](#footnote-6) Obviously the latter is the most mysterious, but first I should discuss the immediate infinite modes.

IMMEDIATE INFINITE MODES

In EP21, when Spinoza is first introducing the concept of something infinite that follows from the absolute nature of an attribute of God, he gives the example of "the idea of God in Thought". This is the example he uses when proving that anything that follows from an attribute's nature will be infinite and eternal. It seems reasonably clear that this "idea of God" is the same thing as the absolutely infinite intellect that he refers to in the letter. It is clearly not some person's idea of God; rather, it is the idea that God has and perhaps also, God's idea of himself. This infinite mode is the one he talks about the most and perhaps we can even say the one Spinoza himself knows the most about.

What do we know about the idea of God? We know that Spinoza brings up this example as if it will be clear to the reader that the idea of God follows from the nature of the attribute of Thought. What else can Thought itself be if not God's idea? To some it may at first seem contentious, but this is trivially true if we have already proven that God is the only substance and God necessarily exists. In order to follow Spinoza’s reasoning, it seems most natural to think about the infinite mode that here follows immediately from the attribute of Thought as really just another way of thinking or talking about this same attribute. In other words, the attribute of Thought and the infinite mode seem extensionally identical.[[7]](#footnote-7) The idea of God is just another way of describing God's attribute of Thought. However, they are clearly intentionally distinct in that they have different definitions. That is why the following from relationship is not reciprocal – Spinoza says that the idea of God follows from the definition/essence of the attribute of Thought, but he does not seem to believe that the attribute of Thought follows from the definition/essence of the idea of God. In this way they are like Hespherus and Phosperus, if it could be proven from the definition that Hesperus was Phospherus but not the other way around. Perhaps Superman is a better example. We might, for analogy's sake, say that the definition of Superman is an alien who seeks to fight crime on earth while disguising himself as a human when he does not fight crime. So Clark Kent follows from that definition of Superman.[[8]](#footnote-8) But Clark Kent may simply be defined as a reporter at the Daily Planet – this is the essence of Clark Kent, from which we cannot immediately derive Superman, despite the fact that they are the same person.

In the letter from Schuller in which he relayed Tschirnhaus's question about the infinite modes to Spinoza, either Schuller or Tschirnhaus himself confuses the attributes with the infinite modes. This is still a mistake, but it may not be as mistaken as some scholars have believed. For there is independent evidence that at least in the case of the idea of God, this reading is plausible. Consider Spinoza's proof that if something follows from the nature of an attribute it must be infinite (E1P21). He uses the familiar tactic of proof by contradiction:

Suppose this proposition be denied and conceive, if you can, that something in some attribute of God, following from its absolute nature, is finite and has a determinate existence or duration; for example, the idea of God in Thought. Now Thought, being assumed to be an attribute of God, is necessarily infinite by its own nature (Pr.11). However, insofar as it has the idea of God, it is being supposed as finite. Now (Def. 2) it cannot be conceived as finite unless it is determined though Thought itself. But it cannot be determined through Thought itself insofar as Thought constitutes the idea of God, for it is in that respect that Thought is supposed to be finite. Therefore, it is determined through Thought insofar as Thought does not constitute the idea of God, which Thought must nevertheless necessarily exist (Pr. 11). Therefore, there must be Thought which does not constitute the idea of God, and so the idea of God does not follow necessarily from its nature insofar as it is absolute Thought. (For it is conceived as constituting and not constituting the idea of God.) This is contrary to our hypothesis. Therefore, if the idea of God in Thought, or anything in some attribute of God (it does not matter what is selected, since the proof is universal), follows from the necessity of the absolute nature of the attribute, it must necessarily be infinite. (Shirley, 230-231)

Here is a reconstruction of this proof:

1. Suppose that something which follows from the nature of an attribute is finite.
2. For example consider the attribute of Thought and suppose that something that follows from it, namely God's idea, is finite.
3. The attribute of Thought is infinite in its own nature. However, if a finite thing follows from its nature as we are supposing, then we are supposing that it is also finite in that respect.
4. Given the definition of finitude, God's idea must be conceived as finite insofar as we can conceive something else of the same nature that limits it. This must be Thought itself.
5. But God’s idea cannot be limited by Thought if Thought is also finite, so it must be limited by Thought insofar as Thought does not constitute the idea of God.
6. But then the idea of God would not follow necessarily from the nature of Thought, which is a contradiction.
7. Therefore *everything* that follows from the nature of the attribute must be infinite, not just the idea of God.

But the conclusion of this argument is not warranted. If we suppose that God's idea is finite, and that leads to a contradiction, then we prove that God's idea cannot be finite, but we do not thereby prove that any other immediate infinite mode cannot be finite. But this conclusion would be supported if we suppose that the immediate infinite mode of Thought is identical to Thought itself. In fact, to accommodate Spinoza's language that this would hold for anything that followed from the nature of the attribute, we should suppose that these things would all be identical to Thought.

We should see if this makes sense in the case of the other immediate infinite mode Spinzoa mentions: motion and rest. It is not a stretch to say that thought is the same as God's thought (within Spinoza's system) but it does seem strange to say that extension is the same as motion and rest. But if we look at Descartes' account of motion and assume Spinoza accepted it then perhaps it isn't such a stretch. [[9]](#footnote-9) For Descartes motion is a change in spatial position relative to other bodies. If this is true then being either in motion or at rest is simply the same thing as being in space. Many would say that motion and rest is pervasive throughout Extension or perhaps that every extended thing is thereby in motion, according to Descartes. But this Cartesian account of motion, if we presume Spinoza held it, has even further consequences for this theory of infinite modes, because it supports my reading that the immediate infinite mode of motion and rest is merely another name for the attribute of Extension.[[10]](#footnote-10) Like in the case of Thought and God's idea we would also want to say that motion and rest follows from the nature of Extension, but Extension does not follow from the nature of motion and rest, and this isn't immediately obvious. It depends on how we define motion and rest. Notably, Spinoza does not *define* motion as a change in spatial position in the way that Descartes does in the Principles.[[11]](#footnote-11) Rather he leaves motion and rest undefined, but he takes it as an axiom that "All bodies are either in motion or at rest" (E2P13Axiom1) and then uses this axiom to prove that bodies in motion or at rest must have been determined to motion or rest by another body (E2P13Le3). Had this followed from the nature of motion and rest it would not have needed to be proven in the way that it was. So, it is more than plausible to suppose that Spinoza understood motion and rest in the same way as Descartes, but he did not suppose that this followed immediately from the nature of motion and rest. This is why it would make sense for Spinoza to say that motion and rest follow immediately from the nature or definition of Extension, but Extension does not follow immediately from the nature or definition of motion and rest.

MEDIATE INFINITE MODES

What then can we say about the mediate infinite mode; the "face of the whole universe"? The phrasing did not come out of the blue, as noted by Wolfson the bible refers to everything "upon the face of the earth" which is also translated as *super faciem universae terrae* and there were also Cabalists writing about "faces" as mediate emanations from the Infinite and even "faces of the universe of the Infinite."[[12]](#footnote-12) So what seems to us an excessively vague response to Tschirnhaus' request for examples may have been meant to evoke something familiar to Schuller and Tschirnhaus. There is right away a worry about why Spinoza does not identify a mediate infinite mode for each attribute and instead only offers one. Most have supposed that this is the mediate infinite mode for the attribute of Extension. The idea is something like, following from Extension through the immediate infinite mode of motion and rest there is some totality of bodies, things, and/or physical laws that Spinoza refers to as the face of the universe. And the corresponding mediate infinite mode that follows from Thought through God's idea is a totality of ideas and/or non-physical laws, which Spinoza simply declines to give name to.

Another possibility is that Spinoza doesn't offer an example of a mediate infinite mode for each attribute because "the face of the whole universe" is what he calls all mediate infinite modes that follow from both Thought and Extension.[[13]](#footnote-13) On this reading, the face of the universe is not actually an example of a mediate infinite mode at all; it is just a way to refer to every mediate infinite mode.

Recall that though Spinoza asserts that infinite things follow in infinite ways from the necessity of the divine nature (E1P16), he also asserts that there cannot be something equated with an infinite number (there can be no infinite cardinality) because the infinite cannot be composed of finite parts. This leads to the absurd conclusion that there are different sizes of infinity. So we cannot say without further qualification that there are an infinite number of finite modes, even though Spinoza seems to lead us to that conclusion. The mediate infinite modes allow us a way out of this puzzle, they are how we understand the logical relationship between attributes and finite modes. Infinite things follow in infinite ways from the attributes of God, in the sense that there are infinite totalities (mediate infinite modes) of finite amounts of finite modes. These mediate infinite modes, if we conceive them as infinite, are like an indivisible mass, the face of the entire universe. But if we consider them as finite, they are merely the finite modes themselves, which cannot be conceived as having infinite cardinality. If this is the right way to understand the mysterious mediate infinite modes, then for Spinoza we can switch between two ways to think about the finite modes – either they are considered as one undifferentiated lump, infinite and indivisible, a bunch of mediate infinite modes that make up the face of the entire universe, or they are considered as multiple finite things, differentiated but not completely unlimited, though not associated with any particular number either. If we think a certain way "…we shall readily conceive the whole of nature as one individual…" (E2P13Le7Sch) but if we think another way we are like the worm in the blood that cannot recognize that the particles of the blood are part of another whole individual (Ep.32).

LAWS OF NATURE

 I should say a bit about the most popular alternate interpretation of Spinoza's infinite modes, which is that they are laws of nature. There have been slightly different versions of this interpretation, but perhaps the best known is the Curley-Bennett interpretation.[[14]](#footnote-14) This interpretation gets its force from a few passages in the TIE in which Spinoza discusses "laws inscribed in" "fixed and eternal things" "according to which all singular things come to be" (TIE 101). It is thought that by the "fixed and eternal things" Spinoza is here referring to the infinite modes, and he is saying that laws of nature are inscribed in infinite modes. Spinoza says "although these fixed and eternal things are singular, by reason of their omnipresence and wide-ranging power they will be to us like universals, i.e., the genera of the definitions of particular mutable things, and the proximate cause of all things" (TIE 101). It is known that Spinoza denied the existence of universals, but he did clearly believe that the world has what we might call fixed properties that are real and can be known by science. The laws of nature that describe these aspects of the world can be derived from the axioms in book 2 of the Ethics – at least some of them can. They include the previously mentioned Lemma 3 of Ethics2P13 "A body in motion or at rest must have been determined to motion or rest by another body." But how did the infinite modes come to be identified with these laws of nature themselves? This follows from the suggestion made by Stuart Hampshire that when Spinoza speaks of ideas this includes what we normally call assertions or propositions.[[15]](#footnote-15) Curley takes the extra step to re-describe Spinoza's system as a world that is a set of facts or propositions. The scientific laws that govern it (the laws of nature) are universal propositions. These propositions can be derived from more general propositions, which either are about things that have extension or things that do not (thus they can be described as two different attributes).

 This idea, that the world is a set of facts, was very popular at a certain time in the 20th century. And it is a seductive way to interpret Spinoza because it allows us to make many of the things he says more compatible with modern understandings. But it is of course anachronistic. Spinoza spoke of infinite modes and he spoke of laws of nature, which may or may not be "inscribed" in those modes, depending on how you read the Ethics in light of the TIE. It is not strange to say that Spinoza's laws of nature are akin to what we today call propositions, but it very strange to suppose that Spinoza would have regarded these propositions themselves as somehow more fundamental than the modes. I think we must accept that for Spinoza a proposition can, at most, describe the world, but it cannot be part of the makeup of the world itself except metaphorically.

1. Though some disagree about this, thinking there are fewer modes. [↑](#footnote-ref-1)
2. For discussion of how Spinoza influenced Cantor see Paolo Bussott and Christian Tapp, "The Influence of Spinoza's Concept of Infinity on Cantor's Set Theory," *Studies in History and Philosophy of Science* 40 (2009): 25-35 and for discussion of how Spinoza's concept of the infinite was influenced by Hasdai Crescas see Yitzhak Melamed, "Hasdai Crescas and Spinoza on Actual Infinity and the Infinity of God’s Attributes," *Spinoza and Jewish Philosophy* Ed. Steven Nadler (Cambridge: Cambridge UP, 2014) 204-15. [↑](#footnote-ref-2)
3. Gueroult, Garrett, Della Rocca, and Melamed have all accepted that finite modes are parts of infinite modes. [↑](#footnote-ref-3)
4. Yitzhak Melamed, *Spinoza's Metaphysics: Substance and Thought* (Oxford: Oxford UP, 2013, p.199-120). [↑](#footnote-ref-4)
5. The request comes through their mutual friend Schuller, Ep.64. [↑](#footnote-ref-5)
6. Ep64 Shirley 919 [↑](#footnote-ref-6)
7. This is similar to the conclusion Aaron Garrett comes to, though he says the infinite modes are "co-extensive with the attributes." *Meaning in Spinoza's Method* (Cambridge, UK: Cambridge UP, 2003) 42. [↑](#footnote-ref-7)
8. For more on Spinoza's notion of definitions see my "Two Kinds of Definition in Spinoza's *Ethics*," *British Journal for the History of Philosophy* 2011. [↑](#footnote-ref-8)
9. For a defense of the idea that Spinoza's immediate infinite mode of motion and rest is the same as the Cartesian notion of local motion see Robinson, Thaddeus S. "Identifying Spinoza's Immediate Infinite Mode of Extension." *Dialogue* 53.2 (2014): 315-40. [↑](#footnote-ref-9)
10. Spinoza says in the Short Treatise that "there is no other mode in extension than motion and rest" KV App.II.14. [↑](#footnote-ref-10)
11. Rene Descartes, *Principles of Philosophy*, Part 2, paragraphs 24&25. Given Descartes' non-geometrical presentation, it isn't obvious that he is offering his account as a definition of motion, but Spinoza clearly understood it as a definition because he reconstructs it as such in Principles of Cartesian Philosophy Part 2, Def. 8. [↑](#footnote-ref-11)
12. Wolfson, Harry Austryn. *The Philosophy of Spinoza: Unfolding the Latent Processes of His Reasoning*. Vol 1. Cambridge, MA: Harvard U Pr, 1948, 244-5. [↑](#footnote-ref-12)
13. This is also Wolfson's view, *ibid*. For a contrary view see Schmaltz, Tad M. "Spinoza's Mediate Infinite Mode." *Journal of the History of Philosophy* 35.2 (1997): 199-235. [↑](#footnote-ref-13)
14. Edwin Curley, *Spinoza's Metaphysics: An Essay in Interpretation* (Cambridge: Harvard UP, 1969) 45-74 and Jonathan Bennett, *A Study of Spinoza's Ethics* (Indianapolis: Hackett, 1984). Yovel also discusses and affirms this interpretation in Yirmiyahu Yovel, "The Infinite Mode and Natural Laws in Spinoza," *God and Nature: Spinoza's Metaphysics* Ed. Yirmiyahu Yovel (Leiden: E. J. Brill, 1991) 79-96. [↑](#footnote-ref-14)
15. Stuart Hampshire, *Spinoza and Spinozism* (Oxford: Clarendon, 2005) 66. [↑](#footnote-ref-15)