The Classical Model of Science II, 2-5 August

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Publication date
2011
Document Version
Final published version
Published in
The Reasoner

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The conference *The Classical Model of Science II: The Axiomatic Method, the Order of Concepts and the Hierarchy of Sciences from Leibniz to Tarski* (Faculty of Philosophy, VU University Amsterdam, The Netherlands, 2-5 August 2011) was devoted to the development of the axiomatic method. It aimed to provide a better historico-philosophical understanding of the manner in which the axiomatic ideal of scientific knowledge influenced the development of modern science. The overarching framework of the conference was the so-called "Classical Model of Science" (CMS), an interpretative model aiming to capture a historically highly influential ideal of axiomatic science.

The contributions (8 invited and 20 contributed) concentrated on various historical periods and highlighted the use and articulation of axiomatic ideals of science in philosophy, logic, mathematics and natural science.

Several papers focused on ideals of axiomatic science as articulated in ancient philosophy. For example, Bernardo Mota argued that the axiomatic structure of the received text of the first book of Euclid's *Elements* was partly forged by Epicurean critiques of propositions contained in original versions of this book, while Marije Martijn presented an original overview of Neoplatonic views on the subordination of sciences.

Conceptions of axiomatic science as developed by modern philosophers were also treated in multiple papers. Eric Schliesser put forward the provocative thesis that Spinoza was critical of axiomatic methods in science insofar as he was skeptical about mathematical physics and adopted a holistic conception of scientific method. Katherine Dunlop showed how Christian Wolff took mathematical definitions and demonstrations to be partly based on experience, while Lisa Shabel reconstructed Kant's theory of geometry in terms of the CMS and showed how the often neglected regressive argument in the *Prolegomena* supports Kant's view that mathematical knowledge is based on pure intuition.

Turning to the 19th and 20th century, Paul Rusnock highlighted Bolzano's *Theory of Science*, emphasizing Bolzano's pragmatic views on science from his Theory of Method. Patricia Blanchette contrasted Frege's axiomatics to that of Dedekind and Hilbert, stressing the importance of the role of Fregean senses in this debate. By drawing upon the legacy of Leibniz's *characteristica* in the works of Grassmann, Peano and Gödel, Paola Cantù suggested viewing condition 2 of the CMS as containing variables. Paolo Mancosu showed how methodological issues of purity ideals in mathematical proofs informed discussions on the relationship between plane and solid geometry, insisting on the problematic relationship between the idea of contentless axioms and ideals of purity in Hilbert-style axiomatics. Hourya Benis Sinaceur gave an overview of Tarski's axiomatic views, stressing a three-fold distinction between concrete, abstract and formal axiomatics. Stewart Shapiro focused on the notion of *Zermelo self-evidence* according to which a proposition or inference is self-evident if it is applied unreflectively in a variety of instances, defending the suitability of this notion for non-foundational , holistic epistemologies of mathematics.

The conference was supported by the European Research Council and the KNAW. For more information, see the conference website.

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