The Central Asian Role in the Making of Modern European Science

A Review of *Warriors of the Cloisters: The Central Asian Origins of Science in the Medieval World,* by Christopher Beckwith (Princeton University Press, 2012)

George Saliba
Columbia University

At first glance, Christopher Beckwith's *Warriors of the Cloisters: The Central Asian Origins of Science in the Medieval World* is rather straightforward. It argues that the origins of modern science are found in the Middle Ages, and that those origins, in turn, can be traced back to Islamic civilization, which was in direct, intimate contact with Latin Europe during the same medieval period. That much is rather well-known and heavily documented. But Beckwith goes a step further. He claims in this book that the essential components of what he calls "full scientific culture" (p. 120) should themselves be sought in ancient Buddhist texts of pre-Islamic Central Asia. And in Beckwith's view, those features constituting scientific culture came about as a result of two-tier developments that he claims were first taken in Central Asia, in those Buddhist texts, specifically. The new features involved the development of what he calls the "recursive method," a slightly nuanced, new name for the well-known Scholastic method, and the establishment of the concept of a college, which he claims could be traced linearly from Central Asia to the Islamic world and then to medieval Europe.

The connection between the Scholastic method of the Latin West and the college, within which it was mostly practiced, and their origins in Islamic civilization has already been argued at great lengths in many works of the late George Makdisi (most notably Makdisi 1970, 1974, and 1981). Much more information on this connection can be found in many notes, articles and references in his other works on Islamic jurisprudence, education, and theology. The novelty of Beckwith's current book is to stretch the connection further east, well into Central Asia, and to the Buddhist texts that Makdisi seems not to have known about.

All this sounds plausible enough and, except for the last Central Asian stretch, one can find it relatively well-documented repeatedly by Makdisi and others. One can even tolerably contemplate a Central Asian extension, especially if connected through the works of Ibn Sīnā (hereafter referred to by his Latin name, Avicenna),

Corresponding author's e-mail: gas1@columbia.edu

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a renowned thinker of the Islamic civilization at its heyday, who was born in Central Asia. On the surface of it, and in general terms, there do not seem to be formidable obstacles to accepting this binding framework of the argument of origins. But, like all arguments of origins, the devil lies in the details.

First, the concept of a college is indeed problematic, especially when it comes to the colleges that we know from the Islamic world, and even from Medieval Europe, with their formidably varied deeds of endowment, purposes, programs of studies encompassed, and the rich tapestry of cultural ripples that emanated from them. The Central Asian extension, which now seems to be stipulated as the beginning of such institutions as if by mere extrapolation, remains deeply troubling when we do not see any such evidence for specific deeds, programs, endowment conditions, or other similar features as those we can study extensively from the classical Islamic and medieval European sources. For that extension, most of the evidence Beckwith seems to offer is the reliance on rather simple, rectangular archeological remains of *Vihāra*(s) that he claims "saw their birth in Central Asia" (p. 125). To this reviewer, rectangular archeological remains, with no supportive textual evidence explaining when, by whom, and for what purposes they were built, could easily belong to temples, palaces, places of communal activities, and maybe educational institutions—*Vihāra*(s) or otherwise. The absence of context makes it difficult to convincingly establish a line of influence of such cultural features on later Islamic and European establishments.

As for the Scholastic method that went with the college (the recursive method, as designated by Beckwith), that, too, is a much more complicated matter. First, the method is supposed to have originated in Central Asia and to have travelled westwards to Europe via the Islamic world, eventually ushering in what Beckwith calls "full scientific culture." Parts of this narrative are essentially true. Makdisi has already demonstrated, with concrete examples from the work of Ibn ʻAqīl and others, that one can produce examples of authors using the very same method in the Islamic world, then passing on this method to Latin Europe along with the translations of the texts that deployed this method. One can even detect the time when this method was reincarnated in the Latin West as the proverbial Scholastic method. The problem is that this passage is unconvincingly made responsible for the birth of a vague concept of science that is supposed to have sprung out of such discursive debates surrounding it. But the science that this method generated and its relationship to the contents of the texts that produced it are both too poorly defined to make a good argument for east-to-west influence in the absence of more extensive corroborative evidence. It is not enough to rely only on sweeping statements, concluding that because Avicenna used such a method in his works, and he happened to be born in Central Asia, he must have inherited this method from Buddhist texts, without convincingly demonstrating the routes of that influence. Yet the book goes further, claiming that such methods are not known

from classical antiquity, and thus, the first appearance of the recursive method is in the works of the Central Asian Avicenna. This seems to be done in order to bolster the wider argument of locating the birth of a full scientific culture, presumably meaning modern science, in that same locality, which this reviewer feels is stretching things too far.

Within the logic of its argument, the problem this book had to struggle with is, how was it possible that the Latin European culture, which inherited its essential methods of argumentation from the Islamic world, produced modern science while Islamic culture itself did not? In order to resolve this urgent question, the author fell back on time-worn arguments made fashionable in the characterizations of world cultures during the nineteenth-century European theoretization zeal, when Eurocentric, linear progression of the rise of science was linked to non-Semitic cultures, such as those of Greece or Persia. In this book, the latter is made a proxy for the Buddhist influence of central Asia. That orientalist, nineteenth-century European legacy made it impossible to see any development of scientific thought in Islamic culture except at the times when that thought was nurtured by the hegemonic, non-Semitic, Persian elements that were supposed to have dominated the Abbasid period of the Islamic civilization. Furthermore, and following a strictly straight-jacketed mode of European thinking, no scientific thought could ever develop in an atmosphere that also harbored religious thought. Thus, the author followed the very same route and argued that Islamic civilization could not develop a full scientific culture because it became deeply engulfed in religious thought, especially after Ghazali's (d. 1111) well-known work, the *Incoherence of the Philosophers*, which supposedly snuffed out the last breath of science in that civilization. Because the author led himself into that trap, he could no longer see the fantastic production of the highest-caliber scientific thought in the Islamic civilization during the post-Ghazali era, accomplishments that I and others have amply demonstrated in the last half-century (see Saliba 2007, 2011). Their achievements in astronomy, to say nothing of physics, medicine, and other disciplines, witnessed a vigorous profusion, both pre- and post-Ghazali.

The virtue of *Warriors of the Cloisters* is that it attempts to look worldwide at the phenomenon of scientific thought and link civilizations across vast areas of geography and time. In this manner, it invites people to think outside the box. The important point is that the origin sought here is nothing less than that of science itself—loosely defined or not. However, because of the zeal for what looks like an ideological commitment to make every important idea stem from the Central Asian plateau, the book is severely marred by short-sightedness, and more importantly, of ever-so-gently twisting facts to fit into the straight jacket that ideologies usually require. For example, the presence of modes of argument very similar to the recursive method championed by Beckwith in classical Greek texts, especially those of Galen in his commentary on Hippocrates's *On Elements* or his treatise on

the *Small Art of Medicine*, to name only two works, are missed altogether. Ironically, the argumentation in those texts could also be slightly tweaked to fit with Beckwith's over-arching ideological argument. Furthermore, he also misses the fact that those classical Greek texts, and not the Buddhist ones, constituted the backbone of Islamic philosophical and scientific thinking. To take another example, the classical Alexandrian Compendia, which encompassed most, if not all, of the essential Galenic texts, with their tendency to summarize, categorize, and schematize the original works, serve very similar purposes to the recursive method. Those texts were also translated into Arabic during the early part of the ninth century, and probably even served as models for Avicenna, who studied medicine through such compendia. One would have hoped that Beckwith would at least investigate such texts as possible precursors of the scholastic method, and for which he could supply the linking evidence, rather than seek Avicenna's background for a method from the Buddhist texts which he may or may not have read. All such leads are not even given a nominal consideration, and are summarily dismissed together with all other classical texts that do not strictly exhibit the kind of argumentation defined by the author as the recursive method. Even though such texts do not seem to have been noticed by the author, nor were they given the status of corroborating or providing counterevidence for the project he was pursuing, the book still makes enjoyable reading, provided one does not question its premises, and reads it more like the kind of fiction one encounters in any account of narratives of origins.

References

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