The History of Printmaking Across the Arab World

Co-written by: Iona Stewart, Boushra Batlouni, Wafa Roz
(Part of the Prints & Printmaking Exhibition at DAF 2024)

Printmaking has a long and rich history in today's Arab region. While this artistic tradition has often been overshadowed in global discourse, its five-thousand-year evolution is intricately linked to the broader region's cultural, religious, and technological developments. From the ancient Mesopotamian cylinder seals to contemporary fine art printmaking, we will explore the trajectory of printmaking (including banknotes, text, literature, ornamental and fine art) in today's Arab region, while examining its aesthetics, historical underpinnings, technological advancements, and role in shaping socio-political narratives and artistic innovation.

Mesopotamian Stamp & Seal Printing

We can trace the first two categories of printmaking, relief and intaglio impression, to 3200 BCE with the invention of stamp and cylinder seal printing, 300 years after the creation of the first known writing system, Cuneiform, in southern Mesopotamia, present-day Iraq. During this period, rulers sought to memorialize themselves and their gods in the palaces and temples they built by stamping an inscription onto building bricks.

To do so, Mesopotamians created a stone mold where they would carve away the areas that were not to be printed, leaving behind a raised surface of the image intended to be printed, a technique known as relief. They would then stamp the soft clay of the bricks with the carved stone before firing it to leave the impression indented beneath the surface. In a similar but opposite technique, Mesopotamians formed cylinder seals from stone, marble, gold, silver, or semiprecious stones. They would engrave or incise the desired design into the cylinder's surface (or matrix), a technique known as intaglio. This mold was then rolled over soft clay, thus imprinting a continuously raised impression of the design above the main surface. Pierced through from end to end to be worn on a string, cylinder seals functioned as administrative signatures to notarize clay documents and were embellished with images and cuneiform writing.[1]

Early Textile Printing

Moving beyond the cylinder seal imprints of ancient Mesopotamia, fabric printing developed across India, Egypt, and China, with each culture developing similar techniques to transfer patterns onto textiles. In China and Egypt, some of the earliest printed fabrics date back to 3000 BCE, possibly even earlier. During the Indus Valley Civilization (between 3300 BCE and 1300 BCE),

[1] Andrea Seri, "Adaptation of Cuneiform to Write Akkadian," *Visible Language: Inventions of Writing in the Ancient Middle East and Beyond* 32 (2010): 85-98.
Oya Topçuoğlu, *Iconography of Protoliterate Seals* (n.p.: 2010).
Metropolitan Museum of Art, *Stamp Seals of the Hittite Old Kingdom*, accessed August 31, 2024, https://www.metmuseum.org/art/collection/search/327799.
Metropolitan Museum of Art, *Cylinder Seal and Modern Impression*, accessed August 31, 2024, https://www.metmuseum.org/art/collection/search/329090.
Kadim Hasson Hnaihen, "The Appearance of Bricks in Ancient Mesopotamia," *Athens Journal of History* 6, no. 1 (2020): 73-96.

The History of Printmaking Across the Arab World, PAGE 1
Co-written by Iona Stewart, Boushra Batlouni and Wafa Roz
Part of the Prints & Printmaking Exhibition

India was a center of block printed textiles production, with evidence suggesting that the Egyptian and Indian development of textiles during that period was connected through trade via the Red Sea.[2]

During the 1st century, the Roman writer and philosopher Pliny the Elder discussed textile printing in Egypt in *Natural History* (Book 35, Chapter 42).[3] He described a technique used by the Egyptians to produce colored designs on fabrics. This method involved applying dyes to textiles using blocks or stamps with engraved patterns. The fabric was first treated with a mordant to fix the dyes, and then the design was stamped onto the cloth.

In his writings, Pliny notes that this technique allowed for the creation of highly prized intricate and multicolored patterns. He described the process as an early form of what we would now call "block printing," a highly developed method in Egypt that contributed to the region's reputation for producing luxurious textiles. These printed textiles were used in clothing and for decorative purposes. One of the earliest Egyptian printed cloth we have on record is dated to the 4th century, and was most likely produced in the textile centers of Alexandria, Panopolis, Oxyrhynchus, or Tinnis.

Across the Arab region, printmaking on fabric as an artistic practice employed techniques of woodcut printing and mediating dye or ink, which would remain the backbone of global printing for another 500 years. Syria, for instance, was a key node of the Silk Road and was known for its textile production since Roman times. Oral histories gathered by art historian Rania Kataf recount that hand-printed fabric with woodblock prints was a popular commodity in Syria over the last centuries (until very recently with the advent of war),[4] with Aleppo, Hama, and Damascus as its main arteries.

Aleppo was especially renowned for the *habari*, a silkscreen-printed silk scarf worn to cover hair on special occasions or wrapped around the forehead as a symbol of beauty and luxury.[5] Artisans used silk mesh stretched over a square wooden frame fitted with a paper stencil. To cover the large square scarves, they applied the mesh four times. This enabled fabric dye to be pressed through the screen onto the scarf, revealing a pattern in the stencil's negative space.

On the other hand, Hama, a city in Syria, was known for its simpler white cotton fabrics, which featured black floral or geometric designs created using woodblock printing, typically used as domestic textiles for beds and tables. Artisans would carve out the negative space of a design into a block of wood, which, when coated in ink and pressed onto the fabric, would print the raised area of the block. Artisans carved designs in relief (removing the negative space) on wooden blocks. By coating these blocks with ink and pressing them onto the fabric, they transferred the raised design on the block to create the printed patterns. These Hama-printed textiles were sold to Bedouins as far as Iraq, and were dyed with darker pigments to make the fabrics more suitable for travel, with the black ink symbolizing the strength of the men of Hama.

[2] Ayesha U. Shaikh, "Made in India, Found in Egypt: Red Sea Textile Trade in the Thirteenth and Fourteenth Centuries," *The Metropolitan Museum of Art*, March 2023, accessed September 1, 2024, https://www.metmuseum.org/toah/hd/rstti/hd_rstti.htm.
[3] Pliny the Elder, *Natural History*, Book 35, Chapter 42, accessed August 31, 2024, http://www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A1999.02.0137%3Abook%3D35%3Achapter%3D42.
[4] *Syrian Heritage*, "The Ink That Lasts Forever: Textile Printing in Syria," accessed September 1, 2024, https://syrian-heritage.org/the-ink-that-lasts-forever-textile-printing-in-syria/.
[5] *Syrian Heritage*, "A Woman with a Screen-Printed Headscarf Called Habari," accessed September 1, 2024, https://syrian-heritage.org/a-woman-with-a-screen-printed-headscarf-called-habari/.

The History of Printmaking Across the Arab World, PAGE 2
Co-written by Iona Stewart, Boushra Batlouni and Wafa Roz
Part of the Prints & Printmaking Exhibition

In Damascus, woodblock-printed fabrics were produced in *Khan al-Dikkeh* in *Souq Midhat Pasha* by a family named *al-Tabbaa*, which translates to 'the ink printers'.[6] In Southern Iraq, Karbala was also recognized for more colorful woodblock prints on fabric in the form of mosques, ornate motifs, and poetic texts, which were used for decorative purposes on religious holidays.[7]

Invention of Paper & Papermaking

The papermaking process was developed in the royal courts of the Han Dynasty of China (206 BCE – 220 CE) and first recorded in their dynastic records in 105 CE. The Chinese created paper using hemp, mulberry tree bark, bamboo, rosewood, and silk. They soaked and pressed the plants' fibers or pulp, then dried them on wooden frames in sheets.[8] Before fiber-made paper, papyrus and parchment were the earliest invented writing surfaces. Papyrus, extracted from the central pith of a Papyrus plant, was invented as far as 2900 BCE in Egypt. Parchment, made out of animal skin and named after the ancient Greek city of Pergamum, was first commercially produced around the 2nd century BCE.

Arab Muslims encountered papermaking when they conquered Central Asia in the 8th century CE. The technique spread via the Silk Road to Samarkand, present-day Uzbekistan. There, papermaking technology was further advanced by combining silk waste, mulberry bark, and bamboo sprouts, which were boiled, ground, and pressed into thin sheets to create high-quality paper for making copies of the Quran.[9][10] By 794 CE, papermaking had spread to Baghdad, where it became more efficient through the creation of the first water-powered paper mill,[11] enabling mass production. These innovations spread to Damascus, Cairo, and eventually to Europe, when the Umayyad Caliphate (661 CE – 750 CE) controlled Southern Spain from 714 CE as Al-Andulus.[12] Paper is cheaper and easier to source than tablets or parchment, so it was and continues to be the medium for printmaking across centuries.

Early Experiments in Block-Printed Amulets: Tarsh (9th – 14th Century)

Arabic block printing must have begun in the 9th or 10th century but continued to the 14th century. *Tarsh* was a block printing form that seemed to have disappeared after that period. *Tarsh* prints are usually fitted inside a metal cylinder and worn as an amulet on chains around the neck, with long Quranic quotes and other religious texts made to ward off evil.[13] One community that had peddled these amulets belonged to a medieval Islamic underworld of beggars and swindlers called the Banu Sasan, who would produce and sell *Tarsh* to the poor and illiterate populace.

---

[6] Syrian Heritage, "The Ink that Lasts Forever".
[7] Rafa Nasiri, *Contemporary Graphic Art* (Beirut: The Arab Institute for Research and Publishing, 1997), 38.
[8] The earliest known paper is traced to 200 BCE in China but was only recorded 300 years later. Before the development of paper, various materials such as clay tablets, tree bark, papyrus, and parchment were used.
[9] Maya Shatzmiller, "The Adoption of Paper in the Middle East, 700–1300 AD," *Journal of the Economic and Social History of the Orient* 61, no. 3 (2018): 461–92.
[10] Shatzmiller, "The Adoption of Paper in the Middle East".
[11] 'History of Papermaking Around the World'; 'Paper in Ancient China'.
[12] Thomas Christensen, "Guttenberg and the Koreans," in *River of Ink: An Illustrated History of Literacy* (Counterpoint, 2014); Phil Sanders, *Prints and Their Makers* (New York: Princeton Architectural Press, 2020).
[13] Richard W. Bulliet, "Medieval Arabic ṭarsh: a forgotten chapter in the history of printing," *Journal of the American Oriental Society* (1987): 427-438.

The History of Printmaking Across the Arab World, PAGE 3
Co-written by Iona Stewart, Boushra Batlouni and Wafa Roz
Part of the Prints & Printmaking Exhibition

How *Tarsh* prints were created is still being debated, but one of the most likely printing methods was that the maker of the *Tarsh* shallowly engraved the minute text into a wet clay tablet. After it dried, he applied a thin sheet of tin and pounded it into the grooves of the letters or, alternatively, poured molten tin onto it – a repeated process using the same tin.[14] This technique potentially explains why none of the prints have survived. Another possibility why the technique did not survive is because the technology used to make *Tarsh* was seen as inferior and not worthy of being applied to the refined world of those of higher social status, which may have kept it insulated from the rest of society.

Research continues about *Tarsh* block printing as part of the history of Arab printmaking and printmaking more broadly, with some scholars speculating that the Italian word *Tarocchi,* which refers to tarot cards – the earliest European printed artifacts – may have originated from the Arabic '*Tarsh*.'[15]

Coinage and Block Printing on Paper Currency

Coinage has long been a significant aspect of the Arab world's economic and cultural history, with the process of coining involving the use of punches or dies – engraved tools made of hard material with designs engraved onto their surface, which were pressed into heated metal to create identical reproductions of a design. The Umayyad Caliphate (661 CE – 750 CE) was the first Islamic dynasty to issue coinage, which allowed them to maintain economic stability and authority over their Empire and convey religious and political messages.

By the early 14th century, Muslim societies were well-acquainted with printing techniques, as the famous historian and statesman Rashid al-Din demonstrated. Vizier to Ghazan Khan, the Mongol ruler of Iran, Rashid al-Din highlighted in the first volume of his world history in 1307 that printing was known in the Muslim world.[16] His writings also provide evidence of printing experiments within Iran. Notably, in 1294, Ghaikhatu, the Mongol ruler of Iran, attempted to introduce block-printed paper money. This paper currency bore inscriptions in both Arabic and Mongolian. However, the introduction of paper money faced severe challenges: it was met with skepticism from merchants, was rejected by the military, and ultimately led to public unrest.[17]

Printmaking in the Ottoman Empire (15th – 18th Century)

European accounts regarding the development of printmaking often portrayed the Ottoman Empire as resistant to technological advancement. This resistance was sometimes interpreted as a sign of cultural or intellectual backwardness. For example, printing was seen as an inherently "Western" and "Christian" development, with some European historians overlooking or dismissing

[14] Bulliet, "Medieval Arabic ṭarsh".
[15] Geoffrey Roper, "Arabic Printing: Printing Culture in the Islamic Context," in *Encyclopedia of Mediterranean Humanism*, Spring 2014, https://encyclopedie-humanisme.com/?Arabic-printing.
[16] "A Missing Link," in *Arabic and the Art of Printing: A Special Section*, Aramco World, November-December 1980,
https://archive.aramcoworld.com/issue/198102/arabic.and.the.art.of.printing-a.special.section.htm.
[17] "A Missing Link".

The History of Printmaking Across the Arab World, PAGE 4
Co-written by Iona Stewart, Boushra Batlouni and Wafa Roz
Part of the Prints & Printmaking Exhibition

the Ottoman adoption of printing altogether.[18] Moreover, the Orientalist version of events often ignored the economic, cultural, religious, and political factors that influenced the Ottoman reluctance to adopt printing.

The Ottoman resistance to printmaking technology was due to several concerns. Mainly the potential disruption and impact on the livelihoods of a vast network of scribes, calligraphers, and illuminators who played a significant role in producing Quran manuscripts.[19] These artisans were integral to creating functional manuscripts that were considered luxury items and symbols of status among the elite.[20]

Manuscripts, especially those containing the Quran and other religious texts, were revered for their content, artistry, and the spiritual merit involved in their creation.[21] The act of handwriting was imbued with piety and considered a form of worship. Scribes engaged in a meditative practice that honored sacred texts.[22] The transition to print, perceived as a mechanical and impersonal process, raised concerns about diminishing the spiritual value and personal devotion involved in manuscript production, which was seen as a higher, more respected art form.[23]

There was a fear that the mechanical reproduction of holy texts could lead to errors and inaccuracies, potentially corrupting the sacred words.[24] This issue was prevalent in the early books printed in Arabic – often printed in Italy since it was a leading center of technology at the time, and there were extensive trade routes and diplomatic connections with the Ottomans. For example, the first book printed in Arabic type was '*Kitab Salat al-Sawa'i*' or the *Book of Hours* (potentially for Arabic-speaking Christians in the Levant). The book was produced in Fano, Italy, in 1514. It had a type so unrefined and unattractive to the readers that it was near incomprehensible.[25] Then, when the first Quran was printed in Arabic type, in Fano, by the Venetian printer Alessandro Paganino around 1537 or 1538,[26] it was also plagued by numerous errors critical to the Arabic script, such as misplaced diacritical marks and confusion between similar letters.[27] Scribes' precision and care in transcribing religious texts – especially the Quran and related literature – were viewed as safeguards against errors and integral to maintaining the Quran's textual integrity.[28]

These mistakes in Arabic script were likely due to the printer's inadequate understanding of the Arabic language. Thus, the early mal-constructed Arabic printed books did not appeal to the reader, reducing their potential as commercial investments.[29] Furthermore, the Ottomans were cautious of technological innovation that might compromise the tightly regulated control or spread of information. The Empire's leadership was wary of print technology's potential to

[18] Nil Pektaş, "The Beginnings of Printing in the Ottoman Capital: Book Production and Circulation in Early Modern Istanbul," *Studies in Ottoman Science* 16, no. 2 (2015): 3–32.
[19] Pektaş, "The Beginnings of Printing in the Ottoman Capital," 9-10.
[20] Pektaş, 7.
[21] Pektaş, 8-9.
[22] Pektaş, 8-9.
[23] Pektaş, 8-9.
[24] Pektaş, 9-10.
[25] Paul Lunde, "Arabic and the Art of Printing: A Special Section," *Aramco World*, January/February 1981, accessed August 31, 2024, https://archive.aramcoworld.com/issue/198102/arabic.and.the.art.of.printing-a.special.section.htm.
[26] Pektaş, 5.
[27] Pektaş, 5.
[28] Pektaş, 9-10.
[29] Titus Nemeth, "Overlooked: The Role of Craft in the Adoption of Typography in the Muslim Middle East," in *Manuscript and Print in the Islamic Tradition*, ed. Scott Reese, vol. 26 of *Studies in Manuscript Cultures*, ed. Michael Friedrich, Harunaga Isaacson, and Jörg B. Quenzer (2022): 21.

The History of Printmaking Across the Arab World, PAGE 5
Co-written by Iona Stewart, Boushra Batlouni and Wafa Roz
Part of the Prints & Printmaking Exhibition

facilitate the unauthorized dissemination of information that could undermine the existing social order or stir dissent.[30]

Role of Ottoman Armenians, Greeks, and Jews in Printmaking Development

Ottoman Armenians, Greeks, and Jews played an essential role in the earliest development of printing in the Arabic script; yet, they did not hold the same concerns regarding the sacred nature of the Arabic language that Muslims held. Through the 15th and 17th centuries, these non-Muslim communities printed books in the Ottoman Empire in Armenian, Syriac, Hebrew, Greek, and Roman movable type printing.[31]

Outside of Istanbul, small-scale printing projects began in monastic communities such as the Lebanese Monastery of Saint Anthony's Press in Quzhayya, located in the Zgharta District in the North Governorate of today's Lebanon. The first printed book by the St. Anthony's Press was published in 1610; it was a book of psalms in Syriac written in Garshuni (Arabic transliterated in Syriac letters since Syriac was the language of the Church, but most worshipers spoke Arabic).[32] Though the psalms do not include illustrations, they include the seal of the printing press on the front cover and are stamped with decorative flourishes throughout.

In 1734, a Lebanese printer and typographer, Abdallah Zakher (1684-1748), set up the first printing press in the Middle East. He was a Melkite Christian at the time of the Church's re-establishment of Communion with Rome. Zakher's printing press "used Arabic movable types and was installed in 1733 in the motherhouse of the Basilian Chouerite Order, the monastery of Saint John the Baptist at *Choueir,* or *Dhour El Shuwayr*, near *Khinchara*, in Mount Lebanon, where it still can be visited."[33]

Ibrahim Müteferrika, the Printing Press, and Reform in Ottoman Istanbul

In the 18th century, modernization movements in the Ottoman Empire began to prioritize the mass production of books, spurring the development of printing technologies despite earlier hesitations about printing in Arabic script. Modernization efforts aimed to cultivate a more extensive and better-educated military and administrative class, strengthen the state, and challenge traditional political and religious structures.[34]

In 1727, Ibrahim Müteferrika, a diplomat and philosopher, presented *Wasilat al-Tiba'a*, or *The Utility of Printing* to the Sultan of the Ottoman Empire, Ahmed III (1703-1730); the essay relays the benefits of printing to the Muslims and Ottomans.[35] Convinced by Müteferrika's proposal, Sultan

[30] Pektaş, 10-11.
[31] Roper, "Arabic Printing"; Barbara Henning and Taisiya Leber, "Print Culture and Muslim-Christian Relations," in *Christian-Muslim Relations. A Bibliographical History Volume 18. The Ottoman Empire (1800–1914)* (Brill, 2021), 39–61, 42, https://doi.org/10.1163/9789004460270_004.
[32] Hala Auji, "Picturing Knowledge: Visual Literacy in Nineteenth-Century Arabic Periodicals," in *Making Modernity in the Islamic Mediterranean* (Indiana University Press, 2022), 73–94, 79; Pascal Zoghbi, "First Printing Press in the Middle East," *29LT* (blog), 2012, https://blog.29lt.com/2010/06/16/1st-printing-press-in-me/.
[33] "In Honorem: Deacon Abdalla Zakhir Made the First Arabic Press — Eastern Christians Were Key to Arab Renaissance." Accessed August 31, 2024. https://phoenicia.org/zakhir.html; "Al-Shamas Abdallah Zakher," *Gallerease,* accessed September 1, 2024, https://gallerease.com/en/artists/al-shamas-abdallah-zakher__a0b1a708bc0e.
[34] Roper, "Arabic Printing".
[35] "Sultan Ahmet III Permits Printing on Secular Topics by Müteferrika While Protecting the 4000 Scribes in Istanbul," *History of Information*, accessed September 1, 2024, https://www.historyofinformation.com/detail.php?entryid=472.

The History of Printmaking Across the Arab World, PAGE 6
Co-written by Iona Stewart, Boushra Batlouni and Wafa Roz
Part of the Prints & Printmaking Exhibition

Ahmed III, an avid reader, skilled in calligraphy, and knowledgeable on history and poetry, authorized the opening of a printing press in Istanbul for printing in Arabic type using custom-made fonts referred to as 'Turkish incunabula.' The Press, called *Dârü't-tıbâ'ati'l-ma'mûre*, and best known as the *Basma Khāne* or printing house, operated between 1729 and 1742, producing 17 works in 22 volumes.[36] Müteferrika's first book, an Arabic-Turkish dictionary in two volumes, was published on January 31, 1729, with an initial print run of 500 copies.

The press was limited to books on secular topics, such as history, geography, language, and government – some illustrated with maps or engravings. This edict protected the many professional scribes of Istanbul and helped educate and empower a new class of officials more aligned with the state's goals and less dependent on the traditional religious elites.[37] Notably, the Müteferrika press printed the first book with figural illustrations, *History of the Discovery of America*, which featured 13 prints and four maps.[38] This publication initiated a culture of printing images alongside books.

Consequently, Istanbul became the center of Muslim Arabic printing in the 18th century, highlighting print's potential as a medium for distributing ideas. It made education more accessible and promoted the spread of printing technology throughout the region.

Napoleon's Occupation of Egypt and the Bulaq Printing Press in Cairo

In Egypt, over half a century later, Napoleon occupied Egypt, from 1798-1801CE. He introduced a printing press using 17th century Arabic types brought from Europe.[39] Napoleon's printing presses in Egypt were not popular with the public, for they served as a means of propaganda. The press promoted French learning, culture, and ideas, thereby informing the Egyptians about Napoleon's goals and ambitions.

Twenty years later, the printing press began to take root in a post-French occupation era. Muhammad 'Ali Pasha, who was the Egyptian *Wali* or assistant to the Turkish Sultan from 1805 to 1849, sent printmakers to Milan to learn the craft of printing and type-founding. He also requested that they purchase printing presses. Muhammad 'Ali established the Bulaq printing press in 1821, in the Bulaq neighborhood in Cairo, as the Egyptian state press. The first publication by the press was an Arabic-Italian dictionary issued in 1822.

Initially, the press focused on printing textbooks, manuals, and maps for a modernized military as part of a nationalization process. By the end of the 19th century, the Bulaq press had expanded to publish over 1600 titles on various topics for a new reading public. These publications included

[36] Sean E. Swanick, "İbrahim Müteferrika and the Printing Press: A Delayed Renaissance," *Bibliographical Society of Canada* 52, no. 1 (2023): 269–92, https://doi.org/10.33137/pbsc.v52i1.22262.
[37] Roper, "Arabic Printing".
[38] Scott Reese, *Manuscript and Print in the Islamic Tradition* (De Gruyter, 2022); Roper, "Arabic Printing".
[39] Wan Kamal Mujani and Napisah Karimah Ismail, "The Social Impact of French Occupation on Egypt," *Advances in Natural and Applied Sciences* 6, no. 8 (2012).

The History of Printmaking Across the Arab World, PAGE 7
Co-written by Iona Stewart, Boushra Batlouni and Wafa Roz
Part of the Prints & Printmaking Exhibition

aesthetic and technological innovations, such as locally cut and cast fonts in a tighter and more utilitarian *Naskhi* script, lithographic maps, and pages decorated with lithographic ornamentation, flowers, flourishes, and geometric matrices.

For instance, the Bulaq Press Encyclopedia, *The Book of Gnosis*, written by İbrahim Hakkı Erzurumi and printed in 1839, included lithographed maps of the world from various perspectives, astronomical charts, and various other charts and diagrams. A later 1874 Bulaq Press publication of children's stories of animal fables*, In Advice and Warning*, was filled with lithographed illustrations and labels of the animals. The Bulaq printing press in Egypt had a tremendous impact. It paved the way for westernization in the Middle East and somehow triggered the Renaissance period after centuries of Ottoman domination.

Early Arab Lithography

It is important to mention the immense significance of lithography in 17th and 18th century Arabic printing. Though developed in Germany in 1796, lithography in Europe was used primarily for maps and illustrations.[40] Lithographic printing, with its simple, readily available, and cost-effective equipment, offered several advantages over printing with movable type. It allowed a smooth continuation of traditional manuscript techniques, particularly in replicating the aesthetic impact of calligraphy, while enabling the production of text and graphic adornments, like illumination or illustration, using a single method. Because lithography could be drawn by scribes and can reproduce the same markings as manuscripts, lithography took on a much more critical role in the Islamic world. Muslim printmakers used lithography to reproduce entire texts by hand, maintaining calligraphic integrity and the role of scribes. The acceptability and cost-effectiveness of this medium allowed for wide dissemination, and lithography was favored over movable type across Morocco, Iran, Central, South, and Southeast Asia.

The first lithographic printing press was brought from Tbilisi to Persia in 1821 by order of Crown Prince Abbas Mirza, producing the first Muslim-printed Quran in 1832. The desire to produce high-quality copies of the Quran led Ottoman calligraphers to develop the most advanced and modern methods, even using more advanced techniques like photolithography, a method of lithography where the image is transferred onto a photosensitive surface using light, to print miniature Qurans.

The Nahda and Rise of a New Printmaking Aesthetic

In the 19th century, Arab and Orientalist printing presented starkly contrasting narratives. The Arab cultural and intellectual revival known as the *Nahda* spurred an explosion of printing, supporting widespread literacy, critical thinking, and reform. During this period, print aesthetics evolved with experiments in new visual and technical printmaking forms. Art historian Hala Auji

---

[40] Lithographs are produced by drawing an image on a flat surface, such as stone or metal, with a greasy material, such as crayons or oily ink. The surface is dampened with water, which repels the greasy design, while ink adheres only to the greasy areas. When pressed onto paper using a flatbed lithographic press, the ink transfers the image, preserving the artist's original marks and enabling a variety of effects resembling pen lines, crayon drawings, or brushwork.

The History of Printmaking Across the Arab World, PAGE 8
Co-written by Iona Stewart, Boushra Batlouni and Wafa Roz
Part of the Prints & Printmaking Exhibition

asserts the centrality of visuality as crucial to understanding the social history of the Nahda Arabic press,[41] whereby illustrated content helped engage and inform a broader audience.[42]

Early Lebanese illustrated journals such as *Al-Tabib* and *Al-Muqtataf* introduced new visual literacy to the reading public, with illustrations made through relief prints and intaglio prints, including etchings and lithography.[43] Binding, typography, layout, size, and design were all markers of 'visual literacy' in the transition from scribal to print culture.[44] Book printing flourished in major centers of the region, such as Aleppo, Beirut, Cairo, and Damascus. Their publications and illustrations spread ideas and connected people from all corners of the Arabic-speaking world. Counter to the intellectual flourishing of print in the Nahda in the late 19th century, printmaking was used to propagate orientalist and colonial narratives in the Middle East. Printmakers like David Roberts sold lithographs depicting ancient ruins and clueless locals in exotic, timeless scenes, suggesting a need for western intervention. These prints reinforced prejudices and justified colonial ambitions through visually romanticized and theatrical portrayals.[45]

Arab Printmaking in the 20th Century

Globally, and in the Arab world, the 20th century saw a rapid proliferation of print culture for an increasingly literate society with greater access to print materials for producing fine art prints and publishing literature in printing houses. The production of books, posters, and fine art prints, which were relatively recently rooted in the region, became very intertwined.

The avant-garde art thrust of this period and the transnational political movements following postcolonial independence compelled innovation in artistic methods and techniques – both manual and mechanized – and experimentation with a broader range of materials. It allowed fine art printmaking artists to be more tactile in their artistic experimentation and to disseminate their art to wider audiences. Thus, fine art printmaking emerged as a thoroughly modern medium, essential to the creative and political condition of the last century.

While modern Arab artists initially focused on painting and sculpting, fine art print culture became vital in shaping national and transnational visual languages and identities. In particular, Rafa Nasiri (1940-2013), an Iraqi artist and pioneer printmaker, traces the genealogy of fine art printmaking's traction and boom in the Arab world to the 1960s and the social and political revolutions of that decade that led to a proliferation of transnational graphic arts: "Just as graphic art was affected by (all of these) artistic and intellectual events and revolutions, it was also affected by the results of modern industrial and political developments."[46]

Nasiri himself left for Lisbon, Portugal, just a week after the Six Day Arab defeat, or the Arab-Israeli War in 1967, for a Gulbenkian Foundation scholarship – a two-year training at the Portuguese

---

[41] Hala Auji, *Printing Arab Modernity: Book Culture and the American Press in Nineteenth-Century Beirut*, vol. 7 (Brill, 2016).
[42] Auji, "Picturing Knowledge".
[43] Auji, "Picturing Knowledge", 74.
[44] The Nahda is the term for the cultural and intellectual revival in the Arab world in the 19th and 20th centuries.
[45] Robert Myers, "Painting the Theater of the East: Nineteenth-Century Orientalist Painters and the Modern European Theater," *Middle East Critique* 18, no. 1 (2009): 5–20.
[46] Rafa Nasiri, *50 Years of Printmaking* (Milano: Skira, 2013).

The History of Printmaking Across the Arab World, PAGE 9
Co-written by Iona Stewart, Boushra Batlouni and Wafa Roz
Part of the Prints & Printmaking Exhibition

Engravers Co-operative (Gravura). In Portugal, Nasiri was also exposed to an environment of civil unrest in Europe during 1968, punctuated by demonstrations and strikes linked to leftist movements worldwide, which inspired a generation of protest art, including posters and graffiti.[47]

The importance of fine art printmaking in transnational anti-imperial and protest movements gave printmaking a popular edge. It was a revival of printmaking that Nasiri and his Iraqi colleagues, like Salem al-Dabbagh and Hashim Samarchi, who trained in Portugal, wanted to bring back to Iraq's artistic and political atmosphere.[48] The diversity of fine art printmaking techniques and processes made this art exceptionally flexible and rich. It provided endless possibilities for expression. As such, artists began recognizing printmaking's potential for intense innovation and experimentation, reflecting the cultural drive for the new and the modern. They also acknowledged its potential to bring art to the people, to move modern Arab art away from the intelligentsia, and to make it visible and part of a national visual language of Arab modernity.

Many pioneering Arab artists of the early 20th century learned some basic printmaking techniques as part of classical Western art education while studying abroad. Such as Jewad Selim, Hafidh Droubi, Mahmoud Mokhtar, and Fateh Moudaress, to name a few. Though this certainly has significance, these artists did not continue practicing printmaking on their return home as they focused on creating national modernist art. They also did not have access to printmaking studios, nor did they print with simple means like wood or linoleum. Instead, pioneering artists such as these helped found fine arts departments focusing on painting and sculpture in their universities with new modernist yet nationalist curricula. There was no mention of printmaking departments, though. It was not until the beginning of the 1960s that fine art printmaking in the Arab world began to take root. Though we have touched on the Arab region, the focus will be on two countries, Iraq and Lebanon.

20th Century printmaking in Iraq & The New Vision Group

The consolidation of printmaking as an art form in Iraq has no linear narrative but many threads that built up the printing culture among Iraqi artists, including the influence of Polish printmaking and graphic art, Chinese woodblock, silkscreen posters, and publishing.

In 1959, the Institute of Fine Arts in Baghdad invited Polish artist Roman Artemowski to teach a printmaking course after organizing an exhibition of Polish contemporary Art in Baghdad, including prints. During this period, the institute acquired two old printing presses, and the Polish art and design magazine Projekt became very influential for Iraqi artists' printing, with artists Dia Al Azzawi and Saleh al-Jumaie traveling to Poland for international poster biennales. Artemowski organized a graphics exhibition at the Institute of Fine Arts in Baghdad, which then traveled to East Germany,[49] under the title *Modern Iraqi Graphic Art*.

---

[47] Rafa Nasiri, *50 Years of Printmaking* (Milano: Skira, 2013).
[48] Sonja Mejcher-Atassi, "Unfolding Narratives from Iraq: Rafa Nasiri Book Art"; Rafa Nasiri, *Artist Books* (Milano: Skira, 2016), 47.
[49] Nasiri p90; Dia al-Azzawi, "Graphic Design and the Visual Arts in Iraq," in *Modern Art in the Arab World: Primary Documents*, ed. Anneka Lenssen, Sarah A. Rogers, and Nada M. Shabout (New York: Museum of Modern Art, 2018), 370-371; Zeina Maasri, *Cosmopolitan Radicalism: The Visual Politics of Beirut's Global Sixties*, vol. 13 (Cambridge University Press, 2020), 200; Bahia Shehab and Haytham Nawar, *A History of Arab Graphic Design* (American University in Cairo Press, 2020), 83.

The History of Printmaking Across the Arab World, PAGE 10
Co-written by Iona Stewart, Boushra Batlouni and Wafa Roz
Part of the Prints & Printmaking Exhibition

During this same period, an exhibit of Chinese works of ivory, copper, silk, ceramics, and printmaking was held at the Institute of Fine Arts in 1959. Having been moved by this exhibition, young artist Rafa Nasiri applied for a government scholarship to study painting and printmaking in China. Along with four other students, including fellow artist Tariq Ibrahim, Nasiri studied at Peking University in Beijing, from 1959-1963, where he came to specialize in Chinese woodblock printing. Although Nasiri was taught by Artemowski, since he was studying abroad during this period, he had Chinese rather than Polish influences. Nasiri would go on to head the Graphic Department at the Institute of Fine Arts Baghdad in 1974.[50]

Simultaneously, artists in Baghdad were learning silkscreen printing from master printer Nadhim Ramzi. From the 1950s, Iraqi artists used silkscreen in posters and cards, such as Jewad Selim's silkscreen greeting cards from 1958.[51] Nadhim Ramzi proposed the first exhibition of silkscreened poster art at the National Gallery of Modern Art in 1971, which took place through the printing facilities at his atelier.[52] Print artists sought to take art outside the walls of museums and galleries to the public, such as the pre-Islamic *Hanging Odes of Mecca* as silkscreen posters, collaborative art prints with contemporary poets, or art print homages to Palestinian resistance and suffering.[53] This reflected the goals of contemporary artists concerned with their cultural and political environment.

Rafa Nasiri co-founded the New Vision Group (*al-ru'iya al-Jadida*) in 1969, along with fellow artists Dia Al Azzawi, Saleh Al Jumaie, Ismael Fattah, and Hashim Samarchi. What distinguished it from previous groups was the use of new media and techniques, such as printmaking and graphic art, especially the artistic poster. The New Vision Group did not call for common stylistic trends; its members came together around intellectual and political ideas. The 1967 Six Day War, Arab defeat, or the *hazima* was fresh in their minds; they aimed at a closer relationship of art and politics, foregrounding notions of revolution, freedom, anti-imperialism, social justice, and political change. In the group's manifesto, Dia Al Azzawi writes: "We reject the artist of partitions and boundaries. We advance. We fall. But we will not retreat. Meanwhile, we present the world with our new vision [...] We reject social relations resulting from false masks and reject what is given to us out of charity. We are the ones to achieve justification of our existence through our journey of change ...".[54]

Posters during this era were treated less as commercial tools and more as fine art prints, a method of communicating the aesthetics and ideals of local art movements to the urban public. For instance, Dia Al Azzawi, Hashim Samarchi, and Rafa Nasiri designed posters for *the al-Mirbid Poetry Festival* in Basra 1971, creating 30 original prints and distributing each work individually by hand. In this period, artists experimented extensively with medium and form through the possibilities opened by printmaking processes, expanding their outreach and impact.[55] Posters were easy to reproduce and circulate, making them ideal visual

---

[50] Nasiri, *50 Years of Printmaking*, 29.
[51] Ibrahimi collection - https://www.instagram.com/p/C2FaDXrPH0-/?hl=en&img_index=1
[52] Nasiri p39; al-Azzawi, "Graphic Design and the Visual Arts in Iraq"; Maasri, *Cosmopolitan Radicalism*, 200; Shehab and Nawar, A History of Arab Graphic Design, 83; Rafa al Nasiri his life and art; Sabah al Nasiri, May Muzaffar
[53] Smitshuijzen AbiFarès, "Experiments in Modern Arabic Typography", 302; Nada M. Shabout, *Modern Arab Art: Formation of Arab Aesthetics* (Gainesville, FL: University Press of Florida, 2007), 132.
[54] Mejcher-Atassi, "Unfolding Narratives from Iraq"; Nasiri, "Artist Books", 126.
[55] Huda Smitshuijzen AbiFarès, "Experiments in Modern Arabic Typography," in *Modern Art in the Arab World: Primary Documents*, ed. Anneka Lenssen, Sarah A. Rogers, and Nada M. Shabout (New York: Museum of Modern Art, 2018), 302-303.

The History of Printmaking Across the Arab World, PAGE 11
Co-written by Iona Stewart, Boushra Batlouni and Wafa Roz
Part of the Prints & Printmaking Exhibition

communication tools for disseminating knowledge. In Iraq, art prints emerged alongside a surge in collective visual communication – both commercial and artistic – offering a gateway to introduce modern art to a broader public.

20ᵗʰ Century Printmaking in Lebanon

Similarly, many factors consolidated printmaking as an art in Lebanon, from studies in engraving abroad to local publishing houses and poster culture. Halim Jurdak, trained initially at the Lebanese Academy of Fine Art (1953-1957), went on to continue his studies in Fine Art at *Ecole Nationale Supérieure des Beaux-Arts* in Paris, France, where he focused on engraving and received the first prize in the print category of the academy's annual exhibition. He began teaching at the Lebanese University in 1966, developing the printmaking curriculum and training the next generation of printmakers, such as Jamil Molaeb and Mohammad El Rawas.[56] After further training in printmaking at the Slade, London, El Rawas developed the printmaking studio at the Lebanese University, introducing Intaglio techniques such as etching on metal. In 1990, he established a printmaking studio at the American University of Beirut in the Department of Architecture and Design, equipping it with etching, engraving, and silkscreen studios. He taught another generation of printmakers, such as Bernard Haddad and Hassan Zahreddine.

Printmaking also took hold and reached the public as an art form through publishing houses in Beirut. Illustrated Arabic books in the mid-20ᵗʰ century interwove the Arab art scene with print culture after offset printing. They used lithography to transfer an image from a hydrophilic aluminum printing plate to a rubber blanket cylinder and then onto paper via inked rollers, making these illustrated Arabic books available due to developments in lithography. The publishing house Dar an-Nahar, led by Yousef al-Khal, commissioned artists such as Paul Guiragossian, Dia Al Azzawi, and Shafic Abboud to produce works printed alongside Arabic poetry and literature classics in his literature and art magazine *Shi'r*. These artists would also exhibit at Gallery One, established in 1963 by publisher Yousef al-Khal and his wife, the artist Helen Khal.[57] During this period, artists began to explore the value of printing in their practice; both Dia Al Azzawi and Shafic Abboud would study fine art printmaking after this experience.

Art historian Zeina Maasri also highlights the role that the printing of political posters played in catalyzing artists to explore print as a medium of political art. Just as radical art collectives such as the Atelier Populaire in 1968 Paris, and the Black Panther Party in San Francisco were using printed art on the street, Palestinian revolutionary groups and the artists who supported the causes also began to use poster as a revolutionary art form, bringing together printmakers and artists from across the Arab world.

The intellectual and Palestinian Liberation Organization representative in France, Ezzeddine Kalak, writes that "Through posters, the [Palestinian] cause enters the homes of masses and

---

[56] Jamil Hammoud Molaeb, *Artists and Art Education in Time of War: Lebanon* (PhD diss., The Ohio State University, 1989); Halim Jurdak, https://galeriejaninerubeiz.com/storage/artists/November2018/1fk1ylAmN07Efpn6RdTE.pdf

[57] Zeina Maasri, "The Visual Economy of 'Precious Books': Publishing, Modern Art, and the Design of Arabic Books," *Comparative Studies of South Asia, Africa and the Middle East* 40, no. 1 (2020): 95–113, https://muse.jhu.edu/article/755625.

The History of Printmaking Across the Arab World, PAGE 12
Co-written by Iona Stewart, Boushra Batlouni and Wafa Roz
Part of the Prints & Printmaking Exhibition

resides in their eyes."[58] Posters reproduced from Palestinian nationalist paintings and drawings became popular, such as paintings by Sliman Anis Mansour, Nabil Anani, Abdulrahman al-Muzayen, and Abdulhay Musallam Zarara. The convergence of Beirut's trans-local art and publishing scene infrastructures in the 1960s created the historical conditions that enabled the city's visual rise to become a concentrated site of printmaking shapes in solidarity with Palestine, where "Palestinian posters transformed Beirut's walls into a large exhibition," as noted by the Lebanese novelist and critic Elias Khoury.[59]

Conclusion

The history of printmaking in the Arab world is a rich tapestry woven through centuries of innovation, cultural interchange, and artistic evolution. The pivotal invention of paper and the establishment of water paper mills in Baghdad mark crucial milestones that transformed the capacity for documentation and artistic expression across the Arab world. As printmaking grew through various forms, such as the *Tarsh* block printing in Fustat and the adaptation of Mongol printing techniques for banknotes in Iran, non-Muslim Ottomans development of Arabic script printing further broadened the scope of print culture. This opened avenues for producing religious texts and educational materials that played significant roles in community life. The establishment of the first official printing press in Istanbul by Ibrahim Müteferrika, alongside Napoleon's introduction of movable Arabic type to Egypt, laid foundational stones for a burgeoning print industry that would eventually see a proliferation of print media throughout the 19th and 20th centuries.

The Nahda period marked a renaissance not only in literary pursuits but also in visual culture, highlighting the integral relationship between print and society. The visual aspect of print became crucial to understanding the socio-political landscape of the region. The subsequent emergence of poster design as a form of social commentary and the establishment of fine arts printmaking studios in places like Iraq and Lebanon, besides other Arab countries, heralded a new era of artistic expression that embraced and innovated upon traditional methods.

Moreover, importing techniques such as metal intaglio and advanced silkscreen fine art printmaking from Western countries symbolized a significant shift that expanded the repertoire of Arab artists. Movements like the New Vision Movement in Iraq emerged, advocating for exploring new mediums and melding art and politics. This evolution reveals a response to historical circumstances and a spirited dialogue between heritage and modernity.

Thus, the arc of printmaking in the Arab world illustrates a story of resilience, creativity, and transformation – a narrative continuously underscored by the region's diverse cultural influences. As we look toward the future, the rich legacy of printmaking in the Arab world continues to inspire new generations of artists and thinkers, encouraging them to harness the power of print as a vehicle for social change and artistic exploration. The dynamic history and ongoing

[58] Maasri, *Cosmopolitan Radicalism*, 179.
[59] Maasri, *Cosmopolitan Radicalism*, 179.

The History of Printmaking Across the Arab World, PAGE 13
Co-written by Iona Stewart, Boushra Batlouni and Wafa Roz
Part of the Prints & Printmaking Exhibition

evolution of printmaking not only enriches our understanding of Arab cultural heritage, but also reaffirms the enduring relevance of this art form in reflecting and challenging the complexities of contemporary society.

Bibliography

al-Azzawi, Dia. "Graphic Design and the Visual Arts in Iraq." In *Modern Art in the Arab World: Primary Documents*, edited by Anneka Lenssen, Sarah A. Rogers, and Nada M. Shabout, 370-371. New York: Museum of Modern Art, 2018.

"Al-Shamas Abdallah Zakher." *Gallerease*. Accessed September 1, 2024. https://gallerease.com/en/artists/al-shamas-abdallah-zakher__a0b1a708bc0e.

Auji, Hala. *Printing Arab modernity: Book culture and the American press in nineteenth-century Beirut*. Vol. 7. Brill, 2016.

Auji, Hala. 'Picturing Knowledge: Visual Literacy in Nineteenth-Century Arabic Periodicals'. In *Making Modernity in the Islamic Mediterranean*, 73–94. Indiana University Press, 2022.

Badghaish, Ahmad, Amal Omar, and Mohammad Khizal Mohamed Saat. "Investigate The Level of Awareness and Acceptance of Social Commentary Art Among the Public in The Arab Region." *KUPAS SENI: Jurnal Seni Dan Pendidikan Seni* 11, no. 2 (2023): 10–22. https://doi.org/10.37134/kupasseni.vol11.2.2.2023.

Bulliet, Richard W. "Medieval Arabic ṭarsh: a forgotten chapter in the history of printing." *Journal of the American Oriental Society* (1987): 427-438.

Christensen, Thomas. "Guttenberg and the Koreans." In *River of Ink: An Illustrated History of Literacy*. Counterpoint, 2014.

"Early Arabic Printing: Movable Type & Lithography." *Yale University Library Online Exhibits*. April–June 2009. https://onlineexhibits.library.yale.edu/s/arabic-printing/page/printing_history_arabic_world.

Henning, Barbara, and Taisiya Leber. 'Print Culture and Muslim-Christian Relations'. In *Christian-Muslim Relations. A Bibliographical History Volume 18. The Ottoman Empire (1800-1914)*, 39–61. Brill, 2021. https://doi.org/10.1163/9789004460270_004.

Hnaihen, Kadim Hasson. "The appearance of bricks in ancient mesopotamia." *Athens Journal of History* 6, no. 1 (2020): 73-96.

Lenssen, Anneka, Sarah A. Rogers, and Nada M. Shabout. *Modern art in the Arab World: Primary Documents PP 306-307*. New York: The Museum of Modern Art, 2018.

Lunde, Paul. "Arabic and the Art of Printing: A Special Section." *Aramco World*, January/February 1981. Accessed August 31, 2024.

Maasri, Zeina. Cosmopolitan Radicalism: The Visual Politics of Beirut's Global Sixties. Vol. 13. Cambridge University Press, 2020.

Maasri, Zeina. "The Visual Economy of "Precious Books": Publishing, Modern Art, and the Design of Arabic Books." Comparative Studies of South Asia, Africa and the Middle East 40, no. 1 (2020): 95-113. https://muse.jhu.edu/article/755625.

Mejcher-Atassi, Sonja. "Unfolding Narratives from Iraq: Rafa Nasiri Book Art."

Metropolitan Museum of Art. *Cylinder Seal and Modern Impression*. Accessed August 31, 2024. https://www.metmuseum.org/art/collection/search/329090.

Metropolitan Museum of Art. *Stamp Seals of the Hittite Old Kingdom*. Accessed August 31, 2024. https://www.metmuseum.org/art/collection/search/327799.

Miller, Meg. "Print." Eye on Design. Accessed September 2, 2024. https://eyeondesign.aiga.org/design-for-and-from-communities-bahia-shehab-on-a-history-of-arab-graphic-design/print-100/.

Molaeb, Jamil Hammoud. *Artists and Art Education in Time of War: Lebanon*. PhD diss., The Ohio State University, 1989.

Mujani, Wan Kamal, and Napisah Karimah Ismail. 'The Social Impact of French Occupation on Egypt'. *Advances in Natural and Applied Sciences* 6, no. 8 (2012).

Myers, Robert. "Painting the Theater of the East: Nineteenth-century Orientalist Painters and the Modern European Theater." *Middle East Critique* 18, no. 1 (2009): 5-20.

Nasiri, Rafa. *50 Years of Printmaking*. Milano: Skira, 2013. ISBN 978-88-572-2023-9.

Nasiri, Rafa. *Contemporary Graphic Art*. Beirut: The Arab Institute for Research and Publishing, 1997. http://rafanasiri.com/Publication.aspx?id=7.

Nasiri, Rafa. *Artist Books*. Milano: Skira, 2016. ISBN 978-88-572-3341-3.

Nemeth, Titus. "Overlooked: The Role of Craft in the Adoption of Typography in the Muslim Middle East." In *Manuscript and Print in the Islamic Tradition*, edited by Scott Reese, vol. 26 of *Studies in Manuscript Cultures*, edited by Michael Friedrich, Harunaga Isaacson, and Jörg B. Quenzer (2022): 21.

Pektaş, Nil. "The Beginnings of Printing in the Ottoman Capital: Book Production and Circulation in Early Modern Istanbul." *Studies in Ottoman Science* 16, no. 2 (2015): 3–32.

"In Honorem: Deacon Abdalla Zakhir Made the First Arabic Press — Eastern Christians Were Key to Arab Renaissance." Accessed August 31, 2024. https://phoenicia.org/zakhir.html.

Pliny the Elder. *Natural History*. Book 35, Chapter 42. Accessed August 31, 2024. http://www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A1999.02.0137%3Abook%3D35%3Achapter%3D42.

Reese, Scott. *Manuscript and Print in the Islamic Tradition*. De Gruyter, 2022.

Roper, Geoffrey. 'Arabic Printing : Printing Culture in the Islamic Context'. In *Encyclopedia of Mediterranean Humanism*, Spring 2014. https://encyclopedie-humanisme.com/?Arabic-printing.

Sanders, Phil. *Prints and Their Makers*. New York: Princeton Architectural Press, 2020.

Seri, Andrea. "Adaptation of cuneiform to write Akkadian." *Visible language. inventions of writing in the Ancient Middle East and beyond* 32 (2010): 85-98.

Shabout, Nada M. *Modern Arab Art: Formation of Arab Aesthetics*. Gainesville, FL: University Press of Florida, 2007.

Shaikh, Ayesha U. "Made in India, Found in Egypt: Red Sea Textile Trade in the Thirteenth and Fourteenth Centuries." *The Metropolitan Museum of Art*. March 2023. Accessed September 1, 2024. https://www.metmuseum.org/toah/hd/rstti/hd_rstti.htm.

Shatzmiller, Maya. "The adoption of paper in the Middle East, 700-1300 AD." *Journal of the Economic and Social History of the Orient* 61, no. 3 (2018): 461-492.

Shehab, Bahia, and Haytham Nawar. *A History of Arab Graphic Design*. American University in Cairo Press, 2020.

Smitshuijzen AbiFarès, Huda. "Experiments in Modern Arabic Typography." In *Modern Art in the Arab World: Primary Documents*, edited by Anneka Lenssen, Sarah A. Rogers, and Nada M. Shabout, 302-303. New York: Museum of Modern Art, 2018.

"Sultan Ahmet III Permits Printing on Secular Topics by Müteferrika While Protecting the 4000 Scribes in Istanbul." *History of Information*. Accessed September 1, 2024. https://www.historyofinformation.com/detail.php?entryid=472.

Swanick, Sean E. "İbrahim Müteferrika and the Printing Press: A Delayed Renaissance." *Bibliographical Society of Canada* 52, no. 1 (2023): 269–92. https://doi.org/10.33137/pbsc.v52i1.22262.

Syrian Heritage. "A Woman with a Screen-Printed Headscarf Called Habari." Accessed September 1, 2024. https://syrian-heritage.org/a-woman-with-a-screen-printed-headscarf-called-habari/.

Syrian Heritage. "The Ink That Lasts Forever: Textile Printing in Syria." Accessed September 1, 2024. https://syrian-heritage.org/the-ink-that-lasts-forever-textile-printing-in-syria/.

Topçuoğlu, Oya. *Iconography of Protoliterate Seals*. na, 2010.

Zoghbi, Pascal. 'First Printing Press in the Middle East'. 29LT (blog), 2012. https://blog.29lt.com/2010/06/16/1st-printing-press-in-me/.

The History of Printmaking Across the Arab World, PAGE 14
Co-written by Iona Stewart, Boushra Batlouni and Wafa Roz
Part of the Prints & Printmaking Exhibition