

The Possibility of Interactive Dualism in a Causally Closed World

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Abstract

The causal closure principle (CCP) and the arguments that stem from its numerous variations pose a significant threat to the possibility of mental causation. There are however dualistic theories that can answer this threat. Lowe's non-Cartesian substance dualism is one of them. In this thesis, I will follow his treatment of the CCP in order to reconstruct a working definition of mental causation. This definition is still susceptible to some physicalist arguments that show the incompatibility of mental causation and physicalism on a more general level. By treating these arguments, the main conviction on which the physicalist relies will be laid bare, namely the reliance on the fact that empirical research and data will be sufficient to paint a complete picture of the world. By taking a stand against this belief, I will ultimately argue that mere existence of mental phenomena implies mental causation, and that the empirical standard purported by the physicalists is ill suited for the research on mental activity.

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Introduction

One does not have to look further than Dick Swaab's (in)famous book "*Wij zijn ons Brein*" to understand that the situation of the status of our mind is a dire one. Many scientists and a large part of the general population seem to have given up on the idea that the mental has any place in our (physical) world. In contemporary philosophy of mind, there is a tendency for authors of different backgrounds to lean towards reductive or non-reductive physicalism; the view that everything is or supervenes on the physical. The adoption of this doctrine has important consequences for the relationship between mind and body. It implies that the mind and mental phenomena can have no effect on the body and physical phenomena. Physicalism deprives the mental from its causal powers.

An attempt to let the mind transcend an epiphenomenal or supervening status, I will defend a dualistic position along the lines of Jonathan Lowe's non-Cartesian substance dualism, which entails the interaction between the mental and the physical. Such an interaction is impossible according to physicalism. This friction between the physicalist stance and the interactive dualist stance on mind-body interaction will be the main subject of my thesis.

While I do not entirely agree with Lowe's theory, his treatment of the Causal Closure Principle (henceforth: CCP) is a valuable one for any kind of dualistic position. This physicalist principle serves as the basis for the leading argument against the causal efficacy of the mental. In short, the principle tells us that the physical world is causally closed. All physical events have sufficient physical causes, or, formulated more strongly: no physical event has a cause outside the physical domain. There is no place for mental events to have any effect on or be the cause of anything physical.

The main part of the thesis will follow Lowe's argumentation against several differently formulated CCP's. Doing so will result in a definition of mental causation. I will introduce some relevant physicalist positions and arguments to create a context in which I can point out some inadequacies in Lowe's view and also enables me to address and reply to the underlying motivation of the physicalists. This paves the way for my own argument against this motivation, which I will identify as the urge to rely solely on empirical data, with which I will attempt to show the necessity of mental causation when assuming the existence of mental phenomena.

In order to show how Lowe's theory differs from and improves upon other dualistic theories, the first chapter will serve as a short introduction to the main principles and versions of dualism. The second chapter continues by introducing the concept of mental causation and treats the problems it encounters in dualistic theories. Subsequently I will introduce the CCP and the structure of the arguments based on it in the third chapter. Following Lowe, I will

consider different possible formulations of the principle that vary in strength. After having finished the third chapter, with Lowe's reconciliation of mental causation and the CCP in terms of 'fact-causation', the fourth chapter treats two physicalist retorts to the implications of fact causation which potentially pose a threat to this conclusion. These arguments will form the context necessary to introduce my own view in the fifth chapter, which will lead to some conclusions about the manner in which physicalists attack dualism and mental causation in particular.

1. An Introduction to Classic Forms of Dualism and NCSD

To start, I briefly summarize the varieties of dualism categorized by their ontological classification. As my main concern lies in the varieties of (non-)interaction of dualistic theories, I will not delve into the ontological details of the different theories. However, it is important to understand what kind of perspectives one can assume towards dualism and why it is not (as) relevant for my thesis. Moreover, Lowe, in his book *Personal Agency: The Metaphysics of Mind and Action*, does take a particular stance in the ontological debate and, as I will make use of some of his arguments, I feel compelled to render his position as complete as possible.

The three types of dualism I will touch upon are predicate, property and substance dualism. All forms separate the physical and the mental, the body and the mind, in some way. The first-mentioned theory holds the weakest claim of the three: it claims that mental predicates are necessary for a complete description of the world, thereby claiming simultaneously that they are not reducible to physical predicates¹. For instance, the physical vocabulary may describe adequately how a thought or desire in a person came to be, but the meaning or intentional content of that mental event is beyond its reach². Mental predicates are necessary to complete the worldview. Since predicate dualism does not make claims about what is actually in the world, but only concerns itself with correctly describing it, its reach does not extend beyond predicates in our language. Therefore, the theory is for the most part irrelevant for my discussion on mental causation.

The remaining two types of dualism posit that there are different *kinds* of properties or substances and, by doing this, make an ontological claim. Property dualism holds that physical matter can have two types of properties: physical or mental. The brain for example has a shape, size, weight and other physical characteristics, but apart from that, it also has properties, mental

¹ Robinson, "Dualism", §2.1

² Davidson, "Mental events (1970)," p. 218

ones, that are required to form a consciousness. A property dualist could therefore say that studying the physical and mental properties of the brain would eventually unlock the secrets to the human mind³. The substance dualist however would not agree. By postulating that the mind is a completely different substance than the body there is no way that investigating the brain, a wholly physical material thing, would help us to understand consciousness⁴. Either way, both theories require a new categorisation of mental phenomena: the mind and the body are two separate realms.

By creating this divide, the necessity arises to describe the relation between the two realms. Again, we have three main options to choose from: interactionism, epiphenomenalism and parallelism. The first of these commits itself to the possibility of two-way causation between the physical and the mental. Physical events can be the causes of mental events and vice versa. Epiphenomenalism on the other hand restricts the causation between the two realms to a one-way relation. The epiphenomenalist holds that mental events can have no effect on the physical, while physical events can interact with the mental. The third category denies any form of interaction between the two realms. Like the name implies, physical and mental events exist only parallel to each other; they co-occur but cannot influence each other.

Jonathan Lowe's theory can be understood as an interactive form of substance dualism, which he calls non-Cartesian substance dualism (NCS). The substances postulated by Cartesian dualism are the soul and the body and each of these has a unique, fundamental property the other lacks. The mind has thought and consciousness while the body is characterized by spatial extension. This is problematic when trying to formulate an interactionist theory. How can we understand interaction between two substances that have two completely different modes of being? How can something unextended interact with the material and vice-versa? Lowe therefore posits a different sort of substance than the Cartesian soul: a person (or self). The main difference is that persons/selves possess physical characteristics⁵. The chief principle, from which NCS departs, is that selves, self-conscious subjects of experience and agents of intentional actions, are not identical with their bodies. However, while agreeing with Cartesian dualism that the self is wholly distinct from the body, NCS does not insist that the self is entirely separable from anything spatially extended⁶. Thus Lowe allows, or even necessitates, that the self has spatial properties (like shape, size, etc.).

³ Robinson, "Dualism", §2.2

⁴ Robinson, "Dualism", §2.3

⁵ Lowe, "Non-Cartesian Substance Dualism and the Problem of Mental Causation," p. 5-6

⁶ Ibid. p. 8

The argument that Lowe presents as the strongest in favour of this central claim, that the self is not identical with its body, is what he calls the “unity argument”. This “unity” comes from the first premise of the argument: I am the subject of all and only my own mental states⁷. The self, thus understood, is the unifying factor of these mental states, making it the unique subject of a particular set of experiences. The second premise reads as follows: “Neither my body as a whole nor any part of it could be the subject of all and only my own mental states.”⁸ The conclusion that must follow from the two premises is quite clear. The self is the unique subject of a particular set of experiences and the body, or a part of it, *cannot* be the subject of that particular set. Ergo, the self cannot be identical with its body or any part of it.

The first premise being a self-evident truth for Lowe⁹, he acknowledges the second one to be crucial and in need of a defence. First, let us dissect the second premise and focus on the possibility whether the body as a *whole* could be the subject of *all* mental states of a particular self. An important observation to make is that the *wholeness* of my body is not necessary for me to experience all individual mental states I have¹⁰. The loss of a part of my body can have the consequence that I cannot experience the mental states linked to that specific part, but it is unlikely it will affect all my mental states. For example, missing an arm might cause me to not be able to feel it anymore, but it does not influence the mental states that are caused by my other body parts. On the other hand, the possibility exists that I will still feel my arm, and therefore still have mental states normally caused by the arm, when I would suffer from phantom pain¹¹. Lowe uses these examples to come to the following conclusion: “[...] no entity can qualify as the *subject* of certain mental states if those mental states could exist in the absence of that entity.”¹² It seems that a great part (even *all* in some cases) of my mental states can exist without the wholeness of my body, thus disqualifying the *body as whole* from being the subject of all of my mental states¹³.

⁷ Lowe, *Personal Agency*, p. 96

⁸ Ibid.

⁹ Lowe gives his more extensive definition of the self in his book *Subjects of Experience* (1996) (chapter 2 in particular), in which he also shows in detail why it is necessary for the self to be a simple, that is non-composite, substance. However, for the sake of the flow of the argument here I will not delve deeper into these considerations.

¹⁰ Lowe, *Personal Agency*, p. 96

¹¹ Ibid.

¹² Ibid.

¹³ Here the objection may be raised that this argument is based on the assumption that the body as a whole would cease to exist when it would lack a certain part; making every part of the body essential. Lowe counters this objection by supposing two objects: the body as a whole, B, and the body missing some part, O. Furthermore, there are thoughts, T, that do not depend on the part that O misses. When choosing which one of the objects can be regarded as the subject of T, there would be no way to prefer the one above the other. It must be concluded that either both or neither are the subject. The first option is impossible because B and O are numerically different. Thus neither B or O are the subject of T and therefore the self is not identical with either of them. Lowe, *Personal Agency*, p. 98-99

However, is it possible that a *part* of my body is the subject of all of my mental states? Surely, the absence of this part would have to cause the immediate loss of all mental states. The most obvious candidate therefore is the brain. Without my brain I cannot experience any mental states; without the brain as a *whole*¹⁴. Now the argument used earlier against the suggestion that my whole body is the subject of all my mental states can be recycled to show that my brain as a whole is also unqualified to be such a subject. Although mental states do depend on the brain and if it were destroyed all mental states would cease to be, it is not something with which the self can be identified, just as it cannot be identified with the body as a whole. After all, it is conceivable that some parts of the brain can be removed without thereby erasing all of mentality (or even any brain functions).¹⁵

2. The Original Problem of Mental Causation

Now that we have a firm grasp of Lowe's theory, it is possible to examine whether mental causation is a possibility in NCS: the two substances have been defined, shown to not be identical to each other and they retain a common ground by virtue of both being spatially extended.

As briefly mentioned earlier, a particular difficulty for Cartesian dualism in respect to mental causation is the fact that it is a mystery how something that is by definition non-physical, the soul, can have any causal impact on the body. Lowe's attempt to circumvent this problem finds its basis in the fact that both substances in his dualistic theory have physical properties. Therefore, the *prima facie* impossibility of the interaction between the two substances is explained away by this common ground. However, the question of how interaction between the two substances works remains.

The issue becomes most apparent in the attempt to reconcile the bodily and the mental perspectives on the causality of physical action. On the one hand, we have the disunified and ramifying causal chains that are ongoing in the body and on the other hand, we experience intentional and unitary mental acts¹⁶. In the case of a bodily movement, introspectively the mental act of decision seems a singular occurrence that initiates the intended movement. At the same time, a complex combination of neural and other bodily events occur that ultimately appear to cause the particular movement. Is it possible that there are two explanations for the

¹⁴ Ibid. p. 97

¹⁵ Robert B. Glassman, "An Hypothesis about Redundancy and Reliability in the Brains of Higher Species," 276-277.

¹⁶ Lowe, Non-Cartesian Substance Dualism and the Problem of Mental Causation, p. 11

occurrence of the same event? According to Lowe, NCSD enables us to adopt both the mental and the physical perspective without reducing the one to the other. The solution lies in the particular way the perspectives causally explain the occurrence. They differ in the question they ultimately answer. When asking someone why his or her arm moved, his or her answer most likely would come down to: "because I wanted it to". While inquiring about how the arm had moved, would probably result in a more biologically focused answer. The act of choice explains *why* the intended motion occurred while the bodily events explain *how or in what way* it happened¹⁷.

In order to show that mental events are not identical to physical events, Lowe continues this line of thought by following up with a counterfactual-based argument. The condition he uses for a counterfactual to evaluate whether it is considered to be true is the following: "A counterfactual of the form 'If it were the case that *p*, then it would be the case that *q*' is said to be true if and only if, in the *closest* possible world in which *p* is the case, *q* is also the case"¹⁸. The 'closest' possible world is further defined by him as the world where *p* is also possible but differs minimally from the actual world.

Lowe starts the argument by supposing that a physicalist proposes that the choice to raise one's arm is identical with a neural event which is demonstrably the cause of this bodily movement¹⁹. The physicalist then must allow the physical and mental activity to precede the intended arm movement (even if it is just for a fraction of a second) and, being identical, he must suppose they happen at the same time. Following these statements, Lowe considers this counterfactual: "If [the neural event] *N* had not occurred, then [the bodily movement] *B* would not have occurred."²⁰. This must evidently be true, since the neural event was proposed to be the demonstrable cause of the bodily movement. But what would have occurred instead of *B*? According to how counterfactuals must be evaluated we must look at the closest possible world in which this specific neural event does not happen. Considering what we know about the neural causes of such physical events, *N* must be complex, an aggregation of a large number of other neural occurrences. This means that in the closest possible world a neural event would happen, but it would consist of a slightly different aggregation. Such a difference cannot be expected to cause a wildly different or no bodily movement. So, what would occur instead of *B* is a movement that would only differ slightly from *B*, caused by a very similar neural event.

¹⁷ Ibid. p. 12-13

This also matches Anscombe's approach in her book *Intention*.

¹⁸ Lowe, *Personal Agency*, p. 103

¹⁹ Ibid.

²⁰ Ibid. p. 104

Now, what would happen if not N but the mental event, the choice to raise the arm, did not occur? The most likely outcome would be that no arm movement would occur. Because, if an agent does not make the decision to move he won't move. The physicalist could argue that we again have to look at the closest possible world and that there a mental act would take place which differs only very little from the actual act, analogous to the neural event. However, Lowe responds that this would be an incredible situation. Mental acts are, as opposed to (most) neural events, simple and unitary events. There are, simply put, not enough variables present in such an act to create such a small difference between the two decisions. Furthermore, the contents of mental acts, which defines them for the most part, lack a certain *fine-grainedness* that could warrant a similarity of the same level that N and its counterpart have²¹. In short, even if another mental act would occur instead of the original decision, it would cause a very different motion to happen. Consequently, the absence of the neural event and the absence of the mental event have different outcomes. If N does not occur a nearly indistinguishable bodily movement would be caused by a similar neural event, while in the latter case there would be no (or a wildly different) movement. This shows that the two cannot be identical to each other²².

Now that the separateness of the mental and the physical has been shown we can come to the following conclusion. Because the presence or absence of the mental event has an effect on the physical world (the occurrence or non-occurrence of a particular physical event), it must be so that the mental has causal powers (at least to some extent).

3. Causal Closure Principles and Mental Causation

With the conclusion of the last chapter, we have arrived at the point where the interaction between the two kinds of substances must be examined. However, although Lowe has shown with his theory that it must be so that the mental has some effect on the physical world, we still require an answer to one of the main arguments of the physicalist against the possibility of mental causation. This argument finds its basis in the causal closure principle (CCP), which tells us, roughly put, that everything that happens in the world is the effect of physical occurrences only²³. Hence, the question is raised what the causal role could be for mental events. After all, the principle states that all the causes are of a physical nature, creating a (seemingly) closed system of cause and effect. Such a closed physical system is important, says the physicalist, because it enables us to have extensive knowledge of the world. We can gather empirical data

²¹ Ibid, p. 106

²² Lowe, "Non-Cartesian Substance Dualism and the Problem of Mental Causation," p. 14-15

²³ Lowe, *Personal Agency*, p.11

about physical cause and effect relations and be assured that these measurements are complete and help us understand the physical processes. If mental occurrences interfered with these kinds of processes, there would be hidden and unmeasurable data, making it unlikely for us to understand them. The fact that we are able to do this and furthermore successfully predict outcomes of physical processes drives the physicalist to claim that even if mental causation could be possible, all mental events would be identical to physical events²⁴. Otherwise, they would either obscure the workings of physical processes or overdetermine occurrences that already have physical causes. This is, in fact, the conclusion the causal closure argument eventually produces.

Now, in order to discuss the argument more in depth I will follow Lowe's reasoning and approach. The CCP has many different possible formulations, some stronger, some weaker, and as such there is a whole family of possible causal closure arguments. To come to a suitable candidate for discussion first we must consider different variations of the principle.

The family of arguments based on the CCP has, according to Lowe, three main premises²⁵:

1. The (particular) causal closure principle
2. At least some mental events are causes of physical events
3. Physical events caused by mental events are not causally overdetermined

The conclusion that follows from these premises generally is that (at least some) mental events are identical with physical events. The challenge of formulating an adequate CCP as a first premise lies in the degree of strength of the claim it makes. When it is too strong, the argument eventually just begs the question; the third premise would become obsolete and the asserted principle would just become the conclusion. Another factor that limits its strength is the need to have some empirical support. If the claim it makes would lack empirical evidence, it would lose its persuasive force because it was designed exactly to defend the statement that the physical world is a comprehensible, measurable, closed system²⁶. An example of a CCP that is so strong it begs the question would be:

(A) No physical effect has a non-physical cause²⁷.

When combining (A) with the statement that some mental events cause physical events we can already conclude that these mental events must be identical to physical events without

²⁴ Lowe, "Causal Closure Principles and Emergentism," p. 572

²⁵ Lowe, *Personal Agency*, p. 42

²⁶ *Ibid.* p. 43

²⁷ *Ibid.* p. 44

employing the third premise. (A), being demonstrably too strong, would not be suitable to attack the interactive dualist position.

The following is a version of the CCP that is too weak:

(B) Every physical event which has a cause has a sufficient physical cause²⁸.

When starting out with this premise the causal closure argument cannot arrive at the intended conclusion (the identity of physical and mental events). By merely stating that a physical event needs a *sufficient*²⁹ physical cause, the dualist can employ the transitivity of causation to show that a mental cause does not necessarily overdetermine an event. If the mental cause has a causal history that leads back to a physical event, then the effect has a sufficient physical cause without it being overdetermined. So, this does not demonstrate in any way that mental events must be identical to physical events³⁰.

These examples show that to formulate an adequate CCP one must carefully navigate between strong and weak claims so as not to run into the same pitfalls. Now, one school of physicalists considers probabilistic versions to avoid such complications and also to accommodate quantum theory, something that the “standard” CCP is not compatible with. However, if I were to treat these in more depth, I would have to expand upon the workings of mental causation in a quantum theory. This would become a digression into, for my purpose, irrelevant topics and introduce many complications. For this reason, I will not delve deeper into probabilistic versions of the CCP.

To escape the transitivity problem, the physicalist must formulate a stronger CCP than (B) while also avoiding begging the question. Perhaps the following will do:

(C) At every time at which any physical event has a cause, it has a sufficient physical cause³¹.

This version neutralizes the transitivity problem because if there would be a mental cause, there would have to be a physical one at the same time. It would cause the effect to be overdetermined. However, (C) neglects the possibility of simultaneous causation, the contemporaneousness of cause and effect³². If this principle holds, the possibility exists that the physical cause P_0 at time t_0 not only causes P_1 at t_1 but also mental event M at t_0 (via

²⁸ Ibid. P. 46

²⁹ Ibid. p. 46

Here I use the definition of “sufficient” Lowe gives: “a non-empty set of physical events, each of which is a cause of the given event and all of which jointly causally necessitate the occurrence of the given event”.

³⁰ Lowe, “Causal Closure Principles and Emergentism,” p. 576

³¹ Lowe, *Personal Agency*, p. 48

³² Ibid. p. 48-49

simultaneous causation). P_0 and M jointly are a sufficient cause for P_1 without overdetermining it. In the absence of either P_0 or M , P_1 would not have occurred.

But simultaneous causation is a contested notion, so the physicalist may deny it. Yet this formulation of the principle would still fail on another front; it would be too strong. If we would consider a dense temporal ordering (the assertion that between two times there is another time) it would give rise to the following issue³³. Suppose that physical cause P_0 at time t_0 is empirically proven to be a sufficient physical cause for the physical event E at t_1 . It does this in part by causing a mental event M at a time between t_0 and t_1 . This would mean that as stated by principle (C) at this intermediate time E would again have a sufficient physical cause.

According to Lowe this supposition would be “in advance of any empirical evidence in support of [it] [...]”³⁴. Already this lack of empirical support would cause the principle to be too strong according to the aforementioned standards. This becomes even more blatant the closer the occurrence of the mental event comes to time t_1 . If the difference between times would near 0, (C) has to insist that in an infinitesimal amount of time before E happens it still has a *sufficient* physical cause.

While (C) fails to find sufficient empirical support, it is not too strong to beg the question, in the way (A) does, and still seems to lead to the conclusion of the causal closure argument. However, to make his position as convincing as possible Lowe wants to show that mental causation would be compatible with a CCP that is even stronger than (C). For that purpose, he formulates this version of the principle:

(D) Every physical event contains only other physical events in its transitive causal closure³⁵.

The ‘transitive causal closure’ refers to the causal history of a particular event P that branches out backwards in time. Practically this contains every direct cause, the cause of that cause, etc., that leads up to P . Thus, (D) states that there are only physical causes in the causal history of physical events. In this respect (D) is stronger than (C) because it explicitly prohibits the loophole that was created by simultaneous causation. If only physical causes are allowed in the transitive causal closure of an event, even a simultaneously caused mental event could not be a partial cause of a physical event. However, (C) does claim that physical events have sufficient physical cause and (D) makes a weaker claim on that score. On the other hand, this way it is

³³ Ibid. p. 50

³⁴ Ibid. p. 51

³⁵ Ibid. p. 53

empirically better supported and could even comply with quantum theory and the aforementioned probabilistic physics.

Now that we have arrived at a CCP that (1) has the potential to lead to the conclusion that (some) mental events are identical with physical events, (2) does not beg the question and (3) does seemingly not allow mental causation in the usual sense, the challenge is to show how mental causation can be compatible with this principle after all. It seemingly precludes all options for the mental to have a causal role. Lowe escapes this conclusion by introducing the notion that mental events do not directly cause physical events, but can make sure that the events have certain effects. This indirect influence on causal interactions is based on the distinction, assumed by Lowe, between event causation and fact causation. Fact causation is best understood as the creation of a state of affairs (or circumstances or a fact) that primes some physical events to be the cause of other physical events. It creates the potential for a particular causal chain to be actualized³⁶. So, a mental event could bring about the situation that causes physical events to behave in a certain way. A theological example Lowe uses concerns the problem of the first physical event. In a world where every physical event has a sufficient physical cause (and no backward or simultaneous causation is possible) there would be no beginning of time or a first physical event. The causal fact that enables such a world to be actual is the will of God to let it be actual. He fills the world with physical causal facts that cause the right circumstances for the occurrence of a first physical event. This would be the manner in which Lowe envisages mental causation. The mental is now reconciled with the CCP by interacting with physical events without directly causing them. Therefore, mental causation must be understood as the causation of physical causal facts³⁷.

4. Some Issues with Mental to Mental Causation

It seems that by conquering the CCP and the arguments based on its many variations Lowe is close to justifying the possibility of mental causation in his NCSD. However, while fact causation seems to be a safe approach it remains a form of causation. There are certain requirements a causal relation has to meet and it remains susceptible to some critiques, like Davidson's mental anomalism. One such requirement would stem from the nomological character of causality, which entails that causal relations have to be supported by laws that govern the

³⁶ Dretske, "Mental Events as Structuring Causes of Behaviour," p. 122-125

Lowe compares his idea to Dretske's proposal in his paper. The way I explain Lowe's position is inspired on that paper and although it is nowhere explicitly formulated as I have recounted, I think my interpretation bridges the gap between the two.

³⁷ Lowe, "Causal Closure Principles and Emergentism", p. 583

concerning events. As fact causation is a special kind of causation these issues are better treated in a more general context. That is why I will now concentrate on mental to mental causation.

Lowe defined what mental causation is in relation to physical events. Now the question arises what defining mental causation in that way means for mental to mental causal relations. Can a mental event directly cause another mental event or does it have to cause causal facts to create the right circumstances for a physical event to cause one?

I would like to start by considering the former suggestion. The CCP does not directly rule out the possibility of mental to mental causation. One mental event can cause another without disturbing the causal closure of the physical world. However, as said earlier, mental events can have an influence on and interact with physical events. If mental events could cause other mental events, and in this way give rise to longer causal chains consisting of solely mental causes, this could eventually lead to inexplicable physical processes. Consider a situation in which only the last mental event in such a long chain causes a physical causal fact. Would the process where the influenced physical event is a part of still be intelligible? Just as was the case with “normal” mental causation (where mental events could be the direct causes of physical events), this version also disrupts the closed physical system which is of great importance for the understanding of the world according to the physicalist. So, the possibility of mental to mental causation does not immediately contradict the CCP but it does undermine the goal it was designed to defend.

In an attempt to save mental to mental causation while also keeping all physical interactions intelligible one would need strict laws that can describe how mental interactions exactly work. If this were feasible, and mental causation would be predictable and consistent, even long mental causal chains would not hinder our ability to acquire certain knowledge about the physical from empirical data. Are such strict laws feasible? According to Donald Davidson and his principle of the anomalism of the mental, they are not. In short, this principle directly objects to the possibility of strict laws that can predict or explain mental events³⁸. Davidson departs from the idea that at least some mental events are the causes or effects of physical events. Although mental causation as I have described earlier in the context of the CCP does not entail direct causation of physical events there is an interaction between the mental and the physical. This interaction is sufficient for the sake of Davidson’s argument. Furthermore, physical events are capable of causing mental events. This means that unlike the physical the mental cannot be regarded as a closed system; the physical events act as interferences in mental processes. The fact that it is possible to formulate strict laws for the physical realm hinges for a great part on

³⁸ Yalowitz, “Anomalous Monism,” §4

the fact that it is a closed system. This promotes the comprehensibility of a system and is a suitable environment in which predictions can be made and tested. Because the mental lacks this closedness it is highly improbable that the mental can provide a suitable framework on which strict laws can be based³⁹. There are too many interferences that are not part of the mental system that if any laws were derived from it, the predictions and explanations coming from those laws would almost certainly be untrue. Therefore, mental to mental causal relations would not qualify to be described by strict laws. Which would mean that their interaction with the physical world can still be seen as a hindrance for its comprehensibility.

Direct mental to mental causation thus does not seem the way to go; at least not as long as mental phenomena also interact with physical occurrences, which is what I am defending. So, let us now turn to the second option, the causation of mental events via physical events. As said before, this would entail the causation of physical causal facts by mental events that prime physical events to cause new mental events. A first observation is that, when accepting this suggestion, mental events would be wholly dependent on physical events. The mental can only be (directly) caused by the physical. Again, this warrants the question whether some kind of laws are needed to govern the interaction between the mental and the physical; and again, one could argue that, without a proper understanding of the workings of mental causation, it would blur our comprehension of physical processes. On the other hand, this time there is only one mental phenomenon at a time that engages in an interaction, not a whole (obscure) chain of events. Furthermore, on at least one side of the interaction there is always a physical event, which makes potential empirical data more easily accessible. All in all, this second option seems a more likely candidate for understanding mental to mental causation without having it disrupt empirical comprehensibility of the physical. Although it still has its fair share of drawbacks.

5. An Intuitive Defense of Mental Causation

Instead of getting lost in a tangent about the precise workings of mental causation, I would like to direct my attention to another issue. My main goal in treating these arguments raised against mental causation was to give a sketch of the physicalist's general train of thought; the ideas from which they depart. As seen, many (if not all) arguments against interactive dualism eventually stem from the inability to have access to empirical data about mental (psychological) activity. I wonder whether this is justified and why this burden of proof never lies with the physicalists themselves. The idea that the purely physical world can yield us a complete picture

³⁹ Davidson, "Mental Events (1970)," p. 223-224

lies at the heart of the physicalist doctrine. However, is this really a certainty? I would like to delineate an argument based on our first-person intuitive experience with mental events against this idea.

Below, I will show that to oppose it, it is enough to demonstrate the presence of mental events. The latter is not something that is hard to do, I reckon. In daily life we all experience that our actions are preceded by choices, thoughts, reasoning etc. This category of mental phenomena is generally recognised as a guiding whole; it has intention and content. These last two properties are important in creating a distinction between the physical and the mental. We do not ascribe intention to a purely physical subject and while I think of the colour “red” the thought itself is not red, but it does refer to “red”. These capacities are unique to mental phenomena. A red object could never refer to something blue and a falling object does not *intend* to move. When I will to raise my arm I have a certain goal and movement in mind; intention and content respectively. The physical processes that follow do not have this focus; they are ‘blind’. The neurons that fire and the muscles that contract in order to raise my arm have no knowledge of my intentions and do not know the ‘content’ of the eventual movement. However, the physical part of the raising of my arm does explain *how* I move, while the mental phenomena answer the question *why* I move. This is a notion Lowe introduces, as I mentioned in the second chapter, and it holds an intuitive strength. The divide between physical and mental we experience is a strong indication that we actually have a dualistic nature.

This argument that recounts our experience with mental phenomena also illustrates two reasons why we should be committed to their existence and thereby to mental causation. First, we do not only experience that our mental activity is translated to physical events, it is a necessity for the possibility of agency. We presuppose and use human agency to understand the world around us and attribute responsibility to these agents based on the assumption that their actions are intentional⁴⁰. It is a deeply ingrained and important notion for the understanding of human life. Secondly, the acquisition of knowledge, when regarding it as thought content, must be based on our perception of physical objects. Otherwise, empirical knowledge would not be possible, which is something the physicalist could not accept. Yet, perception or the interpretations of our perceiving itself are also mental concepts

It is quite clear that we must commit to at least the existence of some mental phenomena, if not already some form of mental-physical interaction. However, as mentioned earlier, I think the presence of the mental phenomena would already be enough to proof the latter statement. The argument I want to present draws heavily on the theory of evolution, and involves, in particular

⁴⁰ Kim, *Mind in a Physical World*, p.31

the evolution of our cognitive abilities. Through the course of the evolutionary path of humans, from the prehistoric age until now, our cognitive abilities kept on developing and becoming more acute. Especially if we assume that we are ultimately descended from apes. In a purely physical world it would be hard to defend why that is. The way organisms evolve warrants the development of physical traits that help the organism to survive. However, if psychological, cognitive, traits also evolve, there must exist some causal interaction between these mental traits and the prolonged survival of the organism. For example, the emergence of introspection, the ability to perceive one's own mental processes, does not make much sense if the organism in question could just as well survive solely by the grace of his physical attributes. There would be no evolutionary justification if there were no interaction between the mental and the physical⁴¹.

Finally, I would like to return to the question whether it is justified to assume that the examination of the physical world would ultimately give us a complete understanding of the world. While I will not claim that this is an inherently inconsistent view, the main problem that I have with this notion is that all the empirical research we conduct about the physical world, but also the mind, is done with equipment and instruments that can only measure physical occurrences. It seems obvious to me that if we are searching for something like consciousness, thought contents or other mental activity, we should not solely rely on the investigation of the physical. Admittedly, there are (yet) no proofed and reliable ways to research the mental realm directly, but what we are trying to do now is akin to proving the existence of extra-terrestrial beings by finding any traces they could have left on earth. It is not impossible that such research would eventually yield positive results, but it is highly unlikely⁴².

All in all, this empirical bias that the physicalists employ seems a double-edged sword. It enables attacks on the dualists, but it misdirects research on the mental realm. In the first place it causes a disregard of our first-hand experiences with mental events. Because of the bias introspection just is not taken seriously as data. Secondly instead of finding other means to research the mind, the physicalist is prone to conclude that the absence of empirical evidence entails the non-existence of the mental realm.

⁴¹ This argument has a high similarity to an argument directed against epiphenomenalism in particular: <http://www.iep.utm.edu/epipheno/#SH5c>

⁴² My thoughts here are comparable to Thomas Nagel's project, in particular "What is it like to be a bat?" and "Mind and Cosmos. Why the Materialist Neo-Darwinian Conception of Nature is Almost Certainly False."

Conclusions

In this thesis, I have reconstructed Lowe's theory of non-Cartesian substance dualism and, following his argumentation, shown that there are forms of interactive dualism (and thereby mental causation) that are compatible with a quite strong formulation of the principle that the physical world is causally closed. The causal closure principle is an adept tool of the physicalists to challenge dualistic convictions, but has its own difficulties. These mainly consist in the rate of strength with which the principle is formulated. When the principle is too strong, arguments based on it become question-begging; when too weak they are not able to uphold the physical causal closure and cannot arrive at the intended conclusion(s).

Following upon my treatment of several CCP's, one plausible way to define mental causation such as to remain compatible with a strong formulation of the CCP was as the indirect causation of physical causal facts by mental events. However, while this conception escaped the attack of the CCP's it was still susceptible to mental anomalousness and the nomological requirement for causal interactions still applied. It seemed to only move the problem, but not completely evade or neutralize it.

On the other hand, the physicalist arguments and in particular the positions they are based on do also seem to be unsatisfactory. In the last chapter, I have shown that as long as we accept the existence of mental phenomena, mental causation must be possible in some form. Furthermore, the empirical standard that the physicalists uphold limits the scope of possible research about mental phenomena. By requiring empirical data collected by equipment that can only measure physical occurrences it is almost impossible to find proof of the existence of mental events or properties.

The status of our mind and mental capacities is still uncertain. In particular, the precise workings of mental interactions pose many difficulties. However, I hope to have shown that mental phenomena and mental causation is not something that can be easily dismissed. Physicalism is a serious theory that provides valuable counterweight to dualistic beliefs, but it must be doubted that physicalism can explain our world without admitting a mental realm after all.

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