

[History of Logic from Aristotle to Gödel \(www.historyoflogic.com\)](http://www.historyoflogic.com)

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## Ancient Islamic (Arabic and Persian) Logic and Ontology

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Islamic (Arabic and Persian) Logic and Ontology (Current page)

## Bibliography on Language and Logic in Ancient Islam

### Logic in Medieval Islam

"It has long been recognized by historians of logic that the medieval Muslim philosophers and philosophical theologians (*Mutakallimūn*: rendered variously as rationalist theologians, dialectical theologians, the "scholastics" of Islam) made some interesting contributions to the history of logic. When the Greek logical works were handed to the Muslim scholars in translation in and after the 9th century A.D., they studied them thoroughly and critically and wrote commentaries upon them. Prantl, (1) the 19th-century writer on the history of logic in the West, noted that Arabic literature on logic was one of the main sources for the terminist logic (i.e., the logic of terms) of the medieval Western logicians - a view upheld by 20th century scholars on medieval philosophy. (2) William and Martha Kneale (3) and David Knowles (4) have also noted the origin in Avicenna (Ibn Sina, d. A.D. 1037) of the doctrine of *intentio*, a doctrine which was of great importance in both Arabic and medieval Western philosophical logic. The *secundae intentiones* constituted the subject matter of logic. (I have shown elsewhere, however, that in Arabic logic itself the doctrine of the "intentions" is traceable to al-Farabi, d. A.D. 950). (5)Bochenski (6) was also aware that "Arabian logicians certainly exercised some influence" on medieval scholastic logic.

However, for a complete knowledge of the contributions to logic made by the Muslim philosophers we have to wait until a great number of the logical works in Arabic have been edited and studied. But we know so far that modal logic, the branch of logic which deals with the concepts of possibility and necessity, because of its relevance to the problem of determinism and divine foreknowledge, was of great concern to them; that the relationship between logic and grammar interested them; that conditional syllogisms, the problem of universals, the analysis of the concept of existence and predication, the theory of categorical propositions were some of the logical or logico-philosophical questions which the Muslims philosophers treated in interesting ways." (pp. 1-2)

#### Notes

- (1) C. Prantl, *Geschichte der Logik in Abendlande* (Leipzig, 1855), 2: 263 f.
- (2) See, e.g., L. M. de Rijk, *Logica Modernorum* (Assen, 1962), 1: 18-19.
- (3) William Kneale, *The Development of Logic* (Oxford, 1962), p. 229.
- (4) David Knowles, *The Evolution of Medieval Thought* (Baltimore: Helicon Press, 1962), p. 197.
- (5) Kwame Gyekye, "The Terms 'prima intentio' and 'secunda intentio' in Arabic Logic," *Speculum* 46 (January 1971).
- (6) I. M. Bochenski, *A History of Formal Logic* (Notre Dame, 1961), p. 150.

From: Kwame Gyekye, *Arabic Logic. Ibn al-Tayyib's Commentary on Porphyry's Eisagoge*, Albany: State University of New York Press 1979.

Whereas the study of medieval Western logic is now an established field of research, contributing both to modern philosophy of logic and to the intellectual history of the Middle Ages, the study of logic in the precolonial Islamic world is still barely in its infancy. That fact alone makes it difficult to write an introductory chapter on the field:we are as yet unclear what contributions of the logicians writing in Arabic are particularly noteworthy or novel. It is also a dangerous temptation in

this state of relative underdevelopment to cast an eye too readily on the work of the Latin medievalist, and to import the methods, assumptions, and even the historical template that have worked so well in the cognate Western field.

This temptation must be resisted at all costs. There are many important differences between the scholarly ideals and options of the Latin West and the Muslim East; there are, also, many differences between the various fortunes encountered by rigorous logical activity in the two realms over the centuries. A glance at the historiographical preliminaries of Bochenski's *History of Formal Logic* prompts the following observations.<sup>(1)</sup> First and foremost, Aristotle ceases by the end of the twelfth century to be a significant coordinate for logicians writing in Arabic - that place is filled by Avicenna. The centrality of Avicenna's idiosyncratic system in post-Avicennian logical writings and the absence of Aristotelian logic in a narrowly textual sense meant that Arabic texts dealing with Avicenna's system were left to one side by the medieval Latin translators. Instead, other, less influential texts by Averroes and al-Fârâbi were translated because they did concentrate on Aristotle and spoke to thirteenth-century Western logical concerns. Even at the outset, then, the insignificance of Aristotle's logical system in the Avicennian tradition worked to distort Western appreciation of the relative importance of particular logicians writing in Arabic.

A second difference is that the whole range of Aristotelian logical texts were available in Arabic by about 900, and so the broad periodization of medieval Latin logic into *logica vetus* and *logica nova* is inappropriate as a way of periodizing logic written in Arabic; by the time serious logical work began, the complete Organon was available. Avicenna's work marks the watershed for any helpful periodization. Thirdly, Bochenski's analysis of what preconceptions and historical meanderings clutter the way to the proper study of medieval Western logic (the collapse of acute logical study with the demise of scholasticism, the ahistorical reductivism of post-Kantian logic, the institutionalization of a psychologistic logic in neoscholasticism) do not apply to the study of the logic of medieval Muslim scholars - even in the early twentieth century, it is clear that at least some scholars were still in contact with the acute work of the thirteenth century. There had been far less of a rupture in logical activity over the intervening centuries. On the other hand, there have been postcolonial efforts to find later Western logical achievements foreshadowed in early Arabic logic, and this has damaged the prospects for appraisal of the work by leading to a disproportionate focus on minor traditions.

Finally, only some of the characteristics Bochenski finds which distinguish medieval Western logic from the logic of late antiquity apply to the logic being written in Arabic at roughly the same time. It too is highly formal and metalogical in its treatment, and pedagogically central; but no doctrine like supposition was developed, and there seems to have been far less concern with antinomies. One may say - nervously, given the current state of research - that Arabic logic is somewhat closer to the logic of late antiquity in its concerns and methods than medieval Latin logic. That said, one must guard against an obvious alternative assumption, which is that Arabic logic is by and large just one or other of the systems of late antiquity.<sup>9</sup> We already have enough control over Avicenna's logic to know that is false." (pp. 248-249)

## Notes

(1) I. M. Bochenski, *A History of Formal Logic*, translated by I. Thomas, Notre Dame: Indiana University Press, 1961; see esp. "On the History of the History of Logic", pp. 4-10.

From: Tony Street, "Logic", in Peter Adamson, Richard C. Taylor, *The Cambridge Companion to Arabic Philosophy*, Cambridge: Cambridge University Press 2004, pp. 247-265.

## Ontology in Medieval Islam

"The problem of expressing the Greek concept of being in Arabic did not escape classical Islamic writers. But the discussion of this problem as an instance of the general question of the influence of grammar on the formation of philosophical concepts is to be found among some recent writers on Islam, although unfortunately there is hardly anything approaching a sustained treatment from this perspective.

A few quotations from two recent writers will bring into focus those distinctive features of the Arabic language which are said to be problem-causing, and at the same time they will provide our analysis with a point of departure.

In his useful book *Philosophical Terminology in Arabic and Persian*, Soheil Afnan identifies the problem for the Arabic translator of Greek metaphysics in these words: "the translator can easily find himself helpless." (1) This is generalized to all semitic languages, which are said to be "still unable to express the thought adequately." (2) Afnan attributes this to what he calls "the complete absence of the copula." (3) Another writer, the linguist Angus Graham, in a stimulating article, (4) singles out another, but related, feature of Arabic, the sharp separation of the existential and predicative functions, a feature notably lacking in classical Greek. (5) These two features, the absence of the copula and the existential-predicative separation, are supposed to have stood in the way of expressing the Greek concept of being adequately or accurately. And what is meant by this, in the words of Afnan, is the failure to express "the precise concept of being as distinct from existence." (6) Graham puts it this way: "Because of the structure of the language, they [the Arabic translations of Aristotle] transform him at one stroke into a philosopher who talks sometimes about existence, sometimes about quiddity, never about being.(7)" (pp. 29-30)

### Notes

(1) *Philosophical Terminology in Arabic and Persian*, p. 29.

(2) *Ibid.*, p. 30. It is not clear what the relevance of time is ("still").

(3) *Ibid.*, p. 29.

(4) Angus Graham, " 'Being' in Linguistics and Philosophy," *Foundations of Language* 1 (1965): 223-31.

(5) *Ibid.*, p. 223. (6) Afnan, *op. cit.*, p. 29.

(7) Graham, *op. cit.*, p. 226; italics in the original.

From: Fadlou Shehadi, *Metaphysics in Islamic Philosophy*, New York: Caravan Books 1982.

### Islamic logicians

Al Kindi (c. 801 - 873)

Al-Farabi (c. 872 - 950/951)

Avicenna (Ibn Sina) (c. 980 - 1037)

Averroes (Ibn Rushd) (1126 - 1198)

### Bibliographical guides

A comprehensive bibliography of secondary literature on Islamic philosophy up to the year 2005 can be found in:

1. Hans Daiber. *Bibliography of Islamic philosophy*. Leiden: Brill 1999. (Two volumes).
2. ————. *Bibliography of Islamic philosophy. Supplement*. Leiden: Brill 2007.

See also:

1. Georges C. Anawati. "Bibliographie de la philosophie médiévale en terre d'Islam pour les années 1959-1969" in: *Bulletin de Philosophie Médiévale*, 10-12, 1968-70, pp. 343-344.
2. ———. "Bibliographie Islamo-arabe. Livres et articles sur l'Islam et l'arabisme parus, en langues occidentales, durant la période 1960-1966" in: *Mélanges de l'Institut dominicain des études orientales (MIDEO)*, 9, 1967, pp. 143-213.
3. Thérèse-Anne Druart and Michael L. Marmura. "Medieval Islamic philosophy and theology: Bibliographical Guide," in:
  4. *Bulletin de Philosophie Médiévale* (32) 1990 (1986-1989) pp. 106-135;
  5. *Bulletin de Philosophie Médiévale* (35) 1993 (1989-1992) pp. 181-219;
  6. *Bulletin de Philosophie Médiévale* (37) 1995 (1992-1994) pp. 193-232;
  7. *Bulletin de Philosophie Médiévale* (39) 1997 (1994-1996) pp. 175-202;
  8. *Mélanges de l'Institut dominicain des études orientales (MIDEO)* (24) 2000 (1996-1998) pp. 381-414.