

The Causal Exclusion Argument and its Critique in Debates on Reductionism: The Case of One Specific Clash

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Holubenko, Oleksandr (2024) The Causal Exclusion Argument and its Critique in Debates on Reductionism: The Case of One Specific Clash. *Philosophy and Cosmology*, Volume 32, 127-140. <https://doi.org/10.29202/phil-cosm/32/10>

One of the modern forms of philosophical discussion about the essence of mentality is the dispute between (“classical”) physicalists (who take a reductionist position) and the so-called non-reductive materialists. Non-reductive materialists are property dualists who claim supervenient relations between physical and mental properties. Such a non-reductive scheme claims that mental properties occupy a specific ontological level and, as a result, have their own causal power. Perhaps the most effective physicalist counterargument against such a position is the Causal Exclusion Argument, which makes explicit several logical contradictions inherent in non-reductive materialism. One of the most famous physicalists who contributed to the formulation of this argument was Jaegwon Kim. Considering the logical aspects of the philosophical dispute between reductionists and non-reductive materialists is very important because the resolution of this issue has direct consequences for the construction of new anthropological theories and cosmological models. In particular, clarifying the nature of the phenomenon of emergence and determining the limits of reduction can either inspire a certain “descriptive relativism” in scientific theories or encourage the continuation of the search for the “fundamental” level of physical reality (to which any anthropological theory can ultimately be reduced). In this article, I analyze the most significant objections put forward by Ned Block, a well-known apologist for non-reductive materialism, to the Causal Exclusion Argument. In conclusion, I argue that none of Block’s counterarguments can resolve the logical contradictions stressed by Kim.

Keywords: physicalism, reductionism, non-reductive materialism, causal closure, emergence, anthropology, cosmological models

Received: 15 November 2023 / Accepted: 18 December 2023 / Published: 5 February 2024

Introduction

Gaps in our understanding of the world have always formed a kind of “gray zone” in which a fierce struggle between various philosophical concepts and arguments arises. This situation is, of course, still relevant in the field of human consciousness research, especially when we are talking about various attempts to solve the well-known “mind-body” problem. But within the framework of this article, I am interested in a specific discussion line, that is, the ongoing philosophical dispute in recent decades between representatives of the “reductionist” and “anti-reductionist” positions on resolving the problem of the relationship between the mental and the physical.

Specifically, I intend to focus my attention on a set of counterarguments put forward by a well-known apologist of the so-called “non-reductive materialism”, Ned Block, to the Causal Exclusion Argument in his article *Do Causal Powers Drain Away?* (2003). The Causal Exclusion Argument was introduced in its most detailed and convincing form by the philosopher Jaegwon Kim (1993; 1998; 2005). So, it is not surprising that Block focuses primarily on the points outlined in one of Kim’s works, namely *Mind in a Physical World* (1998). It is noteworthy that in Block’s article we are faced with an isolated set of counterarguments that almost do not concern the adjacent “discussion zones” associated with the defense (or criticism) of the main provisions of “non-reductive materialism” (i.e., discussions about, for example, the problem of qualia or the essence of “physical”). Thus, this text by Block is a convenient subject for specific logical analysis.

In addition, assessing the quality of the counterarguments against the Causal Exclusion Argument, in my opinion, is in itself an important research task, due to the fact that the results of the polemic over nature and forms of “mental causal power” not only are extremely relevant for research in the field of philosophy of mind, but also has a direct impact on hypotheses and concepts that will determine the specifics of anthropological and cosmological models in the near future. This applies, for example, to the problem of emergence in the domain of physical reality. The defence of the anti-reductive position and the insistence on the reality of “strong emergence” leads to the ontological independence not only of the mental domain but also of different levels of physical reality. It may encourage some “drift” towards the gradual elimination of the term “fundamental” and related theories from scientific usage. In this case, descriptive levels of various scientific theories might be understood as ontological levels of nature/cosmos/universe, among which there are no “privileged” levels and, therefore, no “fundamental” theory. Also, this discussion is related to the problem of determining the place and abilities of human beings in nature. For example, if somehow ontological independence in a non-reductive sense can be confirmed, but the classical problem of dualism (namely, how something non-physical can affect the physical world) remains, then we have a risk of epiphenomenalism for consciousness, which can mean loss of hope for the justification of human agency (Kim, 2005).

In general, critical remarks that Block makes in his text (Block, 2003) can be divided into two main groups: 1) a set of different versions of the Multiple Realizability Argument (or the Multiple Composition Argument); and 2) questioning the concept of “bottom level” in physics. But I want to emphasize that, in this article, I will analyze the critical arguments that belong specifically to the first of these groups. So, the main result I seek is the answer to the following question: what specific counterarguments does Block put forward against the Causal Exclusion Argument (whether it is some variants of the Multiple Realizability Argument or something else, but this “else” does not relate to the critique of the notion of

“bottom level” in physics), and can they be considered weighty; that is, can they significantly undermine Kim’s physicalist position?

1. Mental Properties, Causation and the Causal Exclusion Argument: Exposition of the Problem

Even before we look closely at the arguments put forward by Kim, we can assume that they are indeed challenging for any property dualist. Block himself admits that “non-reductive materialists must face up to the serious difficulties he [Kim] has raised for our position” (Block, 2003: 133). In general, non-reductive materialism is a philosophical position of the dualistic kind, according to which material objects and their physical properties do not exhaust the entire spectrum of reality, since certain (usually mental, though not always) properties are fundamentally different from purely physical properties. In other words, this is a kind of “property dualism” that does not deny the material basis for mental events and/or properties, but at the same time tries to add “something else” to the physical world.

Block himself describes such a theoretical position as follows:

A minimal version of materialism could be defined as the view that every thing is decomposable into particles of the sort that make up inorganic matter. The materialist can nonetheless be a property dualist, that is a denier of the claim that mental properties are physical properties; and this is one tenet of non-reductive materialism (Block, 2003: 133).

To make the sense of this point of view even clearer, let us turn to the corresponding scheme, which is often used in such disputes (Block, 2003: 134):

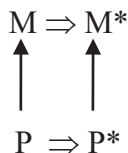


Figure 1

In Figure 1, we see physical property P, which causes physical property P* and, respectively, mental property M which causes mental property M*. Causation is indicated as a double arrow “⇒”, and a single arrow “↑” indicates supervenience. Thus, in this scheme physical property P is “the supervenience base of M and physical property P* the supervenience base of M*” (Block, 2003: 134).

So, to defend the theoretical position represented by this diagram, Block attempts to eliminate some of the “problematic tensions” that Kim points out, formulating the first of these tensions as: “M and P* can each be used to offer complete and independent explanations of M*” (Block, 2003: 134-135). Block responds to this as follows:

Of course, the non-reductive materialist who accepts causation at many levels should not recognize any tension. The non-reductive materialist thinks that every property above the level of basic physics has “horizontal” causal relations (at the same level) and vertical determination (from a lower level). And these explanations are

not completely independent, since the property that M supervenes on (viz. P) is the property that produces P* (Block, 2003: 135).

Regarding Block's answer, I should admit that the first "problematic tension" can lose its "edge", but only when it is viewed separately from Kim's main arguments. Moreover, what Kim is talking about in this case, in my opinion, does not belong entirely to the field of causality research and rather indicates some "overlap of descriptions". But if we understand the "levels" that Block talks about only as "descriptive tools", then it becomes hard to see any real difficulties with this "overlapping". The problem, however, is that non-reductive materialists (as the above quote indicates) consider these "levels" a result of genuine "ontological stratification" of reality (See Figure 2 below, which illustrates Block's point of view and where $L^0 \dots L^n$ are different "levels" in the non-reductive sense).

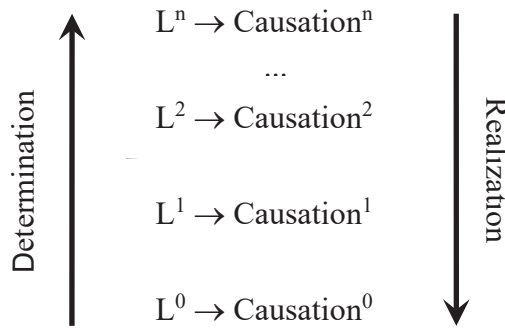


Figure 2

In general, Block does not take the first "tension" as a serious challenge, and we can agree with him in this case. This is because Kim himself does not focus too much on this "double description/explanation" problem, since for him, as Block notes, it is just a "way station" while moving to another issue. However, the second "tension", in Block's opinion, is much more serious, because what is indeed a real challenge for proponents of non-reductive materialism is the reasonable and logically consistent assertion evident in the situation diagrammed in Figure 1: "we have two different causally sufficient properties competing for the causation of P*" (Block, 2003: 135). This problem of certain "causal redundancy" that Kim draws attention to is the main sense of the so-called "Causal Exclusion Argument".

We can also present this "redundant causation" by adding a double diagonal arrow from M to P* to the relevant scheme (Block, 2003: 135):

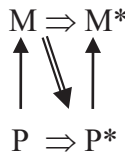


Figure 3

It seems completely natural that Kim would call into question the necessity of such a “double causal work”. We can also mention, together with Block, a different formulation of this problem, which Kim gives in the form of the following question: “If a physical event has a sufficient physical cause, what causal work is left for an event consisting in the instantiation of some *nonphysical* mental property?” (Kim, 1993: 361). Slightly reformulating one of Kim’s examples, which Block mentions in this regard (Kim, 1998: 53; Block, 2003: 135), let us ask another question in the same vein: if we smell rotten food, that is, roughly speaking, electrochemical signals from our scent receptors reach the olfactory bulbs, insular cortex, etc., and as a result, we feel nauseous, then what causal work is left for “disgustingness”? To counter such an attack, Block notes the following:

But why does the causal work done by P exclude that done by M? Perhaps the thought would be that if there is a sufficient physical cause and a sufficient mental cause, then each does 100% of the work, and so more work is being done than there is to do. But if causation derives from causal law and if there are causal laws at different levels that specify sufficient causes, then we cannot “add up” work in this way (Block, 2003: 135).

We see here Block turning again to the scheme of non-reductive materialism, which itself must be justified. Due to the literal understanding of the “ontological stratification” of reality, Block (intentionally or otherwise) admits the improper equating of the “causal laws” as certain aspects of reality (in other words, the real “state of affairs”) with the “causal laws” as ways of describing this reality. But some of these descriptions may just be convenient simplifications, for example. At the same time, such simplifications do not have to be a complete “illusion”, as Block writes, in describing Kim’s position on this matter (Block, 2003: 133). When talking about reality, we merely have to clarify what we mean by “reality” in every particular case. And we must admit that philosophers have written extensively on this issue over the past few centuries.

So, it seems that Block has committed the old mistake of medieval realists, using the phrase “there are causal laws at different levels” in the context of his non-reductive point of view (especially when he talks about the non-mental domain), because in the strict sense of the language there are no “causal laws at different levels”, but rather different “levels” (i.e., ways) of describing *the same* reality. Thus, Block’s phrase could be reformulated as follows: “There is causality (or causal laws) and different methods to conceptually (and formally) describe it, and these methods constitute certain “levels” depending on the “scale” or context in which these descriptive tools are applied”. Of course, if Block had agreed with this formulation, he would not have been a non-reductive materialist. But, if someone is true to such a theoretical position, he/she must make a serious case for it.

2. Overdetermination and the Issue of Causal Closure

In point of fact, Block realizes his critique of the Exclusion Principle, i.e., the thesis “that sufficient causation at one level excludes sufficient causation at another level” (Block 2003, 136), in the form of attempts to refute both the correctness and the consequences of a rather simple thought experiment proposed by Kim. This experiment is a logical modeling of a world that is as close as possible to ours, but in which there is no physical causality (Kim, 1998: 45).

Since non-reductive materialists adhere to the principle of “overdetermination” and consider that there is a specific type of causality on the different levels of reality (see Figure 2 again), then in Kim’s imaginary case the mental sphere remains the only source of causality. Therefore, Kim rightly notes that in such a situation, the causal closure is violated in the physical domain, which is a completely unacceptable consequence (and Block does not argue with this conclusion). Briefly speaking, Kim invites us to imagine that the causal relationship $P \Rightarrow P^*$ shown in Figures 1 and 3 is missing. Such a move immediately demonstrates serious issues with the non-reductionist scheme that Block attempts to defend.

So, Block begins his counterattack by indicating two “problems” with Kim’s thought experiment (Block, 2003: 136-137). The first problem is that Kim arbitrarily chooses a particular version of the supervenience doctrine for his critique. Referring to McLaughlin (1997), Block claims that there are different variants of supervenience doctrines: some of them suppose that mental causation can exist without physical, but some preclude that. But the main thing, as Block emphasizes, is that we do not have enough reasons to favor any of them, and therefore “there is no fact of the matter of whether the closest non-P world contains the instance of M” (Block, 2003: 136).

Concerning this remark, I would like to say that, in considering Kim’s thought experiment, we must first focus on how this imaginary situation can undermine the position of non-reductive materialism (after all, this is Kim’s goal). Therefore, the main result of using this logical model is not the description of a place “closest to our world”, but the questioning of the “causal independence” of mental properties. Since the “non-zero degree of independence” (or “minimal causal effectiveness”) for the mental domain is what gives non-reductive materialism a certain meaning, it does not matter what type of supervenience doctrine a particular non-reductive materialist prefers. In any case, Kim’s arguments should present such theorists with significant difficulties.

Let us say we are dealing with a variant of non-reductive materialism, which allows for the possibility of a mental causality without the presence of a physical one. In this case, we will not have any issues with causal closure if we are in the domain of mentality. But in those domains of reality where mental causality does not exist (namely the whole area of “inanimate things” or “physical domain”), the principle of causal closure is violated, and it seems that the only way to “save” such a world is to stick to some variant of panpsychism or idealism (Kim, 2005: 43-44). In other words, in such a world, any P^n should cause, at least partly, the existence of related M^n and be the only result of M^{n-1} (this link is not present in Figure 4, but it should be implied in this causal chain). So, even those domains of reality that we are used to thinking of as not having any mental properties inevitably have a “causation form” like that depicted in Figure 4.

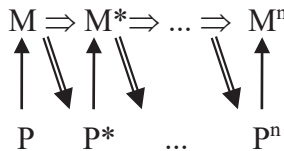


Figure 4

It is an interesting and at the same time “symptomatic” fact that many theorists from the non-reductive (or close to it) theoretical camp are now inclined towards one or another

version of panpsychism, or at least take it *seriously* (Brüntrup, 2016; Goff, 2017; Rosenberg, 2015; Seager, 2016). For example, one of the most popular thinkers of this kind is David Chalmers (2015).

But if we do not want to take this rather, in some sense, marginal position, then the only choice for us seems to be those supervenient doctrines (and hence the corresponding variants of non-reductive materialism) that preclude the existence of mental properties without a physical basis. However, even in this case, the effectiveness of Kim's argument remains. If it is always necessary to have P for the existence of M, it automatically means "zero degree of independence" for the mental sphere. And this raises questions about the advisability of conjecturing such a "mental quasi-level" of reality at all.

Instead of giving us more convincing counterarguments, Block resorts to a rather strange formulation of the second "problem" with Kim's thought experiment. He first asks the following question:

Going along with Kim's assumption that (assuming overdetermination) the closest non-P world is one that nonetheless contains the instance of M, why should we suppose that the closest world in which the instance of P does not exist is a world in which causal closure no longer holds? (Block, 2003: 136)

It might seem that Block is talking here about the supervenient doctrine, which assumes the presence of M without P and which can not prevent "causal failure" without resorting to some version of panpsychism. But this is not the case. After the above question, Block depicts an imaginary world in which Cain strangles Abel, but both consist of different molecules (or, more precisely, of "the same types of carbohydrates and proteins but different tokens of those types") (Block, 2003: 136-137). And then, just below, he makes the following conclusion:

So a world in which the molecular implementer of an event (token), e, does not exist can be a world in which e exists but is implemented differently. Kim says "we may assume, without prejudice, that no alternative physical base ... would have been available on this occasion." (Kim 1998: 43) But although there are worlds in which there is no alternative physical base, Kim owes us a reason for thinking the world in which there is no alternative physical base (in which causal closure fails) is closer than one in which it doesn't fail but M is implemented differently (or M doesn't exist at all) (Block, 2003: 137).

It is worth noting that Block is quite picky about "the way Kim puts his point" (Block, 2003: 137). So he also must be careful in his own work with Kim's original text. And I must point out that the phrase "we may assume, without prejudice, that no alternative physical base of M would have been available on this occasion" is a detail that Kim adds to his other argument on page 43. Here is the relevant passage:

If you choose to understand causation in terms of counterfactuals, again there is good reason to think that P qualifies: if P hadn't occurred M would not have occurred (we may assume, without prejudice, that no alternative physical base of M would have been available on this occasion), and given that if M had not occurred P* would not have occurred, we may reasonably conclude that if P had not occurred, P* would not have either (Kim, 1998: 43).

We see that this is a closely related but still different example, and therefore Block's remarks in this case (even if they make sense) should address precisely this particular fragment. Otherwise, it may be considered a manipulative trick.

So, on pages 43 and 44, Kim emphasizes that in the case depicted in Figure 3, we may get the impression that we are dealing with a causal chain $P \Rightarrow M \Rightarrow P^*$ in which M is in the "intermediate causal link position" (Kim, 1998: 44). Kim suggests that to some non-reductive materialists this may seem like a kind of "salvation". But firstly, even in this case the absence of P leads to the absence of M (see quote above). Secondly, Kim notes that in such a chain, we have the relation $P \rightarrow M \Rightarrow P^*$, which means that "the relation between base properties and supervenient properties is not happily construed as causal" (Kim, 1998: 44). Therefore, a "defense strategy" of building such a causal chain does not work.

Block, for his part, believes that if we can replace P in the chain $P \rightarrow M \Rightarrow P^*$ with P^1 , which is sufficient for M to appear (i.e., if we replace the previous chain with the chain $P^1 \rightarrow M \Rightarrow P^*$), then the very possibility of such a replacement should save the position of non-reductive materialism. But the fact remains that for Kim's thought experiment it does not matter which element from the set of possible modifications of P we choose, because within this model we can exclude *all of them*, without affecting the final result.

As for the thought experiment discussed earlier, Kim writes about it on page 45 (and Block gives a description of this thought experiment, but later, again, he adds comments related to another of Kim's arguments) as follows:

... consider a world in which the physical cause does not occur and which in other respects is as much like our world as possible. The overdetermination approach says that in such a world, the mental cause causes a physical event – namely that the principle of causal closure of the physical domain no longer holds (Kim, 1998: 45).

This model, with a total absence of physical causality, is an additional illustrative "reinforcement" of the previously proposed thesis about the presence of "causal failure" in the scheme, where there is a causal relation $M \Rightarrow P^*$. Kim rightly points out that such a causal relation by itself (i.e., without elimination of " $\Rightarrow$ " from relation $P \Rightarrow P^*$) means "a violation of the physical causal closure" (Kim, 1998: 44). In addition, I want to note that Kim does not say that, in the case of a thought experiment with a total absence of physical causality, M needs invariable P (See Kim 1998: 45). Most likely because invariable P is not a necessary requirement for this particular model either, although Kim's physicalism implies the individuation of physical events in general (at least in our real world).

But let us suppose this assumption is wrong and Kim's thought experiment does imply fixed P . Then I myself can make the appropriate adjustment and put forward as a condition the complete absence of physical causality, regardless of the specific configuration of P . Then, all the difficulties mentioned above will become obvious again. However, I think that my help is not needed in this case, since Kim's argumentation includes all the necessary components.¹

Thus, Kim convincingly shows that the non-reductive approach to the supervenience and mental properties leads to a double difficulty when the issue of an "overabundance of causes" intersects with "causal failure" in the physical realm. This seems like too high a price to pay for satisfying someone's desire to believe in something "non-physical".

¹ Kim's later explanations on this matter seem to confirm that my interpretation of his thought experiments is correct (Kim, 2005: 43).

3. Micro-Based Properties and Specific Mereological Configurations

As we saw above, non-reductive materialism looks rather unconvincing, if we want to receive something more than a certain kind of “belief” as justification for our theoretical position. So, in an attempt to defend the “non-zero degree of causal independence” of the mental domain (and its irreducibility to physical constituents), “property dualists” sometimes can resort to a certain “oversimplification” of the materialist and/or physicalist point of view, which means “to construe the physical domain excessively narrowly” (Kim, 1998: 113). Therefore, if some non-reductive materialists base their critique of physicalism on the thesis that in the physical world, we can observe properties that are not identical to those of single “microparticles”, then it should be considered solely the problem of their restricted point of view, since “physicalism need not be, and should not be, identified with micro-physicalism” (Kim, 1998: 117).

Confirmation that a physicalist position does not correspond to the naive principles of the “minimal version” of materialism is in Kim’s use of the concept of *micro-based properties* (M-B), about which he writes the following²:

... if P is a micro-based property of having parts $a_1, \dots, a_n$, such that $P_1(a_1), \dots, P_n(a_n)$, and $R(a_1, \dots, a_n)$, then P is a physical property provided that $P_1, \dots, P_n$, and R are physical properties (and relations), and each a_i is a basic particle or an aggregate of basic particles (Kim, 1998: 114).

Noticing that “it is important that these micro-based properties are counted as physical, for otherwise the physical domain won’t be causally closed” (Kim, 1998: 114), Kim also adds that micro-based properties are, in a sense, “based” on specific *mereological configurations* (SMC). The advantage of this approach is not only that it does not lead to any “causal redundancy” and eliminates “the problem of causal powers draining away”, but also that it does not imply the reduction of physical causation only to the causal properties of microparticles:

... the fact that we can micro-structurally explain why a micro based property has a certain set of causal powers does not mean that these causal powers are identical with the causal powers of its micro-constituents. Micro-reductively explainable causal powers may be new causal powers, net additions to the causal structure of the world. None of this is in conflict with the basic commitments of physicalism (Kim, 1998: 117).

Kim’s approach also precludes the unjustified ascription of the “causal independence” to those properties that can be considered *second-order functional properties*:

... the causal powers of an instance of a second-order property are identical with (or a subset of) the causal powers of the first-order realizer that is instantiated on that

² It is interesting that the components given in this definition match, to a certain extent, the list of “logical atoms” proposed by Russell (1918), who thought that the ability of language to reflect reality is provided by the correspondence between the logical structure of the language and the (logical and ontological construction of the) world: “If the world is composed of simples – i.e., of things, qualities and relations ... – then not only all our knowledge but all that of Omniscience could be expressed by means of words denoting these simples” (Russell, 1948: 259).

occasion. This means that second-order properties represent heterogeneous causal powers, but none that go beyond the causal powers of the first-order properties already in our domain over which they are defined And if any mental properties turn out to be functional properties, there are no special problems about their causal roles either (Kim, 1998: 115-116).

In fact, as Kim admits, it is sometimes difficult to make a clear distinction between first-order and second-order properties (Kim, 1998: 115). But overall, Kim's approach is clear and convincing. For example, if we are talking about the property "to be a DNA molecule", then such a property is micro-based since it is completely defined by the *specific mereological configuration* of the particular *organic* molecule. But this molecule's property of *storing* genetic information should be considered the corresponding *second-order functional property*. This class also includes properties such as "water-solubility, ductility, thermal conductivity, inflammability", and so on (Kim, 1998: 115).

Is there anything that Block can do to counter this explanatory approach? The only difficulty that Block identified in the relation between M-B and SMC is that it is a supervenient relation too. And such a relation is identical, in his opinion, to the relation between mental and physical properties in the non-reductive scheme (See Block, 2003: 144):

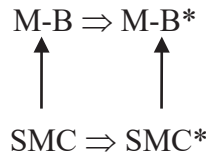


Figure 5

The logic behind Block's argumentation is as follows: if Kim sees some issues with a non-reductive interpretation of supervenience, then the same issues should hold up in the case of the relation between M-B and SMC. But this is not the case:

Difficulties of this sort do not arise for micro-based properties in relation to their constituent properties because the former do not supervene on the latter taken individually or as a group. Rather, they supervene on *specific mereological configurations* involving these microproperties – for a rather obvious and uninteresting reason: they *are* identical with these micro-configurations (Kim, 1998: 117-118).

It is interesting that Block cites this quote (even in a more extended version) but still refuses to acknowledge that the concept of "supervenience" here is not identical to his own definition of the term. Nevertheless, we should remember that Kim's "physicalist supervenience" does not imply the so-called "strong emergence" on which Block's "non-reductive supervenience" is based (especially when we are talking about the mental domain). It just means that in the face of opponents like Block, it is essential to be as precise and careful as possible in your wording, although this does not change anything in essence.

4. The Argument of Multiple Composition and the Fragmentation Strategy

Returning to Block's example with the "alternatively realized" Cain and Abel, we find there a description of another situation. Referring to the article by Ernest Lepore and Barry Lower (1987), Block claims that there is "a lawlike relation between hurricanes and damage" (Block, 2003: 137). He argues that, for example, Hurricane Edna could have a different "micro-composition", but "even with this alternative molecular realization of Edna it might have caused similar damage" (Block, 2003: 137). With this example, Block seeks to demonstrate that Hurricane Edna has a certain "causal power" of its own, which is to some extent independent of the causal power of its constituent parts. In other words, the hurricane and the damage it causes are, in Block's opinion, "ontologically independent" (at least to some extent) and by themselves constitute a *real* causal chain.

But how can such an assumption be seriously considered without convincing arguments against the view that we are simply dealing here with the conceptual ordering of certain natural phenomena? That is to say, what can Block oppose to some kind of "nominalistic" thesis in this case? Are not "hurricane" and "damage" only classes fixed in the language, with which we generalize physically individualized phenomena and properties according to a certain (but never absolute) degree of similarity? And how can Block refute the reasonable statement that classes are not actually existing entities (Russell, 1905)? In addition, it is not difficult to come up with many imaginary examples demonstrating the arbitrary (or "semantically flexible") nature of the concepts people use in their language practice (although in the real world the possibility to divide reality into concepts is usually limited to certain conventions and pragmatic grounds; i.e., such a division is not *completely* arbitrary) (Putnam, 1981).

So here we can see another unconvincing attempt to use the favorite "defense tool" of non-reductive materialists (Block, 1997; Heil, 1999), namely the Multiple Realizability (or Composition) Argument. I would also like to point out that the requirement to avoid fragmentation of the macro-level and to endorse "event individuation at levels other than the physical" (Block, 2003: 138) sounds more like a call to protect certain "non-reductive commandments" than a serious argument. But nevertheless, Block repeats (in different forms) the question related to the following "conceptual confrontation":

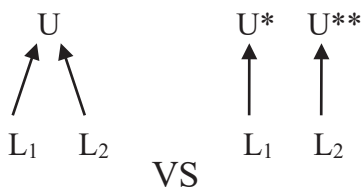


Figure 6

We have U, U*, & U** (upper-level properties), and L₁ & L₂ (lower-level specific mereological configurations) in Figure 6. Block is primarily interested in why we should choose the second scheme and not the first. In other words, why should we carry out "vertical individuation" of upper-level properties (U* and U**) instead of considering this as a single property U with different variants of its lower-level realization?

In support of the first scheme in Figure 6, Block provides a number of examples (“the rigidity of a rigid body” and the conservation of angular momentum, heat and temperature, water and molecules of H_2O , “enantiomorph” of a normal human brain, etc.) that seem to be ineffective attempts to demonstrate the signs of “strong emergence” in the realm of “everyday physics”. For this purpose, he also argues that jade (or the property “to be jade”) is an example of a single but nevertheless decomposable (into properties “to be nephrite” and “to be jadeite”) micro-based property (Block 2003, 145). But what can we do if in nature there are complexes of molecules $(Ca_2(Mg, Fe)_3Si_8O_{22}(OH)_2)$ and $NaAlSi_3O_8$ in this case), i.e., *specific mereological configurations*, and at the same time certain conceptual and linguistic means (“jade”) are used to make communication slightly easier (or due to limited observational data and knowledge in general)?

So, to Block’s question about “the rationale for avoiding multiple decomposition by fragmenting the macro level”, namely: “Is it an empirical hypothesis? A metaphysical thesis?” (Block, 2003: 147), I can answer that this is, of course, neither “a metaphysical thesis” nor “an empirical hypothesis”, but simply the most relevant reflection of how physical reality exists (at least in line with modern science).

It is noteworthy that at the end of his article, Block writes that all issues with mental causation could be solved if we accept “the point of view that recognizes causal efficacy at many levels and does not regard them as competing” (Block, 2003: 149). But we can say with the same “quality” of argumentation that all issues would be solved if we accept the existence of God, who just arranged the world in such a way that causal powers do not “drain away” from level to level. However, such a convenient step would mean “laying down arms” in this intellectual clash. But nothing is surprising about Block’s suggestion because the non-reductive interpretation of mentality seems to be a kind of “God of the gaps”. In other words, this is a theoretical position, which can be taken more or less seriously only as long as we do not have a complete (or at least satisfactory) scientific theory of all aspects of the human mind.

Block’s last remark is that “the Exclusion Principle (and the Causal Exclusion Argument that depends on it) appears to yield conclusions that conflict with our explanatory practice” (Block, 2003: 149). But in this case I would like to ask: with *what* explanatory practice exactly does this principle/argument conflict? For scientists, there is no conflict here at all. If we are talking about non-reductive materialists, then such a conflict may be considered an intrinsic problem from their specific point of view. Block also might be referring to contradictions with “everyday” explanatory practice, but on no account should such a conflict be evidence for the fallacy of any theoretical position. And I am not even speaking about the numerous historical examples, when to disagree with conventional explanatory practice meant not just to fight for truth but also to put one’s life in danger.

Conclusions

The results of this compact study allow me to argue that, with this particular set of counterarguments, Block does not provide any compelling reason to doubt the validity of The Causal Exclusion Argument/Principle and its effectiveness in undermining the non-reductive view on mental causation.

More specifically, Block’s attempt to defend non-reductive materialism by attacking The Causal Exclusion Argument/Principle has, in my opinion, the following main flaws. Firstly, he does not provide any explanation for why we should not consider properties that are ontologically “higher” (or different) than micro-based properties and second-order functional

properties, only as human “conceptual tools” fixed in the language and used for ordering reality. Secondly, he does not show how “horizontal individuation” at the mental level can prevent “vertical” physical reduction of mental events/properties, or how such individuation can eliminate the logical contradictions inherent in non-reductive materialism and stressed by Kim (a simple postulation of some non-reductive “commandments”, in my opinion, cannot be considered a serious argument).

Lastly, I believe that non-reductive materialists should finally decide whether the emergent principle in its strong form applies at every “level” of reality or not. Although, to be honest, I think that even a “softening” of the emergent thesis specifically for the physical realm will not save them. This is because non-reductive materialism retains within itself almost all the problems of the classical “substantival dualism” (with whatever modern terms we would attempt to disguise it). Therefore, as Kim points out, whether we like it or not, we still have to consider any kind of property dualism as “an idle dream” (Kim, 1998: 120). But this does not necessarily mean some tragic “philosophical loss”, although for “romantic” minded thinkers the failure of non-reductionist arguments paints a not very pleasant picture. For philosophers of a different kind, as well as scientists (from “micro-level” physicists to cosmologists), it just means following Occam’s well-known principle and common sense in our understanding and description of physical reality. In the context of anthropological discussions, confirming the identity of human consciousness with its physical basis (and therefore maintaining the principle of causal closure) means that we save consciousness from epiphenomenalism and still preserve hope for the justification of human agency.

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