

Published Review of

Hugh Lacey, *Is Science Value Free? Values and Scientific Understanding*, London, Routledge, 1999, in: *Heythrop Journal*, 46, 4 (2005), pp. 587-8.

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***Is Science Value Free? Values and Scientific Understanding.* By Hugh Lacey. Pp. xiv, 285, London, Routledge, 1999, £50.00.**

It is still fashionable to claim that a logical gap separates fact from value. Science allegedly deals with fact and is therefore neutral. Such reasoning has recently come under attack from various quarters. Can we really sustain the idea that science and values only touch but do not interpenetrate, as Henri Poincaré once said? Isn't such an idea nothing more than an idealisation? Can we insist that there is no link between science and genuine human flourishing?

Hugh Lacey addresses these and similar important questions by first engaging in the task of giving an acceptable account of values and, more specifically, of cognitive values. In this latter category he puts the characteristics that make beliefs or theories 'good', in the sense of rationally acceptable. So, he is taking a value to be a property of the object confronting the human subject. The value is cognitive when the object is a belief or theory. He analyses the question of science and value by refracting it into three possible modes. One can understand science as value-free in the sense of it being impartial, or in the sense of it being neutral, or in the sense of it being autonomous. Impartiality refers to the state where values are not among the grounds for accepting and rejecting theories. Neutrality, roughly speaking, refers to consistency with all value judgements. Autonomy refers to the fact that the scientific community conducts its investigations in self-governed institutions free from outside interference. Lacey's book is an attempt at elucidating these modes of understanding science as value free. His conclusions show that while autonomy cannot be sustained the other two aspects can.

A central idea that runs right through this discussion is that of materialist strategies. Lacey uses this expression to highlight the fact that the descriptive language in which the data for science are expressed contains what he calls materialist terms: quantitative and mathematical terms applicable in virtue of measurement and experimental operations. Modern scientific practice shows considerable variety as regards description, explanation, structure, or law. Nevertheless, there is a common feature corresponding to these materialist strategies. This common feature indicates the kinds of data that are acceptable for scientific theories. Only theories resulting from materialist strategies have cognitive value. This central idea is not new. Lacey's original contribution lies in his claim that such materialist strategies are just one kind among several other kinds of strategy that can be adopted without sacrificing the basic requirement of intersubjectivity of empirical data.

His major argument goes this way. Materialist strategies are adopted within the scientific community for a reason. They are adopted because they reinforce modern values of control that are evident in the desire to 'grasp' the world. Understanding here is taken to be a matter of control. A problem arises because the world understood

in this way is not constituted of objects that are purely and simply given, ontologically independent of human observers. Objects are always handled, manipulated, measured, or experimented upon via operations involving groups of people. The materialist strategies give the impression of doing away completely with all subject-related terms. This, however, is only an illusion. If Lacey is right, the world is made up of objects that are partly constituted in practices, and these practices have mutually reinforcing interactions with the modern values of control: we understand the world by choosing, consciously or unconsciously, what we want to grasp and how. This does not mean that the door is closed for genuine discovery. It means that anyone making new discoveries cannot affirm or conclude that the underlying strategies were unique and independent of human subjectivity.

Lacey proceeds by making a number of suggestions as regards alternative strategies. The most interesting is the 'grassroots empowerment approach'. This strategy is not presented as a radical substitute for the materialist strategies mentioned above. It is meant to be a meta-strategy to which the materialist strategies are seen as subordinate. The basic idea here is that, in general, the objective of gaining understanding provides by itself no direction to scientific inquiry. In order to pursue it, it is necessary to follow a particular approach to inquiry. An approach consists in strategies that limit the kinds of theories entertained. A strategy is what gives direction to research. The objective of the grassroots empowerment approach to science involves identifying the object of research in line with potential value for local well-being and community. An example would be the aim of identifying objects of research relevant to agricultural practices. This approach therefore is not exclusively linked to control. One aims to control nature in view of higher values. It is this higher level of strategic planning that shows that science cannot be considered autonomous. It can indeed be considered neutral and impartial, in the senses explained above. It cannot however be considered value-free in the sense of conducting its investigations in self-governed institutions free from outside interference.

Lacey's argument is convincing. Overall, the book is very well written. It goes a long way to refresh science studies and to explore the often-neglected interface between science and ethics. One thing that is overlooked, however, concerns the individual person. Lacey makes only one quick reference to the question whether the activities and virtues involved in the gaining of scientific knowledge are constitutive of human flourishing (p. 105). In the present state of philosophical scholarship, when virtue-ethics and virtue-epistemology are making a comeback, it is very important to investigate whether science, as a cultural reality, makes individual people, in the long run, more virtuous or more vicious. In *Is Science Value Free?*, this terrain remains uncharted. In spite of this, however, I have little doubt that the book will be a good read for research students in the area of science and ethics. Moreover, professional philosophers will find that Lacey supplies indispensable vocabulary for further exploration in this crucial area. The looseness of much writing in philosophy and the environment can be amended by building on this solid foundation.

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