Books in Arabic Script
Dagmar A. Riedel
Abstract: [100 words]
The essay approaches the book in Arabic script as the indispensable means for the transmission of knowledge across Eurasia and Africa, within cultures and across cultural boundaries, since the seventh century AD. The state of research can be divided into manuscript and print studies, but there is not yet a history of the book in Arabic script which captures its plurilinear development for over fourteen hundred years. The essay explores the conceptual and practical challenges that impede the integration of the book in Arabic script into book history at large, and includes an extensive reference list which reflects its diversity.

Keywords: [max. 10] Judaism, Islam, Eastern Churches, Semitic languages, Turkic languages, Iranian languages, codicology, moveable type, lithography, blockprint

The book in Arabic script emerged in Late Antiquity in the Middle East, in a world politically dominated by the Byzantine empire in the Eastern Mediterranean and the Black Sea, and the Sasanian empire in Mesopotamia and on the Iranian plateau. To this day its dominant format is that of the codex (Ar. *kitāb*); the esthetic unit of page design is the double page (Figure 1). But the roll (Ar. *darj*, Pers. *ṭūmār*, Lat. *rotulus*) and the folding book (Ar. *muraqqaʿ*, Pers. *tā-yi bād-bizanī*; Gk. *pinax*; e.g., ʿUmar Khayyam, *Divan* – New York Public Library, Spencer Collection, Pers. ms. 37, colophon dated 1277/1861) are also used. The one-volume Qurʾan codex (Ar. *muṣḥaf*) is more common than Qurʾan rolls (Saleh 2014). There are, however, no horizontal scrolls in Arabic script (Lat. *volumen*; cf. Gacek 2009, 224–225). The most widely used writing surfaces are parchment and paper (Bloom 2001). While Egyptian papyrus was important for administrative documents—in the European successor states of the Roman empire (Pirenne 1937, 91–93) as well as for the Byzantines and in the Middle East—extant evidence suggests that its use for book production was rare and ceased after the eighth-century introduction of paper (Déroche 2004, 23). Micrography was practiced—for example, in glosses of formal manuscripts written after 1500 in Iran and Turkey (Qurʾan – Columbia University, RBML, Smith MS Or 347, colophon dated 1129/1716)—but remains to be systematically studied. The development of the book in Arabic script follows the diffusion of Islam and the establishment of Muslim-ruled societies from the 620s onwards, yet its production and circulation were never restricted to Arabs or Muslims. It is a hallmark of Islamic civilization that until the European conquest of the Americas in the sixteenth century, it was the only medieval civilization that had direct contact with all contemporary civilizations in China, India, Africa, and Europe. Eurasian long-distance trade networks connected the Levant with Xinjiang Uygur, Scandinavia, and East Africa, and the arts and sciences flourished in urban centers such as Granada, Fez, Timbuktu, Konya, Aleppo, Jerusalem, Ardabil, Isfahan, Bukhara, Herat, and Multan. Books in Arabic script were the indispensable means for the transmission of knowledge across Eurasia and Africa, within cultures and across cultural boundaries.

In book history, the book in Arabic script is the odd one out. A book in Arabic script is not always a book in the Arabic language related to Islam. The term “Islamicate”—proposed by Marshall Hodgson (1922–1968) to distinguish between the religion Islam and its civilization—is occasionally used to indicate that the widely shared Arabic alphabet, together with strong traditions of book design for important literary genres, creates, if seen from afar, an impression of uniformity despite linguistic and religious diversity (Figure 2). This “global view”—to use the terminology coined by Colette Sirat (2006, 305) for the study of Hebrew manuscripts—explains

partly why those who specialize in "western" books tend to overlook the plurilinear development of the book in Arabic script between the seventh century and the present. Additional factors that impede its integration into book history curricula are the linguistic challenge of acquiring at least some competence in the major languages written with the Arabic alphabet, as well as the political implications of everything associated with Islam, although violence and warfare are present in all civilizations. Due to the persistent othering of Islam within the dominant narratives of the western civilization, today's Muslim citizens in Europe and North America are again perceived as a new phenomenon which allegedly threatens Judeo-Christian civilization. From the seventh century onwards, the Church of Rome had to confront Islam, since Muslims, like pagans and Jews, were neighbors, trading partners, and adversaries. From the eighth century until 1492, Muslim elites ruled over parts of Iberia and Southern Italy. After the 1453 conquest of Byzantine Constantinople, the Ottoman empire (1281–1923) expanded its rule into Central Europe, including parts of the Balkans, until its demise after World War I.

Arabic and Hebrew script both are derived from Aramaic script. But the Arabic alphabet has always transcended the boundaries of the worldwide Muslim community, while the Hebrew alphabet defines the Jewish book. The oldest preserved texts in the Arabic language are Nabatean inscriptions from the fourth century (Hoyland 2001, 202 pl. 32a; George 2010, 23). By the sixth century, in present-day Jordan, the use of Nabatean Aramaic script for the writing of Arabic had led to the development of the Arabic alphabet with 28 letters among Christian Arabs whose liturgical language was Aramaic (Bauer 1996; cf. Hoyland 2015, 16 fig. I.3). With the revelation of the Qurʾan to the prophet Muḥammad (d. 632) and the establishment of the first Muslim community on the Arabian peninsula, Arabic became the language of Islam, the Qurʾan was identified as the Islamic book *par excellence*, and Arabic calligraphy emerged as an Islamic artistic practice. At the beginning of the eighth century, Muslim troops had taken Egypt, Iraq, Syria, and Palestine from the Byzantine empire and defeated the Sasanian empire, while continuing to push westward into North Africa and Southern Europe and eastward into Central Asia and the Indian Subcontinent. Within less than a century, Muslim elites ruled over a vast territory with diverse populations, and most of their subjects were neither Arabs nor Muslims. In the 690s, the Umayyad caliph ʿAbd al-Malik (r. 685–705) discontinued the administrative uses of Greek and Middle Persian. Once Arabic was firmly established as the empire's administrative language, it was not only the language of the revelation which united a linguistically diverse Muslim community, it also served as the lingua franca which allowed Muslims and non-Muslims to live together under Muslim rule. Judeo-Arabic, which is written in Hebrew characters, became one of the important languages of Jewish culture. To this day Christian Arabic connects members of the Eastern churches across schisms (e.g., Trilingual Psalter in Greek, Latin, and Arabic – British Library, Harley MS 5786, written before 1153). Arabic dominated Islamic civilization which first flowered under the Umayyads (661–750) in Damascus and then under the Abbasids (750–1258) in Baghdad. But in the tenth century, after governors in Central Asia had successfully established greater independence from the Abbasid caliphate, the rise of local Muslim dynasties paved the way for Persian and Turkish to become, together with Arabic, the dominant literary languages of Islamic civilization.

Until the beginning of the twentieth century, Arabic script created a visual unity between Arabic, Persian, and Turkish, although they are fundamentally different from each other as they are, respectively, Semitic, Iranian, and Turkic languages. At the same time, religious communities with established literary traditions, such as Jews, Zoroastrians, Copts, Nestorians, Greeks, Assyrians, and Armenians, continued to use their own scripts for the writing of religious and vernacular literature, whether or not these texts were in their own languages. As discussed in

the preceding chapters on clay tablets and Hebraic books, the uses of more than one alphabet for the writing of the same language is characteristic of literacy in Middle Eastern societies. While the religious and linguistic diversity of Muslim-ruled societies was always accompanied by tension, which occasionally led to violence, in the history of Islamic civilization diversity is the rule and not the exception. It was the rise of nationalist movements in response to European colonialism that weakened the dominance of Arabic script in the Middle East. The 1928 abolition of Arabic script in the newly founded Republic of Turkey and the mandated uses of the Cyrillic alphabet in the USSR fundamentally changed the accessibility of the Islamic civilization's literary heritage in the Balkans and the Caucasus, as well as in Asia Minor and Central Asia (Holbrook 1999). After World War II, decolonization affected the official roles of Arabic and Arabic script in Africa. In Nigeria, for example, Arabic ceased to be taught in state schools after independence from Britain in 1960. Nonetheless, the wide reach of Islamic civilization in Eurasia and Africa, together with the adaptability of Arabic script to the writing of non-Semitic languages has ensured that, after the Roman alphabet, Arabic is now the most used segmented script (Kaye 1996).

In academic disciplines which rely on sources in Arabic script, print and manuscript studies are distinct specializations with few practitioners, and their development mirrors the changing perception of Islamic civilization. While scholars inside and outside Muslim societies have significantly advanced our knowledge of the history of the book in Arabic script during the last two decades, the most important practical impediment remains the insufficient state of cataloging and bibliography of known and accessible collections in Muslim societies, as well as in Europe and North America (Roper 1991–1994). Adam Gacek (2009, x) has openly admitted that the number of extant manuscripts cannot be known, as the number of inaccessible manuscripts in private collections is anybody's guess. Geoffrey Roper (2010, 323) has estimated that "more than 3 million MS texts in Arabic script" have been preserved in accessible collections worldwide, but he counts texts, not codices. His number seems rather modest, if compared to the estimates of 5 to 30 million extant Sanskrit manuscripts, mentioned in the preceding chapter on South-Asia. Because of the insufficient state of cataloging it is not yet possible to take full advantage of the historical evidence preserved in paratexts such as colophons, dedications, ownership statements, or marginalia (Ahmed and Larkin 2013). The regrettable absence of bibliographic control is a recurrent theme in scholarship (Humphreys 1991, 7; Rippin 2006). While the direct relationship between the routinely lamented poor availability of primary sources (Humphreys 1991, 25) and inadequate cataloging is usually overlooked, the absence of bibliographic control is traditionally presented as the inescapable downside of an extraordinarily rich manuscript tradition. Unfortunately, inadequate cataloging contributes to the impression of extraordinary riches, while, at the same time, making it impossible to verify any speculation. The situation will not be ameliorated by the steadily improving availability of digital surrogates, whether of manuscripts or printed books, as digitization projects are generally executed as ventures independent of cataloging (Chapman 2010).

Scholars of the history of Iberia, Africa, the Middle East, Turkey, Iran, and the Caucasus, as well as Asia and the Pacific Rim value the rich traditions of the book in Arabic script. Pride of place, however, is given to manuscripts. They constitute the most important source for all aspects of Islamic history, as their professional production only ceased in the early twentieth century. A manual on the codicology of manuscripts in Arabic script (Déroche 2000), which reflects the French tradition of research on western medieval manuscripts at the Institut de Recherche et d'Histoire des Textes (IRHT), is now available in English, Arabic, and Italian translations.

Recent handbooks on comparative codicology (Géhin 2005, Bagnall 2009, Bausi 2015) include chapters on manuscripts in Arabic script. A specialized bibliography of Islamic codicology (Gacek 2001–2008) provides guidance to research on the book in Arabic script in non-western languages. Periodicals are published inside and outside Muslim societies, and international conferences have been regularly convened since the 1980s.

Art historians study Islamic calligraphy and illustrated manuscripts in Arabic, Persian and Turkish (George 2010, Brend 2010), while Qurʾan specialists are the vanguard of Arabic paleography and Islamic codicology (Déroche 2014). Since the early 2000s there has been a growing interest in the cultural history of books, in which scholars explore the Islamic book as discussed in written sources without necessarily consulting extant manuscripts and printed books (Touati 2003, Hanna 2007, Ghersetti 2012, Hirschler 2012). The continuing destruction of books in Arabic script as a consequence of warfare, political instability, and natural disaster has heightened the appreciation for the endangered cultural heritage of Islam and the Eastern churches (Kominko 2015). The growing sense of protectiveness has contributed to a greater awareness of Islamic manuscripts among scholars who have never touched original manuscripts—or rare printed books—for their own work.

Praising the Muslim Middle East as "one of the most bookish of pre-modern cultures" (Saleh 2004, 207) creates, unfortunately, an impediment to the unsentimental examination of both manuscripts and printed books as commercial commodities which are, at the same time, unique material evidence of intellectual practices. The Islamic legal literature about the disposal of worn-out copies of the Qurʾan documents agreement about the veneration of its sacred text, and disagreements about what to do with its material manifestation (Figure 3). The disposal practices include incineration and several methods of burial, as well as their recycling as binding material (Sadan 1986, 37–40). While palimpsests of parchment manuscripts are common in the Christian Arabic tradition, the very limited evidence for palimpsests of parchment Qurʾans is exclusively associated with Yemen (Déroche 2014, 55). For the editors of the Qurʾan's modern standard version, published 1924 in Cairo, it was unnecessary to examine the earliest extant Qurʾan manuscripts in order to establish a written text for the revelation's correct recitation. As Muslims have written treatises on Qurʾan recitation and orthography since the eighth century, the editors consulted scholarship, and not historical witnesses (Bergsträsser 1930, 4–6).

Many European and North American libraries collected manuscripts in Arabic script (Roman 1990) to provide access to the knowledge traditions of Islam and Eastern Christianity, as well as to those of Greece, India, China, and Africa. While scant material evidence for the European circulation of manuscripts in Arabic script outside Iberia and Italy before 1500 has been preserved (Burnett 1997), the oldest oriental acquisitions in the research libraries of Leiden, Oxford, Munich, Paris, and the Vatican (Grafton 1993, 225–249) document how scholars such as Jacobus Golius (1596–1667; Witkam 2007, 10–11) and André du Ryer (*c.*1595–1672; Hamilton and Richard 2004) continued older traditions of collecting manuscripts in Arabic script, together with those written in Greek, Aramaic, Syriac, Geez, and Hebrew. Although the history of the export of books in Arabic script to Europe and North America remains to be written, books in Arabic script have circulated outside Muslim-ruled societies because of their literary contents and because of their perceived value as material artefacts. The techniques and the design of early fifteenth-century bindings from northern Italy show the impact of Islamic bindings on Renaissance book production (Foot 1998, 13). In the second half of the nineteenth century, Paris was the center of the European trade with Islamic artefacts (Hillenbrand 2010, 203), and illuminated manuscripts in Arabic script became a more widely known bibliophilic collectible.

Important exhibitions in Paris and Munich highlighted figurative illustrations, mostly single leaves from Persian and Turkish manuscripts produced after 1500, as their esthetics appealed to Art Nouveau sensibilities. The Grolier Club in New York included, for example, 16 manuscripts from Iran and India into one of its first exhibitions of illuminated books (Anon. 1892, 43–48).

The first scholarly introductions to the book in Arabic script were written after World War I (Grohmann and Arnold 1929, Pedersen 1946), when manuscripts and printed books in Arabic script had turned into a niche market within the rare book trade. Although fine manuscripts in Arabic script had been highly valued commodities in premodern Muslim societies, the known written sources about the arts of the book are limited to technical manuals and chronology (Qummī 1959; cf. Roxburgh 2001). The increased demand for illustrated Islamic manuscripts among those who could not read them was met by adding new miniatures (Simpson 2008) to manuscripts traditionally not illustrated, such as an early nineteenth-century Qurʾan (Gottheil 1931; its current owner is unknown), or by recycling illustrations out of context, as in the case of a seventeenth-century copy of Shūstārī's Shiite biographical dictionary with miniatures from a seventeenth-century copy of Firdawsī's epic *Shāhnāmah* (New York Public Library, Spencer Collection, Pers. ms. 7, undated colophon, purchased Tehran 1949).

After the 1970 UNESCO convention on the trade with cultural property and the 1976 World of Islam Festival in London (Beeley 1978), buying books associated with Islam became the acquisition of the Islamic civilization's cultural heritage rather than an esthetic purchase. Nowadays few institutions can afford to actively acquire rare books in Arabic script, whether handwritten or printed. While the growing appreciation for Islamic manuscripts is accompanied by ever greater restrictions on scholars' access to the originals (Witkam 2010, 298; Déroche 2014, 43 n. 24), the motivation for displaying these treasures has increased. At the Bibliothèque Nationale in Paris, major exhibitions presented the Islamic book within the framework of Arabic (Guesdon and Vernay-Nouri 2001) and Persian (Richard 1997) as contemporary national languages. Smaller exhibitions have focused on the printed book in Arabic script (Marzolph 1994, Hanebutt-Benz 2002, Pehlevanian 2006). Terrorism in the name of Islam has prompted the interdisciplinary examination of the sacred book in the three monotheistic religions (Berthier 2005, Reeve 2007, Delsaerdt 2014).

Western library holdings in Arabic script have received little attention from book historians, partly because the institutional logic of libraries ensures that books with few readers are allotted scant resources for preservation and cataloging. In the second half of the nineteenth century, Arab nationalists first noticed the European collections of valuable Arabic manuscripts (Mestyan 2015, 454). In connection with the twentieth-century establishment of Middle Eastern nation states, it was argued by Edward Said (1979, 98) and others that the European demand for oriental manuscripts was the precondition for oriental philology as an academic discipline which in turn made Orientalism and, by extension, colonialism possible. Graduate education in disciplines which rely on sources in Arabic script is nowadays focused on preparing students for conducting research overseas, since European and North American collections of manuscripts in Arabic script are perceived as cultural heritage which was removed from its rightful places of origin. Consequently, there is only reluctant faculty support at European and North American institutions for the development of institutional expertise in order to facilitate access to their own holdings in Arabic script. At Princeton and UCLA where strong Middle East Studies departments have access to collections of more than 10,000 manuscripts in Arabic script, there is no tradition of using these books for teaching. The German Research Foundation (DFG) project *Manuscript Cultures* (SFB 950) at the Universität Hamburg has excluded from its agenda

any research on the oriental manuscript holdings of its own university library (Brockelmann 1908). Institutions such as the British Library, the Ashmolean Museum, or Harvard University rely on private organizations (e.g., Barakat Trust, Imam Zayd Cultural Foundation, Iran Heritage Foundation) and individuals (e.g., Yousef Jameel, Prince Alwaleed Bin Talal) to fund the digitization of holdings in Arabic script. In the 2000s, The Islamic Manuscript Association (TIMA) began to regularly organize five-day introductions to Islamic codicology, but book history programs have not integrated the book in Arabic script into their curricula.

Print studies tend to focus on the impact of letterpress technology and lithography (Figure 4) on the foundation of twentieth-century nation states, since the nineteenth-century introduction of large-scale commercial printing in Arabic script is considered a watershed which marks the beginnings of modernization in Muslim societies (Stark 2007, Sadgrove 2008, Wilson 2014).

There are no incunables in Arabic script from Christian Europe, although German printers experimented with Arabic letters in the 1480s (Osborn 2008, 342). The slow development of Arabic typography is usually related to the exceptional difficulties of correctly typesetting texts in a legible Arabic script. But Greek and Syriac typography, which pose comparable technological challenges, had been mastered by the 1550s (Balagna 1984, 128). Moreover, the argument ignores economic factors, such as the low demand for books in Arabic script in Christian Europe, as the teaching of oriental languages was a new subject at Renaissance universities. Not until the 1580s did the Arabic fonts of Robert Granjon (*c.*1513–1590), one of the most celebrated punchcutters of his time, establish a typographical standard of clarity. The Typographia Medicea in Rome used Granjon's fonts to publish a few Arabic books in the 1590s, primarily scientific works by authors such as Ibn Sīnā (Avicenna, *c.*980–1037) and Ṭūsī (1201–1274). Since these printed books circulated in the Ottoman empire (Hanebutt-Benz 2002, 138; Pektaş 2015, 6), they were possibly presented, together with the Morgan Picture Bible (Morgan Library, MS M.638, *c.*1250), to the Safavid ruler Shah ʿAbbās I (r. 1587–1629), when he received a diplomatic mission of Pope Clement VIII (1592–1605) in the Safavid capital Isfahan in 1608 (Simpson 2005).

The European demand for books in Arabic script—ranging from theology and history to the sciences and literature (Schnurrer 1811)—became sufficient to sustain the work of specialized presses at the beginning of the seventeenth century. Nonetheless, the history of oriental studies is not only a story about European scholars' quest for Islamic books in Muslim societies, but also about their constant lament about the difficulties of publishing books in Arabic script in Christian Europe (Toomer 1996). Censors were monitoring the publication of books in Arabic script until the early eighteenth century because Arabic script was associated with political adversaries,. When the celebrated Arabist Ludovico Marracci (1612–1700) finally published his Arabic-Latin Qurʾan edition (Padova 1698), the first volume was dedicated to a refutation of Islam's scripture, which followed in the second volume.

Since the diffusion of letterpress technology, coming first from Korea and China and later from Northern Europe, stopped twice at the borders of Islamic civilization (Roper 2007), its seemingly belated adaptation has generated considerable defensiveness. But printing technologies are never only used for book production. In Fatimid Egypt (909–1071) Islamic talismans were block-printed (Schaefer 2006). In Iran the Ilkhanids (1256–1353) experimented with printed paper money (Floor 1990). Moreover, nineteenth-century lithography (Marzolph 2001, Green 2010) and twentieth-century digitization are possible counterexamples of imported technologies which were almost immediately adapted to book production in Muslim societies.

It is usually presented as an exception in the Islamic history of the printed book that between 1729 and 1743 the Muslim convert Ibrahim Müteferrika (1675–1745) typeset 17 non-religious works in Istanbul (Pektaş 2015, 4). But book production involved always non-Muslims and occasionally foreigners, since premodern Muslim societies were religiously diverse. In general, economic resources determined how religious minorities produced their own books. In 1493 the Hebrew press of David and Jacob Nahmias published its first book in Istanbul. In the sixteenth century there were Jewish, Armenian, and Greek printers in the Ottoman capital. While the Carmelites failed in their attempt with printing Arabic and Persian books in seventeenth-century Isfahan, in 1637 Armenians established a press in Julfa, an Isfahan suburb. From 1772 onwards, books in Arabic script were printed at Fort William, Calcutta.

In the early sixteenth century some Iberian and Italian printers collaborated with scholars trained in Muslim societies in order to produce books for Christian and Muslim readers in North Africa and the Eastern Mediterranean. The first full book was an Arabic Book of Hours, printed 1514 in Italy. Although these export wares seem to have been commercial failures (Nuovo 1990, Bobzin 1995), European Christians continued to export small numbers of Christian books in oriental languages to Christian communities in Muslim societies, mostly, to support Christian missionaries. Over time their uses by missionaries became a topos of paratexts accompanying printed books in Arabic script. In the nineteenth century, political developments in the Ottoman empire allowed British and American missionaries to establish their own presses in the Levant (Auji 2013).

There is not yet a comprehensive study of books in Arabic script which were produced in Europe for the export to Muslim societies, but the case of the Qurʾan suggests that in the nineteenth century new business opportunities emerged. In 1834 the Leipzig printing house Tauchnitz published a Qurʾan (h = 25 cm), edited by Gustav Flügel (1802–1870), in four distinct issues, one of which would meet the expectations of readers in Muslim societies concerning paratexts and book design (Smitskamp 1994; cf. Nuovo 1990, 282–283). After the initial success of Flügel's text, Tauchnitz published a smaller student edition (1837, ed. Gustav Moritz Redslob, h = 22 cm, stereotyped), two corrected editions (1841 and 1858, h = 25-27 cm, illuminated opening pages, stereotyped, based on 2nd issue; Figure 5), and a concordance (1842, h = 25 cm, stereotyped). While Redslob's student edition ceased to circulate after World War I, Flügel's text and concordance continued to appear in authorized and unauthorized reprints, inside and outside Europe, until the availability of digital surrogates at the end of the twentieth century. It was widely cited in research for much of the twentieth century, although its verse divisions differ from those of the 1924 standard version. In English, readers encounter references to Flügel's text in the admired Qurʾan translation by A. J. Arberry (1904–1969).

The printed book in Arabic script serves book historians primarily as a negative example. Since Mediterranean Muslim communities, unlike their Jewish and Christian neighbors (Hanebutt-Benz 2002, Pehlevanian 2006, Sadgrove 2008), did not immediately adapt the fifteenth-century technology of moveable type, the Islamic history of printing is not aligned with that of early modern Europe. The production of printed books in Muslim societies is effectively invisible, as it cannot be fitted into the teleological model of a western intellectual history stretching "from Aristotle to Einstein." Falling into the trap of technological determinism, it is this time lag which is used as evidence for the intellectual decline of Islamic civilization after the Mongol sack of Abbasid Baghdad in 1258.

Three interrelated reasons for the comparatively late adaptation of printing technology are presented. Islam's "sacralization of handwriting and writing implements" (Mitterauer 2009, 236; cf. Roper 2010, 330–331) empowered those associated with the production and the trade of manuscripts so that an alliance between Muslim theologians (Ar. *ʿulamāʾ*) and the commercial manuscript workshops successfully opposed the introduction of the allegedly more rational printing technology to the Ottoman empire (Wilson 2014, 40–41). At the same time, Islam's conservative concepts of education favored the intensive reading of a few core works while discouraging the extensive reading of non-canonical works so that there was a limited demand for books (Ayalon 2008, 160–161). Since Muslim readers were not encouraged to be curious about new works in order to develop an independent human rationality, there was no economic rationale for the shift from manuscript to printed book in order to increase production. Outside academia, Islam's alleged opposition to printing technology has turned into the cliché of a religion's self-defeating denial in the face of western modernity (Epstein 2010).

The persistence of the decline thesis is salient, as it is based on the speculation that the immediate adaptation of letterpress printing would have increased book production and allowed for a much wider diffusion of knowledge, thus preventing the socio-economic and political problems which beset contemporary Muslim societies. Aside from the logical impossibility of proving a negative, the comparatively late adaptation of printing technology in Muslim societies is featured twice in the decline thesis in order to claim a teleological connection between rationality and progress: It is first explained as Islam's resistance against the mechanical reproduction of the word of god and then presented as the most damning evidence for the intellectual and economic decline of Islamic civilization. In comparative studies on the origins of modern science and Europe's economic ascendancy after 1500, the works of Muslim scholars such as Ghazālī (1050–1111) and Ibn Taymiyyah (1263–1328) are adduced to claim that Islamic theology did not allow for the development of a concept of an independent human rationality which in turn is claimed as the intellectual foundations of modernity in general and science in particular (Huff 2003, 108–115).

Intellectual historians (Gutas 1998, Dallal 2010) have consistently rejected the decline thesis, though without proposing a counter thesis. Instead, they highlight the achievements of Islamic science through explicating the remarkable insights of works written by outstanding scientists in Muslim societies. Their response illustrates a practice of textual scholarship that does not examine the manuscripts of their sources as the material evidence of the intellectual practices of authorship and the transmission of knowledge. Consequently, it misses its target, as it does not confront the technological determinism of the decline thesis, although the learned man who himself copied the works which he wanted to add to his library is one of the central characters of their version of Islam's intellectual history (Rosenthal 1947, 9; cf. Beit-Arié 1993, 82; Sajdi 2009, 126).

The most promising way out of this impasse is the comparative study of book production, since research on the parallel uses of different production modes of early modern Europe and its Jewish diaspora has revealed a complex interplay between production mode and a wide range of socio-economic and political considerations: manuscripts continued to be copied and circulated long after the fifteenth-century invention of letterpress technology in northern Europe. But at present the production modes of manuscripts and printed books in Arabic script are a little explored field of research. On the one hand, the already mentioned lack of bibliographical control creates significant hurdles for the design of feasible case studies on modes of book production. On the other hand, the practice of textual scholarship as reflected by the

organization of reference works is disconnected from both critical bibliography and book history. In none of the published catalogs of manuscripts in Arabic script is there a systematic distinction between formal (Figures 1-3), informal, and composite manuscripts (Figures 3, 6), although formal (Figure 3) and informal (Figure 6) repairs are often mentioned. In the still indispensable surveys of Arabic and Persian literature by Carl Brockelmann (1868–1956), Georg Graf (1875–1955), and C. A. Storey (1888–1967), manuscripts are not separated from printed books. Since art historians regard illuminated manuscripts as one of the major artistic achievements of Islamic civilization, the best-known sector of manuscript production is the high-end workshop (Rettig 2011). However, the most common form of manuscript production in Muslim societies is the user-generated book, which includes both the bibliophilic book made to order for a wealthy patron and any manuscript written for personal use only (Beit-Arié 1993, 9). While the overall output of bibliophilic codices for wealthy patrons must have been rather limited, the majority of manuscripts in Arabic script were codices exclusively written for personal consumption. Before the nineteenth-century introduction of large-scale commercial printing, the modes of manuscript production ranged from the professional copying of formal manuscripts of varying quality for the trade to the unprofessional copying of informal manuscripts for private use only. Since the repair of damaged manuscripts was much more cost-effective than the production of new copies, both formal and informal codices were continually recycled as composite manuscripts and circulated side by side as trade copies. Indeed, manuscript production never entirely vanished: at the end of the twentieth century students were still copying their own textbooks in rural Yemen (Messick 1993, 90) and rural Egypt (Elliott 2006).

References.

Ahmed, Asad, and Margaret Larkin, eds. 2013. *The* ḥāshiya *and Islamic Intellectual History*. Special issue, *Oriens*, 41/3-4.

Anonymous. 1892. *Catalogue of an Exhibition of Illuminated and Painted Manuscripts*. New York: Grolier Club.

Arberry, A. J., trans. 1955. *The Koran Interpreted*. Reprint, New York: Touchstone, 1996.

Auji, Hala. 2013. Between Script and Print: Exploring Publications of the American Syria Mission and the Nascent Press in the Arab World, 1834–1860. PhD diss., SUNY Binghamton.

Ayalon, Yaron. 2008. “Richelieu in Arabic.” *Islam and Christian-Muslim Relations*, 19: 151–165.

Bagnall, Roger, ed. 2009. *The Oxford Handbook of Papyrology*. Oxford: Oxford University Press.

Balagna, Josée. 1984. *L’imprimerie arabe en occident*. Paris: Maisonneuve & Larose.

Bauer, Thomas. 1996. “Arabic Script.” In *The World’s Writing Systems*, ed. Peter Daniels and William Bright, 559–564. Oxford: Oxford University Press.

Bausi, Alessandro, ed. 2015. *Comparative Oriental Manuscript Studies*. Hamburg: Tredition.

Beeley, Harold. 1978. “The World of Islam Festival, London 1976.” *Museum*, 30: 10–11. DOI:10.1111/j.1468-0033.1978.tb02110.x.

Beit-Arié, Malachi. 1993. *Hebrew Manuscripts of East and West*. London: British Library.

Bergsträsser, Gotthelf. 1930. *Plan eines Apparatus Criticus zum Koran*. Munich: Oldenbourg.

Berthier, Annie, et al. 2005. *Livres de parole*. Paris: Bibliothèque nationale.

Bloom, Jonathan. 2001. *Paper before Print*. New Haven: Yale University Press.

Bobzin, Hartmut. 1995. *Der Koran im Zeitalter der Reformation*. Stuttgart: Steiner.

Brend, Barbara. 2010. *Muhammad Juki’s Shahnamah of Firdausi*. London: Royal Asiatic Society.

Brockelmann, Carl. 1908. *Die arabischen, persischen, türkischen, malaiischen, koptischen, syrischen and äthiopischen Handschriften*. Reprint, Hamburg: Hauswedell, 1969.

Burnett, Charles. 1997. *The Introduction of Arabic Learning into England*. London: British Library.
Chapman, Stephen. 2010. “The Harvard University Library Islamic Heritage Project.” *Journal of Islamic Manuscripts*, 1: 18–30.
Dallal, Ahmad. 2010. *Islam, Science and the Challenge of History*. London: Yale University Press.
Delsaerdt, Pierre, et al. 2014. *Sacred Books*. Wommelgem: BAI.
Déroche, François, et al. 2000. *Manuel de codicologie des manuscrits en écriture arabe*. Paris: Bibliothèque nationale.
———. 2004. *Le livre manuscrit arabe*. Paris: Bibliothèque nationale.
———. 2014. *Qur’ans of the Umayyads*. Leiden: Brill.
Elliott, Andrea. 2006. "A Muslim Leader in Brooklyn.” *New York Times*, March 5.
Epstein, Jason. 2010. “Publishing.” *New York Review of Books*, March 11.
Floor, Willem. 1990. “Čāp.” In *Encyclopaedia Iranica*, 4/7: 760–764.
Foot, Mirjam M. 1998. *The History of Bookbinding as a Mirror of Society*. London: British Library.
Gacek, Adam. 2001–2008. *The Arabic Manuscript Tradition*. 2 vols. Leiden: Brill.
———. 2009. *Arabic Manuscripts*. Leiden: Brill.
Gdoura, Waḥīd. 1985. *Le début de l’imprimerie arabe à Constantinople et en Syrie*. Tunis: Université de Tunis.
Géhin, Paul, et al. 2005. *Lire le manuscript medieval*. Paris: Colin.
George, Alain. 2010. *The Rise of Islamic Calligraphy*. London: Saqi.
Ghersetti, Antonella, ed. 2012. *The Book in Fact and Fiction in Pre-Modern Arabic Literature*. Special issue, *Journal of Arabic and Islamic Studies*, 12.
Gottheil, Richard. 1931. “An Illustrated Copy of the Koran.” *Revue des études islamiques*, 4: 21–24, 6 plates.
Grafton, Anthony, ed. 1993. *Rome Reborn*. Washington: Library of Congress.
Green, Nile. 2010. “Stones from Bavaria.” *Iranian Studies*, 43: 305–331. DOI:10.1080/00210861003693844.
Grohmann, Adolf, and Thomas Arnold. 1929. *The Islamic Book*. Leipzig: Pegasus.
Guesdon, Marie-Geneviève, and Annie Vernay-Nouri. 2001. *L’art du livre arabe du manuscrit au livre d’artiste*. Paris: Bibliothèque nationale.
Gutas, Dimitri. 1998. *Greek Thought, Arabic Culture*. London: Routledge.
Hamilton, Alaistair, and Francis Richard. 2004. *André du Ryer and Oriental Studies in Seventeenth-Century France*. London: Arcadian Library.
Hanebutt-Benz, Eva, et al., eds. 2002. *Middle Eastern Languages and the Print Revolution*. Westhofen: Skulima.
Hanna, Nelly. 2007. “Literacy and the ‘Great Divide’ in the Islamic World.” *Journal of Global History*, 2: 175–193. DOI:http://dx.doi.org/10.1017/S1740022807002240.
Hillenbrand, Robert. 2010. “Western Scholarship on Persian Painting before 1914.” In *After One Hundred Years*, ed. Andrea Lermer and Avinoam Shalem, 201–229. Leiden: Brill.
Hirschler, Konrad. 2012. *The Written Word in the Medieval Arabic Lands*. Edinburgh: Edinburgh University Press.
Hodgson, Marshall. 1974. *The Venture of Islam*. 3 vols. Chicago: University of Chicago Press.
Holbrook, Victoria. 1999. “The Intellectual and the State.” *Oriente Moderno*, n.s. 18: 233–251.
Hoyland, Robert. 2001. *Arabia and the Arabs*. London: Routledge.
———. 2015. *In God’s Path*. Oxford: Oxford University Press.
Huff, Toby. 2003. *The Rise of Early Modern Science*. 2nd ed. Cambridge: Cambridge University Press.

Humphreys, R. Stephen. 1991. *Islamic History*. Rev. ed. Princeton: Princeton University Press.
Kaye, Alan. 1996. “Adaptations of the Arabic Script.” In *World’s Writing Systems*, ed. Daniels and Bright, 743–762.
Kominko, Maja, ed. 2015. *From Dust to Digital*. Cambridge: Open Book. DOI:http://dx.doi.org/10.11647/OBP.0052.
Marzolph, Ulrich. 1994. *Dāstānhā-ye šīrīn*. Stuttgart: Steiner.
———. 2001. *Narrative Illustration in Persian Lithographed Books*. Leiden: Brill.
Messick, Brinkley. 1993. *The Calligraphic State*. Berkeley: University of California Press.
Mestyan, Adam. 2015. "Ignác Goldziher's Report on the Books from the Orient for the Hungarian Academy of Sciences." *Journal of Semitic Studies*, 50: 443–480.
Mitterauer, Michael. 2003. *Warum Europa?* Eng. trans., Chicago: Chicago University Press, 2009.
Nuovo, Angela. 1990. “A Lost Arabic Koran Rediscovered.” *Library*, 12: 273–292.
Osborn, J. R. 2008. The Type of Calligraphy: Writing, Print, and the Technologies of the Arabic Alphabet. PhD diss., UCSD.
Pedersen, Johannes. 1946. *Den arabiske bog*. Eng. trans., Princeton: Princeton University Press, 1984.
Pehlevanian, Meliné. 2006. *Exotische Typen*. Berlin: Staatsbibliothek.
Pektaş, Nil. 2015. “The Beginnings of Printing in the Ottoman Capital.” *Osmanlı Bilimi Araştırmaları*, 16/2: 3–32.
Pirenne, Henri. 1937. *Mohammed et Charlemagne*. Reprint, 1954 English trans., Mineola, NY: Dover, 2001.
Reeve, John, ed. 2007. *Sacred*. London: British Library.
Rettig, Simon. 2011. "La production manuscrite à Chiraz sous les Aq Qoyunlu entre 1467 et 1503," PhD diss., Université de Provence.
Richard, Francis. 1997. *Splendeurs persanes*. Paris: Bibliothèque nationale.
Rippin, Andrew. 2006. “Preface.” In *Blackwell Companion to the Qurʾān*. Blackwell Reference Online. DOI:10.1111/b.9781405117524.2006.x.
Roman, Stephan. 1990. *The Development of Islamic Library Collections in Western Europe and North America*. London: Mansell.
Roper, Geoffrey, ed. 1991–1994. *World Survey of Islamic Manuscripts*. 5 vols. London: Furqan.
———. 2007. “The Printing Press and Change in the Arabic World.” In *Agent of Change*, ed. Sabrina Alcorn Baron et al., 250–267. Amherst: University of Massachusetts Press.
———. 2010. “The History of the Book in the Muslim World.” In *Oxford Companion to the Book*, 1: 321–339. 2 vols. Oxford: Oxford University Press.
Rosenthal, Franz. 1947. *The Technique and Approach of Muslim Scholarship*. Rome: Pontificium Institutum Biblicum.
Roxburgh, David. 2001. *Prefacing the Image: The Writing of Art History in Sixteenth-Century Iran*, Leiden: Brill.
Qummī, Qāḍī Aḥmad. 1959. *Calligraphers and Painters*, tr. Vladimir Minorsky. Washington: Smithsonian.
Sadgrove, Philip, ed. 2008. *Printing and Publishing in the Middle East*. Oxford: University of Manchester Press.
Said, Edward. 1979. *Orientalism*. New York: Vintage.
Sajdi, Dana. 2009. “Print and its Discontents.” *The Translator*, 15: 105-138.
Saleh, Walid. 2004. *The Formation of the Classical Tafsīr Tradition*. Leiden: Brill.
Al-Saleh, Yasmine. 2014. ‘Licit Magic’: The Touch and Sight of Islamic Talismanic Scrolls. PhD diss., Harvard University.
Schaefer, Karl. 2006. *Enigmatic Charms*. Leiden: Brill.

Schnurrer, Christian Friedrich. 1811. *Bibliotheca arabica*. Halle: Hendel.
Simpson, Marianna Shreve. 2005. “The Morgan Bible and the Giving of Religious Gifts.” In *Between the Picture and the Word*, 141-150. Princeton: Index of Christian Art.
———. 2008. “Mostly Modern Miniatures.” *Muqarnas*, 25: 359–395.
Sirat, Colette. 2006. *Writing as Handwork*. Turnhout: Brepols.
Smitskamp, Rijk. 1994. "Flügel's Koran Edition." *ʿĀlam al-kutub*, 15: 533–535.
Stark, Ulrike. 2007. *An Empire of Books*. Ranikhet: Permanent Black.
Toomer, G. J. 1996. *Eastern Wisedome and Learning*. Oxford: Clarendon.
Touati, Houari. 2003. *L’armoire à sagesse*. Paris: Aubier.
Wilson, Brett. 2014. *Translating the Qur’an in an Age of Nationalism*. London: Oxford University Press.
Witkam, Jan Just. 2007. *Inventory of the Oriental Manuscripts of the Library of the University of Leiden*. Vol. 1. 2nd ed. Leiden: Ter Lugt.
———. 2010. Review of *From Codicology to Technology*. *Journal of the American Oriental Society*, 130: 297–300.

Cross- References to other chapters:
Eleanor Robson, “The Clay Tablet Book”
J. S. Edgren, “China”
Emile G. L. Schrijver, “The Hebraic Book”
Graham Shaw, “South Asia”
Michelle Brown, “The Triumph of the Codex”
M. T. Clanchy, “Parchment and Paper”

Biographical Note: [max. 50]

Dagmar A. Riedel is an Associate Research Scholar at the Center for Iranian Studies of Columbia University. She is one of the Associate Editors of the *Encyclopaedia Iranica* (vol. 1/1, New York, 1982–). Her research explores how books in Arabic script contributed to the transmission of knowledge across Eurasia.