

Reading Assignment 15: Shapin on the Scientific Revolution

Assigned Reading S. Shapin. *The scientific revolution*. University of Chicago Press, 1996. Chapter 1.

Due Date Please bring a typed, hard copy of your answers to class on Tuesday, February 28th, 2017.

Technical Requirements Answer questions one, five, seven and eight below. Together, your answers should not be longer than a single typed page. Remember to provide page numbers indicating which passages you are paraphrasing. For the remaining optional questions, please write down the page numbers on which the authors address the question.

Questions

1. In no more than a paragraph, describe two reasons that seventeenth century philosophers thought a clock was a proper metaphor for understanding nature.
2. What do “animism” and “anthropocentrism” mean? According to Shapin, what is the relationship between the mechanical philosophy, animism, and anthropocentrism?
3. How did Descartes and Boyle’s respective mechanical explanations differ?
4. In no more a paragraph, explain how van Leeuwenhoek’s work made mechanical explanations more “credible” according to Shapin?
5. Why did Gabbey claim the mechanical philosophers often gave explanations that were no more explanatory than Aristotelian forms?
6. Explain Kepler’s hypothesis about why the planets are positioned the way they are in the solar system. Why does Shapin contrast Kepler’s hypothesis with the views of Boyle and Bacon on the role of mathematics in explanation?
7. What work was considered to be the “culmination of the Scientific Revolution?” In no ore than a paragraph, describe one of the central contributions of that work.
8. Explain Leibniz’s criticism of Newton’s theory of gravity and its relation to the “mechanical philosophy.”