

Scholastic Economics and Arab Scholars: The "Great Gap" Thesis Reconsidered*

S.M. Ghazanfar

Introduction

Joseph Alois Schumpeter (1883–1950) stands among the intellectual giants of the twentieth century, especially in the field of economics; in his long and varied impact on the profession, he is second only to Maynard Keynes. He was a pragmatist in his economic philosophy, an "objective scientific investigator with no particular axe to grind" (Newman, et al., 746). His encyclopedic *History of Economic Analysis*, edited after his death by his wife and published in 1954, is a monument to his gigantic and versatile achievements; and it remains the *locus classicus* of almost all works in this area.¹

The inspiration for the present paper comes primarily from this Schumpeterian classic (1954), as do the quotations from Schumpeter that appear here. However, my purpose is a bit out of the ordinary: I propose to take issue with the "Great Gap" thesis that this eminent scholar propounded. He argued that "economic analysis begins only with the Greeks," not to be reestablished until the Scholastics emerged with St. Thomas Aquinas; the many "blank" centuries within that span represent the Schumpeterian "Great Gap" (52). This thesis has been deeply entrenched as part

* An earlier version of this paper was presented at the History of Economics Society Conference in Toronto, Canada, June 1988. The author has benefited from comments by discussants, especially Professor S. Todd Lowry of Washington and Lee University, Lexington, Virginia, who also separately communicated some useful suggestions. Also, the author gratefully acknowledges comments from Professor Warren S. Gram of Washington State University, Pullman, Washington; and Professor Jurgen Backhaus of Rijksuniversiteit, Limburg, the Netherlands. Thanks are also owed to two graduates students: Mr. A. Rubian, who suggested some useful references, and Mr. Steve Peterson, who provided some research assistance. Any shortcomings remain the author's responsibility.

of the accepted tradition and is reflected in almost all relevant literature.

I shall begin with a brief discussion of the "Great Gap" thesis and the tradition it perpetuated in the profession, followed by some analysis and evidence disputing its validity. Next I shall present illustrative synopses of the economic thought of a few selected Arab scholars who, writing prior to the medieval European Scholastics, offered rather detailed and sophisticated discourses on numerous economic issues.² Then, some evidence will be presented regarding the transmission of Arab economic thought into Latin and the incorporation of that stream into Scholastic economics. I shall conclude this paper with a plea that the contributions of the Arab scholars to economic thought be "rehabilitated" in the science of economics for the sake of doctrinal continuity as well as objectivity.

The "Great Gap" Thesis and the Perpetuation of a Tradition

In his *History*, Schumpeter presents "the intellectual efforts that men have made in order to *understand* economic phenomenon or, which comes to the same thing, the history of the analytic or scientific aspects of economic thought" (3). He states that scientific analysis is "an incessant struggle with creations of our own and our predecessors' minds and it 'progresses,' if at all, in a criss-cross fashion, not as logic, but as the impact of new ideas or observations or needs, and also as the bents and temperaments of new men, dictate. Therefore, any treatise that attempts to render 'the present state of science' really renders methods, problems, and results that are historically conditioned" (4). Schumpeter's main purpose is "to describe what may be called the process of Filiation of Scientific Idea. . . . the process by which men's efforts to understand economic phenomena produce, improve, and pull down analytic structures in an unending sequence." But, "this filiation of ideas has met with more inhibition in our field." Thus, he says, the obvious answer is "the study of doctrinal history" (6).

Schumpeter defines science as "tooled knowledge," typified by the use of "special techniques," and "command of facts un-

earthed by these techniques which are beyond the range of the mental habits and the factual knowledge of every day life" (7). Then, after classifying Greek economic thought as being consistent with his definition of science (in terms of economic orthodoxy whereby, for example, St. Thomas's "just price" is viewed as equivalent to the normal, competitive market price; see Schumpeter, 93; also see Raymond de Roover), Schumpeter leaps over to the thirteenth century and chooses St. Thomas Aquinas's *Summa Theologica* as the key to scientific thought and "the earliest and most important step in methodological criticism taken in Europe after the breakdown of the Graeco-Roman world" (8). Thus, despite his earlier emphasis on the evolutionary nature of economic thought, subject to "predecessors," "historical conditioning," and "process of filiation," now Schumpeter disregards the possibility of almost any developments, economic or otherwise, elsewhere during the intervening period – i.e., between the Greeks and the Scholastics.³

Later, Schumpeter is more explicit. Before undertaking a discussion of the "classical situation" that emerged with Adam Smith, he attempts to cover "the whole span of the more than 2000 years that extends from the 'beginnings' to about twenty years after the publication of the *Wealth of Nations*. This task is much facilitated by the further fact that, so far as the purposes of history are concerned, many centuries within that span are blanks" (52).

In Chapter 2 of Part II, Schumpeter begins with a discussion of the "Great Gap." Reference is made to the Byzantine emperors who must have "reasoned" about a "host of legal, monetary, commercial, agrarian, and fiscal problems. . . . If they did, however, the results have been lost" (73). Further, not much of any significance happened in the Germanic states of the West, either. The philosophers who adorned the courts of Germanic rulers "touched upon economic questions incidentally, if at all." Such arguments lead to Schumpeter's conclusion: "So far as our subject is concerned we may safely leap over 500 years to the epoch of St. Thomas Aquinas (1225–1274) whose *Summa Theologica* is in the history of thought what the Western spire of the Cathedral of Chartres is in the history of architecture" (74).

The implication here is that for more than five hundred years prior to the writings of the Scholastics, nothing of any significance to economics was said or written anywhere else – as though

the period of Europe's Dark Ages was a universal phenomenon that extended over the intellectual evolution of the rest of the world.

Thus, Schumpeter strengthened and perpetuated a tradition that, unfortunately, was already well-established in the literature from about the late 1800s. There is hardly any book, beginning with William J. Ashley's *An Introduction to English Economic History and Theory* (1888), that does not echo Schumpeter's sentiments, punctuated only by a very rare footnote or reference to Arab scholarship during those "blank" centuries.

We can verify briefly this persistent tradition in more concrete terms. About the most widely read post-World War II text has been Eric Roll's, originally published in 1954; and it fully reflects, to this day, the extant tradition – there is not a single reference to any of the Arab precursors of the Scholastics. In 1964, Henry Spiegel published his edited volume on the subject, which "covers Aristotle down to the present" and is intended to be "international in scope" (Spiegel, ix). Further, while introducing Richard Tawney's essay on medieval economic thought, Spiegel says this "thought is inspired by ethics, and reflects the doctrines of Aristotle as well as the Hebrew-Christian tradition" (Spiegel, 16). There is no mention of the Arab-Islamic tradition that influenced the Scholastics; the same is true of Tawney's essay. Another example is the Spengler-Allen compilation of essays on this subject, almost as much a classic as Schumpeter's *History*; here, too, those intervening centuries (about 500 AD–1200 AD) are assumed "blank."

Another well-received book on the subject recognizes, referring to the medieval economic thought, that "it is inconceivable that there was no 'economic thought' over so many years – even in the Dark Ages" (Newman, et al., 15). Yet the editors do not explore the "inconceivable," and simply begin with the Scholastics; the tradition persists. The same is true of a relatively recent book by Barry Gordon, whose title *Economic Analysis Before Adam Smith* suggests that it might deviate from the tradition; the book is intended to cover the "ideas, personalities, and events of antiquity, the middle ages, and the Renaissance" (Gordon, xi). However, aside from a brief reference to "Arab commentators like Avorres [Averroès] and Avicenna," the "Gap" lingers on (Gordon, 154).

The only recent scholar who briefly departs from the Schumpe-

terian tradition is Karl Pribram (1877–1973), whose classic has been published recently (also posthumously). Pribram chooses to begin with the thirteenth century. While claiming that the “history of economics starts with the Thomistic economic doctrines,” he recognizes the influence of not only the Aristotelian thought on the Scholastics but the “treatises in which Arabian philosophers had interpreted Aristotle’s work in the light of their own reasoning” (Pribram, 4). Elsewhere, while tracing the evolution of Europe’s Renaissance and discussing the “disintegration of Thomistic reasoning,” he mentions “two significant streams” of influence emanating from the Arab-Islamic world. Thus, “one stream originated in Italian cities, which in the wake of the Crusades had established relations with the traders of the Near East and had adopted various institutions and devices which were at variance with the rigid pattern of the medieval social and economic organization. The other, far more important, stream started, within the body of Scholastic theologians, who derived their intellectual armory from the works of Arabian philosophers” (Pribram, 21). Here one can see some clues as to the origin and evolution of Scholastic economics.⁴

However, the critical question is this: If economic analysis began with the Scholastics, how were they able to develop and assimilate such a voluminous body of thought on economic issues (not to speak of other matters of human intellectual evolution) during the thirteenth, fourteenth, and early fifteenth centuries? George O’Brien, writing on medieval economics in the 1920s, quotes a contemporary French scholar named Jourdain as saying “that he carefully examined the work of Alcuin, Rabanas Mauras, Scotus Erigenus, Hincmar, Gerbert, St. Anselm and Abelard – the greatest lights of theology and philosophy in the early Middle Ages – without finding a single passage to suggest any of these authors suspected that the pursuit of riches, which they despised, occupied a sufficiently large place in national as well as individual life to offer to the philosopher a subject fruitful in reflections and in results” (O’Brien, 14). That is, these pre-Thomas Latin Scholastics had nothing to say on economic matters; thus, they can be eliminated as sources of influence on Thomistic economic thought.

Such “irrelevance” of economics in early Christian thought is clearly acknowledged even by Schumpeter. Lamenting this situation, Schumpeter writes that “whatever our sociological diagnosis

of the mundane aspects of early Christianity may be, it is clear that the Christian church did not aim at social reform in any sense other than that of moral reform of individual behavior. At no time even before its victory, which may have roughly dated from Constantine's Edict of Milan (313 AD), did the church attempt a frontal attack on the existing social system or any of its more important institutions. It never promised economic paradise, or for that matter any paradise this side of the grave. The How and Why of economic mechanisms were then of no interest either to its leaders or to its writers" (72). However, Schumpeter argues that the thirteenth century is distinguished from the previous era due to the theological-philosophical revolution, which was caused by the resurrection of "Aristotelian thought." But, he dismisses Aristotelian influence as the chief cause of St. Thomas's "towering achievement." He insists, "I do not assign to the recovery of Aristotle's writings the role of chief cause of thirteenth century developments. Such developments are never induced by an influence from outside" (88).

What was true in Schumpeter's time and what has since become even clearer is something amply manifested through research in medieval history: that is, Scholasticism was ecclesiasticism made up of Patristic, Aristotelian, Neoplatonic, and Arab-Islamic thought. Schumpeter acknowledges, explicitly or implicitly, all except the last as the major sources of influence. He seems aware of such an influence, as is evident from his brief statement and a footnote, concerning "Semite mediation" (87) through Avicenna (Ibn Sina, 980–1033), Averroès (Ibn Rushd, 1126–98), and Maimonides (Ibn Maimon, 1135–1204). Beyond this, however, Schumpeter chose not to explore. In the words of Bernardelli, who, incidentally, points out a similar, but historically minor, "mishap" in Schumpeter's *History*, such an attitude is "all the more disappointing," as Schumpeter "must have been well aware of the fascinating process of cultural diffusion" between the Arab world and the West; and by restricting himself to Europe, Schumpeter "grossly underestimated the richness in analytical content of the Mesopotamian contributions" (Bernardelli, 320).

Clearly, the reason for Schumpeter's omission could not be the lack of availability of the works of Arab scholars. For almost a century prior to Schumpeter's time, a plethora of those volumes was available in all major European languages (with which Schumpeter was familiar), and these works showed that of all

the medieval scholars mentioned by Schumpeter, there was none that had not been influenced by Arab scholars.⁵ The names cited by Schumpeter are: Robert Grosseteste, Alexander of Hales, Albertus Magnus, St. Thomas Aquinas, St. Bonaventura, Duns Scotus, Roger Bacon, Marsilius of Padua, Richard of Middleton, Nicholas Oresme, and Joannes Buridanus; but there are others who were similarly influenced – such as Siger of Brabant, John Peckham, Henry of Gant, Williams of Occam, Walter Burley, and William of Auvergne (see, for example, Afnan, Callus, Copleston, Crombie, Durant, Hammond, Harris, Leff, Meyers, Sarton, Sharif, and Sheikh). Surely, the possibility of this influence should have made Schumpeter a bit tentative in insisting on the “discontinuity” in intellectual evolution, even if he was reluctant to acknowledge the possibility of Arab scholars’ impact on Scholastic economic thought, and even if these scholars were to be viewed simply as “interpreters” or “transmitters” of Greek thought.

Whatever might have been Schumpeter’s motivation for disregarding the influence of Arab-Islamic scholars, the results have been most unfortunate for the history of economic thought.⁶ The fact that his book became a classic helped to perpetuate what we may call a “blind spot” in economics. Any attempt at extracting the economic thought of St. Thomas, as Schumpeter did, must lead one to consult his *Opera Omnia*, *Summa Theologica*, and *Summa contra Gentiles*, and one cannot do so without seeing some references to Arab scholars, such as Al-Farabi (Alfarabus), Ibn Sina (Avicenna), Averroès (Ibn Rushd), and Al-Ghazali (Algazel). While such encounters are unavoidable, they seem to have failed to arouse scholarly curiosity on the part of Schumpeter and other who wrote in his tradition. Thus, one looks in vain in the works of an equally distinguished scholar, Jacob Viner, who discusses the economic ideas of Scholastics, especially St. Thomas Aquinas; and he, too, accepts the “Gap” and chooses to treat the several intervening centuries as mere “blanks.”⁷

Despite the foregoing, however, there are a few scholars of medieval history who would reject the Schumpeterian “Great Gap” as patently absurd:

1. “No historical student of the culture of Western Europe can ever reconstruct for himself the intellectual values of the later Middle Ages unless he possesses a vivid awareness of Islam looming in the background” (Butler, 63).

2. "Without the influence of Arabian Peripateticism, the theology of Aquinas is as unthinkable as his philosophy" (Harris, 40).
3. "The fact that Aquinas derived ideas and stimulus from a variety of sources tends to suggest both that he was an eclectic and that he was lacking in originality. . . . In other words, the more we know about Aristotle and about Islamic and Jewish philosophy, as also of course about previous Christian thought, the more we may be inclined to wonder what, if anything, is peculiar to Aquinas himself" (Copleston, 181).
4. "In the 12th and 13th centuries, the first period of European impingement, Arabic philosophical writings exerted a significant stimulative influence on the great synthesis of Christian Aristotelianism by St. Albert the Great and St. Thomas Aquinas. . . . This influence has not only been extensive and profound, but relatively continuous and astonishingly diversified" (Rescher, 156–57).
5. "The Arab has left his intellectual impress on Europe, as, before long, Christendom will have to confess; he has indelibly written it on the heavens, as anyone may see who reads the names of the stars on a common celestial globe" (Draper, 42, vol. 2).

Indeed, it is the enormity of this kind of diverse influence of Arab-Islamic knowledge upon medieval Europe which forms the basis of Haskins's book title, *The Renaissance of the Twelfth Century*.

Arab Scholars' Economic Thought and Transmission to European Scholastics: A Sketch

It is appropriate at this point to present a brief outline of the available corpus of economic ideas emanating from Arab scholars prior to the emergence of Scholastic economic thought, and to offer some evidence as to the transmission of those ideas to the Scholastics. Indeed, it is possible to demonstrate, based on available historical research, that the Arab scholarship, itself stimulated by the Greeks and further developed in light of the Islamic ethos, not only inspired Scholastic thought, but that much of that scholarship became incorporated in Scholastic writings.

A survey of the relevant literature enables one to identify

numerous prominent Arab scholars (both from the Islamic East and the West).⁸ As with the Scholastics, the primary focus of these scholars was not the domain of economic aspects of life. One chiefly encounters theological-philosophical ratiocination in their treatises, and not economic content as we now know the subject – i.e., not the abstract economic principles and models that one encounters in contemporary texts. Within the religious-ethical system of Scholastic jurisprudence, whether Islamic or Christian, the assumption was that all behavior, including economic life, is teleological, in that its ultimate aim is God and salvation. Thus, the economic thought emanating from either the Arab-Islamic or European-Christian scholars was never elaborated in separate volumes; indeed, such a “segmented” treatment hardly would have been compatible with the prevailing emphasis on the “unity of knowledge” as a fundamental principle of learning.

From a list of at least thirty Arab scholars over the period 700–1400, economic “synopses” of only four such scholars will be presented:

1. Abu Yousuf (731–798). The main point of this scholar’s works, as that of several others, related to the economic responsibilities of the rulers; thus, much of Abu Yousuf’s discussion pertained to agricultural relations and taxation. He preferred the state taking a proportion of agricultural produce from the farmers rather than levying a fixed rent on land. This, he thought, was more equitable and more conducive to large revenue because it facilitated the expansion of the area under cultivation. Further, he states certain principles of taxation that anticipate those discussed by the classical economists centuries later – often called the “canons of taxation.” The ability to pay, taxpayers’ convenience, as well as tax administration issues are discussed by Abu Yousuf. He also discusses the need for developing socioeconomic infrastructure (roads, bridges, canals, etc.). He emphasizes the role of free markets, within the prescribed Islamic constraints, and is against price-fixing by the authorities – though state intervention may be required to regulate the markets in order to protect the society from elements of monopoly, hoarding, and other corrupt practices.

2. Ahmed Ibn Hanbal (780–855). As the founder of the fourth school of Islamic jurisprudence, Ahmed Ibn Hanbal discussed the problems of promoting socioeconomic welfare (*maslaha*) in

great detail – he insisted on greater flexibility and realism concerning changing economic issues. He talked in terms of fairness of market competition, such that monopolies would not emerge – in which event state intervention may be necessary. He also talked of granting maximum freedom of contract and enterprise, and, in that context, he would allow conditions to be attached to contracts, something generally disallowed by the other schools.

3. Abu Muhammad Ibn Hazm (d. 1064). Ibn Hazm was a great jurist whose unique approach to Islamic law rejected analogical reasoning. With a clear perception of the state's collective responsibilities, he discussed various means to removing poverty and securing socioeconomic justice through redistribution. Further, he was the only scholar among the four schools of Islamic jurisprudence who prohibited the renting of agricultural land; he thought the owner should cultivate land himself or enter into a sharecropping arrangement with another. Thus, some have labelled him as socialistic. It should be noted, however, that the majority opinion in Islamic jurisprudence allows the renting of agricultural land.

4. Abu Hamid Al-Ghazali (1058–1111). "The greatest Muslim after Muhammed" (Watt 1964: vii). Up to the thirteenth century advent of European Scholastics, Al-Ghazali is about the most prominent scholar who discussed economic issues extensively; in fact, a large section of his foremost classic, *Ihya Ulumal-Din (Revival of the Religious Sciences)*, is devoted mainly to economic issues, such as voluntary market exchange, stages of production, poverty and income distribution, division of labor, trading among cities, public finance issues, principles of government for rulers, usury, barter and need for money, counterfeiting and debasement of money (preceding Nicholas Oresme, who is often credited with the origin of what later became "Gresham's Law"), ethics of market behavior, and other topics (see Ghazanfar-Islahi for details).

There are some other prominent scholars of the medieval Arab-Islamic world who wrote on economic issues – in particular, Ibn Taimiya (1263–1328), Ibn Qayyim (1292–1350), and, of course, Ibn Khaldun (1332–1404). However, although each relied heavily on their predecessors, they seem to be contemporaries of the thirteenth-century European Scholastics, and Ibn Khaldun appeared after them; thus, it is possible that the pre-1300 Scholastics (such

as St. Thomas) were not influenced by their writings.

It is useful, in the present context, to refer to an excellent paper on the economic thought of Ibn Khaldun by J. Spengler. This paper represented a significant departure from his earlier work. Here, before discussing Ibn Khaldun's economics, Spengler provides a glimpse of the economic thought of some other Arab scholars who wrote during the "blank" centuries and whose works were translated into Latin from the eleventh century onward. Spengler discovers that these scholars had dealt with major economic issues similar to those identified in the previous paragraphs above.

While Spengler's paper reflects somewhat of an "orientalist" tone, he concedes that Ibn Khaldun's knowledge of economics "greatly transcended that present in the works" of the Greeks. Further, he states that "one is compelled to infer from a comparison of Ibn Khaldun's economic ideas with those set down in Muslim moral-philosophical literature that the knowledge of economic behavior in some circles was very great indeed, and one must turn to the writings of those with access to this knowledge and experience if one would know the actual state of Muslim economic knowledge" (Spengler, 304). Indeed, one can add that some of the economic knowledge available to Ibn Khaldun also was available in one form or another to the early Scholastics, as well as to Ibn Khaldun's contemporaries, and others who followed. That becomes evident from even a cursory exploration into medieval intellectual history. When Europe became interested in science and philosophy during the eleventh and twelfth centuries, these disciplines were already at their peak in the Arab-Islamic world, and Europe was anxious to learn. The transmission of this knowledge to Europe took several forms.

First, during the eleventh and early twelfth centuries, several European scholars (such as Constantine the African and Adelard of Bath) travelled to Arab countries, learned Arabic, and brought back to Europe their newly acquired knowledge.

Second, during this period, "many students from Italy, Spain and southern France attended Muslim seminaries in order to study mathematics, philosophy, medicine, cosmography, and other subjects, and in due course became candidates for professorships in the first Western universities established after the pattern of Muslim seminaries" (Sharif, 1367). These halls of new learning were established in cities such as Naples, Padua, Salerno,

Toulouse, Salamanca, Oxford, Montpellier, and Paris. Further, the Council of Vienna (1311) established several schools of Oriental languages at the request of Raymund Lull (1232–1315), who had traveled widely in the Arab world, knew Arabic, and had written several works in that language, with the objective of engaging in “missionary work among Saracens and Jews” (Durant, 979). Indeed, it was “in the 12th century Europe discovered the wealth of Spain. Scholars descended upon Toledo, Cordova, and Seville, and a flood of new learning poured up over Pyrenees to revolutionize the intellectual life of adolescent North” (Durant, 909).

Third, from the eleventh through the fourteenth centuries, there were mass translations of the works of Arab scholars into Latin – not only those written in Arabic, but also those which had been translated earlier from Arabic to Hebrew. “The stream whereby the riches of Islamic thought were poured into the Christian West was by translations from Arabic into Latin” (Durant, 910). This “translation movement” took place in Spain, Italy, and France. Some prominent “scholar-translators” identified by medieval historians were Adelard of Bath, Constantine the African, Michael Scot, Herman the German, Dominic Gundisilavi, John of Seville, Plato of Trivoli, William of Luna, Gerard of Cremona, and Alfred of Sareshel, and there were many others. Many of these scholars could read and write Arabic, as well as other languages of the region (see Sharif, Durant, and Myers). Indeed, it is also well known that the Franciscan monk, Roger Bacon (1214–1294), was familiar with Arabic. It is such impact which persuades Gordon Leff to suggest that “intellectually, the difference between [the] 12th and 13th century was, at its broadest, the difference between isolation from the Islamic world and contact with it” (Leff, 141). Further, during the fourteenth and fifteenth centuries, the Latin Scholastics also were indirectly influenced by the writings of their Latin predecessors (Crombie, 30).

Finally, in addition to the enormous catalog of translated works, another important source of influence was oral transmission – something for which documentation is not readily available. While tracing links between Arabic, medieval Spanish, and European thought, Chejne argues that “particularly oral transmission was an important factor, and . . . this is proven by internal literary evidence in both Arabic and Western materials” (Chejne, 11). Further, “oral transmission [was] achieved by a long and per-

manent contact between Muslims and Christians, for whom the question of communication did not constitute a serious obstacle due to the fact that bilingualism in Spain was common. Eight or more centuries of such an intimate contact is, in itself, quite persuasive an argument for a cultural interaction and continuity. . . . It is from this [vantage] point that more weight should be given to oral transmission, which often extended well beyond the frontiers of Spain" (Chejne, 120).

Notwithstanding the foregoing, one may ask the question: if the Arab scholars influenced the Scholastics in philosophy, ethics, and sciences, what was their influence on economic thought? An objective examination of historical facts would lead one to conclude that this impact was far greater than has been acknowledged generally. In fact, the opportunity for Arab economic thought to influence medieval Europe was even greater than that of Arab philosophy or Arab science. As noted earlier, all medieval scholarship – Islamic as well as Christian, Arab as European – was based on the principle of "unity of knowledge"; and economics, to the extent it was addressed, was part of moral philosophy and ethics, whereby the measure of man was man, not things, and the ultimate measure was God and salvation.⁹

In addition to translations and oral transmission, there were two additional channels through which economic ideas flowed to Europe: trade and commerce, and cultural diffusion of institutions and processes into European societies before and after the Crusades.¹⁰ Several writers have shown how trade was conducted from the Arab world through Russia to Poland, the shores of Baltic seas, to Scandinavia, to north-central Europe and even Iceland (see Cook, Draper, and Heaton, for example). With trade followed the diffusion of economic institutions and processes, to which Karl Pribram also refers, as noted earlier. Not only the coins from the Arab countries circulated freely in medieval Europe, but also various techniques and methods of commerce, as well as the spirit of enterprise and adventure. In addition, the "demonstration effect" induced by the introduction of a variety of new goods soon spread to Europe (Cook, 219). The spirit of enterprise was further nurtured by Arab scholars, for whom the Islamic Scriptures mandated economic enterprise. "Muslim writers of this period do tend to be more sympathetic to mercantile activity than those of Christian Europe . . . much of early Islamic literature was in fact written in a mercantile environment" (Cook, 226).

Further, Udovitch reports his discovery of a fifteenth-century *commenda* between a Venetian and an Arab merchant in Alexandria.¹¹ The *commenda* and other partnership contracts were indigenous to the Arab world and spread to Latin Europe through contacts and the writings of Arab scholars and jurists. Similarly, the emergence of various other instruments and institutions facilitated the development of commerce and trade in Europe – such as bills of exchange (*suftajah*), letters of credit (*hawala*), specialized trading centers (*funduq*), and a kind of early private bank (*ma'una*). In the same vein, as further evidence of the influence of economic institutions and instruments through trade, Kramers postulates that the IOU document may have come from “the Arabic word *sakk*, from which the modern words cheque has been derived” (Kramers, 102). Not only does Kramers trace the Arabic origin of several other commercial terms, he also talks of the “manifold ways in which commercial relations led to close cooperation between Muslims and Christians” (Kramers, 102).

The discussion thus far has attempted to demonstrate that opportunities were available to the thirteenth-century Scholastics in the form of a vast pool of economic ideas, institutions, and processes, which they could borrow from the Arab world and assimilate into their own economic and philosophical-theological discourses. Yet, it might be asked: Why are there so few appropriate citations to the works of Arab scholars in the writings of the Scholastics?

There are several reasons why one may not find such citations. First, there is the medieval Scholastics' attitude toward Islam in general and Arab scholarship in particular. The Crusades epitomized this attitude, which is well documented historically; indeed, its legacy is contemporary “Orientalism” (see Beckingham, Daniel, Said, White, for example). One also may conjecture that Schumpeter's assertions of the “Great Gap” and “blank” centuries represent yet another illustration of that attitude.¹² Moreover, it is an established fact that the Scholastics perceived Islam and the ideas of Arab scholars such as Ibn Sina (Avicenna), but especially Ibn Rushd (Averroës), as threats to Christian dogma. The list of 219 condemnations (“Averroestic” heresies, as they were called), published in 1277 by Etienne Tempier, Bishop of Paris, was a clear manifestation of those fears (Durant, 957–58). The successive waves of translations “in the 12th and 13th centuries brought to the West the revelation and challenge of Greek and Muslim

philosophies so different from the Christian that they threatened to sweep away the whole theology of Christendom unless Christianity could construct a counterphilosophy" (Durant, 949).

Durant goes on to say that "Thomas Aquinas was led to write his *Summas* to halt the threatened liquidation of Christian theology by Arabic interpretations of Aristotle . . . indeed, the industry of Aquinas was due not to the love of Aristotle but to fear of Averroès" (Durant, 954). Aquinas subsequently was able to overcome this "fear" by relying heavily on Al-Ghazali. According to Meyers, "since Al-Ghazali placed science, philosophy, and reason in position inferior to religion and theology, the Scholastics accepted his views, which became characteristic of most medieval philosophy" (Myers, 39–40).¹³ Jurji is even more specific; he asserts that Al-Ghazali's "work was paralleled by Thomas Aquinas in the discourse on Christian doctrine and in other portions of the *Summa Theologica*" (Collier's Encyclopedia, 313, vol. 13). Indeed, Al-Ghazali's *Tahafut al Falasifa* (*Incoherence of Philosophers*) was primarily directed against the Arab Aristotle, Ibn Sina (Avicenna), whose rationalism was viewed as a challenge to Islam, as well as a threat to the Christian theology of Latin Europe. Under this kind of a confrontational social-religious environment, it made sense not to rely openly on "alien" Arab-Islamic sources, for Christendom was already undergoing its internal turmoil.

Further, it should be pointed out that intellectual borrowing without acknowledgment was not an uncommon practice among the Scholastics and others at the time, including the Arab scholars – "property rights" in twentieth-century terms had not arrived yet. It is a fact that the Spanish Dominican monk, Raymund Martin, an influential contemporary of St. Thomas, borrowed for his own books from Al-Ghazali's *Tahafut*, *Magasid*, *Al-Munqidh*, *Mishkat al Anwar*, and *Ihya Ulum al Din*, without mentioning any references (Sharif, 1361). St. Thomas Aquinas, however, was somewhat of an exception, for he would quote Avicenna, Averroes, Al-Ghazali, and others – although, in the words of Meyers, the Scholastics "discarded [those ideas that] conflicted with Christian teaching and adopted those that appeared to them reconcilable." Further, Albertus Magnus and his pupil, St. Thomas Aquinas, made it "the goal of their lives to reconcile Aristotelian and Moslem philosophy with Christian theology" (Myers, 16).

Conclusion

The purpose here has been to demonstrate the considerable influence of Arab scholars on economic thought as it evolved from Scholastic writings, and to point out a serious omission in the history of economic science – indeed, in the history of ideas – of the profound contributions made by those scholars. The primary motivation behind this article has been to draw attention to a stubborn “blind spot” in the history of economic thought, to suggest that the “Great Gap” thesis is patently untenable, that Arab scholars were more than mere “interpreters” and “transmitters” of Greek thought, that the medieval Scholastics had both the motive and opportunity to assimilate the ideas and concepts developed in the Arab-Islamic world and that they did so.

It must be stated emphatically, however, that the purpose has not been to denigrate the enormous contributions of the Scholastics, nor to suggest that they lacked originality. Nor can one deny the corpus of Greek heritage available to Arab scholars, upon which they built their own edifice, inspired and bonded by their own young faith.¹⁴ Nevertheless, it must be stated that access to the economic writings of Arab scholars persuades one to be quite skeptical of the “Great Gap” thesis. Further, one experiences similar uneasiness about the disregard, benign or otherwise, on the part of recent economic historians for the contributions of Arab scholars in the evolution of economic thought and institutions during the medieval period.¹⁵ Even if one grants that, despite evidence to the contrary, there was not much available during Schumpeter’s time to allow exploration into the medieval intellectual links were the Arabs and the Scholastics, the wealth of research since then no longer absolves economic historians – indeed, the profession generally – to allow this lapse in objectivity to persist. Along with the Greeks and Romans, the Arab contributions to economic thought and to the discipline of economics in general should be recognized appropriately in the literature to shed any “inhibitions” that Schumpeter mentioned, so that the discipline truly reflects, as he aptly stated, “an incessant struggle with the creation of our own and our predecessors’ minds,” and so that the process of the “filiation of ideas” is carried forward unabated. Such indeed is the professional imperative, in order for the history of economic ideas to achieve the doctrinal continuity that any discipline deserves.

Notes

1. Schumpeter's other important works, *The Theory of Economic Development* (1917) and *Business Cycles* (1939), are in the field of business-cycles theory. Like Wesley Mitchell, Schumpeter believed the study of cycles depended on insights into the entire capitalistic process, a topic he pursued in his *Capitalism, Socialism, and Democracy* (1942).
2. See, for example, S.M. Ghazanfar and A. Azim Islahi, "Economic Thought of an Arab Scholastic: Abu Hamid Al-Ghazali (1058–1111 AD)," *History of Political Economy* 22 (Fall 1990): 381–403.
3. In order to establish further the scientific nature of the Scholastics' thought, Schumpeter argues, "They produced principles that were not only formative but also explanatory. They created juristic logic that was applicable to a wide variety of social patterns. So far as their facts were economic, their analysis was economic analysis" (69). However, such methodology came from their Arab predecessors, for "the scholastic method used by the medieval Christian scholastic was already in current use among Muslim jurists long before St. Thomas" (Chejne, 111–112).
4. A recent book by S. Todd Lowry criticizes Schumpeter for insufficient recognition of the Greek origins of modern economic analysis (Lowry, *The Archeology*. . . , XIV). In this book the author stays with the Schumpeterian tradition as far as Arab scholarship is concerned; in another edited volume, however, Lowry includes an excellent article on Islamic economic thought (see Lowry, *Pre-Classical*. . .). Further, it must be acknowledged that, based on personal conversations and communications, Todd Lowry is about the only contemporary eminent scholar of economic thought who is willing to recognize the contributions of Arab-Islamic scholastics. In a recent letter to the author, Lowry states, "the Medieval Europeans got their Greek economics served on an Islamic plate" (his letter dated August 22, 1990). It is safe to say that this "plate" was garnished substantially by Arab scholarship.
5. There are several "pre-Schumpeter" publications in French, German, English, and Spanish that abundantly document such an influence. See, for example, Forget (1894); Goichen (1944); Hammond (1947); Mehren (1890); Palacios (1935); Plessner (1928); Renan (1938); Wensinck (1940); Wustenfeld (1877); and others.
6. One can grant Schumpeter the benefit of the doubt and argue in his defense as follows: his disregard of the Arab contributions might have been simply "benign neglect" – a sign of the times; that is, not a conscious act of prejudice, but merely an "institutionalized" phenomenon, reflecting, as Daniel succinctly describes, "a cultural

filter in acquiring knowledge from an alien source considered to be tainted" (Daniel, *The Cultural Barrier*, 87); he was unaware, or only peripherally aware, of the Arab contributions and their influence upon the Scholastics; he might have felt it unnecessary to explore or cite any Arab writings, for his expected audience was the Western reader; and since he really had not finished his *History* before his lifetime, had he lived longer, he would perhaps have accommodated the Arab works. Still, according to a contemporary economic historian, his omission "is all the more striking since he spent some time of his formative period in an Arabic country [Egypt] . . . and Schumpeter worked in the best-equipped library in the world [Harvard University's Kress library]" (quoted from a letter dated October 21, 1988, from Jurgen Backhaus of Rijksuniversiteit Limburg, Netherlands). Also see note 12.

7. It may be useful to mention here that in order to identify Schumpeter's reasons for disregarding the Arab scholars' economic thought, the author communicated with several scholars who knew him well. While the present author does not intend to cast aspersions on Schumpeter's motives, responses of some may be cited here: Professor Mark Perlman (University of Pittsburgh), letter of 18 June 1990: "He was a strange man, and in spite of that his numerous admirers think, implemented his personal prejudices unfortunately." Professor E. Streissler (Institut Fur Wirtschaftswissenschaften der Universität Wien, Austria), letter of 1 June 1990: "He was not a scholar with an open mind but rather could not see what he did not want to see . . . A more appropriate title of the famous 1954 book would thus be '*Joseph Schumpeter, Selected Thoughts about History*,' and it is a pity that its influence is so pervasive." But Streissler is sympathetic in that, "Perhaps he really was not aware of Arab scholarship and its influence on Latin Europe." Professor Kurt W. Rothschild (University of Linz, Austria), letter of June 14, 1990: "Altogether it is not quite so surprising that Schumpeter missed the important of the Arab contributions. . . . So the 'great gap' may have slipped in just because the Arab scholars are neglected in almost all works on economic doctrines. Thus, for instance, the huge 17-volume *Encyclopedia of Social Sciences* [of 1968] does not refer to the work of the Arab scholars which you mention. The main trouble seems to be the extremely Euro-USA-centered outlook and traditions of the 'Western' culture." On the other hand, there are others (for example, Wolfgang Stöpler, University of Michigan; Edward Mason, Harvard University; Wassily Leontieff, New York University; and Paul Samuelson, Massachusetts Institute of Technology), who suggest that perhaps Schumpeter simply was not aware of the early Arab-Islamic writings.

8. For more details and references, see, for example, M.A. Mannan, *Islamic Economics*, (Lahore, Pakistan: Ashraf Publications, 1980).
9. O'Brien mentions the "simplicity of medieval social situation, where the relations of persons were all important, in comparison with the modern order, where the exchange of things is the dominant factor" (O'Brien, 10).
10. Indeed, it is transmission of this kind that was the basis of the rather controversial "Pirenne Thesis" of a few decades ago. This thesis was "concerned with the transition from antiquity to medieval civilization. . . . transforming a static period into an era of research and reinterpretation" (Havighurst, viii). This transformation of Europe, according to the French economic historian, Henri Pirenne (1862–1935), was chiefly the result of Europe's contacts with the Arab-Islamic civilization.
11. Also known as *mudharibah* in Arabic, *commenda* is a written contract whereby one partner in a business provides financial capital, and the other operates the business; both parties share risk and profits (Labib, 91).
12. Two relevant quotations from well-known scholars will elucidate the argument: (1) "For our cultural indebtedness to Islam, we Europeans have a 'blind spot.' We sometimes belittle the extent and importance of Islamic influence in our heritage, and sometimes overlook it altogether. For the sake of good relations with Arabs and Muslims we must acknowledge our indebtedness to the full. To try to cover it over and deny it is a mark of false pride" (Watt, 1972: 2). (2) "It is an anachronism to project into the Western Middle Ages the contempt for the Near East that has characterized the Occident in more recent centuries" (White, 4).
13. It is worth noting that several medieval historians identify Al-Ghazali as the most significant influence upon St. Thomas Aquinas, directly and through his teacher, Albertus Magnus (1206–1280), and his contemporary, Raymund Martin (d.1285). Abu Hamid Al-Ghazali's books, including his greatest work, *Ihya Ulum al Din (The Revival of the Religious Sciences)*, became available in Latin even before 1150 (Meyers, 39). Further, Raymund Martin, who knew Arabic, incorporated much of Al-Ghazali's writings directly and via Bar Harbraeus's works (a Syrian priest, known as Al-Faraj in the Islamic world, who "copied many chapters from Al-Ghazali" and "who wanted to keep secret the sources of the ideas") into his *Pugio Fidei (The Sword of Faith)*. The latter inspired St. Thomas's *Summa contra Gentiles*. Both of these treatises were written at the request of the Dominical Order and were aimed at refuting the arguments of philosophers and sophists against faith. Another source of Aquinas's familiarity with Al-Ghazali's works was the Jewish scholar,

Maimonides (Ibn Maimon), who drew some of his ideas from Al-Ghazali's *Maqasid al Falasifah (Aims of Philosophers)* (Meyers, 42–43; also see Sharif 1360–1362). Moreover, Al-Ghazali's influence upon St. Thomas Aquinas becomes rather apparent when one takes a comparative glance at the lengthy tables of contents of their most significant works (*Ihya* and *Summa Theologica*); numerous topics covered in both, including those relating to economics, are almost identical, and same holds for the methodological approach.

14. Indeed, objectivity demands that one also must acknowledge that the Arab scholars themselves might have been influenced by the early Christian writings. Thus, "although it is not possible to indicate how and by what means Augustine's ideas were transmitted to al-Ghazali, it is quite possible that this influence was widespread in the intellectual circles where Al-Ghazali was brought up" (Sharif 1360). However, while evidence to this effect is lacking, there is "much evidence about the transmission of al-Ghazali's thought to the West" (Sharif 1361; also see Palacios).
15. While the present paper argues that, based largely on the Schumpeterian "gap" thesis, a tradition in economic thought evolved that has neglected the Arab scholars' contributions, it is instructive to note that some eminent contemporary scholars who otherwise dispute the Schumpeterian premise continue to engage in similar mishaps – again, perhaps quite benignly. Thus, Otto Langholm says, "there is no longer any excuse for a practice which has confounded the study of medieval economics since its inception more than a century ago, namely that of basing the most sweeping historical generalizations on a few familiar names, with no regard for the context and continuity; even the best text books in the field skip and jump from one century to the next, in and out of different traditions" (Langholm, 6). Despite his warning, Langholm's writings keeps the Schumpeterian traditio quite alive.

Bibliography

- Afnan, Soheil M., *Avicenna: His Life and Works*, George Allen & Unwin, Ltd., London, 1958.
- Aquinas, St. Thomas, *Summa Theologica*, 3 vols., Benziger Brothers, Inc., New York, 1947.
- Ashly, William J. *An Introduction to English Economic History and Theory*,

- 2 vols., London, 1888 and 1893.
- Beckingham, C.F., "Misconceptions of Islam: Medieval and Modern," *Journal of Royal Society of Arts*, September 1976.
- Bernardelli, H., "The Origins of Modern Economic Theory," *Economic Record*, vol. 37, pp. 320–338, September 1961.
- Boulakia, H., David C., "Ibn Khaldun: A Fourteenth Century Economist," *Journal of Political Economy*, vol. 79, no. 5., pp. 1105–1118, September–October 1971.
- Butler, Pierce, "Fifteenth Century of Arabic Authors in Latin Translation," in the *McDonald Presentation Volume*, Books for Libraries, Inc., pp. 63–70, Freeport, N.Y., 1933.
- Callus, D.A., *Robert Grosseteste: Scholar and Bishop*, Clarendon Press, Oxford University Press, London.
- Chejne, Anwar, "The Role of Al-Andalus in the Movement of Ideas Between Islam and the West," in Khalil I. Semaan, ed., *Islam and the West: Aspects of Intercultural Relations*, State University of New York Press, Albany, N.Y., 1980.
- Collier's Encyclopedia*, vol. 13, McMillan Educational Corporation, New York, 1979, (article on "Islam," Edward J. Jurji, pp. 312–313).
- Copelston, F.C., *A History of Medieval Philosophy*, Harper & Row Publishers, New York, 1972.
- Crombie, A.C., *Medieval and Early Modern Science*, 2 vols., Harvard University Press, Cambridge, Mass., 1963.
- Daniel, Norman, *Islam and the West: The Making of an Image*, Aldine Publishing Company, Chicago, Ill., 1966.
- , *The Cultural Barrier: Problem in the Exchange of Ideas*, Edinburgh University Press, Edinburgh, 1975.
- , *The Arab and Medieval Europe*, Longman Group Limited, London, 1975.
- Draper, John W., *History of the Intellectual Development of Europe*, 2 vols., Harper & Row Publishers, New York, 1876 and 1904.
- Durant, Will, *The Story of Civilization: The Age of Faith*, vol. 4, Simon & Schuster, New York, 1950.
- Essid, M. Yassine, "Islamic Economic Thought," in S. Todd Lowry, *Pre-Classical Economic Thought: From the Greeks to the Scottish Enlightenment*, Kluwer Academic Publishers, Boston, Mass., 1987.
- Forget, J., "De l'influence de la philosophie arabe sur la philosophie scolastique," *Revue Néo-Scolastique*, pp. 385–410, October 1984.
- Al-Ghazali, Abu Hamid, *Ihya Ulumal Din (Revival of the Religious Sciences)*, 4 vols., Daral Nadwah, Beyrouth, Lebanon, no date.
- Ghazanfar, S.M., "Explorations in Economic Thought: Contributions of Arab Scholastics during Early Medieval Period," presented to the *Annual Meeting of the American Economic Association*, Atlanta, Ga., December 1989.

- and A. Azim Islahi, "Economic Thought of an Arab Scholastic: Abu Hamid Al-Ghazali (1058–1111 ad)," *History of Political Economy*, vol. 22, no. 2., pp. 281–403, Autumn 1990.
- Goichen, A.M., *La Philosophie d'Avicenne et son influence en Europe Médiévale*, Paris, 1944.
- Gordon, Barry, *Economic Analysis Before Adam Smith*, Harper & Row, Publishers, Inc., New York, 1975.
- Hammond, R., *The Philosophy of Alfarabi and Its Influence on Medieval Thought*, Hobson Press, New York, 1947.
- Harris, C.R.S., *Duns Scotus*, 2 vols., The Humanities Press, New York, 1959.
- Haskins, C.H., *The Renaissance of the Twelfth Century*, Cambridge, G.B., 1927.
- Havighurst, Alfred F., ed., *The Pirenne Thesis: Analysis, Criticism and Revision*, D.C. Heath & Co., Lexington, Mass., 1969.
- Heaton, Herbert, *Economic History of Europe*, Harper & Brothers Publishers, New York, revised edition, 1948.
- Kramers, J.H., "Geography and Commerce," in Sir Thomas Arnold and Alfred Guillaume, eds., *The Legacy of Islam*, Clarendon Press, Oxford, 1934.
- Labib, Subhi Y., "Capitalism in Medieval Islam," *Journal of Economic History*, vol. 4, pp. 178–196, 1944.
- Langholm, Otto, *Price and Value in the Aristotelian Tradition*, Universitetsforlaget, Oslo, Norway, Columbia University Press, New York, 1979.
- Leff, Gordon, *Medieval Thought*, Quadrangle Books, Inc., Chicago, Ill., 1958.
- Lowry, S. Todd, *The Archeology of Economic Ideas: The Classical Greek Tradition*, Duke University Press, Durham, N.C., 1987.
- Lowry, S. Todd, ed., *Pre-Classical Economic Thought: From the Greeks to the Scottish Enlightenment*, Kluwer Academic Publishers, Boston, Mass., 1987.
- Mannan, M.A., *Islamic Economics: Theory and Practice*, Sh. Muhammad Ashraf, Lahore, Pakistan, 1980.
- Mehren, A.F., "Algazel, Maqasid al-falasifat, quoted by St. Thomas in Summum Algazel," *Annales de philosophie chrétienne*, vol. XX, Paris, 1890.
- Myers, Eugene A., *Arabic Thought and the Western World*, Frederick Ungar Publishing Co., Inc., New York, 1964.
- Newman, Philip, et al., eds., *Source Readings in Economic Thought*, W.W. Norton & Co., Inc., New York, 1954.
- O'Brien, George, *An Essay on Medieval Economic Teaching*, Longman, Green & Co., London, 1920.
- O'Leary, De Lacy, *Arabic Thought and its Place in History*, Kegan Paul, Tench, Trubner & Co., Ltd., New York, 1922.

- Palacios, M. Asin, "Contact de la spiritualité musulmane et de la spiritualité chrétienne," *L'Islam et l'Occident*, 1935.
- Plessner, Martin, *Der Oikonomikoc des Neuphythagoras "Bryson" und sein Einfluss auf die Islamischen Wissenschaft*, Heidelberg, Germany, 1928.
- Pribram, Karl, *A History of Economic Reasoning*, The Johns Hopkins University Press, Baltimore, Md., 1983. (In French, *Histoire du raisonnement économique*, *Economica*, Les fondements de la pensée économique, 1986).
- Renan, Ernest, *Averroès et l'Averroïsme*, Calmann Lévy, Paris, 1938.
- Rescher, Nicholas, *Studies in Arabic Philosophy*, University of Pittsburgh Press, Pittsburgh, Penn., 1966.
- Roll, Eric, *A History of Economic Thought*, Prentice-Hall, Inc., Englewood Cliffs, N.J., 3rd ed., 1953.
- Roover, Raymond de, "The Concept of the Just Price: Theory and Economic Policy," in James A. Gherity, ed., *Economic Thought: A Historical Anthology*, Random House, New York, 1965.
- Said, Edward, *Covering Islam*, Pantheon Books, New York, 1981.
- Sarton, George, *Introduction to the History of Science*, 3 vols., Williams and Wilkins, Baltimore, Md., 1927–1948.
- Schacht, Joseph, and C.E. Bosworth, eds., *The Legacy of Islam*, Oxford University Press, Oxford, 1974.
- Schumpeter, Joseph A., *History of Economic Analysis*, Oxford University Press, New York, 1954. (In French, "L'âge des fondateurs, des origines à 1790," *Histoire de l'analyse économique*, Paris, Gallimard, Sciences Humaines, 1983.)
- Sharif, M.M., ed., *A History of Muslim Philosophy*, 2 vols., Otto Harrassowitz, Wiesbaden, 1966.
- Sheikh, M. Saeed, *Islamic Philosophy*, The Octagon Press, London, 1982.
- Spengler, Joseph J., and William R. Allen, eds., *Essays in Economic Thought: Aristotle to Marshall*, Rand McNally & Co., Chicago, Ill., 1960.
- Spengler, Joseph J., "Economic Thought of Islam: Ibn Khaldun," *Contemporary Studies in Society and History*, vol. VI, no. 3, pp. 268–306, 1964.
- Spiegel, Henry W., ed., *The Development of Economic Thought*, John Wiley & Sons, Inc., New York, abridged edition, 1964.
- Udovitch, Abraham L., *Partnership and Profit in Medieval Islam*, Princeton University Press, Princeton, N.J., 1970.
- Viner, Jacob, "Religious Thought and Economic Society: Four Chapters of an Unfinished Work," *History of Political Economy*, vol. 10, no. 1, Spring 1978.
- Watt, W. Montgomery, *Muslim Intellectual: A Study of Al-Ghazali*, Edinburgh University Press, Edinburgh, 1963.
- , *Islamic Surveys: The Influence of Islam on Medieval Europe*, Edinburgh University Press, Edinburgh, 1972.
- Wensinck, A.J., *La Pensée de Ghazzali*, Paris, 1940.

White, Lynn, Jr., "Medieval Borrowings from Further Asia," *Medieval and Renaissance Studies* 5, Proceedings of the Southeastern Institute for Medieval and Renaissance Studies, Chapel Hill, N.C., pp. 3–26, Summer 1969.

Wustefeld, F., *Die Übersetzungen arabischer Werke in das Lateinische seit dem XI. Jahrhundert*, Göttingen, Germany, 1877.