

Reading Assignment 6: Heliocentrism after Copernicus

ASSIGNED READING

- Galileo. Letter to Dutchess Christina. In M. Oster. *Science in Europe, 1500-1800: a primary sources reader*. Palgrave, 2002. Pages 66-71.
- Cardinal Bellarmine's Letter to Foscarini. In Oster, *Science in Europe, 1500-1800*. Pages 71-73.
- Galileo. "Considerations on the Copernican Opinion, Part I." In G. Galilei. *The Essential Galileo*. Ed. by M. A. Finocchiaro. Hackett Publishing, 2008. Pages 148-156.
- Descartes. *Principles of Philosophy* in R. Descartes. *The Philosophical Writings of Descartes*. Ed. by J. Cottingham, R. Stoothoff, and D. Murdoch. Vol. 1. Cambridge University Press, 1984. Vol. 1. Pages 248-258.

DUE DATE

Please bring a typed, hard copy of your answers to class on Tuesday, January 24th, 2017.

TECHNICAL REQUIREMENTS

Answer questions two, three, five, 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. According to Galileo, what properties does the Bible, if interpreted literally, attribute to God? Why does Galileo discuss whether the Bible ought to be interpreted literally or figuratively?
2. In your own words, explain one of Galileo's arguments that "nothing physical which sense-experience sets before our eyes, or which necessary demonstrations prove to us, ought to be called in question . . . upon the testimony of biblical passages."
3. In his letter to Paolo Foscarini, why does Cardinal Bellarmine claim that Foscarini and Galileo spoke "prudently" about heliocentrism?
4. In no more than a paragraph, explain the argument involving a ship that Cardinal Bellarmine criticizes, and explain Bellarmine's criticism.
5. In his "Considerations on the Copernican Opinion," Galileo provides at least three distinct arguments that Copernicus actually believed that the Earth moves and did not regard heliocentrism as a device for summarizing astronomical data. In no more than a paragraph, summarize the argument that you find most convincing.
6. In no more than a paragraph, explain Galileo's analogy between treating epicycles and eccentrics as calculational devices and saying that word "God" denotes a shadow.
7. In your own words, explain how, according to Descartes, the earth does not technically move, but in a sense, it also revolves around the sun.
8. Why according to Descartes is it unreasonable to conclude that the stars are stationary?

REFERENCES

- [1] R. Descartes. *The Philosophical Writings of Descartes*. Ed. by J. Cottingham, R. Stoothoff, and D. Murdoch. Vol. 1. Cambridge University Press, 1984.
- [2] G. Galilei. *The Essential Galileo*. Ed. by M. A. Finocchiaro. Hackett Publishing, 2008.
- [3] M. Oster. *Science in Europe, 1500-1800: a primary sources reader*. Palgrave, 2002.