

Richardson, Kristina. "A New Narrative of Premodern Afro-Eurasian Printing." *Roma in the Medieval Islamic World: Literacy, Culture, and Migration*. London: I.B. Tauris, 2022. 103–126. *Bloomsbury Collections*. Web. 18 Jan. 2022. <<http://dx.doi.org/10.5040/9780755635801.0012>>.

Downloaded from Bloomsbury Collections, www.bloomsburycollections.com, 18 January 2022, 21:29 UTC.

Access provided by: BC December 21 Authors

Copyright © Kristina Richardson 2022. All rights reserved. Further reproduction or distribution is prohibited without prior permission in writing from the publishers.

Chapter 6

A NEW NARRATIVE OF PREMODERN AFRO-EURASIAN PRINTING

As professional internal strangers equally dependent on cultural difference and economic interdependence, they speak at least one internal language (sacred, secret, or both) and at least one external one. They are all trained linguists, negotiators, translators, and mystifiers, *and the literate groups among them tend to be much more literate than their hosts.*

—Yuri Slezkine, *The Jewish Century* (emphasis mine)

In each previous chapter I have explored a distinct aspect of *gharīb* history and, where applicable, the reasons that the topic has been abandoned in West Asian historiography—the modern formation of Romani studies that divorced the study of the Roma from their western Asian and northern African histories, the centuries-long endurance of the Sin language, the literary culture of the *ghurabāʾ*, and the creation of their homes, neighborhoods, and burial grounds in Islamicate cities. In this chapter I pose similar questions of premodern Islamicate print and book history. How does the important technological development of premodern Hebrew, Aramaic, Coptic, Arabic, and Syriac printing remain unintegrated into global histories of print? Orientalists trained in the relevant languages have been aware of print specimens since 1852 when Joseph Hammer-Purgstall (1774–1856) published evidence from thirteenth- and fourteenth-century Andalusian manuscripts that suggest printing activity.¹ Granted, early printing vocabularies in western Asia were exclusively in Sin, a language obscure to most researchers, but the sidelining of this technological development is not solely a question of translatability. Print history is a deeply political field, as the supremacy of Western modernity rests almost entirely on representing print's origins as uniquely Christian and European and its effects on Latin Christendom as singularly transformative. Given the deep entrenchment of this myth in historical scholarship, in library and museum cataloging practices, and even in the naming of print artifacts, the isolation of Afro-Asian print heritage from that of Europe is even quietly reproduced by historians of Asian and African print. Gentle revisions to the grand narrative are insufficient to correctives. In this chapter I will propose a new narrative centered on the minoritized people—*ghurabāʾ* astrologers from 900 to roughly 1430, then Jews and Christians starting around 1493—who sustained an

indigenous print culture nearly continuously until 1727, the year traditionally held as the start of “Islamic printing.”

Johann Gutenberg

The master narrative in studies of print culture claims that Johann Gutenberg, born into an aristocratic family around the year 1400, independently developed the printing press, *ex nihilo*, in Mainz, Germany, in a burst of inspired genius. He certainly pioneered the technology of arranging typography using metal movable characters within the structure of a large press. He also developed a special ink with high copper and lead content that would adhere to the metal type. His printing press enabled the wide and rapid dissemination of ideas, ushering in major social revolutions in Europe, namely the Renaissance, the Protestant Reformation, and the rise of literacy and modern science.² An invention of profound and long-lasting cultural significance has prompted scrutiny of its inventor. The purity of Gutenberg’s inspiration functions as a hagiography in service to a larger mythology, in this case the origin myth of European modernity as an endogenous development. It leads to bewildering locutions, like this one from a classical Arabist: “Movable type and the internet are products of the West (though movable type emerged independently in several places across the globe, including Korea).”³ How can both parts of that sentence be simultaneously true? A nonspecialist reader would be forgiven for thinking that movable type emerged at the same time around the globe, yet Asian movable type actually predates Gutenberg by 400 years. Furthermore, such formulations imply that East Asian printing traditions were static and unchanging. In fact, Buddhist communities invested in printing as an inexpensive and efficient means of spreading their religious texts in myriad languages across vast distances. One example illustrates the complexity of some of these achievements. Between 764 and 770 the Japanese empress Shotoku famously commissioned one million prints of the Buddhist sutra *Hyakumantō dharani*. Thousands of copies of these texts have survived in Japan in small statues that housed them. Composed in Chinese characters, “the texts consist almost entirely of sounds transcribed phonetically from the original Sanskrit.”⁴ The scribe-carvers merged scripts (Chinese) with languages (Sanskrit) to communicate with Buddhist populations in lands far beyond Sanskrit and Chinese speech communities (Japan).

Buddhism, woodblock printing, and movable-type printing in Chinese, Uyghur, Mongolian, Sanskrit, Tibetan, and Tangut spread along the Silk Roads from the eighth century onward. Islam spread through conquest eastward from Arabia, and many Central Asian communities converted or maintained their ancestral faiths and pledged allegiance to a new Muslim ruler. It is abundantly clear that as Buddhist and Muslim communities deepened their interactions, this contact ushered in a novel print culture in the Sunni Abbasid Empire from 900 to about 1430. The earliest Abbasid prints were of Islamic religious texts in Arabic, but later communities printed in Hebrew, Coptic, and Syriac. Geographically,

printing spread into northern Africa in the early tenth century, then moving into Andalusia by the eleventh or twelfth century. One can more aptly characterize premodern Asian printing as proceeding continuously from the 700s, incorporating technological developments, like movable type, along the way. That this vast and diverse printing tradition has been consistently marginalized as inferior or irrelevant to global print history illustrates a scholarly commitment to upholding Central European print traditions as unique and disconnected from earlier Asian, African, or southern European histories.

In a similar vein one modern biographer of Gutenberg who explored the possibility that Chinese technology influenced Gutenberg insisted on his unflinching admiration for the man and his legacy: "I have not raised the issue of whether Gutenberg may have been influenced by printing in the Far East in order to diminish his reputation in any way."⁵ To uphold Gutenberg's legacy as wholly European and Christian, his biographers have focused on his upper-class upbringing and privileged circles in fifteenth-century Mainz. This account of Mainz erases long-standing Jewish communities and interactions with neighboring Muslim empires. Mainz, known in Yiddish as Magenza, had been home to a thriving Jewish community since the tenth century. When the Sephardic Jewish merchant Ibrāhīm ibn Ya'qūb al-Isrā'īlī al-Ṭurtūshī visited Mainz in 965, he registered surprise to find Iranian Samanid silver coins minted in the years 301 and 302 AH/913 and 914 CE circulating in the markets, as well as Asian spices like pepper, ginger, and cloves.⁶

Trade routes between Central Asia and northern Europe are well documented, but this long-distance trade would not have been the only way that residents of Mainz had learned of Islamic empires. Muslim armies conquered Iberia in 750 and were not fully expelled until 1492, so a sophisticated Islamic empire where printing existed dominated southern Europe for all of Gutenberg's lifetime. (He died on February 3, 1468.) Ottoman Turkish forces seized Constantinople on May 25, 1453, shortly after Gutenberg had begun printing pamphlets and books on his new press. But in 1454, his printing themes started to pivot toward the Islamic East, when he printed copies of his German poem "Eyn manung der christenheit widder die durken" (An Admonition to Christendom against the Turks), in which he exhorted European sovereigns to protect Cyprus against Muslim invaders.⁷ The following year he used the same punchtype to print his famous Latin Bibles, and in 1456, his workshop again reused this type to print, concurrently in Latin and German, Callixtus III's papal bull, ordering Christians to say special prayers at noon for those Crusaders fighting Turks in the Balkans.⁸

Drawing direct, unmediated connections between early medieval China and late medieval Western Europe is fanciful work, but with the spread to Europe of such Chinese inventions as paper, shadow theater, techniques of silk production, porcelain, and gunpowder, researchers have easily demonstrated mechanisms of technological transfer along the Silk Roads or via Indian Ocean trade routes.⁹ All of these technologies were adopted in Central Asia, Islamic West Asia, and northern Africa before arriving in Europe, so how tenable is it that the printing press was completely disconnected from printing techniques that had existed for

centuries in Buddhist and Islamic Asia?¹⁰ Central to rethinking print is recognizing that the premodern period was a vibrant and innovative stage, not a lost era, in print history. By centering the artistry and technological achievements of minority West Asian and African printers, like the *ghurabā'*, it becomes clearer that their work was a crucial continuation of Central and East Asian printing and a plausible forerunner of the European tradition.

Gutenberg was certainly aware of the world outside of Mainz, but it is not only the odd Europeanist or Arabist who scuttles any suggestion of Afro-Eurasian technological transfer. Historians of the material culture and social milieu of medieval Islamdom have also upheld this viewpoint, by offering limited and misleading assessments of Islamicate blockprinting. According to Jonathan Bloom:

Although Muslims knew about printing as early as the tenth or eleventh century, and *occasionally used it to make inexpensive amulets or to decorate cotton cloth*, book printing came to the Islamic lands a full millennium after the introduction of paper in the late eighth and ninth centuries.¹¹ (emphases mine)

This one sentence incorporates two analytical biases that have stymied Islamicate print studies for years. First, Bloom assesses objects as commodities, measuring their historical or technological worth purely by their market value. Printed books were expensive commodities, whereas smaller printed leaves were evidently not, but as the rich findings of the Cairo Geniza have shown, it pays to engage cultural production wherever we find it. Second, Bloom only considers printing to have arrived in Islamic lands in the eighteenth century, when Muslim printers started to operate presses, sidelining three centuries of handpress books made by Ottoman Jews and Christians. To more fully appreciate the social conditions and technical knowledge of the past, historians should not define printing technologies against the standard of Gutenberg's printing press. As the historian Kathryn Schwartz has noted of a later period, "these frameworks are ahistorical because they predicate Ottoman printing on the European experience of print."¹² Even with such a call for alternative visions, a steady stream of anxious scholarship seeks to align Islamicate print history with European milestones and developments.¹³ Instead of arguing that medieval Islamdom was not a mirror of Latin Christendom, let us start from the premise that the history of Afro-Asian printing looked nothing like Europe's history.

Pre-1500 Blockprinting in East and Central Asia

While the diffusion of print is a historically complex process, the key preconditions for premodern textual printing were the availability of paper, a critical mass of urban residents, and institutions of learning, like libraries, temples, schools, or madrasas.¹⁴ Chinese paper was invented by 100 BCE, and printed texts emerged in China in the seventh century. In Europe the first paper mills were constructed

in the late 1200s, and blockprinting took firm root there in the early fifteenth century.¹⁵ But this pattern of diffusion did prevail in Islamic West Asia, where paper arrived in the eighth century and blockprinted texts in the tenth.

When woodblock printing of texts emerged in Buddhist China sometime before the mid-seventh century, it was used to reproduce short religious works on paper that people carried as charms, then later printed as longer books. Blockprinting on paper and textiles allowed for efficient sharing of Buddhist texts and images in Central and East Asia. Perhaps the earliest blockprint to be identified is a Sanskrit *dhāraṇī* that dates between 650 and 670 CE. It was excavated in 1974 in Turfan, an oasis settlement along the ancient Silk Roads in the western Chinese province of Xinjiang/East Turkestan. More famously, the Diamond Sutra, printed with woodblocks in China in 868 CE and taken by Aurel Stein from the library cave of Dunhuang, is the earliest dated printed book.¹⁶

Movable type developed in China between 1041 and 1049 CE, and the technologies of blockprinting and movable-type printing accompanied the spread of Buddhist populations from China into Japan, Korea, Central Asia, and India.¹⁷ In fact, it is possible to trace the movement across Central Asia, as archeological excavations there have only turned up blockprinted texts “in sites on the northern route of the Silk Road (the Turfan oasis, Khara-khoto and Dunhuang), and only in six languages (Chinese, Uighur, Mongolian, Sanskrit, Tibetan and Tangut).”¹⁸ All of these Buddhist texts are printed on paper, in black or red ink, ranging in date from the seventh to the fourteenth centuries. The Turfan oasis and Khara-khoto are located in an area known as the Tarim Basin, and Dunhuang lies just to the east of this region. Situated along a major trade route, the region attracted a wide range of settlers. Iranian groups like the Saka, Sogdian, and Tocharian people had entered the Tarim Basin before the common era. Buddhists arrived in the first century, and Manichaeans in the fifth.¹⁹ The Uyghur Turkic tribal confederation established several small kingdoms in the Tarim Basin in 847 that thrived until the Mongol takeover in the late fourteenth century. The deep writerly and scribal traditions, cultural sophistication, and steppe pedigree of the Uyghurs made them strong candidates for setting up a Mongol state.²⁰

The Sinologist Tsien Tsuen-Hsuei suggested that “[i]f there was any connection in the spread of printing between Asia and the West, the Uighurs who used both block printing and movable type had good opportunities to play an important role in this introduction.”²¹ Shortly after 847, the Uyghurs adopted the Syriac-Aramaic script, which the Sogdians had been using, for their own Uyghur language. Uyghurs serving in the Mongol Chinese administration were instrumental in the Mongol ruler Temüjin’s (also known as Genghis Khan’s) adoption of the Uyghur script in 1204 to represent the spoken Mongolian language. Prior to this development, Mongolian had remained unwritten. Buddhist printing flourished under the Uyghurs, who brought this expertise and their printing vocabulary to the Mongol courts. The earliest Mongolian word for “printing block,” for instance, is *tamgha*, an Uyghur loanword.²² In 1908 in the caves of Dunhuang, Paul Pelliot found 960 wooden printing blocks, each one bearing Uyghur “words, phonetic groupings, and punctuation marks . . . engraved on both sides.”²³ Some blocks still

bear traces of ink, confirming their use in printing.²⁴ Housed now at the Musée Guimet in Paris, these Uyghur blocks have been dated to the beginning of the thirteenth century.

Printing Paper Money and Striking Coins

Uyghur scribes in the Mongol administration, as well as Chinese precedent, may have inspired the Mongol Ilkhanids of Iran to print paper money, which the Chinese had been issuing since the ninth century. For a few months in 1294, in Tabriz, a city in northwest Iran that served as an Ilkhan capital, the Mongol Ilkhan of Persia Gaykhātū issued blockprinted paper currency (*chao*) that bore inscriptions in Chinese and Arabic. However, the experiment destabilized local markets, and Gaykhātū was assassinated in 1295 for his efforts. Soon afterward, metal currency returned to circulation in Iran.²⁵ This brief episode, along with the blockprinted talismans of the *ghurabā'* and blockprinted endpapers of manuscripts, is often cited in the literature as evidence that printing was an occasional enterprise in premodern West Asia that left no broad cultural imprint. Frankly, I had always considered these phases of printing as isolated from broader technological trends. I only awakened to the connection between the crafts of blockprinting paper money and minting metal coins upon reading an excerpt from the Mongol Ilkhanid chronicler Abū Sulaymān Dāwūd al-Banākātī (d. 730/1329–30), who was himself quoting Rashīd al-Dīn (d. 1318), the vizier to Gaykhātū's uncle the Ilkhan Ghāzān. In this passage, Rashīd al-Dīn compares Chinese government scribes' wooden printing blocks to coin dies:

And when they have thus taken a copy of all the pages of the book, numbering all [the blocks] consecutively, they place these tablets in sealed bags, like the dies in a mint, and entrust them to reliable persons appointed for this purpose, keeping them securely in offices specially set apart to this end on which they set a particular and definite seal. Then when anyone wants a copy of this book he goes before this committee and pays the dues and charges fixed by the Government. Then they bring out these tablets, impose them on leaves of paper like the dies used in minting gold, and deliver the sheets to him.²⁶

To Rashīd al-Dīn the wooden print blocks are “like the dies in a mint,” and the sight of printblocks resting atop paper calls to mind “the dies used in minting gold.” His comparisons offer a useful perspective on how someone in a multiethnic and multireligious Iranian cultural milieu might have perceived the craft of blockprinting. Both blockprinting and coin minting required the engraving of a block (of wood or metal) that could leave an inked impression on paper or an indented impression in metal once the engraved block had been struck. These associations persisted into the early eighteenth century. In 1727 the Ottoman sultan Ahmed III famously issued an imperial edict (*firman*) permitting two members of his court to open a press and print secular titles. Within this document

he states that “printing is like coining money and impressing paper with a signet ring.”²⁷ The first book published on this new press included a personal essay by İbrahim Müteferrika, entitled “The Usefulness of Printing,” in which he expanded the sultan’s comparison. “Printing,” he wrote, “is a type of inscribing analogous to the action of engraving and writing by the pressing of words and lines on a page, it is like coining money or inscribing walls, or like the impression from a signet ring when pressed down upon a document.”²⁸ To trace any developments in printing techniques in premodern West Asia, exploring the analogous crafts of blockprinting, minting coins, etching graffiti, and document sealing will probably yield the most insights.

In modern historiography, the association between printing paper currency and minting coins crops up in speculations about Gutenberg’s influences. Timothy Barrett wondered whether the coin punches used in medieval England to make different coin dies inspired Gutenberg’s invention of the printing press. Others have mused that Gutenberg’s training as a goldsmith and his family’s ties to the Mainz mint probably afforded him opportunities to witness the engraving of dies and the production of die-struck coins, a point to which I will return.²⁹

In the Islamicate context no speculation is needed; die engravers in ninth-century Umayyad Spain and tenth- and eleventh-century Iran and Afghanistan showed incredible ingenuity in their engraving and even incorporated *movable elements of printing* into their craftwork. The diameter of Islamicate coins rarely measured more than 3 centimeters, and a single coin had up to 150 words on it.³⁰ As such, a die engraver’s chief skill was situating miniscule letters in a balanced layout on a small field. No premodern coin dies survive, because they were traditionally destroyed at year’s end to prevent forgeries. Even so, coins themselves reveal a lot about production. Thus, George C. Miles found that many Umayyad Spanish coin dies were constructed with punches, that is, engraving tools with letters or word shapes on the end that could be pressed into the softer metal surface of a die. Most punches were portions of letters—strokes, curves, rings—that an engraver could combine to make different Arabic letters. Other punches consisted of an entire letter, and still others carried groups of letters forming words or even groups of words. “There are in addition a great many instances of overlapping or over-extending rectilinear marginal segments which appear to me to be unmistakable evidence of the use of long punches for conventional parts of the mint-date formula, especially for the words between *bīsm* and the name of the mint.”³¹ A single punch with the words *wa-miʿatayn* was used to inscribe a coin die (Hispanic Society of America 14330, no. 122e), and a silver dirham dated 262/875–6 has part of a word punched into it (American Numismatic Society 1917.215.617). Medieval European die engravers used “elemental punches” for serifs, curves, and triangles to make images, as well as punches of single letters. The Islamicate cases are distinguished by their use of long punches and the concomitant development of blockprinting technology used to mass-reproduce texts.

And while many scholars and laypeople assume that Gutenberg cast many identical letters in permanent matrices to create his first type—the Donatus-Kalender (DK) typeface—his working method was closer to that of medieval coin

die makers. A comparison of the letter *i* in Gutenberg's papal bull of 1456 revealed such a range of widths and shapes of the letter that Gutenberg either carved these letters from wood or metal or used many different matrices to cast type. The latter option requires less labor and would thus be more likely. He cast strokes, curves, and other shapes and combined them to make single letters. "Preliminary observations suggest that DK types may have been constructed in a similar way, though from more elemental components corresponding roughly to single scribal strokes rather than entire letters such as *O* and *E*. Hence the hyphen would have been made from two such elements, but even simple letters might have been formed from between four and seven elements."³² Gutenberg used elemental punches and temporary matrices to produce his earliest works, and this method may have been common among European printers of incunabula. Given the uses of elemental punches in Gutenberg's printshop and among coin engravers, Gutenberg's early exposure to coin minting may have had a decisive influence on his trajectory as an inventor.

Stefan Heidemann has identified Seljuk and Ghaznavid coins whose dies were not entirely engraved by hand, though portions of them had been made with punches. In order to fit more text on a coin face, engravers used punches to produce die with greater efficiency and precision. "Prefabricated punches came into use, mostly ringlets for circular letters, but sometimes whole words were just punched with a single tool onto the die."³³ The circular portion of letters on one Seljuk gold dinar minted in 493/1099 in Walwalij (present-day Qunduz in northern Afghanistan) shows the uniformity of having been cut with a punch. The exigencies of the craft prompted innovations, like word and letter punches, that mirrored movable-type technology. As we shall see in the following section, the miniature text on coins is comparable to the microscript on *gharib*-printed amulets. Additionally, the coins were produced with dies of high-tin bronze or iron and the amulets with stamps of wood or tin. Die engravers and printblock engravers both executed metalworking skills. These and other convergences necessarily redirect our attention to metalworkers and engravers who were the prime innovators of print technologies in West Asia. One fascinating example is a tenth-century lead plate that later had an early thirteenth-century North Indian coin impressed into it, creating a reverse design.³⁴

Luke Treadwell has estimated that the average mint required three to twelve weeks of labor in a given year from die engravers. This schedule meant that engravers could work the rest of the year in bazaars or in a court workshop. Others were itinerant workers. The die engraver al-Ḥasan b. Muḥammad carved his 1.5-mm-high signature and Shi'i catchphrases into dies used to mint Buyid coins between 336/947 and 365/975. This dated corpus allows historians to identify key features of al-Ḥasan's script and to trace changes in his techniques over a decades-long career, serving at least eleven Iranian mints.³⁵ Later Buyid coins minted between 364/974–5 and 368/978–9 were apparently signed by some of his apprentices, giving a window onto the transmission of artisanal knowledge. Could techniques for making letter and word punches have passed within communities of metalworkers, informing the print-related practices of itinerant and settled artisans?

West Asian Printing as a Minority Enterprise

The earliest Arabic paper documents were petitions composed on Chinese paper between 721 and 790.³⁶ The introduction of paper to the Middle East in the eighth century heralded a new age of literacy, revolutionizing reading and documentary practices.³⁷ Paper became widely available in the central Islamic lands in the ninth and tenth centuries, and printing followed soon thereafter. Leaves and long scrolls blockprinted with Arabic, Hebrew, Coptic, Aramaic, and Syriac texts in green, black, and red inks and dating from 900 to 1444 CE have been recovered at the Umayyad Mosque in Damascus and the Ben Ezra Synagogue in Cairo, as well as excavated in Cairene middens and in port cities along Egypt's Red Sea coast.³⁸ Less securely, a private collector claims to have acquired—whether archeologically or not is unclear—an Arabic blockprint in Spain.³⁹ No wooden print blocks or metal print matrices from the period have yet to be recovered.⁴⁰ A handful of blockprinted pilgrim certificates can be dated to the seventh/thirteenth century because of the rulers mentioned in them. Other than this, most of what we know about them derives from archeological context and paper analysis. George Scanlon excavated two blockprints at Fustat in 1980 and, based on the documents found among them, dated them to between 950 and 1050 CE.⁴¹ A rare Hebrew blockprint (Cambridge Or. 1080 J50) on oriental paper has been carbon-dated to the fourteenth century.⁴² Another important change is the printed Hebrew amulet. A late fourteenth-century blockprinted amulet, bearing a line of black Hebrew text and two rows of black and red tulips, was found among the Cairo Geniza documents.⁴³ This finding raises the tantalizing possibility that the Shi'i *ghurabā'* shared xylographic and other engraving technologies with Jews of medieval Cairo, or at least sold amulets to members of this community. Last, a print at the Gutenberg Museum in Mainz (GM 03.1 Schr.) bears a watermark of a bell that places the likeliest production of the paper in Italy between 1436 and 1444.⁴⁴ Because this is the youngest securely dated specimen and we have neither textual nor material evidence for the production of blockprints after the mid-fifteenth century, scholars can surmise that blockprinting in Islamdom spanned the tenth to the mid-fifteenth centuries. This time frame corresponds to textual references to blockprinting, the earliest of which appear in tenth-century Iraqi Arabic poems and the latest that come in a fifteenth-century Egyptian magician's manual. These printed artifacts are only mentioned in connection with the *ghurabā'*, and the vocabulary associated with the craft of blockprinting is entirely in their tribal dialect of Šin. This Islamicate tradition of blockprinting forms an important antecedent to the emergence of blockprinting in northern Europe in the fifteenth century.

The blockprints themselves come in a variety of formats. One finds long, thin scrolls, measuring up to 8 centimeters wide, though amulet scrolls could be very long. There were also small rectangular paper leaves. All of them are printed in miniscule letters that measure between 0.1 and 3 centimeters high. The earlier specimens from the ninth and tenth centuries bear Kufic script and later ones *naskh*.⁴⁵ The delicate skill needed to produce miniscule, engraved lettering is mind-boggling and brings to mind the labor of coin die engravers. On the basis of

script alone, the earliest specimens seem to date to the 900s, which also matches with the earliest mentions of these amulets in Arabic sources. In form and content these prints may have been based on Qur'anic rotuli, which were long, thin paper scrolls of varying lengths wound around a wooden rod. They consistently measured less than 15 centimeters wide and up to 2 meters in length. Today, forty Qur'anic rotuli are preserved at the Istanbul Museum of Turkish and Islamic Art and, on the basis of paleographic styles, Solange Ory has dated some of them to the early 900s.⁴⁶ Although scholars have not yet understood how these rotuli were used, they serve as important context for understanding the phenomenon of printed amulets. It is likely that early printers appealed to consumers by emulating a known Qur'anic format.

Of the *tarsh*-printed amulets, approximately seventy are known to have survived. Of these, the dimensions are strikingly small. The stamps clearly were used to mass-produce amulets, as evidenced by scholars' identification of sets of amulets made with the same stamp.⁴⁷ Karl Schaefer's study and edition of Arabic blockprints in North American and European collections features fifty-six known specimens and four lost ones.⁴⁸ Since the 2006 publication of his monograph, at least two more have been sold in London galleries,⁴⁹ four identified in collections at the Gayer-Anderson Museum in Cairo, two fragments of a single print at Yale University,⁵⁰ eight at the University of Utah,⁵¹ four in the Tokegawa collection in Spain,⁵² three at Columbia University,⁵³ several among the deposits in the Qubbat al-Khazna in Damascus,⁵⁴ and two at the Bavarian State Library.⁵⁵ The Aga Khan Museum and the Metropolitan Museum of Art have each acquired one blockprint in recent years.⁵⁶ A paper conservator at the Lambeth Palace Library in London has found two blockprinted parchment fragments bearing red geometric designs and Arabic script. Judging by the ownership history of the manuscript (Arabic MS 573), they must date before 1679.⁵⁷ Schaefer is currently preparing an update to the original volume that includes these and other specimens.

Blockprinting briefly expanded beyond the sphere of amulets in the early thirteenth century, when it was used to stamp ornaments, images, and text on paper pilgrimage certificates. Şule Aksoy and Rachel Milstein analyzed several pilgrimage certificate scrolls retrieved from the Umayyad Mosque in Damascus and currently housed at the Museum of Turkish and Islamic Art in Istanbul. The corpus dates between 607/1210 and 640/1243 and ranges widely in length and width. They probably hung on walls in homes or at mosques. In the early stages handwritten and stamped rolls coexisted, but "[b]y the second quarter of the thirteenth century, it seems, only printed documents were produced."⁵⁸ By 1250 the production of blockprinted pilgrimage scrolls appears to have ceased.⁵⁹ In these scrolls printing blocks were used for large Arabic calligraphy, decorative borders and section dividers, illustrations and their captions, stand-alone motifs, and single and doublines that framed images. Watercolor washes in vibrant colors was also layered over some images. A single scroll could require many printing blocks for the various motifs. Because Muslims from Africa, Asia, and Europe made pilgrimage to Mecca, these blockprinted artifacts are more likely than the locally sold amulets to have survived outside of the central Islamic lands. Pilgrims

from West or East Africa, India, China, or Indonesia could have brought home blockprinted pilgrimage certificates that have since entered local manuscript collections or have been deposited in local mosques or temples. So, specialists in other fields may have already encountered more such documents.

The majority of the printed talismans consists of Islamic Arabic texts, like Qurʾanic passages, the ninety-nine names of God, prayers, and supplications. Others bear Hebrew, Coptic, and Greek scripts. Al-Ḥillī's claim that the Banū Sāsān engraved their stamps with multiple scripts for various confessional audiences is handily supported by physical evidence. A printed Hebrew amulet housed at the University of Strasbourg dates to the thirteenth century, and the University of Utah possesses an Arabic amulet with a border of words in Syriac, Hebrew, Coptic, and Arabic script.⁶⁰ The Austrian National Library (P.Vindob. A.Ch. 12145) holds a fragment of this amulet produced by the same stamp, showing only the Coptic and Arabic scripts.⁶¹ In Ibn Dāniyāl's shadow play *'Ajīb wa-Gharīb*, *'Awwādh al-Sarmāt* (lit., the writer of amulets and charms) delivers a monologue about his trade that accurately reflects the typical language of astrologers. He draws a magic circle (*mandal*, from Sanskrit *mandala* "circle") onto his divining mirror and cures a boy of epilepsy, while uttering spells in Hebrew for a Jewish audience, Greek for a Christian audience, or by invoking fire and light for a Magian audience.⁶² Significantly, very much of this monologue mirrors text in two amulets at the University of Utah (Lilly Atiya no. 9 and Or. P1559), showing just how thoroughly Ibn Dāniyāl's depiction of the *ghurabā'* amulet makers was rooted in their actual practices and, therefore, stands as an important document for social historians.⁶³ The texts reproduced in amulets likely did not mirror the religious convictions of the artisans but those of their intended clientele. To sell as many amulets as possible, the astrologers and amulet makers printed motifs and texts that hewed closely to local preferences and tastes. As such, it is important to read these sources as reproducing popular sentiments, not challenging them.⁶⁴

There are additional clues that Ibn Dāniyāl's work was rooted in a familiar reality. The astrologer in the shadow play is named Hilāl al-Munajjim, which means "Crescent Moon the Astrologer," and Ibn Dāniyāl's native Mosul may have inspired this character. The British Museum houses a brass celestial globe engraved with constellations (British Museum OA 1871.3-1.1) that was signed in 674/1275–6 by the craftsman Muḥammad, son of Hilāl, al-Munajjim al-Mawṣilī.⁶⁵ In this instance "munajjim" likely signified "astronomer," which was the craftsman's profession. The globe dates to Ibn Dāniyāl's residence in Cairo, which began soon after the Mongols invaded Mosul in 660/1262.

Ghurabā' Printing

As the number of native Sīn-speakers diminishes with each passing generation, historians will lose access to an intricate vocabulary of printing technology. Sīn printing terminology gets coded as corrupted Arabic terms, suggesting to researchers that documentation of this phenomenon is unreliable. In the following

explanations of *Ṣin* printing vocabulary, details about the manufacture of talismans are revealed.

ṭarsh (n.), *ṭurūsh* (pl.): printing block

*ṭ*rāsh* (n.): engraver of printing blocks; printer or prints

Assuming an Arabic etymology for *Ṣin* printing terms has made the history of Middle Eastern printing appear poorly documented. In Arabic, the word *ṭarsh* means “deafness”; however, in Aramaic, a language from which *Ṣin* draws much of its vocabulary, the trilateral root *ṭ-r-sh* means “to beat, batter,” as well as “to deafen.”⁶⁶ In the modern *Ṣim* of the Nile Ḥalab smiths, *mutrash* means “Schneide-Amboß,” or a type of anvil for metalworking.⁶⁷ Is it possible that the word derives from the same root as *ṭarsh* (print block) because smiths work metal by striking it with hammers? I propose that the *Ṣin* term *ṭarsh* reflects the production method, namely the striking of the inked stamp onto a printing support to produce an impression. According to the poet Abū Dulaf, members of the Banū Sāsān used engraved stamps to print amulets with the intent of selling them in the open marketplace.

Verse 74: Among us [the Banū Sāsān] is one who engraves the *ṭarsh* without boasting about or publicizing [the production process].⁶⁸

[Gloss to verse 74:] The engraver of *ṭarsh* engraves (*yahfiru*) stamps (*qawālib*) for amulets (*ta'āwīdh*). People who are illiterate and cannot write buy them from him. The seller keeps back (*hafīza*) the design (*naqsh*) which is on it [the *ṭarsh*] so that he exhausts his supply of amulets on the common people (*nās*) and makes them believe that he wrote them. The stamp is called the *ṭarsh*.⁶⁹

The secrecy on which the *ṭarsh*-engravers insisted parallels the closely guarded work materials of coin die engravers, whose dies were destroyed yearly to protect the integrity of currency. To underscore the exclusive claims that the Banū Sāsān had lain to printing in the premodern period, the archetypal Gharīb in Ibn Dāniyāl's shadow play emphatically cries: “We [the *ghurabā*] have boldly proceeded to praise the printer/prints!”⁷⁰ The Banū Sāsān was motivated by a desire to deceive the public into believing that the amulets were custom-made handwritten wares and not mass-produced copies. To maintain secrecy (“without . . . publicizing”), the engraver may have worked alone or in small workshops and even separately from the amulet seller. This backdrop of secrecy distinguishes the emergence of print in the Arab world from its emergence elsewhere. In eighth-century China Empress Wu encouraged the reproduction of Buddhist texts to promote the spread of this religion, and blockprinting was essential for this enterprise.⁷¹ As mentioned earlier, Buddhism was the biggest engine for the spread of early printing technologies.

Woodblock printing coexisted for decades with letterpress printing and would certainly have appealed to those people who could not have afforded access to a printing press. In fact, after traveling to the Holy Land in 1483, the cleric Bernhard

von Breydenbach published his memoirs, in which he reproduced the Arabic, Hebrew, Syriac, Coptic, Ethiopian, Armenian, and Greek alphabets with printblocks he had fashioned himself.⁷² The utility of woodblock printing spread quickly. Similarly, after knowledge of Gutenberg's press became known, movable-type printing spread rapidly across Europe in the second half of the fifteenth century. So, intentionally guarding printing processes from the wider public may illustrate why the technology was not widely adopted in Islamic lands. However, this cannot be the entire story. In the thirteenth century Jawbarī disclosed printing processes as one of the Banū Sāsān's secrets. His book was an enduring bestseller into the early modern period, and was transcribed into Karshuni, but still the information did not become mainstream.⁷³ According to him,

among the revelation of secrets that they [the astrologers] utter concerning the amulet (*sarmāt*) is that they have matrices (*ma'ārīd*) that are called *turūsh*. These are stamps (*qawālib*), with which one can print amulets (*fa-yaṭba 'sarāmīf*) every day—God willing.⁷⁴

Jawbarī confirms that the Banū Sāsān mounted a large-scale printing operation (“one can stamp/print amulets every day”), for which they engraved their own printblocks and prepared their own colorful inks. Evidence of their prolific production is apparent in fragments of paper where a stamp has been impressed twice on a sheet, but the twin impressions have not been separated into two amulets.⁷⁵ Larger sheets of paper were printed multiple times, then cut into smaller amulets. Furthermore, at least eight sets of amulet multiples lie in private and public collections around the world:

- University of Utah A1563r⁷⁶ and Bayerische Staatsbibliothek München A.or. 88.2023⁷⁷;
- Aga Khan Museum (Toronto) AKM508, dated 1000 to 1100; Andalusian specimen TP1-2;⁷⁸ and a specimen in the possession of a private collector in California.⁷⁹ All three amulets were found inside small inscribed lead amulet cases, though only the writing on AKM508's case is legible, bearing the text of Qurʾān 112:1-4;
- Columbia University Library Papyrus 705b⁸⁰ and Indiana University, Bloomington, Lilly Library, Misc. mss. Atiyah Gift no. 9;⁸¹
- Michaelides E29 and E30;⁸² Document 43 excavated in Fustat among documents dated between 344/955 and 487/1094;⁸³
- Österreichische Nationalbibliothek (Vienna) P. Vindob. A. Ch. 12.142⁸⁴ and private collection of Richard Ettinghausen (ca. ninth or tenth century);⁸⁵
- Österreichische Nationalbibliothek (Vienna) P. Vindob. A. Ch. 12.146⁸⁶ and Dār al-kutub al-miṣriyya (Cairo) inv. no. 313;⁸⁷
- Österreichische Nationalbibliothek (Vienna) P.Vindob. A. Ch. 12.145⁸⁸ and University of Utah A1561 (c. twelfth or thirteenth century);⁸⁹
- Österreichische Nationalbibliothek (Vienna) P.Vindob. A. Ch. 12.141 and University of Utah A1562.⁹⁰



Figure 6.1 Blockprinted amulet. Counterclockwise from upper left, the border has Hebrew, Syriac, Arabic, and Coptic scripts, with Arabic text in center. Possibly Aramaic language in upper left. Egypt, thirteenth century. Paper and ink, 10.2 × 4.6–4.9 in. (26 × 11.8–12.5 cm). J. Willard Marriott Library, University of Utah A1561r.

Printing Ink

Immediately after the previous passage about printing amulets, Jawbarī continues: “then they dry saffron, verdigris, and cinnabar (*bil-za ‘farān wal-zinjār wal-zanjāfr*) for them.”⁹¹ These plants and minerals (“saffron, verdigris, and cinnabar”) confirm the range of colored inks that *gharīb* printers prepared for their amulets. Two recipes from a fourteenth-century manuscript use these simple ingredients to make red and green inks.

7. Ways to prepare cinnabar ink: Grind the Iraqi cinnabar into a fine powder, then wash it with fresh water a number of times until it becomes yellow; pour some Syrian safflower on it, and the way to extract the water from it is the same way we have mentioned about the ink for paper; with the difference that this one has no gum arabic or vitriol.

8. Way to prepare verdigris: Take some Iraqi verdigris, grind it into a fine powder, mix with it some ground saffron, and make them join.⁹²

Material evidence also exists to corroborate Jawbarī’s claim that amulets were printed or painted with yellow, green, and red inks. While most extant blockprinted amulets are entirely printed with black ink, some were printed monochromatically in red (Cambridge Genizah Collection Or. 1080 J50). Of the polychromatic samples, one of the most elaborate is housed in the David Collection (Inv. No. 85/2003). It is an amulet scroll printed with black, green, and red inks. A yellow wash covers portions of an amulet depicting text and illustrations of locations relevant to the Prophet Muḥammad’s life.⁹³ However, one most commonly finds amulets hand-painted in a reddish wash.

Preparation of these inks required little more than the raw materials, a mortar, pestle, and water. Because mineral or vegetal inks do not cleave to metal stamps, we can deduce that Jawbarī was most familiar with stamps (*turūsh*) carved from wood. In the thirteenth century, the *ghurabā’* were printing with metal matrices, which would have required a different type of ink. No written evidence exists about other types of ink used by the *ghurabā’*, but one could add a metallic component like vitriol to the vegetal recipes to make it compatible with metal printblocks. Chemical analysis of the black and red inks used in the Gutenberg Bible has demonstrated that Gutenberg used oil-based inks containing high levels of copper and lead that could adhere evenly to metal movable type.⁹⁴ In Ibn al-Jazarī’s short treatise on handwriting, he explained how to combine vegetal and metallic substances to make iron-gall ink and colored metallic inks.⁹⁵ In future, analysis of *ṭarsh*-printed amulets may be able to show whether an amulet had been produced with wooden or metal printblocks.

Ṭarsh of Tin

Hilli highlighted the facility of the *ghurabā’* with different languages as well as a new method of production: “How many times has my hand written/printed

(*sarmaṭat yadī*), by *ṭarsh* of tin, Syriac followed by the language of phylacteries (i.e., Hebrew)!⁹⁶ This single verse of al-Ḥillī's opens up yet another view into amulet production. Here, he specified that the stamps were fashioned from tin. Since tinsmithing and tinsmiths barely register in premodern Islamic sources, scholars have had little evidence of historical tin-engraving methods.⁹⁷ Richard Bulliet rejected the possibility of amulet makers carving out letters in relief on tin, because it "would have been an impossibly laborious task."⁹⁸ Instead, he proposed that the Banū Sāsān either pounded a tin sheet into a clay mold to form a tin *ṭarsh* or they poured molten tin into a clay mold, then removed the hardened metal as the completed *ṭarsh*. Both methods are improbable. In the first, the clay risks fracturing under the pressure of the hammer. One could simply form a stamp by carving the clay. In the second instance, the need for a foundry would have made concealment of printing rather difficult.

Recognizing that coin die engravers exercised the same skills that Bulliet found "impossibly laborious" makes Ḥillī's claim much more plausible. A *gharīb* could have engraved scavenged pieces of metal, and tin (*qaṣḍīr*) is certainly soft enough to be engraved. While no sources suggest that the *ghurabā'* were printing with engraved stones or etched metal, the fifteenth-century Egyptian magician Zarkhūrī, who wrote about the secrets of the Banū Sāsān, instructed his readers on using acid to etch words into stone and metal:

Description of a flowing ink with which you can write on stones. Take the stone and write whatever you want on it with wax and soak it in the watery solution. Take potassium nitrate, ammonia, and wine vinegar (*shabb yamānī wa-nūshādīr wa-khall khamr*). If you want the writing to be engraved, coat the background surface with the wax, but if you want the background surface to be engraved, then coat the writing with the wax. Leave it in the abovementioned solution for three days. So understand this.

Description of another ink that writes on tin bronze (*al-qaṣḍīr al-aṣfar*). And this (tin bronze) becomes white like inlay (*al-mukaffat*), when it [the ink] is wiped away. The way of making it is to write on the tin with alkali and lime dissolved in water. So understand this.⁹⁹

Etching is a printmaking method in which an acid solution is used to etch text and design into a metal plate. Historians of printing processes have placed the origins of etching in sixteenth-century Europe, where artists typically coated a copper or iron plate with wax, then etched designs into the wax. Leaving the wax-coated plate in an acid bath would etch the design into the metal. Etching words backward would have left grooves into which ink could have been filled. Paper could have been pressed onto the plates so that the paper met the ink in the grooves. This style of printing is more commonly known as intaglio printing, and its origins traditionally attributed to German printers of the 1430s.¹⁰⁰ These etching technologies emerged simultaneously in fifteenth-century Europe and Egypt but put to different uses. European artisans recognized the utility for printing, but in Egypt no such application is in evidence.

s(h)armāt (n.), *s(h)arāmīṭ* (pl.): inscribed amulet
sarmaṭa (trans. and intrans. v.): to write, (and metonymically) to print
qarmaṭa (v.): to write amulets in tiny and large scripts

The philologist Theodor Nöldeke encountered the term *sharmāt* in some manuscripts of Jawbarī's *Kashf* and proposed to Georg Jacob, who had read it in Ibn Dāniyāl's shadow play, that *sharmāt* derived from the Greek term for chiromancy—"cheiromanteia."¹⁰¹ The repeated identification of amulet production with fortune-telling astrologers lends considerable credence to Nöldeke's proposal that the *ghurabā'* had borrowed words from another occult tradition. Yet another amulet-writing term *qarmaṭa* seems to derive from the Greek *grammata*, or "letters of the alphabet." Regardless of etymology, in twentieth-century Cairo, the term *sarmāt* still retained its earliest associations with writing amulets and magical practices. Paul Kahle recorded the many shades of meaning of *sarmāt*:

سرمط (سرمت) *sarmat* (auch *ṣarmat*, *sarmaṭ* und *ṣarmaṭ*) "er schrieb," *asarmit* "ich schreibe," *surmāta* "Buch," *surmāti* "Zauberer," "Rammāl," "Amulettenschreiber," *surmāti innāwi* "ein fränkischer Schreiber, Priester."¹⁰²

But it was Richard Bulliet who made the crucial link between the carved blocks in Abū Dulaf's verse and printed amulets that he was able to study in Columbia University's own papyrus collection. According to two tenth-century Iraqi poets, the Sīn term *sarmāt* generally signified "a piece of writing" but was also used more specifically for "amulet" or "blockprinted amulet." Al-'Ukbarī wrote that among the Banū Sāsān is "the one who peddles a *sarmāt*." The final word is not Arabic but a Sīn term that the author glossed as "a text and an amulet."¹⁰³ Abū Dulaf elaborated on his discussion of amulet production with a verse about the act of writing them.

[Verse 76] And the one who wrote with fine, closely-spaced writing (*qarmaṭa*) or who wrote (*sarmaṭa*) or penned lines (*khaṭṭata*) in a book.

[Gloss to verse 76] The one who *qarmaṭa* is the person who writes amulets in scripts both minute and grand. *Sarmaṭa* means "he wrote" (*kataba*) and the *sarmāt* is the written document (*kitāb*).¹⁰⁴

Both handwritten and blockprinted texts were forms of writing, and in this early phase of West Asian printing, Arabic and Sīn had not developed vocabularies to differentiate texts by their production modes. The Syrian poet Ibn al-Muḥaddith al-Kātib (d. 731/1331) describes how a scribe like himself could write or print amulets as part of a larger fortune-telling routine. The poem is in Arabic, interspersed with Sīn terms.

Many a time did I write/print amulets (*sarmaṭtu sarmātan*) / of the kind that sets free or binds [with spells] //

I scammed (*'azbartu*) and cast spells / in the balance scale with a firebrand //

And I conjured spirits in the magic circle (*mandal*) / by burning aloeswood and amber //

And I have gathered the crowds of the jinn / to myself spontaneously.¹⁰⁵

In Arabic lands the blockprinted amulet represents a significant and enduring innovation in technology and craftsmanship that underwent changes over time. In the thirteenth century this technology was adapted for Meccan pilgrimage certificates that combined blockprinted passages with painted illustrations and handwritten text.¹⁰⁶ Until direct evidence shows otherwise, at least some of the makers of these certificates can be assumed to have been *ghurabā'*. The *ghurabā'* certainly traveled in pilgrimage caravans. The fourteenth-century Damascene notary Ibn Ṭawq made a record in his diary of their arrival from Aleppo: "Monday, 11 [Shawwāl 899]. After noon, the first pilgrims from Aleppo arrive, Turkmens and *Ghajar*."¹⁰⁷ Fellow pilgrims would have been obvious customers for the amulets and pilgrimage certificates, as well as people they encountered on stops between Aleppo and Mecca.

shariḥa (n.), *sharā'ih* (pl.): small amulet

haykal (n.), *hayākil* (pl.): large amulet

naffādh (n.): seller of *hayākil*

Jawbarī also explained how the *ghurabā'* classified their amulets:

There are two types [of amulets]: small ones are called *sharā'ih*, and big ones are called *hayākil*.¹⁰⁸

Although these classifications are too vague to apply them with certainty, but we may assume that the *shariḥa* was a rectangular or square leaf that could be folded, and a *haykal* was a long amulet scroll. In fact, a self-referential header of a fifteenth-century amulet scroll reads: "The noble *haykal* is beneficial."¹⁰⁹ A fourteenth-century verse confirms that the *ghurabā'* participated enthusiastically in distributing *hayākil*: "And how often have I acted as a *naffādh*," where *naffādh* is glossed as "seller of talismans and large amulets (*bāyi 'uwadh wa-hayākil*)."¹¹⁰

While the terms *shariḥa* and *sharā'ih* did not gain currency outside of *gharīb* circles, the terms *haykal* and *hayākil* were absorbed into the postclassical Arabic lexicon. In Arabic today, *haykal* still signifies "temple," but also "amulet." One nineteenth-century lexicographer composed the following entry for *haykal*: "In the language of the Arabs, it means long horse, holy building, house of idols, and the Christian place of worship. As for the amulets that they call *haykal* and *hayākil*, they are not found among the speech of the Arabs, as al-Ṣāghānī [*sic*] [d. 650/1252] said in *al-'Ubāb*."¹¹¹ Is there any deeper significance to the finding that the Sin word for "large amulet" is the same as the Arabic for "temple"? Jeffrey Kotyk has argued that in Tang China, Buddhist astrology and astral magic constituted "a kind of 'sub-religion' that has often been embedded, whether formally recognized or not, within larger religions."¹¹² And just as religious communities would erect monuments and shrines, could the *haykal* have served as a specific form of monument for adherents to a *gharīb* astrological faith?

jawānī (n. pl.): small amulets and talismans of lead and paper

Al-Ḥillī, assuming the voice of a *gharīb*, asks in his fourteenth-century *qaṣīda*: "How many *jawānī* and how many amulets / do I sell to the would-be customer



Figure 6.2 Blockprinted Arabic amulet and lead case, Egypt, eleventh century. Paper, ink, and lead. Amulet: 2.8 × 2.1 in. (7.2 × 5.5 cm). Case: 1.1 × 0.5 in. (2.7 × 1.3 cm). Aga Khan Museum, Toronto, AKM508.

in exchange for the seven different kinds of metal (i.e., for all kinds of precious metals and coins)!¹¹³ The author glosses *jawānī* as “small amulets and talismans of lead and paper” (*hayākil ṣiḡhār wa-‘uwadh raṣāṣ wa-wariq*), probably referring to such items as this 2.7 × 1.3 cm eleventh-century lead amulet case that held a 7.2 × 5.5 cm paper amulet. Such encased amulets were meant to be worn close to the body, perhaps on a chain or sewn into a bag or article of clothing, protecting the wearer against disease or other misfortune.¹¹⁴ Both the case and the amulet are inscribed: Qur’ān 112:1-4 on the case and 3:18 and 1:137, plus supplications to God, on the amulet.

Knowledge Classification

This reassessment of the “classical” moment of the onset of European modernity situates Gutenberg in a nascent printing culture that centered on popular Christian devotion. He did not exist outside or above it, and the combination of his expertise in metalwork, his social proximity to minters, and a rising appetite for private devotional tools may have been the crucial factors leading to his invention of the printing press. To build on the work of troubling canonizations, decolonizing the archive, as a first step, will change the ways in which we categorize knowledge about the global enterprise of early printing. An incunabulum is usually defined as an early printed book, particularly one printed before 1501, but in practice, blockbooks, broadsheets, pamphlets, and even very small blockprinted leaves are also cataloged with them.¹¹⁵ This Latin term means “in the cradle” and encapsulates the framing of the European phase of

printing as the ultimate beginning of this technology. They mark the birth of print history, of early modernity, and of Western civilization. Between the 1440s and 1501, books were printed in Latin, European vernaculars, and Hebrew. Earlier printed books in Chinese or Mongolian or Uyghur do not appear in incunabula collections in North American and European libraries. What if librarians cataloged materials printed before 1500 *in any language* as rare prints, instead of classifying non-European pre-1500 prints as manuscripts or papyri? The phrase “early print” would no longer make much sense, as centuries of Afro-Asian prints could not reasonably be considered “early.” Such a move would more clearly represent the history of global print and retrain medievalists to think in terms of interconnected histories. It would also prevent such obvious miscategorization as one finds with the Sanskrit and Uyghur blockprints that are listed in the online International Dunhuang Project database as “manuscript; ink on paper” instead of, for instance, “xylograph printed from carved blocks; ink on paper.”¹¹⁶ Similarly, the Arabic blockprints, including one print bearing Arabic and Coptic script, at the Austrian National Library form part of the vast papyrus collection. Here, a papyrus is interpreted broadly as a manuscript on paper or papyrus, but it most certainly does not include printed matter. In Yale University’s Beinecke Rare Book and Manuscript Library, two large fragments of an Arabic blockprint (Yale P.CtYBR inv. 2016) are cataloged as manuscripts, and the metadata includes the oxymoronic detail that “[t]his manuscript is block-printed.” Yale only holds the one blockprint, but the Metropolitan Museum of Art owns at least twelve, which are not consistently identified as blockprints in the online catalog (Table 6.1). Seven of these are described as printed material, whereas five are not. The oldest blockprint in the collection (MMA 1978.546.38) dates to the tenth century, placing it among the earliest Arabic blockprints in the world, but it is nowhere described in the public-facing catalog as a printed work.

Accordingly, no fanfare surrounds this piece, nor others that share its distinctive features of decorative headers (and sometimes also footers) bracketing tens of

Table 6.1 Cataloging Arabic Blockprints at the Metropolitan Museum of Art

Shelfmark	Place and Date of Production	Is it Cataloged as a Print?
MMA 1971.237.1	Egypt, eleventh to twelfth century	No
MMA 1975.192.20	Egypt, eleventh to twelfth century	No
MMA 1975.192.21	Egypt, eleventh to twelfth century	Yes, “printed” and “blockprinted”
MMA 1978.546.32	Egypt, eleventh century	Yes, “blockprinted”
MMA 1978.546.33	Egypt, eleventh century	Yes, “printed”
MMA 1978.546.34	Egypt, eleventh century	No
MMA 1978.546.35	Egypt, eleventh century	Yes, “blockprinted”
MMA 1978.546.36	Egypt, eleventh century	Yes, “blockprinted”
MMA 1978.546.37	Egypt, eleventh century	Yes; object title is “blockprinted talismanic circular leaf”
MMA 1978.546.38	Egypt, tenth century	No
MMA 1978.546.39	Egypt, eleventh to twelfth century	No
MMA 2016.624	Egypt, thirteenth or fourteenth century	Yes, object title is “Ibex or Gazelle, Block Print”



Figure 6.3 Blockprinted Arabic amulet, Egypt, tenth century. Paper and ink, 10.9 × 1.8 in. (27.6 × 4.6 cm). Metropolitan Museum of Art, New York, 1978.546.38.

lines of minuscule Kufic text. The duplicate blockprints in Munich (BSB Res A. or.88.2021) and Utah (Lilly A1563r), along with others in Princeton (Scheide Library 26.6) and Utah (Lilly A19r), probably represent the earliest layer of Arabic printing, appearing two centuries after printing emerged in China.

A model of inclusive cataloging is the Bavarian State Library in Munich, which recently placed its two specimens of Arabic blockprints into its early print collection that comprises printed matter before 1500 from anywhere in the world.

From the tenth to the eighteenth centuries, all of West Asian and northern African printing was firmly in the hands of linguistic and religious minorities—Buddhist Mongols; Shi‘i *ghurabā’* who spoke Sin; Jews printing in Hebrew, Greek, and Turkish; and Christians printing Syriac, Armenian, Persian, Turkish, and Arabic. The majority Sunni Muslims resisted this technology. In the earliest phase of textual printing, between the tenth and the fifteenth centuries, Shi‘i *gharīb* astrologers engraved wooden and metal matrices to print talismans (in

Sīn *sarāmīf*, sing. *sirmāt*) for Christians, Jews, and Muslims on paper and parchment. Then in the fifteenth-century production of these talismans suddenly ceased. The latest print that we can date (Gutenberg Museum GM 03.1 Schr.) bears an Italian watermark, placing the production of the paper between 1436 and 1444.¹¹⁷ The manufacture of the last West Asian blockprints probably overlapped with Johann Gutenberg's printing press in the 1440s. Shortly thereafter, minority-language presses—the first printing presses in all of West Asia—sprang up in the Ottoman Empire in the late fifteenth century. Just one-and-a-half years after their expulsion from Iberia, the Jewish brothers David and Samuel Ibn Naḥmias established the first Ottoman printing house, publishing the religious collection *Arba'ah Turim* in Istanbul in December 1493.¹¹⁸ After the expulsion in 1497 of Jews from Lisbon, the Jewish printer Judah Gedaliah left Lisbon to set up a Greek-language press in Ottoman Salonica; he started publishing books in 1516. To our knowledge, it was more than fifty years before another printing press was founded in Ottoman lands. In the interim, European presses developed Asian-language movable type, and the bulk of Asian-language book printing occurred in Europe.¹¹⁹ But in 1567, the Abgar Dpir Tokhatetsi press in Istanbul printed an Armenian grammar book, and in 1610 a Lebanese monastery printed a bilingual Syriac and Karshuni Arabic Psalter. (In the 1580s or 1590s, Domenico Hierosolimitano, a Jewish court physician to Sultan Murad III, discreetly noted that the Ottoman palace library held “books in all kinds of languages, of great beauty, all written by the pen.”¹²⁰ According to this testimony, the Topkapı Palace library held no printed material at this point.) Finally, in Istanbul in 1727, in what marks for most historians the beginning of Middle Eastern printing, two Muslims were granted sultanic approval for the undertaking. Together, Mehmet Sait Efendi (d. 1761), the son of a Georgian who had served as the first Ottoman ambassador to France, and İbrahim Müteferrika (1674–1745), a Hungarian Christian convert to Sunni Islam who served in the Ottoman diplomatic service, opened a printing press and in 1729 published a Turkish translation of an Arabic dictionary. Both men had unusually easy access to the highest levels of imperial decision-making and contact with non-Ottoman Turkish Muslim culture. From 1720 to 1721, Mehmet had resided in France with his father Yirmisekiz, who recorded in his diplomatic dispatches that he had been given a tour of the royal French printing press. Duc Saint-Simon, a local French notable, claimed that Yirmisekiz “was a particular friend of the Grand Vezir, and, on his return, he was going to propose to him the establishment of an Ottoman printing press and a library in spite of the aversion of the Turks.”¹²¹ Of course, Yirmisekiz did not accomplish this himself, but his son, along with Müteferrika, did. Less is known of Müteferrika's biography and the timing of his conversion, but his hybrid cultural, linguistic, and religious backgrounds were likely crucial to his interest in printing. If print had historically been associated with the lower prestige of minority status, then that may have been enough to deter most Muslims from embracing the practice. By contrast, Mehmet Sait Efendi and İbrahim Müteferrika's own biographies may have made them more accepting of foreign and minority practices.

If the social status of minorities influenced their receptivity to print, then which social values or priorities led to the maintenance of printing practices among these populations? The question of minority motivations for countercultural activity has shaped historiographical debates about the supposed absence of archives in preindustrial Islamic society. Unfortunately, and in sharp contrast to the extensive documentary archives that proliferated in parish churches and official chanceries in Latin Christendom, very little of any premodern Islamic state's archive has survived.¹²² Tamer El-Leithy has argued that the few surviving caches of official state documents were intentionally preserved by minority communities, such as the Greek Orthodox monks at St. Catherine's Monastery in Sinai, the Jewish congregation of Ben Ezra Synagogue in Cairo, and Georgian monks in Jerusalem. What we scholars recognize as archival practices may have been more strongly embraced by Jews and Christians of this period, because as second-class *dhimmi* subjects, they could often assume less security around their rights to property and religious expression, making the preservation of rights-affirming documents a matter of *communal preservation*. *Dhimmi*s' "social logic of archival strategies," El-Leithy stresses, highlights their political and material precarity.¹²³ Could similar fears have led to the emergence and maintenance of printing practices among minority populations?

The *ghurabā'* prized their financial and professional independence, whether as a defiant posture in the face of exclusion or as a matter of principle is difficult to ascertain. As discussed in the Introduction, a major appeal of begging was not needing to borrow and repay money and not having one's earnings taxed. Blockprinting also afforded personal autonomy. As a portable art, requiring no fixed domicile or workshop and for which there was a thriving market, printers were free to choose sedentary or mobile lives. Maya Shatzmiller has extensively documented the reputable trades and professions in medieval West Asia and northern Africa but omitted marginal trades, such as those plied by the *ghurabā'*.¹²⁴ The *ghurabā'* filled economic niches, unrepresented in most tax records, by providing specialized "consumer goods, medical services and entertainment," as animal trainers, public performers (astrologers, magicians, acrobats, sword swallows), medical workers (ophthalmologists, drug dealers, pharmacists, female genital cutters), beggars, night watchmen, and makers and sellers of printed amulets. What Patricia Crone has described as a general feature of preindustrial societies certainly applies to West Asia and northern Africa. "Because the sums in any one place were so small, such people were often itinerant, moving from place to place in search of their meagre income and sometimes trying to improve on it by combining several specialties, as did for example the gypsies (who were tinkers, fortune tellers and purveyors of trinkets and other knick-knacks wherever they went.)"¹²⁵ But this explanation does not account for the printing presses of Ottoman Jews and Christians, whose professional tools were less portable. İbrahim Müteferrika suggests that, like the archival practices, these minorities embraced printing as

a means of protection, and a defense against change and alteration on account of falsehoods or untruths according to religion and morals, and a way of creating

safety from sudden catastrophes and the changes arising in the poor memories of men caused by the passing of days and years, thus enabling the laws and ordinances of the state and society to be kept correctly, as if they were a compact inscribed in stone, copper, or iron.¹²⁶

Even though Ottoman Jews and Christians lived under far more stable regimes than their European counterparts, Jewish refugees recently relocated in Ottoman lands remembered that in 1490 the Catholic Monarchs Ferdinand and Isabella ordered the burning of Hebrew Bibles and other books owned by Jews. The loss of this religious and literary heritage may have spurred moves to preserve and disseminate works as widely and quickly as possible, a project perfectly suited to the printing press.