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Chinese Decorated Paper in Persianate Manuscripts of the Fifteenth Century

Materiality, Use and Meaning

Ilse Sturkenboom[1] with Christina Bisulca, Sebastian Bosch, Claudia Colini, Agnieszka Helman-Ważny and David Howell

Approximately one century ago, Islamic art historians became aware of the use of a particular kind of coloured and gold-decorated paper in specific fifteenth-century manuscripts from the Persianate world. Based mainly on the style of this paper's gold motifs it is believed to have its origin in China, even if, until now, this was not supported by scientific evidence. Apart from its origin, other important questions have remained unanswered concerning the paper's materiality and production techniques, its original use, and the reasons for which it was applied in Persianate manuscript production.

After introducing previous approaches to this particular subject and the manuscripts in which the paper was identified, this article presents initial results from scientific and technical analyses of so-called 'Chinese' paper, discusses its gold motifs and their application techniques, investigates how the original long sheets were cut and used in greater Iran and China and considers possible motivations for the use of this paper in Persianate manuscripts.

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Introduction: An Overview of Previous Approaches to 'Chinese' Paper in Persianate Manuscripts

Since at least the first half of the twentieth century, scholars have been aware of the select use, in certain fifteenth-century Persianate manuscripts, of a distinct kind of paper that is generally believed to be of Chinese origin. This paper is typically very heavy, brightly coloured on both sides and embellished with gold on only one side of the folio (comp. fig. 1). The gold decoration consists of either large gold flecks or fine gold sprinkling[2] and may, additionally, be combined with gold designs. This combination of coloured paper and gold embellishment was, after its production, used as a background for writing, and sometimes painting, in Persianate manuscripts.

In 1929, Erménag Beg Sakisian was apparently the first to describe such coloured and gold-decorated paper in four manuscripts in Istanbul's collections (tables 1:2–3, 2:12–13)[3] as 'Chinese paper' (*papier chinois*).[4] Sakisian's assumption that this paper originated in China was in the first place based on his observation of the Chinese-like style of the paper's gold designs, of which he mentioned Chinese landscapes, flowers and trees. Shortly thereupon, a Qur'an manuscript in the collection of the Detroit Institute of Art (DIA) was described as executed on 'Chinese' paper directly after it was acquired under the tenure of Mehmet Aga-Oglu as DIA's Curator of Near Eastern Art in 1930.[5] This Qur'an manuscript (table 2:9) includes only two folios with gold design (ff. 67b and 126a, in both cases part of a grapevine design on light-blue paper). But, apart from the limited gold designs, the DIA Qur'an shares important characteristics with the manuscripts that Sakisian described, including a variety of colours in its folios, gold flecks or sprinkling on one side of the folios, and an extraordinarily heavy weight (14 pounds or 6036 gram in the case of the DIA Qur'an). Undoubtedly, Aga-Oglu was aware of these similarities. In 1928, he was acting director of the Evkaf

[2] Gold flecks consist of large particles of gold leaf that can be seen with the naked eye, as on the right-hand folio in fig. 1. Gold sprinkling, as on the left-hand folio in fig. 1, appears as a gold shimmer to the naked eye, but can be identified as separate particles under a microscope (fig. 6b). In the manuscripts analysed, folios feature only one of the two forms of decoration; a combination of gold flecks and gold sprinkles has not been identified on a single folio.

[3] The tables 1–3 on pp. 180–187 list known manuscripts written on 'Chinese' paper with indications of a date (table 1), undated manuscripts written on 'Chinese' paper (table 2) and manuscripts and albums containing single leaves of 'Chinese' paper (table 3).

[4] Sakisian, Arménag Beg: *La miniature persane du XIIe au XVIIe siècle*. Paris and Brussels: Les Editions G van Oest, 1929, p. 56.

[5] Detroit Institute of Arts: *The Fourteenth Loan Exhibition: Mohammedan Decorative Arts, the Detroit Institute of Arts, October 21 to November 23, 1930*. Detroit: The Detroit Institute of Arts, 1930, p. 17. Ford, Edsel B. – Albert Kahn – Charles T. Fisher – Julius H. Haass – W. R. Valentiner – Clyde H. Burroughs – Dexter M. Ferry, Jr.: "Annual Report for the Year 1930". *Bulletin of the Detroit Institute of Arts of the City of Detroit* 12:5 (February 1931), pp. 46–64, here p. 58.



Fig. 1: Qur'an manuscript (table 2:15) written on 'Chinese' paper, showing a dark-purple folio with fine gold sprinkling on the left and a light-orange folio with pomegranate design and gold flecks on the right. Courtesy of Christie's, London

Museum in Istanbul,[6] where three of the four manuscripts mentioned by Sakisian were held. In 1935, Aga-Oglu discussed two of the Istanbul manuscripts (table 1:2–3) in his monograph *Persian Bookbindings of the Fifteenth Century* and mentioned the heavy weight of the manuscripts' pages, their various colours, gold speckling and designs of landscapes and branches which he deemed to be "undoubtedly of Chinese manufacture".[7] It therefore seems likely that the DIA Qur'an was purchased during Aga-Oglu's tenure *because* he believed that this Qur'an was produced out of paper from China and, together with the Istanbul manuscripts, belongs to a distinct group of manuscripts.

After a shift of generations, and possibly also after unpublished knowledge was lost, the 1980s again saw intensified interest in manuscripts on 'Chinese' paper and the identification of additional specimens. In 1981, Zeren Tanındı discussed leaves of 'Chinese' paper collected in two of the Istanbul albums.[8] Norah M. Titley described two fifteenth-century manuscripts on 'Chinese' paper in the British Library (table 1:4–5) and comparative manuscripts in her 1983 monograph,[9] while in her seminal article of 1988, Priscilla Soucek used the wording 'Chinese' paper for the light-blue-tinted and gold-decorated paper of the 1478 New York

[6] Comp. Weibel, Adèle Coulin: "Mehmet Aga-Oglu (1896–1949)". *Ars Islamica* 15/16 (1951), pp. 267–271, here p. 267.
[7] Aga-Oglu, Mehmet: *Persian Bookbinding of the Fifteenth Century*. Ann Arbor: University of Michigan Press, 1935, description facing plate I.
[8] Tanındı, Zeren: "Some Problems of Two Istanbul Albums H. 2153 and 2160". *Islamic Art* 1 (1981), pp. 37–41, here p. 37.
[9] Titley, Norah M.: *Persian Miniature Painting and Its Influence on the Art of Turkey and India: The British Library Collections*. London: The British Library, 1983, pp. 240–241.

Public Library *Makhzan al-asrār* manuscript (table 1:6).[10] In their use of the term 'Chinese' paper, these authors adhered to its meaning as implied in the 1920s and 30s, and included in their discussions coloured papers with only gold flecks or sprinkles, as well as those with gold designs.[11]

In the following years, the term continued to grow in popularity when used by Islamic art historians such as Sheila S. Blair, Jonathan M. Bloom and David J. Roxburgh,[12] in catalogues[13] and in recent conference talks and still unpublished studies that demonstrate the increased scholarly interest in this topic.[14] The increased awareness of this type of paper, and thus the increased use of the term, is fuelled in large part by the occasional appearance of new manuscripts and loose folios at auctions. Most recently, on 25 June 2020, a Qur'an on 'Chinese' paper (fig. 1, table 2:15) was auctioned at Christie's for GBP 7,016,250, which provides an indication of the value of such manuscripts today.

Since the 1980s, several different approaches to the study of 'Chinese' paper have been taken. Sakisian already suspected that the coloured papers in the manuscripts he investigated derived from single pieces [of paper],[15] but it was not until 1988 that Priscilla Soucek demonstrated that the 35 small folios (17.9 × 10.6 cm) of the New York Public Library *Makhzan al-asrār* (table 1:6) had been cut from two long sheets.[16] Recently, Ursula Sims-Williams used the method of photographic reconstruction introduced by Soucek to show that some of the folios of the 1451-dated *Dīvān* of Hāfiẓ in the British Library (table 1:4) together form a continuous landscape design.[17]

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[10] Soucek, Priscilla: "The New York Public Library 'Makhzan al-asrār' and Its Importance". *Ars Orientalis* 18 (1988), pp. 1–37, for 'Chinese' paper esp. pp. 15–18.
[11] Comp. Titley, *Persian Miniature Painting*, p. 240, who defined 'Chinese' paper as "thick, highly polished and either flecked with gold or bearing Chinese painting in gold."
[12] Blair, Sheila S.: "Color and Gold: The Decorated Papers Used in Manuscripts in Late Islamic Times". *Muqarnas* 17 (2000), pp. 24–36, here pp. 25–30; Bloom, Jonathan M.: *Paper Before Print: The History and Impact of Paper in the Islamic World*. New Haven/London: Yale University Press, 2001, pp. 70–71; Roxburgh, David J.: *The Persian Album, 1400–1600*. New Haven/London: Yale University Press, 2005a, pp. 159–165.
[13] Cf. tables 1–3 for references to catalogues and other publications that deal with manuscripts on 'Chinese paper.'
[14] Margaret Shortle's presentation "Creativity and Humor in Illustrated 'Divans' of Hafiz" at the workshop *Writing as Intermediary*, 11 October 2019 in Bamberg, contained new thoughts on 'Chinese' paper, cf. her article in the present volume. On 23 November 2019 Yusen Yu delivered the talk "Why Paper?: A Study of Written Sources from the Mongol and Timurid Periods" with newly discovered sources on 'Chinese' paper at the workshop *Decorated Papers in Early Modern Islamic Manuscript Culture* at the Orient-Institut Istanbul. Elaine Wright's article "'Chinese' Paper and Margins of Gold in a Fifteenth-Century Shiraz Anthology" is forthcoming in the *Journal of the Royal Asiatic Society*.
[15] Sakisian, *La miniature persane*, p. 56.
[16] Soucek 1988: pp. 15–16, 31–33, figs. 15, 17 and 19.
[17] Sims-Williams, Ursula: "Two Persian 'Ming' manuscripts on view at the British Museum". *Asian and African studies blog*, 25. September 2014, https://blogs.bl.uk/asian-and-african/2014/09/two-persian-ming-manuscripts-on-view-at-the-british-museum.html (last viewed 17.12.2021).

Scholars have investigated written sources about Timurid-Ming diplomatic missions taking place from 1412 to the mid-1430s to explain how 'Chinese' paper might have been brought from China to greater Iran.[18] A problem in understanding these sources is their often-lacking description of the paper in question. In his *Mujmal-i faṣīḥī*, Faṣīḥ Khvāfī (d. 1442), for example, mentioned 'Cathayan paper' (*kāghaz̲-i khaṭā'ī*) among the Chinese diplomatic gifts received in Timurid Herat in the Spring of 1417.[19] Cathay/*khaṭāy* being the most common word for China in fifteenth-century Persian, the term Cathayan paper/*kāghaz̲-i khaṭā'ī* primarily denotes the broad geographical area of origin of this paper, but does not have specific implications for its visual qualities and material consistencies.[20] New investigations of sources are underway and will be published in a forthcoming volume edited by Jake Benson. At the workshop *Decorated Papers in Early Modern Islamic Manuscript Culture*, convened by Benson on 23 November 2019 in Istanbul, Yusen Yu presented exciting evidence from the Sino-Persian tribute letters *Translations of the Muslim Office* (回回館譯語). According to the letters, a certain Ḥāfiẓ from Samarqand was presented with gold-sprinkled paper (*kāghaz̲-i zar-shāsh*/撒金剪紙) by the Ming emperor,[21] which is closer in its description of the 'Chinese' paper under investigation than any other written source thus far identified.

An interpretation of the meaning of the employment of 'Chinese' paper in Persianate manuscripts has been suggested by David J. Roxburgh, who suspects a relationship between the Muslim concept of the light of God and the, at times, mystical works written on gold-decorated papers.[22] An investigation of the sensory aspects of 'Chinese' paper when used as a background for texts in Persianate manuscripts is presented by Margaret Shortle in the present volume.

A last approach taken by multiple scholars is the investigation of the impact of 'Chinese' paper on the aesthetics of Persianate manuscripts. As argued by Soucek (1988), Blair (2000) and the present author,[23] the use of 'Chinese' paper in Persianate manuscripts resulted in increased employment of gold decoration on

[18] Soucek 1988, pp. 10–11; Blair 2000, pp. 26–27; Roxburgh, *Persian Album*, pp. 159–161.
[19] Khvāfī, Faṣīḥ Aḥmad b. Jalāl al-Dīn Muḥammad: *Mujmal-i faṣīḥī (777–849)*. Ed. Maḥmūd Farrukh. Mashhad: Kitābfurūshī-i Bāstān, 1960 (1339 H. Sh.), p. 230.
[20] Cf. for the common Timurid use of *khaṭāy/ khaṭā'ī* Thackston, W. M.: *A Century of Princes: Sources on Timurid History and Art*. Cambridge MA: Aga Khan Program for Islamic Architecture, 1989, p. 280, *n.* 8. Comp. Afshār, Īrāj: *Kāghaz̲ dar zindigī va farhang-i Īrānī*. Tehran: Mīrāth-i maktūb, 2011 (1390 H. Sh.), pp. 97–100 for Persian sources' uses of the wording *kāghaz̲-i chīnī*, *kāghaz̲-i khaṭā'ī* and *kāghaz̲-i khānbāligh* for paper from China.
[21] At the moment of editing this article for publication, similar information is about to be published by Yu, Yusen: "Gold Sprinkled: Chinese Paper and Persian Book Arts during the Fifteenth Century". In: *The Allure of Matter: Materiality Across Chinese Art*. Ed. Orianna Cacchione – Wei-Cheng Li. Chicago: University of Chicago Press, 2021, pp. 92–113, here p. 95.
[22] Roxburgh, *Persian Album,* pp. 162–165.
[23] Sturkenboom, Ilse: "The Paintings of the Freer *Divan* of Sultan Ahmad b. Shaykh Uvays and a New Taste for Decorative Design". *Iran* 56, 2 (2018), pp. 184–214.

the (coloured) margins and, sometimes, in the text areas of manuscripts produced in greater Iran.

As important and encouraging as these approaches are, more research needs to be conducted in order to gain greater understanding of the production processes, uses, meanings and impact of 'Chinese' paper. One research strand, which I have recently started together with scientists and conservators, is the investigation of the material consistencies of the 'Chinese' papers, their colouring, and gold decoration. Further Persianate manuscripts on 'Chinese' paper, this paper's use in China, and Middle Eastern and Chinese sources still await further scrutiny. The current article, therefore, is not the bottom line of a research project but rather an interim report that presents new insights including additional information indicating that this particular paper was indeed produced and used in Ming China, evidence for the gold designs' application through printing, and reasons for which this paper was used for manuscript production in greater Iran. After introducing Persianate manuscripts on 'Chinese' paper,[24] this article surveys the materiality and production processes of the paper, its gold designs and their application techniques, the ways in which the paper was employed in Iran and China and, finally, text-image relationships in the use of this paper in Persianate manuscripts.

Known Persianate Manuscripts on 'Chinese' Paper

The identification of manuscripts on 'Chinese' paper has been a slow process. As many collections of Persianate manuscripts are still uncatalogued, and available catalogues might not mention, let alone index, the coloured and gold-decorated characteristics of this paper, researchers still rely on their own personal investigation of manuscripts. New manuscripts on 'Chinese' paper are still being discovered. The tables provided below, listing manuscripts on 'Chinese' paper with an indication of a date (table 1), undated manuscripts on 'Chinese' paper (table 2) and manuscripts and albums containing single leaves of 'Chinese' paper (table 3),

[24] Throughout this article, the term 'Chinese' paper will be used for the specific group of papers under investigation. This term is doubtlessly problematic. In a broader sense it implies a specific group of material products made in China, by Chinese people, or according to Chinese methods and technologies. Specific methods and technologies are, however, often shared and rarely exclusive to one geographical location. This is why defining the paper of Persianate manuscripts as 'Chinese' paper may not be adequate to common ways in which the term is understood by scholars other than those (often western) scholars in Islamic Art History who have employed it. Chinese paper was made of a wide variety of both recycled rags and bast fibres of indigenous plants, by using specific tools and technologies. It should also be emphasised that the process of paper production has evolved over time and was conditioned by access to local raw materials in particular geographical regions.

will continue to grow. These tables would not have been as extensive without the help and valuable information provided by colleagues.[25]

The available data provides us with an impression of the fifteenth-century time frames, contexts and places of production of Persianate manuscripts on 'Chinese' paper as well as the paper's continued valuation during the Safavid period. The earliest securely dated manuscript is the Bodleian *Kulliyāt* of Saʿdī (Table 1.1), written upon grey and light-purple folios with gold-sprinkling, gold-flecking and gold designs. According to its final colophon on f. 269a this collection was calligraphed by Nāṣir al-Kātib in Shaʿbān 840 (February/March 1437).[26] Although the colophon lacks a place of production, the combination of the manuscript's 'three-sided-marginal column format,'[27] vegetal designs used as a background for rubrics and in triangular thumb- and corner pieces, and thirty-one headpieces in the 'blue-and-gold floral style'[28] place it into the Shiraz tradition in fashion from the second half of the fourteenth until the middle of the fifteenth century. The style of this manuscript's table of contents, of which only the right-hand half survives, differs from the blue-and-gold floral style in its greater colour variety, the use of large white-outlined blossoms and the addition of structuring bands with interlaced and cross-and-line designs.[29] This style corresponds with what Elaine Wright has called the 'floral/palmette-arabesque style.'[30] Apparently under influence of the illuminative style of Herat, this new style often features alongside the blue-and-gold floral style in manuscripts produced in Shiraz starting from the final years of the reign of the city's Timurid ruler Ibrāhīm (d. 1435). The 1437-dated Bodleian *Kulliyāt* of Saʿdī can then be called a true child of its time. It betrays its provenance from Shiraz in its use of the well-established blue-and-gold floral style while adding a contemporaneous touch to its opening folios that, in the original composition, must have contained all the titles of Saʿdī's works available in the manuscript.

[25] I am grateful to Jake Benson, Richard McClary, Karam Mirzaei, Andrew Peacock, Denise-Marie Teece, and Elaine Wright for pointing out manuscripts and single leaves of 'Chinese' paper to me.
[26] Cf. for this colophon in the central panel f. 269a: https://digital.bodleian.ox.ac.uk/objects/b54c3f88-a3bf-4cfe-a743-e4fd42c8b67c/surfaces/5186b868-6f77-45e0-814f-399711dc5b47/ (last viewed 05.12.2021).
[27] Cf. for the 'three-sided-marginal column format' Wright, Elaine: *The Look of the Book: Manuscript Production in Shiraz, 1303–1452*. Washington DC: Freer Gallery of Art, 2013, pp. 128–131.
[28] https://digital.bodleian.ox.ac.uk/objects/b54c3f88-a3bf-4cfe-a743-e4fd42c8b67c/ (last viewed 05.12.2021) on ff. 3a, 7b, 10a, 14a, 16a, 19b, 26a, 28a, 30a, 39b, 40b, 42b, 43b, 54b, 73b, 92a, 98a, 103b, 112a, 171b, 219a, 238b, 241a, 243a, 250a, 253b, 257b, 262a, 265b, 276b and 268b. For the 'blue-and-gold floral style' cf. Wright, *Look of the Book*, pp. 71–80.
[29] On f. 1b: https://digital.bodleian.ox.ac.uk/objects/b54c3f88-a3bf-4cfe-a743-e4fd42c8b67c/surfaces/cdf9a3de-9551-4128-b675-f192f484d042/ (last viewed 05.12.2021).
[30] For the 'floral/palmette-arabesque style' cf. Wright, *Look of the Book*, pp. 106–120.

Table 1: Manuscripts written on 'Chinese' paper with indications of a date[31]

	Date and place of production	Content	Calligrapher(s)
1.	1437 (Shaʿbān 840), probably Shiraz	*Kulliyāt* of Saʿdī (in Persian and Arabic)	Nāṣir al-Kātib
2.	1438 (27 Shavvāl 841), in Herat, where Shāhrukh had his seat	Six Persian works (allegedly) by ʿAṭṭār: *Javhar al-ẕāt, Bulbul-nāma, Vaṣlat-nāma, Manṣūr-nāma, Khusrav-nāma, Mukhtār-nāma*	ʿAbd al-Malik
3.	Probably *c.* 1438, Herat, because dedicated to Shāhrukh and apparently produced as a set with no. 2	Five Persian works (allegedly) by ʿAṭṭār: *Asrār-nāma, Ilāhī-nāma, Manṭiq al-ṭayr, Muṣībat-nāma, Ushtūr-nāma*	-
4.	1451 (mid Ramaḍān 855), probably greater Iran	*Dīvān* of Ḥāfiẓ (in Persian)	Sulayman al-Fūshanjī
5.	1468 (1 Rābiʿ II 873) at Shamakhi, where Farrukh Yasār had his seat	An anthology of selections from Persian *Dīvān*s by Kamāl Khujandī, Ḥāfiẓ, Amīr Khusrav, Kātibī Turshīzī, Mavlānā Ashraf, Amīr Shāhī Sabzavārī, Nāṣir, Mavlānā Biṣātī, Khiyālī, Jāmī, Ṭūsī, Ṭāliʿī	Sharaf al-Dīn Ḥusayn Sulṭānī

[31] For detailed references cf. the bibliography at the end of this volume.

Collection and call number	**Literature**
Bodleian Library, Oxford, Pers e. 26	Beeston 1954, p. 29, no. 2579; Roxburgh 2005a, pp. 161, 340–341, *n*. 36; Howell and Snijders 2020, p. 137; Wright forthcoming; digitized manuscript[32].
Topkapı Palace Library, Istanbul, A. 3059	Sakisian 1929, p. 56; Aga-Oglu 1935, pls. 1–3; Ritter 1958, pp. 11–12; Karatay 1962, no. 484; Titley 1983, p. 240; Soucek 1988, p. 14; Lentz and Lowry 1989, pp. 121, 337, no. 40; Schmitz 1992, p. 67; Blair 2000, p. 26; Bloom 2001, p. 70; Roxburgh 2005a, pp. 161, 341, *n*. 36; Roxburgh 2005b, pp. 198, 228–229, no. 179; Wright forthcoming.
Museum of Turkish and Islamic Art, Istanbul, 1992	Sakisian 1929, p. 56; Aga-Oglu 1935, pls. 6–7; Ritter 1958, pp. 12–13; Titley 1983, p. 240; Soucek 1988, pp. 14, 17; Lentz and Lowry 1989, pp. 121, 337, no. 39; Schmitz 1992, p. 67; Blair 2000, p. 26; Bloom 2001, p. 70; Roxburgh 2005a, pp. 161–165, figs. 84–86; Wright forthcoming.
British Library, London, Add 7759	Rieu 1881, pp. 627–628; Titley 1983, pp. 240–241, fig. 82; Soucek 1988, pp. 15–16; Schmitz 1992, p. 67; Soucek 2011; Sims-Williams 2014; Yu 2021, p. 93, figs. 1–2; Wright forthcoming; digitized manuscript[33].
British Library, London, Add 16561	Rieu 1881, pp. 734–735; Stchoukine 1954, p. 61, no. L, pl. XLV; Robinson 1957, pls. 8–10; Robinson 1967, p. 87, no. 109, pl. 40; Titley 1977, pp. 38–39, no. 97; Robinson 1979, pp. 226, 241, fig. 130; Titley 1979, pp. 14, 16, fig. 8; Titley 1983, pp. 64, 69, 240, pl. 6; Soucek 1988, pp. 4–5, 15, fig. 5; Schmitz 1992, p. 67; Canby 1993, pp. 70–71, fig. 45; Sims 2002, pp. 107, no. 92; Soucek 2011; Sims-Williams 2014; Wright forthcoming; digitized manuscript[34].

[32] https://digital.bodleian.ox.ac.uk/objects/b54c3f88-a3bf-4cfe-a743-e4fd42c8b67c/ (last viewed 05.12.2021).
[33] http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Add_MS_7759 (last viewed 05.12.2021).
[34] http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Add_MS_16561 (last viewed 05.12.2021).

	Date and place of production	**Content**	**Calligrapher(s)**
6.	1478 (25 Jumādā I 883), probably produced in Tabriz because dedicated to the Aq Qoyunlu ruler Yaʿqūb who had his seat there	*Makhzan al-asrār* by Mīr Ḥaydar in Chagatai Turkish	Sulṭān ʿAlī al-Yaʿqūbī
7.	1497–8 (903), probably Herat because calligraphers were active there	Anthology with the *Ḥayrat al-abrār* (in Chagatai Turkish) by Navāʿī in the central panel and in the margin: Jāmī's *Subḥat al-abrār* (in Persian), Navāʾʿī's *Naẓm al-jawāhir* (in Chagatai Turkish), ʿĀrifī's *Hāl-nāma* (in Persian) and Rūmī's *Rubāʾiyāt* (in Persian)	Sulṭān Muḥammad Khandān, Shāh Maḥmūd [Nishapūrī]
8.	Before 1608–9 (1017) when endowed to the shrine of Shaykh Ṣafī in Ardabil, probably greater Iran (Herat?)	Persian poetic anthology with *ghazaliyyāt* by Bisāṭī, Jāmī, Jalāl, ʿImād, Nāṣir, ʿIṣmat, Kātibī, Shāhī, Ṭūsī, Khiyālī and *muqaṭṭʿāt* by Ibn Yamīn	-

Collection and call number	**Literature**
Spencer Collection, New York Public Library, Persian Ms. 41	Corbin et. al. 1938, p. 152, no. 42; Bussagli 1956, pp. 287–288, no. 556; Grube 1968, p. 191, no. 38, pl. 38; Soucek 1979, pp. 22, 30, 36, colour pl. IV; Titley 1983, p. 240; Soucek 1988; Schmitz 1992, pp. 67–69, no. II.1, colour pls. 1–2, figs. 43–47; Blair 2000, p. 26; Bloom 2001, pp. 70–71, fig. 32 and cover; Clunas 2007, p. 82, fig. 60; Yu 2021, pp. 97–98, fig. 3; Wright forthcoming.
Süleymaniye Library, Istanbul, Ayasofya 4334	-
National Museum, Tehran, 3598	-

Table 2: Undated manuscripts written on 'Chinese' paper

	Content	Calligrapher(s)	Collection and call number
9.	Qurʾan	-	Detroit Institute of Art, 30.323
10.	45 leaves of a Qurʾan	-	Sarikhani Collection, Oxfordshire, I.MS.1029
11.	Qurʾan	-	Topkapı Palace Library, Istanbul, M. 100
12.	Qurʾan	-	Museum of Turkish and Islamic Art, Istanbul, 41
13.	Qurʾan	-	Museum of Turkish and Islamic Art, Istanbul, 186
14.	Qurʾan	Bāyazīd bin Ṣādiq al-Kirmānī	Tareq Rajab Museum of Islamic Calligraphy, Kuwait, 87
15.	Qurʾan	-	Current whereabouts unknown
16.	*Dīvān* of Ṭālib Jājarmī in Persian	-	National Museum of Iran, Tehran, 4326
17.	A treatise on Sufism by Abū 'l-Vafā b. Saʿīd b. Muḥammad b. Yūsuf b. Maḥmūd in Persian	-	Current whereabouts unknown

Literature
Detroit Institute of Arts 1930, p. 17; Ford et. al. *1931,* p. 58; North Carolina Museum of Art 1959, pp. 196, 254, no. 214; Edwards and Signell 1982, p. 28; Soucek 1988, p. 14; Lentz and Lowry 1989, pp. 78–79, 332, no. 20; Blair and Bloom 1991, pp. 55, 97, no. 33a; Schmitz 1992, p. 67: Henshaw 1995, p. 127; Soucek 2016, p. 234, pls. 25.9–10; Yu 2021, p. 106, fig. 9.
Christie's, 8 April 2008, lot 120[35]. Further folios of apparently the same Qur'an were auctioned at Christie's, 7 October 2008, lot 143[36] and at Bonhams, 4 October 2011, lot 7[37].
Karatay 1962, p. 110, no. 396; Titley 1983, p. 240; Soucek 1988, p. 14; Schmitz 1992, p. 67.
Sakisian 1929, 56; Roxburgh 2005b, pp. 198, 228, cat. no. 178; Şahin 2010, pp. 103, 286–289, cat. no. 70; Şahin, Kutlay, and Çelen 2014, p. 329, cat. no. 107, fig. 115; Farhad and Rettig 2016, cat. no. 34, pp. 240–243.
Sakisian 1929, p. 56.
Sotheby's, 26 April 1995, lot 29; Asian Civilisations Museum 1997, p. 60.
Christie's, 25 June 2020, lot 29; Yu 2021, pp. 104–105, figs. 7–8.
-
Christie's, 5 May 1977, lot 56; Titley 1983, p. 240; Soucek 1988, pp. 15, 17; Schmitz 1992, p. 67.

[35] https://www.christies.com/lot/lot-a-group-of-timurid-or-aqquyunlu-quran-5057505/ (last viewed 05.12.2021).
[36] https://www.christies.com/lot/lot-a-group-of-timurid-or-aqquyunlu-quran-5125277/ (last viewed 05.12.2021).
[37] https://www.bonhams.com/auctions/18950/lot/7/?category=list&length=12&page=1 (last viewed 05.12.2021).

Table 3: Manuscript and albums containing single leaves of 'Chinese' paper

	Content	Calligrapher(s)
18.	Persian anthology of short poetry by ʿIṣmat, Saʿdī, Rūmī, ʿAṭṭār, ʿIrāqī, Avḥadī, Khusrav Dihlavī, Ibn Yamīn and Salmān Sāvajī, and selections from *mathnaviyyāt* by ʿAṭṭār (*Manṭiq al-ṭayr*) and Niẓāmī (*Makhzan al-asrār* and *Khusrav va Shīrīn*).	-
19.	Anthology of poetry	-
20.	Album	ʿAbd al-Ḥayy b. Ḥāfiẓ Shaykh Muḥammad al-Bukhārī (ff. 74b), *firmān* in the name of Sulṭān Yaʿqūb), Najm al-Dīn Masʿūd (f. 86b), *firmān* in the name of Sulṭān Yaʿqūb), Sharaf al-Dīn Ḥusayn (ff. 111b, 126b), Sulṭān ʿAlī al-Yaʿqūbī (ff. 125b, 129a, 136a, 139a, 148a, 155b, 156a), ʿAbd al-Karīm al-Yaʿqūbī (f. 136a), ʿAbd al- Karīm al-Khvārazmī (ff. 142b, 151a, 168a), ʿAbd al-Raḥīm al-Yaʿqūbī (f. 151a), Shaykh Muḥammad al-Yaʿqūbī (f. 155b), Shaykh Maḥmūd (f. 156b)
21.	Album	Sulṭān ʿAlī al-Yaʿqūbī (ff. 31b, 48b, 63b), Shaykh Maḥmūd (f. 52b)
22.	Album	Sulṭān ʿAlī Mashhadī (ff. 82b–83a)
23.	Album	None recorded

Collection and call number	**Literature**
Chester Beatty Library, Dublin, Per. 294, ff. 72, 133, 134, 165–168	Robinson in Arberry, Robinson, Blochet and Wilkinson 1962, pp. 62–63; Wright 2013, p. 325; Wright forthcoming.
Previously in the Kevorkian Collection. Current whereabouts unknown.	Robinson 1953, pp.23–25, no. 22.
Topkapı Palace Library, Istanbul, H. 2153, ff. 51b, 74b, 86b, 97b, 111b, 125b, 126b, 129a, 130a, 136a, 139a, 142b, 143a, 148a, 151a, 155b, 156a, 156b, 168a	Tanındı 1981, p. 37, figs. 5–6, 13; Soucek 1988, p. 14; Seki 2007–2008, pp. 79, 84; Yu 2021, pp. 107–109, figs. 10–11.
Topkapı Palace Library, Istanbul, H. 2160, ff. 31b, 48b, 52b, 63b	Tanındı 1981, p. 37.
Topkapı Palace Library, Istanbul, H. 2161, ff. 82b, 83a	-
National Library of Russia, St Petersburg, Dorn 148, ff. 14a, 66b, 67a, 67b, 69a, 69b	-

Another manuscript that indicates that 'Chinese' paper was available in or around Shiraz at this early stage is an anthology in the Chester Beatty Library (table 3:18). Although it does not contain a colophon that could disclose its calligrapher, dedicatee, date or place of production, the anthology can, based on the style of its illustrations and the combination of the blue-and-gold floral style and the floral/palmette-arabesque style, be dated into the 1430s or 1440s and attributed to Shiraz. In a forthcoming article, Elaine Wright points out that among this anthology's papers are seven 'Chinese' folios in green of which only one (f. 134a) contains part of a gold design.[38] This gourd-vine design is used in combination with fine gold sprinkling and it appears likely that all seven folios were cut from a single sheet of 'Chinese' paper showing, on one side, the gourd-vine design in the middle while leaving parts at the edges without design, but with gold sprinkling all over.

An apparently similar combination of gold-decorated 'Chinese' and 'Islamic' paper characterises an anthology in the oblong *safīna* format that was previously in the Kevorkian collection (table 3:19). B.W. Robinson described this anthology with two illustrations as executed in the Shiraz style of the second quarter of the fifteenth century.[39] His mentioning of a number of its folios "of heavy paper, glossy and colored; some of them [...] decorated with free designs in gold of rocky landscapes, rippling water, melon vines, and a bird, all in the Chinese manner, over which the text is written" as well as his statement that this paper is "the same glossy colored paper" as that of the Shamakhi Anthology (table 1:5) gives the strong impression that this *safīna* too employs 'Chinese' paper.

These instances of the use of 'Chinese' paper provide an important indication for its early circulation. In previous studies it had been assumed that this paper was exclusively available for manuscript production in Herat during the first half of the fifteenth century and was introduced to the western half of greater Iran only after the middle of the century.[40] Envoys and ambassadors carrying reciprocal gifts did, however, not only move between Shāhrukh's capital Herat and China, but also departed from and travelled to other major cities in greater Iran, including Shiraz.[41] Between 1413 and 1427 a total of five embassies from Shiraz

[38] Wright forthcoming.
[39] Robinson, B. W.: *The Kevorkian Collection: Islamic and Indian Illustrated Manuscripts, Miniature Paintings and Drawings*. Typescript prepared for the Trustees of the Kevorkian Foundation at the Metropolitan Museum of Art, New York, 1953, pp. 23–25.
[40] Schmitz, Barbara with contributions of Latif Khayyat – Svat Soucek – Massoud Pourfarrokh: *Islamic Manuscripts in The New York Public Library*. New York / Oxford: The New York Public Library and Oxford University Press, 1992, p. 68. Blair 2000, p. 27.
[41] Chinese accounts on relationships and envoys between China and Central and Western Asia during the fifteenth and sixteenth centuries are translated and summarised in Bretschneider, Emil: *Mediaeval Researches from Eastern Asiatic Sources: Fragments Towards the Knowledge of the Geography and History of Central and Western Asia from the 13th to the 17th Century*, volume 2. London: Routledge 1967 (reprint of 1937), pp. 157–332.

are recorded to have visited the Chinese court (in 1413, 1415, 1419, 1423 and 1427). Chinese envoys also visited Shiraz prior to the Shiraz embassy's arrival at the Chinese court in 1413, and ambassadors from China followed the Shiraz envoys home after their visits in 1413, 1415 and 1419.[42] Although the known sources do not mention paper to have been gifted by the Chinese to governors of Shiraz, the recorded exchanges would have provided ample occasions for 'Chinese' paper to end up at the court in Shiraz before the death of Ibrāhīm in 1435.

The availability of 'Chinese' paper in Shāhrukh's capital Herat in the first half of the fifteenth century is shown by two manuscripts (table 1:2–3) already known to Sakisian and Aga-Oglu. Both are collections of works attributed to Farīd al-Dīn ʿAṭṭār and were written entirely on 'Chinese' papers with gold flecks, gold sprinkles and gold designs that are more varied in their colours (pink, light orange, dark orange, purple, light blue and grey) than the papers in the Bodleian *Kulliyāt*. Folio 1a of both manuscripts contains a *shamsa* which states that the manuscript was intended for the treasury of Shāhrukh, while seal impressions in both manuscripts confirm that they were indeed both part of Shāhrukh's imperial library.[43] Only the manuscript with six works attributed to ʿAṭṭār in the Topkapı Palace Library (table 1:2) contains a colophon which states that the otherwise unknown calligrapher ʿAbd al-Malik completed the manuscript in Herat on 27 Shavvāl 841 (23 April 1438) in the days of Shāhrukh's reign. The manuscripts' similar folio sizes of an impressive *c.* 36 × 25 cm, their common page layout of 25 lines written in four columns and the complementary character of their contents indicate that they were produced as a set. The manuscript with five works attributed to ʿAṭṭār in the Museum of Turkish and Islamic Art (table 1:3) is therefore likely to have been produced around 1438 as well, but at least before Shāhrukh's death in 1447.

In date, these manuscripts are followed by the small (17.1 × 10.6 cm) British Library *Dīvān* of Ḥāfiẓ (table 1:4) that is written entirely on 'Chinese' paper (table 1:4) and contains stunning illumination in the form of a *shamsa* and a headpiece.[44] Its colophon mentions that Sulaymān al-Fūshanjī wrote the manuscript in the middle of Ramaḍān 855 (middle of October 1451).[45] A place of production is not mentioned in the colophon and although the manuscript provides space for a dedication in its *shamsa* on folio 1a, the six-lobed and gilded centre of the

[42] Bretschneider, *Mediaeval Researches*, pp. 292–293.
[43] These seal impressions were identified on ff. 1a, 115b, 233b and 378a of the manuscript Topkapı Palace Library A. 3059 and on ff. 1a, 204a and 345a of the manuscript in the Museum of Turkish and Islamic Art 1992.
[44] On folios 1a http://www.bl.uk/manuscripts/Viewer.aspx?ref=add_ms_7759_f001r (last viewed 17.12.2021) and 1b http://www.bl.uk/manuscripts/Viewer.aspx?ref=add_ms_7759_f001v (last viewed 17.12.2021).
[45] Cf. for the colophon f. 141a:
http://www.bl.uk/manuscripts/Viewer.aspx?ref=add_ms_7759_f141r (last viewed 17.12.2021).

shamsa is not inscribed. This may indicate that the manuscript was produced without a particular dedicatee in mind but was still made in a very high quality in the assumption that a well-to-do buyer would be found. The calligrapher's *nisba* 'Fūshanjī' indicates that he or his family came from Fūshanj near Herat, which led scholars to suggest that this manuscript might have been produced in Herat.[46] As we know of the availability of Chinese paper at the Timurid court under Shāhrukh in Herat, this could indeed have been the place where Sulaymān al-Fūshanjī had access to this paper. Between Shāhrukh's death in 1447 and the late 1460s, however, only very few manuscripts are known to have been produced for Timurid rulers in Herat.[47] Judging from its colourful illumination and structuring bands, the British Library *Dīvān* of Ḥāfiẓ fits comfortably within the Herat tradition seen for example in the *c.* 1444 *Shāh-nāma* of Muḥammad Jūkī.[48] Similar features of the manuscript's *shamsa* and headpiece can, however, also be observed in manuscripts produced for Pīr Būdāq,[49] who governed Shiraz from at least 1456 to 1460 and Baghdad from 1461 until his assassination in 1466. From the 1450s, book artists left Herat to work further to the west under the Qara Qoyunlu and the Aq Qoyunlu confederations[50] and it cannot be ruled out that this manuscript, too, was produced by itinerant book artists.

The British Library *Dīvān* of Ḥāfiẓ demonstrates important developments in the use of 'Chinese' paper. It contains a much greater array of paper colours (dark blue, light blue, green, dark orange, light orange, dark pink, light pink, dark purple and light purple) than the Bodleian *Kulliyāt* and the two ʿAṭṭār manuscripts. While the latter three manuscripts usually employ folios of the same colours in single quires, in the *Dīvān* of Ḥāfiẓ up to all four bifolios of its quires have a different hue. This results in a festival of colours when leafing through the manuscript, where, except in the middle of the quires, the left- and right-hand pages of the opened book are differently coloured. In both the Bodleian *Kulliyāt*

[46] Titley, *Persian Miniature Painting*, p. 240; Sims-Williams 2014.
[47] For an in-depth analysis cf. Roxburgh, David: "'Many a Wish Has Turned to Dust': Pir Budaq and the Formation of Turkmen Arts of the Book". In: *Envisioning Islamic Art and Architecture: Essays in Honor of Renata Holod*. Ed. David Roxburgh. Leiden/Boston: Brill, 2014, pp. 174–222, here pp. 177–179. Important exceptions to the assumed lack of manuscripts produced for Timurid rulers from the late 1440s to the late 1460s in Herat are a manuscript of the *Nahj al-farādīs* and an anthology of love poetry (Chester Beatty Library, Per 149) that are both dedicated to Abū Saʿīd, ruler over the Timurid empire from 1458 to 1469. For these manuscripts and others that might possibly have been produced for Abū Saʿīd cf. Sims, Eleanor: "The *Nahj al-Faradis* of Sultan Abu Saʿid ibn Sultan Muhammad ibn Miranshah: An Illustrated Timurid Ascension Text of the 'Interim' Period". *Journal of the David Collection* 4 (2014), pp. 88–147.
[48] Cf. for this manuscript (Royal Asiatic Society Persian 239) Brend, Barbara: *Muhammad Juki's Shahnama of Firdausi*. London: Royal Asiatic Society, 2010, pp. 39–43 for the illumination; and the digitised manuscript https://royalasiaticcollections.org/ras-persian-239-shahnamah-of-firdausi-of-muhammad-juki/ (last viewed 17.12.2021).
[49] Comp. for this illumination Roxburgh 2014, esp. figs. 9.3, 9.13, 9.20.
[50] Cf. for discussions of this movement of book artists from Herat to the Qara Qoyunlu and Aq Qoyunlu realms Soucek 1988; Robinson, Basil W.: *Fifteenth-Century Persian Painting: Problems and Issues*. New York/London: New York University Press, 1991, pp. 21–43; Roxburgh 2014.

and in the British Library *Dīvān*, the bifolios are arranged so that throughout the manuscript, facing folios with gold decoration alternate with ones without, but the resulting visual effect is much more dramatic in the *Dīvān*, because the gold is more vibrantly off-set by its stronger paper colours.

In the second half of the fifteenth century, 'Chinese' paper was available at courts in the west of greater Iran. Although to date no manuscripts on 'Chinese' paper are known to be dedicated to Pīr Būdāq, there is some evidence to suggest that this paper was available during his reign. The calligrapher Shaykh Maḥmūd signed two poems on leaves of 'Chinese' paper collected in the Istanbul Albums H. 2153 and H. 2160 (table 3: 20–21), which mainly contain specimens from the Qara Qoyunlu and Aq Qoyunlu periods. These calligraphies do not provide a date, an indication of their place of calligraphing, or a courtly affiliation, yet the calligrapher's signing as 'Shaykh Maḥmūd' is telling. During his time as student of Jaʿfar al-Baysunghūrī in Herat he signed his name as 'Shaykh Maḥmūd al-Jaʿfarī' in recognition of his teacher.[51] While in the service of Pīr Būdāq in Shiraz and Baghdad, he signed all but one manuscript as either 'Shaykh Maḥmūd' or 'Shaykh Maḥmūd Pīr Būdāqī.'[52] When Pīr Būdāq died in 870/1465–6, Shaykh Maḥmūd — by then a mature calligrapher — appears to have left Baghdad. Based on six specimens of his work in the Topkapı albums H. 2153 and H. 2160, all of which are both signed and provide a place of production, it appears that he was then active for only one further year, during which time he moved between Sava, Hamadan and Darjazin (near Hamadan).[53] It is therefore likely that it was during his ten-year career under Pīr Būdāq — the most important patron of manuscripts at the time — that Shaykh Maḥmūd had access to 'Chinese' paper.

The calligrapher Sharaf al-Dīn Ḥusayn[54] also signed two leaves of 'Chinese' paper in the album H. 2153 without an indication of a date, place or affiliation. He was a younger colleague of Shaykh Maḥmūd when in the service of Pīr Būdāq and later worked for the Shirvānshāhīs in Shamakhi and for the Aq Qoyunlu in Tabriz, which makes it difficult to estimate where and when he wrote these specimens. The only dated calligraphy of Sharaf al-Dīn Ḥusayn on 'Chinese' paper was not executed in Pīr Būdāq's capital Baghdad or in the Aq Qoyunlu capital Tabriz, but in the provincial capital city of Shamakhi (in present-day

[51] Comp. Seki, Yoshifusa: "Shaykh Maḥmūd Haravī". *Nāma-i bahāristān* 11 (2010), pp. 45–60, here pp. 46–49.
[52] For these six manuscripts cf. Roxburgh 2014, esp. no. 3 on p. 219, no. 4 on pp. 219–220, no. 5 on p. 220, no. 7 on p. 220, no. 8 on pp. 220–221 and no. 9 on p. 221. Cf. Roxburgh 2014, no. 2 on p. 219 for Shaykh Maḥmūd's earliest manuscript known to be dedicated to Pīr Būdāq, a *Dīvān* of Amīr Khusrav Dihlavī of 860/1455–56, that is signed 'Maḥmūd.'
[53] Cf. Seki 2010, table on p. 52 for these six specimens dated to 870 and 871 and p. 53 for Shaykh Maḥmūd's movements.
[54] For Sharaf al-Dīn Ḥusaynī cf. Bayānī, Mahdī: *Aḥvāl va āthār-i khushnivīsān*, volume 1&2: *nastaʿlīq-nivīsān* (second edition). Tehran: Chapkhāna-i Mihārat, 1984 (1363 H. Sh.), no. 257, pp. 156–157; Soucek 1988, p. 5; Roxburgh 2014, p. 240.

Azerbaijan). According to its colophon, this so-called Shamakhi Anthology in the British Library (table 1:5) was completed by Sharaf al-Dīn Ḥusayn Sulṭānī (the latter written in gold) at the city of Shamakhi on the first day of Rabīʿ II 873 (19 October 1468).[55] The addition of the epithet *sulṭanī* to the calligrapher's name signifies that he worked for a sultan, and this might well have been the Shīrvānshāh ruler Farrukh Yasār, who ruled Shirvan with Shamakhi as its capital between 1462 and 1500.

The Shamakhi Anthology is executed on papers in strong pink, purple and green, which were colours already available in earlier manuscripts written on 'Chinese' paper. These papers contain no gold sprinkles or gold designs, but large gold flecks as their only 'Chinese' gold decoration. On top of this coloured and gold-flecked paper not only calligraphy and illumination, but also illustrations and a double-page figural frontispiece were added. The distribution of the coloured 'Chinese' paper in this manuscript is similar to that in the *Kulliyāt* of Ḥāfiẓ. Here, quires regularly consist of three bifolios in each of the manuscript's colours and openings with large flecks of gold usually alternate with those without.

The albums H. 2153 and H. 2160 contain abundant evidence for the availability of 'Chinese' paper at the Aq Qoyunlu court in Tabriz during the government of the Aq Qoyunlu Yaʿqūb (r. 1478–1490). Two *firmāns* in the name of Sultan Yaʿqūb were written on such paper in the album H. 2153 (table 3:20, ff. 74b, 86b),[56] and the use of the *nisba* al-Yaʿqūbī by calligraphers — Sulṭān ʿAlī *al-Yaʿqūbī*[57], ʿAbd al-Karīm *al-Yaʿqūbī*[58] and ʿAbd al-Raḥīm *al-Yaʿqūbī*[59] — when calligraphing on the tinted and gold decorated papers collected in these albums substantiates that they were in his service when writing. The only manuscript written completely on 'Chinese' paper known to have been produced for Yaʿqūb is the small New York Public Library *Makhzan al-asrār* (table 1:6). According to its colophon, on folio 33a, it was calligraphed by the above mentioned Sulṭān ʿAlī *al-Yaʿqūbī* (the latter written in gold), who is also known as ʿAlī Qāʾinī, on 25 Jumādā I 883/ 24 August 1478.[60] The folios are all pale blue and are decorated with gold sprinkles and gold

[55] On f. 89a http://www.bl.uk/manuscripts/Viewer.aspx?ref=add_ms_16561_f089r (last viewed 17.12.2021).
[56] Soucek 1988, p. 14.
[57] Cf. Bayānī, *Aḥvāl va āthār*, pp. 236–241; Soucek, Priscilla P.: "ʿAlī Qāʾenī". *Encyclopaedia Iranica*, I/8, 1985, p. 870, the online version of 2012 is available at http://www.iranicaonline.org/articles.ali-qaeni-calligrapher (last viewed 17.12.2021).
[58] Cf. Bayānī, *Aḥvāl va āthār*, pp. 409–411; Soucek, Priscilla P.: "ʿAbd al-Karīm K̲ʷārazmī". *Encyclopaedia Iranica*, I/2, 1982, pp. 123–125, the online version of 2011 is available at https://iranicaonline.org/articles/abd-al-karim-karazmi (last viewed 17.12.2021).
[59] Cf. Bayānī, *Aḥvāl va āthār*, pp. 384–388; Soucek, Priscilla P.: "ʿAbd-al-Rahīm Kʷārazmī". *Encyclopaedia Iranica*, I/2, 1982, p. 143, the online version of 2011 is available at https://iranicaonline.org/articles/abd-al-rahim-karazmi (last viewed 17.12.2021).
[60] Soucek 1988, p. 2.

designs; a double-page figural frontispiece and one illustration are also included in it.

The calligraphy by Sulṭān ʿAlī Mashhadī (c. 1453–1520) on 'Chinese' paper in the Istanbul Album H. 2161 (table 3:23) provides an indication that towards the end of the fifteenth century this paper was again, or possibly still, available in Herat at the court of Ḥusayn Bāyqarā, where Sulṭān ʿAlī Mashhadī worked during most of his career.[61] Sulṭān Muḥammad Khandān, who was a student of Sulṭān ʿAlī and seems to have spent his whole life in Herat,[62] signed the central panel of an anthology on 'Chinese' paper in the Süleymaniye Library, Istanbul, (table 1:7, fig. 23) in the year 903/ 1497–8, while the marginal columns of this anthology were calligraphed and signed by Shāh Maḥmūd. The latter may be identifiable with Shāh Maḥmūd Nishapūrī who, according to the nineteenth-century calligrapher Mīrzā Sanglākh, studied for a while at the atelier of Sulṭān ʿAlī Mashhadī and was an apprentice of Sulṭān Muḥammad Khandān.[63] Herat then appears to be the most likely place of production for this anthology that contains poetry by, among others, the Herati poets Jāmī (d. 1492) and Navā'ī (d. 1501), on deep purple, pink and orange folios. As in the Shamakhi Anthology, the only 'Chinese' gold decoration in this manuscript consists of large gold flecks on only one side of the paper. The folios in three different hues are likewise combined in quires of three bifolios. Most quires, however, contain pages in deep purple and pink, to which only in the final four quires (ff. 118–141) orange folios were added.

The gathered data substantiates the use of 'Chinese' paper during the fifteenth century, from 1437 to 1497–8, but a final manuscript with an indication of a date demonstrates that 'Chinese' paper was still valued during the Safavid period. A poetic anthology in the National Museum of Iran, Tehran (table 1:8, fig. 2) contains a *waqf* statement on its opening folios as well as multiple seal impressions that together testify that the manuscript was endowed by the Safavid Shāh ʿAbbās I to the shrine of Shaykh Ṣafī in Ardabil, where it was received in 1017/ 1608–9. The manuscript's binding (now bound with its flap attached to the front instead of the back cover) and its illuminations are executed in Safavid styles. Yet, the latest poet whose work is included in the manuscript, which does not have a colophon, is Jāmī (d. 1492). The papers decorated with gold-flecks, gold-sprinkles and gold motifs are coloured in dark pink, light orange, dark orange, light blue, light purple and green. With quires containing bifolios that are all differently coloured, the colour variation of this manuscript approaches that of the 1451-dated British Library *Dīvān* of Ḥāfiẓ (table 1:4). This, alongside the absence of

[61] For Sulṭān ʿAlī Mashhadī cf. Bayānī, *Aḥvāl va āthār,* pp. 241–266; Blair 1996, pp. 280–283.
[62] For Sulṭān Muḥammad Khandān cf. Bayānī, *Aḥvāl va āthār,* pp. 268–271.
[63] For Shāh Maḥmūd Nishāpūrī cf. Bayānī, *Aḥvāl va āthār,* pp. 295–307, and p. 297 for Mīrzā Sanglākh's statement.



Fig. 2: Opening of a poetic anthology (table 1:8, two folios not decorated with 'Chinese' gold) with binding and illumination in the Safavid style and a seal impression reading "Endowment to the blessed tomb of the Safavīd Ṣafī, 1017 [1608–09]". Photograph by Ilse Sturkenboom

(original) writing in the Tehran anthology's headpieces and rubrics (fig. 2), leads to the hypothesis that this manuscript was produced in the second half of the fifteenth century, but that its illuminations were still lacking at that point. It is likely that the manuscript was refurbished under Shāh 'Abbās I (r. 1577–1629) in preparation for its endowment to the shrine of the Safavid dynasty's name giver.[64] These refurbishments consisted of the addition of illuminations to the empty spots for headpieces and rubrics, new incipit pages on cream-coloured paper holding the *waqf* statement of Shāh 'Abbās, and a (new) binding.

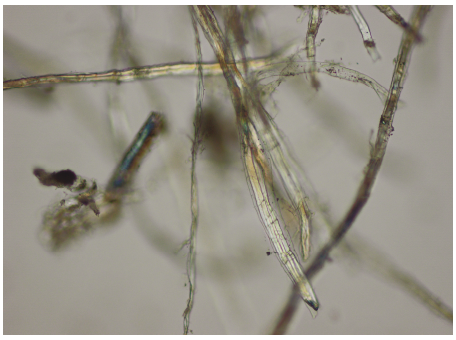
[64] This is reminiscent of the very similar case of a famous late-fifteenth-century manuscript of the *Manṭiq al-ṭayr* from Herat that was refurbished and gifted to the shrine of Shaykh Ṣafī by Shāh 'Abbās I in 1017/1608–9. For the refurbishment of the *Manṭiq al-ṭayr* manuscript, The Metropolitan Museum of Art, New York, 63.210, Cf. Kamada, Yumiko: "A Taste for Intricacy: An Illustrated Manuscript of *Manṭiq al-Ṭayr* in the Metropolitan Museum of Art". *Orient: Reports of the Society for Near Eastern Studies in Japan* 45 (2010), pp. 129–175.

The Materiality and Production Processes of 'Chinese' Paper

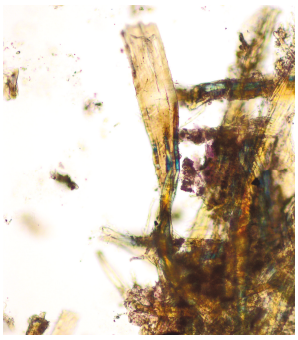
As demonstrated above, scholars have employed the term 'Chinese' paper for a coherent group of writing supports in Persianate manuscripts but without presenting evidence that this paper was produced in the broad geographical area of China.[65] This section presents first results of scientific and technical analyses of paper fibres, the materials and techniques of colouring the paper, and the application of gold. Together, these analyses lead to the conclusion that this kind of paper was produced in Central or East Asia. It should be noted that the different stages of production do not need to have taken place at the same location.

To date, it was possible to analyse paper samples from two manuscripts on 'Chinese' paper through microscopy.[66] The samples from both manuscripts demonstrate that their papers were produced using fibre components from the same set of plants, which are here discussed by focussing on samples taken from a total of five folios of a Qur'an manuscript on 'Chinese' paper in the Sarikhani Collection (table 2:10, fig. 3). Fibres from the paper mulberry shrub were present in all samples. Under a microscope, these fibres can be identified by their translucent membranes partially detached from the fibres (fig. 3a). The bast of paper mulberry has been used for paper making in China since at least the first century AD but has thus far not been recorded in papers from the Middle East.[67] Ramie or 'China grass' is another bast fibre that is common in Central and East Asian paper production and was identified in small amounts in the paper samples, but that has not been identified in paper from the Middle East (fig. 3b). It consists of long fibres which under a microscope are recognisable by both longitudinal stratification and irregular cross markings.[68] The other fibres identified are cotton (which has a 'twisting' appearance, fig. 3c), hemp (which looks similar to paper mulberry but has a wider lumen and more cross markings, fig. 3d) and flax (which has a narrow lumen and many 'knees,' fig. 3e). In the Islamic world, rag papers were commonly produced out of the latter fibres, but hemp and flax were, often in combination with bast fibres, also used for paper production in East Asia.[69] Papers from Chinese Turkestan that are dated to the period between the third and eighth century were similarly produced from a combination of mul-

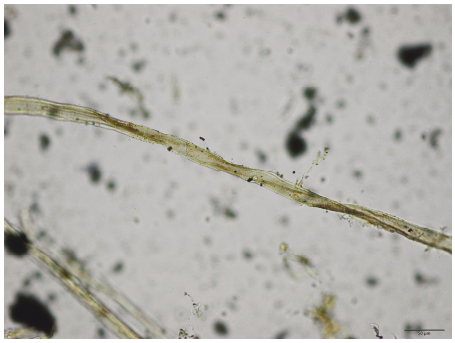
[65] Comp. footnote 24 for further implications of the use of the term 'Chinese' paper.
[66] The microscopic analyses were graciously made by Agnieszka Helman-Ważny at the Centre for the Study of Manuscript Cultures (CSMC), University of Hamburg.
[67] Cf. for the use of paper mulberry in China Tsien Tsuen-Hsuin: *Paper and Printing* (part 1 of volume 5 *Chemistry and Chemical Technology* of the series *Science and Civilisation in China*. Ed. Joseph Needham). Cambridge, MA: Cambridge University Press, 1985, pp. 56–59.
[68] Cf. for the use of ramie in Chinese paper Tsien, *Paper and Printing*, p. 53.
[69] Cf. Tsien, *Paper and Printing*, p. 53 for flax, pp. 53–54 for hemp, and p. 63 for cotton in Chinese paper. For the predominance of rag fibres in the Islamic world cf. Bloom 2001, pp. 44–45 and Bloom, Jonathan M.: "Papermaking: The Historical Diffusion of an Ancient Technique". In: *Knowledge and Space*. Eds. H. Jöns – P. Meusbruger – M. Heffernan. Heidelberg: Heidelberg University, 2017, pp. 51–66.



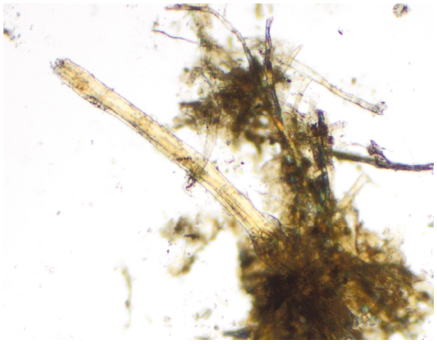
a. Paper mulberry fibres in the Sarikhani Qur'an, sample from a light-blue folio with, on one side, the gold design of a mountainous landscape in combination with fine gold sprinkling, sūra 3:152–169



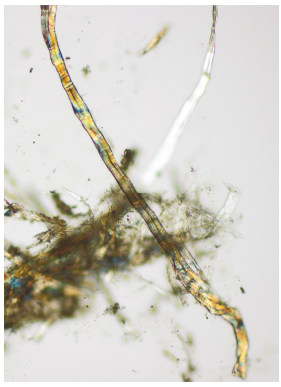
b. Ramie fibre in the Sarikhani Qur'an, sample from a dark-pink folio with, on one side, the gold design of a landscape with mountains and pine trees in combination with large gold flecks, sūra 10:24–48



c. Cotton fibre in the Sarikhani Qur'an, sample from a dark-blue folio with, on one side, the gold design of a gourd plant in combination with gold sprinkling, sūra 3:152–169

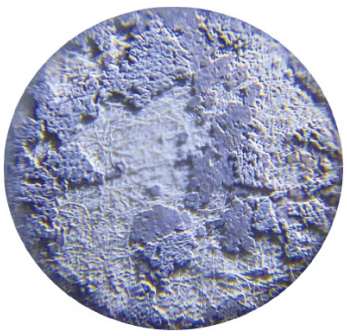


d. Hemp fibre in the Sarikhani Qu'ran, sample from a dark-pink folio with, on one side, the gold design of a landscape with mountains and pine trees in combination with large gold flecks, sūra 10:24–48



e. Flax fibre in the Sarikhani Qur'an, sample from a dark-pink folio with, on one side, the gold design of a landscape with mountains and pine trees in combination with large gold flecks, sūra 10:24–48

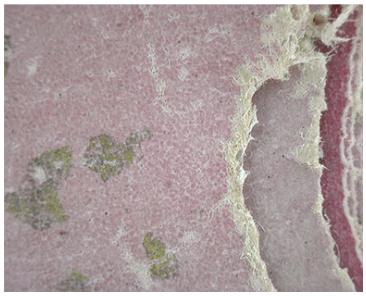
Fig. 3: Microscopic photographs of fibres from papers of the Sarikhani Qur'an (table 2:10). Photographs and analyses by Agnieszka Helman-Ważney



a. Microscopic photograph of the coating of *Kulliyāt* of Saʿdī (table 1:1). Bodleian Library, Oxford, Pers e. 26, f. 3b



b. Microscopic photograph of the coating of a Qur'an (table 2:9), Detroit Institute of Art, 30.232, f. 29a



c. Microscopic photograph of the coating of a Qur'an (table 2:15), auctioned at Christie's on 25 June 2020, f. 509b

Fig. 4: Microscopic photographs of coatings and fibres of manuscripts on 'Chinese' paper. Photographs by Ilse Sturkenboom

berry bark, hemp, flax and ramie.[70] The scientific evidence of the presence of paper mulberry and ramie in the folios tested suggests that 'Chinese' paper was likely produced in Central or East Asia. However, more extensive testing is required to confirm this.

Microscopic analyses of the surfaces of a number of manuscripts on 'Chinese' paper (table 1: 1, 4–8 and table 2:9–10, 14–16, fig. 4) reveal that the fibres of the paper have an off-white colour. This means that the fibres themselves were not dyed, either by adding dye to the paper pulp or dipping the papers into a vat of dye, as this would have caused the dye to penetrate and colour the fibres. Rather, a thick coating (esp. fig. 4a) appears to have been dyed and then applied, possibly with a spatula or a brush, to the paper's surfaces.

X-Ray Fluorescence (XRF) analysis of three manuscripts has shown that their 'Chinese' paper contains a large amount of lead. While the gold that is so clearly visible on the surface of the papers only produces a very small peak (Au in fig. 5),

[70] Tsien, *Paper and Printing*, p. 54; Tsien Tsuen-Hsuin: "Raw Materials for Papermaking". *Collected Writings on Chinese Culture*. Ed. Tsuen-Hsuin Tsien. Hong Kong: The Chinese University of Hong Kong Press, 2011, pp. 72–90, here pp. 74–75.

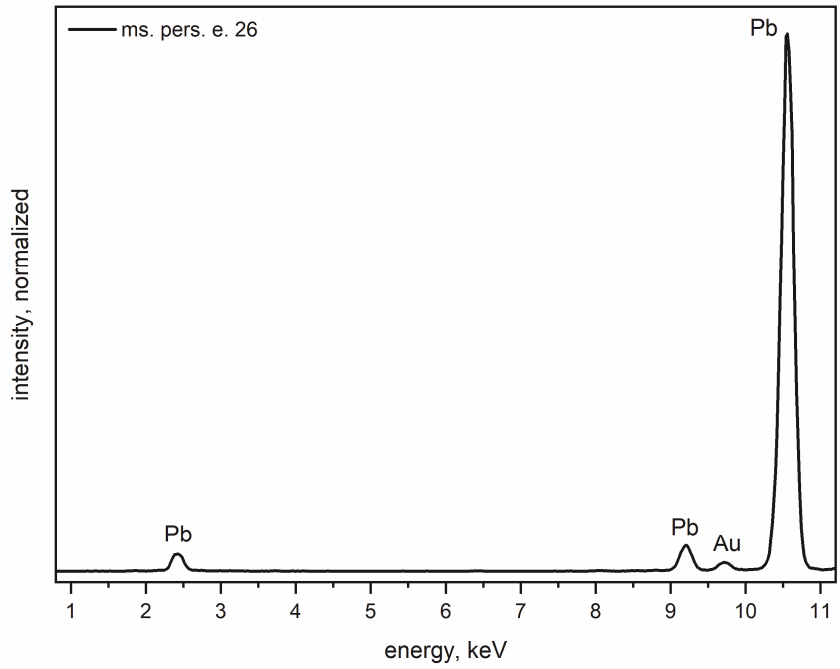


Fig. 5: Bodleian *Kulliyāt* of Saʿdī (table 1:1). XRF measurements (4 different spots on gold) by David Howell, Bodleian Library, Oxford. Data representation and interpretation by Sebastian Bosch

lead (Pb in fig. 5) results in a huge peak in the XRF spectra of the Bodleian *Kulliyāt* of Saʿdī (table 1:1). This high amount of lead seems to be the reason for the heavy weight of manuscripts on 'Chinese' paper.[71] The Bodleian *Kulliyāt*, for example, weighs 1896g. Subtracting the approximate weight of its binding (determined by the weighing and measuring of detached bindings to calculate an average density per cm^3 for Persianate bindings of its type) results in an approximate weight of 1763g for the paper used in the manuscript. This means that each of the Bodleian *Kulliyāt*'s 269 folios (measuring 22.5 × 14.0 cm) weighs, on average, 6.6 g, with the grammage of the paper being 202 g/m^2. Although this is not a precise calculation (because the exact weight of the binding is not known), the calculated grammage of the paper of the unbound Tehran *Dīvān* of Ṭālib Jājarmī (table 2:16) is equally high, at 190 g/m^2. The grammage of the 'Chinese' paper used in other manuscripts, calculated in the same manner as that of the Bodleian manuscript, is between 190 and 224 g/m^2, [72] which is significantly higher than the grammage of other, 'non-Chinese' papers employed in Persian manuscripts of the fifteenth century and,[73] of course, much higher than the 80 g/m^2 grammage of today's

[71] Comp. Howell, David – Ludo Snijders: *Conservation Research in Libraries*. Berlin/Boston: De Gruyter Saur, 2020, p. 137.
[72] The calculated grammages of the 'Chinese' paper are 190 g/m^2 in the British Library *Dīvān* of Ḥāfiẓ (table 1:4), 211 g/m^2 in the Shamakhi Anthology (table 1:5), 224 g/m^2 in the New York Public Library *Makhzān al-aṣrār* (table 1:6), 213 g/m^2 in the DIA Qurʾan (table 2:9), 195 g/m^2 in the Tareq Rajab Qurʾan (table 2:14), and 198 g/m^2 in the Qurʾan sold on 25 June 2020 at Christie's (table 2:15).
[73] For example, the calculated grammage of the paper of a manuscript of the *Mihr va Mushtarī*, British Library Add 6619, written in 876/1472 at Shiraz, is 96 g/m^2.

standard office paper. This means that even if XRF-analysis cannot be conducted, a calculated grammage of around 200 g/m^2 for the thin,[74] tinted and gold-decorated paper in manuscripts from the Persianate world is a strong indication that it contains lead or is coated with lead.

As X-rays penetrate the folio under investigation, it is not possible to determine how the lead distributes through the thickness of the folio, and therefore it is unclear whether the lead is located inside the paper, in the tinting, or in a layer between the two as a base for the dyes and the gold decoration. The tinting of folios, however, provides further insight. The paper colours of the Bodleian *Kulliyāt* and the DIA Qur'an (table 2:9) are made of organic dyes, as no elements associated with inorganic pigments were detected by XRF analyses (with the exception of the aforementioned lead).[75] The DIA Qur'an was further tested using fibre optics reflectance spectroscopy,[76] which confirmed that all colourants used for the paper are organic dyes. These analyses demonstrated that for the ten paper colours of the DIA Qur'an probably three primary dyes were used: an insect (possibly lac) dye for a strong pink/magenta colour, indigo dye for a dark blue colour, and an unidentified organic dye for an orange/yellow colour. The remaining seven colours used for this Qur'an manuscript's papers consist of either a mixture of the primary dyes or a lighter version of primary or mixed dyes. A green dye was demonstrated to have been produced by mixing indigo with the organic orange/yellow dye, dark purple was achieved by mixing the indigo and dark pink/magenta insect dye, while dark orange is a mixture of the orange/yellow dye and the magenta insect dye. Light blue, light purple/lavender, grey, and light pink appear to have been produced by mixing mentioned dyes with lead white. This is suggested by the higher amount of lead detected in lighter papers compared to papers tinted with primary dyes (especially orange/yellow).

The gold decorations on 'Chinese' papers are visibly added on top of the dyed coating but are positioned underneath the calligraphy, illumination, *jadval*-lines and sporadic illustration applied to the papers in greater Iran. The gold motifs, which will be discussed in greater detail below, are positioned underneath the large gold flecks (fig. 6a). When instead of gold flecks, fine gold sprinkling was used, it can be suspected that also in these cases the gold motifs were applied prior to the fine gold sprinkling, even if this is not clearly visible due to the small

[74] Recorded thicknesses of single folios of 'Chinese' paper range from 0.09 to 0.15 mm.
[75] The analyses of the Bodleian *Kulliyāt* were thankfully conducted by Dr David Howell, Bodleian Library.
[76] Christina Bisulca (Andrew W. Mellon Scientist at the Detroit Institute of Art's Department of Conservation) performed fiber optics reflectance spectroscopy on an Ocean Optics HR4000 spectrometer from 350–1000nm with a deuterated halogen light source (HL-2000-HP). A bifurcated fiber optic probe with approximately 400 µm spot size was used to collect spectra.



a. f.3a b. f.29a

Fig. 6: Microscopic photographs of the gold decoration in the British Library *Dīvān* of Ḥāfiẓ (table 1:4). Photographs by Ilse Sturkenboom

size of the sprinkles. Thus far, only folios with either gold flecks or gold sprinkles have been identified and the two forms of decoration do not jointly occur on the same page.

Microscopic investigations of the gold flecks and fine sprinkles (fig. 6) demonstrate that both consist of sharp-edged gold leaf, despite them being of considerably different sizes. Yoshifusa Seki has investigated both gold-decorating techniques. He compared folios with large gold flecks on fifteenth-century paper used in greater Iran to contemporary techniques of applying gold flecks to paper in Japan. There, the paper is treated with a starch glue before the gold leaves are scattered over it through a large sieve and adhere to the wet starch glue,[77] which appears to be a suitable technique to achieve the gold flecking on 'Chinese' paper (fig. 6a) as well. The fine gold sprinkling consists of minute but rather similarly sized particles of gold leaf that, according to Seki, are difficult to handle. He suggests that these tiny particles (fig. 6b) consist of ground gold leaves that might have been mixed with a starch glue before the mixture was applied to the paper with a brush.[78] As the gold-flecking and -sprinkling is positioned under the calligraphy and similarly applied gold leaf is not demonstrably used in greater Iran before the sixteenth century[79] it appears plausible to suggest, as Seki does,[80] that these gold-decorations were added to 'Chinese' paper in East Asia.

[77] Seki, Yoshifusa: "Fann-i zarāfshānī dar du murraqaʿ-i Sulṭān Yaʿqūb: yādgārī az ʿaṣr-i Qarāqūyūnlūhā va Āqqūyūnlūhā". *Nāma-i bahāristān* 8–9:13–14 (2007–2008), pp. 77–84, here pp. 78–79.
[78] Seki 2007–2008, p. 81.
[79] Early examples of Persian gold flecking were produced in the sixteenth century, such as the *Shāh-nāma* of Shāh Tahmāsp and the Shāh Tahmāsp Album. Apparent earlier examples of gold-flecked margins such as the early-fifteenth century *Khusrav va Shīrīn* of Niẓāmī in the Freer Gallery of Art (31.32/7) and the Cairo *Būstān* of Saʿdī (Dār al-kutub, Adab fārisī 22) of *c*. 1488 are in fact later, Safavid, additions. Comp. Blair 2000, pp. 29–30 and Balafrej, Lamia: *The Making of the Artist in Late Timurid Painting*. Edinburgh: Edinburgh University Press, 2019, p. 216.
[80] Seki 2007–2008, p. 81.

'Chinese' Paper's Gold Designs and their Application Techniques

In the 'cut off,' incomplete and, at times, rotated form in which the gold motifs in Persianate manuscripts reveal themselves, they quickly give the impression that they were once part of a larger whole. The aforementioned studies by Priscilla Soucek and Ursula Sims-Williams[81] have already demonstrated that this impression is correct and that folios of 'Chinese' paper were cut from long sheets with continuous gold designs. What went unnoticed by previous researchers of manuscripts on 'Chinese' paper, however, is that the gold motifs repeat within single manuscripts and across manuscripts.

Combining photographic reproductions of folios from manuscripts on 'Chinese' paper in Adobe Photoshop and subsequently tracing them on the places where the folios were photographed in their flattest position (fig. 7) makes it possible to reconstruct the original and continuous designs. This process furthermore provides additional information about the themes of the designs, their application techniques as well as their uses within Persianate and Chinese material culture.

The gold designs can be divided into three groups based on their themes. One thematic group consists of three plants: the gourd vine (fig. 8), the grapevine,[82] and the pomegranate shrub (fig. 1).[83] All plants are depicted growing from the soil in the middle of the composition often indicated by hatchings. The stems meander up and are, initially, seen from the side. At about one-third from the bottom of the compositions, the stems branch out to the right and the left as well as upwards and downward. There, leaves, fruits, spiralling vines (in the cases of the grape- and gourd vine) and flowers (in the cases of the pomegranate shrub and gourd vine) emerge. The more the plants expand, the more perspectives shift, allowing the beholder views from the side, the bottom and the top of the plants and their details. These plants are frequently recurring motifs in Chinese art and can, for example, be found as decoration on blue-and-white porcelain. Traditionally, these motifs are related to longevity, fecundity and offspring in Chinese art

[81] Cf. footnotes 10 and 17.

[82] Parts of this design can be seen in the digitised Bodleian *Kulliyāt* of Saʿdī (table 1:1, https://digital.bodleian.ox.ac.uk/objects/b54c3f88-a3bf-4cfe-a743-e4fd42c8b67c/ (last viewed 28.12.2021)) on folio 77b and on bifolios 1b–2a, 3b–10a, 4a–9b, 5b–8a, 6a–7b, 59b–66a, 60a–65b, 61b–64a, 75b–82a, 76a–81b, 78a–79b, 85b–88a, 258b–265a, 259a–264b, 260b–263a, 261a–262b.

[83] Parts of this design can be seen in the digitised Bodleian *Kulliyāt* of Saʿdī (table 1:1, https://digital.bodleian.ox.ac.uk/objects/b54c3f88-a3bf-4cfe-a743-e4fd42c8b67c/ (last viewed 19.12.2021) on folio 80a and on bifolios 43b–50a, 45b–48a, 52a–57b, 53b–56a, 54a–55b as well as in the British Library *Dīvān* of Ḥāfiẓ (table 1:4, http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Add_MS_16561 (last viewed 28.12.2021)) on the bifolios 13b–20a, 30b–35a, 61a–68b, 70b–75a.



Fig. 7: Tracing of a gourd-vine design based on light-pink folios from a manuscript with five works (allegedly) by ʿAṭṭār (table 1:3, from left to right: ff. 427b, 422a, 429a, 421b), orange folios from the same manuscript (from left to right: ff. 309a, 297b, 294a), and grey folios from the Bodleian *Kulliyāt* of Saʿdī (table 1:1, from left to right ff. 26a, 38a). Tracing by Ilse Sturkenboom

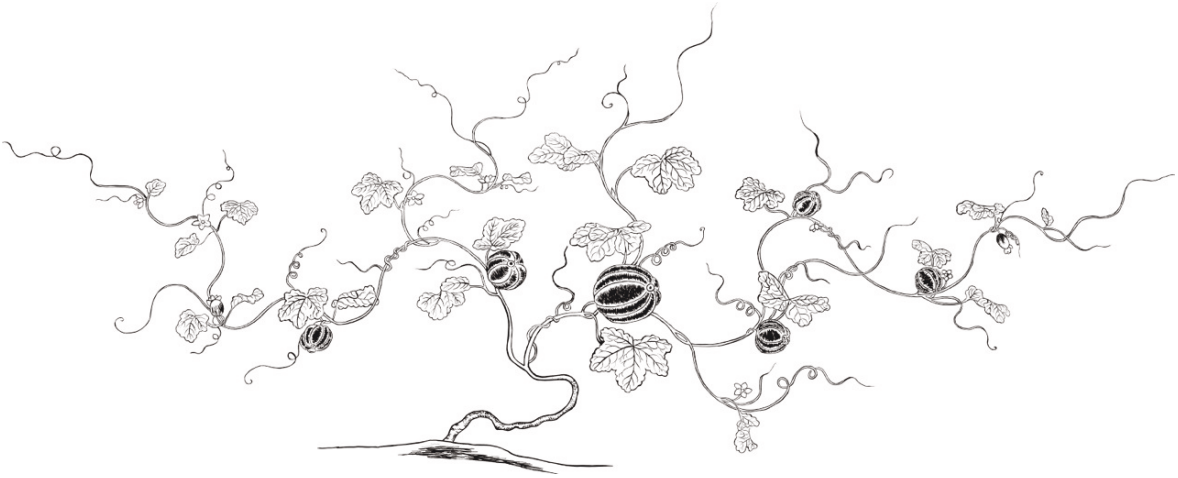


Fig. 8: Traced design of a gourd-vine design as recognised in the manuscripts: Bodleian *Kulliyāt* of Saʿdī (table 1:1), five works attributed to ʿAṭṭār (table 1:3), British Library *Dīvān* of Ḥāfiẓ (table 1:4), Sarikhani Qur'an (table 2:10), Qur'an in the Museum of Turkish and Islamic Art (table 2:12), Tareq Rajab Qur'an (table 2:14), Christie's Qur'an (table 2:15). Tracing by Ilse Sturkenboom

owing to the reproduction of the fruits as well as the seeds in them,[84] which can be seen particularly well in the motif of a bursting pomegranate (fig. 1).[85]

An analogous thematic group consists of flowering trees that move in similar ways and provide similar perspectives as the aforementioned plants (fig. 9).[86] A

[84] Welch, Patricia Bjaaland: *Chinese Art: A Guide to Motifs and Visual Imagery*. Tokyo: Tuttle Publishing, 2008, pp. 50–52 for the gourd, p. 53 for grapes and pp. 57–58 for the pomegranate.
[85] Also cf. the British Library *Dīvān* of Ḥāfiẓ (table 1:4) f. 61a http://www.bl.uk/manuscripts/Viewer.aspx?ref=add_ms_7759_f061r (last viewed 28.12.2021).
[86] For another design within the same group cf. Soucek 1988, p. 31, fig 15.



Fig. 9: Traced design of two birds in a flowering tree as recognised in: five works attributed to ʿAṭṭār (table 1:3), a folio auctioned at Bonhams on 4 October 2011 (table 2:10), a Qur'an in the Museum of Turkish and Islamic Art (table 2:12). Tracing by Kathryn McLaren

difference in this group of motifs is that two birds of the same species, understood as a couple,[87] perch on the branches of the flowering tree and interact while facing each other. The monochromy of these designs is reminiscent of the literati ink-painted, rather than colourful, flower-and-bird paintings that originate in the Song period.[88]

The last and most frequent theme on 'Chinese' paper within Persianate manuscripts is that of the landscape. Some landscapes contain abundant water waves seen in birds-eye view in the lower half of the composition, hills with pines seen from a horizontal perspective and, in some designs, clouds in the sky (fig. 10). Other landscape compositions indicate water through far fewer waves and more negative space (fig. 11),[89] while employing multiple viewpoints on the islands in the water. This is reminiscent of Chinese landscape paintings such as Zhao Mengfu's 趙孟頫 ink-wash painting *Twin Pines, Level Distance* 雙松平遠圖 (fig. 12) in the birds-eye representation of rocks with trees and/or plants in the foreground, and hills, seen from a distance, in the background. In the second type of landscape, other details that are sometimes depicted include Chinese-style pavilions with upturned eaves on the roof corners (fig. 11), flying or swimming birds[90] and sporadic people.[91]

[87] Cf. Welch, *Chinese Art*, p. 67 for any pair of birds being understood to represent a male and a female in Chinese art.
[88] For these ink-painted flower-and-bird paintings cf. Law, Sophia Suk-mun: *Reading Chinese Painting: Beyond Forms and Colors, a Comparative Approach to Art Appreciation*. Translation by Tony Blishen. Shanghai: Shanghai Press and Publishing, 2016, pp. 99–110.
[89] For another design in this category cf. Soucek 1988: p. 32, fig. 17.
[90] Comp. Soucek 1988: p. 32, figs. 17–18.
[91] A landscape design in which a mounted and a walking man approach a bridge is identified in the manuscript with five works attributed to ʿAṭṭār (table 1:3) and in the Qur'an manuscript auctioned at Christies on 25 June 2020 (table 2:15).

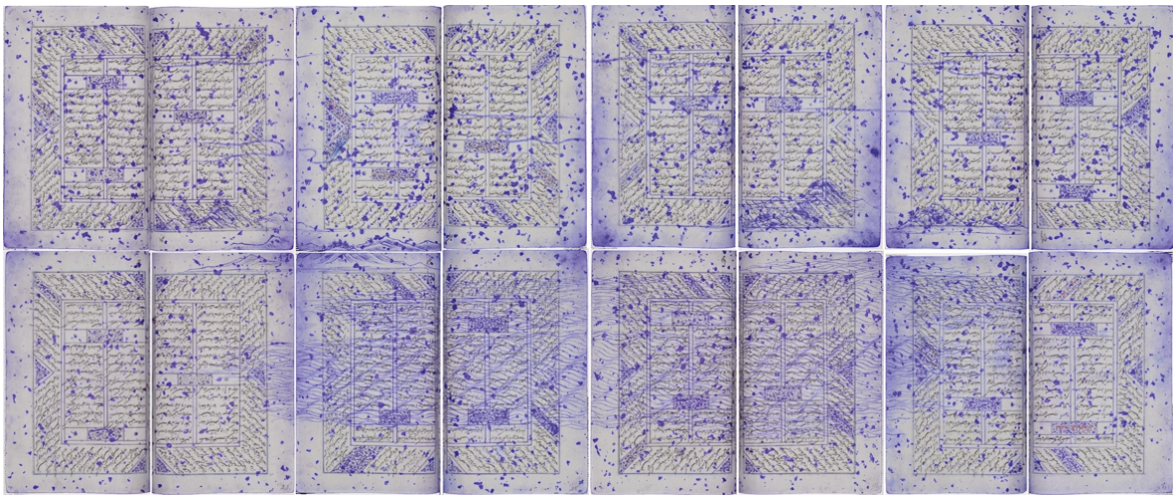


Fig. 10: Design of a landscape with water waves. *Kulliyāt* of Saʿdī, 1437 (table 1:1, gold replaced by blue). Folios (left to right, top to bottom): 193a, 186b, 143a, 140b, 147a, 152b, 149a, 150b, 169a, 162b, 108a, 113b, 165a, 166b, 145a, 138b, size of reconstructed sheet: *c.* 45 × 120 cm. Reconstruction by Ilse Sturkenboom

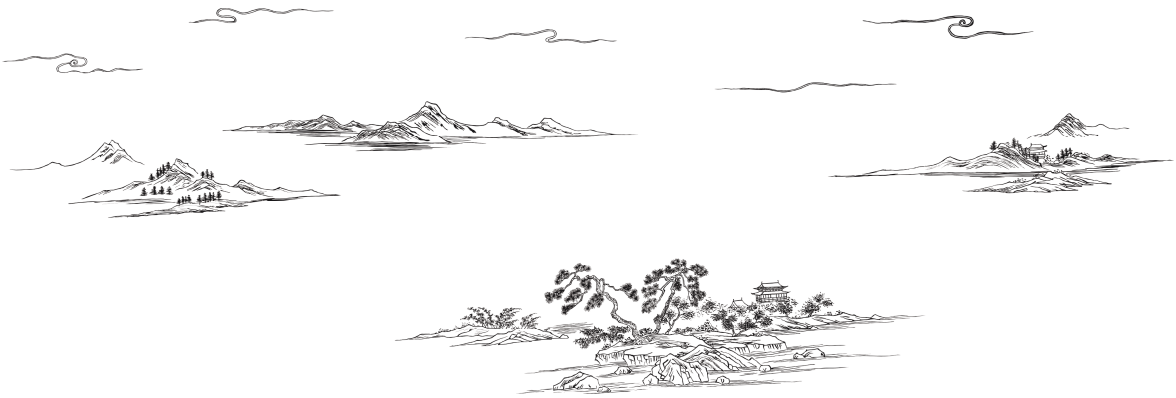


Fig. 11: Traced design of a landscape with pavilions as recognised in: the Bodleian *Kulliyāt* of Saʿdī (table 1:1), five poems attributed to ʿAṭṭār (table 1:3), British Library *Dīvān* of Ḥāfiẓ (table 1:4), Sarikhani Qurʾan (table 2:10), Qurʾan in the Museum of Turkish and Islamic Art (table 2:12), Tareq Rajab Qurʾan (table 2:14), Christie's Qurʾan (table 2:15), Tehran *Dīvān* of Ṭālib Jājarmī (table 1:16). Tracing by Ilse Sturkenboom



Fig. 12: Zhao Mengfu, *Twin Pines, Level Distance*. Handscroll, ink on paper, 26.9 × 107.4 cm. The Metropolitan Museum of Art, New York, 1973.120.5. Photograph in public domain

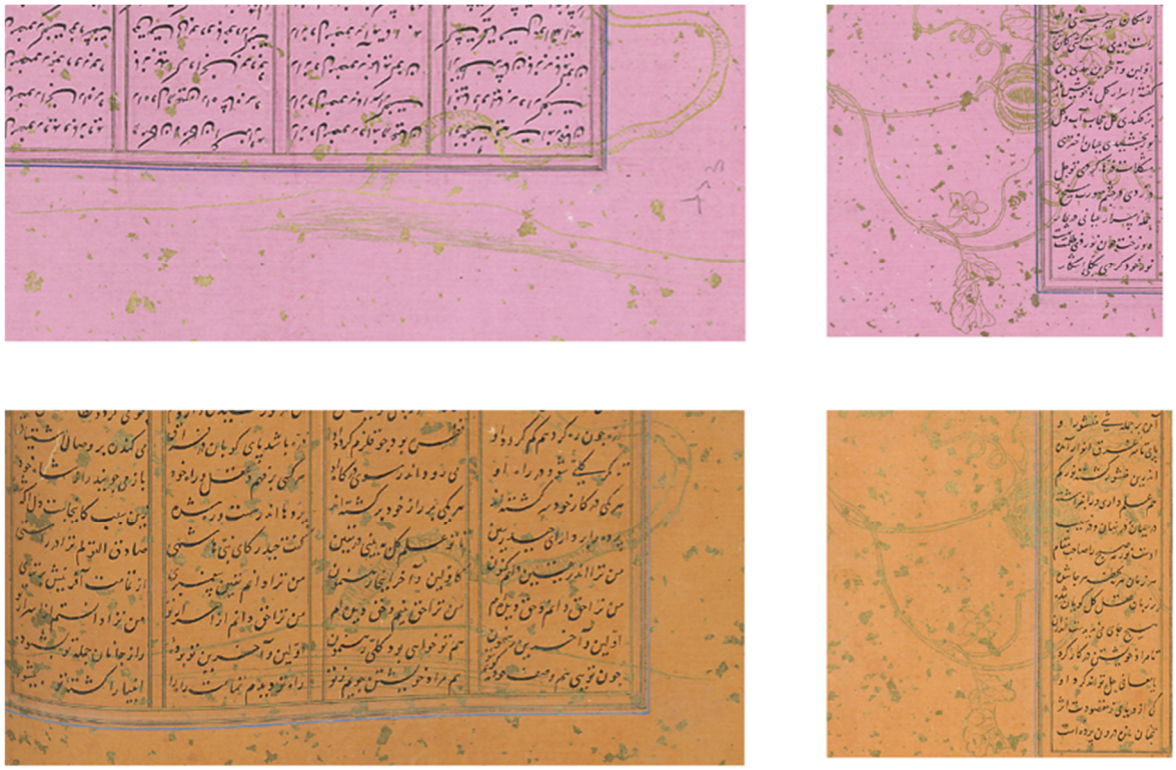


Fig. 13: Details of a gourd-vine design in a manuscript with five works attributed to ʿAṭṭār (table 1:3), ff. 422a, 428a, 297b, 294a (from left to right and from top to bottom).

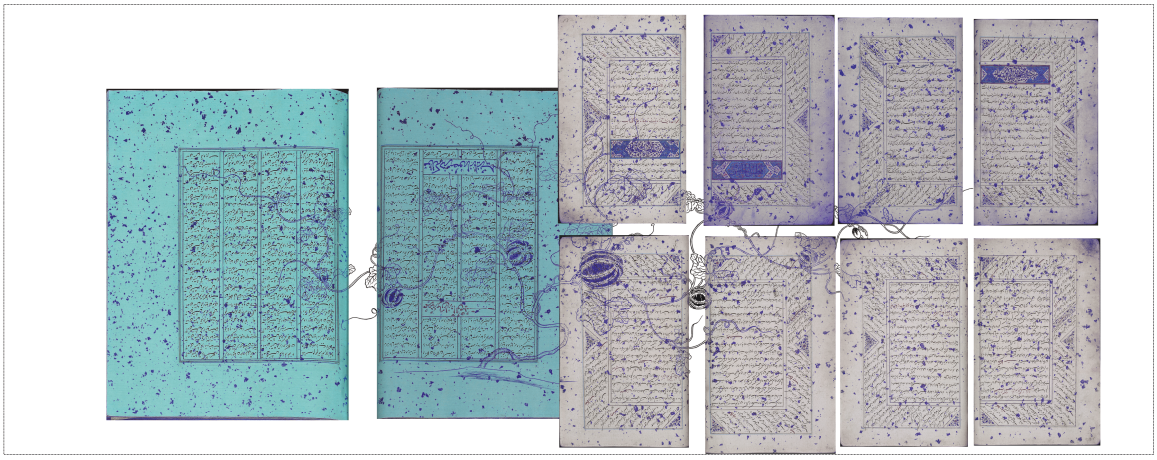


Fig. 14: Systems of cutting (bi-) folios from sheets of 'Chinese' paper. The dotted frame marks a sheet of 120 × 55 cm. In the folios of both manuscripts, gold was replaced by blue in Adobe Photoshop to increase the visibility of the design. The two left-hand folios are folios 427b and 422a (left to right) from a manuscript with five works attributed to ʿAṭṭār (table 1:3) that measure *c.* 35 × 26 cm each. Originally, these leaves are coloured in light pink. This figure demonstrates that only four folios, or two bifolios, of this size were cut from the original sheet while aiming to capture the design in the middle. The folios to the right derive from the Bodleian *Kulliyāt* of Saʿdī (table 1:1). They measure 22.3 × 14.4 cm and are originally coloured in grey. Sixteen folios or eight bifolios were cut from a sheet measuring 120 × 55 cm.

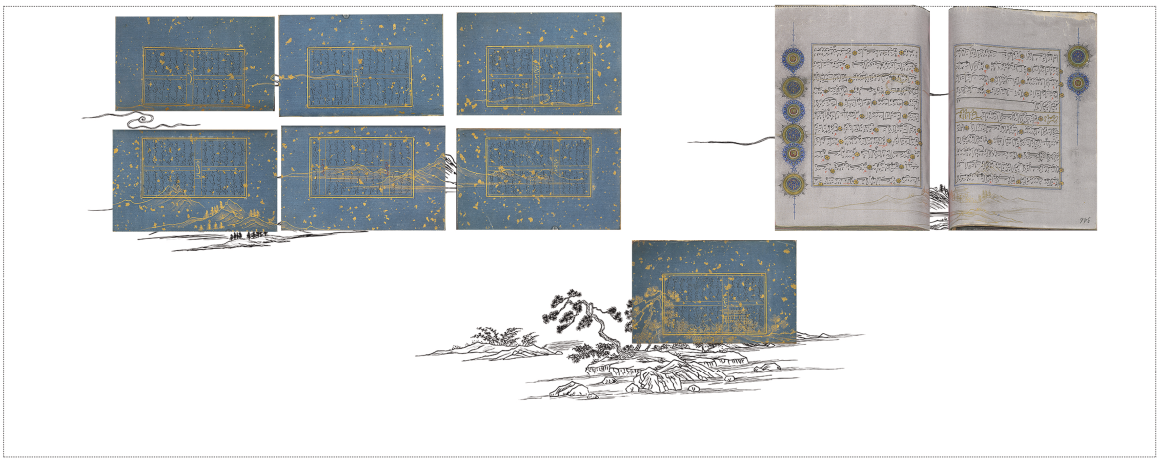


Fig. 15: Systems of cutting (bi-) folios from sheets of 'Chinese' paper. The dotted line marks a sheet of 120 × 55 cm. The dark-blue folios of the British Library *Dīvān* of Ḥāfiẓ (table 1:4) measure 17.1 × 10.6 cm. From left to right and from top to bottom these are the folios 45b, 16b, 7a, 51a, 17a, 10b and 3a. This figure demonstrates that in total twenty-four oblong folios, or twelve bifolios, of this size could be cut from such a sheet. The grey folios of a Qur'an manuscript in the Museum of Turkish and Islamic Art, Istanbul (table 2: 12) measure 22.7 × 18.0 cm. Here we see, from left to right, folios 347b and 346a. Twelve folios, or six bifolios, were cut from such a sheet of 'Chinese' paper for this manuscript.

The gold designs on 'Chinese' paper then fit well within Chinese visual culture and find counterparts in Chinese paintings on porcelain, paper or silk. The gold execution of the motifs might be unique to 'Chinese' paper, but also the designs' monochrome character as well as their employment of empty space to indicate water, soil or sky are by all means characteristic of Chinese art.

The striking repetition of the same designs in and across manuscripts (comp. figs. 14–15) give a first impression that they may have been reproduced through the old Chinese technique of printing. A closer examination, however, reveals that not all components of the motifs but rather the outlines were printed. Figure 13, for example, shows that the outlines of the gourd vine on folios in the manuscript of five works attributed to ʿAṭṭār are identical. Fine lines and hatching on the ground, in the stem and in a flower, however, vary. This indicates that after printing the outlines, details were added with a brush and gold paint, providing each print with a certain degree of individuality. Due to its capacity of reproducing a whole image, woodblock printing is the most likely method by which the outlines of designs were transferred.[92] Woodblock printing, though often in black ink, was a common method to reproduce paintings in the Ming period.[93] Thus, not only the styles and themes of the motifs, but also the method of their application technique points toward East Asia as their origin.

[92] For Chinese woodblock printing cf. TsienTsuen-Hsuin: "Techniques of Woodblock Printing". *Collected writing on Chinese Culture*. The Chinese University of Hong Kong Press: Hong Kong, 2011, pp. 129–144.
[93] Clunas, Craig: *Pictures and Visuality in Early Modern China*. London: Reaktion, 1997, pp. 134–148.

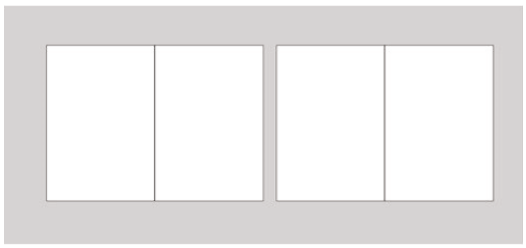
The Employment of 'Chinese' Paper in Iran and China

The way in which sheets of 'Chinese' paper were employed for manuscript production in greater Iran makes clear that these sheets were not understood as completed works of art or products. Rather, they required further processing by cutting, folding, calligraphing, decorating and binding. Already seen in the 1437 Bodleian *Kulliyāt*, but far better recognisable in the 1451 British Library *Dīvān* of Ḥāfiẓ and in later manuscripts, parts of the same sheet were deliberately dispersed over a number of quires, apparently in order to disguise their coherence and to further the diversity of motifs in the quires.

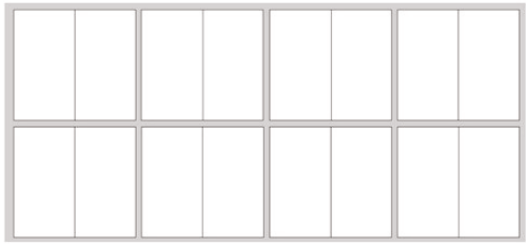
The decision as to how to cut the originally uncut sheets as they arrived at greater Iran, was, of course, dependent on the required size and proportions of the manuscript. Several cutting systems have thus far been identified (fig. 16), which demonstrate that, by means of vertical and horizontal cuts, from just four large folios (or two bifolios, fig. 16a) up to twenty-four small folios (or twelve bifolios, fig. 16d) could be produced from a single sheet.

The Qur'an manuscript sold at Christie's on 25 June 2020 (table 2:15) provides the best indication of the size of the original sheets of paper. Sixteen of its folios measuring 26.5 × 14.1 cm could be produced from a single sheet, which indicates that the minimum dimensions of the original sheets must have been around 55 × 120 cm (fig. 16b). A very similar method of cutting sixteen slightly shorter folios (22.3 × 14.4 cm) is identified in the Bodleian *Kulliyāt* (table 1:1, figs. 10, 14). Twelve folios, or six bifolios, were cut to produce a Qur'an manuscript in the Museum of Turkish and Islamic Art, Istanbul (table 2:10, figs. 15 and 16c), while a total of twenty-four folios, or twelve bifolios, were cut from one sheet to produce folios for the British Library *Dīvān* of Ḥāfiẓ (table 1:4, figs. 15 and 16d). The remarkable aspect of the latter way of cutting is that it produces folios that show the designs with a rotation of 90 (or 270) degrees in the manuscript, while the other systems produce folios that either show the designs correctly or with a rotation of 180°.

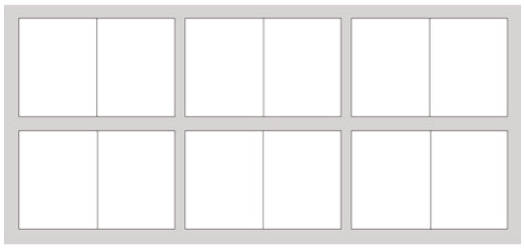
The two *c.* 1438 ʿAṭṭar manuscripts (table 1:2–3, figs. 7, 14, 16a, 21) are, by their sheer folio size of *c.* 36 × 25 cm, the most suitable to reconstruct original designs. A (nearly) complete gold design can be reconstructed by combining reproductions of only two bifolios from these manuscripts (figs. 16a, 21). These reconstructions demonstrate that the folios were produced from the middle of the original sheets, where most of the gold design was located. Indeed, also in the ʿAṭṭar manuscripts themselves, large amounts of gold design feature on the folios whereas in other manuscripts it is common to also see folios with only a very small gold element from a larger design, or folios that might have been part of a sheet with design that only shows gold flecks or sprinkling, possibly because they were cut from the edges of the large sheets. Through the large amounts of gold



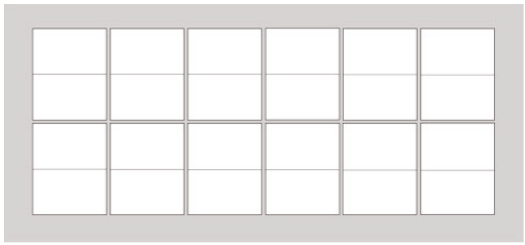
a. System of cutting of the ʿAṭṭār manuscript (table 1:2–3), folio c. 36 × 25 cm



b. System of cutting of a Qur'an sold at Christie's (table 2:15), folio 22.5 × 14.1 cm



c. System of cutting of a Qur'an in the Museum of Turkish and Islamic Art, Istanbul (table2:10), folio 22.7 × 18.0 cm



d. System of cutting of the British Library *Dīvān* of Ḥāfiẓ (table 1:4), folio 17.1 × 10.6 cm

Fig. 16: Regular cutting systems of sheets of 'Chinese' paper to produce bifolios for manuscript production, the size of the reconstructed sheet as depicted in grey is 55 × 120 cm.

on their folios, the ʿAṭṭar manuscripts thus present themselves as even more extraordinary than the other manuscripts. For this extensive project of writing eleven works attributed to ʿAṭṭār on 'Chinese' paper for Shāhrukh, a total of around 230 sheets of 'Chinese' paper (926 folios: 4 folios per sheet) must have been required. The paper waste resulting from this system of cutting must have been immense and it seems plausible to suggest, as Elaine Wright does, that the wastepaper deriving from the edges of the sheet ended up in small manuscripts and those that contain only a few folios of 'Chinese' paper.[94] Also the British Library *Dīvān* of Ḥāfiẓ gives the impression that the original sheets were used to provide folios for more than one manuscript. Even though the British Library *Dīvān* is a complete manuscript, it for example includes only seven folios (three bifolios and one single folio) cut from a dark blue sheet with a landscape design (fig. 15), while twelve bifolios or twenty-four folios could be cut from a full sheet measuring 55 × 120 cm.

Strong clues that point towards East Asia as the origin of 'Chinese' paper have already been discussed, but the purpose of these papers is still unknown. During a research trip to China and Taiwan in 2019 three Chinese examples of 'Chinese' paper were identified that provide information about their mode of employment

[94] Comp. Wright forthcoming for the thought that six of the seven folios of 'Chinese' paper in the small anthology Per. 294 in the Chester Beatty Library were cut from remains of sheets that were used for larger manuscripts.

in China. The exhibition *Friends Through Culture: A Special Exhibition of Paintings on Elegant Gatherings* at the National Palace Museum, Taipei (5 May–25 December 2019), focussed on paintings of 'elegant gatherings.' The insightful display of the painting *The Eighteen Scholars* 十八學士圖, which is historically attributed to the late-twelfth and early thirteenth-century artist Liu Songnian 劉松年 but is considered to be a Ming copy,[95] did not only show the painting itself, but the complete handscroll of which it is part (fig. 17). This is rather uncommon in exhibitions and publications of Chinese art, which put on display and publish sections of the scroll considered to be more important, while hiding other sections such as the frontispiece. Read from the right to the left, *The Eighteen Scholars* handscroll opens with a yellow frontispiece paper, which is followed by the painting itself and multiple colophon papers.[96] Close examination reveals that the yellow frontispiece (fig. 18) contains the gold design of a landscape with, in the foreground, rocks, plants and birds seen in birds-eye view and, in the background, mountains with a few clouds above them seen from a distance.

Especially exciting was the discovery of another handscroll frontispiece containing the calligraphy *Poems at Songfeng Pavilion* (自書松風閣詩) written by the famous Song-period calligrapher Huang Tingjian 黃庭坚 (1045–1105, fig. 19).[97] The frontispiece of this handscroll, which is also located in the National Palace Museum in Taipei (fig. 20), was, judging from its seal impressions, attached to the scroll in the Ming period.[98] Its dark blue paper is the same colour as that used for folios in the 1451 British Library *Dīvān* of Ḥāfiẓ (comp. fig. 15), while its printed gold design of two birds in a flowering tree is used both in the *c.* 1438 manuscript with five works attributed to ʿAṭṭār (figs. 9 and 21) and also on a similarly coloured dark blue folio from a Qurʾan manuscript.[99]

A final example of 'Chinese' paper is similarly used as frontispiece to a handscroll which is located in the National Palace Museum in Beijing (fig. 22).[100] The light-orange frontispiece sheet contains a gold landscape design with waves, which was, among others, recognised in the 1437 *Kulliyāt* of Saʿdī (fig. 10). The

[95] *Friends Through Culture: A Special Exhibition of Paintings on Elegant Gatherings* (以文會友: 雅集圖特展). Ed. Lin Wanru 林宛儒. Taipei: National Palace Museum, 2019, no. 19.
[96] Cf. for this handscroll https://theme.npm.edu.tw/opendata/DigitImageSets.aspx?sNo=04011039 (last viewed 16.01.2022).
[97] I am indebted to Yusen Yu for the reference to this handscroll. Cf. for this handscroll https://digitalarchive.npm.gov.tw/Painting/Content?pid=43&Dept=P (last viewed 16.01.2022).
[98] I am grateful to Lai Yuchih, Institute of Modern History, Academia Sinica, Taipei, for this information.
[99] Cf. https://www.christies.com/lotfinder/Lot/a-group-of-timurid-or-aqquyunlu-quran-5125277-details.aspx (last viewed 28.12.2021) for this folio that appears to stem from the same manuscript as the 45 folios in the Sarikhani Collection (table 2:10).
[100] I am grateful to Zhao Lihong, research professor librarian at the Palace Museum in Beijing, for confirming that this sheet is part of a handscroll.



Fig. 17: Handscroll with the painting *The Eighteen Scholars*. 44.5 cm in height. National Palace Museum, Taipei. Photograph of the exhibition *Friends Through Culture: A Special Exhibition of Paintings on Elegant Gatherings*. Photograph by Ilse Sturkenboom



Fig. 18: Frontispiece of *The Eighteen Scholars* handscroll. 44.5 cm in height. National Palace Museum, Taipei. Photograph by Ilse Sturkenboom



Fig. 19: Handscroll with calligraphy of *Poems at Songfeng* by Huang Tingjian. 32.8 cm in height. National Palace Museum, Taipei

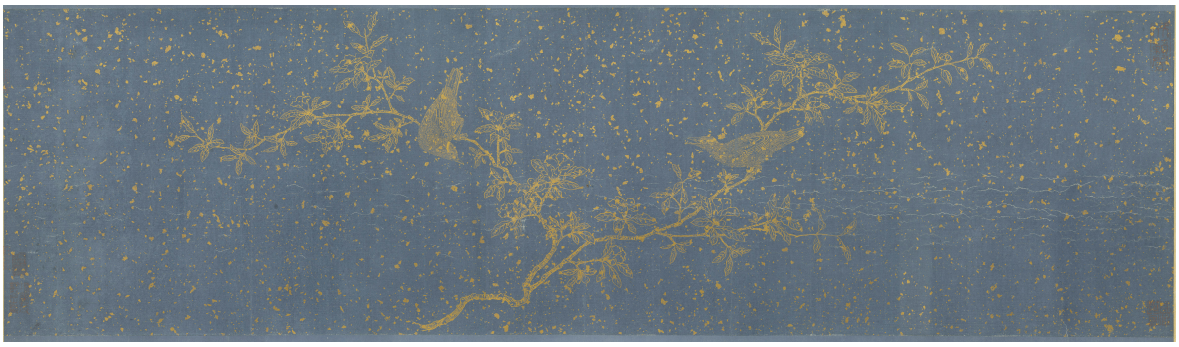
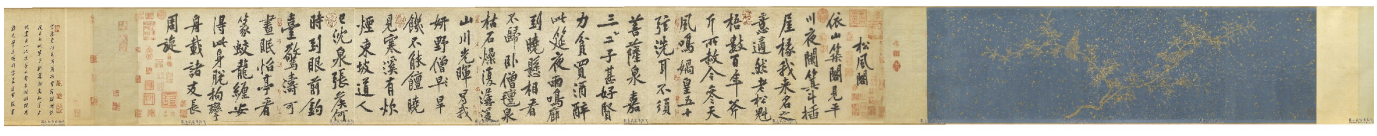


Fig. 20: Frontispiece of the handscroll containing *Poems at Songfeng* by Huang Tingjian. 32.8 × 114.1 cm. National Palace Museum,Taipei. http://painting.npm.gov.tw/Painting_Page.aspx?dep=P&PaintingId=43 (last viewed 29.12.2021)



Fig. 21: Five works attributed to Farīd al-Dīn ʿAṭṭar, calligraphed *c.* 1438 for Shāhrukh in Herat (table 1:3). Museum of Turkish and Islamic Art, Istanbul, 1992, folio (left to right): 78a, 71b, 88a, 93b. Size of reconstructed sheet: *c.* 35 × 106 cm. Reconstruction by Ilse Sturkenboom



https://digitalarchive.npm.gov.tw/Painting/Content?pid=43&Dept=P (last viewed 14.01.2022)

most striking aspect of this frontispiece is its ink painting, which is signed by the Ming court artist Wu Wei 吳偉 (1459–1509) and depicts the anecdote *Asking for the Ferry* (book 18, chapter 6 of the *Analects* of Confucius).[101]

It was not possible to handle any of these examples or to technically analyse them, and therefore it is not possible to say whether the paper's weight, materiality and dyes are similar to the paper used in Persianate manuscripts. However, the frontispieces' use of the same gold-printed designs as in the manuscripts from greater Iran, apparently the same colours, heights below 55 cm (44.5 cm, 32.8 cm and 46.3 cm) and a date roughly corresponding to the Ming period (before 1509 for the Wu Wei frontispiece) provide sufficient evidence to suggest that this paper was indeed produced and used in Ming China. Furthermore, these examples indicate that 'Chinese' paper was produced as stationery paper[102] for frontispieces (if not also for other purposes) and was, not unlike its use in Persianate manuscripts, cut or trimmed to fit the formats of the handscrolls. Of the featured frontispieces only one has been identified with a painting on top, but other frontispieces, and also those with gold flecks, hold calligraphy providing the title of the work in the handscroll.[103] It can therefore be assumed that writing or painting on top of the coloured and gold-decorated frontispieces was part of its intended purposes. Therefore, it is possible to see the Persian impulse to write on the same paper and to understand it as an interim stage in a production process as not that far remote from or even disrespectful of the intended use of the paper.

Text-image Relations in the Use of Chinese Stationery Paper

Further research is needed in order to say in which instances exactly and for which reasons coloured and gold-decorated stationery paper was employed in China, and whether it might have had a particular meaning. The paper's availability at the Ming court and use in front of valued art works, however, do give the impression that it was considered a high-status commodity.

Wu Wei's painting on a sheet with landscape design might imply a further relationship between this painting and the gold print onto which it is positioned

[101] I am grateful to Uta Lauer for pointing this out to me. For a translation of this anecdote cf. Legge, James (trans.): *The Chinese Classics*, volume 1: *Confucian Analects, the Great Learning, The Doctrine of the Mean*, third edition. Hong Kong: Hong Kong University Press, 1960, pp. 333–334.
[102] The use of decorated stationery paper has a long tradition in China. Tinted notepaper was already used in the fourth century AD and notepaper coloured in ten different colours with motifs and gold 'sand,' gold 'powder,' and gold 'spots' were known by the ninth century AD. Already in the tenth century it was recorded that stationery papers were decorated through woodblock printing. Cf. Tsien, *Paper and Printing*, pp. 92–94 and *A Special Exhibition of Painting and Calligraphy on Song Dynasty Decorated Paper* (宋代花笺特展). Ed. He Yanquan (何炎泉). Taipei: National Palace Museum, 2017 for Song-period uses of decorated stationery paper.
[103] Cf. the 31-volume series *Illustrated Catalogue of Painting and Calligraphy in the National Palace Museum* (故宮書畫圖錄), esp. volume 22. Ed. Lee Yumin (李玉珉). Taipei: National Palace Museum, 2003.



Fig. 22: Wu Wei (1459–1509), *Asking for the Ferry*, painted on stationery paper used as a frontispiece. Palace Museum, Beijing, 00153059. 46.3 × 110.1 cm. Yu, Yusen: "Gold Sprinkled: Chinese Paper and Persian Book Arts during the Fifteenth Century". In: *The Allure of Matter: Materiality Across Chinese Art*. Ed. Orianna Cacchione – Wei-Cheng Li. University of Chicago Press: Chicago, 2021, pp. 92–113, Fig. 5

(fig. 22). The anecdote visualised by Wu Wei narrates how Confucius — seated on the carriage in the painting — and his driver were looking for a good place to pass a river. The carriage driver approached two men ploughing in a field — seen on the left in the painting — and asked them where it is best to ford the river. The men replied that Confucius, as a sage, should know the answer to this question very well. Providing the content of the story depicted, it does not seem to be entirely coincidental that out of all tinted sheets with gold designs available, a sheet with the design depicting abundant water waves was chosen as a background for this painting. In this image-image combination, the positioning of Confucius' carriage within these waves thus appears to reinforce the message that he already knows where the best ford is.

Similarly, in manuscripts from the Persianate world, we can at times suspect a relationship between the text and the gold images onto which it was written. The best example is 'Attār's poem *Manṭiq al-ṭayr* ('Conference of the Birds') in one of the volumes produced for Shāhrukh (table 1:3). Except for a few folios, this work about birds finding their way to God is written on top of pink leaves with gold designs of birds perching on flowering branches.[104] In other cases, however, no relation can be established between the contents of the texts and the images used as a background. In order to explain those occurrences of works written on Chinese stationery paper we might reconsider the nature of these works. They often consist of poems written by a single author or multiple authors (tables 1:1–8, 2:16, 3:18–19) and of Qur'an manuscripts (table 2:9–15). These works have in common that they are difficult to illustrate. The Qur'an is never illustrated, and

[104] This work is written on ff. 112b–161b. Of these folios, only ff. 156–157 are not written on pieces of a sheet with the design of two birds perching in a flowering tree, but instead on a gourd-vine design.

the poems contained in the manuscripts are at times mystical and therefore rather abstract, or they are short *ghazal*s and other poems which lack a clear narrative. The selection of decorated papers from China to write these works upon presents itself as an endeavour to produce luxurious and visually appealing manuscripts in, at times, courtly contexts without the need of the lavish illustration used in other luxury manuscripts.

A poem sometimes related to the use of 'Chinese' paper in Persianate manuscripts stems from Sulṭān ʿAlī Mashhadī's 920/1514-dated treatise *Ṣirāt al-suṭūr*.[105] If the most complete sixteenth- and seventeenth-century versions of his treatise are compared to V. Minorsky's often-quoted translation of this poem, it becomes evident that the former provide more verses, slightly different wording and another sequence of the verses.[106] They also indicate that instead of Chinese (*khaṭā'ī*) paper, hennaed (*ḥanā'ī*) paper was addressed by Sulṭān ʿAlī and that '*khaṭā'ī*' may either be a copying error of '*ḥanā'ī*' or both words were used synonymously in manuscripts:[107]

کاغذی بهتر از خطایی [حنایی] نیست	حاجت آن که آزمایی نیست
حبذا کاغذ سمرقندی	مکنَش رد اگر خردمندی
خط براو صاف و خوب می آید	لیک پاک و سفید می باید
خواه رسمی و خواه سلطانی	جهد کن تا که خوب بستانی
هیچ رنگی به از حنایی نیست	با تو گویم که رنگ آن از چیست
زعفران و حنا و قطره ای چند	از مدادست بیش ازین مپسند
خط بر او خوب و هم طلا خوبست	زینتِ خط خوب مرغوبست
چشم را رنگ سرخ و زرد و سفید	خیره سازد چو دیدن خورشید
بهرِ خط نیم رنگ می باید	تا از او دیده ها بیاساید
رنگهایی که تیره رو باشد	خط رنگین بر او نکو باشد
کاغذِ سرخ را سفید نویس	تا نماید خط تو خوب و نفیس
کاغذ کان کبود° رنگ بُوَد	از سفیداب دلپسند بود[108]

[105] Soucek 1988: p. 14 appears to be the first to relate Sulṭān ʿAlī Mashhadī's poem to the phenomenon of 'Chinese' paper.

[106] Cf. for Minorsky's version of the poem Minorsky, V.: *Calligraphers and Painters by Qāḍī Aḥmad, son of Mīr-Munshī*. Translated from the Russian by T. Minorsky. Washington DC: Freer Gallery of Art, 1959: p. 113. For an edition of the relevant poem of the *Ṣirāt al-suṭūr* based on three manuscripts of the sixteenth and seventeenth century cf. Māyil Haravī, Najīb: *Kitāb ārā'ī dar tamaddun-i islāmī*. Mashhad, Āstān-i Quds-i Raḍawī, 1993, pp. 90–91 and pp. پنجاه و پنج– پنجاه و سه for the manuscripts used for the edition.

[107] Already Minorsky (*Calligraphers and Painters*: p. 113, *n*. 369) commented that in one occasion in this poem '*ḥanā'ī*' might be read instead of '*khatā'ī*'. With reference to the same poem, Afshār (2011, p. 99) mentioned that Sulṭān ʿAlī Mashhadī used *khatā'ī* in place of *ḥanā'ī*. In her analyses of Persian recipes for paper dyes, Mandana Barkeshli notes that henna colour was referred to with both *ḥanā'ī* and *khatā'ī*. Cf. Barkeshli, Mandana: "Historical Persian Recipes for Paper Dyes". *Restaurator* 37:1 (2015), pp. 49–89, p. 67. I am grateful to Mandana Barkeshli, Nourane Ben Azzouna and Elaine Wright for discussing this poem with me.

[108] Based on the edition of Māyil Haravī (*Kitāb ārā'ī*, pp. 90–91). The addition of *ḥanā'ī* in square brackets in the first verse is my own.

There is no better paper than Chinese [hennaed] paper,
there is no need to test it.
Oh excellent, the paper of Samarqand!
Do not reject it if you are wise.
On it, calligraphy comes out clear and good,
but if it needs to be pure and white,
whether of the *rasmī* or the *sulṭānī* kind,
try to acquire it well.
There is no better colour than henna,
I tell you what its colour consists of:
Saffron, henna and a few drops
of ink, no more.
Calligraphy is good on it and gold is too,
the adornment of good calligraphy is desirable.
For the eye, the colours red, green and white,
are dazzling, like looking at the sun.
For calligraphy, a slight tint is suitable,
for it relaxes the eye.
On dark colours,
coloured writing is good.
Write on red paper with white,
to make your writing good and delicate.
For paper that is blue,
white lead is pleasant.[109]

The (slightly-tinted Persian) paper dyes favoured by Sulṭān ʿAlī were already described in the anonymous fifteenth-century treatise *Risāla dar bayān-i kāghaz murakkab wa ḥall-i alwān*[110] and can also physically be found in fifteenth-century

[109] For translations of parts of this poem cf. Minorsky, *Calligraphers and Painters*, p. 113 and Barkeshli 2016: pp. 50, 66.
[110] Cf. Māyil Haravī, *Kitāb ārāʾī*: pp. 67–80 for an edition of this text and Barkeshli 2016 for translations of excerpts from it.

Persian manuscripts.[111] His statement that white, red, and green paper have the effect of looking at the sun is repeated by Muḥammad Bukhārī in 1586 and the sixteenth-century treatise of Ṣayrafī confirms that this effect is not desirable in the clear expression that white harms the eyesight a hundred times.[112]

Considerations similar to Sulṭān ʿAlī's thinking about which colours to choose for writing on coloured paper can also be suspected of the process of writing on Chinese stationery paper. In the anthology of 1497–8 (table 1:7), calligraphed by Sulṭān ʿAlī's apprentice Sulṭān Muḥammad Khandān and Shāh Maḥmūd, for example, the coloured inks are consciously selected to contrast with their tinted support (fig. 23). White is often chosen to highlight lines on the dark purple, strong pink and deep orange folios, while red, gold, green and blue were also used to contrast with their backgrounds. As such, the calligraphy and the paper interplay and reinforce each other: the colours of both seem even brighter when juxtaposed, and the qualities of both are enhanced by the presence of the other. The story of this and other manuscripts on 'Chinese' paper then becomes a story of superlatives. The best calligraphers of the time wrote the most highly valued works (Herat's court poets Jāmī and Navāʿī in the 1497–8 anthology being two) on coloured paper from China for the most important (courtly) patrons. This demonstrates an appreciation of all of the manuscript's parts and, especially, of their combination.

If we ask whether manuscripts written on 'Chinese' paper were meant to be read or to be looked at, the answer can only be 'both.' Only if the reader's and viewer's attention switches back and forth between the content of the text, the beauty of the calligraphy, the changing colours of the paper and its gold designs, can the manuscript be appreciated to its fullest. The gold flecks, sprinkles and images are only a background if one reads the text, but they are foregrounded if one focusses on the landscapes, plants and living beings and maybe even attempts to reconstruct the complete designs or to establish relationships between the images and the text.

The ambiguity between the gold images as a medium on which to write and an intermediary agent that conveys meaning is beautifully seen in Qurʾan manuscripts on 'Chinese paper.' The producers of several, probably fifteenth-century, Qurʾan manuscripts had no problem with employing designs that feature birds in a landscape or a tree as a background for the holy text.[113] They thus appear to have mainly understood these gold images as an embellishment without icono-

[111] For examples cf. Teece, Denise-Marie. "'Compassionate Companion, Familiar Friend': The Turin Safīna (Biblioteca Reals ms. Or. 101) and its Significance". *Muqarnas* 36 (2019), pp. 61–82 and Wright forthcoming.
[112] Cf. Māyil Haravī, *Kitāb ārāʾī*, p. 454 for Muḥammad Bukhārī's statement and p. 291 for Ṣayrafī 's statement. Barkeshli 2016: p. 50 translates and discusses these sections.
[113] Designs including birds have been recognised in the Qurʾan manuscripts table 2:10, 12, 15.



Fig. 23: Opening of an anthology with works by Nawāʿī, Jāmī, ʿĀrifī and Rūmī (table 1:7), calligraphed by Sulṭān Muḥammad Khanḍān in 1497–8 (central panel) and Shāh Maḥmūd [Nishapūrī] (marginal column), probably in Herat. Süleymaniye Library, Istanbul, Ayasofya 4334, ff. 70b–71a

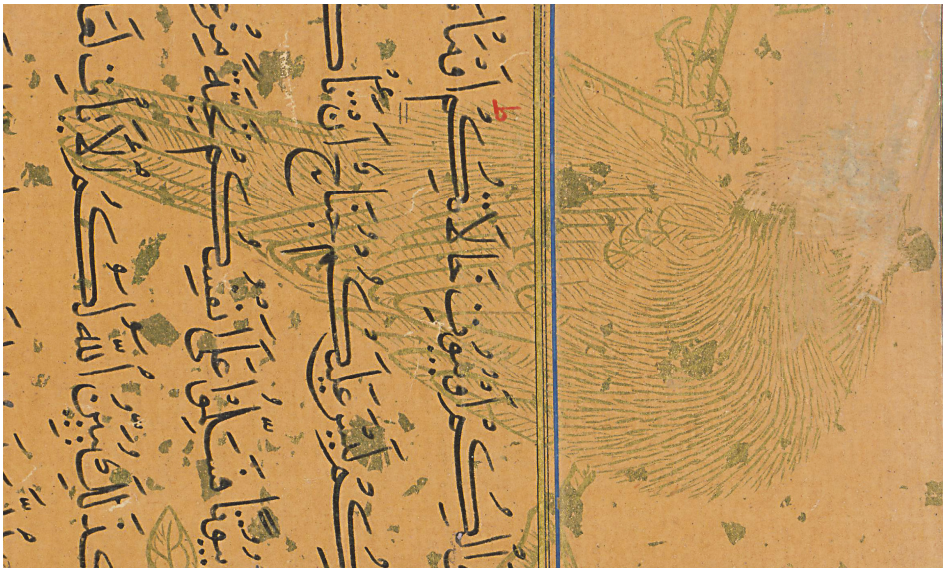
graphic implications. Later beholders of two Qur'an manuscripts, however, took offense at these birds and 'killed' the depictions of living beings by rubbing out their faces or placing a gold fleck on their head (fig. 24). Inevitably, the presence of the birds in the Qur'an manuscripts and the iconoclastic reaction they provoked reinforce the multi-layered understanding of the gold images. On the background or to the sides of the main text, they contribute to the embellishment of the ensemble, and yet, they never entirely seem to lose their quality as recognisable images.

Conclusion

The gathered evidence indicates that the 'Chinese' paper used in Persianate manuscripts was created out of long paper sheets from at least 55 × 120 cm that were in all likelihood produced, coloured and decorated with gold in Ming China. Contrary to what was previously assumed, the outlines of the gold motifs were not painted but instead printed onto the paper, after which details were executed with a brush. In Ming China, these stationery papers were used as frontispieces



a. Museum of Turkish and Islamic Art, Istanbul, 41 (table 2:12), f. 72b



b. Museum of Turkish and Islamic Art, Istanbul, 41 (table 2:12), f.205b



c. Christie's Qur'an (table 2:12), f. 315b

Fig. 24: Defacing of birds in Qur'an manuscripts

that may also be painted or written upon, while, once exported to greater Iran in the fifteenth century, the sheets were cut up and folded to the required folio sizes to subsequently be written upon, illuminated and bound. Contextual information obtained from the manuscripts suggests that they were luxury books that, at least in part, were produced at courts, in the most important centres of manuscript production in the Persianate world (such as Shiraz, Herat, Tabriz and probably Baghdad), and calligraphed by the most famous calligraphers of the time. The

contents of these manuscripts — the Qur'an or, often, collections of short or mystical poetry — have in common that they are difficult to illustrate. The fifteenth-century selection of Chinese stationery paper to write these texts upon presents itself as an attempt to create the finest manuscripts without frequently drawing on the figural illustrations that characterise other luxury manuscripts of the time. In these manuscripts, high-quality calligraphy interplays with the changing colours of the paper and its gold designs that, depending on the reader's and beholder's focus, can be understood as pure embellishment or valued as recognisable images and part of a larger composition.

Sources of Illustrations

Figs. 1, 24c: Courtesy of Christie's, London — Figs. 2, 4, 6, 17, 18: Photograph by Ilse Sturkenboom — Fig. 3: Photographs and analyses by Agnieszka Helman-Ważney — Fig. 5: XRF measurements (4 different spots on gold) by David Howell, Bodleian Library, Oxford. Data representation and interpretation by Sebastian Bosch — Fig. 7, 8, 10, 11, 21: Tracing by Ilse Sturkenboom — Fig. 9: Tracing by Kathryn McLaren — Fig. 12: Photograph in public domain — Figs. 13–16: Graphic arrangements by Ilse Sturkenboom — Figs. 19, 20: National Palace Museum, Taipei — Fig. 22: Palace Museum, Beijing — Fig. 23: Süleymaniye Library, Istanbul — Figs. 24a, b: Museum of Turkish and Islamic Arts, Istanbul