

## SCIENCE AND SURVIVAL

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The issue of the possibility of the survival of the human ego after physical death is surely one of the most important of all philosophical questions. Few others bear so closely on the way we look at our lives and ourselves. I hope here to cast some light on the issue by applying considerations of epistemological methodology.

Philosophers have often in recent years addressed the question whether the survival of the human personality after physical death is conceptually intelligible. That is, they have tried to answer the question whether such survival is possible by conceptual arguments, pro and con. Those denying survival have tried to point out logical incoherencies in the notion, for example, of discarnate personal existence, such as that of personal identity over time and individuation of persons at any time. And supporters of the idea of survival have tried to construct imaginary scenarios to give meaning to such notions. Perhaps most famous is John Hick's concept of "resurrection world" in which there are exact duplicates of our bodies with seemingly our memories. In both cases the methods employed are those of a priori philosophical reasoning. This is natural and proper, since such methods are those to which philosophy is professionally committed, philosophy being a conceptual discipline.

But, not all reasons for drawing conclusions are conceptual; even the most passionate rationalists recognize that there are many empirical questions the answers to which can only be discovered observationally. And if it is our primary concern to discover a true answer to the question whether the personality survives physical death, sources of empirical information should not be overlooked. This recent philosophy has tended to do.

I argue that empirical information is available that bears heavily on the question of survival. In particular, neuroanatomical and neurophysiological discoveries in the past few decades have given very strong reasons to doubt that such survival is scientifically possible. Such discoveries support the conclusion that the events and processes characteristic of

consciousness are causally dependent on neurological processes in the brain. If this is correct, then consciousness--however little we may understand it philosophically--results from the functions of material entities in the physical body. And this in turn strongly suggests that when those processes cease and those entities are dispersed after death, consciousness no longer can exist.

I will not distinguish for present purposes between mind-brain identity theories of mind, various behavioristic theories like those of Ryle and Wittgenstein, or any others that have as a consequence the conclusion that minds are logically or causally dependent on bodies and therefore could not survive without them. Although as a matter of fact I tend to accept some such theory myself, it is the purpose of this paper to argue methodological considerations, not philosophies of mind.

Of course, this neurophysiological line of reasoning is "merely" inductive; it does not possess that peculiar sort of certainty that attaches to the conclusions of formal logic and that alone seems to provide many philosophers with a sense of security. But of course our reasons for believing that the earth circles the sun and that smoking causes lung cancer are also "merely" inductive. Indeed, if the evidence linking smoking with cancer were as overwhelming as that linking consciousness with brain function, the tobacco manufacturer's cynical campaign to discredit the connection would never have been attempted.

The factual information to which I am making appeal is too well known to need much stress. The eyes are struck by light reflected from a flower, stimulating nerve impulses that are carried to the brain, where the conscious experience of seeing a rose is brought about. Though the process is imperfectly understood, no one is much inclined to doubt the causal dependence of our experience of sight on such neurological phenomena. The measurable activity of the cerebral cortex varies with sleep and wakefulness, concentration, mood, drug use, and any number of other events. Physiological damage to the brain sometimes results in behavioural changes, as do some cases of tumors. All in all, the dependence of conscious experience on a functioning nervous system is too obvious to deny.

Some believe, it is true, that direct evidence of ego

survival is found in psychical research. This is a field so complex that I approach it with trepidation and penetrate it only shallowly. Nonetheless, I think it is possible to make some important points about the logical relations between research in the areas of neurophysiology and parapsychology. First, if the evidence of psychical research is to be of any value in the present inquiry, it must conform to the canons of scientific inquiry. Anecdotal evidence, always suspect, is more so in an area where both traditional teaching and human hopes play so prominent a role. The point we must remember is that whatever evidence is adduced by psychic research to support the hypothesis of survival will also be inductive evidence. It therefore must be balanced against the negative inductive evidence of neurophysiology with which it indirectly but strongly conflicts. This conflict is indirect, I say, because the conclusion that the destruction of the nervous system entails the cessation of consciousness rests on an inference: that the brain functions that are observed to be associated with consciousness are causally necessary for it, so that consciousness could not continue without them.

And of course this causal dependence could not be observed directly since it is never possible to state with assurance that our observations have been exhaustive; there may always be conditions that have escaped our notice. If Isaac Newton had been asked to explain an ordinary pocket flashlight, he probably could not have done so since the fundamental concepts of electrical potential and current were unknown in his day. Similarly, it is possible in principle that, though brain processes are coincidentally associated with consciousness, the real cause of conscious phenomena is something wholly other that does not deteriorate with the body.

But the conflict between neurophysiological and psychic research is important, even if indirect. This is not because the inference from observed association to causal dependence is in itself overwhelmingly strong in any particular instance, but rather because of methodological considerations. It is just not sound procedure of inquiry to continue to insist, in the absence of any evidence whatever, that a proposed causal explanation is inaccurate even though it conforms neatly to the accepted form of scientific accounts. Cautious thinkers always reserve the right to review their opinions in the light of new information;

but, at the same time they are guided by the best evidence available to them.

The history of the controversy over vitalism is an instructive parallel to the present case. The view that life involves "vitalistic" principles not explainable in terms of causal scientific laws that apply to nonliving matter has not been empirically disproved, nor could it ever be. But as the explanatory power of mechanistic biological theory has grown ever greater, biologists have almost universally come to hold that vitalism was no more than an antimechanistic metaphysical prejudice. Inquirers whose motivation is the pursuit of truth will note that, in principle, vitalism remains a possibility; but, they will not, I think, conclude that the hypothesis is as well-supported as its alternative. Similarly, with regard to survival, it seems unnecessary as of now to take seriously the suggestion that neurophysiological science has missed something as it proceeds toward an empirical explanation of consciousness.

So there is an important conflict between the neurophysical evidence that postmortem survival is causally impossible and the evidence from psychical research that it occurs. I do not propose to try to evaluate all the evidence cited for paranormal phenomena, but several points need to be made. A distinction must be drawn between stages in reaching the conclusion favoring survival based on psychic research. The first stage is observation of certain events, for example, the behaviour of mediums (now often called "channelers"). The most persuasive such cases are those in which the medium possesses information that apparently could only have been acquired through communication with the dead. The second stage is the inference that such communication has occurred.

At this point some philosophers would introduce the sort of conceptual considerations mentioned at the outset. If, for example, one is convinced of the truth of certain philosophical theories of mind, the conclusion immediately follows that discarnate personality is logically impossible. And if any such theory is correct, the phenomena of psychic research must be interpreted in another way--for nothing whatever can be evidence for that which is logically impossible.

But the theme of this paper is the way that empirical considerations can supplement such conceptual arguments, and

so I will not discuss competing philosophies of mind. I will note, however, that such conceptual arguments, though in principle conclusive if sound, are also themselves notoriously controversial. Thus, however convinced a particular philosopher may be of the correctness of a theory of mind (whether it favors survival or not), there is still a point in drawing attention to any relevant empirical evidence.

The issue, then, is whether the evidence against survival from brain research is to prevail over that in favor of survival from psychical research. And here the distinction mentioned above between stages in the psychic research argument becomes important; for, even if there are events not explainable by present knowledge, whatever reason we may have for doubting survival will count in favor of seeking an alternative explanation that does not entail it. Thus, if the medium exhibits apparently inexplicable information and if we have very strong reason to believe that survival of the personality after death is impossible, then we should explore other possible explanations besides survival for how that information could have been acquired, for example, telepathy or clairvoyance. It is true that the evidence for these processes is scanty, but perhaps more will appear with further investigation. At any rate, they do not seem to present the sort of conceptual difficulties that appear to surround the concept of a disembodied mind. As always in such cases of conflicting evidence, methodological considerations should guide us. All else being equal, the preferred explanation will be the one that least disrupts the accepted paradigms. For example, if we judge the evidence against survival to be greater than that against telepathy, then the latter will appear to be a more acceptable hypothesis than the former.

The point is that the evidence from neurophysiology must be pitted against that from psychic research. And it seems to me that even with expert knowledge it is possible to note some reasons to favor the former arising from the methodological principle of economy just mentioned. The scientific research I have been characterizing as neurophysiological is not an isolated field of endeavor but rather ties in at innumerable points with the results of the other natural sciences. Physics and chemistry, as is well known, are found to be increasingly applicable to the study of biological organisms, and the same

principles and laws appear to be operative here as in nonliving matter. This is not to say that biology is reducible as a whole to chemistry or physics, or that living matter does not exhibit properties not found elsewhere, presumably because of its greater complexity. It is to say that, to a great and constantly increasing degree, the study of nervous functions is continuous with the rest of the natural sciences.

The same could not be said of psychic research. The principles that are discovered, if any, seem to have little connection with the principles of established science. Moreover, the results of psychical research are both unpredictable and unrepeatable. Of course, neither of these factors can count decisively against the possibility of a science of psychical research, because many new areas of inquiry seem isolated at the time of their discovery. But, for the methodological reasons discussed, the burden of proof lies heavily on the effort to establish survival through such research. I do not believe that burden can be borne.