

10 The Many Faces of Spinoza's Causal Axiom

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1. Introduction

“Cognition of the effect depends on and implies cognition of its cause,” announces Spinoza in 1a4 of his *Ethics*.¹ This axiom, known as “Spinoza’s causal axiom,” is one of the most important in the *Ethics*. It plays a central role in Spinoza’s arguments for some of his most significant doctrines, including (1) that things with nothing in common cannot causally interact; (2) that we have sense perception of the external causes of our bodily states; (3) that we have adequate knowledge of God’s eternal and infinite essence; and (4) that the order and connection of ideas is the same as the order and connection of things. It would thus appear that a single axiom bears a tremendous amount of weight in Spinoza’s metaphysical system.

In what follows, I will explore how Spinoza uses the axiom to argue for the four doctrines mentioned above, and I will argue that it cannot be given a consistent interpretation that allows it to play all the roles that he assigns to it. In particular, whereas there is a single interpretation that makes sense of (1)–(3), there is no way to make the causal axiom consistent with both those three doctrines and the role Spinoza assigns it in securing (4). I will argue, however, that this does not present an insuperable problem for Spinoza, because he has a better argument for the parallelism that relies not on the causal axiom but rather on mode identity. I conclude by considering the underlying philosophical motivations for the causal axiom and argue that it is an expression of a coherent and attractive view of the relationship between causation and causal explanation.

2. No Interaction

Spinoza famously denies that things that do not share an attribute can causally interact. This is a significant doctrine because it helps him establish that it pertains to the nature of a substance to exist (1p7 via 1p6), which is, in turn, crucial to all four of his arguments for the existence of

God (1p11). His argument for it also contains the first application of the causal axiom in the *Ethics*. He writes:

1p3: If things have nothing in common with one another, one of them cannot be the cause of the other.

Dem.: If they have nothing in common with one another, then (by 1a5) they cannot be understood through one another, and so (by 1a4) one cannot be the cause of the other, q.e.d.

The argument (No Interaction) can be paraphrased as follows:

1. If two things, x and y , have nothing in common, then x and y are not understood through one another. (1a5)
2. If x and y are not understood through one another, then x and y do not stand to each other as cause to effect. (1a4)
3. Therefore, if x and y have nothing in common, then x and y do not stand to each other as cause and effect.

The second premise of No Interaction is justified by appeal to the causal axiom, 1a4, which means that we must understand it in a way that is not immediately suggested by its initial formulation. In particular, we must read it as entailing:

- If one thing causes another, then these things can be understood through one another.

This raises the question of what kind of “understanding” is at issue in the claim that if one thing causes another, then they can be understood through one another. Moreover, in connection with the first premise of No Interaction, it is natural to wonder why Spinoza believes that it is necessary that things that are understood through one another, in the relevant sense, have something in common.

The answers to these questions become clearer when we situate 1p3 into the broader philosophical context of Spinoza's *Ethics*. Spinoza takes up the issue of interaction again in 2p5 and 2p6. And once again, he appeals to his causal axiom to make his case. There he appears to say that modes of different attributes cannot causally interact, because the concepts of modes of a given attribute “imply the concept of their own attribute, but not of another one” (2p6). That is, if one thing causes another, then their concepts are inferentially connected. Concepts are inferentially connected just in case they belong to the same attribute. Thus, things cause one another only if they can be conceived under the same attribute. But why should there be a conceptual condition on causation?

The answer to this question can be found in Spinoza's discussion of mind–body identity in 2p7. Just after telling us that God cannot cause modes except insofar as he is considered under the attributes to which

they belong, he says that the mind (i.e., the idea of the human body) and the body are one and the same thing conceived of in two different ways (2p7s). This creates the appearance of paradox because if God, insofar as he is thinking, causes some idea and every idea is identical to some body, then God, insofar as he is thinking, causes some body. Spinoza is well aware that his words have created the appearance of paradox and immediately addresses it. He says that he denied interaction for “no other reason” than that a mode can be “perceived” only through another mode of the same attribute. Consequently, we must “explain” the causal order of nature through a single attribute at a time.² In other words, causal explanations must be framed in terms of concepts that belong to a single attribute because we can only perceive the connections between things when we think about them using concepts that are inferentially connected to each other. This is a point about causal explanation and it does not require Spinoza to deny that minds and bodies can causally interact as they manifestly must, given Spinoza’s commitment to mind-body identity. Rather he is denying that we can frame explanations of those interactions in terms of concepts belonging to more than one attribute. The barrier between the attributes is explanatory and not causal.

This interpretation is controversial, but, unfortunately, I cannot undertake a full defense of it here.³ In lieu of such a defense, I will note only that my interpretation has certain advantages over its main rivals. Many commentators have attempted to deal with the seeming contradiction between Spinoza’s claims that bodies and minds don’t causally interact and that they are “one and the same thing” by ascribing some exotic doctrine to him, such as that the indiscernibility of identicals is false⁴; that causation is an “intensional relation,” the holding of which depends on how things are conceived⁵; or radical ontological pluralism.⁶ My interpretation, in contrast, does not impute any such exotic doctrine to Spinoza. The claims that causation implies causal explanation, and that causal explanations must be framed in terms of concepts that bear inferential connections to each other, although not entirely uncontroversial, are certainly less controversial than the aforementioned alternatives and, to this extent, my interpretation is to be preferred. Others have attempted to address the problem by claiming that, when Spinoza says that the mind and the body are “one and the same thing,” he does not mean that minds and bodies are numerically identical; rather he means that they are qualitatively similar and are parts of a single whole (the mind–body composite that constitutes the human being).⁷ But as Don Garrett has convincingly shown, there is no textual evidence that Spinoza ever uses “one and the same thing” to express anything but numerical identity.⁸ My interpretation has the advantage of allowing us to interpret “one and the same thing” in the most natural way as expressing numerical identity. Against my interpretation, it might be objected that it reads *causa* in Spinoza as ambiguous between expressing a metaphysical relation—causation as

such—and an epistemic relation—causal explanation. This is true, but I do not think that it represents a significant cost. In philosophical neo-Latin, *causa* is no less ambiguous between causation and explanation⁹ than “cause” is in English,¹⁰ and thus it is in no way surprising that Spinoza’s use of the term displays such ambiguity.

We now see why Spinoza thinks that the causal axiom entails that if x causes y , then x and y can be understood through one another, and that if x and y can be understood through one another, then they have something in common. He believes the former claim because he believes causation implies explanation and he believes the latter claim because he believes that explanation requires conceptual connectedness, presumably because he thinks that causation is intelligible.¹¹ Thus, two things that do not share an attribute cannot cause one another because there is no way of conceiving of them such that their concepts are inferentially connected.

It should be stressed that the claim that causation implies explanation is compatible with modes of different attributes standing in causal relations to one another. It is true that if we conceive of two modes under different attributes, then they cannot causally explain one another. However, Spinoza’s causal axiom only requires that if x causes y , then there is some way of conceiving x and y such that x causally explains y . The modes of one attribute are identical to the modes of every other attribute and thus for any two modes, there is a way of conceiving both under the same attribute, which allows us to appropriately frame causal explanations whenever causal relations obtain.

We can summarize these results as follows. The argument of 1p3 requires us to understand Spinoza’s causal axiom as entailing:

- If x and y stand in causal relations, then x and y are understood through one another.

And given how Spinoza develops his ban on inter-attribute causal explanation in 2p5, 2p6, and 2p7s, we can further interpret 1a4 as entailing:

- If c causes e , then there is some way of conceiving c and e so that c causally explains e .

Spinoza believes that causation implies understanding because he thinks that if one thing causes another, then the one causally explains the other. Explanation generates understanding, and if one thing causes another, then the latter is understood through the former.

It is natural to think that understanding is a relation to a subject. (This point isn’t particularly important for understanding No Interaction, but it will become important when we consider his account of sense perception, adequate cognition of the essence of God, and the parallelism, so it will be useful to start addressing this issue now.) Here is one way that the

claim about understanding entailed by the causal axiom can be reformulated so as to make its relativity to a subject explicit:

- If x and y stand in causal relations, then there is a subject S such that S understands x and y through one another.

But this formulation is unsatisfactory, because in 1a5 Spinoza treats the claim that x is understood through y as equivalent to the claim that x is conceived through y . However, that x is conceived through y does not entail that anyone has ever conceived of x , whereas the above formulation treats “ x is understood through y ” as entailing that someone understands x . (Spinoza does not establish that all modes are conceived until 2p3, by which time he has already argued that infinitely many modes which are conceived through God exist in 1p16.¹²) We can, however, reformulate the principle as follows so that it doesn’t imply that a subject actually understands:

- If x and y stand in causal relations and there is a subject S that understands x or y , then S understands x and y through one another.

This formulation does not have the unwanted consequence that if x is understood through y , then there is someone who understands x . Rather, it merely states that if someone understands (in the sense of grasping a causal explanation) a cause and its effect, then they must understand them through each other.

3. Sense Perception

Another important use of the causal axiom occurs in 2p16, which forms the basis of Spinoza’s account of sense perception (an account I will call “Sense Perception” hereafter). I reconstruct it as follows:

1. The causes of a passive state of the human body are the natures of both the human body and certain external bodies. (2a1)
2. If c causes e and S has an idea of e , then S has an idea of the nature of c that is implied by S ’s idea of e . (1a4)
3. Therefore, if S has an idea of a passive state of S ’s body, then S has an idea of the natures of both S ’s body and certain external bodies that is implied by S ’s idea of the passive state.

Spinoza argues that if we have an idea of a state with internal and external causes, then that idea implies an idea about those causes. When the external world impinges upon us (e.g., by directing light rays through our eyes to our retinas, which subsequently puts our visual system in a certain state), we have an idea of that state. Because that state has causes, by the

causal axiom, we have ideas of those causes, which include the external causes. Thus, we have ideas of the external world insofar as it causes us to be in that state.¹³

In order to understand Spinoza's argument, it will first be necessary to understand some elements of Spinoza's philosophy of mind and his account of intentionality. According to Spinoza, every idea is identical to some body. The human mind is a complex idea that is identical to a complex body, and the parts of the human mind are identical to the parts of the human body. Not only are our ideas identical to parts of our body, but they represent them. This intentionality toward the body is both primitive and direct. It is primitive because it is not analyzable in terms of any other relation. It is direct because it does not obtain in virtue of the representation of anything else. Moreover, for Spinoza, the only thing that the mind can represent in this primitive and direct way is the body to which it is identical.

In addition to this direct and primitive intentionality, Spinoza also holds that there is derived and indirect intentionality. For example, we can represent things other than our own body in virtue of representing our own body when the states of our body have an external cause. Such representation is indirect because it occurs in virtue of the representation of something else (viz., our own body), and it is derived because it occurs in virtue of nonrepresentation relations (viz., causation).¹⁴

In Sense Perception, Spinoza is addressing a special case of indirect derived intentionality: the kind that occurs when the external world causes a state of our body. The causal axiom entails that ideas about effects imply ideas about their causes. Ideas of the states of our body that have external causes imply information about those causes, and thus we automatically represent those external causes by means of representing our body.

There are two things worth noting that will become relevant when we compare this use of the causal axiom with the role the axiom is asked to play in the demonstration of the parallelism doctrine in 2p7d. First, the idea of *e* and the idea of *c* possessed by *S* need not be different ideas. Indeed, it is very natural to read the demonstration as saying that there is a single idea that represents both the effect (the passive state of the human body) and its causes. It represents them both because the idea of the passive state implies truths about the internal and external causes.¹⁵

Second, the idea of the causes (the natures of both the human body and certain external bodies) must be possessed by the same subject that possesses the idea of the passive state. This must be so if 2p16 is to provide an account of sense perception. After all, if the idea of its causes implied by my idea of my passive state was in your mind instead of mine, I could hardly be said to enjoy perception of the external world in virtue of your idea.

At this point, a natural question arises about how a single axiom could support both No Interaction and Sense Perception. After all, causation

between things that don't share an attribute and perception of the external world appear, on the face of it, to be completely different topics. Let us begin by comparing the premises derived from the causal axiom at work in both arguments. The premise in No Interaction is:

- If x and y stand in causal relations and there is a subject S that understands x or y , then S understands x and y through one another.

And the premise in Sense Perception is:

- If c causes e and there is a subject S has an idea of e , then S has an idea of the nature of c that is implied by S 's idea of e .

It is clear that the two premises are not logically equivalent to each other. However, if we help ourselves to equivalencies that Spinoza states elsewhere, then it is possible to see the No Interaction premises as entailed by the Sense Perception premise. The antecedent of the No Interaction premise is " x and y stand in causal relations," whereas the antecedent of the premise in Sense Perception is " c causes e ." The antecedent of the Sense Perception premise is stronger in that it specifies the direction of the causal relation whereas No Interaction is indifferent to the direction of causality. Moreover, Sense Perception requires a consequent that specifies the conceptual relation: the idea of the cause must be implied by the idea of the effect. This is clearly logically stronger than the consequent of the premise of No Interaction, which merely requires that some conceptual connection obtains. This is even clearer when we consider that 1a5 and 2d3 license us to paraphrase the consequent of the No Interaction premise as *either* " S has an idea of x that implies an idea of y or S has an idea of y implies an idea of x ," which is clearly entailed by the Sense Perception consequent: " S has an idea of the nature of x that is implied by S 's idea of e ." Thus, the Sense Perception premise is logically stronger than the No Interaction premise and we can derive the latter from the former.

But is the underlying motivation the same in each case? I believe that the answer is yes. Spinoza's denial of interaction is motivated by the thought that causation implies causal explanation and causal explanation must be framed in terms of concepts that bear inferential connections to one another. Similarly, the account of sense perception is motivated by the thought that representations of effects allow us to infer information about their causes because causes explain their effects. The picture of explanation assumed by No Interaction is entailed by that of Sense Perception. Thus, both arguments can be seen as rooted in the notion that causal explanation allows us to infer information about the cause from an idea of the effect. What is more, the idea that explanation allows us to infer information about the cause from the effect is a natural one. For example, the distribution of characteristics in the result of crossbreeding

pea plants allowed Mendel to infer the existence of genes because the existence of genes explains the distribution. Spinoza thinks that such inferential connections require that explanations are framed in terms of concepts that belong to a single attribute because only such concepts are inferentially connected. Thus, No Interaction and Sense Perception express interlocking perspectives on the relationship between causation, causal explanation, and implication.

4. Knowledge of God's Essence

One of the more striking theses advanced by Spinoza in the *Ethics* is that every idea implies adequate knowledge of God's eternal and infinite essence. (I will call this thesis "Knowledge of God" hereafter.) That is, not only is it possible to know God, but every human mind, and indeed every mind whatsoever, automatically possesses this knowledge. Here, too, the causal axiom is in play. The first stage of the argument comes at 2p45 and can be summarized thus:

1. Every singular thing is causally explained by God insofar as he is considered under the attribute of that thing. (1p15 and 2p6)
2. An attribute expresses the eternal and infinite essence of God. (1d6)
3. If c causes e , then the idea of e implies an idea of c . (1a4)
4. Therefore, the idea of every singular thing implies the eternal and infinite essence of God.

Spinoza next argues (in 2p46d) that such ideas of God's essence are all adequate. Every idea whatsoever implies an idea of God's essence, and, thus, such ideas of God's essence are common to all and "equally in the part as in the whole."¹⁶ What is common to all and equally in the part as in the whole can only be, for Spinoza, conceived of adequately (2p45). Thus, Spinoza concludes, the idea of God implied by every idea is adequate.

On this basis, Spinoza infers (in 2p47d) that the human mind has adequate knowledge of God's eternal and infinite essence. This conclusion sheds light on how Spinoza is using his causal axiom in this context. Recall that the argument for the claim that every idea implies an idea of God's essence has this premise derived from the causal axiom:

- If c causes e , then the idea of e implies an idea of c .

The role this premise plays in eventually securing Knowledge of God requires that both the idea of e and the idea of c implied by it must be in the very same mind. This is because if ideas in the human mind implied ideas of God's essence that were not part of the human mind, then there would be no sense in which the human mind would possess knowledge of God.

Not only must the idea of *c* be in the same mind as the idea of *e*, but there are powerful reasons for supposing that it must be the very same idea. Every idea in the human mind has some part of the human body as its object. Moreover, every idea of the human body implies adequate knowledge of God (2p46). Thus, if the human mind has knowledge of God's essence, then there is an idea that constitutes that knowledge that is identical to some idea of a part of the human body. Therefore, there is at least one idea of a cause (i.e., an idea of God's essence) that is identical to the idea of the effect (i.e., an idea of a part of the body) that implies it. It would be very surprising if there were one part of the human body the idea of which constituted knowledge of God and was implied by every other idea in the human mind. Instead, it would be much more natural to say that every idea implies an idea of God's essence to which it is identical.

5. Parallelism

The last major use of the causal axiom that I would like to discuss is Spinoza's use of the axiom in deriving his famous parallelism doctrine (Parallelism hereafter), which says, "The order and connection of ideas is the same as the order and connection of things" (2p7). From the way Spinoza uses the proposition in subsequent demonstrations, it is clear that he means the causal structure of each attribute is the same.

Because they manifest the same causal structure, there must be the same number of bodies as there are minds. If there were fewer minds than bodies or vice versa, then there would be either unoccupied positions in one of the two structures or leftover minds or bodies that had stood in no causal relations. There can't be unoccupied positions, because that would mean that there were causes without effects or effects without causes. And the existence of leftover bodies or minds would be tantamount to a structural difference insofar as the fact that there are bodies or minds that are not in the structure is a fact about the structure.¹⁷

Moreover, the way bodies and minds exemplify the same structure is constrained, according to Spinoza, by representation relations: every idea represents the body of which it is the structural analog (2p7c). Recall that Spinoza recognizes two resources of intentionality: the direct primitive intentionality that an idea bears to the body to which it is identical, and the indirect derived intentionality that an idea bears toward objects that are distinct from it. Spinoza calls the idea that directly and primitively represents a body the "mind" of that body. As Spinoza's subsequent discussion makes clear (e.g., in 2p7s), it is direct primitive intentionality that constrains Parallelism. If a thing stands in causal relations, then the idea which is identical to it and represents it directly—that is, its mind—stands in those same relations and not another idea that merely indirectly represents it.

As we saw when considering No Interaction, Spinoza denies mind–body causal explanation on the grounds that genuine explanations must be framed in terms of concepts that bear inferential relations to one another and that only concepts that fall under the same attribute bear such relations. And yet, the mind and the body seem tightly connected. When you kick my shin, I feel pain. When I want a drink, I raise my hand to catch the waiter's attention. If mind–body explanation is impossible, why are these events so reliably correlated? Parallelism is meant to answer this question. They are correlated because the causal order exemplified by the mental is the same as that of the physical.

Spinoza's argument for this conclusion is brief, and he cites only the causal axiom in support of it.

2p7: The order and connection of ideas is the same as the order and connection of things.

Dem.: This is clear from 1a4. For the idea of each thing caused depends on the knowledge of the cause of which it is the effect.

One problem with this demonstration is that the causal axiom does not entail the existence of any ideas. It says only that if there is an idea of an effect, then that idea implies and depends on an idea of the cause. Parallelism, however, requires that if there are bodies, then there are ideas. Many commentators, however, have seen 2p3, which says that there is an idea of everything, as supplying the needed premise.¹⁸ Thus, given 2p3, there is an idea of every body, and it implies and depends on the idea of its cause. The resulting argument could be represented as:

1. If a body c causes a body e and there is an idea of e , then the idea of e is caused by the idea of c . (1a4)
2. There is an idea of each body. (2p3)
3. Therefore, a body e depends on a body c just in case the idea of e is caused by the idea of c .

There are at least two problems with this argument. The first is that the argument secures the left-to-right direction of the biconditional but not the right-to-left. For example, the right-to-left direction would be false if ideas of effects can depend on ideas of causes and yet the realm of thought could manifest a different causal structure than the realm of bodies because the effects of some ideas might depend upon the ideas of the causes of their objects *and* other ideas. Yet, such a scenario is not ruled out by either premise of the argument.¹⁹ This problem is, however, orthogonal to our present concerns, and I will set it aside.

More pressing for us is the interpretation of the phrase “the idea of c ” in premise (1). For Spinoza's argument for Parallelism to be cogent, the idea of c must be the idea which constitutes the mind of c (Spinoza is

a panpsychist and believes that every body has a mind²⁰) and which is identical to it. But this requires a very different understanding of the causal axiom than that employed in No Interaction, Sense Perception, and Knowledge of God. In No Interaction, the premise derived from 1a4 is that if c causes e , then c causally explains e . Causal explanation, for Spinoza, requires that if a subject has an idea of an effect, then that idea implies an idea of its cause. But if the cause is distinct from the subject's body (assuming for simplicity an extended cause), then the idea of the cause implied by the idea of the effect will not be the mind of the effect—that is, the idea that directly represents it and is identical to it. Thus, the causal axiom, insofar as No Interaction is concerned, is neutral as to whether the idea of the cause and the idea of the effect are numerically distinct. But if the idea of the cause and the idea of the effect can be numerically identical, then Spinoza cannot derive the conclusion that ideas and bodies are equinumerous from the causal axiom.

Sense Perception raises a similar problem. For Sense Perception to account for our perception of the *external world*, the idea of the cause implied by the idea of the effect must *not* be the idea that is identical to the external cause. The idea of the external cause must be external to our mind and thus cannot be the idea in virtue of which we have sense perception. For example, I am currently looking out my window at a tree. Light rays bounce off the tree, irradiate my retinas, and put my visual system into a certain state. My mind is the idea of my body and, as such, contains an idea of my visual system. The idea of the tree implied by my idea of my visual system is not, however, the idea of the tree that directly represents it and is identical to the tree. Just as the tree is not part of my body, the idea that directly represents the tree is not part of my mind. Thus, Sense Perception demands that the causal axiom is neutral as to whether the idea of the cause and the idea of the effect are numerically distinct.

If the causal axiom by itself cannot deliver numerical distinctness between the idea of the cause and the idea of the effect, does Spinoza have other commitments that could force their distinctness in the case of Parallelism? The identity of the idea of the cause and the idea of the effect is made possible in Sense Perception by the fact that ideas, for Spinoza, can have multiple contents. In Sense Perception, the mind has ideas with multiple contents in virtue of representing states of the body that contain information about the external world. Thus, the idea of the effect and the idea of the cause are one and the same. However, if God's idea of the cause and his idea of the effect could be one and the same idea, as they are in the case of human sense perception, then Parallelism would not follow. For example, it would be enough to satisfy the causal axiom if God had an idea of the state of our visual system and did not have an independent idea of the external factors that explain that state. Thus, there would be fewer ideas than bodies, contrary to 2p7.

We might try to rule this out by appealing to the mind-relativity of content and showing that although the idea of a passive state of our body represents its external causes relative to our mind, those same ideas do not represent those external causes relative to God's mind. This line of defense would start with the observation that, for Spinoza, insofar as an idea constitutes the human mind or part of the human mind, it can have two contents.²¹ The first is the content it has in virtue of the primitive intentionality directed at the object with which it is identical—an intentionality that every idea exhibits. As we saw in our discussion of sense perception, there can also be another content, relative to the human mind, that represents the external causes of the states of the body. However, according to Spinoza, insofar as an idea represents the nature of external bodies in addition to the nature of the body with which it is identical, an idea is inadequate (2p25). No idea, however, is inadequate insofar as it is in God's mind. Thus, ideas have one set of contents relative to the human mind and a different set of contents relative to God's mind.

In the case of sense perception, the idea of the cause cannot be the idea that represents the cause directly and is identical to it, because that would be an idea of an *external* cause. Thus, it must be an idea in the human mind that is identical to the idea of some part of the human body and that directly represents the human body and indirectly represents the external cause. This idea is inadequate because, for Spinoza, an idea is inadequate relative to a mind just in case it has causes that are not part of that mind.²²

One might conclude from this that God cannot have an idea of the external cause of a state of my body by having an idea of my body, because, in the human mind, such ideas are inadequate and all ideas insofar as they are part of God's mind are adequate. But remember that an idea is inadequate relative to a mind just in case its causes are not part of that mind. If God had an idea of, for example, the tree that I am looking at by having an idea of my visual system, then that idea would not be inadequate, because the external cause of that idea would be part of God's mind. Thus, while the idea of the tree would be adequate in God's mind and inadequate in mine, both ideas could be indirect.²³ We cannot, therefore, rule out the possibility that ideas and bodies are not equinumerous on the basis of the mind-relativity of content.

Similar considerations bear on Knowledge of God. As we have seen, every idea in the human mind indirectly represents the essence of God. Moreover, the ideas that represent this essence constitute adequate knowledge of that essence. As we have seen, the most natural interpretation of this doctrine is that every idea in the human mind is identical to an adequate idea of God's essence. Thus, here, too, the causal axiom must be neutral on whether the idea of the cause implied by the idea of the effect and the idea of the effect itself are identical. Parallelism, however, requires that they be distinct, because it requires that the number

of bodies and the number of ideas be the same. Thus, Parallelism needs more than the causal axiom can deliver, even in conjunction with the claim that there is an idea of every body.

6. Implication, Dependence, and the Case for Two Axioms

The problem discussed above with respect to Sense Perception and Knowledge of God points to a related conflict between implication and causal dependence in the causal axiom. The causal axiom says that ideas of effects imply and causally depend on ideas of causes. One notion, implication, concerns rational inference, and another, causal dependence, concerns metaphysical structure. The difference between Parallelism and all the other uses so far considered is that it invokes the relation of causal dependence and not implication, while the others all invoke implication and not causal dependence. The causal axiom, however, doesn't say that cognitions of effects imply *or* causally depend on cognitions of causes, but rather says that every cognition of effects bears *both* relations to cognitions of causes. How do things look if we make both relations salient in every context in which the causal axiom plays a role?

Let's start with Sense Perception. We saw that ideas of states of our bodies with external causes afford us sense perception of those causes in virtue of carrying information about them. Thus, the idea of the effect (e.g., the state of our visual system) is the idea of the cause (the external bodies which affect our visual system). How then can the idea of the effect causally depend on the idea of the cause when they are one and the same idea? There are three main options: (1) The idea of the visual system and the idea of the external cause of its state are one and the same idea. This idea causally depends on itself—that is, it's self-caused. (2) The idea of the external cause is the idea of the object of which it is the external cause and is identical to it. (3) The idea of external cause is neither the idea of the visual system nor the idea identical with the external causes of the state of the visual system but a third idea.

Option (1) is clearly out of the question. Modes are conceived through others in which they inhere (1d5). For Spinoza, one thing inheres in another just in case it is not self-caused.²⁴ Thus, modes are not self-caused. Moreover, option (1) is incompatible with the hypothesis that the idea of the state of the visual system has an external cause. If the idea of the external cause is self-caused and it is identical to the idea of the state of the visual system, then the idea of the state of the visual system is self-caused. But then the idea of the visual system is both self-caused and not self-caused.

Option (2) is ruled out, because, as previously discussed, the idea of the external causes gives us sense perception only if it is part of our minds. But an idea is identical to an external cause only if it is not part of

our minds. Again, on this scenario I would have sense perception of, for example, the tree outside my window because someone else has an idea of the tree, which is clearly an inadequate account of sense perception.

The only remaining option is (3), but there is no plausible candidate for being an idea in our mind that (a) is identical neither to the effect nor to the cause, (b) still represents the external cause, and (c) is such that the idea of the effect depends on it. The effect is a state of the visual system. What other idea in the human body could be the idea of the cause? Perhaps there is a state of the brain not part of the visual system that is an output of the visual system—for example, a state of the prefrontal cortex—that encodes information about the external causes. But if so, it is not the cause of the state of the visual system; rather it is an effect of the visual system. Thus, it fails to satisfy (c); it is not such that the idea of the effect depends on it.

The three options just considered by no means exhaust the logical space. For example, it is logically possible that the idea in the prefrontal cortex and the idea of the state of the visual system mutually cause one another. But this is incompatible with the natural assumption that the kind of causation at issue here is asymmetric. Fire causes smoke, but smoke does not cause fire. There are, no doubt, other logically possible scenarios, but, as far as I can see, none of them are plausible as accounts of sense perception, and so we cannot appeal to them in making the dependence clause of the causal axiom consistent with Sense Perception.

Similar problems arise for knowledge of God's essence in the human mind. The idea which constitutes our knowledge of God must be an idea in the human mind. Spinoza argues that this idea is adequate because it is common to all and equally in the part as in the whole (2p46). This universality entails that every idea in the human mind, and the human mind itself, implies an idea of God's eternal and infinite essence. But every idea in the human mind directly represents a part of the human body, and the human mind itself is an idea that directly represents the human body. For this reason, our idea of God's essence must be identical to some idea of our body. Thus, there is at least one idea in the human mind that both is identical to and implies an idea of God's essence. Indeed, as I argued earlier, the most natural assumption is that every idea in the human mind both is identical to and implies an idea of God's essence. But no idea can both imply and causally depend on an idea of God understood in this way, on pain of self-causation.

These considerations show that the causal dependence clause and the implication clause of the causal axiom are in conflict with each other. Because Spinoza only appeals to implication in No Interaction, Sense Perception, and Knowledge of God, and only appeals to causal dependence in the Parallelism, it would appear that there are not one but two causal axioms that are, in the context of Spinoza's system, incompatible with each other. One axiom says that cognition of an effect implies cognition

of the cause and supports No Interaction, Sense Perception, and Knowledge of God but not Parallelism. Another axiom says that cognition of an effect causally depends on cognition of its cause and supports the Parallelism but conflicts with Sense Perception and Knowledge of God. Spinoza can have, at most, one of these axioms.²⁵

Fortunately for Spinoza, there is a simple solution to this problem. The implication version of the axiom is indispensable to No Interaction, Sense Perception, and Knowledge of God, but the causal dependence version is eminently dispensable when it comes to Parallelism because, as we have seen, the dependence version of the causal axiom, even when supplemented with additional Spinozistic doctrines, fails to secure it. Spinoza, however, has an independent argument for Parallelism that is more successful and does not rely on the causal axiom. In the scholium to 2p7, Spinoza writes:

[W]hatever can be perceived by an infinite intellect as constituting the essence of substance pertains to one substance only, and consequently [. . .] the thinking substance and the extended substance are one and the same substance, which is now comprehended under this attribute, now under that. So also, a mode of extension and the idea of that mode are one and the same thing, but expressed in two ways. [. . .] Therefore, whether we conceive nature under the attribute of Extension, or under the attribute of Thought, or under any other attribute, we shall find one and the same order, or one and the same connection of causes, i.e., that the same things follow one another.

This argument raises many fascinating questions about the nature of the attributes and their relation to the one substance; I cannot, unfortunately, address those questions here.²⁶ It is clear, however, that Spinoza maintains that every idea is identical to some body and that every body is identical to some idea. He infers from this that the order and connection of ideas is the same as the order and connection of things. This is obviously a valid inference and does not appeal to any version of the causal axiom.²⁷

Spinoza cannot have both the implication and the causal dependence versions of the causal axiom. He needs the implication version (for No Interaction, Sense Perception, and Knowledge of God) but does not need the causal dependence version, even for the one doctrine whose argument appeals to it (Parallelism), because he can secure it on an alternative basis (mode identity). It is clear, then, how this tension should be resolved: Spinoza ought to retain the implication version of his causal axiom and relinquish the dependence version.

7. Comparison With Previous Interpretations

Some commentators have thought that Spinoza's causal axiom is restricted in some way. For example, Guérout and Loeb²⁸ have argued

that it is restricted to adequate cognition, and Morrison has argued that it is restricted to immanent causation.²⁹ As Margaret Wilson has persuasively argued, the causal axiom cannot be restricted to adequate cognition, because two of Spinoza's most significant applications of the axiom are found in *Sense Perception*, which concerns inadequate cognition, and *Knowledge of God*, which says that all of our ideas, including inadequate ones, imply knowledge of God.³⁰ My interpretation respects Wilson's insight and is not restricted to adequate cognition.

A more challenging case is Morrison's claim that the axiom is restricted to immanent causation. An immanent cause, for Spinoza, is a cause in which the effect inheres, which contrasts with transitive causes in which the effect does not inhere in the cause. Thus, if a substance causes a mode, the substance is an immanent cause of the mode, and if a mode causes a mode that doesn't inhere in it (e.g., when the external environment causes my visual system to be in a certain state), then the former is the transitive cause of the latter. Such a restriction seems to conflict with *Sense Perception*, but Morrison offers an ingenious reconstruction of it according to which the axiom requires only that we have cognition of the immanent cause of our states—that is, our own nature. Because he thinks that Spinozistic natures include dispositions such as being disposed to be in a certain state only if our environment contains certain features, we can infer information about our environment from our present state and our own nature.³¹ I do not object to this gloss on *Sense Perception*, but I would argue that it does not show that the axiom is restricted to immanent causation. Rather, if correct, it shows that cognition of transitive causes is acquired indirectly by means of cognition of immanent causes. In other words, Morrison's interpretation does not show that Spinoza's causal axiom is restricted to immanent causes so much as it gives an account of how we acquire cognition of transitive causes.

According to Jonathan Bennett, Spinoza's causal axiom is a “version or a part of causal rationalism,” by which he means the doctrine according to which the relation between cause and effect is the same relation that a conclusion bears to premises in a logically valid argument.³² In contrast, on my interpretation, in *No Interaction*, *Sense Perception*, and *Knowledge of God*, the causal axiom entails that if we have an idea of the effect, we can infer what the cause is on the basis of the explanatory connections that obtain between cause and effect, which is compatible with the relationship between cause and effect being different from the relationship between premises and conclusion. This is because, first of all, explanatory inferences need not be underwritten by logical entailments. For example, if the evidence implicates the criminal, we can infer the identity of the criminal from the evidence although it does not logically entail it.³³ Second, logical entailment need not be explanatory, and we cannot, as a general matter, legitimately infer premises from conclusions. For example, $p \text{ \& } q$ entails p but we cannot infer $p \text{ \& } q$ from p .

In another respect, however, my interpretation is similar to Bennett's in that he also claims that there are two distinct versions of the causal axiom. But, on his interpretation, the difference between the two axioms is that one is logical (concerns relations between concepts understood as abstract) and the other psychological (concerns ideas and minds). Wilson complains against Bennett that this begs the question of the difference between logical and psychological entities and relations in Spinoza's philosophy of mind.³⁴ On my interpretation, however, Wilson's scruples are irrelevant, because no matter how the line between the logical and the psychological is drawn, the conflict between implication and causal dependence is irresolvable.

It is often assumed that the causal axiom says that x causes y just in case y is conceived through x . Contrary to this interpretation, Morrison has recently argued that the causal axiom says that x causes y only if y is conceived through x , but it does not say that if y is conceived through x , then x causes y . He further maintains that not only is the claim that conception implies causation not an important doctrine for Spinoza, but he would probably reject it.³⁵ None of my reconstructions of Spinoza's arguments make use of the claim that if y is conceived through x , then x causes y , and thus my interpretation is, to this extent, consistent with Morrison's. And that none of Spinoza's most significant doctrines presuppose that conception implies causation lends some credence to Morrison's claim that if Spinoza does accept that conception implies causation, it is not an important doctrine for him. Moreover, what I take to be the principle motivation behind Spinoza's causal axiom (that causation implies causal explanations and that such explanations license inferences from thoughts about the effect to thoughts about the cause) does not require that it is impossible to conceive of one thing through another unless the former is caused by the latter.

8. Conclusion: Causation, Explanation, and Implication

The underlying philosophical motivations of Spinoza's causal axiom have been a source of controversy among scholars. One reason for this, on my reading of 1a4, is that Spinoza derives two distinct principles from it. One of these principles, the implication version of the axiom, has an important role in Spinoza's system, and the other, the causal dependence version, I have argued, cannot even play the limited role that it is called upon to do.

Not only does the causal dependence version fail to play its role, it is difficult to find any compelling philosophical motivation for it. Apart from Spinoza's mind-body identity thesis, there is no independent reason to think that thoughts about effects are caused by thoughts about their causes. This is the sort of tendentious metaphysical claim for which we would like an argument and not something that even a sympathetic reader is likely to grant as an axiom.

The implication version, however, has a clear philosophical motivation: Spinoza thinks that there is no causation without causal explanation. But in order for these explanations to be perspicuous, they must be framed in terms of concepts that bear inferential relations. Thus, causation implies explanation, which, in turn, implies implication. In other words, if c causes e , then the idea of e implies the idea of c . The concepts that pertain to one attribute bear no inferential connections to concepts that pertain to another; thus, two substances that don't share an attribute cannot causally interact, because the lack of inferential connections between the concepts that apply to them precludes explanations regarding their causal interactions. Similarly, if a state of our body has an external cause, then there is an explanatory relation between them that allows us to infer its cause from the idea of the state. And because we are modes of God, there must be explanatory connections between our minds and God that allow us to infer the nature of God from the nature and condition of our minds.

Spinoza's causal axiom is thus a complex principle that is, in the context of his system, at war with itself. It entails one principle about implication and another about causal dependence. As we have seen, the principle concerning implication is an important doctrine that is essential to No Interaction, Sense Perception, and Knowledge of God and has a clear and appealing philosophical motivation. In contrast, the principle concerning causal dependence fails in the one job it is asked to do—secure Parallelism—and lacks any compelling motivation. What is more, given his other commitments, the causal dependence principle and the implication principle cannot both be true. We must conclude that the clause about causal dependence in the causal axiom was a misstep and Spinoza would do well by rejecting it. An axiom that merely said that cognition of the cause is implied by cognition of the effect would provide Spinoza everything he needs while protecting him from the disastrous consequences of his original formulation.

Abbreviations

References to Spinoza are from Gebhardt (ed.), *Opera*. Translations into English are taken from Curley's translations in Spinoza, *The Collected Works*, 2 vols., with occasional modifications.

Passages of the *Ethics* are cited in the following way:

app	appendix
a	axiom
c	corollary
d	demonstration or definition, depending on context
p	proposition
s	scholium

Notes

1. In his standard translation, Edwin Curley renders *involvit* as *involves*, which is a perfectly acceptable translation of the word. But, as Alan Gabbey has shown, *involvere* was a technical term in philosophical neo-Latin that was synonymous with *implicare*, and thus *implies* is also an acceptable translation (see Gabbey 2008). For reasons that will become clear, I think this more accurately captures Spinoza's intention.
2. 2p7s.
3. For a fuller treatment of this issue, see Lin forthcoming a, chap. 4.
4. See Morrison 2017.
5. See Della Rocca 1996.
6. See Garrett 2017.
7. See Marshall 2009.
8. See Garrett 2017, 22–24.
9. See Carraud 2002.
10. See Davidson 1967; Strawson 1985, 115–17.
11. I discuss these issues in more detail in Lin, forthcoming a.
12. See Morrison 2013, 2.
13. For more discussion of this argument, see Lin 2004.
14. See Bennett 1984, 156.
15. See *Ibid.*; Della Rocca 1996, 48.
16. 2p46d.
17. Morrison offers an interesting series of arguments for the conclusion that, for Spinoza, the sameness of the causal structure of things implies that if things are ordered in some way, then their corresponding ideas are ordered in the same way, but it does not imply that if ideas are ordered in some way, then things are ordered in the same way. In particular, Morrison suggests that 2p7 leaves open the possibility that there are more ideas than things, as well as that there are more connections between ideas and things. (See Morrison 2013, 12–14.) With respect to the possibility that there are more ideas than things—the more important claim for my argument here—I believe that this is ruled out by 2p8c, in which Spinoza denies the possibility of the nonexistence of ideas that represent certain things on the basis of the nonexistence of those things by appeal to 2p7. For Morrison's position to be correct, ideas that didn't represent anything would have to be compatible with 2p7, which I take to be un-Spinozistic. This is not to say, however, that I take representation to be sufficient for mentality (see Lin 2017).
18. Bennett 1984, 130; Della Rocca 1996, 22–23.
19. Della Rocca 1996, 23.
20. See Lin forthcoming b.
21. Here I am relying on Della Rocca 1996, chap. 3.
22. 2p24d.
23. Della Rocca claims that God does not have ideas that represent indirectly, but his arguments presuppose the parallelism and thus would beg the question under discussion. See Della Rocca 1996, 44–46.
24. 1d3, 1d5, 1a1, 1a4, and 1p4d.
25. Although she doesn't develop the observation, Margret Wilson is perhaps the first to suspect that tension between the implication clause and the dependence clause might prevent a unified interpretation of 1a4. See Wilson 1999, 160.
26. See Lin forthcoming a, chap. 4.
27. Yitzhak Melamed argues that there are two parallelism doctrines: one presented in 2p7 that concerns things and ideas and one in 2p7s that concerns

modes of different attributes but not modes of the same attribute. If this were so, then 2p7s cannot be used to rescue the first parallelism. But Melamed's interpretation is not correct, because Spinoza applies 2p7s to modes of the same attribute in 2p21s. See Melamed 2013, chap. 5.

28. Guérout 1968, vol. I, 96–97; Loeb 1981, 160.
29. See Morrison 2015.
30. Wilson 1999, 158.
31. Morrison 2015, 57–62.
32. Bennett 1984, 30, 127.
33. See Garrett 2017, 195.
34. Wilson 1999, 154.
35. Morrison 2013, 2.

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