

INTENTIONALITY AND THE PHYSICAL

A REPLY TO MUMFORD

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[Abstract

Martin and Pfeifer (1986) claim "that the most typical characterizations of intentionality" proposed by philosophers are satisfied by physical dispositions. If that is correct, we must conclude either, as they and Mumford do, that the philosophers are wrong and intentionality is something else or, as I do, that intentionality is what the philosophers say it is, in which case it is the mark, not of the mental, but of the dispositional. To my contention that the intentionality of a disposition consists in its being directed towards its future manifestations Mumford objects that the notion of directedness is obscure and cannot in the light of Martin's (1994) argument be elucidated by reference to what *would* happen if the conditions for its manifestation are satisfied. But Martin's argument rests on the mistaken assumption that causal conditionals of which dispositional ascriptions are an instance are of the form 'If p then q'.]

1. Intentionality as the mark of the dispositional

In criticising my thesis that intentionality is the mark, not of the mental, but of the dispositional,¹ Stephen Mumford omits to mention my reasons for subscribing to it. Martin and Pfeifer have claimed

that the most typical characterizations of intentionality . . . all fail to distinguish intentional mental states from non-intentional [*sic*] dispositional physical states.²

If they are right, only two courses are open. Either we insist, as they and Mumford do, that whatever else it is intentionality is what distinguishes the mental from the non-mental. In that case none of the five "characterizations of intentionality" which they examine in their paper have succeeded in capturing its

¹ U. T. Place, '[Intentionality as the Mark of the Dispositional](#)' (hereafter IMD), *Dialectica*, 50 (1996) pp. 91-120.

² C. B. Martin and K. Pfeifer, 'Intentionality and the Non-Psychological', *Philosophy and Phenomenological Research*, 46 (1986) pp. 531-554, at p. 531.

essence. If, on the other hand, you believe, as I do, that 'intentionality' is a philosopher's technical term, and that it means whatever the typical characterisations of it given by the philosophers make it mean, you must conclude that intentionality so defined is the mark, not of the mental, but of the dispositional. To adopt the other view is to run the risk of emptying the concept of intentionality of all its content. For not only have Mumford and Martin and Pfeifer failed to propose any *other* criterion for distinguishing the [p. 226] intentional (*alias* the mental) from the non-intentional (*alias* the physical), there are good reasons to think that the mental (and hence on this view the intentional) is what Wittgenstein (*Philosophical Investigations* §§66-7) calls a "family resemblance" concept which has no one defining characteristic or set of characteristics which constitute its "essence" and distinguish all mental things from all non-mental or physical things.

II. T-intentional states and S-intentional locutions

That said, the issue as to what conclusion we should draw from Martin and Pfeifer's claim only arises if and in so far as what they claim is true. As Mumford points out, I maintain that only three out of the five "characterizations" they list, those that are marks of T-intentional properties rather than S-intentional locutions,³ are marks of the dispositional in general. These are (a) directedness towards an (intentional) object, (b) the inexistence of the intentional object and (c) its vagueness or indeterminacy. The other two (d) the possible falsity of an embedded statement which occurs as the grammatical object of a psychological verb and (e) the failure of substitutivity *salve veritate* in the case of extensionally equivalent expressions (called by Frege 'indirect reference' and by Quine 'referential opacity'), are marks of S-intentional locutions or linguistic expressions. It turns out that locutions that are S-intentional by these criteria are quotations of what someone has said or, in the case of a mental disposition, might be expected to say.

In claiming that the three marks of T-intentionality are features of physical as well as mental dispositions I am relying on three observations.

1. We invariably characterize a disposition in terms of its manifestations.

³ IMD pp. 98-9. Here following W. Kneale, 'Intentionality and Intensionality' *Proceedings of the Aristotelian Society*, Supplementary Volume 42 (1968) pp. 73-90.

2. In the case of where a disposition has not been or is not currently being manifested, no manifestation exists.
3. It follows that in characterising an unmanifested disposition by reference to its manifestations we are characterising it in terms of its "relation" to something that has all the hallmarks of an "intentional object". It doesn't exist and may never do so (it is "inexistent"). It is vague or indeterminate in the sense that although every *actual* manifestation is determinate, there is always a range of *possible* manifestations only a tiny fraction of which actually occur or exist.

III. The "relation" between a disposition and its "inexistent" manifestations

In attempting to characterise the "relation" between the bearer of a dispositional property and its inexistent intentional object, its range of possible future manifestations, I have followed Brentano, Searle⁴ and Martin and Pfeifer (p. 533) in saying [p. 227] that an intentional state (or disposition on my view) is "directed" towards its intentional object. Because I talk in this way, Mumford accuses me of animism and, since I see dispositions everywhere in the universe, of panpsychism. These accusations assume what I dispute, namely that intentionality is an exclusively mental characteristic. They also ignore a distinction I draw (IMD pp. 116-17) between two kinds of disposition. One is the kind of disposition that is typical of biological systems, where the manifestations of the disposition is controlled by a negative feedback mechanism which detects deviations from an end state or optimum condition and supplies the necessary correction. The other is a typical physical disposition such as gravitational or magnetic attraction, where the form of the ultimate manifestation is determined only by the interaction of "blind" forces. Mumford wants to insist that only in the former case is the disposition *directed* towards its possible future manifestations. I agree, of course, that there is a difference between the kind of direction in the two cases, I would also agree that it is natural to describe the directedness of the negative feedback case as "intelligent"; whereas that of the physical disposition is "blind". But the blind force is still in a perfectly good sense directed towards its possible future

⁴ J. R. Searle, *Intentionality: an Essay on the Philosophy of Mind*, Cambridge, Cambridge University Press (1983) pp. 1-2.

manifestations, even though they are much less narrowly constrained than are those controlled by negative feedback.

IV. Dispositional ascriptions as causal law statements

Mumford complains (p. 219) that I say "surprisingly little . . . on why dispositions should be understood as *directed* states or properties or what, exactly is the nature of such directedness". I would argue in my defence (a) that directedness in *some sense* is a feature of dispositions for which *any* theory must account and that mine is no worse in this respect than any other, and (b) that by disqualifying the view that dispositional predicates "entail conditionals", he has deprived me of what has been, since it was first formulated by Ryle,⁵ the only available strategy for elucidating what is otherwise an impenetrable metaphor.

The conditional entailment theory, properly understood, is a theory, not about the nature of dispositions, but about the meaning of what Mumford calls "dispositional ascriptions," statements ascribing a dispositional property to someone or something. It is the claim that when we utter such a statement we are not talking categorically about what exists or is occurring here and now, but modally about what would happen in the future if certain conditions were to be fulfilled. That is not to say that the dispositional ascription does not also *entail* the categorical here-and-now existence of a dispositional state whose possible future manifestations the statement describes. But this state is not specifically *mentioned* in the dispositional ascription. Nor does it play more than a background role in the causal explanations to which dispositional ascriptions contribute.

We owe our understanding of the role of dispositional ascriptions in causal explanation to Nelson Goodman who shows that dispositional ascriptions, do not [p. 228] just entail, but actually *are* a species of causal conditional or causal law statement.⁶ He begins (pp. 18-25) by drawing a distinction between a causal law statement, as in his example "All butter melts at 150° F," and an *accidental generalisation* as in his example "All coins in my pocket are silver." He points out that whereas the former "sustains" the causal

⁵ G. Ryle, *The Concept of Mind*, London, Hutchinson (1949), e.g., pp. 43-4.

⁶ N. Goodman, *Fact, Fiction and Forecast*, 2nd Edition, Indianapolis, Bobbs-Merrill (1965).

counterfactual "If this butter had been heated to 150° F, it would have melted," the latter does *not* sustain the counterfactual "If this coin were in my pocket, it would be silver." He then goes on to show (p. 39) that you don't need a causal law statement universally quantified over the individuals involved in order to sustain a counterfactual, a statement ascribing a disposition to a single individual will do just as well. To cite his example, if we know that "*w* is inflammable," we can infer that "if *w* had been heated enough, it would have burned."

This shows that what makes a causal law statement and gives it the ability to sustain a causal counterfactual does not depend on its being universally quantified over the individual entities involved. What makes a causal law statement is universal quantification over occasions within what, in the case of some mental dispositions, is a very restricted period of time. It is because the occasion referred to in the counterfactual falls within the period over which the disposition obtains and to which the dispositional ascription applies that it is possible to infer the truth of the causal counterfactual from the causal law/dispositional ascription. There is, of course, a problem in representing this inference within standard predicate logic which has no singular non-existential quantifier. Without such a quantifier a device is needed which permits existential quantification over non-occurrent occasions. Hence the bizarre metaphysics of possible worlds.⁷

V. Martin's electro-fink argument and the analysis of causal law statements

According to Mumford, C. B. Martin⁸ has "pointed out that disposition ascriptions can be true even when the associated conditional proposition is false and *vice versa*." If this were true, the conclusion which appears to follow from Goodman's examples that disposition ascriptions just *are* conditional propositions of the form "If at any time an event or state of affairs of the cause type were to occur or exist and event state of affairs of the effect type would occur or exist" would be false. For if, as Mumford suggests, the dispositional ascription

⁷ I have discussed this issue at greater length in U.T. Place, '[De re modality without possible worlds](#)', *Acta Analytica*, 19 (1997), pp. 129-43.

⁸ C.B. Martin, 'Dispositions and conditionals', *Philosophical Quarterly*, 44 (1994) pp. 1-8, and 'Final replies to Place and Armstrong', in D.M. Armstrong, C.B. Martin and U.T. Place, T. Crane (ed.) *Dispositions: A Debate*, London, Routledge (1996) pp. 178-9.

can be true and the conditional false, the two cannot just be two different ways of saying the same thing as Goodman's argument implies.

But that is not what Martin's argument shows. The proposition whose truth is consistent with the falsity of a disposition ascription and *vice versa* is a proposition [p. 229] of the form "If the proposition 'the cause event or state of affairs exists' is true, then the proposition 'the effect event or state of affairs exists' is true." In other words in place of a causal law statement which gives us the conditions under which a certain outcome is liable to occur, we now have what Ryle calls "an inference licence" which gives us, in the antecedent, a proposition which, if true, allows us to infer another proposition, that given in the consequent. To treat an inference licence of the form 'If p then q' as equivalent to the corresponding causal law statement is to be guilty of the fallacy to which Martin himself has given the name "linguisticism" and of which he says in *Dispositions: A Debate* (p. 71)

Martin rejects the Linguisticism that renders properties being had by objects as merely a matter of predicates being true or false of the object, if any, to which the subject term refers.

Martin fails to appreciate that in his electro-fink argument he commits the very fallacy from which he dissociates himself in this passage. Like many others, he is led astray by the fact that existing formal logic has no way of formulating a conditional other than in terms of the formula 'If p then q'. But this we cannot do without committing the fallacy of linguisticism, in this case the fallacy of treating a conditional relation between the existence of events and states of affairs as simply a matter of what we are entitled to infer from what.⁹ Once we realise that causal conditionals are not of the 'If p then q' form, that their function is to describe causal factors operating in the world of physics, physiology and psychology rather than the inferences we are entitled to draw, we also begin to see that because causes are always multiple, every causal law is subject, in a way an 'If p then q' statement never is, to a *ceteris paribus* or other-thing-being-equal clause which, among other things, would prevent interference from a device such as an electro-fink from constituting an exception to the law.

⁹ For a more detailed analysis and rebuttal of Martin's electro-fink argument, see U.T. Place, '[Ryle's behaviorism](#)', in W. O'Donohue and R. Kitchener (eds.) *Handbook of Behaviorism*. San Diego, CA, Academic Press (1998) pp. 393-5.

VI The truthmakers of causal conditionals

In addition to claiming that I have failed to "distinguish dispositional from non-dispositional ascriptions," a charge which I trust I have now fully rebutted, Mumford also (p. 222) accuses me of failing to distinguish "dispositions from non-dispositional properties." That charge needs to be answered. For to show that dispositional ascriptions are causal law statements, tells us nothing on the face of it about the nature of the dispositional property such a statement ascribes.

The issue is a complex and difficult one. It is bound up with another issue which is the main bone of contention in *Dispositions: A Debate*, the relation between dispositions and their underlying basis in the structure of the property bearer.¹⁰ Unfortunately, I only reached my final conclusion about the nature of dispositions [p. 230] after the book had gone to press. I argue in the book that whereas mental processes just *are* processes in the brain, dispositional mental states depend causally on the underlying features of the brain microstructure with which they are correlated, and that the same relation of causal dependence holds between all dispositions and their structural underpinning. It is a consequence of this view that dispositions and their structural underpinning are "distinct existences." They cannot be just one and the same thing, as held by Armstrong,¹¹ or two aspects of the same thing, as held by Martin.¹² But if the disposition is something over and above its structural basis, in what does it consist? It is no use saying with Ryle that it consists only in what would happen in the future, if certain conditions are fulfilled. That, as I have argued, is all we are *saying* about a disposition when we ascribe one to someone or something; but it cannot be all there is to the disposition itself. An unmanifested disposition exists now, not just in some possible future when the conditions for its manifestation are realised. But if what exists now is something over and above its basis in the structure of the property-bearer, what does it consist in?

¹⁰ I have discussed this issue at greater length in U. T. Place, '[On the nature of conditionals and their truthmakers](#)' *Acta Analytica* 18 (1997) pp. 73-87.

¹¹ D. M. Armstrong, 'Dispositions as categorical states', in Armstrong et al. (1996) pp. 15-18.

¹² C. B. Martin, 'Properties and dispositions', in Armstrong et al. (1996) pp. 71-87.

The answer to that question came to me after the book had gone to press when I suddenly realised that dispositions were playing the same role in my theory that Armstrong's substantive Laws of Nature¹³ were playing in his. They were providing the truthmakers for all the modal, conditional and non-categorical aspects of the causal relation, including causal law statements and the causal counterfactuals they sustain. In other words, dispositions are the substantive laws, not, as for Armstrong, of Nature in general, but of the nature of the individual entities whose dispositional properties they are. This is essentially the same view as that advocated by Nancy Cartwright.¹⁴ She too rejects Laws of Nature in general as constituents of the Universe. She sees the laws formulated by scientists as rough and ready generalizations describing the typical "capacities", as she calls them, of individual entities.

You may say that this makes dispositions very queer entities indeed, and I would agree that it does. But one has only to think of black holes to realise that substantive laws of the nature of the individual property-bearer are no queerer than many of the entities postulated by contemporary physics and a deal less queer than Armstrong's substantive laws of nature in general. What is shocking, perhaps, is to find such entities in our own backyard, as it were, in familiar things like the brittleness of the unbroken glass, the flexibility of the rubber that has never been stretched and the desire that has never been evinced, let alone acted on.

VII. Mumford's "better alternative"

In conclusion I should say a few words about the alternative that Mumford proposes to my view. Since I am not impressed by his criticisms, I see no need for such an alternative. However, on examination it turns out that the only differences between [p. 231] his view of the nature and function of dispositions and my own are differences in terminology. Where I talk about dispositions as substantive laws of the nature of the property-bearer, he talks about dispositions as "functionally characterised states or instantiated properties of

¹³ D. M. Armstrong, *A World of States of Affairs*, Cambridge: Cambridge University Press (1997).

¹⁴ N. Cartwright, *Nature's Capacities and their Measurement*. Oxford: Oxford University Press (1989).

objects." Both expressions are somewhat opaque; but if they differ in meaning, I would like to know wherein that difference consists.

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