Abstract: Donald Davidson’s anomalous monism has been repeatedly criticized since its initial defense in the paper Mental Events, which was published in 1970. Despite the widespread rejection, there seems to be no agreement on why anomalous monism fails. This paper systematizes two strong objections to anomalous monism. First, Davidson’s argument for monism requires the problematic assumption that physics can provide strict causal laws for causal relations in general. Second, Davidson’s monism requires an ontology of events for which no satisfactory criterion of identity has been provided. Despite these problems, the paper argues that the theses on the anomalism and irreducibility of the mental remain acceptable, despite the difficulty of reconstructing precisely the arguments Davidson uses to defend them.

Keywords: Anomalous monism. Anomalism of the mental. Philosophy of mind.

Resumo: O monismo anômalo de Donald Davidson foi criticado repetidas vezes desde sua defesa inaugural no artigo Mental Events, publicado em 1970. Apesar da ampla rejeição, não parece haver acordo sobre por que o monismo anômalo falha. Este artigo sistematiza duas objeções fortes ao monismo anômalo. Primeiramente, o argumento de Davidson a favor do monismo exige a suposição problemática de que a física possa fornecer leis causais estritas para relações causais em geral. Em segundo lugar, o monismo de Davidson exige uma ontologia de eventos para a qual nenhum critério de identidade satisfatório foi fornecido. Apesar desses problemas, o artigo defende que as teses sobre a anomalia e irreducibilidade do mental permanecem aceitáveis, apesar da dificuldade de se reconstruir com precisão os argumentos que Davidson usa para defendê-las.


1 Introduction

There is a widespread belief that Donald Davidson’s anomalous monism is no longer a contender in the quest for an adequate theory of the mind. Sometimes, this is stated explicitly. Jens Harbecke says, for example, that “[t]oday, only few philosophers refer to themselves as ‘Davidsonians’, and references to Anomalous Monism seem to be reserved mainly to historical sections of original papers and to textbooks on the philosophy of mind” (Harbecke, 2013, p. 424). Despite this apparent agreement that anomalous monism is to be rejected, the specific reasons why it has been rejected are diverse and disputed. The most popular story about anomalous monism’s failure – namely, that it unacceptably entails property epiphenomenalism (see Honderich, 1982; Kim, 1989, 1993; McLaughlin 1993; and Sosa 1993) – is now increasingly seen as inappropriate (see Davidson, 1993;
Crane, 1995; Campbell, 2003; Gibb, 2006; and Heil, 2008). Even so, there is not much reason for hope: many other criticisms have been presented.

This paper systematizes and summarizes what I take to be the best reasons for rejecting anomalous monism. Although those are not reasons that motivated its rejection in the decades following 1970, I claim that they are good reasons for rejecting anomalous monism. One problem is that Davidson’s argument for monism depends on the problematic claim that physics can provide strict (i.e. exceptionless) causal laws for every causal relation. An additional and independent problem affects the ontology of events assumed by Davidson’s monism, something that undermines its very possibility. Those two problems target Davidson’s monism (hence his anomalous monism as a whole) and are already available in the literature – this paper just reconstructs them here. However, while some have rejected Davidson’s anomalous monism because of those two reasons, it has not always been duly noted that Davidson’s theses of mental anomalism (and irreducibility) remain acceptable. What exactly his arguments for anomalism are remains a disputed topic in the literature. I will not discuss that dispute here, nor will I reconstruct what I think Davidson’s arguments for anomalism are. Instead, I will argue that although good reasons for rejecting Davidson’s monism are available in the literature, his thesis of anomalism remains acceptable today even if not for the reasons Davidson himself offered in its support.

Section 2 below presents Davidson’s argument for anomalous monism and shows how it depends on the claim that there are strict causal laws in physics. Section 3 argues that physics may be unable to offer laws of that sort and that Davidson’s argument depends on them. Section 4 considers the status of the theses of monism and mental anomalism apart from Davidson’s argument discussed in section 2. It concludes that Davidson’s monism faces independent problems due to difficulties present in the ontology of events it assumes, but that the theses of mental anomalism and irreducibility remain acceptable, regardless of how Davidson himself attempted to defend them, as non-refuted empirical hypotheses.

2 The argument for anomalous monism

Davidson’s argument for monism was presented, since its origin, as depending on these three premises (Davidson, 1970, p. 208):

P1. Interaction Principle: “at least some mental events interact causally with physical events”.

P2. Cause-Law Principle: “events related as cause and effect fall under strict deterministic laws”.

P3. Mental Anomalism: “there are no strict deterministic laws on the basis of which mental events can be predicted and explained”.

Davidson counts an event as mental if it can be correctly described in mental or psychological terms, and as physical if it can be correctly described in physical terms (Davidson, 1970, p. 210-211). Mental descriptions are those that include terms for propositional attitudes and that create non-extensional contexts, and physical descriptions are those that contain only the physical vocabulary essentially (Davidson, 1970, p. 210-211). As strict causal laws, Davidson counts general statements that contain no singular terms (for particular objects or instants of time), nor ceteris paribus conditions (Davidson, 1995, p. 265-266). Based on that understanding of the terms employed in the premises, the monist conclusion Davidson draws is that events that have mental descriptions and that causally interact with physical events also have physical descriptions:

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1 By a non-extensional context Davidson has in mind the fact that it may not follow from, say, “John believes that he is seeing the morning star” that “John believes that he is seeing the evening star”, even when it is granted that “the morning star” and “the evening star” describe the same object – it may just be that John does not know that fact.
Suppose \( m \), a mental event, caused \( p \), a physical event \[\text{by P1}\]; then, under some description \( m \) and \( p \) instantiate a strict law \[\text{by P2}\]. This law can only be physical, according to the previous paragraph \[\text{in which P3 is defended}\]. But if \( m \) falls under a physical law, it has a physical description. Which is to say it is a physical event \[\text{monist conclusion}\]. (Davidson, 1970, p. 224).

As we can see, the reasoning here depends crucially on the possibility of describing a mental event also in physical terms. The argument goes as follows. If a mental event causes or is caused by another event \[\text{by P1}\], it must \[\text{by P2}\] have a description that figures in a strict causal law.\(^2\) But P3 denies that laws of that kind can be built from mental terms. So a strict law involving other, non-mental terms must cover the case.\(^3\)

As others have noticed, Davidson needs (and sometimes seems to employ) a further premise to show that laws of the sort required by P2 are physical laws (Davidson, 1970, p. 219, 223-224; 1993, p. 8; Johnston, 1985, p. 411; Antony, 2003, p. 3-4). Following Johnston, Antony (2003, p. 4) suggests the following:

\[\text{P4. “There are strict laws only in physics”}.\]

With the help of P4, we can conclude that mental events that causally interact with other events have physical descriptions – under which they instantiate physical strict laws – and are, therefore, physical events.

From the above considerations it might seem that Davidson’s argument for monism relies on premises P1-P4, but Antony has objected that assuming P4 alters the form of the argument:

\[\text{[Davidson] can appeal to P4 […] only at the cost of radically altering his argument.}\]
\[\text{For if all strict laws are physical, then since all causal interactions require subsumption under strict law (by P2), it follows that all causal interactions, including m’s causing p, involve only events that are physical. So m is physical. We have reached monism from P4 and P2! Such an argument, however, leaves no work for the anomalous of the mental (P3) in deriving the identity theory, which is proved before P3 is even mentioned. (Antony, 2003, p. 5).}\]

If those remarks are correct, then it is not true that P4 can be simply added to the argument. P4 would replace P3.

For the discussion that follows, it suffices to note that P3 and P4 are compatible. P4 is equivalent to the conjunction of these two claims:

\[\text{P4a. There are strict causal laws in physics.}\]
\[\text{P4b. No other science has strict causal laws.}\]

There are strict causal laws only in physics if, and only if, first, physics has such laws, and, second, no other science has such laws. Thus, if psychology is not (reducible to, or a part of) physics, P3 can be inferred from P4b.\(^4\) Davidson, therefore, might still insist on an anomalous monism, as Antony (2003, p. 5) himself acknowledges, even if the argument for monism does not require P3.

\(^2\) P2 in itself does not require that strict laws be physical laws. However, Davidson thinks that physical laws are the most plausible candidates on the basis of his distinction between heteronomic and homonomic generalizations (see Davidson, 1970, p. 219).

\(^3\) It is worth noting that, given P1 and Davidson’s characterization of a “mental description”, the scope of the argument is restricted twice: it covers only propositional attitudes and, among them, only those that either cause or are caused by physical events (see Davidson, 1970, p. 208, 230; Antony, 2003, p. 2).

\(^4\) On the other hand, if one identifies psychology with (parts of) physics, then P4 is also consistent with denying P3.
3 Physics and strict laws

What then is lacking in Davidson’s argument for monism? P1, the claim that mental and physical events causally interact, is seldom criticized and has been emphasized in the philosophy of mind at least since Elisabeth of Bohemia objected that its truth remained unexplained within Descartes’s dualism. It is widely assumed by philosophers working on mental causation (see, for example, Heil and Mele, 1993, p. v), but even epiphenomenalists must be committed to it, since they assume that mental events are caused by physical events (see Lycan, 2009, p. 557, n. 19). The claim that causal relations entail the existence of strict causal laws (P2), on its turn, has attracted some criticism (see, for example, Burge, 1983, p. 610, 1993, p. 112; and Fodor, 1990, p. 153-154), but the matter is disputed (see Schaffer, 2008; Armstrong, 1997, ch. 14, for a defense).

As for P3, there has been discussion of Davidson’s arguments for it, but not even a consensual reconstruction of them has emerged (see e.g. McLaughlin, 1985; Kim, 1985; Yalowitz, 1997, 2012, sec. 4). Nevertheless, I doubt a convincing case against P3 has been made. Indeed, I argue in the next section that it is consistent with our current scientific knowledge in various domains. If that hypothesis is correct, then the truth value of P3 is also not to blame for anomalous monism’s failure, independently of what Davidson has to say in its support.

P4, the claim that there are strict causal laws only in physics, faces more decisive problems. They have the form of objections to P4a, although they leave P4b – and consequently P3 – untouched. One criticism can be drawn from Nancy Cartwright’s (1983) arguments against covering law accounts of scientific explanation (see also Canfield and Lehrer, 1961). Cartwright (1983, p. 49) denies the view “that nature is well-regulated; in the extreme, that there is a law to cover every case”. Instead, she puts forth the thesis that “[c]overing laws are scarce” (Cartwright, 1983, p. 45), and that “[w]hat happens on most cases is dictated by no law at all” (Cartwright, 1983, p. 49). By analyzing particular cases of what we usually take as instances of physical laws, Cartwright notes that they must be read as ceteris paribus laws. Otherwise, they would be falsified by counterexamples. However, if we assume a ceteris paribus condition, those “generalizations may be true, but they cover only those few cases where conditions are right” (Cartwright, 1983, p. 45).

Similarly, Harbecke (2013) argues that physical causal laws are never strict. A necessary condition for a statement to describe a causal relationship is that it relates two events (or two types of events) that follow one another in time (see Davidson, 1967, p. 154, 158; Harbecke, 2013, p. 425). But if we look at physical equations (or at strict laws derived from them), Harbecke contends, we see that they are not strict causal laws. Take for example the equation of ideal gases: \[PV = nRT.\] From the equation – a “law schema” in Harbecke’s terminology – we can derive the following strict law:

\[
\text{SL1: For all ideal gases of an amount of } n \text{ moles in a container of volume } V, \text{ if the gas acts with pressure } P \text{ onto the walls of the container, then its temperature equals } PV/nR. \text{(Harbecke, 2013, p. 426).}
\]

But SL1 describes relations between the properties of a single object – an amount of gas – at a single instant of time: we can know the value of any of the attributes mentioned, at that instant, if we know the values of the others, at that same time. Thus, SL1, albeit strict, is not causal.

On the other hand, if we turn SL1 into a causal statement that describes a sequence of two events, we might get something like this:

\[
\text{CL1: For all ideal gases of an amount of } n \text{ moles that are coupled to an ideal heat bath of temperature } T, \text{ if at time } t \text{ the gas is in a container of volume } V \text{ and has pressure}
\]

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5 See the letters by Elisabeth on May 6, June 10, and July 1, 1643, in Descartes and Elisabeth (2007).
6 Where “P” = “absolute pressure”, “V” = “volume”, “n” = “number of moles”, “R” = “universal gas constant”, and “T” = “absolute temperature”.

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Then, if a particular force is applied to the container at time \( t \) altering its volume to \( V' \) in a reversible manner until time \( t' \), the pressure of the gas at time \( t' \) is given by \( P' = \frac{nRT}{V'} \). (Harbecke, 2013, p. 427).

CL1, as opposed to SL1 and the ideal gas equation, describes the evolution of a system over time. As Harbecke argues, however, we need to assume a lot of idealization in order for CL1 not to face counterexamples: “if the gas container described above is taken out of the heat bath that thermodynamics assumes it to hover in, the ideal gas law would still apply to it, but CL1 would almost certainly be falsified” (Harbecke, 2013, p. 428-429). As a result, we have at least two general kinds of theoretical statements: non-causal laws and law schemata that can be strict and derived causal laws that are non-strict. If we take Cartwright’s and Harbecke’s arguments together, we can say that current physics may provide laws that are strict or exceptionless only for those highly limited contexts where ideal conditions are satisfied. As far as we currently know, most ordinary events seem to be covered by no law of physics that is both causal and strict – which is why we lack a good reason for accepting P4a and, consequently, P4.

A reply could be that Davidson acknowledges that “one could at best hope to find [strict laws] in a developed physics” (Davidson, 1993, p. 8), and that the physical laws investigated by Cartwright and Harbecke are, in contrast, laws of an evolving physics. Davidson might not require the actual existence of causal strict laws, but only a promise that they could be found eventually. However, even if the promise can be justified, the reply is not consistent with the way Davidson defines a physical event, and thus also cannot support monism. An event is said to be physical if it is “picked out by descriptions […] that contain only the physical vocabulary essentially” (Davidson, 1970, p. 211). But it is hard to see how a nonexistent description could pick out anything, that is, how an event can have a physical description that does not exist (see Glüer, 2011, p. 260, n. 12 for a similar criticism).

4 Monism and anomalism beyond Davidson’s arguments

We must conclude that Davidson’s argument for monism is unsound. However, that does not amount to saying that anomalous monism itself fails. At least in principle, an alternative argument might be offered. For instance, one might take anomalous monism as a conjunction of mental anomalism and monism – as Davidson himself seems to allow (1970, p. 213) – and find independent support for each thesis. In the remainder of this paper, I briefly discuss the prospects of that alternative, which has not been explored thus far.

One of the consequences of mental anomalism is that mental events cannot be inferred from physical knowledge only – and this needs to be true even if monism is true, that is, even if mental terms describe (a subset of) events that can also be physically described. So, for example, suppose that an event, \( a \), can be described as \( Pa \), where ‘\( Px \)’ is a physical predicate. If there were true statements of the form “For any \( x \), \( Px \) if and only if \( Mx \)”, then \( Ma \) could be validly inferred from \( Pa \). Mental anomalism denies the existence of true statements of that sort. That amounts to saying that scientific statements containing mental predicates cannot be reduced to statements without them.

Nowadays, a great deal of confidence in the possibility of reduction comes from advances in the study of the brain. Christof Koch claimed that “true mind reading is, at least in principle, possible” (Koch, 2012, p. 29). The claim is in part motivated by the discovery of what he calls concept neurons.

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7 The following remarks concern only psychophysical anomalism. The thesis denies psychophysical laws (or bridge laws) of the form “For any \( x \), \( Px \) if and only if \( Mx \)”, where \( x \) is a variable for events and “\( Px \)” and “\( Mx \)” are, respectively, a physical and a mental predicate. Given the central role of such laws in reductive accounts, it is worth noting that psychophysical anomalism alone suffices for denying the reducibility of generalizations including mental predicates to generalization without them (see, e.g., Fodor, 1974, p. 98). Regarding purely psychological laws, there are no laws of psychology currently regarded as strict causal laws.
The anomaly stands: revisiting some objections to anomalous monism

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(see Koch, 2012, p. 65). These are neuronal cells that are activated by (and only by) very specific stimuli, such as different images of a single famous artist or place:

One hippocampal neuron responded only to seven different photos of the movie star Jennifer Aniston but not to pictures of other blonde women or actresses. Another cell in the hippocampus fired only to the actress Halle Bery, including a cartoon of her and her name spelled out. [...] Each cell, together with its sisters [...] encodes a concept, such as Jennifer Aniston, no matter whether the patient sees or hears her name, looks at her picture, or imagines her. (Koch, 2012, p. 65). 8

Given such a narrow connection between a single cell or a small group of cells, on the one hand, and a specific mental content, on the other, it might seem that we have now found precisely the kind of connection denied by Davidson’s psychophysical anomalism. But that is not quite so. Nothing in those studies seems to entail that the same kind of mental content will be invoked when “the same” nerve cells are activated in the heads of other people, neither, perhaps, in a single person over larger time intervals. 9 The relation between a certain neural concept and its content over time is not fully accounted for by those studies, because they deal with individual persons in relatively short intervals of time (7-10 days, according to Quian Quirog et al., 2005, p. 1106). Therefore, the possibility of psychophysical (or “psychoneural”) anomalism – i.e., that there might not be two predicates, one mental and one physical, true in the same and only in the same circumstances – seems to remain open: it is not refuted even by those studies that went the farthest in the opposite direction. 10 Also, it is not refuted by the reasons invoked against Davidson’s monism.

Davidson’s monism – the thesis that mental events have also physical descriptions – is not in the same condition as anomalism when each thesis is independently considered. Although most philosophers and scientists nowadays are physicalists (see Bourget and Chalmers, 2014), the specific type of physicalism each one endorses varies. Regarding Davidson’s monism, its very possibility is dubious given difficulties with the ontology of events it assumes. Davidson’s monism entails that a single mental event may be described in both mental and physical terms. Although in some individual and relatively simple cases we can offer different descriptions of a single event – Socrates’ death may be redescribed as “The death of Plato’s master” – it is difficult to provide even an example of a mental event that can be redescribed in physical terms while keeping the plausibility that both describe the same event. As for an identity criterion for events in general, as monism requires, Davidson initially claimed that events are identical if and only if they have the same causes and effects (Davidson, 1969, p. 179). He later acknowledged that this criterion is circular since it individuates events in terms of causes and effects, which are also events (Davidson, 1985, p. 309).

In place of his original identity criterion, Davidson later favored a Quinean conception of events as concrete particulars – not essentially distinct from physical objects – to be identified by their spatiotemporal location (Davidson, 1985, p. 309). The problem with that view, however, is that Davidson himself had previously described the possibility of a ball becoming warmer and rotating 35 degrees simultaneously (Davidson, 1969, p. 178). The suggestion is that more than one event can occur at the same space-

8 See also Quian Quirog et al. (2005).

9 I leave without further exam here whether it makes sense to regard two single cells, one in the brain of a person and another in the brain of someone else, as “the same” in the sense of having some trait in common (relative spatial location, function, etc.) that is not also shared by other cells in those same brains. If that cannot be done, we are still farther from strict psychophysical laws (for further discussion of the topic, see Fischborn, 2016, p. 499; Rodkies and Nahmias, 2017; see also Wu and Morales, 2024).

10 Other researchers explicitly endorse the irreducibility of content descriptions to brain descriptions. For example, Naomi Goldblum (2001, p. 13) says: “I believe that we can learn a great deal about how our minds work, about the processes of our thinking, by studying the workings of the brain. The contents of our minds, on the other hand, will always need to be studied separately.” William Domhoff (2003, p. 5) makes a similar claim concerning the study of dreams: “The neural substrate for dreaming [...] may account for other formal features of dreaming [...] However, the neural substrate cannot account for the narrative nature of dreaming or the substance of dreaming content” (see also the previous note).
time location – which can be seen as a counterexample to a view of events as concrete particulars (see Lombard, 1998, p. 283). Because the very possibility of Davidsonian monism is dubious in the absence of a satisfactory answer to that sort of criticism, many ended up rejecting it (see Schneider, 2013, p. 148-149; 2012, p. 720, n. 3; see also Hornsby, 1980; Latham, 2003; Marcus, 2006). The current status of Davidson’s monism, then, is that no good reason to accept it has been provided, and, still worse, there are reasons to doubt its very possibility.

5 Final considerations

It seems fair to conclude that if we are to reject anomalous monism, we should do so because monism has been left unjustified. As some have argued, Davidson’s argument fails because it depends on the likely false assumption that physics has strict causal laws that can cover all events that causally interact with physical events, including mental events. Additionally, the very possibility of a single event having both a mental and a physical description is undermined by difficulties in providing an adequate ontology of events. Despite the problems, one does not need to reject Davidson’s views of the mind completely. In particular, as I have argued, the theses of mental anomalism and the irreducibility of the mental remain consistent with the broader knowledge of the mind and the brain currently available. They can thus be accepted as standing hypotheses even by those who are unpersuaded by Davidson’s arguments for them.11

References


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