

reviews

Rationality and actions

A Rational Animal, and Other Philosophical Essays on the Nature of Man. By Anthony Flew. Pp. 245. (Clarendon/Oxford University Press: Oxford, 1978.) £5.95.

THE attempt to demonstrate on *a priori* grounds that natural science can never fully explain human behaviour has been a fashionable parlour game amongst philosophers for some time. This question—and associated problems hinging on the nature of freedom of choice and rationality—is addressed by Professor Flew with somewhat more caution and subtlety than has been displayed by many of his predecessors. Each of the essays of which *A Rational Animal* is composed attacks the views of one or more other thinkers: the targets range from Hume to Lenin, and one cannot help feeling that many of them, like Skinner and Freud, were so philosophically naïve that they do not require the weight of artillery that Anthony Flew brings to bear. Moreover, his method of proceeding has the serious disadvantage that amidst the smoke of battle, it becomes difficult to discern the position occupied by the author himself. One longs for a clear statement of his own views, and if in what follows I have misinterpreted him, he is at least partly to blame.

He bases much of his argument on our knowledge that we are free to choose: whenever we perform a voluntary action, we know that we could always have acted otherwise had we so chosen. He takes this alleged fact to be irreconcilable with Laplacean determinism which proposes that each state of the Universe is necessarily caused by its antecedent state. The fact that we can make voluntary movements implies that "What there certainly cannot be . . . is an unbroken chain of sufficient physical causes stretching back indefinitely. It would therefore seem that the central nervous system must either be or contain an apparatus of which the total input does not contingently necessitate every element of total output." He acknowledges that this suggestion is made reluctantly and elsewhere he seems to write as though there were no need for this drastic solution, which implies that the matter in our brains

obeys different laws to those currently thought to hold in inanimate matter. As has often been noted, the invocation of Heisenberg's uncertainty principle is of no help as choices are not made at random and therefore cannot themselves be determined by random events at the quantum level.

Flew's own arguments do not in fact seem to necessitate his conclusion. It no more follows from the fact that we feel free to choose that we are free to choose (in the sense that our choice is not determined by the state of our brains) than it follows that someone who is convinced he can grow wings can grow wings. Moreover, to believe that someone might have chosen differently is surely not inconsistent with believing that he would only have done so had he been in a different antecedent psychological state. This is not to deny the difference between voluntary and involuntary acts. It could be argued that we feel free to choose because we have no way of knowing with certainty what we will do until we decide to do it: in order to know in advance, we would have to simulate at time A our state at time B, and the possible effects of undertaking this simulation at time A on our state at time B could not be included in the simulation itself.

Flew concludes that human actions can never be explained and predicted by physiology: he is correct, but for the wrong reasons. We can no more explain human activity in terms of goings-on in individual nerve cells than we can explain how a computer program works in terms of transistors.

To understand how any organised system of matter works, we must develop concepts appropriate to that kind of system. We can understand and predict the hunting behaviour of a system incorporating negative feedback only in terms of control theory not in terms of previously existing physical concepts. Similarly, the scientific explanation of behaviour requires the development of concepts appropriate to understanding the organisation of the brain in relation to the external world: such concepts may not be physical or even physiological, but in as far as they are both precise and render human actions intelligible in a rigorous way, they are nonetheless scientific. Nor does the need to evolve such explanatory concepts suggest that behaviour is undetermined any more than the fact that computer programs cannot be understood in terms of transistors suggests that the outcome of running a program is undetermined.

A small beginning has been made towards developing the requisite explanatory conceptual system within the disciplines of cognitive psychology and artificial intelligence, and it is a pity that philosophers who write about rationality and actions do not examine these disciplines rather than castigating psychoanalysts, who are not scientists, and physiologists, who work at the wrong level of abstraction to be in the business of explaining human actions. □

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Commissure-section studies

The Integrated Mind. By M. S. Gazzaniga and J. E. LeDoux. Pp.168. (Plenum: New York and London, 1978.)

THE rarity of certain kinds of neurological condition is well recognised. Any investigator who obtained access to more than one case of visual or tactile object agnosia or more than one case of cortical blindness or achromatopsia in a lifetime would count himself lucky indeed.

Surgical brain bi-section falls into a related category. Those of us who work outside of the USA will never have the opportunity to examine such patients (except by visiting the USA), because only in America have the fibre pathways connecting the cerebral hemispheres been surgically divided for the relief of epilepsy. Three separate major series (and one smaller series) of commissure-sectioned patients exist. The earliest patients were investigated before modern and subtle tests of brain