ANOMALOUS MONISM

The Oxford Handbook of Philosophy of Mind
Ansgar Beckermann and Brian McLaughlin, eds.

Anomalous monism is a view about the relationship between the mind and the body, which attempts to strike a delicate balance between the thesis of materialism, on the one hand, and the irreducibility of the mental, on the other. Its current formulation is found in Donald Davidson's landmark paper, "Mental Events" (1970), and concerns only intentional states – contentful mental states, such as the belief that *p*, the desire that *q*, and other propositional attitudes.

Anomalous monism consists of two theses, one concerning monism, the other concerning anomalism. The "monism" part of anomalous monism is the claim that all events, including the mental ones, essentially fall under one class, namely, the class of physical events. To say that an event is physical is to say that there is a physical description that correctly picks out the event; alternatively, one can say that an event is physical if it exemplifies a physical property (*mutatis mutandis* for mental events). While Davidson prefers to formulate his views in terms of the application of predicates rather than the instantiation of properties, the majority of contemporary philosophers of mind readily appeal to the notion of properties when discussing anomalous monism, a practice that will be adopted in this entry.

Anomalous monism, then, asserts that every mental event, aside from having its mental property, also has a physical property. For this reason, the monistic part of anomalous monism is also known as *token physicalism*, the idea that every mental event is numerically identical with a physical event, though not the converse, as there are events, such as hurricanes, that are physical but not mental. The following example illustrates the idea of token identity for events. It is uncontroversial that physical events can exemplify more than one property: the sinking of the Titanic, say, can be the same event as the greatest maritime disaster. Here, being a sinking and

being a maritime disaster are the distinct properties or types that belong to one and the same event. Likewise, believing that it is raining (a mental property) and being a certain neural occurrence (a physical property) can belong to one and the same event. The idea of token physicalism, then, is the idea that all mental events also exemplify a physical property, which is to say that mental events, *qua* events, are reductively identifiable with physical events.

The thesis that expresses the "anomalous" part of anomalous monism is that there are no *strict* lawful regularities that govern how someone will think or act, exceptionless regularities that constitute a closed and comprehensive theory, which is a fundamental theory of all natural phenomena that fundamental physics is thought to provide. It encompasses *psychological anomalism* – the denial of strict regularities that would connect only mental events with other mental events – and *psychophysical anomalism* – the denial of strict regularities that would connect mental events with physical events. The thesis of psychological anomalism is directed against the possibility of regimenting folk psychology into a closed and comprehensive theory in its own right, and the thesis of psychophysical anomalism is directed against the requisite inter-theoretic bridge principles that could facilitate a reduction of folk psychology to physics.

Davidson's thesis of anomalous monism has had far reaching implications. It revived concerns over the possibility of mental causation, it introduced the idea of applying the concept of supervenience to mental and physical properties, and it has challenged the possibility of a scientific psychology using the vocabulary of folk psychology. Though widely criticized on all of these fronts, anomalous monism has been one of the most influential theses in contemporary philosophy of mind.

1. Argument for Monism

Monism is the view that there is only one kind of thing. It is typically contrasted with dualism, the view that there are two mutually irreducible kinds of things, the mental and the physical. Monism can, in principle, be construed as endorsing the view that everything is ultimately mental (called "idealism" or "phenomenalism") or that everything is ultimately physical (variously called "physicalism," "materialism" and "naturalism"). The monism of anomalous monism comes down on the side physicalism. The physicalism is of anomalous monism is a very modest one, for while it endorses the claim that mental *events* are reductively identifiable with physical events – a thesis known as *token physicalism* – it resolutely denies that mental *properties* are reducible to physical properties.

Davidson's argument for token physicalism relies upon the claim that a mental event is causally efficacious in virtue of its token identity with an efficacious physical event. The argument consists of three principles. The first is that mental causation really happens; one's desire to stay dry in the rain, for instance, can cause one to use an umbrella. The second is that strict laws are necessary for causation. And the third is that there are no strict psychological laws or psychophysical laws. Here are Davidson's formulations of the principles (1970: 208):

> *Principle of Causal Interaction*: At least some mental events interact causally with physical events.
>
> *Principle of the Nomological Character of Causality*: Where there is causality, there must be a law: events related as cause and effect fall under strict deterministic laws.
>
> *Anomalism of the Mental*: There are no strict deterministic laws on the basis of which mental events can be predicted and explained.

The argument for token physicalism proceeds thus. According to the Anomalism of the Mental, no mental event *m* can cause a physical event *p* (or any other event, for that matter) on account of its governance under a psychological law or psychophysical law, as no such laws are properly strict (if there are any such laws at all). By the Principle of the Nomological Character of Causality, all causal relations must be covered by a strict law. Now, strict laws are found only in the domain of fundamental physics, meaning that only physical events – events exemplifying those properties that appear in the appropriate laws – can enter into causal transactions. This

means that if *m* causes *p*, as the Principle of Causal Interaction affirms, it is because *m* has a physical property, from which it follows that *m* is a physical event.

The main objections to the argument are these. The most prominent is that it ends up precluding the possibility of mental causation, not grounding its possibility (this is discussed in section 5). A different criticism is that mental events cannot be individuated into discrete tokens, on account of their holistic inter-relations with other mental events, so that it is impossible to identify mental events with discretely individuated physical events (Lurie 1978, Antony 1989, Child 1993). A third criticism is that there is no unique physical token with which a mental token can be identified at a time, but rather an array of different possible candidates, undermining the idea that there is a unique token identity that can be established (Hornsby 1980, Horgan and Tye 1985).

2. Strict and Non-Strict Laws

Davidson's argument for psychological and psychophysical anomalism turns upon his insistence that there are no *strict* laws involving the mental. The notion of a strict law, therefore, requires clarification.

As McLaughlin (1985) has explained, a law of nature, on Davidson's account, is a true generalization that is confirmable by its positive instances and is capable of supporting counterfactuals. Some laws of nature have exceptions: they are observed to hold only under conditions where everything is equal. To indicate the dependence upon the presence of optimal conditions, such laws are modified by *ceteris paribus* clauses and are not strict. Laws that are strict, on the other hand, hold without exception – they do not depend upon the presence of optimal conditions for their holding. To be strict, however, exceptionlessness is still not enough. The generalization, "All men are mortal," for instance, holds without exception, but it does not count as a strict law in the sense Davidson has in mind. In addition to exceptionlessness, the law must belong to a fundamental scientific theory, fundamental in the sense that it has the capacity to explain all natural phenomena, ranging from electromagnetism to your unfortunate tomato blight.

This is to say that a theory of this kind describes a *closed* and *comprehensive* – closed in that there are no occurrences whose causal origin goes beyond the laws of the theory, and comprehensive in that its laws fully suffice to encompass the course of all natural occurrences.

Let us say that T is a theory that consists of a body of laws. An event is a T-event just in case a law of T governs its occurrence. T, then, is closed if and only if a T-event is caused by *only* other T-events, that is, if and only if there are no foreign non-T-events causing a T-event. T is comprehensive if and only if the laws of T fully suffice to govern the occurrence of all T-events, that is, if and only if there are no T-events that whose occurrence escapes the jurisdiction of the laws of T. Although Davidson adds that strict laws covering causal relations must be deterministic, it could turn out that the laws of T are not deterministic. But being probabilistic does not mean having exceptions; a probabilistic law can still be strict in that it has no need of being qualified by ceteris paribus conditions. (In fact, our best current physics points in this direction).

Where do we look for a closed and comprehensive theory? Fundamental physics is thought to be the only viable candidate – not the one we currently have, which is incomplete and probably false in places, but a true and completed theory to be had in the future (if we're lucky). Non-strict laws, on the other hand, belong to theories that are neither closed nor comprehensive, paradigmatic examples being laws in the special sciences such as chemistry, biology, geology, and meteorology. Generalizations belonging to these theories may support causal claims concerning the occurrence of natural events. Thus, a generalization like "Tall parents have tall offspring," may have what it takes to support causal claims. But if the theory of biology cannot be reduced to the closed and comprehensive theory via the appropriate bridge laws, then none of its generalizations can be rendered strict and exceptionless if we stick only to its proprietary home vocabulary. In such a case, according to Davidson, a non-strict law, at best, provides evidence that some strict law or other is at work in securing the causal relation between the events.

3. Psychological Anomalism

The primary target of psychological anomalism is generalizations that purport to capture strict mental-to-mental relations, both causal and non-causal. Davidson is not alone in his skepticism about the possibility of strict psychological laws. Indeed, there is a long tradition going back to the Verstehen tradition upheld by William Dray (1957), the Wittgensteinians such as Elizabeth

Anscombe (1976), and more recently, proponents of the simulation theory of mind, such Jane Heal (1995).

To appreciate the thesis of psychological anomalism, let us consider some well-worn folk psychological generalizations:

A. If an agent dearly wants X, but discovers that not-X, then the agent will be disappointed that not-X.

B. If an agent believes that Y and that Y entails Z, then the agent believes that Z.

C. If an agent fears X, then the agent wants it to be the case that not-X.

These familiar generalizations go a long way in supporting many of our explanations and predictions about our thoughts and actions, but we could never say of any of them that they are strict. Take, for instance, (B); there are all sorts of defeaters that may obstruct an agent from making the inference – distraction, inattention, fatigue, and so on. This is true for all generalizations of folk psychology. While good at serving as rules of thumb, none of them are immune to contravention.

Is there a way of refining the generalizations of folk psychology so that they may be turned into strict laws? For there to be strict psychological laws, psychology needs to be either closed and comprehensive, or reducible to, or transmutable into, such a theory. As Davidson argues, this is not possible. It isn't closed, because non-physical events affect the mental (consider distal physical causes of perceptions), nor is it comprehensive, as mental events do not constitute the full scope of natural phenomena (such short circuits and hurricanes). And it isn't reducible to fundamental physics, the theory designated as closed and comprehensive, because there are no bridge principles connecting mental predicates (properties) with physical predicates (properties) to effect the reduction – principles that connect terms or properties of the reduced theory with those of the reducing theory so that the reducing theory can incorporate the phenomena explained by the reduced theory (this is the thesis of psychophysical anomalism, covered more fully in the next section).

It needs to be acknowledged that there are two interpretations of Davidson's psychological anomalism thesis. On one interpretation, the absence of strict laws of folk psychology is still consistent with the claim that there *are* laws of folk psychology – they are just

not strict. The special sciences are fully of non-strict laws, and folk psychology would just be another special science. Several philosophers keen on this idea have taken this to be the moral of Davidson's psychological anomalism, so that statements like (A), (B), and (C), though not expressions of strict laws of nature, still have nomic status (Fodor 1989, McLaughlin 1989, LePore and Loewer 1987). The other interpretation makes the stronger claim that there are no laws of folk psychology, strict or non-strict. Instead, they have the status of normative principles rather than non-normative, law-like, regularities (McDowell 1984, Kim 1985, Child 1994).

4. Psychophysical Anomalism

The psychophysical anomalism thesis is a thesis that asserts the irreducibility of the mental. The primary target of psychophysical anomalism is generalizations linking mental properties with physical properties, or types of mental events with types of physical events, along the lines of the following schema:

D. An agent has a mental property M if and only if the agent has a physical property P.

The psychophysical anomalism thesis is that there are no reductive bridge principles conforming to schema (D), but it is also directed at the weaker one-way conditionals along the lines of (E):

E. If an agent has a physical property P, then the agent has a mental property M.

Since (D) entails (E), arguments directed against (E) will automatically count as arguments directed against (D). For the rest of this discussion, we will only concern ourselves with (E). Davidson's claim is not merely that psychophysical correlations have not yet been discovered; his is an *a priori* pronouncement against their possibility.

Although the argument for psychophysical anomalism is still thought to be sketchy in places, there are two prominent reconstructions, each of which rely upon the following two principles:

I. *Rationality of the Mental*: To have a mind is to have a network of propositional attitudes that is, for the most part, rationally coherent.

II. *Holism of the Mental*: The content of a propositional attitude is holistically determined.

The holism assumption is that a propositional attitude derives the content that it has by playing its unique inferential role(s) within the network of the agent's total propositional attitudes. And the rationality assumption is that we must interpret the content of a belief, say, by placing it within a larger pattern of beliefs (desires and actions) whose contents rationally cohere with the content of the belief we ascribe. None of this is to deny that mentally endowed agents falter in their rationality. Instances of local irrationality have to be acknowledged by any adequate theory of mind. The point is that an agent's beliefs, desires, and other propositional attitudes, cannot be systematically and globally irrational, for then the attributions no longer count as mental attributions. Let us now turn to the reconstructions.

4.1 Reconstruction I

On this reconstruction, devised by Jaegwon Kim (1985), there can be no psychophysical laws along the lines of (E) because such laws would risk compromising the principle of the Rationality of the Mental.

This reconstruction appeals to the idea that there are different rules, what Davidson calls "constitutive principles," essential to the attribution of intentional states and physical states (1970, 1974). The constitutive principles that govern the attribution of physical states are distinctly non-rational, which is to say that physical properties are not attributed in a way that makes them rationally coherent with other physical attributions. This is obvious: physical things, such as traveling along an elliptical orbit, weighing 50 lbs, or having negative charge, are not, as a categorical matter, the kinds of things that have rational bearing. Things are different when it comes to the attribution of propositional attitudes. The constitutive principles governing the attribution of intentional states are rationality-preserving. These "constitutive principles of rationality" enjoin us to attribute attitudes that, for the most part, rationally cohere with the ones ascribed. So while physical things and their relations to other physical things have no bearing, our thoughts *about* physical (and other) things do have rational bearing.

The fact of this disparity constitutes one the premises of Kim's reconstruction. The other crucial premise is a novel spin on the nature of inter-theoretic reductive bridge laws. Kim suggests that we think of bridge laws as having the capacity to "transmit" constitutive principles.

More specifically, the constitutive principles governing the attribution of the reducing property get transmitted to the one reduced. Taking "(x) ($Px \rightarrow Mx$)" to represent the form of psychophysical laws, Kim's idea is that the non-rational constitutive principles governing P will carry over to M, so that the attribution of M will then be governed by distinctly non-rational constitutive principles. Suppose, then, the usual method of attributing mental properties according to principles of rationality leads to the attribution of M for an agent on a certain occasion. As the attribution of M would *also* be governed by non-rational constitutive principles of the physical, it is possible that the psychophysical law covering M enjoins us to make a *different* attribution. If this is possible, then psychophysical laws invite predication conflict. Worse, they run the risk of compromising the nature of mind, which is that it is rational. As Davidson has often stressed, something is a mind only if it consists of a network of propositional attitudes that rationally cohere with each other. If all the attitudes were to be attributed by appealing to psychophysical laws, so that only non-rational constitutive principles come to govern the attribution of mental properties, we could end up with attitude attributions that are rationally incoherent, undermining the very nature of mind itself.

This reconstruction, while provocative, has been resisted. Tiffany (2001), along with McLaughlin (1985) and Latham (1999), have argued that attributing intentional states in a way that has no regard for their rational interconnections does not ineluctably lead to systematically non-rational attributions. For all we know, psychophysical laws may successfully preserve the rational interconnections between the attitudes, in spite of their being attributed according to non-rational constitutive principles. Sure, we may wonder how this could happen, but we cannot assume that it can't. An argument that could demonstrate this consequence would certainly justify skepticism concerning psychophysical laws, but as it is, Kim's reconstruction fails to accomplish this.

4.2 Reconstruction II

This reconstruction, offered by William Child (1994), is based upon the claim that the constitutive principles of rationality are "uncodifiable." This means that the principles of rationality, such as "if you believe that *p* and that *p* entails *q*, then you ought to believe that *q*," "if you desire *p*, and believe that doing *q* is the best way of getting *p*, then you ought to do *q*," and so on – cannot be agglomerated into a complete system of rules that determines uniquely

determines what an agent ought to think or do. Take the first principle: suppose the agent discovers, on independent evidence, that *q* is not true. The agent then has two options: either drop your belief that *p* or drop your belief that *p* entails *q*. The original principle does not tell you which of these two options to take, and therefore underdetermine which attitude you are to attribute. Such indeterminacies are true of all applications of principles of rationality. As a consequence, there can be no psychophysical laws since mental properties cannot be uniquely fixed by physical properties.

Again, while this reconstruction is provocative, it is by no means conclusive, for the uncodifiability thesis is highly contentious. Some have argued that even if the principles of rationality are uncodifiable, psychophysical anomalism still does not necessarily follow (Tiffany 2001). More common is the objection that while we have not yet achieved a codification of all the principles of rationality, some sub-systems of rationality – decision theory, confirmation theory, game theory – are well on their way to codification. At any rate, Child does not give sufficient evidence for the impossibility of their codification (see also Yalowitz 1997).

5. Anomalous Monism and Mental Causation

One of the desiderata of anomalous monism was to establish a framework that can demonstrate how mental causation is possible. Because anomalous monism embraces the token identity thesis, a mental event is causally relevant on account of its token identity with a causally relevant physical event. If one accepts the token identity thesis, establishing the causal *efficacy* of a mental *event* is easy: because physical events unproblematically enter into causal relations and mental events simply are physical events, mental events are causally efficacious. But this is still insufficient for establishing the possibility of mental causation, because we need further assurance that the mental event is efficacious *in virtue of* its mental property. Many argue that the causal relevance of mental properties is what really matters for an account of mental causation. One of the most damning objections to Davidson's argument for anomalous monism is that while it may successfully establish the causal efficacy of mental *events*, it precludes the causal relevance of mental *properties*.

To see the difference between the causal *efficacy* of an *event*, on the one hand, and the causal *relevance* of a *property* of an event, on the other, consider an explosion that causes a fire. Suppose the explosion was also the loudest sound that happened in Smith's cellar. If they are

token identical events, then it is also true that the loudest sound in Smith's cellar caused the fire. However, surely the cause was not causally efficacious in virtue of it's having the property of being the loudest sound in Smith's cellar. Rather, it was the fact that the cause was an explosion. According to the critics, mental properties, under the rubric of Davidson's anomalous monism, are as causally irrelevant to behavior as loudness is to the fire. Contrary to what we want in a demonstration of the possibility of mental causation, anomalous monism entails that mental events cause other events in virtue of their physical properties, not in virtue of their mental properties. To use a different locution among certain critics, mental events are efficacious *qua* physical event, not *qua* mental event.

5.1 The Charge of Epiphenomenalism

Such a view is what McLaughlin (1985a) has called *type-epiphenomenalism*, the idea that the type or property satisfied by the event is causally irrelevant. The reasoning goes as follows. Recall Davidson's requirement that causal relations must be back by strict laws. According to this requirement, events can enter into a causal relation only if they are subsumed by a strict law. Only physical laws have what it takes to be strict, so this means that events can enter into causal relations only in virtue of their physical properties. It follows that what secures the causal relation between a mental event and a physical event is the mental event's instantiation of the relevant physical property, not the instantiation of its intentional property. Therefore, the critics conclude, the fact that the mental event has the mental property (propositional content) it has, makes no causal difference to whether or not the behavioral reaction occurs. By the very lights of the premises of the argument for anomalous monism, the critics argue, it is not the instantiation of a mental property, but rather the instantiation of a physical property, that brings about the effect. If this is right, then there is no support for mental counterfactuals: if the content of a thought were altered or deleted all together, this would not affect a mental event's causal status as long as its physical properties remained intact because in the end it is the physical properties that fix all causal relations.

A number of responses have been given to the charge of type-epiphenomenalism. McLaughlin, for instance, has argued that but being efficacious in virtue of the event's physical properties does not entail being efficacious *only* in virtue of the physical properties. Consequently, it is possible that mental events have their effects in virtue of mental properties,

while, and only as long as, the events have their effects in virtue of physical properties. Another response appeals to the idea that while mental events may be efficacious in virtue of their physical properties, mental properties can still be causally relevant insofar as there are true mentalistic counterfactuals, counterfactuals supported by non-strict psychological laws (LePore and Loewer 1987).

5.2 Davidson's Response to the Charge

Davidson's response challenges the very idea that there are properties in virtue of which events bring about their effects (Davidson 1993). Davidson, contra his critics, insists that the idea that events are causes in virtue of some fact about the event, is a feature of causal *explanations*, an intensional relation between predicates or descriptions. It is not a feature of *causation*, an extensional relation between events *simpliciter*, and so holds no matter how the causes and effects are described. Consequently, the problem of epiphenomenalism is based upon conflating causation with causal explanation.

Davidson's displacement of the "in virtue of" locution from the domain of causation to the domain of explanation is motivated by his particular views about the different logical properties of causal statements as opposed to those that hold of explanatory statements (Davidson 1967). Explanations of the form, "_____ because _____," create an *intensional* context where the "because" typically relates statements or facts. Causal statements of the form, "_____ causes _____," on the other hand, are *extensional*, where the blanks are filled in with nominalized descriptions of events. With respect to causal claims, as long as the events are described by some appropriate event name, such as perfect nominals or definite descriptions, redescriptions along these lines are intersubstitutible. Davidson's contention is that when event names are modified by the "in virtue of" idiom, or any of its cognates, the name gets transformed into a fact description or a statement so that intersubstitution fails, turning the extensional context into an intensional one. This leaves us with one of two options with respect to the favored phrase of the critics, "*c qua* F causes *e qua* G." Either we regard it as an explanatory statement disguised as a causal claim, or we drop the *qua* modifiers along with the properties they highlight if we want the phrase to convey its intended *causal* meaning. Whatever the choice, Davidson argues, we're left with the more simple "*c* causes *e*."

In response to Davidson's analyses of causation and explanation, McLaughlin has defended the use of the "in virtue of" expression in claims about causal relations. Consider again the contested claim, "*c qua* F causes *e qua* G." There are two ways of interpreting this,

a) the fact that *c* has F is what causes the fact that *e* has G, or

b) *c* causes *e* in virtue of some fact (namely that *c* has F and *e* has G, and F and G are suitably related).

Davidson has argued against the reading offered by (a), the idea that facts could count as proper causal relata, arguing that facts belong only within an intensional context, and thus could only serve as explicanda at best. But as McLaughlin points out, the reading offered by (b) does not appeal to facts as the relata of the causal relation. The idea behind (b) is that the holding of a causal relation can be explained by some fact. The important thing to appreciate is that specifying that a relation holds in virtue of some fact does not mean that the relata of the relation are themselves facts, so anyone who wished to embrace (b) as the proper interpretation need not be committed to (a). On McLaughlin's diagnosis of the dispute between Davidson and his critics, Davidson conflates (a) with (b), and that while (a) may be questionable, (b) certainly is not. As McLaughlin explains, to violate extensionality, the "in virtue of" qualification in (b) would have to make the cause of an event essentially description-dependent, but this qualifier doesn't play that kind of role. This is because what makes it the case that a collection of particulars are related in a certain way does not involve the need to cite what descriptions are true of the particulars.

6. Anomalous Monism and Supervenience

A crucial motivation for anomalous monism, recall, was to formulate a convincing form of non-reductive materialism. The commitment to materialism is satisfied by token physicalism, but token physicalism is too minimal to capture a substantive and interesting formulation of physicalism or a substantive and interesting formulation of the psychophysical relation. The reason is that token physicalism it is silent about the nature of the relationship between mental and physical *properties*. Enter supervenience. The relation of supervenience promises to capture a relationship of dependence between mental properties and physical properties strong enough to convey the ontological primacy of the physical by articulating the idea that the way

things are physically determines how things are in all other respects – the mental, included – but not too strong so that it is reductive.

Supervenience is intended to express a relation of dependence in the following way: how things are mentally is just a manifestation of how things are physically in that once we fix the distribution of physical properties, the distribution of mental properties is thereby fixed. Here is an intuitive example: consider the relationship between the distribution of ink dots and the shape of a figure emerging from the ink dot distribution. Once the distribution of ink dots is fixed, the shape of the figure is thereby fixed; different figure, different ink dot distribution. In such a case, we say that the figure's shape supervenes upon the distribution of ink dots.

Davidson's preferred formulation of psychophysical supervenience is what Kim (1989) calls *weak supervenience*. Kim broadly distinguishes between three different supervenience relations: weak supervenience (WS), strong supervenience (SS), and global supervenience (GS). The relata of the relation can range from truths to facts to predicates, but the most common specification of the relata appeals to families of properties. Let us say that F^* comprises the family of properties $F_1, F_2, \ldots F_n$, and that G^* comprises the family of properties $G_1, G_2, \ldots G_n$:

(WS) F^* *weakly supervenes* upon G^* if and only if necessarily for any world w and individuals x and y, if x and y are indiscernible with respect to G^* in w, then x and y are indiscernible with respect to F^* in w.

(SS) F^* *strongly supervenes* upon G^* if and only necessarily for any worlds w_1 and w_2 and any individuals x and y, if x in w_1 and y in w_2 are indiscernible with respect to G^*, then x in w_1 and y in w_2 are indiscernible with respect to F^*.

(GS) F^* *globally supervenes* upon G^* if and only worlds w_1 and w_2 indiscernible with respect to G^* are indiscernible with respect to F^*.

Briefly, the differences between the three supervenience theses comes down to this (see also McLaughlin 1995). Weak supervenience is a claim about the distribution of properties pertaining to individuals *within* a given world. When applied to the family of mental properties and physical properties, saying that mental properties weakly supervene upon physical properties amounts to the claim that if two individuals are physically alike, then they are also mentally alike. The thesis is weak in that the consequence follows with no modal force, as it allows for physical twins each lodged in different worlds to be mentally different. Strong supervenience,

on the other hand, is a modally stronger claim, because it is about the distribution of properties pertaining to individuals *across* worlds. To say that mental properties strongly supervene upon physical properties is to say that two individual who are physically alike *must be* mentally alike. This rules out cross-world physical twins having different mental properties. Finally, global supervenience is about worlds in their entirety, not about individuals within or across worlds. According to global supervenience, worlds that have the same distribution of physical properties must have the same distribution of mental properties. While consistent with the failure of weak supervenience, if unqualified, it still has modal significance, as the idea is that physically identical worlds *must* also be mentally the same.

As stated before, Davidson appeals to weak supervenience to supplement his theory of anomalous monism. Several philosophers, however, have worried that it is too weak to express an interesting form of dependence of the mental upon the physical (McLaughlin 1985). Consider the physical twins Abe and Babe: while they think the same thoughts within a given world, placing each in diverse worlds allows for them to entertain different thoughts. One might think that this is a virtue of weak supervenience, as it is consistent with the externalist theory of content individuation, where facts about one's physical environment and social linguistic conventions partly determine the content of an attitude (Burge 1986, Putnam 1975). While this is certainly a feature of weak supervenience one may exploit, the worry about the weakness of weak supervenience is that it allows for physically identical twins in lodged in physically identical environments to have differing thoughts, something more radical than the psychophysical relations entailed by content externalism.

Strong supervenience, on the other hand, imposes exact similarity in what Abe and Babe are thinking as each occupy a different world. But kind of like Goldilocks and her search for a comfortable bed, there is the worry that it may be too strong to be consistent with Davidson's considerations for psychophysical anomalism (Kim 1993). Strong supervenience implies that for any member of the supervening family, there exists some member or members of the base family that necessitates the supervening member, where the nature of the necessitation is either nomological or metaphysical. This follows if we assume that physical properties are closed under complementation – that not having a certain physical property is itself a physical property – so that for any given mental state, there will exist some physical state that strictly necessitates

the mental state. Such a possibility looks like it compromises Davidson's psychophysical anomalism thesis.

But this issue is complicated. Depending upon what, exactly, we require of a law, it is possible to read Davidson's psychophysical anomalism thesis as being consistent with strong supervenience (Child 1994). On this reading, psychophysical necessitation relations generated by strong supervenience could be so highly specific that they are instantiated only once in a world. Laws of nature, on the other hand, have to have greater generality, which is what makes it possible for them to be confirmable by their positive instances. If there is no positive instance of a psychophysical supervenience relation other than the one time it occurs, then strong supervenience may not threaten the psychophysical anomalism thesis after all. But then it would carry very little significance.

The Influence of Anomalous Anomalism

Anomalous monism has faced many objections from a number of different fronts: that it leads to epiphenomenalism, that its argument for psychophysical and psychological anomalism are underdeveloped, its possible inconsistency with strong supervenience, and its difficulty establishing token physicalism. At the same time, it has been critical for many productive research programs in philosophy of mind; had it not been for Davidson's argument for anomalous monism – its supporting principles, and the consequences it has been thought to entail – major areas of current research may not have come about. These include the surge of interest in mental causation, supervenience, and the status of folk psychology as a scientifically explanatory theory.

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