

WORKSHOP ON ISLAMIC PHILOSOPHY AND LOGIC:
HISTORICAL AND CONTEMPORARY PERSPECTIVES 2018

Centre for the Study of Medieval Philosophy
School of Philosophy, IPM, Tehran
June 12, 2018

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| TUESDAY 2018/06/12 | IBN SINA'S ADVANCES IN HYPOTHETICAL LOGIC | WILFRID HODGES <i>Emeritus Professor, Queen Mary College, University of London</i> | 10:00'-11:30' |
| | Break 11:30'-11:45' | | |
| | FĀRĀBĪ AND AVICENNA ON CONTRAPOSITION | ASAD FALLAHI <i>Iranian Institute of Philosophy</i> | 11:45'-13:00' |
| | Break 11:30'-11:45' | | |
| | AVICENNA ON THE PRIMARY PROPOSITIONS | SEYED N. MOUSAVIAN (& MOHAMMAD ARDESHIR) <i>IPM</i> (<i>& Sharif University of Technology</i>) | 14:30'-16:00' |
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ABSTRACTS

IBN SINA'S ADVANCES IN
HYPOTHETICAL LOGIC
WILFRID HODGES
Queen Mary College, University of London

ABSTRACT: Section vi.2 of *Qiyas* is Ibn Sina's most radical treatment of hypothetical logic. His explanations are seriously inadequate, but the section contains many dozens of exact calculations which allow us to see what he is doing. For productive premise-pairs he gives a proof theory and discovers inferences which were first found in the West by De Morgan in the 19th century. For nonproductive premise-pairs he gives nonproductivity proofs which are certainly not all correct, but he seems to be transforming a method of Aristotle into something that we can recognize as model theory.

FĀRĀBĪ AND AVICENNA
ON CONTRAPOSITION
ASAD FALLAHI
Iranian Institute of Philosophy

ABSTRACT: The rule of contraposition has been investigated thoroughly by Arabic logicians. In this presentation, we study the work done by Fārābī and Avicenna, the fathers of Arabic logic. Although pre-Fārābīan logicians have used contraposition for conditionals and *indefinite* affirmative categorical propositions, Fārābī applied the rule to *universal* affirmatives and Avicenna generalized it to all the four quantified categorical propositions. Fārābī discussed *all four forms* of contraposition of universal affirmatives and discovered a relation between one form and the conversion of *negative universals*. Avicenna's judgment as to the contraposition of *particular affirmative* is the most problematic of his ideas in this respect and it seems to be committed to some form of strong Meinongianism. However, it is to be noted that many ideas of Avicenna on contraposition were opposed by his 12th and 13th century followers, which are to be investigated later.

AVICENNA ON THE PRIMARY PROPOSITIONS
SEYED N. MOUSAVIAN
(& MOHAMMAD ARDESHIR)

IPM (Sharif University of Technology)

ABSTRACT: Avicenna introduces the primary propositions (or the primaries, for short) as the most fundamental principles of knowledge. (In this paper, we are not primarily concerned with the primary/first intelligibles as concepts/conceptions.) However, as far as we are aware, Avicenna's primaries have not yet been independently studied. Nor do Avicenna scholars agree on how to characterize them in the language of contemporary philosophy. It is well-known that the primaries are indemonstrable; nonetheless, it is not clear what the genealogy of the primaries is (§2), how, epistemologically speaking, they can be distinguished from other principles (§3), what their phenomenology is (§4), what the cause of the assent to them is (§5), how to explain the relationship between the 'innate [nature] of the intellect' and the primaries (§6) and, finally, back to their indemonstrability, in what sense they are 'indemonstrable' (§7). We will try to fill this gap. As a corollary, we will explain why Gutas's view [Gutas, Dimitri. 2012. *The empiricism of Avicenna*, Oriens, 40, 391–436], among others, according to which the primaries are analytic (in the Kantian sense) is not true in general (§8). More particularly, we will argue that some primary propositions can be categorized under Kantian synthetic a priori, consistent with Black's and Ardeshir's conjecture [Black, Deborah L. 2013. *Certitude, justification, and the principles of knowledge in Avicenna's epistemology*, in Peter Adamson, *Interpreting Avicenna: Critical Essays*, New York: Cambridge University Press; Ardeshir, Mohammad. 2008. *Ibn Sīnā's philosophy of mathematics*, in S. Rahman, T. Street, and H. Tahiri, *The Unity of Science in the Arabic Tradition*, New York: Springer]. We hope that this work opens up some space to study Avicenna's philosophy of mathematics and logic in connection with his epistemology, philosophy of mind and metaphysics.