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Psycho-Physical Correlations and Ontology: A Reply to Shaffer

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Jerome Shaffer¹ verbally agrees with my contention² that psycho-physical correlations are ontologically neutral (“Hull is absolutely right in his contention that the discovery of *psycho-physical correlations* of the most extensive and detailed sort would in no way bear on the ontological issue of materialism vs. dualism” (S-121)). Yet he also holds that, “Contra Hull, we will choose our ontology in the light of empirical discoveries, *in the end in the light of observable correlations*” (S-123) (emphasis mine). If I read him right, Shaffer holds *both* that correlations are neutral with respect to ontology, *and* that the ontology we choose is ultimately determined by the correlations we find. I claimed in my original paper that “a persistent confusion” informed the mind/body literature, and Shaffer seems to have obliged me again on the point.

Shaffer takes me to task for holding that it is a mistake “to think that causal questions bear any significant relation to ontological disputes”. (H-66) He (correctly) points out that if A_1 causes B_1 , A_1 cannot be identical with B_1 ; and of course the converse of this is true as well. In that respect, causal questions are not unrelated to ontological ones. But, are they related *significantly*? They would be so related if ontological disputes could be settled by discovering causal relations. Yet, Shaffer immediately notes that “if a mental event causes a physical event [or conversely], it follows only that they are different events but not that they differ in ontological status. If the Identity theory is correct, the mental event will be a physical event and the law instantiated will be a physical law.” (S-122) Thus, even if A_1 is a mental event and B_1 is a physical event and A_1 causes B_1 , psycho-physical dualism is not the result; this state of affairs is compatible with various forms of dualism and various forms of materialism.

¹Jerome Shaffer, “Criteria for Mind-Body Identity: A Rejoinder,” *Behaviorism*, Vol. 2, No. 1, Spring, 1974. Page references to this work will be preceded by ‘S’.

Shaffer ultimately contends that “the existence of irreducible psycho-physical causal laws would entail psycho-physical dualism. Thus, causal questions are not irrelevant to ontological disputes.” (S-122) In the first place, there is more than one sort of irreducibility. For example, suppose the Identity theory is correct but that the laws for physical systems of the degree and type of complexity of the brain are not derivable from the composition and process laws of simpler physical systems.³ Call this ‘irreducibility₁’. Then, where A₁ is a mental event and B₁ is a physical event and A₁ causes B₁, we have an irreducible₁ psycho-physical causal law (which is an irreducible₁ physical law), without psycho-physical dualism being entailed. But secondly, the sort of irreducible psycho-physical causal law which does entail psycho-physical dualism is one in which the properties or characteristics lawfully connected involve mental ones which are not physical. Call this ‘irreducibility₂’. If a psycho-physical causal law is irreducible₂, it does entail dualism. But that is solely because it *presupposes* dualism, not because it is a *causal* law. The form of the psycho-physical causal law may be the same whether the law is reducible, irreducible₁, or irreducible₂. Only if the law is not derivable from a minimally adequate set of axioms for physically simpler systems will the law be irreducible₁. And only if A₁ (or B₁) is mental and not physical (and the other is physical) will the psycho-physical causal law be irreducible₂. But there being mental characters that are not physical ones is the essence of dualism and sufficient for the falsity of the Identity theory⁴, whether such characters are lawfully connected to any physical ones or not. We should be closer to the mark in saying that ontological disputes are not irrelevant to causal questions, such as whether a particular psycho-physical causal law is irreducible. Shaffer has not succeeded in showing that I was wrong in holding it to be a mistake to think causal questions bear any significant relation to ontological disputes.

Shaffer correctly points out that there are many kinds of correlations, and lists five sorts: formal, symptomatic, purely accidental, causal, and those between identicals. What I find significant is that Shaffer omits from this list the sort of correlation I characterized in my original statement of the Doctrine of Psycho-physical Correlation, which I argued was equivalent to the conjunction of Shaffer’s necessary-and-sufficient condition criterion with his simultaneity criterion:

For every mental character there exists a physical character such that, for any time, some individual has that mental character at that time if and only if some individual has that physical character at that same time. (H-67)

Of course there are many types of correlation; I suspect that all of the types Shaffer lists occur psycho-physically. What I termed psycho-physical correlation, however, was the simultaneous occurrence of mental and physical states of affairs in a lawful way. Indeed,

²In Richard T. Hull, “On Taking Causal Criteria to be Ontologically Significant,” *Behaviorism*, Vol. 1, No. 2, Summer, 1973. Page references to this work will be preceded by ‘H’.

³For a useful discussion of related points, see Gustav Bergmann, *Philosophy of Science*, Madison: University of Wisconsin Press, 1957, Chaps. 2 & 3 *passim*. Also see May Brodbeck, ed., *Readings in the Philosophy of the Social Sciences*, New York: Macmillan, 1968, Section 4.

⁴By ‘the Identity theory’ I shall mean either reductive materialism or eliminative materialism, as defined in my original paper. See that paper as well for definitions of other terms such as ‘dualism’ and ‘double-aspect materialism’.

the relation of one thing's being a necessary and sufficient condition for another is a type of correlation, as is the causal relation. Had Shaffer really been convinced by my arguments that psycho-physical correlations are ontologically neutral, he would not still be maintaining that psycho-physical causal correlations and psycho-physical necessary-and-sufficient condition correlations are not ontologically neutral. It isn't even clear which of the five sorts of correlations he lists that Shaffer thought I had established as ontologically neutral. But I had in mind those described in the Doctrine of Psycho-physical Correlation, which are those which allegedly form the empirical basis for the Identity theory. So let us finally take a look at them.

The major intent of my original paper was to argue that those sorts of psycho-physical correlations which satisfy Shaffer's necessary-and-sufficient condition and simultaneity criteria, taken by many to be the principal evidence for the Identity theory, are equally evidence for other positions (such as certain forms of dualism and double-aspect materialism) and provide no basis for preferring any one over the others. But Shaffer only grants that psycho-physical correlations do not *entail* the Identity theory; he maintains that "evidence of the right sorts of correlations between mental and physical plus changing our conception of the mental to allow for location would justify [inductively] identifying the mental and the physical." (S-123)

My contention was based on the principle that if X, Y and Z each are compatible with D and its denial, then D's truth (or falsity) provides no ground whatever for rational choice among X, Y and Z. Specifically, since both the truth and the falsity of the Doctrine of Psycho-physical Correlation are compatible with reductive materialism, double-aspect materialism and dualism, its truth favors none of them. Shaffer, however, contends that this sort of correlation between the mental and the physical, *together with* certain conceptual revisions (whereby we would ascribe to mental states the locations of their contemporaneous, necessary-and-sufficient brain states), would justify the Identity theory. But it is equally true that evidence of these sorts of correlations between the mental and the physical, together with a conception which *denies* to mental states any location at all, justifies some sort of dualistic hypothesis.

The issue, then, does not lie with the correlations but with the conceptual issues. Are such revisions as Shaffer proposes warranted, and what is the function of such revisions? Another way of focusing the question is, what is the status of an entrenched way of conceiving an issue when confronted by an alternative? And what is the relation of a contemplated conceptual revision, which may "serve scientific purposes" by allowing "us to deal more fruitfully with the data" by describing, predicting and explaining observable phenomena, to that part of the world to which those concepts apply?

I believe that the answers to these kinds of question involve a wide range of ontological (and linguistic) issues; space does not permit an adequate treatment of them all. What I would like to do in the remainder of this paper is to indicate schematically a few of the issues involved, in order to place in perspective Shaffer's proposed conceptual revision. And I should like to conclude with some polemics about what the "proper" functions of psychological science are.

Shaffer has agreed that our entrenched conceptual scheme involves no way of spatially locating (at least some of) the mental. I would add that this is because our

primary mode of experience of the mental — introspection — does not discover any spatial features of the conscious states which are its objects; neither size, shape, volume nor relative position of conscious states is presented. At the same time, we are presented with numerous other features of conscious states: intentional contents, species of awareness, durations and other temporal relations. Put generally, we are aware of various monadic properties and various temporal relations (perhaps other sorts as well) of those individuals I call mental.

At this point the question naturally arises, when I introspect such a mental individual, am I *wholly* presented with it (i.e., are *all* of its properties and relations given in *introspection*), or may it not have other characteristics which are not given in the introspective mode of awareness? The answer to this question involves one's position on another more basic ontological issue: what is an individual?

Many positions have been held on this question, and only a representative sketch can be given here.⁵ Substance views generally hold that individuals are natured, reidentifiable continuants which take up and drop various accidental properties but continuously possess their essential ones. Other views hold that an individual is a bare particular (i.e., a natureless individuator that is not reidentifiable in different acts of the same or different modes of acquaintance) which possesses just those qualities and relations it appears to have. Still other views hold that an individual is nothing over and above a coordination or bundle of qualities, individuated by their relations to other bundles. On the first and third views, mental individuals would be, *prima facie*, reidentifiable and could conceivably be presented in more than one mode of acquaintance. This would open the way for double aspect materialism as opposed to dualism (see below). On the second view, since there is no way of identifying a bare particular in more than one given act of acquaintance, individuals cannot meaningfully be thought to recur. Hence, mental individuals would be wholly presented in single acts of introspection, would not have features not presented in such individual acts, and should not be identified with brain states. Dualism, as opposed to double-aspect materialism and the Identity theory, is favored by this stance.

However, one's position on the nature of an individual does not entail one's ontology. For the fundamental issue between dualism and double-aspect materialism, on the one hand, and the Identity theory on the other, is the status of mental *properties*. Even if we agree with Shaffer that mental individuals are nothing other than physical individuals, nothing in his criteria or his proposed conceptual revision favors the Identity theory over double-aspect materialism. In fact, accepting the spirit of his proposed revisions we should say that if a simultaneously occurring conscious state and brain process are each necessary and sufficient conditions of the other, then each has *all* the properties the other has: the conscious state will be said to have the spatial location of its correlated brain process, and the brain process will have the intentional features of the correlated

⁵An extensive discussion of the various alternatives is to be found in Robert Cisek, "The Problem of Individuation," unpublished doctoral dissertation, State University of New York at Buffalo, 1974.

conscious states. Whereas before it made no sense to speak of the whereabouts of Jones' thought of his ailing mother, it now will; but whereas it formerly made no sense to speak of how serious a brain process is, it now will. We thus see that Shaffer's proposed conceptual change is but a narrowly partisan application of Leibniz's law of the identity of indiscernibles (roughly, if you want to identify "two" individuals, you must first grant that they have all their features in common). Of course, if Shaffer could successfully argue that mental states have all of the features of their correlated brain processes and also that they have none of the features that are thought to be distinctively mental (or that such properties and relations are really identical with physical ones after all), his conceptual revision would provide support for the identity theory. But as it stands, it at most provides support for double-aspect materialism over dualism (and that only when coupled with the "right" position on the nature of individuals).

There have been many attempts in recent years to deny that most manifest properties are real.⁶ Generally, they take one of two approaches. Either they seek criteria for identifying *properties* that appear to be different, or they hold that a dualistic ontology is merely an entrenched rival scientific theory, whose received status is bolstered by taking what is that theory's *interpretation* of the data of experience to be a fixed, theory-neutral *description* of those data. (I have yet to be convinced by any of them.) But, the three points I hope to have made in this paper are (1) that this is the proper theoretical area in which the Identity theory is to be defended or defeated, (2) that Shaffer's criteria for identity don't really provide for the Identity theory's support, and (3) that the issues involving the nature and status of mental individuals and their distinctive features are ontological in nature and are not to be laid to rest either by the discovery of *any* sort of psycho-physical correlations or by any undefended conceptual revisions.

Many believe that it would simplify the psychologist's task enormously if he could dismiss the mental. The theories, methods and technology of animal psychology have long since taken the physical turn, so that the task of providing a scientific account of human consciousness seems doubly difficult: the subject's behavior in issuing introspective reports of his conscious states cannot even be taken as the fundamental data of consciousness.⁷ However, if the Doctrine of Psycho-physical Correlation is correct, physical theories of human behavior should continue to flourish and may even be facilitated by identifying the mental and the physical. For there is a certain redundancy that results from the truth of the Doctrine, which might well be avoided in order to

⁶See especially works by J.J.C. Smart, such as his *Philosophy and Scientific Realism*, London: Routledge and Kegan, Paul, 1963; Paul K. Feyerabend, such as his "Materialism and the Mind-Body Problem," *The Review of Metaphysics*, 17 (1963), pp. 49-67; Wilfrid Sellars, as in his *Science, Perception, and Reality*, New York: Humanities Press, 1963.

⁷As Alston has recently argued. See William P. Alston, "Can Psychology Do Without Private Data?," *Behaviorism*, Vol. 1, No. 1, Fall, 1972.

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develop physical theory along the proper lines.⁸ However, such identification -for - the - purpose - of - facilitating - the - development - of - psychology - as - a - science is not what the Identity theory is about. There is an appearance of chicanery and absurdity about the Identity theorist's proposals — he who, having been assigned the task of accounting for the mental, denies its existence and calls that his explanation! It is the task of the Identity theorist's apologist to dispel that appearance and show that he does not deny what is obviously true. I do not believe that Shaffer has succeeded in this task.⁹

⁸Psycho-physical dualism of the sort I am inclined to favor does not feature non-redundant causal interactions of mental and physical, although there are grounds on some views of causation for calling that view inter-actionist. Consider the following (simplified) schematic representation of parallelistic dualism where 'M' and 'N' represent two different kinds of mental acts, and 'P', 'Q', and 'R' represent three different kinds of brain states. Let the following represent the relevant causal connections (indicated by '→') and psycho-physical correlations (indicated by '↔'):

$$\begin{array}{l} P \rightarrow Q \\ Q \rightarrow R \\ P \leftrightarrow M \\ Q \leftrightarrow N. \end{array}$$

It follows from the above that

$$N \rightarrow R,$$

which looks like a mental act causes a brain state. But note that Q is also causally sufficient for R and would be even if 'Q ↔ N' turned out to be false. These are the grounds for declaring 'N → R' to be redundant; in general, this sort of redundancy is a consequence of psycho-physical dualism that satisfies the Doctrine of Psycho-physical Correlation.

Another related point to be noted is that, on the Doctrine of Psycho-physical correlation, there is an asymmetry of considerable explanatory import between the mental and the physical. Every mental act is correlated with a physical state, but *not conversely*. Moreover, there are physical states whose causal antecedents are only physical states, whereas there are mental acts whose causal antecedents are not mental acts. The result is that a complete causal account of the mental in terms of the mental is impossible, whereas (on the Doctrine) there is no obstacle to such an explanation of the brain's states in terms of the physical. I conclude from this that the kind of *complete* science of human consciousness for which psychology is striving is only possible given the essential involvement of physical science, and, further, that non-physical theories (e.g., theories of cognitive dissonance, theories of the unconscious, psycho-linguistic theories) will be necessary for psychological explanation only if the Doctrine of Psycho-physical correlation turns out to be false. For, if for every mental event there is a simultaneous brain state which is its necessary and sufficient condition, and if for every brain state there is a physical state which is its sufficient condition, then an ideal theory of the physical will (when supplemented appropriately with correspondence "rules") explain the psychological.

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