

Study Questions 3

1. In Reading 5, the discovery of the continent America in 1492 by Columbus was argued to be the invention of the concept of 'discovery' by the author. Briefly explain the reasoning the author has for this argument. (Reading 5)
2. *'Thus religion, Latin literature and Aristotelian philosophy all concurred: there was no such thing as new knowledge. What looked like new knowledge was, consequently, simply old knowledge which had been mislaid, and history was assumed to go round in circles. On a large scale, the whole universe was held (at least if you put revealed truth to one side and listened to the astrologers) to repeat itself. 'Everything that has been in the past will be in the future,' wrote Francesco Guicciardini in his Maxims...' Discuss. (Reading 5)*
3. *'Aristotle believed that knowledge, including natural philosophy, should be fundamentally deductive in character. Just as geometry starts from undisputed premises (a straight line is the shortest distance between two points) to reach surprising conclusions (the square on the hypotenuse is equal to the sum of the squares of the other two sides), so natural philosophy should start from undisputed premises (the heavens never change) and draw conclusions from them ...' Discuss. (Reading 5)*
4. Explain briefly scientific instrumentalism and scientific realism. (Reading 6)
5. What was the importance of astronomical data collected by Tycho Brahe for the development of Kepler's planetary laws of motion? (Reading 6)
6. What is the importance of the evidence Galileo obtained using the newly invented telescope in discrediting some of the *conceptual beliefs* about the super-lunar part of the Aristotelian universe? (Reading 6)
7. Discuss the importance of observance of 'phases of Venus' with telescope as differentiating evidence for earth centric vs. sun centric model of the universe. (Reading 6)