

WEEK 7

Bridgman

Bridgman presents an account of the nature of scientific concepts which sees them as subject to the constraint that they be operationally defined. What does Bridgman mean by saying that scientific concepts must be operationally defined, and why does he think legitimate scientific concepts must be constrained in this way?

Block and Dworkin

Block and Dworkin illustrate the problems inherent in seeing theoretical terms in science as operationally defined by looking at the history of measuring instruments. In particular, they argue that we cannot make sense of the successive refinement of thermometers if we treat 'temperature' as operationally defined. Explain how this argument goes, and what Block and Dworkin see as the alternative to the operational definition of theoretical terms.

Kuhn

Scientific realists have often claimed that in mature sciences, later theories tend to entail the approximate truth of earlier theories. A standard case used to illustrate this claim is the relationship between Einstein's views and Newton's. Kuhn rejects this view, and he discusses the case of the relationship between Einstein's and Newton's views on pages 101-2. Explain how this argument is supposed to work and how, in Kuhn's view, it illustrates the way in which scientific realists have seriously misunderstood not only this episode in the history of science, but all similar transitions across what he thinks of as "revolutionary divides." What theory of reference for theoretical terms is Kuhn implicitly making use of here, and how would a different theory of reference affect his argument?

WEEK 8

Boyd

Boyd argues that only scientific realism can explain the instrumental success of science. More than this, he argues that his own version of scientific realism has significant advantages in this explanatory task over earlier versions of the view. How does the scientific realist propose to explain the instrumental success of science, and why does Boyd think that this is something which other views of the scientific enterprise cannot explain? What are the distinctive features of Boyd's approach which he sees as marking important developments of the realist position, and how are these features implicated in his explanation of the instrumental success of science?

Laudan

Boyd's version of scientific realism, and many others as well, embodies a commitment to a number of empirical claims about the historical development of successful scientific theories.

What are these various claims, and how does Laudan propose to undermine them. To what extent is Laudan's argument successful?

Cartwright

Scientific realists have frequently argued that the best explanation of the success of scientific theories must appeal to the truth or approximate truth of those theories. Cartwright argues, however, that "the truth doesn't explain much." What does she mean by this? Why does she believe it? And to what extent does Cartwright's claim, if correct, conflict with scientific realism?

WEEK 9

Descartes

Descartes has an exceptionally ambitious foundationalist program. The first *Meditation* presents the negative phase of his approach, and we see elements of the positive phase in *Meditations II* and *VI*. What are Descartes's foundationalist requirements on knowledge, and how does he defend the idea that knowledge can only be attained by way of such a foundationalist approach?

Chisholm

Descartes's foundationalist approach would, if successful, provide us with a straightforward explanation of why our ordinary beliefs about the external world are likely to be true. Chisholm's version of foundationalism is importantly different. Although Chisholm presents his inferential principles as a priori justified, the inference to beliefs about, for example, the external world does not, in the same way, license the claim that these beliefs are likely to be true. What, then, is Chisholm claiming about our beliefs about the external world, and exactly how are his ambitions here different from those of Descartes?

Stroud

Stroud sees a central task of epistemology—perhaps its most fundamental task—as explaining the possibility of knowledge "with complete generality." As Stroud sees it, the externalist inevitably fails in this task. What does Stroud mean by talking about explaining the possibility of knowledge "with complete generality"? What does Stroud have in mind when he speaks of an externalist approach to epistemological questions? And how is it, on Stroud's view, that the externalist inevitably fails to explain the possibility of knowledge "with complete generality"?