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SUPERVENIENCE AND ANOMALOUS MONISM: BLACKBURN ON DAVIDSON

(Received in revised form 23 October, 1992)

In his paper "Supervenience Revisisted", Simon Blackburn redeployed his novel modal argument against moral realism as an argument against Donald Davidson's position of 'anomalous monism' in the philosophy of mind (Blackburn 1985).[1] I shall assess this redeployment. In the first part of this paper, I shall lay out Blackburn's argument. In the second and longer part I shall examine Davidson's denial of psychophysical laws in the light of this argument.

1. BLACKBURN'S MODAL ARGUMENT

The (S)/(P) Combination

Blackburn's argument against moral realism takes off from the supervenience of the moral on the natural (Blackburn 1971, 1984, and 1985). Philosophers usually express supervenience by saying that certain features of a thing (the 'subvening base') *fix* or *determine* certain of its other features. In the philosophy of mind we have the doctrine that physical states fix mental states. This is often cashed out as the idea that two physically identical situations must be the same in mental respects. (See, for example, Davidson 1980, p. 214 and p. 253.)

Let 'F' and 'G' be variables which range over mental and physical properties (rather than, say, moral and natural properties, dispositional and categorical properties, or macro-physical and micro-physical properties). 'G*' denotes a 'total' or 'maximal' G property. (See Blackburn 1985, p. 48; and Kim 1978, pp. 152—3.) Such a property is the total G state which is *responsible* for the instantiation of some F property. A G* property will be a complex conjunction of G properties, the instantiation of which is sufficient for an F instantiation. There are many ways

Philosophical Studies **71**: 59—79, 1993.

of formulating supervenience. Here is one way that Blackburn does it (1984, p. 184):

(S) Necessarily $\{(\exists x)(Fx \& G^*x) \rightarrow (\forall y)(G^*y \rightarrow Fy)\}$

There are other formulations. We could add a necessity operator before the consequent of the overall conditional, thus converting 'weak' to 'strong' supervenience. We could add a temporal variable. And there are formulations which are logically different (see Kim 1984). But we need not worry about these complications for the moment. Blackburn's argument goes ahead given other formulations of supervenience.

Blackburn contrasts (S) with the following doctrine:

(N) Necessarily $(\forall x)(G^*x \rightarrow Fx)$

(N) is the consequent of the overall conditional of strong supervenience. We should be careful to see that (N) is compatible with 'variable realization'. Variable realization means that there are no necessities running from F to G; it does not rule out what (N) asserts, which is the existence of necessities running from G to F. If we lack (N), we have:

(P) Possibly $(\exists x)(G^*x \& -Fx)$

It is an (S)/(P) combination which Blackburn urges us to find problematic. In his early paper, "Moral Realism", Blackburn's interesting question was this: how can it be that although there is no necessity that a G* thing is F, it is necessary that a G* thing is F if some *other* thing is both G* and F? How could it be that a G* thing is only forced to be F if something *else* is both G* and F? (Blackburn 1971, pp. 110—11). Blackburn argued that the moral realist cannot 'explain' why (S) holds, when it is combined with (P).

On the face of it, Blackburn seems to be right to think that the (S)/(P) combination poses a serious difficulty where it arises. However, in this paper I shall argue that, apart from a couple of special cases which we can put to one side, the combination does not arise for Davidson's view in the philosophy of mind according to which the mental supervenes on the physical but there are no strict laws connecting the mental and the physical. If the combination does not arise, Blackburn's argument is no threat to Davidson.

Brands of Modality

Philosophers sometimes distinguish between different brands of modality. Blackburn's argument does not initially depend on the kind of necessity in question in (S) and (P), so long as they are of the same sort. But in different areas, claims (S) and (P) will hold in different strengths. In "Moral Realism" Blackburn only speaks of 'logical necessity'. But in "Supervenience Revisited", he operates with a schema according to which 'conceptual' necessity implies 'metaphysical' necessity, which implies 'physical' necessity, which implies statistical generalizations (1985, p. 54 and 57). This is reversed for possibilities. Stronger senses imply weaker senses. This schema has a certain intuitive plausibility, and I shall go along with it for the time being, except to note that it is probably best not to see conceptual and metaphysical modality as quite different brands of modality. It is better to see conceptual necessities as those metaphysical necessities which we can *know* about in a certain way: we arrive at conceptual knowledge by following out the implications of what we must know in order to be able to employ a concept in judgements. But not all metaphysical necessities can be known in this way.

In order for Blackburn's argument to go ahead, the necessities of (S) and (P) must coincide. In moral philosophy they both hold at the level of conceptual necessity; so that is where the problem arises. There may be metaphysically necessary connections between the moral and natural. But Blackburn is right to think that this does not help with his problem at the level of conceptual necessity. Many philosophers think that the existence of such metaphysical necessities hinders Blackburn's argument against moral realism. James Klagge, Ian McFetridge, and Sydney Shoemaker have all agreed on this (Klagge 1984; McFetridge 1985; and Shoemaker 1986). It is true that the original version of the argument in "Moral Realism" was unsatisfactory in that it operated with an over simplistic notion of 'logical necessity'. And only at one place in *Spreading the Word*, as an afterthought, does Blackburn make it clear that even though metaphysical necessities hold, the argument against moral realism still goes ahead at the level of conceptual modality (1984, p. 221). However, once the distinction between kinds of neces-

sity is made — as it is in "Supervenience Revisited" — Blackburn's argument against moral realism becomes more interesting, not less. The argument is not easy to meet and it raises many interesting issues.

However, supervenience is unlikely to be a conceptual thesis in the philosophy of mind as it is in moral philosophy. Enough people have thought that they could imagine or conceive of disembodied minds, even if this is not really (metaphysically) possible. Blackburn himself argues that whole cultures cannot be guilty of a conceptual confusion (1985, p. 59).

Using the subscript 'c' to mark conceptual modality, then, even though we have (P_c), we lack (S_c) in the philosophy of mind. So it looks as if Davidson's position is safer than moral realism from Blackburn's argument because there is no (S)/(P) combination at the level of conceptual necessity.

Environmentalism

A potential problem with the claim that (S_c) is false in the philosophy of mind arises from 'environmentalism' or 'externalism' about propositional attitudes. Many philosophers think that a supervenience thesis is plausible for propositional attitudes only if the subvening physical states extend 'outside the head' to an organism's causal interactions with its environment. It might be said that this dependence of the content of propositional attitudes on our causal relations with the outer physical world is not just a truth but also a conceptual truth; and this is shown by the fact that those who argue for it (such as Hilary Putnam (1975) and Tyler Burge (1979)) do so by means of *thought experiments*. The thought experiments are supposed to show that 'folk psychology' itself — that is, our everyday psychological conceptual scheme — is committed to the world-involving nature of our mental states. (It is this which, in some eyes, makes folk psychology an unworthy basis for scientific enquiry.) Thought experiment is not an empirical mode of enquiry but a process of following out the implications of what we already know. Whether we can perform certain thought experiments concerning propositional attitudes depends on what we must know in order to possess our *concepts* of propositional attitudes. The arguments for the world-involvingness of propositional attitudes are, therefore,

conceptual ones. So, assuming that the thought experiments are successful, it looks as if the supervenience of the content of propositional attitudes on the environment is a conceptual truth.

However, this is no objection to the denial that it is a conceptual truth that the mental supervenes on the physical *in general.* The thought experiments may show that it is a conceptual truth that propositional attitudes depend *in part* on the physical environment, but they do not show that it is a conceptual truth that propositional attitudes are *entirely* determined by physical states. For the fact that propositional attitudes depend in part on the outer physical world leaves open the possibility that they *also* depend in part on the operation of some ghostly dualistic substance. The thought experiments may show that certain relations to the material environment are *necessary* for determining the content of propositional attitudes; but the crux of the mind-body problem turns on what is *sufficient* for mental states. When we are interested in subvening properties, we are interested in those properties which are sufficient for the instantiation of the supervening properties. The conceptual truth of environmentalism does not imply that psychophysical supervenience is a conceptual truth.

The Argument Against Davidson

Blackburn wants to catch Davidson with the (S)/(P) combination at the level of 'physical possibility' ('$(S_p)/(P_p)$'). To this end he denies (N) at the metaphysical level ('(N_m)') on Davidson's behalf. Blackburn must do this because he needs (P_p) to combine with (S_p) which he derives from (S_m) (1985, p. 59). But Blackburn can only have (P_p) if he denies (N_m), since he holds that (N_m) entails (N_p). This strategy seems peculiar because if Davidson *does* deny (N_m), Blackburn could just as well catch him with the (S)/(P) combination at the metaphysical level; for according to Blackburn's schema, (P_p) entails (P_m). We can only deduce (S_p) from (S_m), as Blackburn does, if we can also deduce (P_m) from (P_p). What holds Blackburn back from formulating the argument at the metaphysical level? Perhaps he thinks that Davidson would say that supervenience holds with physical but not metaphysical necessity.

At any rate, the important thing is that Blackburn denies that Davidson would hold (N_m). Why does Blackburn think that Davidson

cannot have (N_m)? Davidson claimed, famously, that the mental and the physical do not stand in strict 'lawlike relations'; he thinks that there are no strict psychophysical laws. Blackburn puts this claim by saying that there are no "lawlike propositions connecting the two vocabularies" (1985, p. 59). Blackburn takes this to imply an assertion of the 'physical possibility', '(P_p)'. I shall try to show that this way of putting the matter is unfair. Either the possibility is compatible with (N_m) or else Davidson need not accept it. I shall argue that Blackburn is wrong to deny (N_m) on Davidson's behalf. Davidson can and should accept (N_m), despite his denial of psychophysical laws.

It is for this reason — among others — that I think that Davidson should accept *strong* supervenience, not some puny weak version which merely lays down constraints concerning what can happen within a world. Nietzsche was right: the strong should triumph over the weak! Call particular instances of (N_m) 'dependencies'. Strong supervenience is the thesis that behind every F instantiation there stands a G-F dependency (see Kim 1984; Blackburn 1985, pp. 50—52). Davidson himself tends to eschew modality, following Quine. (Maybe that is why he appears to opt for weak supervenience.) But brushing the large Quinean question aside, the claim will be that Davidson *ought* to like strong supervenience. In arguing that Davidson can have (N_m), I am arguing that he can have strong supervenience.

This will involve some reconstruction of Davidson's position, but the position which remains will be recognizably Davidsonian in its embrace of the supervenience-plus-anomalous combination. My presentation will involve at least two other points of difference from the actual Davidson (besides the modal difference over supervenience), which I cannot here defend. First, there is the non-realist aspect of Davidson's views on the mental; he thinks that mental states are a construct of interpretation, whereas I prefer to see them as interpretation-transcendent. Second, Davidson operates with a strict event ontology, whereas I am kinder to properties, and I am kinder to laws conceived of as relations between properties.

If Davidson can have (N_m), as I shall argue, then Davidson would have an (S_m)/(N_m) combination, thus evading Blackburn's problem at the metaphysical level. And if metaphysical necessity entails physical

necessity, he would also have an $(S_p)/(N_p)$ combination, thus evading the problem at the level of physical necessity.

2. DAVIDSON AND PSYCHOPHYSICAL LAWS

Davidson is somewhat inconstant in his characterization of law, and in consequence, he is also inconstant in what he is denying when he says that there are no psychophysical laws. I shall examine Davidson's anomaly claim from the perspective of a variety of conceptions of law, all of which can be found in his writings.

Reduction

In several places, Davidson suggests that psychophysical laws would involve biconditionals (1980, pp. 214—5, pp. 249, pp. 251—2). It is true that Davidson is opposed to the sort of materialism which involves type or property identities. Davidson ends up asserting 'token identities' without 'type identities' between the mental and physical. So it might be conjectured that it is these type identities that Davidson is denying when he denies that there are strict psychophysical laws. Perhaps a psychophysical law should be understood in the sense of 'metaphysical reduction' — a matter of the necessary coinstantiation of mental and physical properties, on the model of the reduction of water to H_2O or heat to mean molecular motion.

If such biconditionals are what psychophysical laws would involve then Davidson can clearly have (N_m) without psychophysical laws. By accepting a strong notion of supervenience, Davidson must accept that there are necessities to the effect that anything which of a certain total physical type must also be of a certain mental type. But that would not mean that he is committed to metaphysical reduction in the bioconditional sense. For even though strong supervenience involves metaphysically necessary relations running up from the physical to the mental, there may be no metaphysically necessary relations running back down from the mental to the physical. Mental properties might be 'variably realized' in the physical, as the functionalists argued. Reduction is a two-way biconditional relation, and there is no reason to think that one

cannot have a one-way relation without a two-way relation. (I am here assuming that we can ignore infinitely disjunctive gerrymandered subvening properties (see Kim 1978 and 1984).)

One Way Laws and (N_m)

However, this victory for Davidson is too easy. For although Davidson is indeed keen to deny bioconditional reduction, this may not be *all* he is denying. At one point, Davidson writes of laws in general:

> Lawlike statements are general statements that support counterfactual and subjunctive claims, and are supported by their instances. (1980, p. 217.)

There is no reason why a psychophysical law in this sense would have to be biconditional. Perhaps he is also denying one-way psychophysical laws. But then, it will be pointed out, surely (N_m) itself involves such laws. In my view, Davidson ought immediately to concede that the one-way relations of (N_m) are lawlike in this sense. Particular instances of (N_m) will support counterfactuals (see Kim 1978, p. 153), and they will also be supported by their instances. So it seems that, for Davidson, this would suffice to make instances of (N_m) psychophysical laws. What is more, these will be *strict* laws, not merely laws which are hedged by ceteris paribus clauses. So Davidson cannot accept (N_m) and deny the existence of strict psychophysical laws, in this sense.

Davidson could react to this news by doing one of two things. He could either retract the claim that these two features (supporting counterfactuals and being supported by instances) suffice for lawlikeness, adding some extra proviso which excludes (N_m), or else he could distinguish these sorts of laws from the sort of psychophysical laws that he was interested in denying. It does not matter which he says. There is no point fighting over the word 'law'. In one sense (N_m) commits him to strict psychophysical laws, and there may be other senses in which it does not. I shall return to this point.

Causal Laws

This cannot be all that we mean by law. When we speak of the laws of nature or of what is physically possible, we are not just talking about

one- or two-way metaphysical necessitation relations. Physical possibility is the sense of possibility that we are dealing with when we say that it is not possible for pigs to fly. This is not possible as far as the laws of nature go. Together with some basic facts about pigs — winglessness, weight, unaerodynamic features, and the like — the laws of nature rule out flying pigs. Unsupported pigs must plummet. If anything is an unsupported pig at a certain time, soon thereafter, it will plummet towards the earth. Here we are dealing with *causal laws.* Causal laws dictate what the state of the world at one time must be, given the state of the world at another. This is where the plain old notions of *physical* necessity and possibility most naturally fit in.

Psychophysical laws might be causal laws of this sort. Psychophysical laws might be taken, not to indicate a metaphysically necesary relation, but a cross-time causal relation. There would be causal laws binding mental and physical properties if there were laws to the effect that if a certain mental property is instantiated at a certain time, then (all else being equal) a certain physical property will be instantiated at a later time. Such laws might also run from the physical to the mental. If we knew such causal laws, we could *predict* later physical events on the basis of our knowledge of earlier mental events — or vice versa. Davidson writes:

> . . . there are no strict deterministic laws on the basis of which mental events can be predicted and explained. (p. 208.)

Davidson's talk of determinism and prediction make it likely that he had psychophysical causal laws in mind when he denied strict psychophysical laws.

Given such a conception of psychophysical causal law, we have a contrast with (N_m). A psychophysical causal law binds states of the world at two different times, whereas (N_m) is not a relation of causal determination between earlier G* instantiations and later F instantiations. According to (N_m), anything G* must be F *then and there.* The necessitation is instantaneous. It is F in virtue of its being G*. So it looks as if metaphysical and causal necessity are two quite separate and perhaps incommensurable necessities. One is not weaker or stronger than the other; they are quite different. Chalk and cheese. If so, causal necessity would not stand in any entailment relation with metaphysical

necessity. So even if Davidson thinks that there are no psychophysical causal laws, that would not mean that he cannot have (N_m).

This chalk and cheese argument has considerable appeal. But the argument can be queried. Why — *exactly* — are we supposed to deny that G-to-F dependencies involve G-F causal laws? Where we have G-to-F necessities without F-to-G necessities (as we have in various uncontroversial examples outside the philosophy of mind), why should there not be G-F causal laws even so? And perhaps we could even be given an argument to the effect that we cannot have the G-to-F necessities of (N_m) without being committed to G-F causal laws. It is hard to see why G-to-F necessities alone *should* bring G-F causal laws in their wake. But it is also hard to see why they *shouldn't*! We cannot rest with chalk and cheese.

Derivative Causal Laws

I cannot see any way to make progress in thinking about this except by reflecting on the following argument for thinking that (N_m) does entail causal laws.

Suppose that an instantiation of the property G* is caused by an earlier instantiation of a different complex conjunctive total G property, G*′, such that it is a law that G*′ instantiations are followed by G* instantiations.[2] So there is a cross-time causal law connecting the two total G properties. Now, given a G-to-F dependency, there will then be a cross-time causal law connecting instantiations of earlier G*′ properties with instantiations of later F properties. G*′ instantiations cause G* instantiations but you cannot have G* instantiations without F instantiations. The physical causal laws plus psychophysical dependencies generate psychophysical causal laws. Call these 'derivative psychophysical causal laws' since the psychophysical causal laws which emerge are totally derivative from particular psychophysical dependencies plus the physical causal laws. Note that these laws will be strict or exceptionless (except for the negligible effect of quantum indeterminancy on the G*′-G* causal law). These laws will not be hedged with ceteris paribus clauses.

This argument seems to show, not only that (N_m) does not rule out psychophysical causal laws, but what is more, that it brings these

derivative psychophysical causal laws kicking and screaming in its train. And so someone, like Davidson, who denies all psychophysical causal laws must deny (N_m) as well. It looks as if Blackburn is right here. If Davidson accepts (N_m), he must accept strict psychophysical causal laws, and if he rejects strict psychophysical causal laws, he must reject (N_m).

Davidson touched on this problem in his reply to a related objection of Robin Attfield's (1980, pp. 241—2). Attfield supposed some G*′-G* law, as I have done, and added the identity between the event which is G* and the event which is F. Attfield then inferred that there is a G*′-F law, contrary to anomalous monism. Davidson replied that since statements of law create intensional contexts, this inference is invalid. This reply is half plausible if we go in for Davidson's event-speak, add the event identity to the G*′-G* causal law, and forget about supervenience. But if instead we take the fact that it is a (metaphysical) law that if G* is instantiated then F is instantiated, and we add this to the fact that it is (causal) law that G*′ instantiations are followed by G* instantiations, it is difficult not to infer that it is dictated by the laws of nature that if G*′ is instantiated then a while later F will be instantiated. Davidson might reply that one cannot add laws together like this. But one can. It might be a law that anything which is sodium chloride is salt. And it might also be a law that anything which is salt is soluble in water. Surely these two laws mean that it is a law that everything which is sodium chloride is soluble in water. Similarly, there are laws concerning falling bodies in a vacuum, and there are laws concerning friction and aerodynamics. From these we can deduce laws concerning falling bodies in an atmosphere. And we can add together the consequences of laws: it might follow from the causal laws plus initial conditions that if I chop the tree just so, it will fall in a certain direction. And it might follow from the causal laws plus initial conditions that if the tree falls in that direction it will smash farmer Giles' roof. Surely it then follows from the causal laws plus initial conditions that if I chop the tree just so, it will smash farmer Giles' roof. Since laws can be added together, there is no reason why we should not add the G*′-G* (causal) law to the G*-to-F (metaphysical) law to yield a G*′-F (hybrid) law. Davidson's reply to Attfield fails to help him get round the problem of strict derivative psychophysical causal laws.

Variable Realization and F-G Derivative Casual Laws

It is an interesting asymmetry that although it seems that Davidson must accept G-F derivative causal laws, he can *deny* F-G derivative causal laws. Suppose that G*′ is instantiated *after* G*, so that there are G*-G*′ causal laws. Now add the G*-to-F necessity. Can we infer that there are F-G*′ derivative causal laws? We cannot. The reason is that such laws would not be *general* enough to count as genuinely lawlike. (Remember that Davidson requires that "Lawlike statements are *general* statements . . ." (1980, p. 217), my emphasis.) An F-G*′ derivative causal law would *not* say that *all* F instantiations must be followed by G*′ instantiations. It would only say that those F instantiations which are underpinned by or are due to G* instantiations must be followed by G*′ instantiations. But it is common to hold that F properties can be variably realized. The doctrine of variable realization says that F properties can be realized in different G properties. Now what about the different G realizations of the F property? These different G realizations will have different causal powers with respect to later G properties. So F instantiations which are differently G realized will causally determine different later G properties. Holding the physical causal laws fixed (and assuming no extraneous intervening cause), it could have been the case that an F property was instantiated without a G*′ property following on. So there is no causal law connecting the fact that something is F with the fact that it is G*′ later. That is, the lack of necessities flowing down from F to G means that there will be no physical type such that a causal law links *all* F instantiations to later tokens of this physical type. And Davidson requires, and ought to require, that laws have this sort of generality. F-G causal laws should be general, covering all F properties with respect to later G properties. Only if they do this will they allow us to make G predictions solely on the basis of F knowledge. It is this generality that Davidson is denying of psychophysical laws. So, given variable realization, Davidson has no problem at all with F-G causal laws, for there aren't any. Not only are there no strict F-G derivative causal laws, but there are no F-G causal laws of any sort.

This is all very well, but Davidson is still stuck with derivative causal laws which run the other way. Since G* determines F, there will be

G*′-F strict derivative causal laws, despite variable realization. And since they are about *all* G*′ instantiations, these laws *will* have the requisite generality and predictive usefulness (as well as supporting counterfactuals and being supported by instances). So we cannot deny their genuineness on this score. Variable realization threatens F-G derivative causal laws, but not G-F derivative causal laws.

However, I suspect that variable realization does mean that there will be no G-F causal laws *beyond* strict G-F derivative causal laws. Slight variations in the total G* property will not jeopardize an F instantiation. But a greater departure will do so. (See Zangwill 1992a on a problem that this generates.) But what goes for the G* property also goes for the earlier G*′ property which causally determines G*. Slight variations will not jeopardize a later F instantiation, but greater variations will do so. Suppose we are not dealing with an earlier very complex conjunctive G property, but with a more ordinary, less complex G property. Then such a G instantiation will be unlikely to be sufficient to causally determine a G* instantiation. And if so, such a G instantiation will not causally determine an F instantiation, since the property G could be instantiated without the property F being instanitated later on. If the earlier G property is to ensure a later F instantiation it had better be a G property approaching the conjunctive complexity of a property which could support an F property. There are not going to be any simple G-F causal laws. Derivative causal laws — if they are genuine laws — are the only causal laws that Davidson need admit.

Psychological Laws

Does variable realization threaten causal laws connecting instantiations of F properties with instantiations of later F properties? Does the previous argument from variable realization against F-G derivative causal laws show that despite G-F derivative causal laws, there are also no F-F causal laws? Do we have here the makings of an argument to the effect that there are no purely psychological causal laws? If we did, it would be important in the light of the fact that it is the current orthodoxy in the philosophy of mind that there are hedged psychological laws and that the causal efficacy of mental properties depends on the existence of these laws.

Suppose that the later G*′ property determines the property F′. Does variable realization show that there are no F-F′ causal laws as well as no F-G causal laws? We might think so if we thought that an F-F′ causal law depends on the existence of both G*-F′ and F-G*′ derivative causal laws. But why should it? It is not clear that variable realization does mean that there are no strict or non-strict laws connecting F instantiations with F′ instantiations at other times. For although I have argued that we should not expect there to be a causal law linking F properties with later G*′ properties because F might not have been realized in G*, I cannot now see (although I am open to persuasion) why F instantiations might not still determine later F′ instantiations. For it might be the case that if F were realized in a different total base G state, then that different G state would only causally determine those later G states which were alternative realizations of F′. How do we show that possible alternative G-realizations of F would always stand in causal relation with alternative G-realization of F′? If it can be shown that they would, then the current orthodoxy would be vindicated. But if this cannot be shown, the orthodoxy would be in doubt. This is an important unresolved issue in the contemporary philosophy of mind.

Explanation

The problem now is to try to find something wrong with G-F derivative causal laws. Someone might say that although the fact that a law obtains is independent of the human mind, a law must have some epistemological bite: grasp of a law must enable us to *explain*. If we grasp a derivative causal law, and given that we know we have a G*′ instantiation, we might be able to *predict* an F instantiation with complete confidence (apart from negligible quantum mechanical indeterminacy). But will we really have *explained* the F instantiation? It might be said that to explain the F instantiation we need to appeal to general circumstances in which we get F instantiations. Davidson hints at this when he writes:

> Mental events *as a class* cannot be explained by physical science; particular mental events can when we know particular identities. (1980, p. 225, my emphasis.)

We could perhaps explain why *that* F instantiation occurred then and there, given the relevant dependency and the causal laws, but that

explanation would not generalize to other F instantiations. We could give no *systematic* explanation of the occurrence of F instantiations; but this is surely what we would expect to be able to do if we grasp a psychophysical causal law. If we grasp a causal law, we should be able to explain an instance of the consequent by reference to an instance of the antecedent. Explanation by law must subsume an individual case under a generalization; it must exhibit it as an instance of a general phenomenon which has a certain standard cause. So it might be argued that a derivative causal law is not a genuine causal law because we cannot use it for this sort of systematic explanation of F instantiations.

While there is something in this, it cannot be so simple. Take explosions. Explosions come about in all sorts of ways. Sometimes because a thermostat was faulty, sometimes because someone lit the fuse of a stick of dynamite. We could explain why a *particular* explosion occurred by reference to the faulty thermostat without producing an explanation which could generalize to other cases. Similarly, there can be an explanation of *an* F instantiation in terms of a previous G*′ instantiation, by way of a derivative causal law, without there being a general explanation of F instantiation*s* in terms of G*′ instantiations. It is true that explanations do appeal, at least implicitly, to a generalization. But this is no reason to be unhappy with G-F derivative causal laws on this score, because G* properties *can* be instantiated on many different occasions, and these instantiations would have all the consequences specified in the law. Derivative causal laws are perfectly general and thus we cannot impugn the lawfulness of G*′-F derivative causal laws by saying that they lack generality or explanatoriness.

Unkosher Properties

Another line would be to say that there is something strange about the total properties that derivative causal laws bind. The worry would be that they are not genuine laws because the physical properties that they involve are fantastically complex conjunctive properties — covering much of the brain and perhaps more. We are bound to be suspicious that this rules out their featuring in genuine laws; for we might think that no predicate referring to such a property could be a well-respected term in a statement of law. A predicate referring to such a clumsy

conjunctive property would not be nomologically 'made for' any other predicate. G* properties are vast conjunctive properties, and we might think that this disqualifies them from being genuine properties. Perhaps these are just quasi-properties. Similar issues crop up concerning disjunctive properties. Quasi-laws might link quasi-properties — perhaps vast conjunctive or disjunctive properties. But surely genuine laws must link genuine properties. So since derivative causal laws involve quasi-properties, they are only really quasi-laws, not the real McCoy.

However, it is very difficult to see exactly why we should say that conjunctive (or disjunctive) properties are not genuine properties. And it is not clear exactly why there cannot be conjunctive (or disjunctive) laws — laws containing complex conjunctive (or disjunctive) properties.[3] We are not going to get very far by trying to rule total G* properties unkosher or by ruling unkosher the laws in which such properties figure.

Interestingness and Basicness

We have so far failed to find a way to be snooty about G-F derivative causal laws. It looks as if Davidson has to swallow his pride at this point. However, even though we may be unable to do down G* properties and laws involving them, there is obviously *some* difference between them and the normal sort of properties and laws. These derivative causal laws are unlike run-of-the-mill causal laws. There is something peculiar about them. In my view, we profit if we move away from the question of the genuineness of derivative as against other sorts of causal laws. We do better to consider the *interestingness* of laws. The division we need to pursue is one within the class of laws. And when we pursue this, we will discover the truth behind the thoughts that derivative causal laws are not explanatory and that they involve unkosher properties.

There are two related things which stand out as casting suspicion on derivative causal laws: first, that they probably only have one actual instance; and second, that they are relatively 'unbasic', in a sense that I will explain.

The first thing which is strange about these laws is that it is very likely that they only have one actual instance, given their immense

conjunctive complexity. (It is unlikely that two people have ever been in exactly the same total brain state). There is something strange about a whole range of laws, all of which only have one instance. Derivative causal laws are indeed highly specific; but, as we saw, this is no reason to think that they lack the generality required for laws. But if we put the question of law-status to one side, we might complain that even if many things *could* instantiate the antecedent of the law, if it only has one *actual* instance then it is a stupendously uninteresting law. It is merely an academic law, which is useless for prediction or explanation in the actual world. Maybe one can use it to explain the one actual case, but what we normally think of as a paradigm of a law is a law which *more* explanatory than this by being *more* general in its application. The fact that it only has one actual instance makes the derivative causal law a tremendously unuseful law to know. The more explanatorily powerful a law is, the more actual cases it covers.[4] It is not that the derivative causal law is not general or explanatory at all, but that most normal laws are much *more* general and explanatory. That is what makes derivative causal laws relatively uninteresting as laws go.

The second related point is this. Although there is no good reason to condemn conjunctive or disjunctive properties or laws as unkosher, if such a quasi-law holds, it could not hold, as it were, 'barely'. It must hold *in virtue of* more basic laws binding the properties figuring in its conjuncts or disjuncts. Quasi-laws hold in virtue of more basic laws. This has consequences for explanation. It is not that a quasi-law is not explanatory at all, but that there are more basic laws which explain why the quasi-law is as explanatory as it is. The more basic law is *more* explanatory than the less basic law by covering more actual cases. Now, psychophysical derivative causal laws score pretty low in respect of basicness. Since a derivative causal law is a conjunction of a causal law plus a dependency, it will not be *as* explanatorily interesting as either of these other laws considered alone. And in addition, the G*'-G* causal law is a law that ties two conjunctive properties; so this law will hold in virtue of simpler laws which binds the individual conjuncts. While we may not be able to deny that a derivative causal law is a law, what we have is a law which only holds because a whole lot of other laws hold, and which is therefore less explanatorily interesting than these other more basic, simpler laws. (Of course, the same goes for virtually all

physical laws, which shows that basicness is a matter of degree; but matters of degree are important.)

It is considerations of basicness and explanatory interest which explain the intuition that there is something ungeneral and unexplanatory about derivative causal laws, as well as the intuition that there is something unkosher about wildly conjunctive or disjunctive laws or properties.

So, my view is that derivative causal laws do not conflict with the psychophysical laws that, *deep down*, Davidson meant to deny. For even though someone who accepts (N_m) has no choice but to swallow the existence of strict derivative psychophysical causal laws, these laws are relatively unexplanatory and unuseful; and they are relatively unexplanatory and unuseful because they are so unbasic. Derivative causal laws may be laws, but if so they are uninteresting laws. Or alternatively, we could say that lawlikeness is a matter of degree which varies with the basicness of a generalization. And if so, psychophysical derivative causal laws would have a low degree of lawlikeness. It does not matter which we say. The important point is that if Davidson is denying the existence of psychophysical causal laws with the sort of interest that we normally expect causal laws to have, there is no stopping him holding (N_m) as well.

Good News and Bad News

Here is a progress report: I hope to have argued that given certain conceptions of law, Davidson's denial of strict psychophysical laws does not run contrary to supervenience or (N_m). If Davidson were merely saying that there is no metaphysical reduction and thus that there are no biconditionals binding F and G properties, then he would obviously have no problem. That is good news. On the other hand, the G-to-F necessity itself looks as though it ought to get classified as a law, as Davidson sometimes defines law. And that is bad news. However, in some moods, Davidson seems to be saying that there are no psychophysical causal laws — that instantiations of F properties cannot be put into strict lawlike correlation with instantiations of G properties at other times. G-to-F necessities are not causal laws — which is good news. But there is no doubt that Davidson has to swallow strict G-F

derivative causal laws — which is bad news. I then tried to suggest that the bad news about derivative causal laws is not really all that bad. Davidson can say that these laws are relatively uninteresting because relatively unbasic. Davidson can afford to make an exception of derivative causal laws because this one concession is so singular that it does not harm his general outlook. Assuming not unreasonably high standards for the interestingness of laws, the denial of interesting psychophysical laws is consistent with psychophysical dependencies and derivative causal laws. So it seems that there is nothing serious preventing Davidson from holding (N_m).

Davidson must accept the G-to-F necessities that come along with supervenience, and he must accept G*'-F derivative causal laws. But he can deny F-to-G metaphysical necessities, and he can deny F-G*' derivative casual laws. Of course, his being able to do the latter depends on his being able to accept the variable realization thesis that there are no F-to-G necessities. I have argued elsewhere that the arguments for this thesis were never very impressive (Zangwill 1992b). It has not been shown that mental states have no biological essence. Maybe Davidson's arguments for the anomalousness of the mental can be adapted. This is another question. We are not dealing with the arguments for Davidson's position but with arguments for thinking that the position of psychophysical supervenience without psychophysical laws is problematic in itself. What Davidson, or a Davidsonian, needs to show, is how his arguments for anomalousness rule out psychophysical reduction and psychophysical causal laws without ruling out psychophysical dependencies and the derivative of causal laws which accompany them. The clear reconstruction of such an argument seems to me to be a project worth pursuing. It is very far from being an obviously impossible undertaking.

Notice that once Davidson takes (N_m) on board, there is a clear sense in which he ought to deny that there are *physical* possibilities open between the mental and the physical. If Davidson accepts that mental events supervene on physical events, and if supervenience is strong supervenience, then he ought to *deny* that it is physically possible to have a particular total physical situation, without the mental property which the physical situation determines. If you cannot prise them apart metaphysically, you cannot prise them apart physically or causally. So

the modalities are not incommensurable after all. In this sense, the metaphysical necessity of F given G*, or equally, the metaphysical impossibility of G* without F, implies the physical *im*possibility of their separation and the physical necessity of their combination. But when Davidson says that there are no strict psychophysical laws, he is obviously not saying that it is physically possible to have a G* instantiation without the F instantiation that it determines. All Davidson — or Davidson as I have reconstructed him — is saying is that there are no biconditional psychophysical reductions or else that there are no strict psychophysical causal laws which are general enough to be explanatorily interesting. And he can say all that while hanging onto (N_m).

Coda

To return to Blackburn's argument: we have encountered no notion of physical possibility that puts any pressure on (N_m). Because Davidson can accept (N_m), there is no kind of modality at which an (S)/(P) combination arises for Davidson's philosophy of mind, as it arises in moral philosophy. Blackburn has an interesting argument, but it passes Davidson by. I have said nothing about Davidson's positive argument for his supervenient-but-anomalous position. And I have said nothing about other arguments against Davidson. But I hope to have shown that as far as Blackburn's argument goes, Davidson is in the clear.[5]

NOTES

[1] Blackburn originally presented the argument against moral realism in (1971). He thoroughly revamped the argument in (1985). Blackburn gave a briefer revamped version at (1984, pp. 182—7).

[2] I have given the earlier G property a '*' to recognize its conjunctive complexity, not because it is the total subvening base of some F property.

[3] For example, such quasi-properties are perfectly causally efficacious with respect to other quasi-properties; so many considerations which lead people to say that 'mere-Cambridge' properties are not genuine will fail to exclude conjunctive and disjunctive properties (cf. Shoemaker 1984).

[4] There are laws about how things behave in a perfect vacuum which have no actual instances but which are predictively useful in the actual world. But this is for special reasons which do not apply in the case of derivative causal laws.

[5] I am very grateful for helpful comments from Simon Evnine, James Klagge, Cynthia Macdonald, an anonymous referee, and especially Peter Smith. I would also like to thank Mike Martin with whom I have discussed these isssues.

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