STUDIES IN MODALITY AND COSMOLOGY

Plenitude and Possibility in the Late
Ancient and Arabic Traditions

A Summary
Taneli Kukkonen

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ABSTRACT

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Plenitude and Possibility in the Late Ancient and Arabic Traditions

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The thesis consists of six separately published articles and a summary. All deal in some form with occurrences in late Ancient and medieval Arabic philosophy of what is known as the “principle of Plenitude”. Professor Arthur O. Lovejoy, who coined the term in his 1936 study The Great Chain of Being, gave to the principle the formulation that “no genuine potentiality of being can remain unfulfilled”. While allusive, the formulation is rather vague. The notion that all possibilities find actualisation can be employed in various different ways in different conceptual contexts. In an argument, it can serve as a presupposition or as a conclusion; it can be grounded in modal logic, metaphysical concerns, or the theological precept that God is ultimately liberal. Sometimes the possibility is raised only in order to be disputed. All of these options were explored in the debates covered in these essays.

In the late Ancient and Arabic periods, the treatment of modal notions was often tied in with cosmological issues. The discussions therefore touch upon such subjects as for instance the need for science to make necessary universal judgements. Among the philosophers whose thought is assessed are such figures as Proclus (d. 485), John Philoponus (d. 574), Avicenna (d. 1037), al-Ghazālī (d. 1111), and Averroes (d. 1198).
ACKNOWLEDGEMENTS

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Professor Simo Knuuttila has been my principal supervisor for the past four years. His learning, enthusiasm, and sense of discipline have proved a constant inspiration. Through good times and bad, Professor Reijo Työrinoja has been at hand to offer camaraderie and the unswerving support of the Department of Systematic Theology. I am deeply grateful to them both.

The essays that comprise this study have been read by a number of people. Some have been presented in front of a live audience in one form or another. All this has immeasurably improved the finished work. I have especially benefited from comments made by Wayne John Hankey, Alfred Ivry, Charles Manekin, Michael E. Marmura, and Christopher J. Martin. Anonymous referees from Dionysius, the Journal of the History of Ideas, the
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To my parents Johanna and Jorma Kukkonen I owe everything. Thanks could never be enough.

This work is dedicated to the loving memory of Liisa Kukkonen and Hilkka Luoma, and to Eva.

In Helsinki on Monday, April 1, 2002,

Taneli Kukkonen
1 CONTENTS

The six articles comprising this dissertation are as follows:


The formatting of the articles varies according to the conventions of the publications in which they appear. The spelling in some articles follows U.S. conventions, whereas in others it is in the UK idiom. Arabic citations in each case follow the transliteration standards specified by the journals and volumes in which they appear. All internal errors and inconsistencies remain the sole responsibility of the author.

2. BACKGROUND

In 1936, the noted intellectual historian Arthur O. Lovejoy published a widely-read work by the name of The Great Chain of Being. In that study, Lovejoy presented (a) a methodology for a future discipline and (b) a case study which he believed could best exemplify the programme put forward therein. The task of what Lovejoy called “the history of ideas” was to search for perennial habits of thought in our – and possibly other – civilisation(s), so-called “unit ideas” that would have endured and perdured through the ages and informed our way of viewing the world, even if we ourselves were not always aware of the rôle they played. One of the chief examples Lovejoy used was that of an implicit assumption of a “principle of Plenitude” at work in expositions of metaphysics and cosmology throughout the Western tradition. Each of the six essays contained in this thesis deals in some way with the principle and how it fared in late Ancient and early medieval philosophy.

Lovejoy’s formulation of the principle of Plenitude was that “no genuine potentiality of being can remain unfulfilled”; he found it first implied in Plato’s Timaeus, then subsequently applied in countless works in the Western canon. The notion is attractive, and the examples he adduces in many
cases persuasive. Nevertheless, Lovejoy’s study has come under criticism on the basis of both methodological and factual concerns. There are several missing links in Lovejoy’s “great chain”, and some important conceptual gaps. For instance, it has been pointed out that finding the same (or similar) words reiterated over and over again hardly suffices to establish that an idea is being passed on. The exact same formulation may serve different or even contrary purposes in different kinds of argumentative contexts. It may also attach itself to completely different conceptual presuppositions. It would therefore be misleading to talk about a single idea being transmitted.

This leads to a consideration of how the history of philosophy in general ought to be construed. If it is thought that it is sufficient for the study of the history of philosophy to draw up doxographies – lists of beliefs defined on well-defined axes of, e.g., empiricism vs. rationalism or instrumentalism vs. realism –, then a “history of ideas” may seem unproblematic, and indeed a desirable way of doing things. If on the other hand our interest is focussed on the way philosophers grapple with complex sets of interrelated propositions and how they struggle – oftentimes, fail – to maintain consistency among their various conceptual commitments, then the notion of “unit ideas” seems suspect and may turn out to be counterproductive.

Instead the following questions may be asked: What purpose does the adoption of the notion that all potentialities are realised – or, for that matter, its rejection – serve in a particular context? What is the wider conceptual framework forming the background to the assumption, and how well does this particular idea fit into the larger whole? Does it? In other words, what factors make this philosopher’s appropriation of the principle different (as opposed to identical) from that of the next? These are the kinds of questions posed with regard to the occurrence of formulations approximating Lovejoy’s, in the historical materials examined in these studies.
On the historical front, the shortcomings in Lovejoy’s account have been adequately documented, even as his original achievement cannot be denied. Most prominently for the purposes of this study, Lovejoy failed to recognise the presence of something very much like a “principle of Plenitude” in Aristotle’s theory of time and possibility. This would have important consequences for the shape Aristotelian school philosophy took in both the late ancient and the medieval epochs. Our understanding of the history of medieval Latin modal theory has greatly improved in the last couple of decades; important inroads have also been made in establishing links between shifts in logical theorisation and the precepts of, e.g., natural philosophy. By comparison, our understanding of the Arabic and late Ancient periods is markedly more sketchy. The studies collected in this dissertation work represent a small contribution towards rectifying this situation.

3. THE ARTICLES

The first two essays in this collection take their start from a specific debate in Arabic cosmology, the one documented in Abû Hâmîd al-Ghazâlî’s (d. 1111 C.E.) Tahâfut al-falâsifa (“The Incoherence of the Philosophers”, first published 1095) and Abû al-Walîd Ibn Rushd’s (the Latin Averroës, d. 1198) response, the Tahâfut al-tahâfut (“The Incoherence of the Incoherence”, 1180). In these two works the preceding Arabic discussion can be said to come to a head: al-Ghazâlî so ably reproduces the Arabic Aristotelians’ largely Neoplatonised cosmos, and his own critique of it is so scorching, that there is no way left for Averroës but to seek a solution on other grounds. It is Averroës’ hope that a more authentic reading of Aristotle can rehabilitate the
Sage (al-hakîm) philosophically and reclaim the ancients’ (al-qudamâ’u) good name in the eyes of Islamic orthodoxy. This is done partially by reinstating a temporalised account of possibility and necessity, which Averroës views as truly Aristotelian.

(I) In the first article in the series, “Possible Worlds in the Tahâfut al-tahâfut: Averroës on Plenitude and Possibility,” I examine Averroës’ interpretation of what al-Ghazâlî in the Tahâfut al-falâsifa presents as the Islamic philosophers’ third and fourth “proofs for the world’s pre-eternity”. Averroës’ reading of these proofs is highly idiosyncratic; it can nonetheless be used to illustrate the way in which Averroës routinely assumes the interdependence – one could say, interchangeability – of eternity and necessity. In his defence of Aristotelian eternalism, Averroës explicitly utilises the temporal-frequency interpretation of the modal terms - an interpretation that was prevalent in Arabic logic for several centuries. According to this “statistical” or “extensional” approach, what is possible will necessarily be realised somewhere sometime. For some, this was even taken to define possibility. The approach allows for a non-circular definition of the modal terms, as well as affording an unproblematic way of applying logic to science. At the same time, the temporal-frequency approach severely curtails the use of, e.g., counterfactuals in scientific enquiry. (Cf. (V) below.) Serious theological problems also arise from the thoroughgoing conceptual determinism this approach entails: what never is, never could have been, and so even God would be unable to make things other than they are.

(II) These concerns can be seen to inform al-Ghazâlî’s criticism of the philosophers both in the Incoherence of the Philosophers and elsewhere. “Possible Worlds in the Tahâfut al-falâsifa. Al-Ghazâlî on Creation and Contingency”
examines one aspect of this critique. The starting-point again is the passage concerning the philosophers’ proofs; only this time, we follow al-Ghazâlî’s exposition. Al-Ghazâlî’s question to the philosophers is on the face of it disarmingly simple. Why could not things be other than what they are? Faced with the necessity of a limited creation – a point al-Ghazâlî takes over from John Philoponus (d. 574) –, we may assume that God has chosen this world over several equally possible alternatives. If one is willing to adopt the basics of Ashârite Occasionalist metaphysics, then it becomes furthermore possible to propose that God fashions a new “possible world” at each moment of time. This makes for a substantial revision of traditional modal theory. But for all of al-Ghazâlî’s Ashârism, the influence of Abû ʿAlî Ibn Sînâ’s (the Latin Avicenna: 980-1037) modal metaphysics on his thinking on the cosmic order is evident; the connection allows for interesting parallels with John Duns Scotus’ later innovations, and links al-Ghazâlî’s work to the larger philosophical tradition.

(III) The article “Infinite Power and Plenitude” examines the debate surrounding the interpretation of Aristotle’s famous “infinite power” argument in Physics 8.10. While the complex history of the argument has been expertly recounted in several studies already, no-one so far has to my knowledge highlighted the central rôle that modal concepts play in the debate.

The interpretation of the argument serves to highlight a fundamental difference between Avicenna’s and Averroës’ modal metaphysics. Avicenna is famous for the notion of beings “possible in themselves, necessary through another.” For Avicenna, this appellation applies to every thing with the exception of God: all created beings are possible in themselves, necessitated by causal chains leading up to God. Averroës appears to have known Avicenna’s theory only through al-Ghazâlî’s report, and to have thought that
it only applies to the eternal-but-caused heavens. Seen from this point of view, and judging by Averroës’ rigid temporal-frequency interpretation of the modalities, Avicenna’s formulation would then seem virtually nonsensical. Things are either eternal, in which case they are necessary, or they are contingent, in which case they sometimes are and sometimes are not. There is no middle ground.

Avicenna is operating with a different conception of contingency, however. For some philosophers working in the Neoplatonic tradition – Proclus, Simplicius and later Avicenna – the favoured interpretation of potency was that of a “power” (dunamis) being passed down “the great chain of being” as a kind of transfusion and dissipation of energy. A constant act of conservation is thus needed. This would indicate that Avicenna’s theory may have deeper roots in late Ancient metaphysics than has sometimes been acknowledged.

While it is easy to establish that Averroës severely misunderstood Avicenna, he seems to have correctly captured the central point in John Philoponus’ criticism of Aristotle. The latter had suggested that if the heavens’ power is necessarily finite (as Physics 8.10 has it), then they would carry a potentiality for one day being corrupted. But then, assuming that all possibilities are eventually realised, there is no way for this corruption to forever be put off, not even by the grace of God. In other words, the assumption of a temporal Plenitude allows Philoponus argue for a temporally finite universe. Averroës counters this by successively stripping the heavens of any possibility of destruction and rest. This further underlines the “conceptual determinism” spoken of earlier.

(IV) “Proclus on Plenitude” examines some of the late Ancient elaborations on the principle of Plenitude in more detail. The article details
the systematic way in which the principle is put to use by Proclus (d. 485 C.E.) in his commentary on Plato’s Timaeus. Proclus was a towering intellectual presence in the Academy of the latter half of the 5th century, as well as its chief ideologue in the sharpening conflict with Christian thought. One of the main points of contention between the Greek philosophers and Christian authors had to do with the issue of creation. Where the Christian creationists saw the Neoplatonist philosophers as paganistic and full of rationalist hubris, the philosophers took the Christian view to be crude, anthropomorphic, and lacking in proper gravitas. At issue at heart were two conflicting notions of piety. For Proclus, the principle of maximal divine generosity (cf. Timaeus 29e-30a) was a valuable conceptual tool in arguing both for the necessary eternity of the universe and for a full range of creatures being created. The principle of plenitude was to him primarily a starting-point for a certain brand of systematic theology.

(V) Besides the infinite power argument, another context in Aristotelianism in which the interconnection between eternity and necessity came under question was the controversy surrounding Aristotle’s purported arguments from impossible hypotheses. The history of this lengthy debate is examined in “Alternatives to Alternatives. Approaches to Aristotle’s per impossibile Arguments”.

According to Aristotle, from an impossibility one can only adduce further impossibilities: the problem was that arguments trying to argue ad absurdum on the basis of this often do not function without the assumption of further auxiliary premises, premises that can themselves be questioned. Prime examples of these kinds of hypotheses were lifted from Aristotle’s cosmological works, where it is asked, e.g., that we imagine the heavens to stop or to start and to grow or to contract, etc. With the assumption that
“with respect to what is eternal, there is no difference between being possible and being” simpliciter (cf. Aristotle, Phys. 203b29-30) these states would be impossible in an obvious way.

The proposed solutions accordingly attempted to circumvent this problem, either by denying that Aristotle’s premises contain an impossibility or else by distinguishing between different levels of impossibility. An extended survey of the debate surrounding the issue, which ranged from Galen through the Arabic commentators to Aquinas and Buridan, is interesting in that it illustrates how counterfactual possibilities were handled before the notion of synchronic alternatives came to be systematically applied.

(VI) “Plenitude, Possibility, and the Limits of Reason. A Medieval Arabic Debate on the Limits of Reason,” the last essay in this collection, draws together several threads running through the previous articles, as well as introducing a couple of new ones. Most crucially, I try to delineate and make understandable the strong connection that Averroës – the foremost Aristotelian of medieval times – makes between omnitemporality and necessity, on the one hand, and finitude and intelligibility on the other. In this study, I also attempt to illustrate in tentative fashion how an understanding of the medieval Islamic and late ancient debates can enrich our understanding of current issues and points of controversy in philosophical cosmology. As it turns out, on the borderline where physics shades into metaphysics, similar conceptual commitments and presuppositions appear to have shaped the thinking behind both new theories and old. This lends some credence to Lovejoy’s original contention that we are dealing with perennial ideas here – albeit that what we seem to have are perennial problems, rather than any incontrovertible answers.
NOTES

3 See here especially S. Knuuttila, Modalities in Medieval Philosophy (London: Routledge, 1993).
4 This is the rationale behind segueing the first two essays in this manner. Although al-Ghazâlî is chronologically the earlier of the two philosophers, Averroës is philosophically the more conservative; as a consequence, while al-Ghazâlî’s criticisms can be made understandable against the Arabic Aristotelian (frequent) background reiterated by Averroës, al-Ghazâlî’s innovations appear so alien to Averroës as to provoke only dismay.