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'IS CONSCIOUSNESS A BRAIN PROCESS?' SOME MISCONCEPTIONS ABOUT THE ARTICLE

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Introduction

In a paper published some forty years ago (Place 1956) I argued that

"the thesis that consciousness is a process in the brain is a reasonable scientific hypothesis, not to be dismissed on logical grounds alone." (1956, p. 44)

This article was the first of three, the other two being Herbert Feigl's 'The "mental" and the "physical"' published in 1958 and J. J. C. Smart's 'Sensations and brain processes' of 1959, which between them launched what became known as "the mind-brain identity theory."

The idea that the brain is the seat of all mental phenomena is very ancient. It is to be found around the turn of the 5th and 4th centuries BC in the writings of Hippocrates of Cos. Even the formulation of the mind-brain relation as an identity was not new. It appears in a book entitled *The Physical Dimensions of Consciousness* by the psychologist E. G. Boring published in 1933. Moreover although he does not emphasize the point, it is evident from his claim that

"a perfect correlation is identity" (Boring 1933 p.16)¹

that Boring thought of the identity theory as an hypothesis which will stand or fall on the evidence of psycho-physical correlation. What was new in the formulations of the late 1950s was the drawing of a clear distinction between a thesis about the meaning of mental predicates on the one hand and a thesis about the actual events and states designated by mental predicates on the other. By restricting the thesis

¹ I have discussed this interesting claim in my 'E.G.Boring and the mind-brain identity theory' (Place 1990a). I argue that because of the invariable multiplicity of synchronous causal factors, in the contrasting case of a causal relation between "distinct existences" a perfect correlation (Hume's "constant conjunction") is encountered only in the special case where all other factors are held constant, as in a perfectly controlled experiment (Sidman 1960) or a mechanical device. A perfect correlation between two measures which applies unconditionally and regardless of context would appear to be conclusive evidence that they measure one and the same thing.

to the latter, it became possible for the first time to deflect what for centuries had appeared to be decisive philosophical arguments against any such identification.

Although I am probably the only person who still subscribes to the thesis in its original form,² there is no doubt that the three papers I have mentioned and my own in particular, as the first of them, began a revolution in the philosophy of mind from a situation in which behaviourism was the only credible alternative to either mind-body dualism or some form of idealism to the situation that prevails today in which it is difficult to find a philosopher who does not subscribe to some version of materialist monism. The course of this revolution has been charted in a number of recent and not so recent publications, too numerous to mention individually; but all those that have come to my attention contain what I regard as serious misconceptions about the thesis for which I was arguing in 1956. It is these misconceptions that I propose to discuss in this chapter. There are five of them:

1. that the paper was intended as a contribution to the philosophy of mind,
2. that its purpose was to characterise the "essence" of the mental,
3. that it is a thesis about mental states, the thesis that each type of mental state is identical with a type of brain state
4. that it abandons the conception of philosophy as the conceptual analysis of ordinary language in favour of the contemporary view of it as top-down theorising in science in general and cognitive science in particular,
5. that it abandons Ryle's (1949) behaviourism in favour of an across-the-board identification of the mental with the cerebral.

1. *The paper as a contribution to the philosophy of mind*

² Of the three original advocates of the position, Herbert Feigl (1967) recanted, in my view quite unnecessarily, over the issue of phenomenal properties which, he thought, could not be ascribed to any brain state. This meant that the previously proposed identity of the "raw feels" with some state of the brain would infringe Leibniz's Law which holds that, if two descriptions relate to the same thing, whatever is true of it under one description must be true of it under the other. J.J.C.Smart (1959) had already questioned my claim that the thesis is an empirically testable scientific hypothesis, and in his (Smart 1967) 'Comments on the papers' he signalled his acceptance of Armstrong's (1968) rejection of my restriction of the identity thesis to private experiences. Subsequent advocates of materialist monism have preferred eliminative materialism (Feyerabend 1963, Rorty 1965, Churchland 1981), Putnam's (1967) functionalism, or Davidson's (1970/1980) anomalous monism.

In his introduction to the 1993 revised edition of his *A Materialist Theory of the Mind* David Armstrong writes

"A tactical mistake was made Place's article appeared in the *British Journal of Psychology*, little read by philosophers".

But that is to assume that the audience the paper was intended to reach was an audience of philosophers. It was not. Although the argument is philosophical, it was intended to be read by psychologists, particularly those involved in what was then called 'physiological psychology' and is now called 'neuropsychology'. Its intended purpose was to persuade such people that there is no longer any reason to be brow-beaten by the philosophical arguments which in the past had seemed overwhelming and had deterred psychologists and physiologists from entertaining and empirically pursuing the hypothesis that consciousness is in fact a process in the brain. If a mistake was made, it was the mistake of supposing

- (a) that psychologists could be induced by philosophical argument to forsake their traditional attitude of sitting on the fence over the mind-body problem, and
- (b) that philosophers would readily hand over to scientists their claim to proprietary rights over the mind-body problem in the way that theologians have had to do in relation to the problem of the origin of the universe.

2. *Searching for the "essence" of the mental*

Since its purpose was to encourage empirical research in the field of what is now known as neuroscience, the paper does not and was not intended to address what for philosophers is the central issue in the philosophy of mind, the question "What is it that distinguishes mental phenomena from non-mental or 'physical' phenomena?" But, although it does not address the issue directly, there is implicit in the argument of the paper, a distinctive attitude to it, which, since it does not appear to be shared by many philosophers, is worth putting on record.

In *The Concept of Mind* Ryle (1949) argues that the distinction between body and mind, between the mental and the physical, is a category mistake. Unfortunately his account of what a category is and, hence, of what it is to make such a mistake leaves much to be desired. The term 'category' comes from Aristotle and is used by him to refer to the units in a taxonomy of fundamental kinds of thing which, he

thinks, our language compels us to distinguish, and which he sets out not only in the treatise known as the *Categories*, but also with minor differences in the *Topics* (103^b23) and the *Posterior Analytics* (83^b15). The best way to understand what a category is for Aristotle is to consider the process of definition *per genus et differentiam* known to the Schoolmen of the Middle Ages as the "Tree of Porphyry." In this procedure a lower-level universal is defined by specifying the superordinate universal or kind under which it falls together with the feature that differentiates it from other kinds at the same level in the hierarchy. By applying this procedure at each successive level of generality one eventually arrives at a point where it no longer makes sense to ask the question 'And what kind of thing is that?' When this point is reached we know that we have arrived at what Aristotle calls 'a category.' Aristotle's list of categories is no longer acceptable, not only because of the inconsistencies between his three lists, but, more important, because it relies heavily on the now outmoded subject-and-predicate analysis of sentences with its inability to handle relations and such grammatical phenomena as the active-passive transformation. In the last few years, the writer (Place 1993, forthcoming-a) has been attempting to develop a more adequate taxonomy of ontological categories based on a version (Place 1990b, 1992, forthcoming-b) of Wittgenstein's (1921/1961) "picture theory" of the meaning of sentences in natural language using Frege's (1891/1960) function and argument analysis of the sentence and Barwise and Perry's (1983) concept of "a situation" as that which a sentence depicts.

This ontology subdivides situations into *events* whereby a change occurs in the properties of and/or relations between concrete particulars (Aristotle's "substances") and *states of affairs* whereby they persist unchanged over a period of time. Events or "occurrences" as Ryle calls them are then further subdivided into *processes* in which the change is continuous over a period of time and instantaneous events (starts and stops) which occur at moments of time, but are not extended over time. This sub-classification of situations was originally inspired by the distinction that Ryle draws in Chapter V of *The Concept of Mind* between verbs "which signify dispositions" (p.116), "process verbs" (p.139) and "achievement words" (p.149). This threefold distinction, particularly that between disposition verbs and process verbs, is crucial to the understanding of the argument in 'Is consciousness a brain process?' It is not explicitly discussed in that paper; but it *is* discussed at some length in the preceding paper (Place 1954) to which it was intended as a sequel. It is the basis for the 1956 restriction of the identity claim to the

"intractable residue of concepts clustering around the notions of consciousness, experience, sensation and mental imagery, where some sort of inner process story is unavoidable." (Place 1956, p. 44)

It is also the basis for the belief to which I subscribed then, as I still do, that the philosopher's search for the essence that distinguishes the mental from the physical is looking for a will o' the wisp. With the doubtful exception of Aristotle's category of substance (ουσία) which, unless you accept Descartes' argument, has no obvious mental instance except possibly the brain, all the important distinctions of category are to be found on both sides of that divide.

3. *The Identity proposed is an identity between mental states and brain states*

Although I did not feel able to deploy the concept of identity in the 1956 paper and had at that time barely heard of Leibniz's Law, I recognised instinctively that it makes no sense to propose an identification between things that belong to different categories. This principle, moreover, has a number of implications of which, unlike the principle's foundation in logic, I was fully aware when the 1956 paper was written:

1. that to assert an identity between consciousness and some, as yet unspecified, brain process is to reject the widespread philosophical opinion that the mental/physical distinction is categorial,
2. that if consciousness is a process in the brain, consciousness itself must be a process,
3. that although it makes sense to speak of a state of consciousness, such as the waking state or the state of rapid-eye-movement sleep, meaning by that the aspect of a continuous process which remains constant over a period of time, consciousness *qua* process excludes dispositional states such as those designated by

"cognitive concepts like 'knowing', 'believing', 'understanding',
'remembering', and volitional concepts like 'wanting' and 'intending'".

I maintained, and still do,

"that an analysis in terms of dispositions to behave (Wittgenstein, 1953; Ryle 1949) is fundamentally sound." (Place 1956, p. 44)

4. as already indicated, that the important categorial distinctions such as those between processes, instantaneous events and dispositional states, occur on either side of the alleged mental/physical divide.

It is this last implication which justifies the use of non-mental analogies such as ‘His table is an old packing case’, ‘A cloud is a mass of particles in suspension’, and ‘Lightning is a motion of electrical charges’ to illustrate the identity relation proposed in the case of consciousness and some as yet unspecified brain process.

4. *The rejection of the conceptual analysis of ordinary language*

In her book *Neurophilosophy* published in 1986, which in many respects can be seen as carrying to its logical conclusion the program of research envisaged in my paper thirty years before, Patricia Smith Churchland writes

"That there is an absolute division between matters of meaning and matters of fact was a tenet of all variations on the empiricist theme, and its demise pulled the rug out from under those philosophers who practiced on the assumption that the solution to philosophical problems consisted in analyzing meanings. The facts, on this view, would have to follow where conceptual clarification first led. For the philosophy of mind in particular, the favored method was to "analyze" the "common" concepts used in talking about the mental in order to discover answers - either answers about the true nature of the mental and how it differs from the physical, or answers showing that the original problem was after all just a semantic misunderstanding. This was the dominant approach to questions in the philosophy of mind from about the 1940s to about the 1970s." (Churchland 1986, p. 271)

It cannot be too strongly emphasised not only that the distinction between "matters of meaning and matters of fact" is fundamental to the whole argument of ‘Is consciousness a brain process?’ but that it originated from an application of conceptual analysis to what Ryle calls "heed concepts" in my 1954 paper ‘The concept of heed’. This led me to conclude that Ryle had failed in his attempt to show that these concepts are what he calls "mongrel categoricals", a matter of doing something else with a particular disposition. It was this conceptual analysis that led to the conclusion that

"If . . . our very ability to describe and adapt our behaviour to the objects and phenomena which impinge on our sense organs, is dependent on a special state of affairs within ourselves, which can itself be described by the person in whom it occurs, the reference which is made to such a process in our use of expressions like 'attending', 'observing' and 'being conscious' can hardly be brushed aside as a matter of no great significance. If such a view is accepted, we can hardly avoid raising the question which Ryle has dodged persistently throughout his book, namely the question: 'What are these curious occurrences within ourselves on which we can give a running commentary as they occur?'" (Place 1954, p. 255)

Nor is this reliance on conceptual analysis simply a reflection of the climate of philosophical opinion at the time when it was written. It is true, as Churchland points out in the passage quoted above, that from the beginning of the 1970s (I would have thought that the rot set in rather earlier) conceptual analysis fell out of favour as a way of doing philosophy in the English-speaking world. But this had little to do with any argument which showed that its assumptions and methodology are unsound. Indeed the only argument I know of which can be construed as undermining the assumptions on which conceptual analysis is based is Quine's (1951/1980) critique of the analytic/synthetic distinction in his 'Two dogmas of empiricism.' Conceptual analysis fell out of favour

- (a) because, once all the traditional problems of philosophy had been exposed as conceptual confusions due to lack of attention to the way words are actually used, there was, on this view of the nature of philosophical activity, nothing left for the philosopher to do other than to engage in a purely lexicographic charting of word meanings, and
- (b) because, quite wrongly in my view, the impression was created that conceptual analysis rejects as conceptually confused any deviation from ordinary ways of talking and is thus inimical to the kind of conceptual innovation that is the lifeblood of science.

Quine's argument against the analytic-synthetic distinction³ rests on the assumption that the methodology of philosophy and its contribution to science is to deploy the predicate calculus in order to replace the intensional features of ordinary language, such as its reliance on counterfactual and subjunctive

³ For a more detailed critique of Quine's argument, see Place (1991).

conditionals, by a purely extensional formulation in which the analytic/synthetic distinction has no meaning. Not only does the attempt to squeeze it into the straitjacket of the predicate calculus distort ordinary language, if, as I do (Place 1987 and forthcoming-a), you accept a counterfactual theory of causal necessity and the dispositional theory of how causal counterfactuals are supported,⁴ you will also think that such a move seriously distorts and undermines the language of science.

One can understand and sympathise with Professor Churchland's urge to be rid of her conceptual-analytic brassière; but she and those who think like her should consider that without the predicate calculus to fall back on, the philosopher has no expertise, no body of data, no scientific methodology, which she can call her own other, that is, than conceptual analysis applied to the elucidation of word meanings in a language (which may be a scientific language - why not?) of which the investigator is a fluent speaker.

5. *The rejection of Ryle's behaviourism*

In a recent article my old friend and former colleague J. J. C. Smart writes

"Ever since Gilbert Ryle at Oxford persuaded me to reject the last vestiges of Cartesian dualism, I have been a materialist about the mind. Admittedly the philosophy of mind to which Ryle attracted me was a sort behaviorism, which I later came to reject (mainly owing to the influence of a younger colleague of mine at the University of Adelaide in South Australia, U. T. Place (see Place, 1956)). Ryle, roughly speaking, held that when we talk about the mind we are concerned with hypothetical propositions about behavior, not, as Descartes thought, with categorical propositions about a nonphysical entity, (see Ryle, 1949, esp. p. 46). Where I possibly differed from Ryle (who at least used a lot of antimaterialist rhetoric) was that I was convinced that these hypotheticals should be at least in principle explicable by a categorical basis provided by neurophysiology and the emerging science of cybernetics. Indeed I now, think that Ryle was wrong in thinking that hypothetical propositions could, so to speak, float in free air. They need a categorical, or relatively more categorical, basis." (Smart 1994, p. 19)

⁴ This theory combines the Hume (1777/1902) and Mackie (1962; 1974) counterfactual theory of causal necessity with Ryle's (1949) analysis of dispositional statements as concealed hypotheticals and Goodman's (1955/1965) observation that a dispositional statement restricted in its application to the behaviour of a single individual is all that is required to 'support' a causal counterfactual.

In this passage Smart has chosen his words so carefully that there is not a single sentence that I can honestly disagree with. Nevertheless, a reader who was not forewarned might easily conclude from what is said that it was my 1956 paper that led him to reject Ryle's behaviourism and, therefore, that the paper itself contains a rejection of this aspect of Ryle's view. Nothing could be further from the truth. The only aspect of Ryle's account that I rejected in both the 1954 and the 1956 papers was his attempt to extend the disposition-to-behave account so as to cover what he calls "heed concepts", in other words to the phenomena of consciousness and attention. But, as he himself makes no attempt to apply the theory in relation to such concepts as 'itches', 'throbs', 'tingles' and other bodily sensation words, 'picturings-in-the-mind's-eye' and 'singings-in-the-ear', this is hardly a major difference between our two positions. In other respects, I make it abundantly clear in both papers that I completely endorse his behaviourist account of

"cognitive concepts like 'knowing', 'believing', 'understanding', 'remembering', and volitional concepts like 'wanting' and 'intending.'"

That is still my position. Where I agree with Smart is when he says

"that Ryle was wrong in thinking that hypothetical propositions could, so to speak, float in free air."

But although there is hearsay evidence⁵ that Ryle agreed with Price (1953) in thinking that

"There is no *a priori* necessity for supposing that *all* dispositional properties must have a 'categorical basis'. In particular, there may be mental dispositions which are ultimate. (Price, 1953, p. 322, quoted by Armstrong, 1968, p. 86)

as far as I know, there is no statement of this view in Ryle's published writings, and certainly no reason why his brilliant analysis of dispositions in Chapter V of *The Concept of Mind* should be construed as committing him to such a view. I agree with Smart that, with one possible exception,⁶ every dispositional property we know of depends for its existence on some feature of the structure, usually the microstructure,

⁵ From C.B.Martin who discussed the matter with Ryle in 1953.

⁶ The possible exception is the 'charm' of the quark which, as far as we know, has no microstructure and little in the way of structure of any kind.

of the property-bearer. But the relation between the dispositional property and the structural feature or features on which it depends is a causal relation in which the dispositional property stands as effect to the structural features as cause; and, as Hume has taught us, causal relations hold only between "distinct existences."

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