Why do the planets not twinkle? – Philosophical discussions about the validity of circular reasoning in sixteenth-century Italy

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The theory of science that Aristotle presents in his Posterior Analytics was the subject of lively debate among Italian logicians of the sixteenth century. Of particular interest was the possibility of circular reasoning, which Aristotle introduces in chapter I, 13 and which developed into a philosophical problem in its own right under the name of regressus. The method of regressus is a two-stage process in which the existence of the cause is first proved from the effect and then the existence of the effect is deduced from the cause. The aim is to ultimately arrive at a causal and therefore scientific understanding of the effect. For this to succeed, the pitfalls of mere circular reasoning must be avoided. How can this be achieved? And what is the purpose of regressus? Can it only serve to organise an existing body of knowledge, or does it also help in the discovery of new knowledge? In answering these questions, many authors turned to the commentaries of Averroes (Ibn Rušd, 1126–1198), in particular his Long Commentary on the Posterior Analytics. This work, first printed in 1523, had a considerable influence on the debate about the standards of scientific method in the sixteenth century.