



STUDIES IN ISLAMIC PHILOSOPHY AND SCIENCE

Published under the auspices of
the Society for the Study of Islamic Philosophy and Science

EDITORIAL BOARD

George F. Hourani, *State University of New York at Buffalo*

Muhsin Mahdi, *Harvard University*

Parviz Morewedge, *Baruch College of City University of New York*

Nicholas Rescher, *University of Pittsburgh*

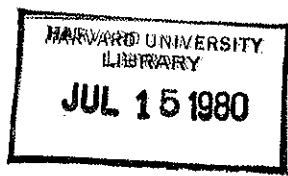
Ehsan Yar-Shater, *Columbia University*

Islamic Philosophical Theology

Edited by Parviz Morewedge

State University of New York Press
Albany

WID-CC
BP
166.1
I 72



Published by
State University of New York Press, Albany

© 1979 State University of New York

All rights reserved

Printed in the United States of America

No part of this book may be used or reproduced
in any manner whatsoever without written permission
except in the case of brief quotations embodied in
critical articles and reviews.

For information, address State University of New York
Press, State University Plaza, Albany, N.Y., 12246

Library of Congress Cataloging in Publication Data
Main entry under title:

Islamic philosophical theology.

Bibliography: p.
Includes index.

1. Islamic theology—History—Philosophy, essays,
lectures. I. Morewedge, Parviz.

BP166.1.172 297'.2 79-14405

ISBN 0-87395-242-1

HOOPER DHP

Contents

Parviz Morewedge, Introduction vii

I. THE GREEK PHILOSOPHICAL TRADITION AND ISLAMIC THEOLOGY

ʿAbdurrahman Badawi, New Philosophical Texts Lost in Greek and
Preserved in Arabic Translations 3 ←
F. E. Peters, The Origins of Islamic Platonism: The School
Tradition 14 ←
Louis Gardet, Aux débuts de la réflexion théologique de l'Islam 46
Ibrahim Madkhour, La logique d'Aristote chez les Mutakallimūn 58

II. CLASSICAL ISLAMIC THEOLOGY AND THE EARLY SHĪʿA MOVEMENT

Richard M. Frank, *Kalām* and Philosophy, A Perspective from One Problem 71
Wilfred Cantwell Smith, Faith as *Tasdiq* 96
Wilferd Madelung, The Shiʿite and Khārijite Contribution to Pre-Ashʿarite
Kalām 120

III. THE DEVELOPMENT OF PHILOSOPHICAL AND MYSTICAL THEOLOGY

George F. Hourani, Reason and Revelation in Ibn Hazm's Ethical Thought 142
Herbert A. Davidson, Avicenna's Proof of the Existence of God as a
Necessarily Existent Being 165
Parviz Morewedge, A Third Version of the Ontological Argument
in the Ibn Sīnīan Metaphysics 188
Nicholas Heer, Al-Jāmī's Treatise on "Existence" 223
Index 257

is almost complete and gives page references to the Cairo edition. *Kitāb al-Ihkām fī uṣūl al-ahkām*, ed. A. M. Shakir, 8 vols. (Cairo, 1925). *Mulakhkhaṣ Ibtāl al-qiyās wa r-ra'y wa l-istihsān wa t-taqlīd wa t-ta'līl*, ed. by S. al-Afghani (Damascus, 1960); used in preference to the extracts from the complete *Ibtāl* in Goldziher, *Zāhiriten*, pp. 207-22, because the *Mulakhkhaṣ* covers the main ideas more widely than the extracts, and omits little of importance. *Kitāb al-Maḥallā*, 11 vols. (Cairo, 1929-34). *Mudāwāt an-nufūs*, ed. and tr. by N. Tomiche as *Épître morale (Kitāb al-Ahlāq wa-l-siyar)* (Beirut, 1961); the Arabic title is a matter of opinion.

4. Arnaldez, *Grammaire et théologie*, and "Ibn Ḥazm," *Ihkām*, 1: 29-35.
5. George F. Hourani, *Islamic rationalism: the ethics of 'Abd al-Jabbār* (Oxford, 1971), p. 39.
6. "Partly," because revelation alone gives knowledge of the after-life and its specific sanctions.
7. *Grammaire et théologie*.
8. Cruz, *Filosofía hispano-musulmana*, 1: 282, is mistaken in including wisdom among the four cardinal virtues listed by Ibn Ḥazm, and in saying that the Greek *sōphrosunē* is specified by him as "generosity." The two latter are listed separately, as *iffa* and *jūd* respectively, and wisdom is not mentioned in §§ 89-92.
9. *Fiṣal*, 4: 87-111 and 163-71, goes over the classical questions on the caliphate (rights of succession, etc.), but with little originality and few remarks about the purpose of the institution in serving the *umma*.
10. Cf. *Ihkām*, 1: 10 and *Mulakhkhaṣ*, 5: the whole of religion is drawn from revelation.
11. Hourani, *Islamic rationalism*, pp. 32-34, 76-81.
12. See Goldziher, *Zāhiriten*, pp. 120-23; Arnaldez, *Grammaire et théologie*, p. 131.

Avicenna's Proof of the Existence of God as a Necessarily Existent Being*

HERBERT A. DAVIDSON

University of California, Los Angeles

1. The cosmological proof of the existence of God may be characterized as a proof that begins by recognizing the actual existence of something in the universe; then it employs the principle of causality to establish that that thing and the universe as a whole have a cause. The a priori or ontological proof, in contrast, operates in the realm of thought without assuming the actual existence of anything. It begins with a concept of the nature of God,¹ such as "that than which nothing greater can be conceived";² the "best";³ the "absolutely simple";⁴ "most perfect being";⁵ "immeasurably powerful being";⁶ "infinite being";⁷ or "substance" par excellence.⁸ Then, as the proof is generally understood,⁹ merely by analysing the concept, it undertakes to demonstrate that such a being must exist. It does this either directly, by showing that actual existence can be logically deduced from the concept;¹⁰ or indirectly, by showing that a self-contradiction would result from assuming that the being in question does not exist.¹¹

The term *necessary being* echoes through much of the history of the ontological proof.¹² This term is not defined by every writer using it, but it seems, in ontological proofs, to have been used in one of two senses:¹³ (a) *Necessary being* may be understood in the sense of a being whose existence is established as a necessary truth, in the way that necessary truth is defined by Leibniz. According to Leibniz: "When a truth is necessary, its reason can be found by analysis, resolving it into more simple ideas and truths until we come to those that are primary . . . Truths of reasoning are necessary and their opposite is impossible."¹⁴ (b) A necessary being may also be understood as that which exists "through

* The first part of this article profited considerably from discussions I had with my colleague Amos Funkenstein.

itself"¹⁵ or "through its essence,"¹⁶ as that "which has in its essence the sufficient reason of its existence."¹⁷

There have been instances of ontological proofs employing the term *necessary being* in one sense or the other, as well as instances employing the term without specifying which sense is intended or whether both are. In fact, however, whether a given argument does happen to use the term *necessary being* in one sense or the other, every ontological proof should, it would seem, make both points. That is to say, every ontological proof¹⁸ attempts to show that the existence of God follows by logical necessity from an analysis of the concept of God's nature; such simply is what we mean by an ontological proof. And, it would further seem, an ontological proof can infer the existence of God from a concept of His nature only if the essence of God, as reflected in the concept, should somehow contain the "sufficient reason" of His existence. Thus the ontological proof assumes that the existence of God can (a) be proved by a priori, logical necessity; and by virtue of this assumption it further assumes that (b) God exists *through His essence*, that He has in His essence a *sufficient reason of His existence*.

Ontological proofs formulated with the aid of the term *necessary being* or *necessary existence* are known from the time of Descartes,¹⁹ and that term can appear in different stages of given argument. Descartes, in the course of elucidating his ontological proof, introduces *necessary existence* as a middle term, to justify passing from the concept of God as a perfect being to the actual existence of God: "Because actual existence is *necessarily* and at all times linked to God's other attributes, it follows certainly that God exists."²⁰ In a number of philosophers, the thesis that God is necessarily existent is the conclusion of an ontological proof. Thus Spinoza,²¹ More,²² Leibniz,²³ perhaps Christian Wolff,²⁴ Baumgarten,²⁵ and Moses Mendelssohn²⁶ offer ontological proofs establishing the existence of a "necessary being," a "necessarily existent being," or a being that "necessarily exists." There also are at least two instances of proofs that start with *necessary existence*. That is to say, rather than beginning with a concept such as *perfect being* or *infinite being* or the like, they begin with the concept of *necessary being*, and then, by analyzing the concept, they establish that such a being does in fact exist. One of several formulations of the ontological argument in Leibniz consists in the following bare syllogism: "necessary being exists," which, Leibniz explains, is equivalent to saying that "being to whose essence existence belongs, exists; or being *per se* exists." This "is evident from the terms." "But God is such a being. . . . Therefore God exists,"²⁷ Mendelssohn reasoned, also as one of several formulations: "It is clear that necessary being . . . must possess all perfections in the highest degree. . . . The concept of the necessary must accordingly also include

within itself the perfection of existence. Therefore the necessary must also actually exist."²⁸

In addition to its role in the ontological proof, which must undertake to establish the existence of God as a necessary being in both senses of the term distinguished earlier, *necessary being* also plays a role in the cosmological proof. Now whatever sense the term *necessary being* may have in a given cosmological argument, the first of the two senses distinguished earlier would presumably be excluded. A cosmological proof could hardly establish the existence of a necessary being in the sense of a being whose existence is established merely by analyzing concepts: for the characteristic of this proof is precisely that it does not restrict itself to the mere analysis of concepts. On the other hand, every cosmological proof, whether or not it happens to use the term *necessary being*, must explicitly or virtually establish that God exists as a necessary being in the second sense. For the cosmological proof undertakes to establish the existence of God as an uncaused cause, consequently as a being that exists through itself, a being that has a sufficient reason of its existence in itself. Thus the cosmological proof—whether or not a given instance of the argument happens to use the term *necessary being*—cannot establish the existence of God in the first sense of *necessary being* affirmed by the ontological proof; and it must undertake to establish the existence of God in the second sense.

Leibniz gave perhaps the best known instance of a cosmological argument using the term *necessary being*. By the side of his ontological argument, Leibniz offered another wherein he begins by considering the actual existence of objects in the external world. Then, employing the principle of sufficient reason, a form of the principle of causality,²⁹ Leibniz establishes that "contingent things . . . can have their final or sufficient reason only in the necessary being," that is to say, in a being "which has the reason of its existence in itself"³⁰—the second sense of *necessary being*. Wolff, Baumgarten, and Mendelssohn all repeat, with minor variations, Leibniz's cosmological proof, concluding in the existence of a necessary being.³¹ Thus Leibniz, perhaps Wolff, Baumgarten, and Mendelssohn give parallel proofs, one ontological and the other cosmological, of the existence of a necessary being. The contention of these philosophers is that the ontological and cosmological proofs lead independently to the same result,³² the existence of a necessary being in some such sense as that which exists "through its essence."

The two proofs were not, however, always kept distinct. At least one philosopher, Samuel Clarke, intentionally or inadvertently combined the two into a single overall demonstration. Clarke presents a cosmological argument in the spirit of Leibniz, contending that the changeable and dependent beings in the universe must have their "ground or reason of

existence" in an eternal being which is "self-existent, that is, necessarily existing." But the only meaning of "self-existent" recognized by Clarke is that whose "necessity . . . must be antecedent in the natural order of our ideas to our supposition of its being"; whose necessary existence "must *antecedently* force itself upon us whether we will or no, even when we are endeavoring to suppose that no such being exists"; "the supposition of whose non-existence is an express contradiction."³³ That is to say, the cosmological argument, which begins with the actual existence of things in the external world, establishes a being which is *necessarily existent* in the sense that its existence can be discovered merely by examining its concept "antecedently" and without considering the existence of anything in the external world, a being such that assuming it not to exist gives rise to a self-contradiction. This, however, is the sense of necessary being that can be established only through an ontological argument. Thus Clarke has intentionally combined or inadvertently confused two arguments, following the reasoning of the cosmological, but giving the conclusion of the ontological.³⁴

Clarke is of particular interest because he inspired Section IX of Hume's *Dialogues Concerning Natural Religion*. In Section IX of the dialogue, Hume allows the conservative participant to have his say. This participant maintains that the most effective way of establishing the existence of God is the "simple and sublime argument *a priori*." The argument, it turns out, has three steps, the first two of which correspond to the cosmological part of Clarke's demonstration. The third step then concludes that in order to explain the existence of the world "we must . . . have recourse to a necessarily existent being who carries the reason of his existence in himself; and who cannot be supposed not to exist without an express contradiction." That is to say, we must have recourse to a first "necessary" cause—a proper conclusion of the cosmological argument—whose concept is such that a self-contradiction results from assuming it not to exist—the conclusion of an ontological argument. If there should be any doubt, Hume's critique reveals that two arguments are in fact present here. The critique begins by showing that the existence of nothing at all can be established *a priori*, merely by examining its concept; that is a criticism appropriately directed against the ontological method. But then Hume goes on to argue that perhaps the universe as a whole has no cause, a criticism appropriate for refuting a cosmological argument.³⁵

Whereas Hume's critique blurs the distinction between the cosmological and ontological proofs of a necessarily existent being, Kant's critique, as is well known, clearly distinguishes the two, and then proceeds to establish an intrinsic connection between them. The cosmological proof, Kant argued, ultimately reduces itself to the ontological. Kant gives a concise statement of a cosmological argument establishing the existence

of an "absolutely necessary being," and then contends: "What properties this being must have, the empirical premise cannot tell us." Consequently, human reason is led to "abandon experience altogether and endeavors to discover from mere concepts what properties an absolutely necessary being must have." The only means human reason can discover for pouring content into *absolutely necessary being* is to identify this being with *ens realissimum*, being possessing the fullness of perfection. But in order to show that *ens realissimum* is identical with the *necessary being* established by the cosmological argument, human reason must first analyze the concept of *ens realissimum* and derive *necessary existence* from it. Since *ens realissimum* is a necessarily existent being and in fact the only one, so human reason proceeds, it must be identical with the necessarily existent being established by the cosmological argument. Thus the absolutely *necessary being* whose existence is established through the cosmological argument acquires meaning only on the assumption that *necessary existence* can also be analyzed out of the concept of *ens realissimum*—which, according to Kant, amounts to the assumption that the concept of *ens realissimum* can serve as the basis for an ontological argument. Hence Kant concludes that the cosmological argument inevitably reduces itself to an ontological argument.³⁶

The foregoing survey shows that an ontological argument, whether it explicitly says so or not, must establish the existence of God as a necessary being in two senses: as a being whose existence can be established by *a priori*, logical necessity; and as a being that exists *through itself*, whose essence contains sufficient reason for its existence. Individual instances of the ontological proof have used the term *necessary being* at different stages of their argument. A cosmological argument, whether explicitly or not, should establish the existence of God in the second of the two senses of necessary being. And individual instances of the cosmological proof, it was seen, did undertake to prove the existence of God as a necessary being in this sense. In at least one instance, Clarke, a cosmological and an ontological argument were combined or confused: from a cosmological argument, Clarke concludes the existence of a necessary being in the sense that can be established only by the ontological proof. Of the two best known critiques of the cosmological argument, Hume's deals with the combined or confused version, and Kant's contends that the cosmological argument for a necessary being must inevitably reduce itself to an ontological argument.

The first philosopher known to use the concept of *necessary existence* in order to construct a proof of the existence of God was Avicenna. Avicenna's proof, it will appear, neither is, nor inevitably reduces itself to, an ontological proof. It is rather a certain kind of cosmological proof.

2. The concept of necessary existence is used by Avicenna to prove the existence of God in two works, at length in the *Najāt*,³⁷ briefly and

somewhat obscurely in the *Ishārāt*.³⁸ The concept is also discussed fully in two other works, the *Shifā'*³⁹ and *Danesh Nameh*,⁴⁰ but there Avicenna employs it only to define the nature of God, not, as far as I can see, to establish His existence.⁴¹

Avicenna gave thought to the method of his proof. The proof, he explains, consists in "examining nothing but existence itself"; by "considering . . . the nature (*hāl*) of existence," the proof has "existence *qua* existence testify to the first [cause]."⁴² This method pursued by Avicenna is contrasted by him with another whereby the existence of God is established not from a consideration of existence in general, but rather from a consideration of one segment of existence: God's "creation and effect." Although the latter method, which takes its departure from "creation and effect," is also recognized by Avicenna as legitimate, his own method, he claims, is "more certain and more exalted."⁴³

The difference between the two is stated here in language that is deliberately allusive, but easily deciphered. Metaphysics was defined in the Aristotelian tradition as the science that "examines the existent *qua* existent and what belongs to it by virtue of itself."⁴⁴ Accordingly, when Avicenna claims to have constructed a proof exclusively by examining "existence itself" and by considering "existence *qua* existence," he means that he has constructed a proof using philosophic principles drawn only from the science of metaphysics. This he contrasts with the proof that begins with God's "creation and effect" and reasons back from them to the existence of God as a first cause. Avicenna cannot mean that his proof uses absolutely no data drawn from God's "creation and effect." For, as we shall see, his proof does require at least one datum from the external world;⁴⁵ and the parts of the world accessible to man are himself and physical nature, both of which belong to God's "creation and effect." Avicenna does mean that his proof considers no peculiar properties of God's creation, that is, no properties of physical nature, but instead considers the attributes belonging to physical nature or anything else solely insofar as it is existent. He is thus claiming to have constructed a metaphysical proof which is superior to proofs that do use principles drawn from physical science, such as—to take the most notable example—Aristotle's proof from motion does. Averroes was later to attack Avicenna for this presumption. At every possible opportunity, Averroes undertook to refute the claim that the existence of God can be established by nothing more than metaphysical principles; and in opposition he defended the position, represented as truly Aristotelian, that the proof of the existence of God is at least in part a subject for the science of physics.⁴⁶

It is easy to point out advantages Avicenna could have perceived in the metaphysical proof, rendering it "more certain and more exalted" than the physical proof. Aristotle's proof from motion rested on a set of

physical principles: motion in place underlies all other kinds of change;⁴⁷ everything moved has the cause of its motion outside itself;⁴⁸ nothing can maintain itself in motion unless it is continuously moved by an agent;⁴⁹ only circular motion is continuous;⁵⁰ only an infinite force can maintain the heavens in motion for an infinite time.⁵¹ Using all these physical principles, Aristotle undertook to establish the existence of an unmoved incorporeal cause solely of the *motion* of the universe.⁵² Avicenna, although not rejecting Aristotle's physical principles, dispenses with them in his metaphysical proof. And yet, without them, he is confident that he can prove the existence of a cause not merely for the motion, but for the very existence of the universe. The metaphysical proof requires fewer premises and is thus "more certain." And it is "more exalted," for it establishes a cause of the very existence of the universe. With less fuel it travels, or attempts to travel, further.

Avicenna found two passages in Aristotle especially suggestive. One of them appears in Aristotle's *Metaphysics*, Book XII. There Aristotle gives a version of his proof from motion, then adds a postscript: Since the prime mover "can in no way be otherwise than as it is," it "is an existent . . . of necessity."⁵³ Avicenna's proof, particularly the fuller version in the *Najāt*, can be understood as starting just where Aristotle left off. Avicenna sets aside all the physical arguments leading up to Aristotle's prime mover, which is an "existent . . . of necessity." He begins afresh by analyzing the concept "existent . . . of necessity" or, as he calls it, *necessarily existent*, working out everything contained in the concept. Then he undertakes to establish that something corresponding to the concept actually exists. He does this, however, without using the principles of physical motion employed by Aristotle, and also without relying exclusively on his analysis of the concept, as an ontological proof would.

The second Aristotelian passage underlying Avicenna's proof appears in another part of the *Metaphysics*, in Book V. *Metaphysics* V is a philosophic glossary that strikes a modern scholar as "evidently out of place" in the totality of the *Metaphysics*.⁵⁴ Avicenna, however, read Aristotle differently. The subject matter of metaphysics was after all understood to be the existent *qua* existent and its attributes,⁵⁵ and *Metaphysics* V consists precisely in an analysis of *existence* and of attributes of existence such as *unity*, *plurality*, *necessity*, *potentiality*, *actuality*, and the like. Book V can therefore be understood as a philosophic analysis of the subject matter lying at the heart of metaphysics. Avicenna must have read it that way, for he used Book V of Aristotle's *Metaphysics* as a cadre for a good half of his own *Metaphysics*, the subject of the remainder of his *Metaphysics* being the existence of God, His attributes, and the incorporeal realm.

Among the terms analyzed by Aristotle in the section in question is *necessary*; *necessary*, he explains, has three senses, of which the most fun-

damental is "what cannot be otherwise."⁵⁶ Then, Aristotle observes: "For certain things, something else is a cause of their being necessary, but for some nothing is [a cause of their being necessary]; rather it is through them that others exist of necessity."⁵⁷ That is to say, there is a class of things that are necessary without having a cause of their being necessary; and a second class of things that are necessary through a cause, this cause to be found in the former class. The Aristotelian distinction was to be mirrored in the painstaking distinction Avicenna drew between the necessarily existent by reason of itself and the necessarily existent by reason of another.

Avicenna for his part begins his analysis of metaphysical concepts by showing that primary concepts cannot truly be defined. Definitions in Aristotelian logic are framed by taking a wider and already known concept, the *genus*, and setting apart a segment of it through a *specific difference*. Accordingly, Avicenna writes, primary concepts such as *existent*, and *thing*, which are not "subsumed under anything better known," cannot be defined; they are rather "imprinted in the soul in a primary fashion."⁵⁸ And among the concepts that cannot be "made known . . . in a true sense" are *necessary*, *possible*, and *impossible*.⁵⁹

Because *necessary*, *possible*, and *impossible* are not definable, ostensible definitions of them lead to a vicious circle. Avicenna considers two ostensible definitions of necessary: "That which can (*yumkin*) not be assumed [to be] absent (*ma'dūm*)";⁶⁰ "that which is such that an impossibility would result if it should be assumed to be other than it is."⁶¹ The first of the two definitions employs the term *possible* (*mumkin*)—"can (*yumkin*)"—and the second uses *impossible*. But, Avicenna observes, when we consider ostensible definitions of *possible* we find that they in their turn employ either *necessary* or *impossible*; possible is defined as "that which is not necessary" or as "that which is absent (*ma'dūm*), but is such that its existence is not *impossible* if it should be assumed to occur at any time in the future."⁶² Ostensible definitions of *impossible*, finally, include either *necessary* or *possible*. Thus attempts to define the triad chase one another in a circle.⁶³ Yet, although primary concepts are not explicable by anything wider and better known and are thus inaccessible to true definition, there is, according to Avicenna, a way of explaining them to the man who for some reason does not have them imprinted in his soul. We may "direct attention" to the primary notions and "call them to mind" through a "term or an indication."⁶⁴ On this basis, Avicenna ventures an explanation of *necessary*: "It signifies certainty of existence."⁶⁵

When Avicenna turns from *necessary* and *possible* to "necessarily existent being" and "possibly existent being,"⁶⁶ he offers the following explanations: A necessarily existent being is a being that "perforce exists"; alternatively, it is "such that when it is assumed not to exist, an impossibility results." A "possibly existent being" is a being that "contains no

necessity . . . for either its existence or nonexistence ('*adam*'); alternatively it is "such that whether assumed not to exist or to exist, no impossibility results."⁶⁷ These obviously are not definitions by Avicenna's standard, since they do not explain the concepts by anything wider and better known. They are in fact merely adaptations of the blatantly circular definitions of *possible* and *necessary* that Avicenna has just been seen to criticize.

The distinction between possibly existent being and necessarily existent being is supplemented by the distinction, originating in Aristotle's *Metaphysics* V, between two ways in which a thing can be necessary.⁶⁸ Reflecting Aristotle's distinction, Avicenna writes that we can conceive of a being as necessarily existent either by reason of itself or by reason of something else. The former would be something "such that because of itself and not because of anything else whatsoever, an impossibility follows from assuming its nonexistence." The latter would be a being "such that should something other than itself be assumed [to exist], then it becomes necessarily existent." The illustrations Avicenna adduces for the latter category are "combustion," which is "necessarily existent . . . when contact is assumed to take place between fire and inflammable material," and "four," which is "necessarily existent . . . when we assume two plus two."⁶⁹ If some thing is necessarily existent only by reason of something else, it must—since it will not exist by virtue of itself without that other thing—be possibly existent by reason of itself.⁷⁰ Thus Avicenna distinguishes three categories: (a) the necessarily existent by reason of itself; (b) the necessarily existent by reason of another, but possibly existent by reason of itself; and (c) the possibly existent by reason of itself, which is not rendered necessarily existent by reason of another.

What Avicenna calls *necessarily existent by reason of itself* is the same as *necessary being* in the sense of that which exists "through itself" and "has in its essence the sufficient reason of its existence."⁷¹ What Avicenna calls *necessarily existent by reason of another* is the same as the category of things having, in the terminology of Leibniz, "physical or hypothetical necessity";⁷² "physical or hypothetical necessity" consists in "things, happening in the world just as they do" because "the nature of the world is such as it is."⁷³ However, the necessity characterizing these two categories of necessarily existent being was already seen to be indefinable for Avicenna; it is a primary concept to be grasped by the human mind immediately.⁷⁴ As a mere "indication" of its meaning, Avicenna wrote that necessity "signifies certainty of existence."⁷⁵ The necessarily existent by reason of itself would accordingly be that which has certainty of existence by reason of itself; the necessarily existent by reason of another would be that which has certainty of existence by reason of another. And the impossibility involved in supposing such a being not to exist would consist in contradicting the certainty of its existence,⁷⁶ the fact that it

does exist. If no more than this can be said about the meaning of *necessarily existent*, it is difficult to see just how necessary existence differs from actual existence; not surprisingly, Ghazālī was later to accuse Avicenna of vagueness in his use of the term.⁷⁷

These remarks relate to the meaning of *necessity* and of *necessarily existent*: Avicenna rules out any definition of *necessarily existent* and we can only infer that its meaning amounts virtually to *actually existent*. When Avicenna subsequently comes to delimit the class of necessarily existent beings, that class turns out, in fact, to coincide exactly with the class of actually existent beings. For the two categories of necessarily existent being—that which is so by virtue of itself and that which is so by virtue of another—are, according to Avicenna, the only two conceivable categories of actual existence. To put this in another way, the possibly existent does not actually exist unless rendered necessary by something else; and conversely, everything actually existing, including whatever occurs in the physical world, such as combustion, is necessary in one sense or the other. To justify the point, Avicenna reasons that as long as something is merely possible, nothing is present to “prefer” its existence over its nonexistence. The possibly existent can enter the realm of actual existence only if a factor distinct from itself should “select out” its existence. But whenever that factor is present, the existence of the possibly existent being is rendered necessary.⁷⁸ The proper way of construing possible existence, according to Avicenna, is therefore to say that during the time the possible existent actually exists, its existence is necessary, and during the time it does not exist, its existence is impossible, but that necessity and that impossibility are both conditioned, due not to the thing itself, but only to the presence or absence of an external condition which necessitates its existence or nonexistence. Considered in itself, in isolation from the external conditions, the possibly existent at all times remains possible.⁷⁹

Actual existent is thus either: (a) Necessarily existent by reason of itself; this is something “such that if assumed not to exist an impossibility results,” with the proviso that it has that character “by reason of itself.” Or (b) necessarily-existent by reason of another, but possibly existent by reason of itself; this is something, again, such that if assumed not to exist, an impossibility results, with the proviso that it has that character only inasmuch as “something else is assumed” to exist. In distinguishing these categories, it must be stressed, Avicenna is operating exclusively in the realm of concepts, without committing himself to the actual existence of anything.⁸⁰ He is saying that if something should be assumed to exist, then it has to be classified in one of the two categories of necessarily existent being.

3. Avicenna, it appears, rejects a true definition of (a) the necessarily existent by reason of itself, (b) the necessarily existent by reason of another but possibly existent by reason of itself, or (c) the possibly existent

by reason of itself which is not rendered necessarily existent by anything else. Still, he writes, the “properties” of these three can be set forth.⁸¹ His proof of the existence of God consists in analyzing the concept of the *necessarily existent by reason of itself* and establishing its attributes; then analyzing the concept of the *possibly existent* and showing that if anything actually exists, something necessarily existent by reason of itself must also exist.

Avicenna’s analysis of the *necessarily existent by reason of itself* was not original with him. Proclus had analyzed the concept of the “self-existent” (*qā'im bi-dhātihī*) and “self-sufficient” (*mustaghniyya bi-nafsihā*) first cause” and shown that it must be eternal, uncaused, and free of composition.⁸² Alfarabi subsequently applied the same type of analysis to the concept of the “First,” as he called the Deity, arriving at a wider set of attributes than did Proclus.⁸³ And the set of attributes deduced by Alfarabi from the concept of the “First” parallels the set Avicenna now derives from the concept of the *necessary by reason of itself*. Significantly, neither Proclus nor Alfarabi required the concept of *necessity* for their analysis. This supports the suggestion that the concept of *necessity* adds nothing to Avicenna’s proof, and that his proof could have as well been based on an analysis of the *actually existent by reason of itself* instead of on an analysis of the *necessarily existent by reason of itself*.

Avicenna’s analysis runs as follows: The necessarily existent by reason of itself clearly can “not have a cause.” If it did have a “cause of its existence,” its existence would be “by virtue of something” and therefore not solely by virtue of itself.⁸⁴ Aristotelian philosophy distinguished no less than four senses of cause, including causes internal to the effect as well as those working on the effect from without, yet Avicenna does not specify which sense he is using here.⁸⁵ However, the omission is apparently intentional, for Avicenna understands that the necessary by reason of itself is incompatible not only with an external cause—an agent upon which its existence depends—but also with internal causes—elements within itself making it what it is.

The denial of internal causes means that the necessarily existent by reason of itself can have no “principles which combine together and in which the necessarily existent consists.” The full argument for this rests on a distinction between a given entity as a whole and the parts of which it is composed. Any composite entity, Avicenna contends, exists by virtue of its parts and not by virtue of itself as distinct from its parts. Accordingly, considered as a whole, it does not exist by virtue of what it is in itself but only by virtue of something else—by virtue of the components that constitute it. And it is therefore not necessarily existent by reason of itself. The implications of the thesis are far reaching. For if the necessarily existent by reason of itself can contain no parts whatsoever, it is simple in every conceivable way. It is incorporeal, inasmuch as it is not

composed of matter and form. It is unextended and immaterial, inasmuch as it is free of quantitative parts. It is indefinable, inasmuch as it is not composed of genus and specific difference. And it is free of the distinction of essence and existence.⁸⁶ The argument for simplicity also gives an implied answer to a much repeated object later to be directed against the proof of the existence of God as a necessary being. Perhaps, that objection runs, the physical world is itself the necessary being.⁸⁷ Avicenna would by implication reply that the physical world cannot be conceived as necessarily existent by reason of itself, since the physical world cannot be assigned the attributes deducible from the concept of the necessarily existent by reason of itself: The physical world is not simple, unextended, and incorporeal.⁸⁸

There can, Avicenna further contends, be only one being necessarily existent by reason of itself. To prove this thesis, he argues basically⁸⁹ that assuming two such beings amounts to assuming two beings that are similar in one respect—their necessary existence—but different in another—the respect whereby they can be distinguished and called two. But that situation would be conceivable only if at least one of the two things should be composite, containing both the element in common with its counterpart and another element whereby it can be distinguished and by virtue of which two distinct beings can be enumerated. Thus at least one of the two would have to be composite, and consequently, as already seen, not necessarily existent by virtue of itself. It follows that not more than one being necessarily existent by reason of itself is conceivable.⁹⁰

Avicenna derives other attributes from the concept of *necessarily existent by reason of itself*. It must be pure *intellect*, for such is the nature of beings free of matter. It must be *true*, for truth consists in the highest grade of existence, and the necessarily existent by reason of itself would have the highest grade of existence. It must be *good*, for evil consists in privation, whereas the necessary by reason of itself has fullness of being and therefore suffers no privation. It must constitute the highest *beauty*, be the highest *object of desire*, be possessed of the greatest *pleasure*, and so forth.⁹¹ Avicenna's analysis of the concept of *necessarily existent by reason of itself* thus establishes that such a being must be uncaused, simple, incorporeal, one, pure intellect, true, good, beautiful, an object of desire, possessed of the greatest pleasure.

But is there anything in the external world corresponding to that concept? Does such a being actually exist? Its existence, Avicenna writes, is surely not self-evident.⁹² Nor can its existence be established through a syllogistic "demonstration" (*burhān*). For a demonstrative syllogism must be constructed with propositions that are "prior to," and the "causes" of the conclusion,⁹³ whereas there is nothing prior to existence, and the cause of the presence of actual existence in the necessarily existent is accepted by reason of itself.⁹⁴ What can be provided is an indirect

"proof" (*dalīl*) of the existence of a being necessary by reason of itself,⁹⁵ and that is what Avicenna undertakes.

To accomplish his proof, Avicenna leaves the conceptual realm for a single empirical datum: "There is no doubt that something exists (*anna hunā wujūdān*)."⁹⁶ It makes no difference what it is that exists or what its peculiar properties might be; for the purpose of his proof Avicenna considers merely the "existent *qua* existent"⁹⁷ and therefore all he needs is the fact that something does indeed exist. Applying the proposition that there are only two conceivable categories of actual existing beings,⁹⁸ Avicenna proceeds: "Everything that exists is either necessary [by reason of itself] or possible [by reason of itself and necessary by reason of another]. On the first assumption, a necessarily existent [by reason of itself] has immediately been established, and that was the object of our demonstration. On the second assumption, we must show that the existence of the possible [by reason of itself but necessary by reason of another] ends at the necessarily existent [by reason of itself]."⁹⁹ If the first alternative were accepted, the proof would be complete; the being conceded to be necessarily existent by reason of itself would simply be assigned all the attributes already shown to belong to such a being. But the real issue is of course posed by the second alternative, the assumption that the random existent object with which the proof started is necessarily existent only by reason of another, and possibly existent by reason of itself. The heart of the proof therefore lies in showing that anything possibly existent by reason of itself must ultimately depend for its actual existence upon something necessary by reason of itself.

Professor Wolfson has pointed out that two philosophic principles underlie Avicenna's proof, as well as other cosmological proofs of the existence of God in the Aristotelian tradition: (a) the principle of causality, and (b) the impossibility of an infinite regress of causes.¹⁰⁰ Avicenna does not posit the two principles in their own right, but ingeniously derives them¹⁰¹ from his analysis of *necessarily existent by reason of itself* and *possibly existent by reason of itself*.

In formulating his version of the principle of causality, Avicenna employs a distinction between the cause of the "generation" (*hudūth*) of an object and the cause of its "maintenance" (*thabāt*).¹⁰² The cause of generation is more obvious since no one, Avicenna is certain, can doubt that whenever an object comes into existence, it does so by virtue of something else. But Avicenna's proof cannot pursue a first cause of the generation of every possibly existent being, both because Avicenna believed that some possible beings are eternal and not generated, and also because his proof requires causes that exist together with their effect,¹⁰³ whereas the cause of generation may perish after the effect comes into existence. Therefore Avicenna gives his attention to the *maintaining* cause.¹⁰⁴ If, he contends, we consider any object possible by reason of

itself, irrespective of whether it is generated or eternal, we may legitimately ask what maintains it in existence. The factor maintaining the object in existence must be distinct from the object,¹⁰⁵ for in itself the latter is only possible and does not exist by virtue of itself. And that factor must exist as long as the object exists; for even when the object is actual, it never ceases to be possible by reason of itself and dependent on something else for its existence.¹⁰⁶ Thus the analysis of the concept *possibly existent by reason of itself*—or, to be more precise, merely asking what *possibly existent* means—establishes that if anything possibly existent should exist, it must at all times depend on a cause distinct from itself to maintain it in existence.¹⁰⁷

The second proposition required by Avicenna is formulated by him as the impossibility that “causes go to infinity”—the impossibility of an infinite regress of causes. In fact, unlike other philosophers,¹⁰⁸ Avicenna does not argue that an infinite regress, specifically, is absurd. He rather argues for the more general principle that whether all actually existent possible beings are “finite or infinite,” they must ultimately depend on a being necessarily existent by reason of itself; and from this more general principle he derives the impossibility of an infinite regress as a corollary.¹⁰⁹

Avicenna's reasoning here too is conducted solely through an analysis of concepts, in the present instance both the *necessarily existent* and the *possibly existent*. He is considering a situation wherein Z, for example, depends for its existence upon Y, which exists simultaneously with it; Y then depends upon X, which also exists simultaneously; ad infinitum. To show that such a situation is inconceivable, he mentally collects into a single group all possible beings actually existing at a single moment. Then he reasons as follows: The totality of possibly existent beings, considered as a whole, must be either (a) necessarily existent by reason of itself or (b) possibly existent by reason of itself. The former alternative would involve the absurdity that the “necessarily existent [by virtue of itself] is composed of possibly existent beings.” Avicenna does not give any reason why that thesis is absurd. He presumably means¹¹⁰ that assuming the necessarily existent by reason of itself to be composed of possibly existent beings amounts to assuming that the necessarily existent is composite, whereas his earlier analysis showed that the necessary by reason of itself cannot be composite.¹¹¹

If the totality of possibly existent beings cannot (a) constitute a group that is necessarily existent by reason of itself, there remains (b) the second alternative, according to which the totality of possibly existent beings, taken collectively, is possible by reason of itself. On this alternative, Avicenna proceeds, “whether the group is finite or infinite,” it stands in need of a factor that will continually “provide [it] with existence.” That factor must be either (b-1) within the group or (b-2) outside of it. Assum-

ing (b-1) that one [or more] of the members maintains the whole group is equivalent to assuming that the member in question is a cause of itself. For to be a cause of the existence of a group is “primarily” to be the cause of the individual members, and since the supposed cause is itself one of the members, it would be a cause of itself. Yet the supposed cause has already been assumed to be possibly existent, and the possibly existent is precisely what does not exist by virtue of itself. Therefore it could not be the cause of the collection of which it is one member.

If the totality of possibly existent beings cannot form a group that is necessarily existent by reason of itself, and if, further, that totality cannot be maintained by one of its own members, the sole remaining alternative is that what does maintain the totality of possibly existent beings in existence is (b-2) outside the group. Since, by hypothesis, all possibly existent beings were included inside, anything left outside is not possibly existent; it must accordingly be necessarily existent by reason of itself. Avicenna was able to reach this result, it should be observed, through the device of considering all possibly existent beings as a single group and then asking what maintains the group in existence; and the cogency of his argument depends upon the legitimacy of that procedure. Once he has established that the series of all possibly existent beings does depend on a necessarily existent being, Avicenna infers, as a sort of corollary, that the series must be finite; for the possibly existent beings must “meet” their necessarily existent cause and “terminate” there. Thus an infinite regress of causes would be impossible—a regress, however, of only one type, that wherein all the causes exist together.¹¹²

Avicenna's complete proof now proceeds as follows:¹¹³ Something clearly exists, and it must be either necessary by reason of itself, or necessary by reason of another and possible by reason of itself. On the former assumption the proof is immediately complete: There is a being necessarily existent by reason of itself, which is to be assigned all the attributes of such a being. On the other assumption, the possible by reason of itself must be maintained in existence by something else, which exists as long as it exists. That other factor, in turn, must be either necessary by reason of itself or possible by reason of itself. If it is assumed to be necessary by reason of itself, the proof is again at once complete. If, on the other hand, it is assumed to be possible by reason of itself, it too must depend on a further factor distinct from it and existing as long as it exists. Once again, Avicenna asks whether the new factor is necessary by reason of itself or possible by reason of itself. It is inconceivable, he has contended, that the series of all possible beings existing simultaneously, whether finite or infinite, should be maintained in existence by part of itself or by itself as a whole. The series must be maintained in existence by something outside, something which can only be necessarily existent by reason of itself.¹¹⁴ The latter is to be assigned all

the attributes shown to belong to the necessary by reason of itself, and it is the Deity in Avicenna's system.

4. Avicenna thus offers a proof of the existence of God that he characterizes as metaphysical since the proof considers the attributes of what exists solely insofar as it is existent and not insofar as it is a certain type of existent. The proof begins by distinguishing that which is *necessarily existent* from that which is *possibly existent*, and that which is necessarily existent *by reason of itself* from that which is necessarily existent *by reason of something else*; it analyzes those concepts; and it shows that the possibly existent can actually exist only if ultimately dependent on something necessarily existent by reason of itself. Necessarily existent, as far as I can see, means nothing more than actually existent for Avicenna,¹¹⁵ and the proof could be executed unchanged using the distinction between what is *actually* existent by reason of itself, and what is *possibly* existent by reason of itself but actually existent by reason of something else.

Avicenna has not given an ontological proof, for although his proof depends on an analysis of the concept *necessarily existent by reason of itself*, the analysis alone is not intended to show that anything exists in the external world corresponding to the concept. In deriving various attributes from the concept of necessary existence, Avicenna in fact follows a procedure later to be sanctioned explicitly by Kant, not for necessary existence, but for the concept of *God*. The proposition "God is omnipotent," Kant granted, is a "necessary judgment," inasmuch as "omnipotence cannot be rejected if we posit a deity, that is, an infinite being; for the two concepts are identical."¹¹⁶ Only the derivation of actual existence from a concept gives an ontological proof, subject to the several objections raised by critics of that proof. What Kant sanctions for the concept of *God* but rules out for the concept of *necessary being*, Avicenna does undertake with the concept *necessarily existent by reason of itself*; he derives a set of attributes from the concept, but does not pretend to derive actual existence from it.

Like other cosmological proofs of the Aristotelian type, Avicenna's proof employs the principles of causality and the impossibility of an infinite regress of causes. Avicenna's proof goes beyond Aristotle's, however, in establishing a first cause of the very existence of the universe rather than just a first cause of motion.¹¹⁷ His proof, further, is original in basing even the philosophical principles needed for the argument exclusively upon an analysis of concepts. Merely by analyzing the concept *possibly existent by reason of itself*, Avicenna establishes that if such a being actually exists, it must have a cause. And merely by analyzing the concepts *possibly existent by reason of itself* and *necessarily existent by reason of itself*, Avicenna shows that actual existence cannot consist solely in a series of possibly existent beings. Since Avicenna derives the philosophic

principles used in the proof from an analysis of those concepts, the only proper way of refuting the proof would be to go back and question the analysis. In other words, the critic would have to go back and question Avicenna's dichotomy of what exists by virtue of itself and what exists by virtue of something else; and, more importantly, he would have to question whether what exists by virtue of another can indeed at no time in its career be self-sufficient, and whether what exists by virtue of itself cannot be composed of internal factors. Criticisms along these lines were directed against the proof by Ghāzālī, Averroes, and Hasdai Crescas.¹¹⁸

Avicenna's proof was widely used, less as a whole than in parts or in adaptations. The methodological insistence that a proof of the existence of God is a subject for metaphysics, not physics, was, for example, taken up by the Latin writer Henry of Ghent, although the proof Henry gives is different from Avicenna's.¹¹⁹ The analysis of necessary and possible being on which the proof rests was employed by *Kalām* writers¹²⁰ and there even appeared an adaptation of the proof as a proof of creation.¹²¹ A watered down version of the proof is given in *'Uyūn al-Masā'il*, and related works;¹²² these are works mistakenly attributed to Alfarabi but in fact dependent on Avicenna.¹²³ The proof was reformulated by Maimonides,¹²⁴ from whom it was copied by Thomas Aquinas.¹²⁵ Another reformulation was offered by Crescas.¹²⁶ Avicenna's analysis of necessary and possible existence enriched one of Spinoza's ontological arguments.¹²⁷ The proof is central for Leibniz and his followers, who—although the historical filiation is unclear—reveal striking similarities with Avicenna.¹²⁸ The two best known critiques of the cosmological proof are directed against versions of this proof as formulated by the followers of Leibniz.¹²⁹ Despite the critiques, the proof is accepted by such widely-read twentieth century writers as Mohammed Abduh¹³⁰ and F. Copleston.¹³¹

Notes

1. If the concept is treated as an actually existent object and its cause then sought, we would have a form of cosmological proof. Such is Descartes' argument in *Meditations*, III.
2. Anselm, *Proslogion*, chaps. 2-3.
3. Richard Fishacre, cited by P. Daniels, *Geschichte der Gottesbeweise* (Münster, 1909), p. 23; William of Auxerre, cited *ibid.*, p. 26.
4. Richard Fishacre, cited *ibid.*, p. 23.
5. R. Descartes, *Meditations*, V.
6. Descartes, *Reply to Objections*, I, transl. E. Haldane—G. Ross, *Philosophical Works of Descartes* (Cambridge, 1931), II, 21.

7. B. Spinoza, *Ethics*, I, prop. xi.
8. *Ibid.*
9. The "ontological" proofs of Anselm, Descartes, and Spinoza have been interpreted as not purely logical but as based on certain psychological assumptions concerning the source of the concept. Cf. J. Hick—A. McGill, *The Many-Faced Argument* (New York, 1967), pp. 33 ff. (on Anselm); M. Guerout, *Nouvelles Reflexions sur la Preuve Ontologique de Descartes* (Paris, 1955); H. Wolfson, *Philosophy of Spinoza* (Cambridge, 1948), I, 165 ff.
10. E.g., Descartes as cited in n. 5.
11. E.g., Anselm as cited in n. 2.
12. Cf. D. Henrich, *Der Ontologische Gottesbeweis* (Tübingen, 1960).
13. Cf. Wolfson, *Spinoza*, I, 160; J. Hick, "God as Necessary Being," *Journal of Philosophy*, LVI (1960), 725–734.
14. G. Leibniz, *Monadology*, § 33.
15. Leibniz, *Philosophical Works*, transl. G. Duncan (New Haven, 1890), p. 50.
16. Wolfson, *Spinoza*, I, 180, and n. 5.
17. Chr. Wolff, *Philosophia Prima* (Frankfurt, 1736), § 309. Wolff bases this sense on the previous sense, cf. §§ 302, 308.
18. With the qualification made above in n. 9.
19. Cf. Henrich, *Der Ontologische Gottesbeweis*.
20. Descartes, *Philosophical Works*, transl. Haldane-Ross, II, 20. Cf. *ibid.*, p. 57; *Meditations*, V.
21. Spinoza, *Ethics*, I, xi.
22. H. More, *An Antidote against Atheism*, 2nd ed. (Cambridge, 1655), pp. 12–14.
23. Leibniz, *Monadology*, §§ 44–45.
24. Chr. Wolff, *Theologia Naturalis* (Frankfurt, 1739), II, §§ 20–21, and Henrich's interpretation, *Der Ontologische Gottesbeweis*, pp. 58–60. *Theologia Naturalis*, I, § 10, and II, §§ 20–21, scholia, seem to rule against Henrich's interpretation.
25. A. Baumgarten, *Metaphysica* (Halle, 1779), §§ 810, 823.
26. M. Mendelssohn, *Gesammelte Schriften* (Leipzig, 1843), II, 36, 39.
27. Leibniz, *Philosophical Works*, transl. Duncan, p. 50.
28. Mendelssohn, *Gesammelte Schriften*, II, 384.
29. Cf. below, n. 128.
30. Leibniz, *Monadology*, § 54.
31. Wolff, *Theologia Naturalis*, I, § 24; Baumgarten, *Metaphysica*, § 381; Mendelssohn, *Gesammelte Schriften*, II, 331–332.
32. Cf. Leibniz, *Monadology*, § 45; Baumgarten, *Metaphysica*, § 856.
33. S. Clarke, *A Demonstration of the Being and Attributes of God*, 6th ed. (London, 1725), pp. 14–17. Clarke weaves in another, truly ontological argument from the concepts of infinity and eternity.

34. There is a suggestion of this combination in Leibniz, *De rerum originatione radicali*, transl. R. Latta in *The Monadology* (Oxford, 1898), pp. 339, 342; Baumgarten, *Metaphysica*, § 381 taken together with §§ 102, 109.
35. D. Hume, *Dialogues Concerning Natural Religion*, Part IX.
36. I. Kant, *Critique of Pure Reason*, trans. N. Smith (London, 1956), pp. 508–511; N. Smith, *Commentary to Kant's Critique of Pure Reason* (London, 1923), p. 532.
The present passage in Kant should be compared to *Critique of Pure Reason*, trans. Smith, p. 418, thesis.
37. *Najāt* (Cairo, 1938), pp. 224 ff.
38. *K. al-Ishārāt wa-l-Tanbihāt*, ed. J. Forget (Leiden, 1892), pp. 140 ff.: French translation by A. Goichon (Beirut—Paris, 1951), with pages of Forget's edition indicated.
39. *Shifā': Ilāhiyyāt*, ed. G. Anawati—S. Zayed (Cairo, 1960), pp. 37 ff., 343 ff.
40. *Le Livre de Science*, trans. M. Achena—H. Massé (Paris, 1955), I, 136 ff. I am unable to use the original Persian.
41. He bases the existence of God solely on the impossibility of an infinite regress of causes; cf. Aristotle's *Metaphysics*, II, and Aquinas, *Summa Theologiae*, I, question 2, article 3 (second way).
42. The sentence continues: "whereupon He testifies concerning everything in existence after Him."
43. *Ishārāt*, p. 146.
44. Aristotle, *Metaphysics*, IV, I, 1003a20–21, and Ross's note; cf. Alfarabi, *Aghrād mā ba'd al-Ṭabī'a* (Hyderabad, 1930), p. 4; Avicenna, *Shifā': Ilāhiyyāt*, p. 13; *Najāt*, p. 198.
45. Cf. below, at n. 96.
46. Cf. H. Wolfson, "Averroes' Lost Treatise on the Prime Mover," *Hebrew Union College Annual*, XXIII/1 (1950–51), pp. 683 ff.
47. Aristotle, *Physics*, VIII, 7.
48. *Ibid.*, 5.
49. *Ibid.*, 6.
50. *Ibid.*, 8.
51. *Ibid.*, 10.
52. *Ibid.*, 267b17–26; *Metaphysics*, XII, 7.
53. *Metaphysics*, XII, 7, 1072b10–13.
54. Aristotle, *Metaphysics*, ed. W. Ross (Oxford, 1924), I, xxv.
55. Above, n. 44.
56. Cf. above at n. 53.
57. Aristotle, *Metaphysics*, V, 5.
58. *Shifā': Ilāhiyyāt*, p. 29.
59. *Ibid.*, p. 35.
60. As far as I know, this definition is not explicitly found in Aristotle. It is, however, implied in *Prior Analytics* I, 13, 32a19–20.

61. Cf. above, n. 56.
62. Cf. Aristotle, *Prior Analytics* I, 13, 32a19-20.
63. *Shifā': Ilāhiyyāt*, p. 35.
64. *Ibid.*, p. 29.
65. *Ibid.*, p. 36.
66. *Necessary* with no further qualification is wider than *necessarily existent being*, for it also includes, e.g., the conclusion of a syllogism. Cf. Aristotle, *Metaphysics*, V, 5, 1015b6.
67. *Najāt*, pp. 224-225.
68. Above at n. 57.
69. *Najāt*, p. 225.
70. *Ibid.*
71. Cf. above, at nn. 15-17.
72. Avicenna would clearly consider the "four" that follows from "two plus two" (above, at n. 69) to have this kind of necessity.
73. Leibniz, *De rerum originatione radicali*, trans. Latta, in *The Monadology*, p. 339.
74. Above, at n. 59.
75. Above, at n. 65.
76. It is not *logical* impossibility.
77. Ghazālī, *Tahāfut al-Falāsifa*, ed. M. Bouyges (Beirut, 1927), IV, § 12; translation in *Averroes' Tahāfut al-Tahāfut*, trans. S. van den Bergh (London, 1954), p. 164.
78. *Najāt*, p. 226.
79. *Najāt*, pp. 226, 238; *Shifā': Ilāhiyyāt*, p. 38.
80. This is clear throughout, but is stated explicitly in *Shifā': Ilāhiyyāt*, p. 37.
81. *Ibid.*
82. *Liber de causis*, ed. O. Bardenhewer (Freiburg, 1882), §§ 20, 24, 25, paralleling Proclus, *Elements of Theology*, ed. E. Dodds (Oxford, 1963), §§ 45-48, 127.
83. *Al-Madīna al-Fāḍila*, ed. F. Dieterici (Leiden, 1895), pp. 5 ff. German translation: *Der Musterstaat*, trans. F. Dieterici (Leiden, 1900), pp. 6 ff.; *al-Siyāsāt al-Madaniyya* (Hyderabad, 1926), pp. 13-15. This type of reasoning is also suggested in a text attributed to Alexander of Aphrodisias; cf. *Aristū 'inda al-'Arab*, ed. A. Badawī (Cairo, 1947), p. 266.
84. *Shifā': Ilāhiyyāt*, pp. 37-38.
85. Averroes raises this point as an objection to Avicenna's reasoning as Avicenna is reported by Ghazālī. Cf. *Tahāfut al-Tahāfut*, IV, § 8; translation in *Averroes' Tahāfut al-Tahāfut*, transl. van den Bergh, p. 158.
86. *Najāt*, pp. 228-229; *Shifā': Ilāhiyyāt*, pp. 344-348; *Ishārāt*, p. 144.
87. Cf. Hume, *Dialogues Concerning Natural Religion*, Part IX.
88. This argumentation is given in Ghazālī's account of the views of philosophy, *Tahāfut*, IV, § 4; translation in *Averroes' Tahāfut al-Tahāfut*, transl. van den Bergh, p. 160. In

- van den Bergh's translation, the phrase: "the first body cannot be composite," should be corrected to: "the first principle cannot be composite."
89. The complete argument is very involved.
 90. *Najāt*, pp. 229-234; *Shifā': Ilāhiyyāt*, pp. 43-47; 350-354; *Ishārāt*, p. 143.
 91. *Najāt*, pp. 229, 245; *Shifā': Ilāhiyyāt*, pp. 355-356; 367-370.
 92. *Shifā': Ilāhiyyāt*, p. 6.
 93. Aristotle, *Posterior Analytics*, I, 2, 71b19-32.
 94. *Shifā': Ilāhiyyāt*, p. 438. This was a commonplace; cf. Alexander, *Commentary on Metaphysics*, in *Commentaria in Aristotelem Graeca*, I (Berlin, 1891), 686, lines 36-37; Themistius, *Paraphrase of Metaphysics*, *ibid.*, V/5 (Berlin, 1902), Hebrew part, p. 11, line 24; and cf. *Liber de Causis*, § 5.
 95. *Shifā': Ilāhiyyāt*, p. 6.
 96. *Najāt*, p. 235.
 97. Cf. above at nn. 42-45.
 98. Above, at nn. 78-79.
 99. *Najāt*, p. 235.
 100. H. Wolfson, "Notes on Proofs of the Existence of God in Jewish Philosophy," *Hebrew Union College Annual*, I (1924), 584 ff.
 101. He in fact treats the two principles as three; cf. below, n. 113.
 102. Avicenna explains that the maintaining cause can either be identical with the cause of generation or it can be different. For example, a container that lends its shape to the liquid contained therein is both the cause of the generation of that shape and also the cause maintaining the shape. Thus here the two are identical. But the cause of the generation of the shape of a statue is the artisan, whereas the cause maintaining the statue's shape is the "dryness of the substance" of which the statue is made. Here the two causes are different. Cf. *Najāt*, p. 237.
The distinction Avicenna draws here was later to be expressed by Thomas Aquinas as a distinction between the cause of *fieri* and the cause of *esse*; *Summa Theologiae*, I, question 104, article 1.
 103. To refute an infinite regress, Avicenna, as will appear, treats all possibly existent beings as a single whole. This procedure can make sense only for possible beings that exist at the same time.
 104. Aristotle's proof from motion, it should be noted, is also primarily interested in the causes *maintaining* the motion of the universe.
 105. This does not exclude its being a component, as in the instance of the statue, above, n. 102.
 106. Cf. above, at n. 70.
 107. *Najāt*, pp. 236-237.
 108. E.g., Aristotle, Maimonides, Aquinas.
 109. The Jewish philosopher Hasdai Crescas constructed his proof on the general principle without using the corollary that an infinite regress of causes is impossible. Cf. *Or ha-Shem* (Ferrara, 1555), I, iii, 2.

110. Possibly, though, he considered the thesis to be intuitively absurd; this is suggested in *Ishārāt*, p. 141.
111. Above, at n. 86.
112. *Najāt*, p. 235; *Ishārāt*, pp. 141-142.
113. Besides the principle of causality and the impossibility of an infinite regress, Avicenna writes that his proof needs a third proposition, the impossibility of a circular, as distinct from a linear, regress. A circular regress is a situation in which X, Y, and Z, for example, exist simultaneously in such a way that X is the cause maintaining Y in existence, Y is the cause of Z, but Z is the cause of X. That situation is manifestly absurd, according to Avicenna, for two reasons, for the same reason that a linear regress is impossible; and also because it would mean that X is a distant cause of itself, also a distant effect of itself, and, put another way, is dependent for its existence upon something whose existence is posterior to it. Cf. *Najāt*, p. 236; Aristotle, *Physics*, VIII, 5, 257b, 13-20.
114. *Najāt*, p. 239; *Ishārāt*, pp. 141-142.
115. Cf. above at nn. 77-78.
116. Kant *Critique of Pure Reason*, transl. Smith, p. 502.
117. Avicenna does not claim originality in this. He writes that although the "first" philosophers—i.e., Aristotle and his commentators—explicitly only proved a first cause of motion, they also alluded to a proof of a first cause of existence; cf. *Mubāhathāt*, in *Aristū inda al-'Arab*, ed. Badawi, p. 180, § 290. Such had been the position of Ammonius and Simplicius; cf. Simplicius, *Commentary on Physics*, in *Commentaria in Aristotelem Graeca*, X (Berlin, 1895), 1362-1363.
118. Ghazālī, *Tahāfut*, IV, §§ 11 ff.; Wolfson, "Averroes' Lost Treatise on the Prime Mover"; Crescas, *Or ha-Shem*, I, ii, 17.
119. A. Pegis, "Toward a New Way to God: Henry of Ghent," *Medieval Studies*, XXX (1968), 229-241.
120. Juwaynī, *K. al-Irshād* (Cairo, 1950), pp. 28-29, 59; Ghazālī, *al-Iqtisād* (Ankara, 1962), p. 25; Fakhr al-Dīn al-Rāzī, *Muḥaṣṣal* (Cairo, 1905), pp. 106-108; Ījī, *Mawāqif* (Cairo, 1907), VIII, pp. 2, 5-8.
121. Ījī, *Mawāqif*, VII, p. 227.
122. 'Uyūn al-Masā'il, in *Alfarabi's Philosophische Abhandlungen*, ed. F. Dieterici (Leiden, 1890), §§ 1, 3; R. Zaynūn (Hyderabad, 1925), pp. 3-4.
123. Cf. S. Pines, "Ibn Sina et l'Auteur de la Risālat al-Fuṣūṣ fi l-Hikma," *Revue des Études Islamiques*, XIX (1951), pp. 121-124; F. Rahman, *Prophecy in Islam*, p. 21.
124. Maimonides, *Moreh Nebukim*, II, 1 (3).
125. Aquinas, *Summa Theologiae*, I, question 2, article 3 (third way).
126. Above, n. 109.
127. Cf. Wolfson, *Spinoza*, I, 197 ff.; Spinoza, *Ethics*, I, xi, second proof.
128. Leibniz, *De rerum originatione radicali*, transl. Latta in *The Monadology*, pp. 337-339: "The sufficient reason of existence [=Avicenna's maintaining cause] cannot be found either in any particular thing or in the whole aggregate and series of things. . . . You may indeed suppose the world eternal; but as you suppose only a succession of states

in none of which you find the sufficient reason . . . it is evident that the reason must be sought elsewhere. . . . The series of changing things, even if it be supposed that they succeed one another from all eternity, has its reason in . . . the prevailing of inclinations, . . . in inclining reasons. . . . Accordingly the reasons of the world lie hid in something extramundane, different from the concatenation of states or the series of things, the aggregate of which constitutes the world."

Wolff, *Theologia Naturalis*, I, §§ 24, 29, 33, 47, 48, 55, 1107. Wolff explains that a necessary being is a being that exists through itself. By analyzing the concept he shows that such a being cannot be extended or composite (and therefore the physical world cannot be a necessary being), and that there cannot be two of them. To demonstrate that such a being actually exists, Wolff begins with the datum that at least something exists—the human soul. Then he argues that either this thing is itself necessarily existent or ultimately depends on something that is necessarily existent: "For everything must have a sufficient reason why it should be, rather than not be." And if the thing we start with has the reason for its existence in something other than itself, we shall arrive at the sufficient reason of its existence only when we arrive at that "which does have the sufficient reason for its existence in itself" (§ 24). Also cf. Baumgarten, *Metaphysica*, §§ 361, 375, 381.

129. Above, nn. 35, 36.
130. Mohammed Abduh, *R. al-Tawḥīd*, chapter 2. This is a brief version of Avicenna's proof.
131. Cf. the Russell and Copleston debate in B. Russell, *Why I Am Not a Christian* (London, 1957), pp. 145-146. Copleston states that he is following Leibniz.
Also cf. R. Garrigou-Lagrange, *Dieu, Son Existence et Sa Nature*, 11th ed. (Paris, 1950), pp. 269 ff.; R. Taylor, *Metaphysics*, Englewood Cliffs, 1963, pp. 85-93.