Book Reviews

The Arts as Phenomena of the Life Process

Mind: An Essay on Human Feeling. Vol. 1. SUSANNE K. LANGER. Johns Hopkins Press, Baltimore, 1967. 511 pp., illus. $10.

Sooner or later every systematic philosopher comes to grips with the problem of mind and its relation to matter. Everyday experience confronts us with an inescapable duality: on the one hand, the tough resistant world of things, the complexities of which science is now untangling and reducing to the form of natural law; on the other hand, ourselves, the thinkers, feelers, choosers, who do the measuring and ordering and who seem to belong to a different realm of reality. Can the dualism be resolved by a single unifying theory that carries conviction? Metaphysicians of the past have attempted to do so by reducing mind to material process, by translating the material into terms of the mental, or by presenting both as different aspects of a single transcendent reality which is neither material nor mental. The currently popular solution is to deny the legitimacy of the question and by a nimble linguistic exercise demonstrate that the problems of metaphysics are artifacts of language. No classical theory of mind has ever satisfied all other philosophers, and for most nonphilosophers the language games continue to be games, leaving us still with the naive conviction that "I," whether or not "I" be designated as a mind, a soul, a spirit, or the initial element in a first-person sentence, am somehow or other different from the things I am conscious of, think about, am excited by, and choose between. As Descartes pointed out long ago, we may systematically doubt everything, but the one undubitable fact is that something is doing the doubting. What is the nature of the "I" or the "mind" which is capable of this seemingly unique kind of activity? This is the question for which a philosophy of mind must provide an acceptable answer.

Susanne Langer's answer will probably be no more satisfactory to her philosophic colleagues than any of the other classic systems have been. One hazards the guess, however, that it will have considerable appeal to her colleagues in the sciences, not necessarily because she will convince them but because of her approach. Instead of treating the problem as an exercise in logical figure-skating, she accepts it as an invitation to the kind of careful and reflective observation which the scientist admires. Her book is a carefully annotated and richly illustrated examination of facts and theories, drawn from a variety of fields, which bear on the central problem of mind. One likes to think—and this is intended as a compliment—that Langer the philosopher is reasserting for philosophy its ancient responsibility, that of synthesizing the sciences and moving beyond them toward, as she quotes from Whitehead, "the most general statements we can make about reality."

Statements about mind, like statements about matter, are of necessity abstractions, but if they are to be meaningful they must be abstractions from the concrete, recognizable data of observation, and it is in the sciences that the art of observing has achieved its greatest refinement. A qualification, though: the metaphysician who attempts to develop a unified cosmology is understandably biased in favor of the data and theories of the physical sciences. He would be misguided, however, as many metaphysicians have been, if he were to base a theory of mind on the selective data of physics and chemistry. If we are to think coherently about mind we must base our generalizations not on the sciences of physical nature, or even exclusively on the sciences that deal with the structure and behavior of organisms, but also on the expressive and communicative arts and on the interactions of people in human societies—in short, on all those phenomena that invite us to think of mind as different in essence from material reality. No theory of mind can be adequate if at the outset it rejects the very phenomena which lead us to think of mind as a problem.

An adequate theory of mind thus calls for an initial suspension of the physicalistic bias of the post-Newtonian age and the acceptance of "mental" phenomena as legitimate data, to be observed and reflected upon rather than to be explained away. It calls for a revised conception of nature "great enough to account for the whole spectrum of vital phenomena, i.e., for our genius as well as for the mold on our bread" (p. xvii). Will such an approach liberate us from the dualisms of tradition? Langer thinks it will, that without violating the principles of science and without introducing metaphysical concepts of a different order we can have a unified theory of the evolution of mind from its first emergence in "inanimate" matter, through its various transitions and transformations, to its most distinctive expressions in the life of man "typified by language, culture, morality, and consciousness of life and death" (p. xvii). Whether or not she has made her case, Langer is at least challenging the biologist and the psychologist to reflect more profoundly on the meaning of their own data, and reminding all scientists that behind their particular questions are more general questions which transcend all special disciplines.

Langer can play the language game with the best of the philosophers. In this book, however, she is not playing games; she is attempting to derive a theory from the facts of observation and experiment. Her scholarship is impressive, her exposition lucid, and her style of writing refreshingly free from jargon. Volume 1 presents a theory of the life process based on the converging evidence of the expressive arts and the life sciences. In the promised volume 2 she will extend the analysis to the more specifically human and social phenomena of mind. Together they will constitute one of the major efforts of recent years to give a systematic interpretation of mind based on the whole range of mental phenomena.

Any final assessment of Langer's theory must await the appearance of volume 2. In the first volume, however, the main lines of the argument are clearly presented. Langer believes firmly in the unity of nature (without the capital N which so easily tricks us into thinking of Natural Law as the immanent expression of a transcendent deity). Nature is one, all its phenomena are coordinate with one another, and what may appear to be unbridgeable gaps in its evolution (from matter to life, from life to mind, from animal to

human) begin to close as the scientist (the molecular biologist, the neurophysiologist, the ethologist) supplies increasingly detailed descriptions and the informed philosopher looks from science to science for common patterns. Such a unitarian view cannot be sustained either by a teleology or by a simple mechanical model of the 18th-century variety; Langer is impatient with both. What is called for is a radically revised conception of the nature of the reality which all sciences are trying to describe.

The key concept in this revised conception of reality is the "act." Most of us in our everyday thinking are thing-minded; we accept the world about us as an array of essentially inert structures which may be pushed and pulled about in space in a multitude of ways, even to the point at which they seem to be generating power, but in the last analysis it is the structure (the atom, the molecule, the bone, the nerve) which is accepted as real; an event is merely what happens to things in time and is essentially secondary. When we found our philosophy on "things" we have the various forms of classical materialism, in which physics becomes the queen of the sciences and the machine (the spring clock, the combustion engine, the electronic computer) becomes the prototype of mind. In protest against this kind of machine theory it is often claimed that there must be "something more": a *deus ex machina*, a guiding purpose, a vital principle; a mere machine, it is asserted, can never replicate the phenomena of growth and reproduction, of feeling, choosing, and reasoning.

Langer agrees that the machine models are inadequate, and she is particularly contemptuous of the computer analogy, with its deceptive jargon of inputs, information processing, and outputs. She is skeptical of model building in general and especially of those models of mind which obsequiously borrow their terms from the physical sciences. The proper alternative, however, is not a retreat into teleology but rather a fresh and critical look at the phenomena themselves. The distinctive phenomena of life and mind are not thing-like but event-like, and the true element is not the particle but the act. To conceive of mind as a matrix of acts within acts requires a suspension of our physicalistic bias. To conceive of life in the same way requires the further suspension of the assumption that for every act there must be an agent. Life processes are directive, but we need postulate a director only if we cling to the analogy of the machine and its driver. It is difficult to get rid of the agent-action-object paradigm, for it is rooted in the grammar of our language; yet we must do so if we are to recognize that the concept of act belongs in physics as well as in biology and psychology. "The study of living functions as acts," Langer insists, "leads us backward into the physical sciences without coming to any dividing line that has to be crossed by a *saltus naturae*" (p. 274). Similarly there is no sharp break between the activity of simple living tissue and the more complex physiological processes which render possible the emergence of the "psychic phase."

In stressing the primacy of the act Langer lays no claim to originality. She recognizes kindred spirits among recent and contemporary writers, and the Aristotelian doctrine of formal causality (minus the final cause) is roomy enough to accommodate the act as the unifying principle. Her treatment is distinctive, however, in two ways. In the first place, no contemporary philosopher has combed the literature of the sciences more painstakingly and interpreted it with greater insight. The very contemporaneity of the discussion is fraught with danger, of course, for today's research may be exposed tomorrow as faulty; but the risk was worth taking. It is a pleasure, to repeat, to encounter a philosopher who actually reads and thinks about the work of the scientists.

In the second place—and this is perhaps truly distinctive—Langer approaches the theory of mind from the esthetic rather than from the cognitive angle. Those who are familiar with her earlier work, especially *Philosophy in a New Key* (1942) and *Feeling and Form* (1953), have an advantage, but nearly half the present volume is devoted to the esthetic thesis. Mind in its most elementary form is not *res cogitans* but rather feeling. Feeling is an aspect of evolving reality which emerges gradually within the system of nature, becomes progressively differentiated and articulated, and achieves its fullest expression in the rhythms, patterns, and symbols of art. If we are to find the key to the understanding of mind we must consequently look first at artistic expression in all its forms. By according the esthetic problem such a central position Langer is indeed challenging some age-old prejudices. Mind has traditionally been regarded as that which thinks, and above all as that which thinks rationally; and esthetics has consequently tended to become a luxury item, if not a downright nuisance. If, however, mind in its elemental form is feeling rather than knowing, then not only does esthetics become central in a philosophy of mind but the sciences which purport to study mind, the so-called behavioral sciences, must undergo a drastic reorientation. This promises to be healthy.

We shall have to await volume 2 for Langer's attack on the problem of mind in its specifically human contexts, and this is where the real battle must be fought. Her references in the first volume to psychological, sociological, and anthropological sources are scanty, but it is evident that she does not count on much solid support. Behaviorists are too slavish in their imitation of physical science and technology, Gestaltists too restricted in the fields they have explored, Freudians too muddy in their conceptualizations, and social theorists too eager to dehumanize social man; and one has the impression that she will be impatient with the existentialists and with those who for want of a better name are now calling themselves humanists. The sciences of man are indeed in a muddle. Perhaps the time is ripe for a fresh appraisal by a philosopher who is fully aware of the central problems, who is not afraid to challenge implicit assumptions, and who can think with clarity and discipline. Toward the end of the last century William James attempted such an appraisal, with only partial success. Perhaps Langer will do better. One hopes so; but even if she too is only partially successful, the world of science will still be in her debt.

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Electromagnetic Waves

Radiation Processes in Plasmas. G. BEKEFI. Wiley, New York, 1966. 391 pp., illus. $15.75.

The way in which Bekefi has organized and elucidated the material he has brought together, mostly from the periodical literature, makes this monograph an excellent tutorial instrument as well as research reference. For the latter use it may have no more than a five-year half-life, as is often the case with