RATIONALITY AND THE ANOMALOUS NATURE OF THE MENTAL

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Donald Davidson's argument for the nonlawlike nature of psycho-physical
generalizations is discussed and refuted. It is shown that his appeals to the
rational and holistic character of intentional description do not support his
conclusion of anomalism. An alternative methodological role is suggested for
the concept of rationality in application to current empirical research in
cognitive psychology.
In a number of influential papers, Donald Davidson has argued for a position which he terms anomalous monism. The view is monistic in that all events are taken to be physical events, though some of these events are held also to be mental events. It follows that each mental event is identical with some physical event. The anomalism consists in the denial that there are any strict psycho-physical laws involving those mental events and states typically characterized as intentional, i.e., believing, hoping, desiring, intending and other states whose complete specification is given by a that-clause. My primary objective below will be to show that the thesis of anomalism cannot be established by appeal to the considerations about rationality and the intentional on which Davidson relies in making his claim. The value of such a demonstration lies in the fact that though Davidson has forcefully focused attention on the essentially holistic and rational character of intentional explanation, he has drawn mistaken conclusions about its significance for psychological theorizing. By showing that such facts about the intentional fail to establish the existence of an unbridgeable statistical gulf between the mental and the physical, I hope to undercut the main methodological moral which Davidson draws for psychology. Positively, I will argue that the real importance of recognizing the intentional’s rational holism is that doing so allows us to lay down certain minimal conditions of adequacy for much interesting work currently being done in cognitive psychology, especially on so called information processing models of mentality. Correct application of philosophic insights is doubly important here, since the research in question is not irrelevant to Davidson’s central thesis, in that it promises to provide us with theoretical understanding of physical/mental relations which on Davidson’s view are decidedly opaque. These programs hold out the possibility of establishing that at least some of the regularities involved are indeed strictly lawlike.

However before assessing the soundness and significance of Davidson’s argument for anomalism, it will be best to get a clear understanding of the thesis and of its relation to his monism. The overall view might be characterized as one of token identity without type identity. Every mental event

*I have benefited greatly from discussions on this subject with Martin Bunzl, George Myro, Sarah Stebbins, and Richard Warner. An earlier version was presented to the Rutgers University Philosophy Colloquium in December 1975.

token is identical with some physical event token, but mental event types are not identical with any physical event types. If we allow ourselves to talk of properties, we may take the latter thesis as a claim that mental properties are not identical with physical properties or that there are no true lawlike biconditionals connecting mental and physical property terms. Put formally the thesis of token identity becomes

\[(1) (x) \to (x \text{ is a mental event token} \rightarrow (\exists y) (y \text{ is a physical event token } \& x = y))\]

while the claim of anomalism denies that there are any true and strictly lawlike statements of the forms

\[(2) (x) (x \text{ is a physical event of type } P_1 \leftrightarrow x \text{ is a mental event of type } M_1)\]

or

\[(3) (x) (x \text{ is a physical event of type } P_1 \rightarrow x \text{ is a mental event of type } M_1)\]

Prima facie it might appear that (1) is inconsistent with the claim that there are no lawlike statements like (2) or (3). On the monistic view, we should be able (in principle) to pick out a physical event, e.g. the event having physical property \(P_1\), \((\forall x) P_1 x\), and determine that that same event is the event which has mental property \(M_1\). Thus to show that the two events are the same (i.e., that \((\forall x) P_1 x = (\forall x) M_1 x\)) we must be able to show that \((\forall x) P_1 x\) has the property of being \(M_1\). Even if we drop all talk of what we can and cannot show, it must still be the case that if \((\forall x) P_1 x = (\forall x) M_1 x\), then \((\forall x) P_1 x\) has the property of being \(M_1\). But in virtue of what, could the \((\forall x) P_1 x\) have such a mental property if there are no laws connecting mental and physical properties? We may determine of \((\forall x) P_1 x\) that it also has physical properties \(P_1 \ldots P_n\), but how can this lead to a determination that \((\forall x) P_1 x\) a particular physical event also has the property \(M_1\)? Any suggestion that the mental and physical properties of an event might be mutually independent as are the shapes and colors of ordinary objects seems implausible. But how then can a physical event have any mental property \(M_1\), if it does not possess that property in virtue of some lawlike connection between its physical properties \(P_1 \ldots P_n\) and being \(M_1\)?

Davidson suggests an answer. If an event \(e\) possesses some mental property \(M_1\), it does so in virtue of its physical properties \(P_1 \ldots P_n\). However, the connections between being \(P_1 \ldots P_n\) and being \(M_1\) are not strictly lawlike. Davidson recognizes that an event's mental characteristics are dependent on its physical characteristics, but denies that this requires the existence of strict psycho-physical laws. An example similar to ones given by Davidson may help. Consider the relationship between an events being a killing and it's being an unjustifiable homicide. The former provides a physical description the latter a moral one. Every unjustifiable homicide is a killing. On the analogy of (1), we may assert that

\[(4) (x) (x \text{ is an unjustifiable homicide} \rightarrow (\exists y) (y \text{ is a killing } \& x = y))\]

Moreover, that an event \(e\) is an unjustified homicide is dependent on its being a physical event of a certain sort, including that it occurred in a certain context and was caused by certain sorts of antecedent events. Yet we do not suppose that we can formulate any lawlike biconditionals of the form

\[(5) (x) (x \text{ is an unjustifiable homicide} \leftrightarrow x \text{ is an event having physical properties } P_1 \ldots P_4)\]
We need not believe that such normative notions as those of moral justification can be specified in purely physical terms. In a similar way, the mental properties of an event are supposed to depend on its physical properties, without our being able to specify in purely physical terms sufficient or necessary and sufficient conditions for possessing those mental properties. Thus Davidson's position may be defended against the charge of apparent inconsistency. The relation between the moral and the physical provides a model on which we may simultaneously maintain the theses of token identity and anomalism. If the physical event \(( x)p_1x\) possesses the mental property \(M_1\), it does so in virtue of its physical properties, \(p_1...p_n\), but the 'in virtue of' relation need not involve any strictly lawlike connection between being \(p_1...p_n\) and being \(M_1\).

Having shown anomalous monism to be a consistent position, we may turn particularly to Davidon's claim regarding anomalism. It is importantly qualified, as he argues not that there are no laws connecting the mental and physical, but that all such laws are irreducibly statistical. What is denied is there can be any strict psycho-physical laws in the sense of deterministic laws holding without exception. Davidson attempts to support this claim by appealing to the holistic character of the mental, and by arguing that while considerations of rationality and coherence act as unavoidable constraints on psychological (or mental) explanations, there are no similar constraints on physical explanations. Thus there is not a common set of constraints or a constitutive framework with respect to which physical and mental attributions can be made and both sorts of explanations offered. We are in principle unable to give strict psychophysical laws since a system of strict laws requires a common framework, of the sort which is lacking. Where we have two distinct schemes of description, each governed by its separate and characteristic theoretical canons, we can expect at best an inexact fit between the classifications of the two systems. The suggestion is that our attributions of intentional attitudes to agents must be responsive to demands of a sort different from those which constrain our physical descriptions of those agents. Should we accept any strict psycho-physical laws, we would be compelled to attribute the relevant intentional attitudes to an agent purely on the basis of whatever considerations governed our attributions to her of the specified physical properties. To do so, Davidson contends, would be to make those intentional descriptions unresponsive to the constraints of rationality, which he takes as constitutive of the intentional. This for Davidson would be to give up the intentional scheme of description.

While the observation that notions of rationality play an important role in intentional explanation is surely correct, a proper understanding of that role does not lead to the conclusion of anomalism. Such considerations of rationality come into play when we explain an agent's actions intentionally, for we are constrained to attribute to the agent a set of beliefs, desires and intentions which are generally consistent and coherent. Moreover, such constraints are essential to intentional explanation, since the attribution to an agent of some intentional property such as believing that \(P\) can only be sensibly made on the assumption that the agent has a generally coherent set of other beliefs. If one wishes to maintain some version of the plausible functionalist thesis
that to be a state of a particular psychological type is to occupy a particular position in a network of interrelated states, behaviors, and stimuli, the relevant networks and the relations within them must be delimited so as to take account of such features as rationality, coherence, and consistency. For surely a person cannot believe a proposition unless she understands to a fair extent what the truth of that proposition would amount to. But understanding a proposition cannot be separated from recognizing its interconnections with other propositions. To suppose that a person might believe a proposition without recognizing any of its logical or evidential connections to other propositions is not merely implausible, it is incoherent. Just as a sentence only has meaning within the context of a language, so a particular psychological state can only be a belief within the context of an interconnected system of beliefs.

The constraints of rationality imposed on the intentional must not be confused with the general constraints of coherence and consistency which apply to all theories. We must be prepared to modify any theory to maintain or increase its overall coherence and consistency. But with respect to the intentional, we are constrained to maintain not only the coherence of the theory, but the coherence of the set of attitudes which the theory attributes to any given agent. Not only must the theory be rational, but the things it describes (be they persons, creatures or systems) also must be taken as rational, in so far as we attribute intentional attitudes to them. Having a set of beliefs, lacking even a minimal amount of consistency is not merely improbable it is impossible; for some degree of coherent and consistent connection is built into the very notion of a belief set.²

Davidson goes on to claim that since these rationality constraints are an essential feature of the intentional, there is an irreducibly normative element in intentional explanation and the attribution of intentional attitudes to agents. Moreover, it is the presence of this allegedly normative element in the psychological to which Davidson must appeal in establishing the impossibility of there being any strict psycho-physical laws. Yet, though Davidson must establish the normative character of the intentional to justify his claim of anomalism, it does not seem that the presence of this normative element can be established purely by appeal to the role of the rationality constraints.

First I should explain why the normative claim is essential to establishing anomalism. More than an appeal to the holistic character of the mental is required, for as Davidson notes,

The nomological irreducibility of the mental does not derive merely from the seamless nature of the world of thought, preference, and intention, for such interdependence is common to physical theory...

²A similar line of argument is offered in Dennett, D.C. 'Intentional Systems,' Journal of Philosophy LXVIII, 4, (1971), pp. 87-106.

³Psychology as Philosophy (Discussion), p. 62.

⁴Mental Events, p. 98.
Rather Davidson argues that the absence of strict psychological laws is due to the "disparate commitments of the mental and physical schemes". In summing up his case for anomalism, Davidson writes,

Standing ready, as we must, to adjust psychological terms to one set of standards and physical terms to another, we know that we cannot insist on a sharp and lawlike connection between them.

The existence of separate background standards supposedly precludes lawlike connection between terms of the two theories, as the formulation of laws must proceed within a common framework of standards and constitutive features. Strict psycho-physical laws are impossible, since there are no such common framework.

But it might be objected that similar situations have existed between other pairs of theories, prior to the reduction of one to the other. Take classical genetics and biochemical genetics as an example of a successful reduction. Surely prior to the reduction "we stood ready to adjust" attributions in genetic terms, such as being recessive or incompletely dominant, to one set of standards and attributions in molecular or biochemical terms to another. The existence before the reduction of separate background standards did not prevent us from carrying out the reduction; nor did the fact that the features of the Mendelian theory were characterized by a distinct structure of relations prevent us from establishing nomic connections between those features and biochemically characterized structures. Rather it was merely required that any adequate mapping from genetic to biochemical features substantially preserve the order of that relational structure. Thus in order to show that there can be no lawlike connections between the terms of two theories, we must do more than show that those theories employ different background standards. We must show that there can be no marriage of the sorts of frameworks presupposed by those theories which would not do unacceptable violence to one or the other scheme of description.

It is here that the normative claim about the intentional is needed. Since there is a supposedly general inability to reduce the normative to the non-normative, if the separate standards according to which we adjust the psychological were normative, we would not be able to reduce the background standards of the intentional to empirical physical standards. Inasmuch as the attribution of intentional states to an agent unavoidably involved normative as well as empirical elements, there could be no reduction of the intentional to the strictly empirical terms of the physical, and no specification of strictly empirical terms of the physical, and no specification of strictly sufficient conditions for the intentional in purely physical terms. It could then be argued that the case of the physical and the psychological is not like that of classical genetics and biochemistry. In the latter case, the separate sets of standards were all of an empirical sort and hence there was no bar in principle to their

5 Mental Events, p. 97.

6 Psychology as Philosophy, p. 52.
incorporation within a common framework. In the psycho-physical case, the division between the normative and empirical would prevent an analogous marriage of frameworks. Thus, it seems clear that such a claim about the normative element in psychology is essential to establishing anomalism. For it is needed to show that the standards governing the psychological cannot be incorporated into a purely physical framework, and that there can be no theory specified in purely physical terms which preserves or mirrors the rational order of the intentional.

My argument is meant as posing a dilemma for Davidson. For though some passages, such as that in which he writes,

The argument led from the necessarily holistic character of interpretations of propositional attitudes to the recognition of an irreducibly normative element in all attributions of attitudes. ...Psychology, if it deals with propositional attitudes,...cannot be divorced from such questions as what constitutes a good argument, a valid inference, a rational plan, or a good reason for acting. (italics added)

might be taken to strongly suggest the reconstructed line of argument here attributed to Davidson, it is not one stressed in his articles. To the extent that he would disavow any special appeal to the normative nature of the rational in establishing his thesis, the objections raised below could not be considered as criticisms of Davidson per se. However, any such a disavowal would, for the reasons given just above, leave a substantial gap in his defense of anomalism, providing no basis for the required thesis concerning our inability to combine the physical and intentional frameworks. I hope thus to show that the crucial step in Davidson's argument is either unargued for or only fallaciously defended. Moreover, the rebuttal of the normative claim to be offered will directly suggest a way in which a unification of the sort alleged impossible might in fact be achieved.

The weak point in Davidson's argument, as reconstructed, is that he fails to offer any support for the claim that the intentional involves an irreducibly normative element, except by arguing that the intentional is inextricably and essentially bound up with the notion of rationality. The move which Davidson apparently feels no need to make is that of showing that the relevant elements of rationality are irreducibly normative. He assumes that the application of the rationality constraints introduces irreducibly normative elements into intentional explanation, but an examination of those constraints and their role in psychological theory will not justify such as assumption. The relevant constraints allow us to attribute intentionally characterized informational and motivational states to a person (creature or system) only if we assume those states to be interrelated and restricted in certain ways which involve the coherence and consistency of the intentional contents attributed to those states. If we think of those states as states of an information-processing

7Psychology as Philosophy, p. 62.
system, then we can characterize those states intentionally only if the information processing operations of that system produce sets of states whose intentionally characterized contents are relatively consistent, coherent, and rational. The operations must also be such that the transitions between states as intentionally characterized generally correspond to sound inferences. But how might it follow from these restrictions on our use of the intentional idiom for content description, that the intentional involves a normative element.

An argument might be offered based on the nature of the evidence and methods which must be employed in attributing psychological attitudes to an agent. Davidson writes,

Any effort at increasing the accuracy and power of a theory of behavior forces us to bring more and more of the whole system of the agent's beliefs and motives directly into account. But in inferring this system from the evidence we necessarily impose conditions of coherence, rationality and consistency.

The suggestion is that the normative elements intrude whenever we infer an agent's psychological attitudes from observations of her behavior and stimulus conditions. For it might be argued that we should attribute to the subject or agent the most rational or best set of attitudes which explain and are compatible with her observed behavior. Thus in inferring from the behavioral evidence what beliefs an agent has and how she reasoned, we must consider how any agent ought to act or reason, given certain beliefs. Such a need to consider how one ought to act or reason would intrude a normative element into any descriptive judgment about an agent's actual beliefs and reasoning.

Were this the case, there might seem to be an unavoidable normative element in any ascription of psychological attitudes to an agent, since any such ascription would always be made relative to the model of the ideal reasoner. However, this is not the sort of argument which Davidson makes nor would one do well in offering it. For our attributions of psychological attitudes are frequently at variance with the method suggested above. We often attribute to a person processes of reasoning or sets of beliefs which are less rational than others we might attribute to her on the basis of those portions of her behavior we wish to explain. We simply recognize that actual agents are far from ideal reasoners and we may have good grounds for attributing to them particular defects of reasoning. We may have observed patterns of irregularity in other samples of the agent's behavior, or we may have direct psychological evidence that the agent suffers from certain sorts of neurological dysfunction. Or perhaps the agent is simply a young child. In some cases, the degree to which our belief attributions stray from the ideal may be very large indeed. The methods we use to infer the beliefs of a schizophrenic from his actions and perceptual conditions are quite different from those we use in dealing with the ordinary man in the street. While certain minimal constraints of rationality must be satisfied in order to sensibly

8Psychology as Philosophy,' p. 43.
attribute beliefs to the schizophrenic at all, those limits are sufficiently loose to allow for a great deal of irrationality in the reasoning and beliefs we attribute to psychotics.

Thus we must weaken any claim about the normative role of rationality in intentional explanation. Rather than requiring that we attribute to the subject the most rational belief set which explains his behavior, we might simply claim that how the ideal reasoner would act or reason is always a relevant consideration in any attribution of psychological attitudes. Considering how an agent ought to act or reason is not definitive in the way suggested above, but it is always relevant. It is this weaker thesis which Davidson does seem to hold. In 'Mental Events' he writes,

The point is that when we use the concepts of belief, desire, and the rest, we must stand prepared, as the evidence accumulates, to adjust our theory in the light of considerations of overall cogency. The constitutive ideal of rationality partly controls each phase in the evolution of what must be an evolving theory. (italics added)

It is this last claim which can be shown mistaken, if we are careful to distinguish between the following two theses:

(A) Notions of rationality impose some limits on when it is appropriate to describe some person (or system's) states as beliefs, or more generally when it is appropriate to describe them in intentional terms.

(B) Considerations of what is the best or most rational way to act or reason must always figure in our attributions of particular intentional attitudes to a person (or a system) and in our predictions of his action on the basis of those attributions. Such considerations play a role at every point in the evolution of our theory.

It will be argued that though (A) is true, (B) is false, and it is the latter which is required to establish anomalism. The notions of rationality delimit the sorts of theories which can count as theories of belief or intentional attitude generally, but the attributions made on the basis of such theories need not always depend on considerations of how the ideal reasoner would act or reason.

An example may illustrate the distinction. Suppose we are confronted with a very sophisticated robot, call him Tobor. Tobor exhibits a wide range of behavioral flexibility. His repertoire of verbal and nonverbal behavior is comparable to that of an average human. He shows a similar disposition to novel verbal behavior, to perceptual discrimination, and cumulative learning. His capacities for memory formation, attention, and goal directed behavior

9'Mental Events,' p. 98.
all seem quite human-like.

Having observed the regularities of Tobor's behavior, we might set to work constructing models of his internal functioning, perhaps of his programatic organization. We could test these models by devising experimental situations and observing Tobor's behavior in those situations. Imagine that we can also inspect Tobor's physical structure and hardware, to see whether it might reasonably instantiate abstract models of the sorts we conjecture. Analytically we may distinguish two aspects of these models: their programs and the interpretations of those programs. On the program level, we would have a description of the system's data or symbol structures, of the computational procedures operating on those sorts of symbol structures mediate Tobor's inputs and outputs. At the intentional level we have the task of specifying an interpretation of those symbol structures. The content which we assign to any given feature or symbol structure will depend not only on its direct relations to input and output (indeed it may have no direct connections), but also on the relations which it bears to other symbol structures in virtue of the computational relations embodied in the program. The nature of the model's internal relations will be a crucial factor in determining whether or not it is appropriate to employ the intentional idiom, that is the specification of content by the use of that-clauses in interpreting the model. It is at this point that the constraints of rationality apply. To justify the employment of the intentional idiom, we must be able to specify an interpretation such that the relations between the features or structures of the model mirror the relations of rational connection between the contents assigned to those structures by the interpretation. The computational processes in the model must function to produce sets of states whose intentionally characterized contents taken together form a relatively coherent and consistent set, and the transitions between the states should reflect the logical relations between their intentionally characterized contents, especially relations of logical consequence.

Assume that our theory T of Tobor's internal organization diverges from the model of the ideal reasoner, but still sufficiently approximates that model to justify the use of the intentional idiom and the characterization of Tobor's informational states as beliefs. It might also be the case that theory T allows us to predict with complete accuracy how Tobor will act on any given occasion, or that at least all of our experimental results have confirmed that Tobor's behavior is explained on the model provided by theory T. Imagine also that our investigations of Tobor's internal electronic structure have provided information which allows us to map the features of our abstract model onto features of Tobor's physical structure, that is we can show that Tobor's physical structure instantiates theory T's abstract model.

We could then use theory T to explain and predict Tobor's behavior. Consideration of how the ideal reasoner might act or reason would be irrelevant to such judgments. We know that Tobor does not instantiate the abstract model of the ideal reasoner but rather another model which we have completely specified. It is this latter model to which we appeal in explaining Tobor's
behavior and it is relative to it that we attribute intentionally specified informational states to the robot.

Since the model of theory T differs from the model of the ideal reasoner, but is to be sufficiently like it to justify us in describing Tobor's states as intentional states, or as states with intentionally specified contents, principle (A) holds with respect to T. In order to qualify as intentional states, the states in our T theory model have to satisfy the rationality constraints to a sufficient degree. But once we have the specific theory T including both model and interpretation and it is well confirmed by structural and behavioral observation, considerations of ideality drop out. Thus principle (B) does not take hold with respect to theory T. Though there would be good grounds for taking theory T as a theory of Tobor's intentional or psychological states, it is nonetheless a strictly empirical theory; it contains no irreducibly normative elements. Given the failure of (B), it is no longer plausible to assume that the necessity to accommodate the constraints of rationality must lead to the "recognition of an irreducibly normative element in all attributions of attitudes". Thus no appeal to the presence of such an element can support the crucial claim in Davidson's argument that there is no possibility of incorporating the constraints of rationality into physical theory, and the thesis of anomalism must be regarded as unshown.

Our story of Tobor and the development of theory T was an excursion into philosophical science fiction, but not unreflective of much actual research being done today in cognitive psychology and computer science. The relevant research programs are in infancy, and there are none about which one could begin to make the sorts of claims supposed true of theory T. Still their not implausible promise is that we may one day arrive at a theory of human mental processes, call it theory H, like theory T in containing a formal model specified in terms of symbol structures and computational processes as well as an interpretation function for assigning appropriate contents to the states or features of the model. Just as with theory T, the model of theory H under the specified interpretation might sufficiently approximate the rational structure of the ideal reasoner model to justify the use of the intentional idiom in content specification while nonetheless diverging from that ideal. It

10 For a general discussion of such recent work see Peter Lindsay and Donald Norman Human Information Processing, Academic Press, second edition, 1976. A convenient source for more detailed reports is Thinking, P.N. Johnson-Laird and P.C. Wason (eds.), Cambridge, 1977. See especially Marvin Minsky 'Frame-System Theory'; Roger Schenck, 'Scripts, Plans, and Knowledge'; and Terry Winograd, 'Formalisms for Knowledge'; all of which concern attempts to build connected and coherent bodies of background knowledge or information into language understanding computer programs. Considerations of holism and rationality are frequently in the fore. I am grateful to the referee for The Philosophy Research Archives for making me aware of some recent work by Christopher Cherniak which argues for a similarly restricted view of rationality constraints and describes some plausible limitations on empirical models of reasoning to support its claims. See Cherniak, C. 'Minimal Rationality' forthcoming in Mind (April, 1981); and 'Feasible Inferences' forthcoming in Philosophy of Science. See also Grice, H.P. 'Method in Philosophical Psychology,' Proceedings of the American Philosophical Association, Vol. XLVIII, especially Problem 4 (The Selection Problem).
might then be possible to specify an instantiation relation such that any system possessing a certain physically specified complex structure would realize the model of theory H. We would then in principle be able to determine the intentionally characterized content (at least relative to theory H) of its states from a sufficiently rich description of its physical structure. Moreover, the theoretical statement which linked the relevant physical structure with the intentionally specified content would be, if not a law, at least a lawlike generalization of the form given by (3). It should be noted that the sorts of psycho-physical laws here envisioned are very different from the psychophysical statements which Davidson rejects as candidates for strict lawhood. Those generalizations, to which he correctly denies such status are ones relating intentional states and very limited specifications of isolated bits of behavior. But the irreducibly statistical nature of such connections need not in any way entail the nonexistence of more complex psycho-physical laws reflecting the holism and rational structure of the intentional. The possibility of offering such explanations certainly promises an advantage over Davidson's austere anomalous monism, which is physicalist only in its commitment to token identities and to an especially weak principle of supervenience.

I am not, of course, suggesting that any theory H will soon be in the offing, nor would I wish to underestimate the formidable obstacle which would confront psychologists, philosophers, or computer scientists in attempting to construct such a theoretical model. My point is merely that the necessity to accommodate the constraints of rationality does not by itself rule out the possibility of formulating such a theory. Nor does that necessity preclude the existence or discovery of strict psycho-physical laws, but rather serves as a condition of adequacy on any alleged set of such nomic generalizations. To arrive at a conclusion of anomalism we would have to establish that it was impossible to computationally mimic the structure of rational connections embodied in our model of the rational agent, and nothing in Davidson's argument provides any real basis for such a priori claims about the negative outcome of future theory construction.

In summary, I hope to have shown that establishing the thesis of anomalism requires demonstrating the presence of an irreducibly normative element in intentional explanation, since neither appeals to mental holism nor to the existence of currently disparate background standards for the mental and physical will by themselves suffice. But we have seen that no demonstration of the required sort can be made merely on the basis of the role played by the constraints of rationality with respect to intentional theories. In the absence of such a demonstration, a gap yawns in Davidson's argument and we are provided with no persuasive reasons for believing there can in principle be no marriage of the frameworks within which we employ physical and intentional descriptions. Thus the thesis of anomalism remains unshown and suspect. Moreover, in so far as the sketch of future psychological theory construction offered above is both plausible and consistent with current work

11 The weak principle is simply that "there cannot be two events alike in all physical respects but differing in some mental respect, or that an object cannot alter in some mental respect without altering in some physical respect," 'Mental Events,' p. 88.
by cognitive psychologists, the methodological morals to be drawn seem quite other than those Davidson suggests. By focusing on the most interesting application of the mental/physical connection, he obscures perhaps the most interesting application of his observations about the holism and rationality of the intentional. I have argued that the rationality constraints should be understood positively as guides directing the construction and evaluation of models of internal psychological function. Such models, embodying the holistic and rational character of the intentional, might at least allow for the possibility of formulating strict laws relating physical structure to the realization of intentionally characterized contentful states. In the end it is likely to be only by detailed work on such intermediate level theories that we will have any hope of resolving the issue of anomalism and explicating in any genuinely explanatory way the relation between our physical constitution and mentality.

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