



On a familiar objection to identity theory

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From FEIGL, H. (1963), “Physicalism, the unity of science, and the foundations of psychology”, in SCHILPP, P.A. (ed.), *The philosophy of Carnap*, Open Court, La Salle (IL), pp. 227-68. Republished in FEIGL, H. (1981), *Inquiries and provocations: selected writings 1929-1974*, ed. R.S. Cohen, Vienna Circle Collection v. 14, Reidel, Dordrecht, pp. 302-41.

Selection by Osvaldo Pessoa Jr. of this “explanatory gap objection” for the course HPSC X755: History & Philosophy of Mind/Brain Science, Indiana University, 2018.

[328] A familiar objection²¹ to the identity theory maintains that the ‘raw feels’ of direct experience could not conceivably be the referents of neurophysiological terms. Neurophysiology deals with the processes in the sensory-neural-glandular-muscular structures, it has reference to the electrochemical aspects of the ‘firing’ of neurons, etc. – and so it is argued, how could directly experienced qualities such as colors, sounds, smells, pains, emotions, or the [329] like, be identical with neural processes whose properties are so fundamentally different? It is usually granted that these two types of processes may be lawfully related, so that to a given quality of experience there corresponds a certain neural state or process (or a disjunction thereof) either by way of simple concomitance or as a consequence of causal relations of interaction between ‘mind’ and ‘brain’. Since what is regarded as the decisive point in this objection depends on various emphases, we shall have to consider each of them.

First of all it must be pointed out that according to our epistemological point of view the designata of the concepts of physical science are by and large totally unfamiliar, i.e., unknown by acquaintance. Only phenomenal terms are directly associated with certain qualities and relations in the field of immediate experience. A Martian super-scientist who did not share any of our human repertory of immediate data could nevertheless (conceivably) attain a perfect behavioral and neurophysiological account of human life. He might not ‘know by acquaintance’ what colors look like, what pains feel like, what it ‘means’ to experience ‘pity’, ‘reverence’, ‘regret’, etc. As has often been pointed out, a congenitally blind (human) scientist, equipped with the necessary instruments and intelligence, could achieve not only an adequate knowledge of the *physics* of colors and radiations, he could also arrive at a (behavioristic and neurophysiological) account of color perception and imagination. Similarly a clinical psychologist completely deprived of certain sectors in the area of emotional experience would in principle be able to introduce the behavioral or neurophysiological equivalents of such (to him completely unfamiliar) emotions in his ‘psychology of the other one’. Of course, it must be admitted, that (a) without *some* basis of immediate experience neither the Martian superscientist nor the emotionally ‘blind’ clinical psychologist could ever get started in his cognition of anything in the world; and (b) that possession of a repertory of experience of a certain breadth will be immensely helpful in a *heuristic* way of the projection of tentative hypotheses or laws concerning the regularities of human experience. In taking himself as an instance or sample of the type of object (‘person’ in this case) to be investigated, the psychologist will have a

²¹ For incisive (but in my opinion inconclusive) arguments against various forms of physicalistic monism, cf. especially C.J. Ducasse [1951]; N. Jacobs [1937]; C.I. Lewis [1941]; Arthur Pap [1951] and [1952].

certain advantage if he finds in himself the kind of processes which he studies in others. On the other hand there are of course also certain dangers of error involved in overestimating the interpersonal similarities. But it is clear that direct acquaintance with, e.g., melancholia, or megalomania, is not an indispensable prerequisite for the psychiatric diagnosis or etiological explanation of these mental conditions. The Martian may be completely lacking experiences of the sort of human [330] piety and solemnity, and hence unable to ‘understand’ (empathize) what goes on in the commemoration of, e.g. the armistice – but this would not in principle make it impossible for him to give a perfectly adequate causal account of the behavior of certain human groups on a November 11th at 11 a.m. (example taken from Eddington, 1929). Quite generally, the significance of intuition, insight, empathetic understanding consists in the power of these processes to *suggest* hypotheses or assumptions, which, however, could *not* be established, i.e. confirmed as scientific statements except by intersubjective methods.

Returning to the central issue, the distinction between ‘knowledge by acquaintance’ and ‘knowledge by scientific description’ can be drawn in such a way that the first reduces strictly to familiarity in the sense of ability to recognize a quality immediately when experienced, i.e., the ability to affix the proper phenomenal label. Knowledge by acquaintance also involves in some areas, but not generally or necessarily, the ability to imagine certain qualities or configurations. One may rightly wonder whether the word ‘knowledge’ should at all be applied to acquaintance or familiarity in the sense just explained. If it is the mere having (*‘erleben’*) of certain contents of experience, no truth-claim is connected with it. If it is the ability of correct labeling, then it is perhaps ‘knowing how’, but again not ‘knowing that’ which alone makes a truth-claim.

The electrochemical concepts of neurophysiology, like all concepts of the natural sciences, have their epistemic roots in the area of sensory evidence. If one confuses evidence with reference, as positivists and phenomenologists stubbornly do, then of course it would seem that the meaning of physical concepts had to be identified with the sensory data that serve as a confirmation basis. Very naturally when we hear of ‘cerebral processes’ we think of a brain-as-seen-when-opening-the-skull, or of nervous-tissue-as-seen-under-the-microscope. It is this ‘root-flavor’ which is so often mistaken for the factual meaning of our statements or concepts. More precisely, it is the pictorial appeals (usually the visual imagery) which masquerade as the ‘true meaning’ of our concepts. But while as empiricists, we insist on ‘rooting’ our concepts in a sensory confirmation base, this does not imply that our concepts *refer* to it. The concept of the electromagnetic field, for example, must of course be introduced in such a manner that it is not completely disconnected from the data of sensory experience, but its referent is not visualizable at all. ‘Thou shalt not make graven images unto thyself’ is a warning to be heeded in the philosophical interpretation of the concepts of physics; this notwithstanding the admittedly often great but always limited heuristic (or didactic) value of [331] images and models. The *prima facie* implausibility of the identity thesis arises, I believe, mainly from the psychological incompatibility of images such as of nervous tissue or of molecular structures (as pictured by didactic tinker-toy models) with the qualities of some data of consciousness, such as sounds, smells or emotions. More fundamentally, perhaps the most perplexing difficulty of the mind-body problem can be avoided by distinguishing between phenomenal and physical space.²² Visual, tactual, and kinaesthetic data contribute the ‘intuitive’ character of phenomenal space (or spaces). The geometry employed in the description of physical space is a conceptual system which, though based upon the evidence of the sensory kind of spatiality, is itself not adequately intuitable (visualizable, etc.). This implies that the neurophysiological concepts which are used in the description of cerebral processes are not to be ‘visualized’ in terms of the phenomenal data on whose basis they are confirmable. Some parts of direct experience (the visual, tactual, etc.) have *phenomenal* spatial extension, others (emotions, volitions, etc.) have at best a very vague and diffuse phenomenal

²² Cf. especially the chapters on qualitative and quantitative knowledge, and on the psychophysical problem in M. Schlick’s *Allgemeine Erkenntnislehre* [1918] which contains a superb and undeservedly neglected clarification of these issues.

localization. In opposition to Descartes I feel tempted to say that it is only the mental, i.e., the phenomenal data, which have (intuitable) spatial extension, whereas physical objects as conceived in physical science have only abstract conceptual (non-intuitable) topological and metrical relationships. Hence there is no conflict and no incompatibility in regard to the 'location' of, e.g., a directly experienced patch of color. It is where we 'see' it in phenomenal space. The systemically identical cerebral process is assigned a place in the abstract 3-dimensional manifold of physical space; and a detailed analysis of the central process in its relations to afferent and efferent impulses should be able to account for the behavior relevant in place learning, spatial orientation, optical illusions, etc.

The psychophysiological isomorphism assumed by the Gestalt psychologists may well be interpreted as the identity of certain items or aspects of the phenomenal field with certain global or configurational aspects of the (in dualistic terms: 'correlated') neurophysiological processes. The criticism that the physical language necessarily omits reference to the experienced aspect may then be rejected because reference is here confused with the evocative appeal of certain terms of our language. Many psychological terms of the intersubjective language of ordinary communication carry such an evocative appeal. This comes simply from the way their use has been learned. If, in the utopian future of a complete neurophysiology, children could be taught to use the appropriate neurophysiological terms on the basis of introspection, these terms would then have the same sort of emotive (pictorial, emotional, [332] motivative) appeals that psychological words have in common language; and there would be the additional advantage of getting rid of the spurious dualism that is essentially linguistic. The incorporation of words which fulfill a phenomenal-introspective function into the total terminology of scientific explanatory terms could thus be achieved.²³

References

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²³ Perhaps I should at this point reassure emotionally tender persons that I am using this fantasy merely as a thought experiment, and that I am not seriously proposing this sort of language reform. I too happen to have a certain romantic attachment to the homey, christmassy, or poetic appeals of many words of ordinary introspective language.