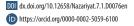
Sonja Brentjes. *Teaching and Learning the Sciences in Islamicate Societies* (800-1700). Turnhout, Belgium: Brepols Publishers, 2018. 334 pages. ISBN: 9782503574455.

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Breathing life into the culture and social practice of learning and teaching in the premodern Islamic world has been one of the more difficult and contested areas of modern research. How does one extrapolate the social practices and institutional structures from the meagre documentary sources at hand? Also, when indirect witnesses to the social phenomena abound, such as bio-bibliographical sources and encyclopedias of the sciences, how does one grapple with the idealized and literary accounts of the scholars' lives and their curriculum of study characterizing these sources? For the historian, these questions remain as elusive as ever. *Teaching and Learning the Sciences in Islamicate Societies* represents a summary of Sonja Brentjes' career-long engagement with the history of the social practices and institutional contexts of Islamicate teaching and learning, a field in which she has been a major contributor in terms of defining and reorienting the direction of research.

Her approach in this work, however, is not so much to formulate new historiographical approaches as it is to reimagine a fresh narrative based on the latest theoretical developments. These include: (1) solidifying the turning away from the "decline" historiography of earlier scholarship, which asserted a progressive degeneration of higher learning to have occurred in Islamicate society from the classical period of the Abbasid Graeco-Arabic translation movement to the supposedly rigid and tradition-bound institutions of the post-Mongol period and beyond; (2) confirming the role of the *madrasa* and networks of *madrasa*-trained scholars as major institutions for the transmission of scientific disciplines; (3) stressing the intrinsic value of certain developments of scholarly enterprises, methods, and networks to the Islamicate, without resorting to comparing them with classical Greek or contemporary European models; (4) avoiding the temptation of mistaking categories of non-rigid

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social practice in bio-bibliographical sources as institutional structures (e.g., using Michael Chamberlain's evaluation of George Makdisi's scholarship); (5) avoiding the modernist-scientistic-theological prejudice against the occult sciences from being counted among the esteemed company of sanctioned so-called scientific knowledge; (6) the judicious use of indirect, non-documentary sources such as bio-bibliographies to infer scholarly networks and social practice; and finally as a consequence of the above considerations (7) resisting the need to make sweeping generalizations regarding institutions of knowledge in the Islamicate, focusing instead on local examples to bring out the diverse social contexts in which the sciences were preserved and transmitted.

In presenting these results through a unified framework, Brentjes' work is not only rewarding for specialists but remains accessible to the general reader who may not be interested in the subtleties of academic debate but who does seek an authoritative, fluid, and relatively comprehensive account of the development of formal and informal institutions of learning during this historical period (700-1700 AD). I use the term "relatively" because the scope of the book is more limited than what is suggested in the title. Unlike the major monographs in the field such as George Makdisi, Jonathan Berkey, and Michael Chamberlain, this work focuses specifically on scientific disciplines construed in a very general and perhaps negative sense, i.e. areas of knowledge whose main sources are not based on religious texts. These include "the mathematical sciences, medicine, philosophy, and the 'occult sciences'" (17). This delimitation, though legitimate in itself, requires explanation because disciplinary boundaries, as the author herself acknowledges, are never hard and fast. Furthermore, one of the major points the author makes is that the institutional loci through which the religious and scientific texts have been transmitted eventually converged in madrasas and other institutional settings during the late Abbasid and post-Mongol periods. Can the conclusions reached on one set of disciplines be applicable to the other in terms of the methods and networks of learning and teaching? How is one to conceptualize this overlapping enterprise of seeking knowledge? The author does not answer these questions head on. The reader would do well to keep in mind that the main objects of study are so-called "non-religious sciences" (72), and that, as a result, any conclusions the author reaches regarding wider social practice can only be relevant to that context alone.

¹ George Makdisi, The Rise of Colleges: Institutions of Learning in Islam and the West (Edinburgh: Edinburgh University Press, 1981).

² Jonathan P. Berkey, The Transmission of Knowledge in Medieval Cairo: A Social History of Islamic Education (Princeton, N.J.: Princeton University Press, 1992).

³ Michael Chamberlain, Knowledge and Social Practice in Medieval Damascus, 1190-1350 (Cambridge & New York: Cambridge University Press, 1994).

The scope of the various localities included in this study is impressive. Brentjes includes not only the well-researched Abbasid and Mamluk eras, which featured important centers of knowledge such as Baghdad, Nishapur, Damascus, and Cairo, but also deals with regions and polities whose important role in Islamicate intellectual history has only recently been researched. This is no less in part due to her own contributions on topics such as the Ilkhanid and Timurid courts, the pre-Safavid Shiraz, Safavid Isfahan, Mughal Delhi, and the Ottoman Empire. The book has a general introduction and eight chapters. Each chapter is devoted to specific themes, cultural practices, and institutions, such as the status of teachers and students; the nature of formal and informal study settings; the various method, tools, and materials of learning; as well the diverse social values and rules that governed the patronage, teaching, and seeking of knowledge. Her procedure for each of these themes is to present a general overview of the basic concerns and patterns before showing cases involving particular figures and institutions, usually from bio-bibliographical sources. This approach balances out the need for acknowledging local contexts and diversity while allowing for common features and generalizations to transpire across the Islamicate. The inclusion of cases involving religious and ethnic minorities as well as the education of women is particularly noteworthy, as this testifies to the internal diversity of the Islamicate. As acknowledged by the author herself, the need for further research on these communities obviously exists. Finally, each chapter ends with a postface that contains the author's meditations on contentious issues in interpretation and historiography. The work is further completed by the reproduction of images of manuscript sources and the inclusion of highly useful appendices listing the various scholarly and political authorities cited by the author along with their associated localities and sectarian, disciplinary, and dynastic affiliations. The bibliography also contains what is perhaps the most up-to-date collection of modern scholarship on Islamicate institutions of learning. The result is a work that can be used simultaneously as a handbook for researchers and a textbook for students. For Ottomanists, this monograph should be read with Khaled El-Rouayheb's more specialized study of scholarly enterprises in the Ottoman context.⁴

⁴ Khaled El-Rouayheb, Islamic Intellectual History in the Seventeenth Century: Scholarly Currents in the Ottoman Empire and the Maghreb (New York: Cambridge University Press, 2015).