

Discussion Questions

Conor Mayo-Wilson

Readings:

- Thomas S. Kuhn. Objectivity, value judgment, and theory choice. In *The Essential Tension*. 1977
- Philip Kitcher. The division of cognitive labor. *The Journal of Philosophy*, 87(1):5—22, 1990.

Kuhn:

1. Kuhn discusses five criteria that scientists use to judge the quality of a scientific theory.
 - What are two problems with applying these criteria in practice?
 - Give an example from the history of science illustrating each problem. If possible, provide your own example in addition to one from Kuhn's paper.
 - Explain why the two criteria might make rational disagreement possible. How is Kuhn's argument for the existence of rational disagreement similar to and/or different from other arguments that you have encountered thus far?
2. On page 359, Kuhn writes, "What I have said so far is primarily simply descriptive of what does on in the sciences at times of theory choice. As description, furthermore, it has not been challenged by my critics, who reject that these facts of scientific life have philosophic import." In your own words, describe the object that Kuhn is addressing.
 - What is the difference between the "context of discovery" and "context of justification"? How do Kuhn's objectors use the distinction to explain what they perceive to be an error in Kuhn's argument for rational disagreement?
 - What is Kuhn's response?

Kitcher:

1. On page 363, Kuhn writes, “Before the group accepts it, a new theory has been tested over time by the research of a number of men, some working within it, other within its traditional rival. Such a mode of development, however, *requires* a decision process which permits rational men to disagree, and such disagreement would be barred by the shared algorithm which philosophers have generally sought.” Would Kitcher agree with Kuhn that in order for different scientists to pursue different theories, it is *required* that they value different aspects of scientific theories differently? Why or why not?
2. Discuss two of Kitcher’s examples from the history of science that are intended to illustrate the following thesis: “It can be beneficial for the scientific community as a whole if a small number of scientists continue to research a theory that is universally agreed to be inferior.”
3. On page 8, Kitcher responds to the objection that there is no conflict between individual and collective epistemic rationality, but rather, only a conflict between which theories it is rational for an agent to *believe* versus what theories it is rational for him or her to *pursue*. Explain the intended objection in a bit more detail, and outline Kitcher’s response.
4. On page 14, Kitcher claims, “allowing our scientists to depart from the high-minded goals of individual rationality (and act on baser motives) might actually help the community’s project.” Does this claim support or undermine (or neither) Kitcher’s argument discussed in the previous question?
5. Without using any numbers of equations, outline Kitcher’s argument that there may be a CO-IR discrepancy. Be sure to explicitly write down the premises and conclusions of the argument.
6. On page 18, Kitcher draws a distinction between a problem for “methods” and one for “theory choice.” Explain the distinction and how Kitcher’s argument concerning “methods” extends to theory choice.