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### Mind Matters

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## MIND MATTERS\*

Who knows what I want to do? . . . Isn't it all a question of brain chemistry, signals going back and forth, electrical energy in the cortex? . . . Some minor little activity takes place somewhere in this unimportant place in one of the brain hemispheres and suddenly I want to go to Montana or I don't want to go to Montana. Maybe it's just an accidental flash in the medulla and suddenly there I am in Montana and I find out I really didn't want to go there in the first place . . . It's all this activity in the brain and you don't know what's you as a person and what's the brain and what's some neuron that just happens to fire or just happens to misfire . . . —Don DeLillo, *White Noise*

**C**ONSIDER the following, admittedly imprecise claims:

- 1) The mental and the physical are distinct.
- 2) The mental and the physical causally interact.
- 3) The physical is causally closed.

Much can be said in favor of each of these. In support of (1), we can point to the failure of attempts to reduce the phenomenal and the intentional to the physical, and to arguments from Descartes to Donald Davidson which purport to show that such reductions are, in principle, impossible. (2) is supported by our everyday experience and by various theories of perception and action. (3) means that every physical event or fact has, in its causal history, only physical events and facts. Both (3) and its cousin:

- 3') All causation is reducible to, or grounded in, physical causation,

where 'grounded' means, roughly, that causal relations supervene on noncausal physical facts and laws, have seemed to many philosophers to be supported by the development of the sciences.

The trouble is that it seems (1), (2), and (3) are incompatible. To be a bit more definite, consider their application to events. (1) then says that no mental event is a physical event; (2), that some mental events cause physical events and vice versa; and (3), that all the causes of physical events are physical events. The inconsistency is obvious. If

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mental events are distinct from physical events and sometimes cause them, then obviously the physical is not causally closed. The dilemma posed by the plausibility of each of these claims and by their apparent incompatibility is, of course, the mind–body problem.<sup>1</sup>

Our primary concern here is how Davidson's<sup>2</sup> account of the relation between the mental and the physical, which he calls "anomalous monism" (*AM*), attempts to resolve the dilemma. *AM* consists of the following three theses:

- 4) There are no strict psychophysical or psychological laws and in fact all strict laws are expressed in a purely physical vocabulary (the anomalousness of the mental).
- 5) Mental events causally interact with physical events.
- 6) Event *c* causes event *e* only if there is a strict causal law which subsumes *c* and *e* (entails that *c* causes *e*) (the nomological character of causality).

(4) is a version of (1). It is commonly held that a property expressed by *M* is reducible to a property expressed by *P* (where *M* and *P* are not analytically connected) only if there is an exceptionless bridge law that links them.<sup>3</sup> So it follows from (4) that (intentional) mental and physical properties are distinct.<sup>4</sup> (6) says that *c* causes *e* only if there are singular descriptions *D* of *c* and *D'* of *e* and a strict causal law *L* such that *L* and "*D* occurred" entail "*D* caused *D'*" ("Causal Relations," p. 158). (6) and the second part of (4) entail that physical events have only physical causes and that all event causation is physically grounded.<sup>5</sup>

The notion of a law being *strict* figures prominently both in Davidson's affirmation of the distinctness of the mental and the physical and in his account of causation. Davidson's notion of a strict law is

<sup>1</sup> Similar characterizations of the mind–body problem can be found in J. L. Mackie, "Mind, Brain and Causation," *Midwest Studies in Philosophy*, vi (1979): 19–29; and Anthony Skillen, "Mind and Matter: A Problem that Refuses Dissolution," *Mind*, xciii (1984): 514–526.

<sup>2</sup> This view is given in three places in Davidson's *Essays on Actions and Events* (New York: Oxford, 1980); at the beginning and end of "Mental Events," pp. 208, 223; and in "Psychology as Philosophy," p. 231. Where nothing else is said, all page references in the text of our paper are to this book.

<sup>3</sup> Davidson's argument against psychophysical laws is restricted to laws whose psychological predicates express propositional attitudes.

<sup>4</sup> We shall typically speak of features, aspects, and properties of events. For present purposes, however, unless we indicate otherwise, what we say can be recast in terms of events satisfying descriptions or predicates.

<sup>5</sup> Davidson never provides an example of a strict causal law. And there are some philosophers who think his account of causation is much too stringent, because there may be too few strict causal laws. (The best candidates for such laws are basic laws of quantum mechanics.) It is not our aim here to defend Davidson's metaphysical account of causation.

best explained by contrast with nonstrict laws. A nonstrict law is a generalization that contains a *ceteris paribus* qualifier that specifies that the law holds under "normal or ideal conditions," where the relevant notions of normal or ideal are specified by the theoretical context of the law. The generalizations one finds in the special sciences are mostly of this kind. In contrast, a strict law is one that contains no *ceteris paribus* qualifiers; it is exceptionless not just *de facto* but as a matter of law. A nonstrict law may be improved upon by explicitly including some of its *ceteris paribus* conditions in its antecedents. Davidson's view is that psychophysical laws of the form—whenever a person is in physical state *P*, then he is in intentional state *M*—are *essentially* nonstrict. That is, no matter how many conditions are added to the antecedent, short of trivializing the generalization, it will not be strict.<sup>6</sup>

Given the parallel between (4)–(6) and (1)–(3), it may seem that the former are also incompatible. But they are not. Davidson shows that they all can be true if (and only if) mental events are identical to physical events ("Mental Events," p. 215). Let us say that an event *e* is a physical event just in case *e* satisfies a basic physical predicate (that is, a physical predicate appearing in a strict law). Since only physical predicates (or predicates expressing properties reducible to basic physical properties) appear in strict laws, it follows that every event that enters into causal relations satisfies a basic physical predicate. So, those mental events which enter into causal relations are also physical events.

AM is committed only to a partial endorsement of (1). The mental and physical are distinct insofar as they are not linked by strict law—mental properties are not reducible to physical properties—but they are not distinct insofar as mental events are physical events. This being so, one might wonder whether AM also only partially endorses claims (2) and (3). In fact, Davidson's views have been criticized precisely on the point of (2). Ernest Sosa<sup>7</sup> writes: "I conclude that . . . anomalous monism is [not] really compatible with the full content of our deep and firm conviction that the mind and body each acts causally on the other" (*ibid.*, p. 278). Ted Honderich<sup>8</sup> goes even

<sup>6</sup> For an explication and defense of Davidson's arguments for the impossibility of strict psychophysical laws, see Jaegwon Kim, "Psychophysical Laws," *Actions and Events: Perspectives on the Philosophy of Donald Davidson*, LePore and Brian McLaughlin, eds. (London: Basil Blackwell, 1986), pp. 369–386, and also the introduction by McLaughlin in the same volume. Cf. also LePore and Loewer, "Davidson and the Anomalousness of the Mental," *Philosophical Perspectives on the Philosophy of Mind*, J. Tomberlin, ed., forthcoming.

<sup>7</sup> "Mind-body Interaction and Supervenient Causation," *Midwest Studies in Philosophy*, IX (1984): 271–282.

<sup>8</sup> "Smith and the Champion of the Mauve," *Analysis*, XLIV, 2 (1984): 86–89.

further charging that AM is really a form of epiphenomenalism: "I went on . . . to claim that [AM] was epiphenomenalist; it did not make the mental as mental an ineliminable part of the explanation of actions" (*ibid.*, p. 88).

If Honderich means that Davidson's views are committed to epiphenomenalism with respect to mental events, he is clearly mistaken, since, according to AM, mental events do cause other events. They *are* physical events and so can, like any event, have consequences. It is rather that, on AM, as he puts it, the mental *as* mental—some writers use the expressions "*qua* mental" and "*in virtue of being* mental"—is causally irrelevant. In defense of Davidson, one might reply that, although it is correct to say it is not *c as* mental that causes *e*, this has nothing to do with any epiphenomenalism on the part of the mental, but simply reflects the fact that it is not events *as* mental or *as* physical or *as* anything else which cause other events. Causation is a relation between events, not between events *as* *F*s. It seems to Davidson's critics, however, to make sense to distinguish some features of an event as causally relevant and others as causally irrelevant. It is this distinction which underlies the locution that it is *c as F* (not *as F'*) that causes *e* (to be *G*). Sosa and Fred Dretske<sup>9</sup> illustrate their understanding of the distinction in the following passages, respectively:

A gun goes off, a shot is fired and it kills someone. The loud noise is the shot. Thus if the victim is killed by the shot it is the loud noise that kills the victim. . . . In a certain sense the victim is killed by the loud noise. Not by the loud noise as a loud noise but only by the loud noise as a shot, or the like . . . . The loudness of the shot has no causal relevance to the death of the victim. Had the gun been equipped with a silencer the shot would have killed the victim just the same (*op. cit.*, pp. 277/8).

Meaningful sounds, if they occur at the right pitch and amplitude, can shatter glass, but the fact that these sounds have a meaning is irrelevant to their having this effect. The glass would shatter if the sounds meant something completely different or if they meant nothing at all (*op. cit.*).

<sup>9</sup> "Reasons and Causes," manuscript presented at the Chapel Hill Colloquium. For similar characterizations and examples of causal relevance, see Ted Honderich, "The Argument for Anomalous Monism," *Analysis*, XLII, 1 (January 1982): 61; John Searle, *Intentionality* (New York: Cambridge, 1983), pp. 155–157; Elizabeth Anscombe, "Causality and Extensionality," *Causation and Conditionals*, E. Sosa, ed. (New York: Oxford, 1975), p. 178; and Peter Achenstein, "The Causal Relation," *Midwest Studies in Philosophy*, IV (1977): 368.

Sosa, Honderich, Jaegwon Kim, Dretske, (among others)<sup>10</sup> think that, once we have made the distinction between the causally relevant and irrelevant features of an event, we will see that it is a consequence of AM that mental features are never causally relevant. Why is the causal irrelevance of the mental supposed to be entailed by AM? Kim<sup>11</sup> reasons as follows:

Consider Davidson's account: whether or not a given event had a mental description . . . seems entirely irrelevant to what causal relations it enters into. Its causal powers are wholly determined by the physical description or characteristic that holds for it; for it is under its physical description that it may be subsumed under a causal law. And Davidson explicitly denies any possibility of a nomological connection between an event's mental description and its physical description that could bring the mental into the causal picture (*ibid.*, p. 267).

The argument is that, since, according to AM, *c* causes *e* only if there is a strict law that subsumes *c* and *e* and since strict laws contain only physical (never mental) predicates, it follows that the mental features of events *c* and *e* are irrelevant to whether they are causally connected. The physical features of events suffice to fix, given the strict laws, *all* causal connections. Mental features neither suffice nor are required to fix causal connections. The argument is powerful. The conclusion the authors draw from it is that on AM *the mind does not matter*; that a neural event has a certain intentional content is as irrelevant to its effect as the fact that the sounds are meaningful is to the sounds causing the glass to break.

But is this criticism of AM correct? We claim that it is not, and that it rests on a simple, but perhaps not obvious, confusion. The confusion is between two ways in which properties of an event *c* may be said to be causally relevant and irrelevant. Consider the following locutions:

- a) Properties *F* and *G* are relevant<sub>1</sub> to making it the case that *c* causes *e*, and
- b) *c*'s possessing property *F* is causally relevant<sub>2</sub> to *e*'s possessing property *G*.

<sup>10</sup> Others who have argued that AM is epiphenomenalist include: F. Stoutland, "The Causation of Behavior," *Essays on Wittgenstein in Honor of G. H. von Wright* (Acta Philosophica Fennica, 1976), p. 307; Dagfinn Føllesdal, "Causation and Explanation: A Problem in Davidson's View on Action and Mind," *Action and Events: Perspectives on the Philosophy of Donald Davidson*, *op. cit.*, p. 315; Mark Johnston, "Why the Mind Matters," *ibid.*, p. 423; and Skillen, *op. cit.*, p. 520.

<sup>11</sup> "Epiphenomenal and Supervenient Causation," *Midwest Studies in Philosophy*, ix (1984), 257–270.

We will say that (a) holds iff  $c$  has  $F$  and  $e$  has  $G$ , and there is a strict law that entails  $F$ s cause  $G$ s. It is in this sense that it is  $c$ 's having  $F$  and  $e$ 's having  $G$  "make it the case" that  $c$  causes  $e$ . Relevance<sub>2</sub> is a relation among  $c$ , one of its properties  $F$ ,  $e$ , and one of its properties  $G$ . It holds when  $c$ 's being  $F$  brings it about that  $e$  is  $G$ . We shall argue that those who charge AM with epiphenomenalism are guilty of confusing relevance<sub>1</sub> with relevance<sub>2</sub>.

None of the authors we have been considering defines the sense of causal relevance they have in mind when they accuse AM of rendering the mental causally inefficacious. Their discussions, though, do suggest a *test* for causal irrelevance. Recall Sosa's remark that "had the gun been equipped with a silencer it would have killed the victim just the same" (278); and Dretske's remark that "the glass would shatter if the sounds meant something completely different." So it may be that Sosa and Dretske (and others) think that AM entails the causal irrelevance of the mental, because they think that it entails the falsity of such mentalistic counterfactuals as: if Fred had not believed that Jerry would attend the conference, he would not have come.

In view of this counterfactual test for causal irrelevance<sub>2</sub>, we suggest that the authors who propose it may have in mind the following characterization of causal relevance<sub>2</sub>.<sup>12</sup>

- (I)  $c$ 's being  $F$  is causally relevant<sub>2</sub> to  $e$ 's being  $G$  iff
- i.  $c$  causes  $e$ .
  - ii.  $Fc$  and  $Ge$ .
  - iii.  $\neg Fc > \neg Ge$ .
  - iv.  $Fc$  and  $Ge$  are logically and metaphysically independent.<sup>13</sup>

Condition (iv) is intended to exclude cases in which the connection between  $F$  and  $G$  is conceptual/metaphysical rather than causal, e.g.,  $c$ 's being the cause of  $e$  is causally relevant<sub>2</sub> to  $e$ 's being caused by  $c$ , when  $c$  does cause  $e$ .

The heart of our response to the claim that AM is committed to epiphenomenalism is this: AM entails that mental features are caus-

<sup>12</sup> While many philosophers appeal to the notion of causal relevance, it is far from clear that there is a single or well-characterizable notion that underlies the locution that  $c$  qua  $F$  causes  $e$  to be  $G$ . We are here interested only in sketching enough of an account to refute the charge that AM is committed to epiphenomenalism. Anyone interested in a thorough explication of causal relevance would have to show how to accommodate familiar difficulties involving pre-emption, overdetermination, and so on. But these are problems which confront every account of causation and we will not discuss them here.

<sup>13</sup>  $c$ 's being  $F$  and  $e$ 's being  $G$  are metaphysically independent, iff there is a possible world in which  $c$  (or a counterpart of  $c$ ) is  $F$  but  $e$  (or a counterpart of  $e$ ) fails to occur or fails to be  $G$  and vice versa.

ally irrelevant<sub>1</sub>, but does not entail that they are causally irrelevant<sub>2</sub>. Before arguing these claims, we need to discuss the interpretation of the counterfactual:

(Q) If event  $c$  were not  $F$ , then event  $e$  would not be  $G$ .

We will adopt the Lewis–Stalnaker<sup>14</sup> account of counterfactuals, according to which  $A > B$  is true iff  $B$  is true at all the worlds most similar to the actual world at which  $A$  is true (or  $A$  is true at no such world). We will suppose that an event  $e$  that occurs at the actual world may occur or have counterparts that occur at others. ‘ $c$ ’ and ‘ $e$ ’ are to be understood as rigid designators of events. In evaluating (Q), we need to look at the most similar worlds to the actual world at which  $c$  fails to be  $F$ .  $c$  may fail to be  $F$  at  $w$  either by existing there and not being  $F$  or failing to occur at  $w$  (or have a counterpart) at all. (Q) is true just in case the most similar worlds at which counterparts to  $c$  fail to have  $F$  or at which  $c$  fails to have a counterpart are such that counterparts to  $e$  fail to have  $G$  or  $e$  fails to have a counterpart.

The irrelevance<sub>1</sub> of the mental follows immediately from the definition of relevance<sub>1</sub> and from AM’s (4) and (6). The irrelevance<sub>1</sub> of psychological predicates, however, is perfectly compatible with the truth of counterfactuals  $-Fc > -Ge$ , where  $F$  and  $G$  are predicates that do not occur in strict laws. That is, the set of strict laws and basic physical facts do not by themselves settle the truth values of counterfactuals.

We can see that this is so as follows: consider the set of worlds  $W$  at which all the strict laws hold. (This set includes the actual world  $\alpha$ .) Until a *similarity order*,  $\geq\alpha$ , is placed on  $W$ , the truth values of almost all counterfactuals are indeterminate. Only those counterfactuals  $A > B$  such that the strict laws and noncounterfactual statements true at  $\alpha$  entail  $A \rightarrow B$  or  $-(A \rightarrow B)$  have determinate truth values, since any similarity ordering  $\geq\alpha$  will make the former true and the latter false. This is just the lesson of Nelson Goodman’s<sup>15</sup> failed attempts to analyze counterfactuals in terms of laws. What Goodman found is that laws and noncounterfactual truths are themselves not sufficient to settle the truth value of any but a limited set of counterfactuals. It follows that the truth of counterfactuals of the sort needed to establish causal relevance<sub>2</sub> (since neither they nor their negations are entailed by the strict physical laws and noncounterfactual truths) are compatible with AM.

<sup>14</sup> See David Lewis, *Counterfactuals* (Oxford: Blackwell, 1973); and Robert Stalnaker, “A Theory of Conditionals,” *Studies in Logical Theory*, N. Rescher, ed. (New York: Oxford, 1968). There are differences between the two accounts irrelevant to our discussion.

<sup>15</sup> *Fact, Fiction and Forecast*, 4th ed., (Cambridge, Mass.: Harvard, 1982).

Of course, it is one thing to show that mentalistic counterfactuals are compatible with AM. It is quite another thing to produce an account of what makes these counterfactuals true and also show that this account is compatible with AM. The question of what makes counterfactuals true is a general one which concerns all counterfactuals and not just mentalistic ones. We shall briefly address it toward the end of our discussion.

To this point, we have shown that, if (I) supplies sufficient conditions for causal relevance<sub>2</sub>, then there is no incompatibility between AM and the causal relevance<sub>2</sub> of the mental.<sup>16</sup> This is important, since, as we have seen, many of Davidson's critics seem to think there is such an incompatibility. There are two further related questions we need to address. One is whether causal irrelevance<sub>1</sub> alone is sufficient to sustain a charge of epiphenomenalism. A second is whether there are some further conditions on (I) such that, once added, AM does entail the causal irrelevance<sub>2</sub> of the mental.

Why would anyone think that irrelevance<sub>1</sub> of the mental entails epiphenomenalism? Honderich<sup>17</sup> formulates a principle he calls "the principle of the nomological character of causally relevant properties," according to which *c*'s having *F* is causally relevant to *e*'s having *G*, iff there is a law of the form *F*s cause *G*s (62). If one thinks, as Honderich does, that AM implies that psychological predicates never appear in causal laws, then one might conclude that psychological features have no causal role to play and indeed that psychology could not be a science. But, as Davidson has been careful to observe (240), there may very well be psychological and psychophysical causal laws that support counterfactuals and other subjunctive conditionals; it is just that such laws cannot be *strict*. If Honderich intends for the principle of nomological relevance to include nonstrict as well as strict laws, then AM is compatible with the causal relevance (in Honderich's sense) of psychological properties. If he intends for the principle to include only strict laws, then it is an unacceptable principle. It is implausible that there are any strict laws linking 'is a match striking' with 'is a match lighting'. So, on the strict law construal of

<sup>16</sup> Although there is a tradition in the philosophy of action arguing that there are conceptual connections between propositional attitudes and actions, this does not entail that particular propositional attitude properties are conceptually connected. For example, suppose that John believes that Mary is across the street and, for this reason, waves his hand. Let *c* be John's thought, *e* his action, *F* the property of his believing Mary is across the street, and *G* the property of being a waving hand. Clearly, we can have *c*'s being *F* causally relevant<sub>2</sub> to *e*'s being *G*, since *c*'s being *F* can obtain without *e*'s being *G* and vice versa in some metaphysically possible world.

<sup>17</sup> "The Argument for Anomalous Monism," *Analysis*, XLII, 1 (January 1982): 59–64.

Honderich's principle, being a match striking is not causally relevant to the match's lighting. On this construal, Honderich's principle would render virtually all properties of events causally irrelevant<sub>2</sub>. This certainly seems wrong.

In arguing that AM entails the causal irrelevance of the mental, some authors have suggested a strengthened account of causal relevance<sub>2</sub>. For example, Sosa writes:

I extend my hand because of a certain neurological event. That event is my sudden desire to quench my thirst. Thus, if my grasping is caused by that neurological event, it's my sudden desire that causes my grasping . . . Assuming the anomalism of the mental, though extending my hand is, in a certain sense, caused by my sudden desire to quench my thirst, it is not caused by my desire qua desire but only by desire qua *neurological* of a certain sort. . . . [T]he being a desire of my desire has no causal relevance to my extending my hand (if the mental is indeed anomalous): *if the event that is in fact my desire had not been my desire but had remained a neurological event of a certain sort, then it would have caused my extending my hand just the same* (277/8, our emphasis).

This passage suggests the following as a sufficient condition for causal irrelevance<sub>2</sub>:

- (II)  $c$ 's being  $F$  is causally irrelevant<sub>2</sub> to  $e$ 's being  $G$ , if there is a property  $F^*$  of  $c$  such that  $(F^*c \ \& \ -Fc) > Ge$  holds nonvacuously.

Even when  $-Fc > -Ge$  holds, there may be a property  $F^*$  of  $c$  such that  $(F^*c \ \& \ -Fc) > Ge$ . In this case, it may seem that it is in virtue of  $c$ 's being  $F^*$ , not  $F$ , that  $e$  is  $G$ . When this holds, we will say that  $F^*c$  "screens off"  $Fc$  from  $Ge$ . Converting (II) into a necessary condition for causal relevance<sub>2</sub> and adding it to (I), we obtain the following proposal:

- (III)  $c$ 's being  $F$  is relevant<sub>2</sub> to  $e$ 's being  $G$  iff the conditions in (I) are satisfied and there is *no* property  $F^*$  of  $c$  such that  $(F^*c \ \& \ -Fc) > Ge$  holds nonvacuously.

Sosa seems to think that it follows from AM that  $c$ 's being a certain neural state,  $Nc$ , *screens off*  $c$ 's being a desire to quench thirst,  $Mc$ , from  $e$ 's being an extending of the hand,  $Be$ . More generally, he seems to think that neural properties screen off intentional mental properties. Presumably, Sosa thinks that this follows from AM, because he thinks there are strict laws connecting neural properties with behavioral properties. Since mental properties are not reducible to neural properties, it follows that there are physically possible worlds in which  $Nc$ ,  $Mc$ , and in *all* such worlds  $Be$ .

It is not at all clear that there are strict laws connecting neural

properties with mental properties (and so that AM *entails* that the neural property screens off the mental property), but it does seem that, as a matter of fact in a case like Sosa's, the neural property does screen off the mental property. The worry then is that, if (II) is kept as a condition on causal irrelevance<sub>2</sub>, then the causal irrelevance<sub>2</sub> of the mental will follow from AM after all.<sup>18</sup>

In response to this, notice first that (II)'s rendering the mental causally irrelevant<sub>2</sub> is independent of AM, at least to the extent that the problem-creating counterfactual,  $(Nc \ \& \ -Mc) > Be$ , holds whether or not there is a strict law linking  $N$  with  $B$ . So anyone who adopts (II) as a condition on causal irrelevance<sub>2</sub> will be committed to the causal irrelevance<sub>2</sub> of the mental in this case. But it seems to us that (II) is not a correct condition on irrelevance<sub>2</sub>. It renders even properties connected by strict law causally irrelevant<sub>2</sub>. To see this, consider the neural event  $c$  and the behavioral event  $e$  in Sosa's example.  $c$  possesses basic physical property  $P$  and mental property  $M$  (being a desire to quench his thirst), and  $e$  possesses the property  $B$  (being a certain movement of the hand). Assuming a strict law between  $P$  and  $B$ , it follows that:

(S)  $(-Mc \ \& \ Pc) > Be$ .

So,  $P$  screens off  $M$  from  $B$ . Now consider the counterfactual:

(T)  $(-Pc \ \& \ Mc) > Be$ .

It can be shown that (T) is compatible with AM *and* (S). Furthermore, it is plausible that (T) is in fact true. If  $c$  had been a desire to quench thirst but had not been  $P$ , it would have had some other property  $P^*$ . Furthermore,  $c$  still would have resulted in an  $e$  that has the property  $B$ . That is, in the closest possible world in which Sosa desires to quench his thirst but this desire is not a  $P$ , it still causes him to extend his hand. Supporting this claim there may be a law, though not strict, to the effect that, when someone experiences a sudden

<sup>18</sup> Jerry Fodor has argued that a taxonomy of propositional attitude states in terms of their truth conditions is not a taxonomy in terms of causal powers. See his *Psychosemantics* (Cambridge, Mass.: MIT Press, 1987), ch. 2. Condition (III) may be involved in the view of some philosophers that scientific psychology requires a notion of narrow content. Thus, Fodor seems to hold that Oscar's belief that water quenches thirst is not causally relevant<sub>2</sub> to Oscar's behavior, since, if Oscar were in the same neural state as he is in but had not believed that water quenches his thirst, he would have behaved identically. The antecedent of this counterfactual is thought to be metaphysically possible for Putnamian reasons: if Oscar has lived in an environment containing XYZ and not H<sub>2</sub>O his neural state would have been a belief that twin-water quenches thirst. One might conclude that, if we want a notion of content such that propositional attitudes are causally relevant<sub>2</sub> in virtue of their contents, then we need a notion of content which makes propositional attitudes supervene on neural states.

desire to quench his thirst and believes there is a glass of water in front of him which he can reach by extending his hand, then, *ceteris paribus*, his hand will extend. When we consider the possibility that *c* is *M* but not *P*, this law “takes over” so that *c* still causes an event that is *B*. Here is a nonpsychological example which will, perhaps, help elucidate our claim.

Consider the event of hurricane Donald striking the coast causing the streets to be flooded. That event is identical to the event of certain air and water molecules moving in various complex ways. Call the property of consisting of molecules moving in such ways *P*. It is perfectly possible for the following counterfactual to be true: if hurricane Donald had not had property *P* (that is, if a hurricane as much like Donald as possible, though without *P*, had occurred), then it still would have caused the streets to be flooded. Indeed, it would have had some property *P\** sufficiently similar to *P*, and *P\** events (under the relevant conditions) cause floodings. The result is that Donald’s being a hurricane would be said to be causally irrelevant to its flooding the streets. We think that examples such as this one show that (III) is too strong a requirement on causal relevance<sub>2</sub>.<sup>19</sup>

A fully adequate account of causal relevance<sub>2</sub> should show how mentalistic counterfactuals are grounded. What is it about Sosa, his situation, etc., that makes it true that, if he had not experienced a sudden desire to quench his thirst, he would not have extended his hand? We do not have such an account, but we do want to suggest an approach that fits within the framework of AM. As we have observed already, the existence of nonstrict psychophysical and psychological laws is compatible with AM. A nonstrict law is one which has a *ceteris paribus* qualifier. The interesting thing about such laws is the ways in which they can support counterfactuals. We will illustrate this by building upon a suggestion by Lewis.<sup>20</sup> Let *R*, *W*, and *B* be the statements that a red block, a white block, and a blue block is placed in front of Donald and *S<sub>r</sub>*, *S<sub>w</sub>*, and *S<sub>b</sub>* be the statements that Donald sees a red block, a white block, and a blue block. We will suppose, as is plausible, that there are nonstrict laws of the form:

(L) If *X* and *C*, then *S<sub>x</sub>*,

<sup>19</sup> It may be that there is some account of causal relevance<sub>2</sub> midway in strength between (I) and (III) which captures what some of Davidson’s critics have in mind. We leave to them the task of formulating it and attempting to demonstrate that AM entails the irrelevance<sub>2</sub> of the mental so characterized.

<sup>20</sup> “Causation,” *Causation and Conditionals*, E. Sosa, ed. (Oxford, New York: 1975), pp. 180–191.

where  $C$  are conditions like lighting is good, Donald is awake and paying attention, and so on. Even with such conditions added, the law is a *ceteris paribus* one and, if AM is correct, it will be impossible to add explicit conditions that turn it into a strict law. When the laws (L) hold, we will say that the statements describing what Donald sees *depend nomically* on the statements describing the blocks in front of him. Call conditions  $C$  *counterfactually independent* of the family of statements  $\{R, W, B\}$ , if  $C$  would continue to hold no matter which member of  $\{R, W, B\}$  is true. Lewis shows that, if  $C$  and the *ceteris paribus* conditions associated with (L) are counterfactually independent of  $\{R, W, B\}$ , then  $S_x$  will depend counterfactually on  $X$ . That is, each of the counterfactuals,  $R > S_r$ ,  $W > S_w$ ,  $B > S_b$ , will be true. If we further assume that a block which has one of three colors will be placed in front of Donald [and that this statement is also counterfactually independent of  $(R, W, B)$ ], then the statement  $-X > -S_x$  will also be true. Suppose a red block is placed in front of Donald, and this event causes the event of his seeing a red block. It will follow that, if the first event had not been a placing of a red block, then the second event would not have been Donald's seeing a red block. As Lewis points out, this "grounding" of counterfactuals in laws fails to *reduce* counterfactuals to laws, since the assumption of counterfactual independence is essential. It does show, however, how laws, including *ceteris paribus* laws, can support counterfactuals. The program for a psychology compatible with AM is the discovery and the systematization of such nonstrict laws (at various levels) connecting psychological and/or behavioral properties.

We have seen that AM attempts to resolve the mind-body problem by endorsing (2), (3), and (3'), denying (1) with respect to events, and affirming (1) with respect to properties. Davidson is silent on (2) and (3) with respect to properties, leading to the accusation that AM is committed to epiphenomenalism. We rebutted this charge by showing that AM is compatible with there being counterfactual dependencies between events in virtue of their mental properties. To do this is to affirm (2) with respect to properties but, of course, to deny (3) with respect to properties. An event's physical features may counterfactually depend on another event's mental features. But, interestingly, we need not deny (3') for our account of causal relevance<sub>2</sub>. It may be that all counterfactuals *supervene* on basic physical truths and strict laws. That is, if two possible worlds are exactly alike with respect to basic physical facts and strict laws, they are exactly alike with respect to counterfactuals. This fairly strong physicalism still allows sufficient autonomy of the mental so that it is not reduci-

ble to the physical and it has a genuine explanatory and causal role to play.

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### MAKING MIND MATTER MORE\*

Ernest LePore and Barry Loewer's paper argues that many of our intuitions about what is required for an intensional property of a mental event to be causally responsible for its behavioral effects can be squared with the metaphysics of "anomalous monism"—specifically, with the idea that singulary causal statements must be backed by strict laws (of physics). I argue, on the contrary, that anomalous monism really is incompatible with a robust construal of the causal responsibility of the mental and that some, at least, of its tenets will therefore have to be revised. In particular, I suggest, the requirement that singulary causal statements be backed by strict laws is unmotivated; all they require is backing by "hedged" laws whose *ceteris paribus* conditions are satisfied. This view not only legitimizes our intuitions about causal responsibility, but also provides a reasonable account of how the laws of the special sciences operate; or so I claim.

A consequence of this approach is that anomalous monism can no longer be invoked to underwrite the famous Davidsonian argument from mental causation to physicalism. An alternative argument is proposed which, though similar in spirit to Donald Davidson's, does not require the assumption that mental events are subsumed by physical laws.

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