

## CALL FOR PAPERS

### Experience and reasoning in scientific methodology: between antiquity and the early modern period

Conference organized by the Institute of Philosophy, Czech Academy of Sciences

Prague, Villa Lanna, May 9-11, 2019

#### Confirmed participants

István Bodnár, Eötvös University / Central European University

Peter Dear, Cornell University

Pavel Gregorić, Institute of Philosophy, Zagreb

R. J. Hankinson, University of Texas, Austin

Alexander Jones, Institute for the Study of the Ancient World, NYU

Matjaž Vesel, Institute of Philosophy, Slovenian Academy of Sciences and Arts

#### **Outline of the topic**

Doing natural science involves experience. Few would contest that – in antiquity and today. However, what experience is and what role it should play within a particular field of study is disputed.

In antiquity, the issue was raised especially in the context of Hellenistic medicine, where a clear-cut distinction between empiricist and rationalist methodologies was drawn for the first time. The empiricists developed a sophisticated account of the relation between experience, sense perception, and testimony, in which the concept of “testing” played a crucial role. In response to “dogmatic” theories on the nature of things, and their mutual disagreements, they imposed strict limits on scientific

reasoning by excluding all inferences to perceptually inaccessible items from scientific discourse.

Other philosophers engaged in the study of nature found these shackles too tight. Galenic physiology and pharmacology; Ptolemaic astronomy, optics, and harmonics; these are some examples of scientific projects that, while trying to give justice to empiricist qualms about unbridled dogmatism, also relied on the demonstrative force of logic, geometry, and arithmetic.

To some extent, these discussions are anticipated by Aristotle, who assigns an important role to experience in the process of formation and acquisition of a science (*ἐπιστήμη*; *scientia*). The question of the relative roles of observation and mathematics, raised by Aristotle with regard to astronomy, is analogous to a more general tension within his philosophy of nature, between rigorous empiricism on the one hand, and ontological commitments apprehended by reason on the other.

During the renaissance and early modern period, translations or/and original texts of these and other scholars became available to the Latin west and influenced to certain extent the views on the meaning and role of experience in the study of natural world. Despite significant constitutive role of ancient texts – not to forget medieval Latin and Arab contributions – this era also witnessed invention of new scientific instruments (telescope, microscope), which broadened the field of experience far beyond usual, everyday observations and had a huge impact in astronomy, cosmology, and physics. This changed early modern attitudes towards experience and reasoning in the process of studying natural world. The so-called rationalist/empiricist debate produced a variety of different theories regarding experience.

### **Aim and format of the conference & form of presentations**

In this conference we would like to explore some of these developments on the basis of particular examples. There will be 12 sessions in total (two in the morning and two in the afternoon). Speakers will choose one natural philosopher or theorizing scientist in antiquity or the early modern period (exceptions are negotiable) and make a selection of texts that reveal his understanding of the nature of (scientifically relevant) experience and the relative roles of experience and reasoning in scientific method. These texts will be distributed in advance to a group of registered participants – mainly experts in ancient philosophy or early modern science with active interest in the other area. When the group gathers at the roundtable of the conference, these

texts will be introduced in presentations of 30 minutes, followed by 60 minutes of discussion.

We do not seek polished lectures or grand-scale narratives. Rather, we prefer slow-paced, audience-friendly analyses of texts. However, by juxtaposing a variety of particular cases in a way that could be followed by specialists in both fields, we hope to produce an occasion for discussing the complex relations between early modern science and its ancient analogue more broadly.

### **Accommodation**

Accommodation is available at the place of the conference. Speakers will have their accommodation costs covered by the organizer.

### **Submission guidelines**

Speakers will be selected on the basis of a written proposal. This should include: Name and institution; short description of the applicant's research interests (including relevant publications); description of the proposed topic; a preliminary list of passages on which the presentation will be based.

Please submit your proposal by **September 10, 2018**.

### **Contact**

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