WOVEN PLEASURE:
CONTINUITY AND CHANGE IN PERSIAN CARPET MAKING
DURING THE ṢAFAVĪD PERIOD

Mansoureh Rajabitanha

Thesis submitted in fulfilment of the requirements for the degree of
Doctor of Philosophy
School of Architecture and Built Environment
The University of Adelaide
May 2020

Table of Contents

Table of Contents 0
List of Figures 3
Abstract 7
Acknowledgements 9
Note to the Reader 10
Introduction: Aims and Method 11
Background *11*
Aims and Significance *12*
Sources and methods *14*
Limitations and contributions *24*
Thesis structure *25*
PART I The Hirāt School: Origin (15th Century) 27
Chapter 1. Hirāt School: Culture of Carpet Making 28
1.1 City and society 28
1.2 The Tīmūrīds: Cultural background 29
1.3 International relations 32
1.4 Art centres and art patrons 34
1.5 Court artists and carpet designers 36
Atelier (kitābkhānih): The shaping of Tīmūrīd art *36*
Art organisation *37*
Workshop practices, circulation of designs, and carpet designers *40*
1.6 Design process and methods 49
Design transferring methods *49*
The technique of transferring design into weaving *52*
Chapter 2. Hirāt School: Carpet's Design and Pattern 54
2.1 Carpet motifs 54
The seven modes of Persian decorative design *56*
The seven modes in the Tīmūrīd era *57*
2.2 Sources of the seven modes 68
The first wave: During the Mongol era *68*
The second wave: During the Tīmūrīd era *70*
2.3 Carpet design structure 70
Background of Tīmūrīd carpets *71*
Tīmūrīd carpet design *73*
Geometric or curvilinear *80*
PART II The Tabrīz School: Transition and Continuity (15th–16th Centuries) 82
Chapter 3. Tabrīz School: Culture of Carpet Making 83
3.1 City and society 83
3.2 The Ṣafavīds: Cultural background 85
3.3 International relations 86
3.4 Art centres and art patrons 87
3.5 Court artists and carpet designers 89
Atelier (kitābkhānih): Continuing Tīmūrīd art and tradition *90*
Art organisation *91*
Workshop practices, circulation of designs, and carpet designers *92*
Carpet weavers *105*
3.6 Design processes and methods 107
Design transferring methods *107*
The technique of transferring design into weaving *107*

Chapter 4. Tabrīz School: Carpet's Design and Pattern 115
4.1 Carpet motifs 115
The seven modes of Persian decorative design *115*
4.2 Carpet design structure 122
Āq-Quyūnlū carpets *122*
Early Ṣafavīd carpets *127*
PART III Iṣfāhān School: Variation (17th Century) 138
Chapter 5. Iṣfahān School: Culture of Carpet Making 139
5.1 Iṣfahān School: City and society 139
5.2 International relations 144
Importance of the silk trade and the Armenian monopoly *144*
Shāh 'Abbās's policies to attract foreigners *146*
East India companies and carpet trade in Iran *146*
Re-routing export to the Persian Gulf *150*
5.3 Carpet weaving centres 150
5.4 Workshop practices 153
Atelier (kitābkhānih) *153*
Art organisation *154*
Carpet designers *155*
Circulation of designs *156*
Chapter 6. Iṣfahān School: Design and Production of Carpets 159
6.1 Iṣfahān School: Various carpet groups 159
6.2 Polonaise carpets 159
Characteristic features of Polonaise carpets *164*
The Yakob carpet *167*
The Yakob design group *171*
Conclusion 176
Bibliography 179

List of Figures

Introduction
Figure 1. Miniature from Niẓāmī attributed to Bihzād, ca. 1493. 23
Chapter 1
Figure 1-1. Map of the Tīmūrīd world. 29
Figure 1-2. "Majnūn at the Ka'ba" (detail). 30
Figure 1-3. *The Report ('arżih-dāsht).* 38
Figure 1-4. Art organization. 40
Figure 1-5. Jug, Hirāt, dated A.H. 871 (A.D. 1467). 46
Figure 1-6. Illuminated panel from a *Būstān* of Sa'dī (detail). 46
Figure 1-7. Design panel, Hirāt, 15th century. 48
Figure 1-8. Page of drawings. Iran or Central Asia, ca. 1400-30. 51
Chapter 2
Figure 2- 1. Frieze tile with inscription from the *Shāhnāmih* (Book of Kings) 58
Figure 2- 2. Section of a tile frieze, from the tomb of Uljāytu. 58
Figure 2- 3. *Miḥrāb* tile, attributed to 'Alī ibn Aḥmad ibn 'Alī Abī al- Ḥusayn. 58
Figure 2- 4. Doors to the main dome chamber of the Shrine of Aḥmad Yasavī. 58
Figure 2- 5. Tile, Iran, dated A.H. 860 (A.D. 1455). 58
Figure 2- 6. Frieze tile with dragon. 60
Figure 2- 7. The author with a Mongol Prince. 61
Figure 2- 8. Enthroned Patron in Royal Guise. 61
Figure 2- 9. Star-shaped tile with lotuses. 61
Figure 2- 10. The cenotaph in the Mausoleum of Khājih 'Alā' ul-Din in Khiva. 61
Figure 2- 11. Quadrangular tile, from the tomb of Oljeitu. 61
Figure 2- 12. Tile from a *miḥrāb.* 62
Figure 2- 13. Tapestry woven roundel. 62
Figure 2- 14. Textile with lotus patterns. 62
Figure 2- 15. Detail of *Ardashīr Battling Bahman*, from a page of the Great Mongol *Shāhnāmih.* 63
Figure 2- 16.. A Jalayirid *Khalila and Dimna* manuscript. 63
Figure 2- 17. Ceramic tiles in the *madrisih* built by Ulugh Biyg in Samarqand in 1417. 63
Figure 2- 18. Detail of ceramic tiles in the mausoleum known as "Anonymous no. 2." 63
Figure 2- 19. Tombstone found at the mausoleum of Jahāngīr, Tīmūr's son 63
Figure 2- 20. Detail of a page from a *Khamsih* of Niẓāmī illustrated in Hirāt in 1431. 64
Figure 2- 21. A drawing from Hirāt. 65
Figure 2- 22. Tīmūr Granting an Audience in Balkh on His Accession to Power in 1370. 65
Figure 2- 23. *Farangī* vase, Topkapı Sarayı Museum. 66
Figure 2- 24. Iskandar, in the likeness of Ḥusayn Bāyqarā, with the seven sages. 67
Figure 2- 25. Textile with coiled dragons and inscription (detail). 69
Figure 2- 26. Textile with dragons and phoenix, China, Yuan dynasty (1271-1368). 70
Figure 2- 27. Fragment of a flat-weave prayer rug, Iran, early 14th century 71

Figure 2- 28. Reconstruction by Amy Briggs of a Tīmūrīd lattice carpet in a miniature from an early 15th century. 74
Figure 2- 29. Diagram of plans of lattice carpets 74
Figure 2- 30. Tīmūrīd lattice carpet fragment, Iran, late 15th century. 75
Figure 2- 31. A Persian-knotted, silk-piled carpet. 75
Figure 2- 32. Reconstruction by Amy Briggs of a Tīmūrīd cartouche carpet. 76
Figure 2- 33. Birth of A Prince, attributed to Bihzād. 77
Figure 2- 34. Tīmūrīd medallion and cartouche carpet fragment, late 15th century. 77
Figure 2- 35. Mystic and four disciples (detail). Tīmūrīd miniature. 78
Figure 2- 36. Left fragment: a detailed section of the Purmann cartouche carpet fragment, Figure 2-30, with the pattern scheme outlined. Right: Reconstruction by Amy Briggs of the carpet depicted in figure 2-31. 78
Figure 2- 37. Reconstruction of a cartouche carpet Iran, circa 1500. 78
Figure 2- 38. "Liylā and Majnūn at School," folio from *Khamsih* of Niẓāmī, 1431-32. 79
Figure 2- 39. Reconstruction of carpet in a miniature from a Niẓāmī manuscript by Bihzād. 80
Figure 2- 40. Partial reconstruction of carpet in a miniature, probably by Bihzād 80

Chapter 3

Figure 3- 1. The Near East around 1478. 84
Figure 3- 2. Velvet, cut and sewn in the form of a roundel with hunting scene. 94
Figure 3- 3. Detail in figure 3-26 and Figure 3- 4. Detail in figure 3-2 94
Figure 3- 5. Knotted-pile carpet, mid-16th century. 95
Figure 3- 6. Detail in figure 3-2 and Figure 3- 7. Detail in figure 3-5 95
Figure 3- 8. Hunting carpet, knotted-pile carpet dated 949/1542-43. 98
Figure 3- 9. Shāh Ṭahmāsp's Hunting scene. 98
Figure 3- 10. Detail in figure 3-8 and Figure 3- 11. Detail in figure 3-9 99
Figure 3- 12. Detail in figure 3-8 and Figure 3- 13. Detail in figure 3-9 99
Figure 3- 14. Detail in figure 3-8 and Figure 3- 15. Detail in figure 3-9 99
Figure 3- 16. Detail in figure 3-8 and Figure 3- 17. Detail in figure 3-9 99
Figure 3- 18. Detail in figure 3-8 and Figure 3- 19. Detail in figure 3-9 99
Figure 3- 20. The animal scene carpet, Tabrīz (1510-1540) 100
Figure 3- 21. A manuscript from *Gulistān* by Sa'dī. 100
Figure 3- 22. Detail in figure 3-20 and Figure 3- 23. Detail in manuscript painting from *Khamsih* of Niẓāmī 100
Figure 3- 24. Detail in figure 3-20 and Figure 3- 25. Detail in figure 3-21 100
Figure 3- 26. Knotted-pile carpet, 1525-50. 101
Figure 3- 27. Majnūn in Chains Led by an Old Lady to Laylā's Tent. 102
Figure 3- 28. Encampment Scene: Conference of the Rival Clans of Laylā and Majnūn. 102
Figure 3- 29. Detail in figure 3-28 and Figure 3- 30. Detail in figure 3-28 102
Figure 3- 31. Fragment of a carpet. 103
Figure 3- 32. Detail in figure 3-28 and Figure 3- 33. Detail in figure 3-28 103
Figure 3- 34. A squared-paper (graph-paper) knot plan 109
Figure 3- 35. Drawing for a carpet design, dated 1306/1888-89 in the Kāshān Museum 110
Figure 3- 36. Marking the pattern on the warp with charcoal as a guide for the weavers. 111
Figure 3- 37. Detail in the border of an Ardabīl carpet. 111

Figure 3- 38. Knotted-pile carpet, mid-16th century. 112
Figure 3- 39. Drawing on cloth; the design for one of a pair of doors. 113

Chapter 4

Figure 4- 1. Ascension of the Prophet Muḥammad ascribed to Sulṭān Muḥammad. 120
Figure 4- 2. Para-Mamluk carpet with geometric pattern. 124
Figure 4- 3. The Chihil-sutūn carpet. 124
Figure 4- 4. Detail in the border pattern of a carpet from the 16th century 127
Figure 4- 5. Painting from a *khamsih* of Niẓāmī, Hirāt 1445-46. 129
Figure 4- 6. Part of a Persian carpet with a central medallion. 129
Figure 4- 7. Tiles from the Blue Mosque of Tabrīz. 130
Figure 4- 8. Quran bookbinding. Iran, 16th century. 131
Figure 4- 9. *Shamsih.* 131
Figure 4- 10. Medallion carpet, north-west of Iran, late 15th to early 16th century 132
Figure 4- 11. Detail in the carpet in figure 4-10. 132
Figure 4- 12. Detail in the carpet in figure 4-10. 132
Figure 4- 13. Detail in the Ardabīl' carpets (in Figure 4-14) 133
Figure 4- 14. One of the Ardabīl' medallion carpets. Probably Kāshān 133
Figure 4- 15. Detail of ornament from Lovers Picnicking 134
Figure 4- 16. Detail of vegetal arabesque from the Ardabīl carpet. 134
Figure 4- 17. Plan of the shrine at Ardabīl, showing where the carpets were situated 134
Figure 4- 18. Carpet fragment, early 16th century 136
Figure 4- 19. Hunting carpet, Museum für angewandte Kunst, Vienna, no. T 8336 137

Chapter 5

Figure 5- 1. Map of Ṣafavīd Iran around 1628. 139
Figure 5- 2. Iṣfahān, looking north over the Maydān and its principal buildings 140
Figure 5- 3. Map of Iṣfāhān during the 17th century showing the location of New Julfā. 141
Figure 5- 4. Edict of Shāh 'Abbās I, granting the lands of New Julfā to the Armenians. 142
Figure 5- 5. Map of commercial links of Iran. 144
Figure 5- 6. View of the port of Gombroon from E. Kaempfer 147
Figure 5- 7. Carpet production and distribution areas during the Ṣafavīd period 152
Figure 5- 8 (a (top) & b (bottom)). View of the Maydān in Iṣfāhān 153
Figure 5- 9. Album page with two hemistichs of poetry. 156
Figure 5- 10 (a & b). The Bethlehem Church, New Julfā, Iṣfāhān. 156
Figure 5- 11. Illuminated frontispiece, *Būstān* of Sa'dī 157
Figure 5- 12. Two fragments of a tomb cover, Iran. 158

Chapter 6

Figure 6- 1 (a & b). The Czartoryski Carpet, Iran, probably Iṣfāhān, 17th century. 160
Figure 6- 2. Silk and silver thread Polonaise carpet. 162
Figure 6- 3. Silk and gold thread Polonaise carpet. 163
Figure 6- 4. One of a pair of silk and gold thread Doria Polonaise carpets. 163
Figure 6- 5. Detail of metal-wrapped silk thread. 165
Figure 6- 6 (a & b). Pair of silk and gold carpets, Iran, second quarter of the 17th century. 165
Figure 6- 7 (a, b & c). The central four-lobed form 166
Figure 6- 8. Designs for textiles, bindings, or architectural decoration. 166

Figure 6- 9. The Yakob carpet, 267 × 165 cm, woven in silk-pile 168
Figure 6- 10. The Marcy-Indjoudjian Cope (“The Iṣfāhān Cope”). 168
Figure 6- 11. The Yakob carpet, inscription detail. 169
Figure 6- 12. The Yakob carpet, drawing of the inscriptions. 170
Figure 6- 13. Polonaise carpet, ex-collection John D. Rockefeller Jr.....172
Figure 6- 14. Silk and gold, Iran, 1625-50, silk pile, silk and precious metal thread. 172
Figure 6- 15. Silk and metal thread Polonaise carpet, ex-collection G. A. Kolkhurst.....173
Figure 6- 16 (a&b). Polonaise carpet, silk, silver and gold-warped thread. 173

Abstract

Ṣafavīd Iran is widely recognised as the Golden Age of Persian carpet. Experts in the field argue that significant change in carpet design took place towards the end of the 15th century, evident by a move from the geometric cross, star, and rosette designs, to medallions and scrolls. Some scholars consider this change as a "revolution" in carpet design; others contest this proposition. Much debate remains, however, on the nature of change—its provenance as well as its time. Another aspect of this change is the involvement of miniaturists in designing new carpets. This argument, however, opens a new discussion on who carpet designers during the 15th and 16th centuries were. This study aims to document the history of change in Persian carpet design, investigate socio-cultural and artistic contexts, and establish the significance for Iranian society. Although the examination of the "carpet design revolution" argument versus historical evidence in original sources is one of the main aims of this research, the scope of this study is wider than the narrow implications of this examination. The research also aims to examine the chronology of carpet production and development in the 16th and 17th centuries. The circulation and migration of ornamental design played an important role in the similarity of surface decoration in various media in Islamic art. Therefore, this study also aims to show the visual resonance that existed historically between carpet design and other art media, especially architectural decorated surfaces that share similar visual characteristics to carpet patterns. The evolution of Iranian art in the late 13th and early 14th centuries under the Mongols is indebted to Chinese elements, including blossoms, trees and shrubs, clouds and cloudbands, and animals known as "chinoiserie." This evolution continued during the Tīmūrīd period in the 15th century. Since chinoiserie contributed to the evolution of Persian arts, including carpets that preceded the so-called "revolution" in carpet design, this study also investigates the nature of this change and its impact and determines what aspects of Iranian carpet design were influenced by this movement. Primary and secondary textual and visual sources including contemporary studies are used. Significantly, the study examines primary Persian sources that have not been consulted in existing studies in the field. Although the study is not reliant on visual sources, miniature paintings and illustrations support textual analyses. The study introduces a fresh perspective on Persian carpet history and design, with an emphasis on shared visual sensibility that underscores artistic production in Ṣafavīd Iran.

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint award of this degree.

I give permission for the digital version of my thesis to be made available on the web, via the University's digital research repository, the Library Search and also through web search engines, unless permission has been granted by the University to restrict access for a period of time.

Acknowledgements

I express my sincere gratitude to my principal supervisor, Professor Samer Akkach, for his continuous support with my PhD study including his patience, motivation, and immense knowledge. His guidance helped me through the research stage and thesis writing.

I also thank the rest of my thesis committee: Dr. Samuel Bowker (Charles Sturt University, NSW), Associate Professor Peter Scriver, and Dr. Katharine Bartsch, not only for their insightful comments and encouragement, but for the hard but insightful questions they asked, which helped me broaden my research.

My sincere thanks to James Bennett (Art Gallery of South Australia), Touraj Zhuleh (Art University of Tehran), Dr. Muhammad Ali Rajabi (Shahed University, Tehran), Dr. Stefano Carboni (Art Gallery of Western Australia), and Abdullah Ghouchani, who introduced new materials and resources.

Special thanks to Margaret Hosking from the Barr Smith Library who supplied me with essential materials for my research that were not available in the library, and other staff from the library of the University of Adelaide, particularly interlibrary loans, who granted access to books and research materials from around the world. Also, staff from the library of the Art Gallery of SA (Jin Whittington), State Library of NSW, National Library of Iran, Parliament (*Majlis*) Library of Iran, Carpet Museum of Iran, and the Topkapı Sarayı Museum (Esra Müyesseroglu). Without their support, it would not have been possible to conduct this research.

I appreciate the funding received from the School of Architecture and Built Environment. I am also indebted to Adelaide Scholarship International (ASI) which offered financial support throughout my study at the University of Adelaide and the Adelaide Graduate Centre (AGC), in particular Janelle Palmer and Rachel Harvey, for being with me during the difficult times of my PhD journey.

My thanks to Dr. Diane Brown for copyediting my thesis in accordance with the ACGR/IPED national guidelines for editing research theses. I thank my fellow researchers for stimulating discussions during sleepless nights when we worked together before deadlines, and for all the fun we have had in the last few years.

Last, but not least, I thank my husband, Dr. Hisham Khdair, my little son Ryan, and my parents for supporting me spiritually throughout writing this thesis and my life in general.

Note to the Reader

Until the 19th century, "carpet" was used for any cover, such as a table cover or wall hanging; since the introduction of machine-made products, however, carpet has been used almost exclusively for a floor covering. Both in Great Britain and the United States, "rug" is often used for a partial floor covering as distinct from carpet, which usually covers the floor wall-to-wall. In relation to handmade carpets, however, rug and carpet are used interchangeably.[1] In this study carpet or rug refers to pile knotted hand-made carpets. Carpet in Persian is known as "*qālī*" or "*farsh*" and small rugs are known as "*qālīchih*", but in Persian documents of the 15th century and indeed earlier, *qālī* and *qālīchih* were used. For instance, in *Ḥabīb ul-siyr* there is a couplet in which the word "*qālīchih*" is used.[2]

For Persian and Arabic words, the IJMES transliteration system has been applied. I have modified sometimes when quoting a translation, even though the translation is not mine. This is because when consulting original Persian sources, I realised they did not exactly follow original primary sources. This is mostly in relation to "the seven modes of Persian decorative design" and especially *khatāyī.*

For Safavid and Isfahan, the transliteration "Ṣafavīd" and "Iṣfahān" have been used as much as possible. The exceptions were book titles or articles, for example, "Timurid Carpets I. Geometric Carpets," or when they appeared as a direct quotation from another author.

For translation of Persian words into English, the most frequently used are those which are closer to Persian concepts and thus create less confusion. For example, the term *ṭarḥ* has been translated as "a finished underdrawing" and/or "draftsmanship." Based on these translations, *ṭarrāḥ,* which relates to a person who makes *ṭarḥ,* is translated as draftsman-designer. Also, "decorative design" is a translation of the Persian word *naqāshī*, used by Necipoğlu, and this seems a better translation than "art" or "painting." Therefore, *naqāsh* is translated as "painter-decorator" which is usually "painter" by other scholars.

---

[1] Murray L. Eiland, "Rug and carpet," *Encyclopædia Britannica* (March 2016): 1, accessed July 13, 2018, https://www.britannica.com/technology/rug-and-carpet/Introduction.

[2] Ghīyāth ud-Dīn b. Humām al-Din Khāndimīr (1475/76-1534/35), *Ḥabīb ul-Siyr fī Akhbār Afrād al-Bashar,* edited by Muḥammad Dabīr Sīyāqī (Tehran: Khayyām, 1333/1954) 4:59-60. The Persian text is as follows:

وزیری کز برای مسندش زیبد که هر روزی فضای چرخ دیوانگه شود خورشید قالیچه
اگر مقدار گرد موکبش داند فلک سازد ز ماه چهارده زین سمندش را نهالیچه

Introduction: Aims and Method

Background

Textiles have always been important in the Islamic world. Lisa Golombek, an expert on Persian art, architecture and culture, has observed that "textiles in Islamic society fulfilled far more than the functions normally expected of them in other societies."[3] Golombek believed that Islamic architecture is obsessed with textiles in closed and open spaces. In closed spaces, these textiles were used as curtains, transforming the open colonnade to a private place, and as carpets and mats.[4] In open areas in gardens, "by spreading a cloth or rug and erecting over it a tent of brocade or a baldachin," royal spaces were created.[5] Textiles have also had a religious function, such as creating a personal space, by using a prayer rug, and a special curtain as a veil draped over the Ka'ba in Mecca.[6] Golombek later proposed that an Islamic "textile mentality" was responsible for the development of certain characteristics in Islamic art.[7] Carpet design and production is an expression, both utilitarian and artistic, of Golombek's "textile mentality," providing strong evidence in support of her generalised observation. Several scholars have presented different interpretations of the history of carpets or Oriental rugs in general, and Persian carpets in particular; however, the relatively new field of Persian carpet history has remained fragmented in views and theories concerning the emergence and development of Persian carpets, as well as major shifts in Persian carpet design.

In the field of Persian carpet history, there is a widely accepted proposition that significant change in carpet design took place towards the end of the 15th century, evidenced by a move from the geometric cross, star, and rosette designs, to medallions and scrolls. Leading art historian, Kurt Erdmann (1901-1964), known for his pioneering work on the history of the Oriental rug, considered this change as a "revolution" in carpet design.[8] Other scholars have contested this proposition, yet much debate remains about the nature of such

---

[3] Lisa Golombek, "The Draped Universe of Islam," in *Content and Context of Visual Arts in the Islamic World* (Papers from a colloquium in memory of Richard Ettinghausen, Institute of Fine Arts, New York University 1980, planned and organised by Carol Manson Bier), ed. Priscilla P. Soucek (University Park: The Pennsylvania State University Press, 1988), 25. Professor Lisa Golombek, Curator Emeritus of the Royal Ontario Museum. Her research has taken her across the Middle East and Central Asia, where she has focused extensively on Tīmūrīd architecture and ceramics.

[4] Golombek, "The Draped Universe of Islam," 25-26.

[5] Ibid, 26.

[6] Ibid, 32.

[7] Ibid, 34.

[8] Kurt Erdmann was a German art historian who was one of the former directors of the Pergamon Museum, Berlin. He was part of the "Berlin School" of the History of Islamic Art.

change in carpet design and the provenance in which it occurred.[9] Erdmann argued that "Miniaturists and illuminators were commissioned to draw up new designs. They created designs in which they brought their own form-world over to the carpet… forms typical of the arts of the book."[10] He asserted that these "new forms are thoroughly alien to carpets; for the greater part they are not even proper for textiles."[11] Despite his views being contested, Erdmann's theory and arguments have remained central and influential in the field.

Aims and Significance

This study aims to critically examine Erdmann's propositions against evidence available in historical sources. It aims to document the history of change in Persian carpet design, investigate socio-cultural and artistic contexts, and establish the significance of carpet design in Iranian society.

The circulation and migration of ornamental design played an important role in the similarity of surface decoration of various media in Islamic art. Islamic art historian, Anna Contadini called it "transmateriality" and defined it "as a common pool of design elements" that "appears in different media."[12] Among the different media used, special attention is devoted to architectural surface decoration. Walter Denny, Oriental carpet expert, stated that "The available evidence strongly indicates that, sometime in the fifteenth century, carpet weavers in Anatolia and Iran began to expand their repertoire of designs to include curvilinear forms adapted from other artistic media, such as architectural decoration and book illumination.[13] Golombek had a different perspective. She wrote:

> If one studies the evolution of surface decoration, it becomes increasingly clear that the practice of hanging the walls with textiles led to the development of mosaic faience and polychrome painted panels. The walls were broken up into small rectangular panels, as if they were products of the loom. The pattern changes abruptly from one panel to the

[9] Jon Thompson, *Milestones in the History of Carpets* (Milan: Moshe Tabibnia, 2006), 177.
[10] Kurt Erdmann, *Oriental Carpets: An Account of Their History,* trans. Charles Grant Ellis (London: Zwemmer, 1960), 31.
[11] Ibid, 32.
[12] Anna Contadini, "Threads of Ornament in the Style World of the Fifteenth and Sixteenth Centuries," in *Histories of Ornament from Global to Local*, eds. Gülru Necipoğlu and Alina Payne (Princeton: Princeton University Press, 2016), 296. Anna Contadini is Professor of the History of Islamic Art and Architecture at Department of the History of Art and Archaeology, SOAS University of London,
[13] Walter Denny, *How to Read Islamic Carpets* (New York: The Metropolitan Museum of Art, 2014), 58. Walter B. Denny, Collage of Humanities and Fine Arts, History of Art and Architecture, UMassAmherst Massachusetts. He received his PhD in Fine Arts from Harvard in 1970.

next, as if the eye were moving from fabric to fabric. Many of the large tile panels reproduce carpet designs, and their large expanse may be a reflection of the increasing size of carpets.[14]

Based on this proposition, this study shows the visual resonance that existed historically between carpet design and other art media, especially architectural surface decoration, which had similar visual characteristics to those of carpet patterns.

In its analyses, the study uses primary Persian texts, visual sources, and the carpets themselves. Thus, it introduces a fresh perspective to the study of Persian carpet history and design, with an emphasis on shared visual sensibility that underscored artistic production in Ṣafavīd Iran (1501--1722). Ṣafavīd Iran is widely recognised as the "Golden Age" of Islamic-Persian culture. Erdmann asserts that collaboration in the art of the book and the art of the rug was indeed a Golden Age, since the book frequently had the upper hand.[15] He adds: "one is quite justified in seeing the 16th century as the 'high point' of rug development."[16] Erdmann hypothesised that "this 'high point' was not attained by the true and characteristic evolution of the carpet but through outside intervention."[17] This study argues that this period cannot be considered as the "Golden Age" of Persian carpets without qualification. It may be considered as the most significant period in the history of Persian carpet production because of the sheer number of existing carpets from this period compared to previous periods, but this should not be understood as the "Golden Age".

The evolution of Iranian art in the late 13th and early 14th centuries under the Mongols is indebted to adopting Chinese elements known as "chinoiserie." Yuka Kadoi, a historian of Islamic and Persian culture, has argued that "any history of Iranian art under the aegis of the Mongols must include some accounts of the occurrence of these elements."[18] This evolution

[14] Golombek, "The Draped Universe of Islam," 34. Golombek also compared the brick patterns with geometric patterns of textiles. She believed "Brick patterns had much in common with textiles, in that they conform to some kind of grid involving a vertical and horizontal axis. In weaving, these are the warp and weft. This woven decoration allowed the architect to virtually swathe his forms, and thereby bring out the volumetric quality of the architecture, as if it were, in fact, draped with textiles."

[15] Erdmann's labeling Ṣafavīd as a "golden age" is in contrast with what he mentioned about the new designs (p. 32, *Oriental Carpets*): "new forms are thoroughly alien to carpets; for the greater part they are not even proper for textiles".

[16] Erdmann, *Oriental Carpets*, 32.

[17] Ibid, 32.

[18] Yuka Kadoi, *Islamic Chinoiserie: The Art of Mongol Iran* (Edinburgh: Edinburgh University Press, 2009), 1. Professor Yuka Kadoi, University of Edinburgh, History of Art. Her research topics range from the visual and material culture of Ilkhanid Iran, artistic exchanges between the Islamic Middle East and East Asia under the Mongols, the Tīmūrīds and beyond, Islamisation / Persianisation in the arts of East Asia, Persian art historiography in the early 20th century to the museum and Islamic / Asian art in contemporary times.

continued during the Tīmūrīd period in the 15th century. Erdmann interpreted chinoiserie as "the entire motley world of Persian miniature painting with its fantastic blossoms, trees and shrubs, clouds and cloudbands, adopted from China during the Mongol era, and then its animals and animal combats, its hunting scenes and its view of paradise are all carried over to the carpet."[19] Since chinoiserie contributed to the evolution of Iranian art just before Erdmann assumed it to be a revolution in design, another aim of this study is to investigate the nature of this impact and determine what aspects of Iranian carpet design were influenced by this movement.

Accordingly, although the examination of Erdmann's "carpet design revolution" argument versus historical evidence available in original sources is the main aim of this research, the scope of this study is wider than the narrow implications of this examination. It also looks at the chronology of carpet production and development in the 16th and 17th centuries to trace the change into the later centuries. On the other hand, since patterns of carpet design share the same aesthetics with other Islamic patterns, especially in architectural ornaments and surface decoration, the study extends its analyses to other areas of decorative design in order to reveal their evolution and cultural relevance to carpet design history. This approach will present a fresh understanding of the agency of geometry in premodern Islamic aesthetics and visual culture.

This study contributes to bridging a gap in the existing literature on carpet history and carpet design, which tends to separate historical and theoretical aspects of carpet study. Questions concerning broader developments of Islamic patterns and aesthetic theories that underpin carpet design are often considered separately and independently from carpet history. This study attempts to bring both aspects together from a cohesive perspective. In addition, the study examines primary Persian sources that have not been consulted in existing studies in the field.

Sources and methods

To investigate the claim of "carpet design revolution" critically, and to trace how that claim evolved, this study relies on selected textual and visual sources: primary and secondary. Primary sources include all original texts which were written in Persian, Ottoman Turkish, or Arabic by local historians, scholars, and craftsmen during the period of the study. Secondary sources include all contemporary studies, Persian and non-Persian, which draw on primary

[19] Erdmann, *Oriental Carpets*, 31.

sources to write the history of Persian carpets and explain the theoretical basis of the evolution of their design. Key contemporary studies central to the conceptualisation and articulation of this study have been identified and distinguished from another set of secondary sources that have been useful, but marginal to this study.

Primary sources

Contemporary studies of Persian carpets have identified four Persian sources and one Ottoman source as being most important for the study of Persian carpet history. These include *'Arżih-dāsht* (by Ja'far al-Tabrīzī, 1427-1431), *Osmanli Sarayi'nda Ehl-i Ḥiref (Sanatkârlar) Defterleri* (author unknown, 1526), *Qānūn al-Ṣuvar* (by Ṣādiqī Biyg, 1576-1602), *Gulistān-i Hunar* (by Qāżī Aḥmad Munshī Qumī, 1006-1015 H/1597-1606), and *Taẕkirat ul-Mulūk* (by Rafī' ul-Dīn Ibrāhīm Shīrāzī, Mīrzā Samī'ā and Muḥammad Samī', 1137-1142 H / 1725-1730).

'Arżih-dāsht (Tīmūrīd Report or Petition also known as *the Report*) is the first important primary source. It is kept in Istanbul, Topkapı Sarayı Library (H. 2153, fol. 98a). The *'Arżih-dāsht* is a report by Ja'far al-Tabrīzī, the head of Tīmūrīd Prince Bāysunqur's artistic establishment in Hirāt to his patron, Bāysunqur Mīrzā. It was written approximately between the end of 1427 and the beginning of 1431. In this report, 22 ongoing projects/job titles are mentioned, and 23 artisans named including painters, illuminators, calligraphers, binders, rulers, and chest-makers.

Osmanli Sarayi'nda Ehl-i Ḥiref (Sanatkârlar) Defterleti is the second historical text and it is from the Ottoman court.[20] It is a list of *ehl-i ḥiref* (people of accomplishment or quality) in the Ottoman court and payments in 1526. This source gives important information on large numbers of skilled craftsmen and artists being taken from Tabrīz to Istanbul, as a result of Ottoman rulers conquering Tabrīz several times in the late 15th and early 16th centuries.

Qānūn al-Ṣuvar (Canons of Painting) is the third source. It was written by Ṣādiqī Biyg (1533–1610) between 1576 and 1602. Ṣādiqī Biyg's treatise deals exclusively with technical advice for depicters and comprises general advice about aspects of practice with guidelines for techniques and recipes.[21] In these historical Persian texts, the motifs are categorised as "*haft*

[20] Ismail Hakki Uzuncarsili, (1526) *Osmanli Sarayi'nda Ehl-i Hiref (Sanatkârlar) Defterleti*, Turk Tarih Belgeleri Dergisi (Ankara), (1981-86), vol. 11, no. 15, pp. 23-76.
[21] David J. Roxburgh, "Persian Drawing, CA. 1400-1450: Materials and Creative Procedures," *Muqarnas* 19 (2002): 68, footnote 16.

aṣl-i naqqāshī,"[22] meaning "Seven Fundamental Modes (or Principles) of Decorative Design." They are as follows: *islīmī*, *khatāyī, abr*, *vāq*, *nīlūfar*, *farangī and band-i rūmī*.[23]

The fourth historical text is *Gulistān-i Hunar* (*Rose Garden of Art*), written between 1596 and 1606 by Qāżī Aḥmad ibn Mir-Munshi al-Husayni (925H/1519 - 985H/1577), known in English as "*calligraphers and painters*."[24] In decorative design (*naqāshī),* this source explains, there are seven modes by analogy to the six styles of calligraphy *(khaṭṭāṭī)*. As cited by Thompson, in the section on painters, some of the painters are described as skilled in drawing and painting and others are portraitists.[25]

The fifth important historical text is *Taẕkirat ul-Mulūk* (Memorial for Kings), which is a Persian manual that provides an account of art production and function of the art organisation in the Ṣafavīd court,[26] comprising five parts and 84 chapters. Each chapter is dedicated to a specific occupation and its related organisation. In addition to 84 occupations, it also includes 28 extra professions, which altogether are 112 occupations. It is a complete source of highly ranked occupations and professions in the Ṣafavīd court. For instance, it is mentioned that luxurious handicrafts for the court, including textiles, were produced by two groups of weavers: workshops managed by royal members and private producers.

Secondary sources

Carpet history at present is viewed, generally speaking, from a "Turkocentric" perspective, which focuses on Turkish influences in carpet history.[27] Jon Thompson, Persian and Oriental carpet historian explained that less familiar Tīmūrīd, Turkmen and Mamluk carpets have long been viewed and studied with reference to more familiar Turkish carpets.[28] This view has been

[22] In Persian: هفت اصل نقاشی.
[23] "The Canons of Painting by Sadiqi Bek," translated as an appendix in Dickson and Welch 1981, 1: 259-69.
[24] Qāżī Aḥmad, "calligraphers and painters, A Treatise by Qāżī Aḥmad, Son of Mīr Munshī (circa A.H. 1015/A.D. 1606)," trans. and ed. V. Minorsky, *Freer Gallery of Art Occasional Papers* 3, no. 2 (Washington, D. C., 1959).
[25] Jon Thompson, "Early Safavid Carpets and Textiles," in *Hunt for Paradise: Court Arts of Safavid Iran 1501--1576*, ed. Jon Thompson and Sheila R. Canby (Milan: Skira Editore, 2003), 278. Jon Thompson is a former May Beattie fellow in carpet studies at the Ashmolean Museum of Art and Archaeology and the Khalili Research Centre at the University of Oxford.
[26] Mīrzā Samī'ā and Muḥammad Samī' [Minorsky (1943)], *Taẕkirat ul-Mulūk (Memorial for Kings): A Manual of Ṣafavīd Administration*, ed. Muḥammad Dabīr-sīaqī translated by Masoud Rajabnia, 1955.
[27] Jon Thompson, "Carpets in the Fifteenth Century," in *Carpets and Textiles in the Iranian World 1400--1700*, eds. Jon Thompson, Daniel Shaffer and Pirjetta Mildh (Oxford: The May Beattie Archive at the Ashmolean Museum, 2010), 32.
[28] Thompson made this observation for two reasons in "Carpets in the Fifteenth Century," 32. He explained that the first factor was trading relations which influenced Western awareness of knotted-pile carpets more than any other. The second factor was the survival of mainland Turkey through many centuries of Ottoman rule without major devastation has ensured the preservation in mosques of a more complete record of the country's carpet weaving history than that of any other.

developed under the influence of both art historians and carpet collectors. However, Thompson advised that to change this view, dedicated efforts are required.[29] This is apparent in naming carpet groupings which is sometimes misleading, for example, para-Mamluk carpets or Polonaise carpets.[30]

The background for a history, classification and chronology of carpets goes back to the first half of the 20th century by scholars of the Austro-German school. The leading scholars in the early history of carpet studies were Wilhelm von Bode, Ernst Kuhnel and Kurt Erdmann. Although other scholars later made their way to carpet studies, they generally followed the same lines of argument, mostly confirming and supporting their pioneer colleagues' propositions and findings.[31]

Erdmann was the first scholar to propose the idea of a carpet "design revolution."[32] Erdmann's observations of change in carpet design during the late Tīmūrīd/early Ṣafavīd period were based on Amy Briggs's paper (in two volumes) where she categorised the carpets depicted in Tīmūrīd paintings into two groups: those with geometric patterns, and those with arabesque and flower patterns. [33]

Briggs's two categories of carpets referenced carpet depiction in Tīmūrīd paintings in the 15th century, since there were only a few surviving Tīmūrīd carpets. Briggs also concluded that arabesque and flower cursive designs flourished during the earlier half of the century, supplanting the early and mid-15th-century geometric, all-over, repeat patterns. Briggs believed that "in the 16th century, the monopoly of elaborate cursive designs, often featuring a stressed motif at the centre of the field, is indicated not only by their representation in early Safawid miniatures but also by numbers of well-known extant carpets."[34]

---

[29] Jon Thompson, *Milestones in the History of Carpets* (Milan: Moshe Tabibnia, 2006), 29.
[30] Cailah Jackson in "Persian Carpets and the South Kensington Museum: Design, Scholarship and Collecting in Late Nineteenth Century Britain," *Journal of Design History* 3 September (2017): 273, used Eurocentric. She wrote "Although classificatory terms continue to pose challenges in many areas of Islamic art scholarship, the continued use of Eurocentric terminology in carpet scholarship, such as 'Polonaise', or 'Holbein,' reflects the comparative lack of scholarly engagement with carpet historiography and the concurrent close involvement of the market and connoisseurs in the evaluation of such material." For further reading please see the proceeding of the two-day symposium held at the Courtauld Institute of Art and the National Gallery, London, in June 2019.
[31] For more information see: Thomas J. Farnham, "From Lessing to Ettinghausen, The First Century of Safavid Carpet Studies," *Hali December* (2007); Kurt Erdmann, *Seven Hundred Years of Oriental Carpets*, trans. May H. Beattie and Hildegard Herzog (London: Faber and Faber, 1970), 36-38; Thompson, "Early Safavid Carpets and Textiles," 271-72.
[32] Erdmann, *Oriental Carpets*, 31-33.
[33] Amy Briggs, "Timurid Carpets I. Geometric Carpets," *Ars Islamica* 7/1 (1940): 20-54; and Amy Briggs, "Timurid Carpets II. Arabesque and Flower Carpets," *Ars Islamica* 11/12 (1946): 146-158.
[34] Briggs, "Timurid Carpets II," 146.

Erdmann also followed Briggs' method based on carpet depictions in Persian paintings during the Tīmūrīd period. Erdmann, in *Oriental Carpets: An Account of their History* and *Seven Hundred Years of Oriental Carpets* explained his idea of "design revolution."[35] Thompson and Denny, two main contemporary Oriental rug historians, argued against Erdmann's design revolution idea.

Erdmann's proposition has three core aspects. The first aspect concerns the designers and the design production method. He believed that there was an influence of miniature painters on designing the carpet cartoons which resulted in transferring the elements of the art of the book into rugs.[36] These two issues raise questions that are central to this study. One is who were the potential carpet designers before and during the Ṣafavīd period? Denny believed that carpet weavers in Anatolia and Iran adapted their designs from other artistic media, such as architectural decoration and book illumination.[37]

The second aspect of Erdmann's "carpet design revolution" concerns unpacking what he meant by changes in design—a key aspect of my study. These changes will be detailed later but here Erdmann's sources are important, because he was the first to clarify that "instead of cross, star and rosette, appear medallions and vines with blossoms and arabesque leaves." He wrote: "in place of subdivision into small-scale rows or large-scale rectangles there are compositions which accentuate the middle of the field."[38] He further explained: "the still prevailing geometric character of the individual forms, the similarity in scale of the elements employed, their arrangement in endless rows [which he believed all were important for the patterning of a carpet] - vanishes and makes way for new forms, principally floral ones, which are arranged in what appears to be a finite grouping about the field's centre."[39] Some of the changes he mentioned are related to motifs and others to structure of carpet design. This has not been carefully studied separatedly by the scholars.

The third core aspect of Erdmann's proposition concerns technical change in carpet making. He said that the design revolution took place following new technical possibilities within production centres in the cities, which happened in Persia during the 15th century.[40] He

[35] Erdmann, *Oriental Carpets*, 31-33, under the heading of Revolutionization of the design. The book was written in German in 1959 and translated and published in English in 1960; and Erdmann, *Seven Hundred Years of Oriental Carpets*, 24-26. The book was written in 1966 in German, translated into English in 1968 and published in 1970. These are two examples of his latest books, translated into English and published. His book "Formenwelt", written in German, is still unpublished.
[36] Ibid, 26. Cartoon is a drawing which was used as guide for a weaver to follow.
[37] Walter Denny, *How to Read Islamic Carpets* (New York: The Metropolitan Museum of Art, 2014), 58.
[38] Erdmann, *Oriental Carpets*, 31.
[39] Ibid, 31.
[40] Ibid, 31.

stressed "this is a complete change of style,"[41] and in "about 1500 this process seems to have been completed and the designs depicted in later miniatures are found in actual carpets."[42] Thompson was not convinced that there was a "technical" revolution in carpet production that engendered design change in the sense claimed by Erdmann.[43]

The weaving technique of pile carpets mostly depends on the structural elements, the warp, the weft and the knot. The warp and the weft shape the foundation of the carpet and piles sit on this foundation in form of knots which vary in type, technique, and density. This technical aspect is not central to my study and they do not directly deal with carpet design. Furthermore, there are not a good number of carpets or direct historical sources to evidence the technical aspect of carpet making before the Ṣafavīds. However, since some factors impact design of a carpet, they will be discussed briefly where relevant, for instance, in part III, to observe what the fashion in carpet history during the 17th century was.

Thompson and Denny have made reference to surviving examples of Ṣafavīd carpets, including several influential propositions that shaped the ways in which Persian carpets have been studied. Thompson reviewed the history of carpet weaving during the 15th and 16th centuries in his chapter called "Early Safavid Carpets and Textiles."[44] Denny proposed two significant ideas in his chapter called "Anatolia, Tabriz, and the Carpet Design Revolution," and *How to Read Islamic Carpets*.[45]

Regarding Tīmūrīd carpets, in the absence of surviving examples Thompson relied on Tīmūrīd paintings and other available historical evidence. He identified few primary sources including *calligraphers and painters*, *Taẕkirat ul-Mulūk*, Tīmūrīd *'Arżih-dāsht* and *Osmanli Sarayi'nda Ehl-i-Hiref*. The first three sources are in Persian while the latter is Ottoman Turkish.

Thompson explained the importance of carpet production during the first half of the Ṣafavīd dynasty, the transformation of art, and carpet industry culture from the Turkmen (Āq-Quyūnlū) to Ṣafavīd period including art organisation in the Ṣafavīd court, carpet design methods, carpet designers and background to preparing carpet designs and cartoons for carpet weaving during the Ṣafavīd dynasty.

Denny in his book, *How to Read Islamic Carpets*, gave us valuable information. He proposed that the design revolution, "probably occurred between Tabriz and Ushak, the Āq-

[41] Erdmann, *Seven Hundred Years of Oriental Carpets*, 26.
[42] Ibid, 26.
[43] Thompson, "Carpets in the Fifteenth Century," 38.
[44] Thompson, "Early Safavid Carpets and Textiles."
[45] Denny, "Anatolia, Tabriz;" and Denny, *How to Read Islamic Carpets*.

Quyūnlū and the Osmanlı, at least as early if not earlier in the western and central parts of the central Islamic lands than in the east in Herat."[46] Denny considers both Ṣafavīd and Ottoman carpets and he focuses more on the depiction of Turkish carpets in European paintings such as those painted by Holbein and Lotto and are known by the name of their artists. But he suggested that many of the earliest carpets in weaving traditions that we assign separately to Iran and Anatolia today may have shared a common ancestry.[47]

Other studies

There are some authors whose works are selected among secondary references that support the main argument of this study. They are Necipoğlu, Golombek, Thackston, Roxburgh, Lentz and Lowry and Azhand.

Gülru Necipoğlu, a leading historian of Islamic art and architecture, brings theories of ornament together and explains the aesthetic of Islamic patterns.[48] Her book *The Topkapı Scroll – Geometry and Ornament in Islamic Architecture*, discusses the Topkapı Scroll, housed in the Topkapı Palace Museum, discovered in 1986.[49] Necipoğlu described the scroll which is a useful source for ornamental patterns probably made during the Ṣafavīd dynasty towards the end of the 15th century and beginning of the 16th century in Iran. It is likely that the Topkapı Scroll was compiled in Tabrīz, which served as a major cultural capital under the Ilkhānīds, the Qārā-Quyūnlū, and the Āq-Quyūnlū Turkmen dynasties, as well as the early Ṣafavīds.[50] Necipoğlu's book begins with geometric arabesque and continues to vegetal arabesque patterns in part three, the most relevant ornamental pattern for Ṣafavīd carpet design. The background to these vegetal or floral patterns reviewed by Necipoğlu helps to examine whether there was a revolution or only an evolution in Persian carpet design during this period. In part 3, Necipoğlu cites Pope's claim that the Ṣafavīd period represented the "ultimate triumph of the floral style" in Iran.[51]

---

[46] Denny, "Anatolia, Tabriz," 65. Thompson (*Milestones in the History of Carpets*, 92) commented on Denny's opinion that "I propose to show that this went beyond the "Tabriz-Istanbul Axis." Developments in the arts of the Ottoman world in the 15th century were part of a stream of artistic ideas flowing westwards from central Asia via Iran – including Herat, central Iran and Tabriz – to Anatolia …. That is to say the commercial looms of Ushak responded independently to the influx of new ideas and were not being driven by the demands of the court where the new ideas produced quite different results.

[47] Denny, "Anatolia, Tabriz," 59.

[48] Gülru Necipoğlu has been Aga Khan Professor and Director of the Aga Khan Program for Islamic Architecture at Harvard University's Department of History of Art and Architecture.

[49] Gülru Necipoğlu, *The Topkapı Scroll – Geometry and Ornament in Islamic Architecture* (Santa Monica: The Getty Centre for the History of Art and Humanities, 1995).

[50] Ibid, 37-38.

[51] Arthur Upham Pope and Phyllis Ackerman, Ed., *A Survey of Persian Art from Prehistoric Times to the Present* in six vols. (London: Oxford University, 1938-1939), vol. 3: 2756-2763.

Lisa Golombek's book, *The Timurid Architecture of Iran and Turan* (1988) is the primary reference work for architecture in the Tīmūrīd period (15th century). In her paper "The Draped Universe of Islam," in proposing the idea of "textile mentality" in the Islamic world, Golombek hypothesised that "the heightened importance of costume and the preference for soft furnishings made the development of textiles practically a cult."[52] The pre-eminence of textiles also helps to explain why it was possible, and perfectly acceptable, in Islamic art for different media "to share the same decorative treatment -- why it is that bookbinding, wood carving, architectural faience, and Koran pages all look like carpets?"[53] This questions Erdmann's position that new styles in carpet design and medallions are the result of artists of the art of the book being responsible for carpet design. Although it seems that Golombek never read Erdmann's publications.

David J. Roxburgh, a leading expert on Persian albums and the art of the book, discussed and explained this diversity, and he demonstrated convincingly that to look closely at the practice of album making is to open a vista to a culture of thought about the Persian art tradition. Roxburgh in *The Persian Album, 1400-1600: From Dispersal to Collection*, examined portable art collections assembled in the courts of Greater Iran in the 15th and 16th centuries.[54] Made by or for rulers, princes, courtiers, artists, and calligraphers, albums were created to preserve and display art, yet they were conceptualised in different ways.

Wheeler M. Thackston, an orientalist and distinguished editor and translator of numerous Chaghatai, Arabic and Persian literary and historical sources, wrote two major works, namely *Album Prefaces and Other Documents on the History of Calligraphers and Painters* and *A Century of Princes: Sources in Tīmūrīd History and Art*.[55] Thackston focuses mainly on the translation and annotation of Persian historical documents from the 15th and 16th centuries including *'Arżih-dāsht*. Studying these documents is important to understand and collect historical sources in order to analyse the main arguments in this study.

Thomas W. Lentz and Glenn D. Lowry, both art historians and museum curators, co-wrote *Tīmūr and Princely Vision: Persian Art and Culture in the Fifteenth Century*.[56] Their

---

[52] Golombek, "The Draped Universe of Islam," 36.
[53] Ibid, 36.
[54] David J. Roxburgh, *The Persian Album, 1400-1600: From Dispersal to Collection* (New Haven: Yale University Press, 2005).
[55] Wheeler M. Thackston, *Album Prefaces and Other Documents on the History of Calligraphers and Painters* (Leiden: Brill, 2001); and Wheeler M. Thackston, *A Century of Princes: Sources in Tīmūrīd History and Art* (Massachusetts: Cambridge, 1989). Wheeler M. Thackston, former Professor of the Practice of Persian and other Near Eastern Languages at Harvard's Near Eastern Studies department.
[56] Thomas W. Lentz and Glenn D. Lowry, *Tīmūr and the Princely Vision: Persian Art and Culture in the Fifteenth Century* (Los Angeles: Los Angeles County Museum of Art, 1989). Thomas W. Lentz is former

book focuses on Persian art and culture during the time of the Tīmūrīds. It is an excellent source for understanding art organisation and how artists were working together in *kitābkhānih,* especially chapter three where they used *'arżih-dāsht* and other historical texts to interpret Tīmūrīd art organisation.

Yaqub Azhand, a Persian speaking scholar, who wrote *Seven Decorative Principles of Iranian Art*," focuses on the history of Persian traditional motifs known as "*Haft Aṣl-i Naqqāshī*."[57] Although his discussions do not focus on the change in design, he contributed to knowledge of historical sources about the chronology of Persian decorative patterns. He also wrote two papers: "Art Education and Patronage during the Shāhrukh Reign" and "Art Atelier during the Reign of Sultān Ḥusayn Bāyqarā," which carefully details 15th century art organisation.[58]

Visual sources

Although this study is not reliant on the examination of visual sources, miniature paintings and illustrations aid discussions and support textual analyses. Visual sources are mostly Persian paintings (depicting carpets in Persian paintings) and objects (carpets). Other media shares the same surface decoration as carpets, for example, architectural ornaments.

Persian paintings

Carpets depicted in Persian paintings show meticulous attention to detail. They are sources for understanding carpet design during the Tīmūrīd and Ṣafavīd periods. They also give information about how they were arranged on the floor and used in courts and daily life. Erdmann stated that representations of carpets in paintings are the most important source of information for the 14th and 15th centuries (Figure 1).[59] With their help we gain a broader view and these few surviving originals can be classified. Erdmann also indicated that Oriental paintings are more faithful than European paintings in representing carpets.[60]

curator at the Rhode Island School of Design Museum in the Asian Art department and currently the curator at Los Angeles County Museum of Art in Egyptian, Islamic, and West Asian art. Glenn D. Lowry is director of the Museum of Modern Art in New York City.

[57] Yaqub Azhand, *Seven Decorative Principles of Iranian Art (Haft Aṣl-i Taz'īnī-yi Hunar-i Iran)* (Tehran: *Paykarih*, 2014). Yaqub Azhand, Professor in the School of Visual Arts, University of Tehran.

[58] Yaqub Azhand, "Art Education and Patronage during the Shāhrukh Reign (*Hunar-parvarī va hunarvarī dar duriy-i Shāhrukh*)," *Faculty of History's Journal of Tehran University*, 3 (2002) and Yaqub Azhand, "Art Atelier during the Reign of Sultān Ḥusayn Bāyqarā (*Kārgāh-i Hunari-yi Sultān Ḥusayn Bāyqarā*)," *Hunarhay-i Ziba*, 12 (2003).

[59] Erdmann, *Seven Hundred Years of Oriental Carpets*, 21.

[60] Ibid, 24.

But Thompson reminds us there was a likely time-lag between actual carpet production and depiction in paintings, and that we should not assume that Persian painters provide the same quality of evidence as the almost photographic representations of carpets in some European paintings.[61]

Some painters' names appear more than others as candidates for carpet design such as Bihzād and Mīr Siyyid 'Alī. Erdmann's theory of carpet design, discussed above, relied heavily on information provided in Bihzād's paintings.[62]

Figure 01. Miniature from Niẓāmī attributed to Bihzād, ca. 1493.
London, British Museum. (Denny, Walter. *How to Read Islamic Carpets*. New York: The Metropolitan Museum of Art, 2014, 64))

European paintings

Some carpets depicted in European paintings are Turkish carpets. Other groups of surviving carpets also documented by European paintings include Mamluk carpets from Egypt.[63] But there is a group of carpets known as para-Mamluk or *tapedi damaschini* carpets which are related to the Iranian Āq-Quyūnlū court of Western Iran in the 15th century.

Drawing albums

A surprisingly large number of Persian drawings exist today simply because, beginning in the 15th century, they were bound into albums, mostly known as the Istanbul and Berlin Albums.[64] Together they contain the largest shared collection of extant drawings worldwide. The main examples are held in three albums in Istanbul[65] (H. 2152, H. 2153, and H. 2160, all in the Topkapı Palace Library) and drawings from the Diez Album[66] in Berlin (Diez A, fols. 70-74, Staatsbibliothek, Preussischer Kulturbesitz [hence-forth, SPK]).

---

[61] Thompson, "Carpets in the Fifteenth Century," 35.
[62] Ibid, 35.
[63] Denny, *How to Read Islamic Carpets*, 64.
[64] For more information on the Istanbul Albums see Filiz Çağman, "On the Contents of Four Istanbul Albums H 2152, 2153, 2154 and 2160," *Islamic Art 1* (1981): 31-36; and for more information on the Berlin Albums see Julia Gonnella et al., *The Diez Albums: Contexts and Contents* (Lieden: Brill, 2016).
[65] The three Istanbul Albums still lack published catalogues. References to drawings in the Bāysunqur album (H. 2152), by folio and number, are derived from David J. Roxburgh, "Our Works Point to Us: Album Making, Collecting, and Art (1427--1565) under the Tīmūrīds and Ṣafavīds," three vols., PhD. diss., University of Pennsylvania, 1996, vol. 3, "Catalogue: Album H. 2152," 644-770.
[66] For a catalogue of the Diez Album drawings, accompanied by many illustrations, see M. S. Ipsiroglu, Saray-Alben: Diez'scheKlebebdndeaus den Berliner Sammlungen (Wiesbaden: Franz Steiner Verlag, 1964).

H 2153 and H 2160 were called “Fatih Album” or “the Āq-Quyūnlū Ya‘qūb Beg Albums”, H 2152 was called “The Bāysunqur Album” and H 2154 was prepared for “Baharām Mīrzā (Son of Shāh Ismā‘īl) and was called “The Baharām Mīrzā Album. *‘Arżih-dāsht*, one of the historical texts (Hirāt, c. 1427-28, ink on paper, 46 x 13.5 cm) is also in H. 2153, f. 98a, Topkapı Sarayı Library. These drawings, believed to have been made in the early 15th century in Hirāt or Shīrāz, are clearly in the manner of the new style bookbinding that appeared at this time. The new style features animals (both real and imaginary), trees and lifelike plants.[67]

Objects

As mentioned earlier, Erdmann stated that representations of carpets in paintings are an important source of information for the 14th and 15th centuries, but he added that after 1500 the situation is reversed.[68] From this period, we possess original carpets in greater numbers and their representations in pictures do not provide us with much new information that is unknown. Nevertheless, they are still of value for the chronological arrangement of material, since the carpets themselves are dated only in rare instances.

These carpets are kept in museums and private collections worldwide which are available for design analysis. Our heritage of Persian rugs from the Ṣafavīd dynasty, known as the Golden Age of Iranian art, constitute about 1500 to 2000 historical pieces attributed to this era. Nonetheless, only 200 of them are considered masterpieces.[69] One of the finest and best known Ṣafavīd rugs is the Ardabīl carpet in the Victoria and Albert Museum and its somewhat fragmentary companion in the Los Angeles County Museum.[70]

Limitations and contributions

The study is geographically limited to Iran within its current geographic boundaries. The period is limited to late Tīmūrīd and Turkmen dynasties and the Ṣafavīd period (1501--1722 CE). This study focuses exclusively on Persian carpet design but in order to understand this design,

[67] Thompson, “Early Ṣafavīd Carpets and Textiles,” 279.
[68] Erdmann, *Seven Hundred Years of Oriental Carpets*, 21.
[69] Cecil A. Edwards, *The Persian Carpet: A Survey of the Carpet-Weaving Industry of Persia* (London: Duckworth, 1975).
[70] M.S. Dimand, “Safavid Textiles and Rugs,” in *Highlights of Persian Art*, eds. R. Ettinghausen & E. Yarshater (Colorado: Westview Press, 1979).

neighbouring empires, in particular, the Ottoman and Mamluk Sultanates, will be considered.[71] Carpet design is the focus of this study and other aspects of carpet making such as weaving techniques, materials, and the dyeing process are not considered unless it contributes to a wider understanding of carpet design. As previously explained, the sources used in this study constitute limited sets of primary and secondary sources.

The contribution of this study is to bring a holistic perspective and build a theoretical framework of Ṣafavīd carpets, incorporating a few key authors as relevant. This study will bring together their ideas and present a better reading of the history of Persian carpets. Therefore, the outcome of this research will be useful for art historians of Ṣafavīd art and specifically Persian carpets. Given that carpet study is a new field at the academic level, as I was among the first graduates in the "carpet expert field" in 2004, scholarly materials are limited for students and instructors. This study aims to contribute to the discipline in Iran.

Thesis structure

This study deals with "Continuity and Change in Persian Carpet Making during the Ṣafavīd Period." It focuses on the examination of Persian carpets from a chronological perspective. Ṣafavīd carpets are not the same overall and change during that era is related to history and society at that time. They are presented differently across centuries as each century is related to a particular school. The 17th century, however, is as important as the 15th and 16th centuries.

Therefore, this study has been divided into three parts organised chronologically, 15th, 16th and 17th centuries, with each corresponding to a school named after a capital city. Part I, Hirāt School: Origin (15th Century), Part II, Tabrīz School: Transition and continuity (16th Century), and Part III, Iṣfāhān School: Variation (17th Century). An exception to this structure is the Turkmen rule of Qārā-Quyūnlū and Āq-Quyūnlū in the 15th century, because the centre of art production during their rule was north-west of Iran in Tabrīz. Specifically, Hirāt was the capital of Tīmūrīd in the 15th century and this period is considered as the origin of Ṣafavīd carpet design. The capital moved to Tabrīz in the 16th century and carpet design changed gradually. I refer to this period as the transition century. In the 17th century, the Iṣfahān School completed the change in variation of Ṣafavīd carpet designs based on trading.

Each part is divided into two chapters. Chapters 1, 3 and 5 deal with history, art in general, the artists and their practice. In these chapters, potential carpet designers are discussed,

[71] Thompson in the first chapter of his book, *Milestones in the History of Carpets*, interpreted the powers of Islamic lands in the 15th century as: Tīmūrīds, the power in the east; the Turkmen, the middle kingdom; the Mamluks, the power in the south; and the Ottomans, the power in the west.

how they worked in the workshops and their methods of design. Chapters 2, 4 and 6, discuss carpet design, clearly divided into patterns or motifs, and structure and layout. This is followed by the Conclusion which is the summary of the research focusing on the “continuity” and “change” in carpet production during the Ṣafavīd period.

PART I The Hirāt School: Origin (15th Century)

Chapter 1. Hirāt School: Culture of Carpet Making

At the beginning of the 15th century, there were three dominant powers in the Islamic world: the Ottoman Sultanate, already established in the Balkans and expanding westwards into Europe; the ailing Mamluk Sultanate which ruled in Egypt, Palestine and Syria; and the Tīmūrīd Emirate to the east, a powerful and aggressive community based in central Asia under the leadership of Tīmūr. As the century progressed, a fourth contender emerged in eastern Anatolia: the Turkmen.[72] Part I focuses on Tīmūrīds and the culture of carpet making that flourished under their rule. The rise of the Turkmen and their culture of carpet making will be discussed in Part II as it is related more to the Tabrīz school, even though it flourished concurrently with the Tīmūrīds in the 15th century.

1.1 City and society

Tīmūr swept aside local dynasties from Baghdad to the borders of China, and the Hirāt oasis became merely one of the districts of his vast empire, although as the capital of Khorasan it was one of the most important. Tīmūr's capital was Samarqand, and it was only upon his death in 1405 that his son Shāhrukh, then governor of Hirāt, established it as the capital of his own empire. Under Shāhrukh (r. 1397-1447) the Tīmūrīd Empire was divided into semiautonomous provinces administered by members of the Tīmūrīd family, who were appointed by Shāhrukh himself. While Tīmūr's empire had been leader-focused in character, Shāhrukh's was more of a family affair.[73] It comprised most of Iran, Afghanistan and Turkestan, including Transoxiana (Figure 1-1). The Tīmūrīds could not control Āzirbāyjān for long, which fell instead to the Qārā-Quyūnlū and Āq-Quyūnlū Turkmen, who capitalised on the weaknesses of Shāhrukh's successors to seize more and more of western Iran.[74]

Shāhrukh's time in the first half of the 15th century, was the first period of Hirāt as a stable capital during the era of Tīmūrīd Empire. Yaqub Azhand, Persian art scholar, suggested moving the capital to Hirāt, already one of the oldest centres of Islamic civilisation, which played an important role in shaping a new direction in the Tīmūrīd period.[75] But it was during Sulṭān Ḥusayn's 38-year reign (r. 1469-1506) that Hirāt reached its peak. It was the most refined city in Asia, the centre of Persian and Turkish culture, and the capital of a

[72] Jon Thompson, *Milestones in the History of Carpets* (Milan: Moshe Tabibnia, 2006), 19.
[73] Terry Allen, *Timurid Herat* (Wiesbaden: Reichert, 1983), 15.
[74] Ibid, 15.
[75] Yaqub Azhand, "Art Education and Patronage during the Shāhrukh reign (*Hunar-parvarī va hunarvarī dar duri-yi Shāhrukh)*," *Nashrīyi-yi Takhaṣṣuṣī-yi Guruh-i Tārīkh, Dānishgāh-i Tehran* 3 (2002): 78.

prosperous province. Sulṭān Ḥusayn's age saw Hirāt expand, almost reaching practical limits of irrigation and probably population.[76]

Figure 1-1. Map of the Tīmūrīd world.
(Thackston, Wheeler. A Century of Princes: Sources in Timurid History and Art (Massachusetts: Cambridge, 1989, vii)

In 1470, Sulṭān Ḥusayn Bāyqarā restored stability to the remnants of the Tīmūrīd Empire, which by then extended beyond Khurasān. The rest of the empire to the west had fallen to the Qārā-Quyūnlū and later, the Āq-Quyūnlū. Hirāt remained the cultural capital of the East, in spite of the decreasing fortunes of the Tīmūrīd court.[77] However, the successful period of Hirāt's history ended badly, since Sulṭān Ḥusayn's sons did not unite to protect Hirāt, which they had recently inherited. As a result, Shaybānī Khān, the Uzbek leader, conquered Hirāt within a short period of time after Sulṭān Ḥusayn's death.[78]

1.2 The Tīmūrīds: Cultural background

Although Tīmūrīd heritage of Turco-Mongol influenced the military and administrative organisation of the dynasty, social attitudes, the legal system, and historical point of view, it is difficult to describe how these beliefs affected the culture and art of this era.[79] We know little about what artists of the Turco-Mongol heritage wanted to say through their works of art, and we are also not aware of the influence of Turco-Mongol art on the arts of the Ilkhānīd and less-studied Chagatai Mongol dynasties in Iran and Central Asia.[80] Although Tīmūrīd culture preserved particular aspects of the dynasty's native ethnic qualities, still they were directed in a way to be in line with dynastic aims.[81] Therefore, the new dynastic art of the Tīmūrīds was the result of a combination of cultures from both Turco-Mongol Central Asia and China. And yet, Islamic Iranian cultural tradition had the most influence on its formation.[82] In spite of the fact that non-Muslim traditions of Turco-Mongol Central Asia

[76] Allen, *Timurid Herat*, 15-16.
[77] Lisa Golombek and Maria Subtelny, *Timurid Art and Culture: Iran and Central Asia in the Fifteenth Century* (Leiden: E. J. Brill, 1992),10.
[78] Allen, *Timurid Herat*, 15-16.
[79] Thomas W. Lentz and Glenn D. Lowry, *Timur and Princely Vision: Persian Art and Culture in the Fifteenth Century* (Los Angeles: Los Angeles County Museum of Art, 1989), 230.
[80] Ibid, 230.
[81] Ibid, 230.
[82] Ibid, 160.

changed to match the structure of Iranian Islamic culture, these traditions were still powerful enough to be pillars of Tīmūrīd rule.[83]

The Tīmūrīd aesthetic nature, which had a dramatic quality, was a prominent aspect in decorations in royal tents, cloth enclosures and wall hangings. Unfortunately, however, no existing fragments remain (Figure 1-2).[84] Clvijo and Sharaf ul-Dīn ʻAlī Yazdī offer firsthand accounts of Tīmūr's tents and camps that show them as being full of architectural decoration, rather than being the mere means of nomadic life.[85] Under the Tīmūrīds, the tradition of putting up royal tents in the Middle East met with a similar tradition that belongs to Turks and Mongols of central Asia. This tradition consisted of creating artistically complex and extravagant decorations for tents.[86]

Tīmūr, after conquering a city, treated skilled craftsmen as the "living booty" of war and they were put to work on projects. The result was a massive gathering in Samarqand of artistic talents from all corners of the Muslim world.[87] In 1411, Ulugh Biyg decided to release from Samarqand those craftsmen who had been captured and put them to work. This was "an event of great significance for the history of 15th century art in the Near East."[88] A large number of the Islamic world's finest craftsmen were looking for work at the same time. The consequences of this artistic diaspora were far-reaching, and the work of some of those who left Samarqand is still visible today in structures and objects surviving from that time. "It seems highly likely that this dispersal contributed to the spread of a fashionable artistic taste that has become known as the 'international Tīmūrīd style.'"[89]

Figure 1-2**.** "Majnūn at the Kaʻba" (detail).
From a *Khamsih* of Niẓāmī, Hirāt, dated A.H. 849 (A.D. 1445-46) (Lentz, Thomas W. and Lowry, Glenn D., *Timur and Princely Vision: Persian Art and Culture in the Fifteenth Century*. (Los Angeles: Los Angeles County Museum of Art, 1989, 219, cat. no. 32)

[83] Ibid, 230.
[84] Ibid, 219. A *sarāpardih* (cloth enclosure) is depicted in a double-page garden scene (c. 1480) probably executed at Hirāt and now a part of the *Muraqqa'-Gulshan* in the former Imperial Library, Tehran (as noted in Lentz and Lowry, *Timur and the Princely Vision*).
[85] Ibid, 219.
[86] Ibid, 219. Lentz and Lowry cited it as P. A. Andrews, "The Tents of Timur: An Examination of Reports on the Quriltay at Samarqand, 1404," in *Arts of the Eurasian Steppelands*, ed. Philip Denwood, Colloquies on Art and Archaeology in Asia, no. 7 (London: University of London, School of Oriental and African Studies, Percival David Foundation, 1977), 144.
[87] Thompson, *Milestones in the History of Carpets*, 21.
[88] Ibid, 21.
[89] Ibid, 21.

While it was unusual for artisans to be sent to different places, a small number voluntarily worked under advantageous conditions in other art centres. There is evidence of the voluntary migration of artisans mid-century to the west and to the Ottoman court, which was becoming rich, successful and powerful at that time. As a result, Persianate artistic ideas infused with Ottoman art and this process continued into the 16th century. In addition to this, artists were sometimes captured and forced to move to a new place to work; an example of this occurred at the battle of Bashkent in 1473, when the Ottoman army of Sultan Mehmet II defeated Ūzūn Ḥasan Āq-Quyūnlū.[90]

Previous examples of Tīmūrīd ateliers (*Kitābkhānih)* and the categories established are apparent. One example is recorded by Dūst Muḥammad in his *Preface to the Bahrām Mīrzā Album* (1544), where he described this process as "chains of transmission" between master and pupil.[91] The fact that painting and other arts were understood through shared ideas by Ilkhānīd, Jalāyirīd and Tīmūrīd artists proves that the said artists had a common artistic lineage. Timurid artistic ambitions and productions were fueled through the working together of experienced artists whose work was mainly state-sponsored.[92]

In 1420/823, when Shahrukh and his third son, Bāysunqur, made the Turkmen ruler, Qārā-Yusuf Qārā-Quyūnlū leave Tabrīz, Tabrīz style reached Hirāt. Bāysunqur Mīrzā brought several masters of manuscripts from Tabrīz to Hirāt. In *Taẕkirat ul-Shu'arā (Memoirs of the Poets),* Dulatshāh Samarqandī (842-900/1438-1494) mentioned:[93]

> His Highness Bāysunqur Mīrzā had Master Siyidī Aḥmad the painter, Khājih 'Alī the portraitist and Master Qavām ul-Dīn the bookbinder brought from Tabrīz and ordered that after the pleasing manner of Sulṭān Aḥmad of Baghdad's miscellany, they should produce a book in exactly the same format and layout and with the same scenes depicted. The copying of it was given into the charge of Mulānā Farīd ul-Dīn Ja'far. The binding was commissioned of the aforementioned Master Qavām ul-Dīn, by

[90] Jon Thompson, "Carpets in the Fifteenth Century," in *Carpets and Textiles in the Iranian World 1400--1700*, eds. Jon Thompson, Daniel Shaffer and Pirjetta Mildh (Oxford: The May Beattie Archive at the Ashmolean Museum, 2010), 33.
[91] Dūst Muḥammad (Guvāshānī Hiravī), "Preface to the Bahrām Mīrzā Album [Istanbul, TSM. 2154, fol. 15a]," in *Album Prefaces and Other Documents on the History of Calligraphers and Painters*, Wheeler M. Thackston (Leiden: Brill, 2001), 13.
[92] Lentz and Lowry, *Timur and the Princely Vision*, 165.
[93] Dulatshāh Samarqandī was a Tīmūrīd poet and biographer during the reign of Sulṭān Ḥusayn and Mīr 'Alī Shīr Navāyī and his book is as follows: Dulatshāh Samarqandī, *Taẕkirat ul-Shu'arā* 1487, ed. Edward Brown in 1900, (Tehran: Asatir, 2003), 257.

whom inlay in bindings was invented; and Mīr Khalīl was put in charge of decoration and depiction of scenes.[94]

This immigration was a century before they moved from Hirāt to Tabrīz court during the 16th century. The artists who worked in Tabrīz court at this time were mostly brought from Hirāt, which greatly affected the outcomes of the workshops.

1.3 International relations

Another point which affected Tīmūrīd art is the relationship with other countries. Azhand stated the importance of Shāhrukh patronage of agricultural sources, commercial policies and the relationship with foreign royal courts, which improved Tīmūrīd reputation and opened commercial trade routes to other countries. This relationship with foreign royal courts continued during the reign of Safavid kings. For example, Shāhrukh had political relations with Ottoman sultans and improved his commercial trading with India and Egypt.[95] It is reported that Turkish and Persian poets gathered in palace of Shāhrukh, Sulṭān Ḥusayn Bāyqarā and his son Badī‘ al-Zamān in Hirāt.[96] Luxury cloth from Ottoman Turkey, India, and even Europe was also known at court, but none competed in royal Tīmūrīd textile production with its overwhelming impact of Chinese decorative motifs.[97]

Both Tīmūrīd and Ming histories show that Chinese silk were used in court, and its arrival as ‘diplomatic gifts’ is recorded in the cities of Hirāt, Samarqand, Shīrāz and Iṣfahān.[98] During Shāhrukh’s reign political and commercial relations between Iran and Ming dynasty experienced a new phase and consequently affected their artistic relations.[99] Embassies were exchanged between the Tīmūrīds and Ming China on a fairly regular basis.

---

[94] The English translation is from Wheeler M. Thackston, *Album Prefaces and Other Documents on the History of Calligraphers and Painters* (Leiden: Brill, 2001), 13. The Persian original text is from Dūst Muḥammad, “Preface to the Bahrām Mīrzā Album,” and the text is as follows:
و حضرت بایسنغر میرزا استاد سیدی احمد نقاش و خواجه علی مصور و استاد قوام الدین مجلد تبریزی را از تبریز آورده فرمود که بر اسلوب مرغوب جنگ سلطان احمد بغداد بهمان دستور قطع و مسطر و مواضع تصویر بعینها کتاب ترتیب دهند و کتابت ان بعهده حضرت مولانا فرید الدین جعفر شد، و جلد را در تعهد استاد قوام الدین مذکور که منبت کاری در جلد اختراع اوست فرمود. و تزیین و تصویر مواضع انرا میر خلیل متعهد گردید.

[95] Azhand, “Art Education and Patronage during the Shāhrukh Reign,” 78.

[96] Lale Uluç, “The Common Timurid Heritage of the Three Capitals of Islamic Arts,” in *Istanbul, Isfahan, Delhi: Three Capitals of Islamic Art - Masterpieces from the Louvre Collection* (Istanbul: Sakip Sabanci Museum, 2008), 43.

[97] Lentz and Lowry, *Timur and the Princely Vision*, 217. Lentz and Lowry referred to the Ma’athir-i Maḥmūd Shāhī, the Sulṭān of Malwā sent these fabrics and other gifts in 1467 to the Tīmūrīd prince Abu-Sa‘īd; see Iqtidār Ḥusayn Ṣiddiqui, “Influence and Prestige of the Sultan of Delhi in India and the Neighbouring Countries, with special reference to Central Asia -- Fifteenth Century,” *Central Asiatic Journal* 29, nos. 1-2 (1985): 110.

[98] Ibid, 217.

[99] Azhand, “Art Education and Patronage during the Shāhrukh Reign,” 78-9.

After Tīmūr's death, the first Chinese embassy to Shāhrukh arrived in Hirāt in 815/1412.[100] The second embassy arrived in Rabī' I 820 (April 1417): "with three hundred horsemen and gifts and presents sent by the Emperor of China consisting of falcons, brocades, velvets, silks, porcelain vessels, Chinese paper, etc."[101]

A third embassy from Ming China arrived in Hirāt in Ramadan 822 (October 1419), and the embassy to which Ghīyāth ul-Dīn Naqqāsh was attached seems to be a reciprocal legation, departing some two months later.[102] Shāhrukh commissioned Ghiyāth ul-Dīn, the painter to China, and his report contains his careful observation of visual arts of the Ming dynasty.[103] He established with Khājih that, from the day they departed the capital Hirāt until the day they returned, they would record in the pages of their notebooks, without addition or deletion, all of what they had witnessed: events, condition of roads, construction of towns, description of garrisons, situations of buildings, conditions of kings, and so on.[104]

Even though the relationship with China during Shāhrukh's reign lasted only a short time, it conveyed a new wave of Chinese-influenced motifs in Tīmūrīd art.[105] The unprecedented artistic and cultural needs of the Tīmūrīd era were met through the blending of different cultural and imaginative trends from Islamic Iran, China and Turco-Mongol sources.[106] Tīmūrīd rulers considered native artistic forms and themes prevalent in Iran as their priorities, since those forms corresponded more readily with political circumstances and conditions after Tīmūr's death.[107] The visual language of the times was dominated by Islamic Iranian ideas and forms, since the Timurid atelier filtered most artistic influences from Chinese and Turco-Mongol traditions, remaining faithful to purely Persianate artistic ideas and motifs.[108] These influences will be discussed in chapter 2, section 2.2.

---

[100] Wheeler M. Thackston, *A Century of Princes: Sources in Tīmūrīd History and Art* (Massachusetts: Cambridge, 1989), 279.

[101] The English translation is from Thackston, *A Century of Princes*, 279. The original Persian text is from Ḥāfiẓ Abrū (d. 833/1430), *Zubdat ul-Tavārīkh*, ed. Siyyid Kamāl-i Hāj Siyyid Javādī (Tehran: Vizārat-i Farhang va Irshād-i Islāmī, 2001), 2/665) and it is as follows:

قریب سیصد سوار تحف و بیلاکات که پادشاه ختای فرستاده بود، از شانقار و اطلس و کمخا [جامه منقشی را گویند که به الوان مختلف بافته باشند] و ترغو [ترغو یا ترقو: نوعی از بافتهٔ ابریشمی سرخ رنگ]و آلات چینی و پنج نی و غیره رسانیدند.

[102] Thackston, *A Century of Princes*, 279.

[103] This report is available in *Hāfiz Abrū History* (as an appendix), *Introduction of Sa'diyn (Maṭla' ul-Sa'diyn)* of 'Abd ul-Razzāq Samarqandī and *Rużat ul-Ṣafā* of Mīrkhānd.

[104] Thackston, *A Century of Princes*, 279-80.

[105] Azhand, "Art Education and Patronage during the Shāhrukh Reign," 78-9.

[106] Lentz and Lowry, *Timur and the Princely Vision*, 230.

[107] Ibid, 230.

[108] Ibid, 230.

1.4 Art centres and art patrons

After Tīmūr's death, Hirāt was at peace to some extent and the royal court gained an international reputation, since it became a remarkable centre of culture in the early 15th century. Literature, poetry, painting, calligraphy and music all thrived. Hirāt became the artistic, fashion-leading centre of the day and attracted every kind of artistic talent. Furthermore, the way the royal princes were assigned as regional governors was equally important because they set up their own courts and were art patrons, although they had a tendency to become too independent and even disobedient.[109]

During the Shāhrukh period of rule, there were other centres for art production: Shīrāz, Balkh and Samarqand. The other two ateliers *(kitābkhānih)* during Shāhrukh's reign, for instance, were Ibrahim Mīrzā, atelier in Shīrāz, and Ulugh Biyg, atelier in Samarqand. Ulugh Biyg knew mathematics, astronomy and science so he naturally urged the building of an observatory in Samarqand. Based on some fragmentary information, there was a library in this observatory:[110]

> He took Mulānā Shahāb ul-Dīn 'Abd ul-Lāh and Mulānā Ẓahīr ud-Dīn Aẓhar and other members of *kitābkhānih* under the shadow of Gurkānīd (attributed to Tīmūr) bounty and carried them to Samarqand where he showed them great favor, made them his attendants and, having commissioned them to copy the history of his excellent time, showed them kindness increasing from day to day, nay, from hour to hour.[111]

But there is no evidence remaining of possible art production of this atelier to understand the quality or other details.[112]

In the early 15th century in Hirāt, Shāhrukh, his wife, Guharshād, and their son, Bāysunqur (1397--1433) were the art patrons. Thompson, referring to Bāysunqur when he took painters back to his artistic establishment in Hirāt, called him "one of the greatest patrons of the arts of the book of all time in the Islamic world."[113] Besides, two of Tīmūr's grandchildren in Shīrāz were notable art patrons and witnesses a very successful stage in the

---

[109] Thompson, *Milestones in the History of Carpets*, 21.
[110] Azhand, "Art Education and Patronage during the Shāhrukh Reign," 86.
[111] The English translation with some modifications is from Thackston, *Album Prefaces*, 14. The original Persian text is from Dūst Muḥammad, "Preface to the Bahrām Mīrzā Album," 14 and it is as follows:
مولانا شهاب الدین عبدالله و مولانا ظهیرالدین اظهر و سایر اهل کتابخانه را در رأفت گورکانی به سمرقند برد و روی ترتیب کلی به جانب ایشان آورده مصاحب خود نمود و امر کتابت تاریخ زمان فضیلت نشان خود را به ایشان فرمود و یوماً و فیوماً بل ساعةً فساعةً درباره ایشان الطاف می نمود و مراسم اشفاق و اعطاف می افزود.
[112] Azhand, "Art Education and Patronage during the Shāhrukh Reign," 86.
[113] Thompson, *Milestones in the History of Carpets*, 22.

art of the book, which took place before its development in Hirāt.[114] Iskandar Sulṭān (d. 817/1414), Shāhrukh's nephew, and his successor in Shīrāz (who was later replaced by his second son, Ibrāhīm Sulṭān (d. 838/1435)), Shāhrukh's second son in Fārs and Iṣfahān, Ulugh Biyg in Samarqand and Muḥammad Jūkī in Balkh were art patrons during Shāhrukh's reign. Bāysunqur was the head of atelier (*kitābkhānih)* and after him, the position was given to his son 'Alā ul-Dulih.[115]

After the release of some artists by Ulugh Biyg, Tīmūr's grandchildren gave them an opportunity to work in Shīrāz although it was already well known as the centre of Islamic culture.[116] Another important event that resulted in the development of the arts in Shīrāz was the death of Sulṭān Aḥmad Jalāyir in 1410, an important art patron in Baghdad and Tabrīz, and the last influential ruler of an ancestry coming from the earlier Mongol rulers of Iran that eventually fell in 1432.[117]

The last Tīmūrīd ruler, an important figure in the realm of culture, was Sulṭān Ḥusayn Bāyqarā. While members of his extended family were busy fighting, he succeeded in creating a culturally and intellectually wonderful centre in Hirāt during 37 years of reign (1469--1506) after which the Tīmūrīd era ended.[118] The main art patron during Sulṭān Ḥusayn Bāyqarā's reign was 'Alī Shīr Navāyī, Sulṭān Ḥusayn's advisor, companion and informal minister of culture.[119]

Azhand believed that during the time of Shāhrukh and Bāysunqur Mīrzā, calligraphy was a priority because Bāysunqur himself was a calligrapher. He then added that during Sulṭān Ḥusayn's reign painting could reach the same rank as calligraphy.[120] This may have had an impact on the development of painting and related arts in the second half of the 15th century.

---

[114] Ibid, 21.
[115] Thompson, "Carpets in the Fifteenth Century," 33 and Dūst Muḥammad, "Preface to the Bahrām Mīrzā Album," 14.
[116] Thompson, *Milestones in the History of Carpets*, 21-22.
[117] Ibid, 22.
[118] Ibid, 22.
[119] Yaqub Azhand, "Art Atelier during the Reign of Sulṭān Ḥusayn Bāyqarā (*Kārgāh-i Hunari-yi Sultān Ḥusayn Bāyqarā*)," *Hunarhāy-i Zībā* 12 (2003): 91. The patrons during Sulṭān Ḥusayn Bāyqarā are continued by Azhand as being Amīr Niẓām ul-Dīn Shaykh Aḥmad known as Shaykhum Suhiylī, a military elite, Khājih Ghavām ul-Dīn Niẓām ul-Mulk Khāfī, financial court minister, Khājih Majd ud-Dīn Muḥammad, court elite, Khājih Shihāb ul-Dīn 'Abd ul-Lāh Murvārīd, the author of *Sharaf-nāmih*, Shujā' ul-Dīn Muḥammad Burundāq, Amir of Barlas, 'Abd ul-Raḥamān-i Jāmī, poet. The Barlas (Barlās, or Berlas), one of the four main Chagatai Khanate, were a Mongol and later Turkicized nomadic confederation in Central Asia. Tīmūr's father was from this tribe.
[120] Ibid, 95.

1.5 Court artists and carpet designers

Studying the practices of court artists and knowing how the royal atelier *(kitābkhānih)* was organised during this time will help develop an understanding of who the potential carpet designers/artisans were. Since there is no clear evidence of artisans/artists who had the title of carpet designer (*ṭarrāḥ-i qālī/farsh*), it is important to suggest who was doing the design or which carpet designs were used by weavers/artisans.

Atelier (kitābkhānih): The shaping of Tīmūrīd art

The methods and objectives of the atelier staff, the artists and artisans who visualised and formed royal ambitions, were important factors in the development of Tīmūrīd art. That they strictly followed the ideas of artistic conception and transmission was often supported by works of art in which different media were used. When we compare poetry, painting, decorative arts and royal myth, we can see interesting similarities between them, which suggest that Tīmūrīd art was a closed system. A limited set of models resulting from the interaction between princely workshops and the ruling house controlled and influenced artists' imagination and creativity.[121]

Before explaining Tīmūrīd art in detail, it will be helpful to know where art activities in the royal court took place and what they were called. Dulatshāh Samarqandī (842-900/1438-1494), a Tīmūrīd poet and biographer during the reign of Sulṭān Ḥusayn, called the art workshop or atelier, *kitābkhānih.*[122] Ghīyāth ul-Dīn Khāndimīr, Dūst Muḥammad and Abū Naṣr-i Sām Mīrzā defined *kitābkhānih* in the same way, an atelier performing different kinds of art.[123] At the same time a junior contemporary of Bāysunqur, historian 'Abd ul-Razzāq b. Isḥāq al-Samarqandī (1413--1482), who marked Bāysunqur's profound interest in the art of the book and applied arts (combined with professional attitude), gives no definition of the art workshop. He mentions only that along with 'masters of [the] book' (calligraphers, illuminators, miniaturists, bookbinders, and others) there worked goldsmiths (*zargarān*),

[121] Lentz and Lowry, *Tīmūr and the Princely Vision*, 163.
[122] Dulatshāh Samarqandī, *Taẕkirat ul-Shu'arā*, ed. E. G. Browne (London-Leyden, 1901), 350. '*kitābkhānih'* literally means 'library.'
[123] O. F. Akimushkin, "The Library-Workshop (*kitābkhāna*) of Bāysunqur Mīrzā in Herat," *Manuscripta Orientalia,* 3, no. 1 (1997): 14. They are cited by Akimushkin as Ghīyāth ul-Dīn b. Humām al-Din Khāndimīr, *Ḥabīb ul-Siyr fī Akhbār Afrād al-Bashar*, ed. Muḥammad Dabīr Sīyāqī (Tehran, Khayyām, 1333/1954), iv, 47, 57, 59, 160; Dūst Muḥammad, "Preface to the Bahrām Mīrzā Album;" and Sām Mīrzā Ṣafavī, *Taẕkiriyi Tuḥfih Sāmī*, Rukn al-Dīn-i Humāyūnfarrukh (Tehran. 1355/1976).

carpenters (*najjārān*), masters of inlay work (*khātam-bandān*) and tile-carvers (*kāshī-tarāshān*), specialists in chasing, engraving and other kinds of metalwork (*ḥaddādān*).[124]

Thackston and Thompson have translated *kitābkhānih* into 'artworks department'.[125] Based on this information, *kitābkhānih* was an art atelier (workshop) where, under the supervision of a management director, the *kitābdār*, masterpieces of manuscript art were specially created for the patron.[126]

There is no doubt that *kitābkhānih* already functioned at the court of Bāysunqur Mīrzā by 823/1420, because calligrapher, Kamal al-Din Ja'far Tabrīzī and miniaturist, Khājih Ghīyāth ul-Dīn Naqqāsh already worked there at that time.[127] From *the Report ('arżih-dāsht)* we know that a separate building "the *kutubkhānih* begun for the artists-painters has been finished and the painters and scribes have moved in."[128]

Art organisation

Azhand divided the Hirāt school into two major periods: preliminary and advanced.[129] The first period was during the reign of Shāhrukh Mīrzā (r. 1405--1447) during the first half of the 15th century. The second period, during the reign of Sulṭān Ḥusayn Bāyqarā (r. 1469--1506), was almost during the second half of the 15th century. He added that each period has its own rulers, patrons and therefore its own style.

One of the most important primary sources which provided information about Shāhrukh and Bāysunqur's atelier (*kitābkhānih)* is *the Report ('arżih-dāsht)* (Figure 1-3). Lentz and Lowry also named the *arżih-dāsht* as a key source for any investigation into the Tīmūrīd atelier.[130] Although neither author nor recipient is named, internal evidence strongly suggests that this is a progress report to Bāysunqur Mīrzā from Ja'far Tabrīzī (Bāysunqurī), the head of Bāysunqur's artistic establishment in Hirāt. It was written approximately between

---

[124] Ibid. Akimushkin cited 'Abd ul-Razzāq Samarqandī, *Matla' ul-Sa'diyn va majma' ul-BaḥriBahriyn yn*, ed. Muḥammad Shafī, VOL. 2 (Lahore, 1368/1949), 2-3, 654-5.

[125] Thackston and Thompson respectively in Thackston, *A Century of Princes*, 323-27 and Thackston, *Album Prefaces and Other Documents*, 43-46; and Jon Thompson, "Early Safavid Carpets and Textiles," in *Hunt for Paradise: Court Arts of Safavid Iran 1501--1576*, eds. Jon Thompson and Sheila R. Canby (Milan: Skira Editore, 2003), 279.

[126] Ibid, 279.

[127] Ibid, 279.

[128] The English text is from Thompson, "Early Ṣafavīd Carpets and Textiles," 279. *the Report ('arżih-dāsht)* will be explained in detail in later sections. The Persian text from *the Report ('arżih-dāsht)* is as follows:
کتبخانه که جهت نقاشان بنیاد نهاده تکمیل یافته و نقاشان و کاتبان نزول کرده.

[129] Azhand, "Art Education and Patronage during the Shāhrukh reign," 88 and Azhand, "Art Atelier during the Reign of Sulṭān Ḥusayn Bāyqarā," 91.

[130] Lentz and Lowry, *Timur and the Princely Vision*, 159.

the end of 1427 and the beginning of 1431 and kept in Topkapı Saray Museum (Topkapı Sarayı Müzesi) in Istanbul (H.2153, folio 98a).[131]

The Report deals with progress on several books -- painting miniatures, copying text, ruling borders, decorating margins, bookbinding and so on.[132] Most of the scribes, artists and artisans are identifiable, as are the individual works upon which they are engaged.[133]

Figure 1-3. *The Report (ʻarżih-dāsht).*
Hirāt, c. 1427-28, ink on paper, 46 x 13.5 cm, Istanbul, Topkapı Saray Library, H. 2153, fol. 98a. (Lentz, Thomas W. and Lowry, Glenn D. *Timur and Princely Vision: Persian Art and Culture in the Fifteenth Century*. (Los Angeles: Los Angeles County Museum of Art, 1989, 160)

One of the most important is Thackston who translated *the Report (ʻarżih-dāsht)* from Persian to English and annotated it. The second example is Lentz and Lowry who have used this source to interpret Tīmūrīd art organisation. The last and most relevant is Azhand, a Persian speaking scholar who studied the above works and formed his own conclusions.

Three authors who have worked on *the Report* and their studies will be used to obtain the best understanding of their content relationship with carpets and to understand the terminology used at the time.

In this report, 22 ongoing projects/jobs titles are mentioned, and 23 artisans named, including painters, illuminators, calligraphers, binders, rulers, and chest-makers, cited as either working individually or in teams, often on several projects at once.[134] On the face of it the report of "such diverse activity apparently under the direction of the head of the atelier, plus the news that the 'book-works' building is now occupied, gives an impression of an active, centrally-directed artistic production in Hirāt."[135]

[131] Thackston*, A Century of Princes*, 323 and Akimushkin, "The Library of Bāysunqur Mīrzā," 15. Calligrapher Jaʻfar Tabrīzī appeared in Hirāt even earlier: he came to the court from Shīrāz through Yazd.
[132] Thompson, "Early Ṣafavīd Carpets and Textiles," 279.
[133] Thackston*, A Century of Princes*, 323.
[134] Lentz and Lowry, *Timur and the Princely Vision,* 159.
[135] Thompson, "Early Ṣafavīd Carpets and Textiles," 279. Here Thompson has used 'book-works' for *kitābkhānih.*

Table 1-1. The artisans' names and occupations based on information from *the Report (ʻarżih-dāsht)* and Dūst Muḥammad's Preface to the Bahrām Mīrzā Album

	Artisan's name	**Title in Persian**	**Title in English**	**Other Information**
1	Amīr Khalīl	*Muṣavvir*[136]	Master of depiction[137]	He was the supervisor of painting in atelier (*kitābkhānih)* and brought from Tabrīz to Hirāt[138]
2	Mulānā Shihāb	*Muẕahhib*	Illuminator	
3	Maḥmūd	*Muẕahhib?*	Illuminator[139]	Azhand[140] suggests that he is a *jadval-kish*
4	Khājih ʻAṭā-yi Jadvalkish	*Jadval-kish*	Ruling-maker[141]	
5	Mulānā Muḥammad Muṭahhar	*Khaṭṭāṭ*	Calligrapher	Muḥammad b. Muṭahhar al-Nayshābūrī[142]
6	Mulānā Shams	*Muẕahhib* [143]	Illuminator	"Has finished one *kashtī*"[144]
7	Mulānā ʻAlī	*Ṭarrāḥ?*[145] *Muẕahhib*	Draftsman-designer? Illuminator	Perhaps Khājih ʻAli Muṣavvir who was brought to Hirāt from Tabrīz[146]
8	Mulānā Qavām ul-Dīn	*Mujallid*	Bookbinder	He is another artisan brought from Tabrīz to Hirāt
9	Ḥājī Maḥmūd	*Mujallid*[147]	Bookbinder	
10	Mulānā Qutb	*Khaṭṭāṭ*	Calligrapher	
11	Khājih ʻAbd ul-Raḥīm	*Ṭarrāḥ*	Draftsman-designer	
12	Ḥājī	*Ḥal-kārī*[148]	dissolve	Thackston[149] has translated to "gilding"
13	Khatāy	*Ḥal-kārī*	dissolve	
14	Ustād Sayf ul-Dīn			
15	Khājih Ghīyāth ul-Dīn	*Naqqāsh* [150]	Painter-decorator[151]	Thackston considered two probabilities and the second one seems more meaningful, which

[136] Azhand, "Art Education and Patronage during the Shāhrukh Reign," 85.
[137] The translation of *Muṣavvir* as master of depiction is used by Thackston in *A Century of Princes*, *The Tarikh-i Rashidi* section.
[138] Dūst Muḥammad, "Preface to the Bahrām Mīrzā Album," 13-14.
[139] Thackston (in *Album Prefaces*, 44) believed that he is an illuminator, since he is working on the cartouches.
[140] Azhand, "Art Education and Patronage during the Shāhrukh Reign," 85.
[141] The translation Thackston (in *Album Prefaces*, 43) uses for *jadval-kish*.
[142] Thackston, *Album Prefaces*, 44.
[143] Azhand in "Art Education and Patronage during the Shāhrukh Reign," 85, suggested *khaṭṭāṭ* (calligrapher).
[144] As Thackston explained in *Album Prefaces*, 44; the puzzling term *kashtī* means "ship," but perhaps we can project onto this text a meaning from Mughal India, where *kashtī* means a floral scroll contained in an ovaloid. It is unlikely that these craftsmen are making ships, whatever they are doing.
[145] Thackston indicated that the term *ṭarḥ* refers to a finished underdrawing and also in *A Century of Princes*, *The Tarikh-i Rashidi* section translated *ṭarḥ* into draftsmanship. Based on these translations in this chapter the word *Ṭarrāḥ* is translated into draftsman-designer.
[146] Dūst Muḥammad, "Preface to the Bahrām Mīrzā Album," 13.
[147] Azhand, "Art Education and Patronage during the Shāhrukh Reign," 85.
[148] Hamidreza Qelichkhani (in *Encyclopedia of Calligraphy and related arts* (Tehran: Ruzanih), 1994, 71) explained *halkari* as a decoration method in which motifs are drawn on paper with dissolved gold.
[149] Thackston, *Album Prefaces*, 43.
[150] Azhand, "Art Education and Patronage during the Shāhrukh Reign," 85.
[151] The word "decorative design" is the translation of Persian word *naqāshī* that was used by Necipoğlu in her recent publication ("Early Modern Floral: The Agency of Ornament in Ottoman and Safavid Visual Culture," in *Histories of Ornament from Global to Local*, eds. Gulru Necipoğlu and Alina Payne (Princeton: Princeton

				is Khājih Ghīyāth ud-Dīn Naqqāsh who travelled to China[152]
16	Khājih Maḥmūd	*Mujallid*	Bookbinder	
17	Mulānā Sa‘ad ul-Dīn	*Khaṭṭāṭ*[153]*? Naqqāsh?*	Calligrapher? Painter-decorator?	There is not much information on what he is exactly doing on door.
18	‘Abd us-Salām	*Muẕahhib*	Illuminator	
19	Mīr Dulatyār	*Naqqash*	Painter-decorator	Dūst Muḥammad introduced him as Aḥmad Mūsā’s pupil and expert in pen-and-ink drawing (*qalam-sīyahī*)[154]
20	Khājih Mīr Ḥasan	*Ṭarrāḥ?*	Draftsman-designer?	
21	Mīr Shams ul-Dīn	*Ṣadaf-tarāsh*	Mother-of-pearl cutter	
22	Ustād Dulat-khājih	*Ṣadaf-tarāsh*	Mother-of-pearl cutter	
23	Ja‘afar Tabrīzī	*Khaṭṭāṭ*	Calligrapher	The author of *‘Arżadāsht*

Akimushkin concluded from the abovementioned evidence that the atelier of Bāysunqur was no ordinary atelier that produced illuminated books. He stated: “It looks more like a network of royal workshops specializing in different arts and crafts (*kārkhānih, buyūtāt*) employing a considerable number of highly qualified specialists.”[155] The interaction between different artists/artisans proposed by Azhand is depicted in Figure 1-4.

Figure 1-4. Art organization.
Supervision and interaction between occupations in Atelier based on information from *Tārīkh-i Mubārak Ghāzānī (Jāmi‘ ul-Tavārīkh)*, *Gulistān-i Hunar* and *the Report (‘arżih-dāsht)*
(Translated from Azhand, Yaqub. “Art Education and Patronage during the Shāhrukh Reign (*Hunar-parvarī va hunarvarī dar duri-yi Shāhrukh).” Nashrīyi-yi Takhaṣṣuṣī-yi Guruh-i Tārīkh, Dānishgāh-i Tehran* 3 (2002): 87)

Workshop practices, circulation of designs, and carpet designers

Sources

Some information about practices in art atelier can be found from *the Report* as a source of Tīmūrīd Hirāt. The artisans engaged in artworks in *the Report (‘arżih-dāsht)* including *naqqāsh* (painter-decorator), *muẕahhib* (illuminator), *jadval-kish* (ruling maker), and others. Among them two artists worked on patterns: Khājih ‘Abd ul-Raḥīm and Mīr Dulatyār. By

University Press, 2016), 134) and this seems a better translation in comparison with “art” or “painting.” She has also translated *Naqāsh* into painter-decorator (p. 133), which was formerly translated into “painter.”
[152] Thackston*, A Century of Princes*, 323.
[153] Akimushkin, “The Library of Bāysunqur Mīrzā,” 15.
[154] Dūst Muḥammad, “Preface to the Bahrām Mīrzā Album,” 14.
[155] Akimushkin, “The Library of Bāysunqur Mīrzā,” 15.

referring to *the Report,* to be discussed below, Lentz and Lowry believed it contained details of the central principle of Tīmūrīd artistic theory and practice.[156]

Beside *the Report,* there is a large corpus of technical materials – including drawings, sketches, and pounces -- which survived primarily in albums and is now co-located in Istanbul and Berlin. The workings of this institution offer clues to the process and ideas by which the Tīmūrīds created their seductive dynastic image.[157] David Roxburgh, the leading Islamic art historian working on drawing albums from Tīmūrīd time, suggested that "based on a visual analysis of hundreds of drawings, references to technical procedures are extremely rare in written sources, and where they exist they usually occur in recipe books."[158]

Works on paper permitted ease of movement of ideas between contemporary court workshops, a process driven by the peripatetic practitioner. Roxburgh explained: "Physical evidence, such as creases and folds in drawing sheets and signs of wear and tear in general, shows that the drawings were stored loose before they found shelter in albums."[159] The drawings in albums were considered to be cultural capital in a way that even the smallest pieces of such drawings were carefully cut, decorated and drawn; therefore, when they reached the hands of the artist, they were absolutely valued.[160]

Roxburgh argued that albums functioned as storehouses of visual ideas and models. The drawings in them represented various stages of conception and rephrasing, and resulted from processes that involved the repeated reworking of a compositional unit.[161] Lentz and Lowry held similar opinions to Roxburgh's. They argued that "these drawings convincingly demonstrate the Tīmūrīd artists' inventive synthesis of specific needs and tastes and the models made available to them."[162] Contadini also called 'pattern books' "a common pool of design elements which had an important role in circulation of ornament in different media."[163]

---

[156] Lentz and Lowry, *Timur and the Princely Vision*, 159.
[157] Ibid*,* 159-60. The Albums in Istanbul are H. 2152, H. 2153, and H. 2160, all in the Topkapı Palace Library, and the Album in Berlin is Diez albums in Berlin, Diez A, fols. 70-74, Staatsbibliothek, Preussischer Kulturbesitz.
[158] Roxburgh, "Persian Drawing, CA. 1400-1450," 47.
[159] Ibid, 47.
[160] Ibid, 47.
[161] Ibid, 45.
[162] Lentz and Lowry, *Tīmūr and the Princely Vision*, 193.
[163] Anna Contadini, "Threads of Ornament in the Style World of the Fifteenth and Sixteenth Centuries," in *Histories of Ornament from Global to Local*, eds. Gülru Necipoğlu and Alina Payne (Princeton: Princeton University Press, 2016), 296.

Workshop practices

The most relevant historical text in regard to Tīmūrīd artistic production is Ṣādiqī Biyg's breakdown of atelier *(kitābkhānih)* activities into divisions that resemble categories and idioms. Decorative art (*naqqāshī*), figural painting (*ṣūratgarī*), and animal design (*jānivarsāzī*) are each singled out for discussion with a listing of types and genres to be emulated.[164]

On the other hand, Lentz and Lowry, referring to the surviving drawing albums, have identified three categories of Tīmūrīd atelier's visual imagery on the basis of their function: illustrative, pictorial and decorative.[165] Roxburgh explained that Lentz and Lowry were mainly interested in the way the Tīmūrīd atelier, as a generative system, performed and how in general, its masters made a visual style of art for the Tīmūrīd house, creating things which were spread to different social groups, probably at the demand of the patron who had ordered the objects.[166]

The illustrative category focuses on the illustration of manuscripts, and more specifically shows the different elements in each narrative.[167] The pictorial category includes independent paintings and drawings, which can be considered as the most innovative artistic productions during the Tīmūrīd period. Unlike the illustrative category, which is bound by narrative content, the pictorial category has a less restricted nature and can, therefore, be more artistically expressive.[168]

The decorative category used a more abstract set of images, which served the purpose of decoration. It had a much wider range of use compared to the former two categories, which is why much extant material with decorations has reached us.[169] This category is most related to carpet motifs and design, and it can be seen on book covers, and on woodenware, stoneware and metalware.

---

[164] Lentz and Lowry, *Timur and the Princely Vision*, 169. Thackston also translated *ṣūratgarī* to painting and he believed normally it refers to figural painting.

[165] Lentz and Lowry, *Timur and the Princely Vision*, 165-66. Azhand in "Art Atelier during the Reign of Sulṭān Ḥusayn," 94, translated this division in Persian into *taṣvīr-sāzī*, *naqqāshī va rassāmī* and *taz'īn va taẕhīb* which are not precise.

[166] Roxburgh, "Persian Drawing, CA. 1400-1450," 46-7. He also added presumably, speculative production in the workshop can be added to the mechanism of direct commission.

[167] Lentz and Lowry, *Timur and the Princely Vision*, 171; and Azhand, "Art Atelier during the Reign of Sulṭān Ḥusayn," 94.

[168] Lentz and Lowry, *Timur and the Princely Vision*, 180.

[169] Ibid, 189. For more information on Tīmūrīd decorative arts, see Ernst Grube, "Notes on the Decorative Arts of the Timurid Period," in *Gururajamanjarika: Studi in anore di Guiseppe Tucci* (Naples: Istituto Universitario Orientale, 1974), I: 233-79, Pls. 24-111.

These categories made it possible to form hypotheses about both the structural and theoretical bases of creativity directed by the dynasty's patronage. These divisions obviously formed inexact groupings that showed the visual plan of dynasty although they were not definite in practice and conception.[170]

The primary sources show not only was there collaboration between the artists in the workshop but also between mathematicians and artisans. Alpay Özdural (d. 2003), art and architecture historian, highlighted two mathematical sources which provide insight into the collaboration between mathematicians and artisans in the Islamic world:[171] *On the Geometric Constructions Necessary for the Artisan (Kitāb fī mā Yaḥtāju al-Ṣāni' min a'māl al-handasa)* by Abu al-Wafā (ca. 940–998), and the anonymous work, *On Interlocks of Similar or Corresponding Figures (Fī Tadākhul al-Ashkāl al-Mutashābiha aw al-Mutawāfiqa)*. The latter source can be dated to around 1300 and the text probably came from Tabrīz.[172]

Özdural referred to these sources as those that show how mathematicians taught geometry to artisans by means of cut-and-paste methods and of geometrical figures that had the potential to be used for ornamental purposes. Özdural proposed that traditionally the artisans, who produced patterns ornamenting architectural monuments and other objects of art, were believed to be experts in geometry.[173]

Circulation of designs

One important aspect is a movement of design between different media. Azhand asserted that based on the information we get from *the Report ('arżih-dāsht)* we can conclude that the "royal atelier *(kitābkhānih)* was active in preparing the designs for various art mediums, such as pottery, metalwork, textiles, architectural ornaments, carpets, etc."[174] He added that as a result, this fact had caused the repetition of motifs and patterns of different media, and their

[170] Ibid, 165.
[171] Alpay Özdural, "Mathematics and Arts: Connections between Theory and Practice in the Medieval Islamic World," *Historia Mathematica* 27 (2000): 171–201. Özdural was by profession an architect who specialised in restoration and preservation of historic monuments and sites. His other fields of interest were architectural photogrammetry, history of mathematics and historical metrology. For the last 10 years of his life he concentrated his efforts on muqarnas, a type of three-dimensional geometric decoration peculiar to Islamic architecture, and on the collaboration of mathematicians and artisans in the medieval Islamic world.
[172] Özdural, "Mathematics and Arts," 172. The two sources are: Abu al-Waf ā' al-Būzjānī, *Kitāb fī mā Yaḥtāju al-Ṣāni' min a'māl al-handasa (On the Geometric Constructions Necessary for the Artisan)*, Mashhad: Imām Rizā 37, copied in the late 10th or early 11th century; and Fī Tadākhul al-Ashkāl al-Mutashābiha aw al-Mutawāfiqa, Paris: Biblioth`equeNationale, Ancien Fonds. Persan 169, ff. 180r–199v. It is worth mentioning that the mathematician and astronomer Abu al-Wafā al-Būzjānī (940-998), who emigrated from his hometown in Nishāpur to Baghdad in 959-960, was one of the scholars involved in this systematic process of popularisation that continued well into the 11th century.
[173] Ibid, 171.
[174] Azhand, "Art Education and Patronage during the Shāhrukh Reign," 84.

similarity and harmony.[175] Lentz and Lowry believed that based on *the Report* atelier drawings played a role in providing designs for a variety of media as well as the importance of codification and repetition in that process.[176]

Lentz and Lowry clearly stated that there is nothing, however, to suggest the existence of a single, centralised state organisation or structure that housed Tīmūrīd artists.[177] Roxburgh believed even if the atelier's absolute centrality continues to be questioned, the material evidence does suggest a linked and interactive artistic production system.[178]

Baer called the transmission of ornaments from one medium to another, that is, from brick to stone, from textiles to stucco, from ceramics to metal, from gold to clay, including the transfer of architectural ornaments to artefacts and vice versa, "the mobility of ornament."[179]

Based on *the Report (ʻarżih-dāsht)*, Thompson stated that "there was a single atelier, a *naqqāsh-khānih*, which worked as a centrally guided, 'top-down' source of artistic innovation, generating designs for use in a variety of media."[180] Thompson was aware of Lentz and Lowry's opinion that there is nothing to suggest the existence of a single, centralised state organisation or structure that housed Tīmūrīd artists (physically),[181] but he believed that the ensuing discussion is couched in terms of "an ambitious state-sponsored program of artistic production."[182] He added that Lentz and Lowry referred to the following two statements: "the designs used in royal textiles originated for the most part in the *Kitābkhānih,*" and that "the *Kitābkhānih* was also involved in the design of royal carpets."[183] The few surviving Tīmūrīd silks provide evidence distinctly contrary to the first statement. Carpets depicted in Tīmūrīd paintings in the second half of the 15th century undergo change in design that reflect the changing style of earlier dateable illuminations. Commenting on this change of style, Erdmann toys with the idea of Bihzād's involvement with carpet design.[184] He noted that although the idea of atelier-designed carpets is tempting no evidence is

[175] Ibid, 84.
[176] Lentz and Lowry, *Timur and the Princely Vision*, 168.
[177] Ibid, 165.
[178] Roxburgh, "Persian Drawing, CA. 1400-1450," 47.
[179] Eva Baer, *Islamic Ornament* (Edinburgh: Edinburgh University Press, 1998), 127.
[180] Thompson, "Early Ṣafavīd Carpets and Textiles," 278-79.
[181] Lentz and Lowry, *Timur and the Princely Vision*, 165.
[182] Thompson, "Early Ṣafavīd Carpets and Textiles," 311.
[183] Lentz and Lowry, *Timur and the Princely Vision*, 217 and 220.
[184] Thompson refers to Kurt Erdmann, *Oriental Carpets: An Account of their History*, trans. Charles Grant Ellis (London, 1955), 31.

provided.[185] Necipoğlu, quoting *the Report (‘arżih-dāsht)* in passing as evidence, concluded that stylistic unity resulted from court artists working in a variety of media. She wrote:

“Archival evidence proves that stylistic unity was further achieved by drawings that painter-designers of the court prepared for various artistic media including manuscripts, tiles, textiles, and tents, following an earlier Timurid pattern documented by the *arżadāşt* of Baysunğur’s *kitābḥāna*.”[186]

Thompson noted it is widely believed that artistic production was centrally directed by a court-sponsored *naqqāsh-khānih* (design workshop) -- an artistic establishment producing designs in a variety of media. It is presumed that these designs were then given to suitable artisans to be performed in the style of a command economy.[187] In theory it works well, but in practice, except for a few famous artists who worked in different media, it is difficult to confirm this was the standard system. We know that craft traditions were often passed from father to son, therefore it would be better for art historians to think of the rules about art ancestries who kept their own styles and modified their designs to changing styles at a speed that was comfortable for them. In fact, the ‘top-down,’ multi-media fashion factory which was directed by court was an exception, not the norm. In the applied study of art objects, it is often marked that there was little coordination and exchange between different media regarding design vocabulary at a particular time. It seems that designs spread in a natural way by imitation and dissemination and were then maintained in an adapted form by copying. In the case of carpets, however, they were preserved by memorisation.[188]

This problem becomes critical in relation to carpets because there are certain carpet designs not evident in the decoration of any contemporary objects, regardless of the medium, in the period we are discussing. This situation is annoying because it is true, even about the carpets, that we can somewhat be sure they are of court quality.[189]

In addition to carpets made for court and the wealthy elite, there was urban production for local use and trade, village production, and also fewer carpets that were mainly functional

[185] Thompson, “Early Ṣafavīd Carpets and Textiles,” 311.
[186] Gülru Necipoğlu, “A Kanun for the State, a Canon for the Arts: The Classical Synthesis in Ottoman Artand Architecture during the Age of Süleyman,” in *Soliman le Magnifique et son temps, Actes du Colloque de Paris Galeries Nationales du Grand Palais, 7-10 mars 1990*, ed. Gilles Veinstein, Rencontres de l’école du Louvre, 1992, 205.
[187] Thompson, *Milestones in the History of Carpets*, 20.
[188] Ibid, 20.
[189] Ibid, 20.

nomadic carpets, even though it seems that no example of this kind has survived from the 15th century.[190]

Even the existence of similar designs does not solve our problem, because when a particular court leads artistic fashion, fashions not only spread to producers in cities, who carefully follow existing trends, but these fashions even spread to the villages. Furthermore, fashionable designs travelled between courts and wealthy circles as well, mostly with help from immigrating artists and craftsmen looking for better professional or living conditions elsewhere, or those who had lost their jobs and were seeking new patrons. New designs may also be introduced by artists copying the motifs on objects transported from one culture to another. For example, Chinese motifs were used in Islamic art, especially in Iran. The transference of fashion from one court to another again involves a time lag, and if we consider that the farthest areas from a source receive new designs later than other areas and that they continue to exist there for a longer period of time, we can argue that dealing with the history of carpets in the 15th century can be challenging.[191] As seen in Figures 1-5 and 1-6, their design structures are similar in different medias of metal, stone and paper.

Figure 1-5. Jug, Hirāt, dated A.H. 871 (A.D. 1467).
(Lentz, Thomas W. and Lowry, Glenn D. *Timur and Princely Vision: Persian Art and Culture in the Fifteenth Century.* Los Angeles: Los Angeles County Museum of Art, 1989, 161, cat. no. 57)

Figure 1-6. Illuminated panel from a *Būstān* of Sa'dī (detail).
Hirāt, dated A.H. Rajab 893 (A.D. June 1488) f. 3b. Copied by Sulṭān 'Ali al-kitab fir Sulṭān Ḥusayn Mīrzā, Cairo, General Egyptian Book Organisation, Adab Farsi 908. (Lentz, Thomas W. and Lowry, Glenn D. *Timur and Princely Vision: Persian Art and Culture in the Fifteenth Century.* Los Angeles: Los Angeles County Museum of Art, 1989, 190, cat. no. 146)

The interpretation of the circulation of ornamental designs by Contadini is the widest and covers most aspects. By focusing on design and trade in the 15th and 16th centuries of Europe and the Middle East, she showed how designs moved from one court to another.[192] This is one example of ornament circulation from a geographical/time point of view.[193] In Tīmūrīd Iran, an example of the movement of designs from one court to another from a geographical aspect is when in 1411 Ulugh Biyg released numerous craftsmen from

[190] Ibid, 20.
[191] Ibid, 20.
[192] Contadini, "Threads of Ornament," 293-95.
[193] Ibid, 296.

Samarqand. It seems highly likely that this dispersal contributed to the spread of fashionable artistic taste. Another example is when Bāysunqur Mīrzā brought from Tabrīz to Hirāt several masters of manuscripts in 1420. The most important type of circulation of design here is the influence of Chinese motifs on Iranian arts known as chinoiserie, to be discussed in detail in the next chapter. The movement of designs over time, can be seen in the sentence from *the Report (ʻarżih-dāsht)* where a design by Mīr Dulatyār for a saddle is mentioned.[194] Mīr Dulatyār was a *naqqāsh* of the Ilkhānīd period. Another feature of circulation and migration of ornamental design was called "transmateriality" and defined "as a common pool of design elements appearing in different media,"[195] already discussed above.

In addition, Golombek highlighted the importance of costume and, as previously discussed, the preference for soft furnishings made the development of textiles practically a cult in itself. "The pre-eminence of textiles also helps to explain why it was possible, and perfectly acceptable, in Islamic art for different media to share the same decorative treatment: why it is that bookbinding, wood carving, architectural faience, and Koran pages all look like carpets?"[196]

Carpet designers

Up to this point, we can't find any evidence of a relationship between artists -- either those who worked for the court or those who worked independently -- and the field of carpets and textiles.[197] Thompson believed the existing evidence shows that carpets at the Tīmūrīd court were woven based on design. He also claimed that those designs were no different from design works in other areas of art, including the book. Thus, he mentioned it was unlikely that rural carpets were used at court; and there was not much difference between methods of production used at both the Tīmūrīd and Ṣafavīd courts.[198]

Akimushkin noted that the artists who were developing carpet patterns also applied such patterns to objects made from different materials (e.g. leather, textiles, carpets, faience, tiles, etc.), while categorising the artists and their projects in *the Report (ʻarżih-dāsht)*.[199] He wrote: "There was a design by Mīr Dulatyār for a saddle. Khājih Mīr Ḥasan copied it, and

[194] For the original text and the translation, see footnote 127.
[195] Contadini, "Threads of Ornament," 296.
[196] Lisa Golombek, "The Draped Universe of Islam," in *Content and Context of Visual Arts in the Islamic World* (Papers from A Colloquium in Memory of Richard Ettinghausen, Institute of Fine Arts, New York University 1980, planned and organised by Carol Manson Bier), ed. Priscilla P. Soucek (University Park: The Pennsylvania State University Press, 1988), 36.
[197] Thompson, "Early Ṣafavīd Carpets and Textiles," 278.
[198] Thompson, "Carpets in the Fifteenth Century," 38.
[199] Akimushkin, "The Library of Bāysunqur Mīrzā," 15.

Khājih Mīr Ḥasan's son Mīr Shams ul-Dīn and Ustād Dulat-khājih are busy executing it in mother-of-pearl."[200]

Two important points can be made here. Dūst Muḥammad introduced Mīr Dulatyār as a *naqqāsh* of Ilkhānīd Sulṭān 'Abū Sa'īd's time, thus it is significant that a *naqqāsh* (painter-decorator) made a design for a saddle.[201] We can also relate that a saddle can be made by a rug weaving technique. Thus, the second point is that a design from the Ilkhānīd period (1256--1335) was later copied and in a different court workshop. A most interesting aspect is a report on a designer's work, Khājih 'Abd ul-Raḥīm: "Khājih 'Abd ul-Raḥīm is busy making designs for the binders, illuminators, tentmakers, and tile-makers."[202]

Even though there is no direct information or mention of carpet design here, we can see that a designer is assigned to work on four different artworks: bookbinding, illumination, tentmaking and tilemaking.

Figure 1-7. Design panel, Hirāt, 15th century.
Berlin, Staatsbibliothek zu Berlin, Preussischer Kulturbesitz, Orientabteilung, Diez A, Fol. 73, 70, no. 4. (Lentz, Thomas W. and Lowry, Glenn D. *Timur and Princely Vision: Persian Art and Culture in the Fifteenth Century*. Los Angeles: Los Angeles County Museum of Art, 1989, 219)

Khājih 'Abd ul-Raḥīm provided designs for tentmakers and a brief description of a single large trellis tent, lavishly decorated in applique and embroidery are both recorded in *the Report (ʻarżih-dāsht)*:[203]

> ...14 pieces of the top cover and seven pieces of the side cover: of these twenty-one pieces, six have been finished. The velvet ornaments have all been sewn, and of the twenty-one medallions for the middle of the calligraphy pieces, which have figural designs, six have been finished. Of the designs, six have been finished. Of the spires, embroidered cover, and borders, nearly a quarter have been sewn. Of the work on the outside of the tent, the basis of which is linen and the design of which is silken weave,

[200] The English translation is from Thackston, *Album Prefaces*, 44, and the original Persian text from *the Report (ʻarżih-dāsht)* is as follows:
طرح میر دولتیار بود جهت زین خواجه میر حسن نقل کرد و میر شمس الدین پسر خواجه میر حسن و استاد دولتخواجه بصدف تراشی مشغول اند.

[201] Dūst Muḥammad, "Preface to the Bahrām Mīrzā Album," 14.

[202] The English translation is from Thackston, *Album Prefaces*, 43, and the original Persian text from *the Report (ʻarżih-dāsht)* is as follows:
خواجه عبدالرحیم بطروح مجلدیان و مذهبان و خیمه دوزان و کاشی تراشان مشغول است.

[203] Lentz and Lowry, *Timur and the Princely Vision*, 219.

and the outlining of which is gold embroidery, approximately a quarter has been sewn, and [the workers] are busy completing [the job].[204]

They suggested that the wording used to describe this decoration corresponds exactly to that used earlier in the report to describe the production of manuscripts. Further evidence of the atelier's role in tentmaking is found in the Diez Album, which contains a pouncing workshop design possibly intended as a model for a tent panel; its arabesque decoration is consistent with that used in books (Figure 1-7).

1.6 Design process and methods

Design transferring methods

Carpet wearing is mostly based on following a pattern drawn on paper. Details on exactly what past methods were used will be discussed in the following section and further in chapter 4. But based on the fact that designs on paper were important in carpet production and that different media shared similar designs, it is worth looking at the design methods used for copying the drawings kept in albums. Tīmūrīd art had an orderly, clear-cut and codified nature that was the means through which visual creativity could be reproduced and transferred in the period under discussion. This has been discovered through investigating drawings and sketches in drawing albums that show that form or image moves from conception through different stages toward execution.[205]

Inspection of drawings reveals they were folded, creased, the ink virtually erased from many passages, and used in various other ways. In other words, the papers were used again post production, for several purposes, rather than being used once.[206]

There is other evidence to prove that designs were used more than once in the 15th century. Roxburgh expressed that "most of the sheets of paper, cut to various dimensions and shapes on which they were drawn, functioned as intermediaries in a design process that led

[204] The English translation is from Thackston, *Album Prefaces*, 46. The original Persian text from *the Report (ʻarżih-dāsht)* is as follows:
یقه تراق چهارده قطعه وبوزه هفت قطعه از جمله این بیست و یک قطعه شش قطعه تمام شده است و نعلهای قطعه تمامی دوخته شده و شمسهای میان قطعهای خط که صورت گریست از جمله بیست و یک عدد شش عدد تمام شده و شرف و محبس و حاشیها را قریب یک دانگ و نیم کار دوخته شده کار بیرون خرگاه که اصل او مثقالی است و نقش او صندل باف و تحریر او زر حقه قریب یک دانگ و نیم کار دوخته شده به تتمه مشغول اند.

[205] Lentz and Lowry, *Timur and the Princely Vision*, 165.

[206] David J. Roxburgh, "Persian Drawing, CA. 1400-1450: Materials and Creative Procedures," *Muqarnas* 19 (2002): 45.

from sketches and exploratory designs to meticulously inked line drawings."[207] Although the papers could have been discarded after being used, they were gradually appreciated for their own artistic value and came to be regarded as containing creative substance.[208]

Having learned that paper designs were used in different media, scholars would like to know more about the methods of transferring them.[209] One such method is called pouncing. In this method, the drawing is copied using a needle and paper or deerskin which is placed on the drawing.[210] The needle creates pinholes on the paper that, together, create the shape or design. Ground chalk or charcoal is applied to the surface of the pounce, which makes the powder penetrate the holes and create dots. The dots are linked using an ink line and form the outline of the design. If the pounce is reversed, a mirror image of the original design is prepared.[211] The mirror image is commonly used in carpet design to create symmetrical motifs and in some larger areas such as medallion and border repetition.

In another method, no intermediary sheet of paper is used as the pounce. Rather, the drawing is itself used as the pounce, and placed on the surface of the artefact that receives the design. The contours of the drawing are pricked, and the drawing is placed on the surface so that the stylus penetrates it, creating marks on the surface beneath. This method does not require powder of any kind. It is, on the whole, a much simpler process that reduces the time or energy required for producing designs but damages the original drawing.[212]

Several pinholes on numerous drawings show that the pouncing processes have been used. Nevertheless, other methods have been discovered as well. For example, the back side of the original painting is painted with red chalk or charcoal. The painting is placed on the receiving surface and the artist traces and draws over the original design with a stylus. The pressure exerted by the stylus transfers the red chalk or charcoal to the underlying surface in the form of the intended design. This method has been identified by discovering discoloured patches of black or red on the sheets in the albums.[213]

The charcoal method is mentioned in *Tārīkh-i Rashīdī* where talking about Ustād Bābā Hājjī, "in painting, his brush is masterly, but his underdrawing is flimsy (*bi-andām*). In

---

[207] Ibid, 44.
[208] Ibid, 44.
[209] Ibid, 61.
[210] Ibid, 61. Roxburgh made the equivalent for "using a needle and a paper and or deerskin" as *charba*, *garda-yi tasvir*, *kaghaz-i suzan zadan*. He explained *Garda-yi tasvir* can also refer to the powder used for pouncing. These terms do not occur in 15th- or 16th-century written sources, but are attested in later periods. The use of animal skins for pouncing in the 15th century is still an open question.
[211] Ibid, 61.
[212] Ibid, 61.
[213] Ibid, 61-62.

all of Khurāsān he is without equal in *ṭarrāḥī-i naqsh* and charcoal *(zughāl-giriftan)*."[214] And the commentary on the method used by Ustād Bābā Hājjī continues: "It is said that in a gathering he was goaded to draw fifty semicircles, all [as though drawn by] a compass, without the slightest differentiation. Not one was larger or smaller by so much as a hair's breadth."[215]

Localised smudges of powder appear in Figure 1-8. This design is of lotus plants and lotus flowers drawn in red ink and arranged in a circle. The lotus leaf and flower in the upper left section are marred by a black shadow.[216] This design is very similar to a carpet design prepared for execution on a *naqshih*.

Figure 1-8. Page of drawings. Iran or Central Asia, ca. 1400-30.
Various inks on paper, 680 x 500 mm (total page). Topkapı Palace Library, H. 2152, fol. 70b. (Photo: Topkapı Palace Museum, Istanbul) (Roxburgh, David J. "Persian Drawing, CA. 1400--1450: Materials and Creative Procedures." *Muqarnas* 19 (2002): 62, part of fig. 21, the image at lower right)

Roxburgh divided the design processes he proposed into two main groups according to materials used. For drawings that in subject matter and size related to objects or other non-paper-based media, transfer methods such as pouncing were essential. Unlike those initially accepted, transfer techniques were seldom used in the drawings that related to manuscript painting and were limited to design of the unit and compositional drawing. According to evidence, there was a similar level of specialisation and skill, or a hierarchy of ability, connected with the methods that went into executing each design.[217] This may be true of carpet designers or those who might be responsible for designing carpets. If the final stages of designing manuscript paintings and drafting designs on the manuscript page occurred without the use of transfer methods, the only option was to draw freehand after a visual model, or even to recall from memory an often drawn compositional unit applicable to the carpet design.[218]

Lentz and Lowry wrote about a fourth technique, that of stencilling. The need to ornament and embellish manuscript pages led the atelier *(kitābkhānih)* to experiment with a stencilling technique, combined with gilding to produce an array of geometric, figural and

[214] Thackston translated *ṭarrāḥī-i naqsh* into "painting design."
[215] Mirza Muhammad-Haydar Dughlat (1500--1551), "The Tārīkh-i Rashīdī," in *A Century of Princes: Sources in Tīmūrīd History and Art,* Wheeler M. Thackston (Massachusetts: Cambridge, 1989).
[216] Roxburgh, "Persian Drawing, CA. 1400-1450," 62.
[217] Ibid, 67.
[218] Ibid, 67.

vegetal openwork patterns.[219] He added that stencilling may not have been a specific Tīmūrīd invention; the nature of the technique was well suited to the Tīmūrīd penchant for repetition and codification, and it became an ideal vehicle for workshop innovation.[220]

The technique of transferring design into weaving

Possible methods weavers used to transfer design into weaving in the 15th century are unknown. However, there are some methods suggested for later carpets to be explained in more detail in chapter 4. Here, it is useful to examine how textile designs were transferred into weavings as well, since both carpets and textiles share similar production processes. Jonathan Bloom, Islamic art and architecture historian, reviewed the design process in different media and in relation to textiles, he believed that our current understanding on how weavers worked in the medieval Islamic period is mainly based on conjecture, since there are few surviving fragments.[221] Nevertheless, it is suggested that weavers did not usually need graphic instructions or cartoons to be able to produce the textiles used in the period, which were mostly plain textiles or geometric patterns such as stripes and checks. Referring to the tapestry weavers, Bloom wrote:

> Tapestry weavers may have used drawings under or behind their looms to guide them when inserting coloured threads to make a pattern, but the largely repetitive nature of many tapestry border designs suggests that all but novices would have been able to produce many of the designs from memory.[222]

There is a difference in terms of design between tapestry weaving and embroidery on the one hand and drawloom weaving on the other. In the process of weaving and embroidering tapestry, the craftsman creates the work as he moves on; hence he is able to change the design along the way as necessary. In the process of drawloom weaving, however, the design for the production is pre-given. This technique which was prevalent in the Islamic world in the late 10th century and early 11th century, is based on a pattern that has already been put on the loom, through tying the warp threads in bundles with the intention of creating more complex

[219] Lentz and Lowry, *Timur and the Princely Vision*, 204. In practice, the (object) stencil is usually a thin sheet of material, such as paper, plastic, wood or metal, with letters or a design cut from it, used to produce the letters or design on an underlying surface by applying pigment through the cut-out holes in the material.
[220] Ibid, 204.
[221] Jonathan M. Bloom, "The Introduction of Paper to the Islamic Lands and the Development of the Illustrated Manuscript," *Muqarnas* 17 (2000): 21.
[222] Ibid. For more information see Patricia L. Baker, *Islamic Textiles* (London: British Museum Press, 1995).

patterns and designs. The weaver, with the help of his assistant called a drawboy, "selecting bundles of threads to raise and lower and the weaver inserting the coloured wefts to make the cloth."[223]

No reliable information exists about the process of transferring patterns to production during medieval times in the Islamic world. Based on analogy, however, it can be gathered that the pattern was first drawn on graph paper. The artist then transferred the graph to the simple, which consisted of cords controlling warp threads tied into bundles. This process could be really time consuming, lasting up to a month or even more. The finer the pattern and the more varied the colours used, the longer it took for the weaving to be completed. Taking into account the context of the production of textiles under discussion, it can be surmised that the initial pattern was drawn on paper. The precision in making such textiles could not have been achieved without having a preparatory pattern or drawing to be used as a guide.[224]

[223] Bloom, "The Introduction of Paper to the Islamic Lands," 21.
[224] Ibid, 21.

Chapter 2. Hirāt School: Carpet's Design and Pattern

In broad terms, carpets can be studied in respect of their designs, weaving techniques and materials. This study focuses on carpet design. Chapters 2, 4 and 6 examine Persian carpet design during the 15th, 16th and 17th centuries respectively. In the discussion of Persian carpet design, it is important to distinguish between two different aspects: design structure (layout) and motifs (patterns). The first two sections (2.1 & 2.2) deal with the motifs of Persian carpet design during the Tīmūrīd period, while the third section (2.3) deals with structure.

2.1 Carpet motifs

The motifs of Persian carpets, generally speaking, can be grouped under Islamic decorative design and ornament, mostly known as arabesque in contemporary Western scholarship. Islamic art historian, Necipoğlu has described arabesque as "having conceived and presented by Western scholars as a unifying essence of Islamic visual culture."[225] The 19th century witnessed the increasing interest in Islamic ornament that had enthralled Europeans since the Middle Ages and the Renaissance. Following the first Industrial Revolution, in the 19th century, art theorists disputed abstract patterns of oriental and Islamic art and attempted to theorise as expressions that consisted of colours, shapes and pure forms.[226]

As Necipoğlu described, "the arabesque has three types with rhythmically interlaced variants: vegetal, calligraphic, and geometric."[227] In her recent publication, however, she has updated arabesque types into four categories: vegetal, geometric, epigraphic and figurative.[228] Generally classified in terms of geometric, vegetal and calligraphic variants, the so-called arabesque (occasionally intertwined with stylised figures and animals) was assigned a purely decorative function that differed fundamentally from the iconographic tradition of Western representational art.[229]

---

[225] Gülru Necipoğlu, *The Topkapı Scroll – Geometry and Ornament in Islamic Architecture* (Santa Monica: The Getty Centre for the History of Art and Humanities, 1995), 61.
[226] Necipoğlu, *The Topkapı Scroll,* 61.
[227] Ibid, 62.
[228] Gülru Necipoğlu, "Early Modern Floral: The Agency of Ornament in Ottoman and Safavid Visual Culture," in *Histories of Ornament from Global to Local*, eds. Gülru Necipoğlu and Alina Payne (Princeton: Princeton University Press, 2016), 132.
[229] Necipoğlu, *The Topkapı Scroll,* 62-63. For various definitions of the arabesque, see Ernst Emil Herzfeld 1987. Reprint. "Arabesque." In *The Encyclopaedia of Islam*. Vol. 1: 363-67. Leiden: E. J. Brill. Original edition (Leiden: E. I. Brill, 1913); Ernst Kühnel, "Arabesque," in *The Encyclopaedia of Islam*. New ed. Vol. 1: 558-61 (Leiden: E. J. Brill, 1960); and Alois Riegl, *Stilfragen: Grundlegungen zu einer Geschichte der Ornamentik* (Berlin: Georg Siemens, 1893). Published in English as *Problems of Style: Foundations for a History of Ornament*, trans. Evelyn Kain and annotated by David Castriota (Princeton: Princeton University Press, 1992).

In contrast to Necipoğlu's classification, Islamic art scholar, Titus Burckhardt divided arabesque into two groups. He wrote:

> There are two typical forms of the arabesque: one of them geometrical interlacing made up of a multitude of geometrical stars, the rays of which join into an intricate and endless pattern.... The second form, the arabesque commonly so-called is composed of vegetable motifs, stylized to the point of losing all resemblance with nature and obeying only the laws of rhythm. Indeed it is the science of rhythm transposed into graphic mode, each line undulating in complementary phases, and each surface having its inverse counterpart.[230]

Considering the ethno-racial character of motifs, Necipoğlu attributed various types of arabesque to Arabian, Moresque, Persian, Turkish and Indian schools.[231]

This was how contemporary scholarship considered generally the decorative motifs of Islamic arts. In contemporary Persian arts these motifs (patterns) are considered as Persian traditional design (*tarrāḥī-yi sunnatī*), which usually has a decorative function. In terms of historical evidence from 15th-century Iran, there are few specific written documents that give instruction or information on "decorative" designs. Among the earliest texts is a treatise that contains a recipe about drawing, composed by Sīmī Nishāpūrī in the first half of the 15th century.[232] The treatise, which seems to be a part of a book, deals with the media of drawing at the time: papers, colours, inks and pens. Although it does not make mention or include information on motifs or geometrical designs; however, it is still relevant to carpet design as it contains detailed instructions on how to make specific colours. The design plan needed colouring for the weaver to follow, and this in turn required expertise on how to make specific colours.

---

[230] Titus Burckhardt, *Mirror of the Intellect: Essays on Traditional Science and Sacred Art*, trans. William Stoddart (New York: State University of New York, 1987), 227.
[231] Necipoğlu, "Early Modern Floral," 132.
[232] Thackston in Wheeler M. Thackston, "Treatise on Calligraphic Arts: A Disquisition on Paper, Colours, Inks, and Pens by Simi of Nishapur," *Intellectual Studies on Islam: Essays Written in Honour of Martin B. Dickson*, eds. Michel M. Mazzaoui and Vera B. Moreen (Salt Lake City, Utah: University of Utah Press, 1990), pp. 219-28 has translated this treatise into English and explained: The text of this treatise has been twice published, based on different manuscripts: "*Risala-i khatt dar hayan-i kaghadh u rangha-yi alwan,*" edited by Parwiz Adhka'i in *Hunar u mardum* 85 (1348): 51-57, an edition based on Tehran, *kitābkhānih-i Majlis-i Shura-yi Milli* MS No. 6150; and "*Yak risala-i nafis u kuhansal-i hunari*," edited by Ahmad Gulchin-i Ma'ani in Nashriyya-i Danishkada-i Adabiyyat-i Tabriz 14 (1341): 287-303, edition based on Tehran, Majlis MS No. 2459. The two texts are very similar in content and have only minor discrepancies. The authorship of this treatise has been demonstrated by Yves Porter, "Un traité de Simi Neysapuri (IXe/XVe S.), artiste et polygraphe," *Studia Iranica* 14 (1985): 179-98. The treatise forms an extract from Simi's Jawhur-i Simi, manuscript copies.

Regarding design manuals and recipes, no surviving examples from the 15th century are evident; however, a number of artistic treatises and commentaries have survived from the succeeding Ṣafavīd dynasty. These historical documents provide insights into both the conceptual foundation and terminology of decorative design with striking similarities to the visual evidence found in Tīmūrīd art.[233] Thackston mentioned that Lentz and Lowry believed both Tīmūrīd and Ṣafavīd traditions share a distinctive schematic organisation that distinguishes visual elements by their function of decorating the surfaces of a variety of media. Although Thackston was uncertain over the precise meaning of the terminology used by Ṣādiqī Biyg to draw on exact correspondence between Tīmūrīd and Ṣafavīd decorative idioms.[234]

Art historian, David Roxburgh mentioned that "texts that deal explicitly with drawing, painting and the arts of the book tend to be later in date, including Ṣādiqī Biyg's *Canons of Painting* (*Qānūn al-Ṣuvar)*, between 1576 and 1602 and Qāżī Aḥmad's *Gulistān-i Hunar* (meaning *Rose Garden of Art*), 1596-1606."[235] Ṣādiqī Biyg's treatise deals exclusively with technical advice for depicters and comprises general advice about aspects of practice with guidelines for techniques and recipes.[236] In these historical Persian texts, the motifs are categorised as "*Haft Aṣl-i Naqqāshī,*" meaning "Seven Fundamental Modes (Principles) of Decorative Designs."[237] Azhand suggested that Ṣādiqī Biyg's information in *Canons of Painting,* who was head of the artworks department (*kitābdār)* himself in the Ṣafavīd artworks department (*kitābkhānih)* is related to artists' activities in Hirāt's royal artworks department.[238]

The seven modes of Persian decorative design

There are several texts from the 16th century, including a few which were introduced above, that refer to the "seven modes" of design in Persian art. These seven fundamental modes will be examined against evidence from the 15th century and their background before that time, as follows: *Islīmī* (the ivy-and-spiral (or vine-and-tendril) pattern); *khatāyī* (the Chinese floral

[233] Thomas W. Lentz and Glenn D. Lowry, *Tīmūr and the Princely Vision: Persian Art and Culture in the Fifteenth Century* (Los Angeles: Los Angeles County Museum of Art, 1989), 168.
[234] Lentz and Lowry, *Timūr and the Princely Vision*, 195.
[235] Roxburgh, "Persian Drawing, CA. 1400-1450," 68, footnote 16. These texts will be discussed further in detail in chapter four when dealing with 16th-century carpet design; however, the issue is raised in this chapter to understand where these motifs and concepts stood in Tīmūrīd art.
[236] Roxburgh, "Persian Drawing, CA. 1400-1450," 68, footnote 16.
[237] The Persian word is "*Aṣl"* and it means "principle" and I have used "modes" as used by Necipoğlu.
[238] Azhand, "Art Education and Patronage during the Shāhrukh Reign," 85.

pattern); *abr* (cloudlike or marbled pattern) and *vāq* (grotesque pattern featuring the head-bearing tree); *nīlūfar* (the lotus) and *farangī* (the Frankish pattern); and finally *band-i rūmī* (the Anatolian knot pattern).[239]

The seven modes in the Tīmūrīd era

The seven fundamental modes (*haft aṣl*) are *islīmī*, *khatāyī*, *abr*, *vāq*, *nīlūfar or fiṣālī*, *farangī*, and *girih* or *band-i rūmī*. In this section these modes will be explained together with examples in Tīmūrīd texts and art.

Islīmī

Azhand believed that the word "arabesque" used by Western scholars is the English translation of *islīmī*. The reason he mentions this is that the beginning of scholarly publication by Western scholars was in the 19th century and they were not familiar with Persian texts and *islīmī* and they called it arabesque, which comes from "Arab" and "Arabic."[240]

Azhand stated *islīmī* is derived from tree and its branches. *Islīmī* is very firm and strong and it has different styles in Iranian art.[241] *Islīmī* was used in Iranian decorative arts before Islam in architectural ornaments and stuccos from Parthian and Sasanian Empires and after Islam, it developed and continued to the Tīmūrīd period. However, the principles and rules are not documented (or if they were, they have not been discovered yet) until the 16th century, but there is some mention of *islīmī* in 15th century texts.

Mulānā Qavām ul-Dīn has finished the *islīmī* margins for the binding of the *Book of Kings* (*Shāhnāmih)* and has taken up the brush for the pleasure scene of the body of the binding. The groundwork (*būm*) is nearly two thirds done; the "back and head and neck" [back and flap?] have been attached and the *ṭarīq* (groove?) has been drawn.[242]

---

[239] Necipoğlu, *The Topkapı Scroll,* 112. Necipoğlu used "*The Canons of Painting* by Ṣādiqī Biyg," translated as an appendix in Dickson and Welch 1981, 1: 259-69 and she slightly modified the translation, adding the bracketed explanations.

[240] Yaqub Azhand, *Seven Fundamental Modes of Iranian Decorative Arts (Haft Aṣl-i Taz'īnī-yi Hunar-i Iran)* (Tehran: Piykarih, 2014), 45.

[241] Azhand, *Seven Fundamental Modes,* 52, except the cloud form which Azhand believed is mistakenly known as *islīmī mārī* (snake-form *islīmī*) in Persian but actually it is *abr-i mārī* from *abr* category, one of the Seven Fundamental Modes of Iranian decorative art.

[242] The English translation with a little modification from Thackston*, A Century of Princes*, 324. The original Persian text is as follows:

مولانا قوام الدین روی جلد شهنامه را حاشیه اسلیمی مکمل کرده و عیش تماشای متن جلد را بقلم گرفته و قریب دو دانگ بوم شده است و پشت و سر و گردن چسبانیده و طریق کشیده شده است.

Islīmī in Tīmūrīd art

The *Islīmī* pattern was used in the decoration of architectural surfaces before the Tīmūrīd period. Takht-i Sulaymān (Figure 2-1) and Sulṭānīyyih (Figure 2-2) are two important buildings from Ilkhānīds (1256--1335). There is another tile from an early-15th-century *miḥrāb* in Kāshān with *islīmī* motifs (Figure 2-3). In the abovementioned three tiles, all before the Tīmūrīd period, the evolution of *islīmī* patterns can be seen. Examples of *islīmī* motifs in Tīmūrīd art can be found in Figures 1-5 and 1-6 (see Chapter 1) and 2-4 and 2-5 here. They clearly show how *islīmī* patterns were further developed during the late 14th century and in the 15th century.

Figure 2- 1. Frieze tile with inscription from the *Shāhnāmih* (Book of Kings).
Iran (Takht-i Sulaymān), 1270s. The Trustees of the British Museum, London (OA 1878. 12-30.573b) (Melville, Charles. "The Mongols in Iran." In *The Legacy of Genghiz Khan, Courtly Art and Culture in Western Asia, 1256--1353*, edited by Linda Komaroff and Stefano Carboni. New York: The Metropolitan Museum of Art, 2002, 52, Fig. 49 (cat. no. 80))

Figure 2- 2. Section of a tile frieze, from the tomb of Uljāytu.
Iran (Sulṭānīyyih), 1307-13. Los Angeles County Museum of Art, The Madina Collection of Islamic Art (M 2002.1.344) (Blair, Sheila. "The Religious Art of Ilkhanids." In *The Legacy of Genghiz Khan, Courtly Art and Culture in Western Asia, 1256--1353*, edited by Linda Komaroff and Stefano Carboni. New York: The Metropolitan Museum of Art, 2002, 124, Fig. 143 (cat. no. 121))

Figure 2- 3. *Miḥrāb* tile, attributed to ʻAlī ibn Aḥmad ibn ʻAlī Abī al- Ḥusayn.
Iran (Kāshān), early 14th century. Victoria and Albert Museum, London (C1977- 1910) (Blair, Sheila. "The Religious Art of Ilkhanids." In *The Legacy of Genghiz Khan, Courtly Art and Culture in Western Asia, 1256--1353*, edited by Linda Komaroff and Stefano Carboni. New York: The Metropolitan Museum of Art, 2002, 128, Fig. 151 (cat. no. 124))

Figure 2- 4. Doors to the main dome chamber of the Shrine of Aḥmad Yasavī.
Turkestan, c. 1397 (Lentz, Thomas W. and Glenn D. Lowry, *Timur and the Princely Vision: Persian Art and Culture in the Fifteenth Century.* Los Angeles: Los Angeles County Museum of Art, 1989, 208, fig. 68))

Figure 2- 5. Tile, Iran, dated A.H. 860 (A.D. 1455).
New York, Metropolitan Museum of Art (Lentz, Thomas W. and Glenn D. Lowry, *Timur and the Princely Vision: Persian Art and Culture in the Fifteenth Century.* Los Angeles: Los Angeles County Museum of Art, 1989, 213, cat. no. 113B))

Khatāyī

Khatāyī is the second mode of Persian decorative arts and it is believed to be related to *Khatāy,* a large region in north and northwest China. It sometimes referred to China in general which is called Cathay in English.[243] Azhand wrote that Iranian artists were inspired by *khatāyī* patterns on Chinese porcelain and they were used, changed and adopted into Iranian decorative art.[244] There are some indications of the presence of Chinese artists and porcelain before the 13th century in historical texts but *khatāyī* was known to Iranian artists by Mongols.[245]

Azhand stated that if we consider that *islīmī* is the abstract form of the tree, *khatāyī* is the abstract form of its branches, leaves, blossoms and flowers.[246] In other words, he defined *khatāyī* as a combination of flowers and decorative leaves which are interwoven, including birds, inside its foliage.[247] So both *islīmī* and *khatāyī* are considered vegetal motifs based on this definition. He believed that *khatāyī* includes three main flowers: papaver somniferum, commonly known as opium poppy or breadseed poppy *(khashkhāsh)*, Jujube *(ʻannāb)*, and lotus *(nīlūfar)*.[248]

For mention of *khatāyī* in Tīmūrīd texts, Ghiyāth ul-Dīn in his report on a China voyage, wrote about the event waiting for the king in Beijing, describing the scene as follows:

> There they saw a pavilion larger than the first palace. [Just then a dais was being set up.] It was a triangular platform, "four cubits a side," with a covering of "gold-flecked" yellow China silk over it. In it were represented dragons, phoenix and *khatāyī* patterns. On top of the dais was placed a golden chair (*kursī*).[249]

---

[243] *Khatāyī* (ختایی) is written sometimes *khatā'ī* (ختائی). Yaqub Azhand, "*Khatāyī* Mode in Iran's Art of Book (*Aṣl-i Khatāyī dar Kitāb-Ārāyi-yi Iran*)," *Nigarih* 10 (2009): 18.

[244] Azhand, *Seven Fundamental Modes,* 97.

[245] Ibid, 97.

[246] Azhand, "Khatāyī Mode in Iran's Art of Book," 19.

[247] Ibid, 19.

[248] Azhand, *Seven Fundamental Modes,* 97.

[249] The English text, which is the translation of original Persian text is from "Thackston, *A Century of Princes*, 288." It is used with some modification and the change of the word "other birds" to *Khatāyī* patterns. This word might be due to using different copies of the same original text. The original Persian text below is from ʻAbdullāh Ibn Luṭfullāh Ḥāfiz Abrū (d. 1430), *Zubdat al-Tavārīkh*, Edited and annotated by Siyyid Kamāl Hāj siyyid Javādī (Tehran: Ministry of Culture and Islamic Guidance, 2000), 2/ 838:

...و در برابر کوشکی از ان کوشک اول به عظمت تر و پیش گشاده تختی اوردند گرد مقدار چهار گز و گرد تخت مثل بلسک خرگاه قسین گرفته از اطلس زرد و مجموع زرفشان ختایی کرده به اژدرها و سیمرغ و نقوش ختایی و بر بالای تخت کرسی از زر بنهادند ...

It seems that what they saw, which Ghiyāth al-Dīn referred to as *Khatāyī* patterns *(nuqush-i khatāyī)*, is no more explanation here about what those patterns were exactly. Further he explained another scene with similar patterns. *Khatāyī* patterns here are mentioned by Ghiyāth ul-Dīn Naqqāsh, and from the text, it is mentioned that these patterns were carved on the stone:

> From the door of the audience hall to the end of the building was 1,925 feet, and all the structures were of cut stone and baked brick. The bricks were so laid that there was not a hair's breadth of crookedness, [and in the stonecutting there were dragons, phoenix and *khatāyī* patterns]. The masters of stonecutting, carpentry, painting and tilemaking of that region have no peers.[250]

Khatāyī in Tīmūrīd art

Apart from being one of seven modes of Persian decorative designs, *khatāyī* motifs have significant importance in this research. These motifs are form a big part of chinoiserie elements in Iran. Before Tīmūrīd, there are records of *khatāyī* in art. There is a tile from Takht-i Sulaymān (Figure 2-6) and a painting mentioned by Azhand in Juwaynī's *Jahān-gushā* with *khatāyī* foliage from the Ilkhānīd period and late 13th century (Figure 2-7). In the painting, the motifs are not skillfully drawn and they are still linear.[251]

Figure 2- 6. Frieze tile with dragon.
Iran (probably Takht-i Sulaymān), ca. 1270s. The Nasser D. Khaljli Collection of Islamic Art, London (POT 790) (Watt, James C. Y. "A Note on Artistic Exchanges in the Mongol Empire." In *The Legacy of Genghiz Khan, Courtly Art and Culture in Western Asia, 1256--1353*, edited by Linda Komaroff and Stefano Carboni. New York: The Metropolitan Museum of Art, 2002, 65, Fig. 59 (cat. no. 101))

[250] The English text, which is the translation from the original Persian text is from "Thackston, *A Century of Princes*, 292." It is used with some modification and a part of the sentence "the bricks were of baked china clay, rand for about 300 cubits" is deleted and the part in brackets has been added based on the Persian text as a result of using different copies of the same original text. The original Persian text below is from "Ḥāfiz Abrū, *Zubdat al-Tavārīkh*, 2/851-2":
... مقدار دویست یا سیصد گز طول و عرض هر حوالی که بود سنگ فرش مقدار موئی کج نشده و نپیچیده که کسی گوید به قلم جدول کشیده اند و در سنگ تراشی ها اژدرها و سیمرغ و نقش ختایی منبت و منقر مثل پشم تراشی که آدمی در آن حیران می شد. سنگ تراشی و درود گری و گلکاری و نقاشی و کاشی کاری در مجموع این بلاد هیچ پیشه وری [چنان] نمی تواند کرد مگر استادان این بلاد ببینند تا باور کنند [و انصاف دهند].

[251] Azhand, *Seven Fundamental Modes,* 108.

Figure 2- 7. The author with a Mongol Prince.
Double frontispiece from the History of the World Conqueror (*Tārīkh-i Jahān-gushā)*, copied by Rashīd al-Khāfī, probably Iraq (Baghdad), finished on A.H. 4. Dhu'l-hijja 689/A.D. December 8, 1290. Fols. 1v, 2r; ink, colors, and gold on paper. Bibliothéque Nationale de France, Paris (MSS or., Suppl. persan 205) (Komaroff, Linda. "The Transmission and Dissemination of a New Visual Language." In *The Legacy of Genghiz Khan, Courtly Art and Culture in Western Asia, 1256--1353*, edited by Linda Komaroff and Stefano Carboni. New York: The Metropolitan Museum of Art, 2002, 173, Fig. 201 (cat. no. 1))

Figure 2- 8. Enthroned Patron in Royal Guise.
From the *Marzbān-nāmih* (Book of the Margrave). Baghdad, 1299. Fol. 7r; ink, colors, and gold on paper. Archaeology Museum Library, Istanbul (ms. 216) (Komaroff, Linda. "The Transmission and Dissemination of a New Visual Language." In *The Legacy of Genghiz Khan, Courtly Art and Culture in Western Asia, 1256--1353*, edited by Linda Komaroff and Stefano Carboni. New York: The Metropolitan Museum of Art, 2002, 172, fig. 200))

Figure 2- 9. Star-shaped tile with lotuses.
Iran, c. 1300 (Kadoi, Yuka. *Islamic Chinoiserie: The Art of Mongol Iran.* Edinburgh: Edinburgh University Press, 2009, 93, fig. 3.13))

Figure 2- 10. The cenotaph in the Mausoleum of Khājih 'Alā' ul-Din in Khiva.
(Uzbekistan). Circa 1303, a ceramic masterpiece built during Mongol rule of the Khwarzm Oasis. (Thompson, Jon. "Carpets in the Fifteenth Century." In *Carpets and Textiles in the Iranian World 1400--1700*, edited by Jon Thompson, Daniel Shaffer and Pirjetta Mildh. Oxford: The May Beattie Archive at the Ashmolean Museum, 2010, 42, fig. 9))

Figure 2- 11. Quadrangular tile, from the tomb of Oljeitu.
Iran (Sulṭānīyyih), 1307-13. Private collection (Blair, Sheila. "The Religious Art of Ilkhanids." In *The Legacy of Genghiz Khan, Courtly Art and Culture in Western Asia, 1256--1353*, edited by Linda Komaroff and Stefano Carboni. New York: The Metropolitan Museum of Art, 2002, 124, Fig. 144 (cat. no. I 22))

As explained above, one of the main motifs of *khatāyī* is the lotus flower. Thompson traced the Chinese-derived lotus flowers and leaves. He considered it as a motif only, but it is a dominant motif of a bigger group of *khatāyī* motifs. He mentioned that they were introduced to the art of Iran and Central Asia during the Mongol period. He suggested their first use in Central Asia was on the cenotaph of Khājih 'Alā' ul-Din in Khiva dated 1303 (Figure 2-

10).[252] Thompson has noticed a distinctive form of lotus leaf, which appears four times in the floral decoration surrounding two rectangular panels: a smaller version appears at the top of both columns. This stylised leaf has five crenated lobes: another version with four lobes is seen in Figure 2-18.[253] Thompson called the style of the lotus leaf in this figure as "flat" form indicating a distinctive, stylised form.[254] At lower right of Figure 2-17, is a typical three-lobed stylised lotus leaf Among the lotus flowers, at lower left of Figure 2-18 is a stylised lotus leaf with four crenated lobes. The leaf-form which spread to the art of the Turkmen and Ottoman courts typically has only three lobes; and in the centre of Figure 2-19, is a motif derived from the lotus leaf found in Tīmūrīd architectural decoration.[255]

Thompson traced the lotus flower in Iran back to almost the same time it appeared in Central Asia. He suggested the Great Mongol *Shāhnāmih* (Figure 2-15), and in a Jalāyirīd painting of the 1340s (Figure 2-16).[256] In Figure 2-15 *khatāyī* patterns are used on the bow case of the horsemen. But there are two other examples of *khatāyī* in Iran from the beginning of the 14th century Ilkhānīds (Figures 2-6 to 2-9 and Figures 2-11 to 2-14), which precede the paintings Thompson mentioned.

Figure 2- 12. Tile from a *miḥrāb.*
Iran, A.H. 722/A.D. 1322-23. The Metropolitan Museum of Art, New York (1983.345) (Blair, Sheila. "The Religious Art of Ilkhanids." In *The Legacy of Genghiz Khan, Courtly Art and Culture in Western Asia, 1256--1353*, edited by Linda Komaroff and Stefano Carboni. New York: The Metropolitan Museum of Art, 2002, 128, fig. 152 (cat. no. 125))

Figure 2- 13. Tapestry woven roundel.
Iraq or Iran, c. 1325. Tapestry weave, silk, gold thread wrapped around a cotton core. The David Collection, Copenhagen (30/1995) (Kadoi, Yuka. *Islamic Chinoiserie: The Art of Mongol Iran.* Edinburgh: Edinburgh University Press, 2009, 30, fig. 1.13))

Figure 2- 14. Textile with lotus patterns.
From the tomb of Cangrande della Scala (d. 1329). Lampas weave. Iran, c. 1300 (Kadoi, Yuka. *Islamic Chinoiserie: The Art of Mongol Iran.* Edinburgh: Edinburgh University Press, 2009, 22, fig. 1.2))

[252] Jon Thompson, "Carpets in the Fifteenth Century," in *Carpets and Textiles in the Iranian World 1400--1700*, eds. Jon Thompson, Daniel Shaffer and Pirjetta Mildh (Oxford: The May Beattie Archive at the Ashmolean Museum, 2010), 42.
[253] Ibid, 42.
[254] Ibid, 42.
[255] Ibid, 43.
[256] Ibid, 42.

Figure 2- 15. Detail of *Ardashīr Battling Bahman*, from a page of the Great Mongol *Shāhnāmih.*
Iran (probably Tabrīz), 1330s. Ink, colors, and gold on paper. Detroit Institute of Arts (35.54) (Hillenbrand, Robert. "The Arts of the Book in Ilkhanid Iran." In *The Legacy of Genghiz Khan, Courtly Art and Culture in Western Asia, 1256--1353*, edited by Linda Komaroff and Stefano Carboni. New York: The Metropolitan Museum of Art, 2002, 157, fig. 184 (cat. no. 53))

Figure 2- 16.. A Jalayirid *Khalila and Dimna* manuscript.
Dated 1343-44, National Library, Cairo, *Adab Fārsī* 61, folio 3b (Thompson, Jon. "Carpets in the Fifteenth Century." In *Carpets and Textiles in the Iranian World 1400--1700*, edited by Jon Thompson, Daniel Shaffer and Pirjetta Mildh. Oxford: The May Beattie Archive at the Ashmolean Museum, 2010, 52, fig. 32))

The use of the lotus is abundant in the decoration of the Shah-i Zinda in Samarqand from around 1360 onwards (Figure 2-18), and this continues during and after the lifetime of Tīmūr, for example in Ulugh Biyg's *madrisih* in Samarqand (1417--20), (Figure 2-17).[257]

Cities such as Shīrāz and Hirāt were home to artistic production where the new lotus style flourished through paintings and illuminations. The "lotus-look", as well as the stylised lotus leaf, began moving more and more toward the western hemisphere as artists and craftsmen migrated. The new form can be found in the 1460s, in Turkmen Tabrīz, and appears as a dominant artistic tendency in Istanbul during the rule of two Ottoman emperors, Mehmet II and Bayezid II.[258]

Figure 2- 17. Ceramic tiles in the *madrisih* built by Ulugh Biyg in Samarqand in 1417.
(Thompson, Jon. "Carpets in the Fifteenth Century." In *Carpets and Textiles in the Iranian World 1400--1700*, edited by Jon Thompson, Daniel Shaffer and Pirjetta Mildh. Oxford: The May Beattie Archive at the Ashmolean Museum, 2010, 43, fig. 12))

Figure 2- 18. Detail of ceramic tiles in the mausoleum known as "Anonymous no. 2."
In the Shah-i zinda, Samarqand, built 1375--1385 (Thompson, Jon. "Carpets in the Fifteenth Century." In *Carpets and Textiles in the Iranian World 1400--1700*, edited by Jon Thompson, Daniel Shaffer and Pirjetta Mildh. Oxford: The May Beattie Archive at the Ashmolean Museum, 2010, 43, fig. 13))

Figure 2- 19. Tombstone found at the mausoleum of Jahāngīr, Tīmūr's son
(Ḥażrat Imām) (detail). Shahr-i Sabz, c. 1400--1450 (Lentz, Thomas W. and Glenn D. Lowry, *Timur and the Princely Vision: Persian Art and Culture in the Fifteenth Century.* Los Angeles: Los Angeles County Museum of Art, 1989, 211, fig. 74))

[257] Ibid, 42.
[258] Ibid, 45.

Figure 2- 20. Detail of a page from a *Khamsih* of Niẓāmī illustrated in Hirāt in 1431.
Istanbul's University Library (Thompson, Jon. "Carpets in the Fifteenth Century." In *Carpets and Textiles in the Iranian World 1400--1700*, edited by Jon Thompson, Daniel Shaffer and Pirjetta Mildh. Oxford: The May Beattie Archive at the Ashmolean Museum, 2010, 44, fig. 16))

Thompson later suggested that around 1430 a new variation of the stylised lotus leaf appeared in Iran. The leaf has appeared with minor variations (one or more lobes curled back to expose the underside) along its trajectory westward, first on the margins of an illuminated manuscript of *Khamsih* of Niẓāmī in Hirāt, in the first half of the 15th century, and then in the *Bābā Naqqāsh Album* (Figure 2-20). The Album was named after the central Asian artist who is supposed to have done the drawings in the Ottoman court from the 1460s to 1480s. The contents are significant in two ways: first, they show that the lotus leaf (both flat and foldedtypes) appears in the paintings and sketches of the Ottoman court; second, the curled-back lotus leaf motif has been distinctive in illuminations and bookbindings derived from Tīmūrīd art in Hirāt.[259]

Abr

Abr is a cloud-like motif and Azhand believed it has a Chinese origin, so it is also called Chinese cloud (*abr-i Chīnī*) in Persian.[260] Azhand believed that *abr* was used in Iranian arts during the Mongol period and continued after that, but there is no evidence before the Mongols or during the Seljuqs.[261] Sometimes the paper was decorated as a background cloud-like pattern before being used for different media and it was called *kāghaz-i abrī* (marbled paper).[262] Although there are some arguments as to whether *kāghaz-i abrī* is the same as *abr*.[263]

Abr had different shapes, *buturmih* (or *kuturmih*) was a cloud pattern extended from both ends and in the middle was a knot shape. This was mistakenly called a snake-like *islīmī* (*islīmī mārī*).[264] This cloud pattern was used in carpet design often and still known as *islīmī mārī*. In Figure 2-21, the depiction of cloud-like (*abr*) patterns form a mythical animal (middle-top), and snake-like cloud (*buturmih)* (top) can be seen.

[259] Thompson, "Carpets in the Fifteenth Century," 45.
[260] Azhand, *Seven Fundamental Modes,* 145.
[261] Ibid, 146.
[262] Ibid. Porter mentioned *abrī* or *kāghaz-i abrī* which undoubtedly means marbled paper.
[263] Najib Mayel Heravi, *Bookbinding in Islamic Civilisation (Kitāb-Ārāyī dar Tamaddun-i Islāmī)* (Mashhad: Āstān-i Quds, 1993), 575.
[264] Azhand, *Seven Fundamental Modes,* 146.

Figure 2- 21. A drawing from Hirāt.
Topkapı Sarayı Museum H2152 (ca. 1539–1543) (Azhand, Yaqub. *Seven Fundamental Modes of Iranian Decorative Arts (Haft Aṣl-i Taz'īnī-yi Hunar-i Iran)*. Tehran: Piykarih, 2014, 150)

Vāq

The *Vāq* pattern is a combination of plant forms, leaves, or flowers with human or animal heads.[265] *Vāq* is associated with a mythical tree on *vāq-vāq* island and its fruits resembled a human head.[266] Ḥamd al-Allāh Mustufī wrote: "*vāq-vāq* is an island in China sea and there are some trees there that when wind blows through their leaves, a song of *vāq-vāq* is heard."[267]

This pattern was mostly used in the border of manuscripts and on book covers.[268] *Vāq* was also known as *dāgh* and *dāq*.[269] The *Vāq* pattern can be seen on the tent design in Figure 2-22.

Figure 2- 22. Tīmūr Granting an Audience in Balkh on His Accession to Power in 1370.
Attributed to Bihzād, *Ẓafarnāmih* of Sharaf ul-Dīn 'Alī Yazdī, Hirāt, dated A.H. 872 (1467-68) (Azhand, Yaqub. *Seven Fundamental Modes of Iranian Decorative Arts (Haft Aṣl-i Taz'ini-yi Hunar-i Iran)*. Tehran: Piykarih, 2014, 176))

Faṣṣālī and nīlūfar

Vaṣṣālī and *faṣṣālī* are two terms used in bookbinding. There are two definitions, the first is a technical method and the second definition is both technical and decorative.[270] In the latter definition, *faṣṣālī* was to detach damaged papers of manuscripts and *Vaṣṣālī* was to restore those damaged parts of the paper with new papers of the same type.[271]

Another definition mentioned by Azhand referring to a 19th-century text was to add a border *(ḥāshīyih-sāzī)* for paintings and manuscripts.[272] This is very similar in technique to the first kind, the text (or any contents) in the middle part of the page was cut off and replaced by another paper with a different colour. Then two papers were attached (by the aid of their fibers) together carefully.[273] Having two different colours could create a special

[265] Ibid, 161.
[266] Ibid, 161-63.
[267] Azhand referred to Hamd al-Allah Mustufi's *Nuzhat ul-Qulub*.
[268] Azhand, *Seven Fundamental Modes,* 161.
[269] Mayel Heravi, *Bookbinding in Islamic Civilisation*, 823.
[270] Azhand, *Seven Fundamental Modes,* 133-35.
[271] Ibid, 133.
[272] Ibid, 134. For more information, see Siyyid Yusuf Ḥusayn's *Bookbinding Treatise (Risālih-yi Ṣaḥāfī)* in Najib Mayel Heravi, *Bookbinding in Islamic Civilisation (Kitāb-Ārāyī dar Tamaddun-i Islāmī)* (Mashhad: Āstān-i Quds, 1993), 459-495.
[273] Mayel Heravi, *Bookbinding in Islamic Civilisation*, 621.

visual effect.[274] There is a third definition for *faṣṣālī* to be explained in chapter 4. *Faṣṣālī* is replaced in Ṣādiqī Biyg's list by *nīlūfar* (bindweeds or convolvulus), also explained in chapter 4.

Farangī

Farangī is related to *farang* (*faranj* or *franj* in Arabic) and is known as Europe and in particular France by Muslims.[275] Azhand believed that *farang* also referred to Christians in general. He referred to Yāqūt al-Ḥamawī (1179--1229) when he wrote about the Crusades: "the saver of Bethlehem from *farang* was Debili (Ṣalāḥ ul-Dīn al-Ayyūbī (1138--1193))."[276] Azhand explained that by *farang,* Yāqūt meant all Christians.

Muslims, including Iranians, were in contact with Europe (*farang*) before the 13th century; however, from this time onward this relationship increased. Ilkhānīds had direct relations with the Vatican and during that time Marco Polo (1254--1324) travelled to China through Iran.[277] Clavijo travelled to Tīmūr's Empire as a Spanish envoy to negotiate political and trade opportunities.

Figure 2- 23. *Farangī* vase, Topkapı Sarayı Museum.
(Azhand, Yaqub. *Seven Fundamental Modes of Iranian Decorative Arts (Haft Aṣl-i Taz'īnī-yi Hunar-i Iran)*. Tehran: Piykarih, 2014, 128))

Firangī (or *firangī-sāzī*) is associated with European naturalistic painting including portraits, cloths, etc. and later followed by perspective as it developed in Europe.[278] Azhand believed it started in the Tīmūrīd period, however, it was introduced to Ilkhānīd artists. *Farangī*, as a decorative mode, was defined by Azhand as flowers and plants used in Byzantine decorations (Figure 2-23).[279] These naturalistic flowers are called European flowers (*gul-farang*) in carpet design and they are still used and known as patterns of carpet design including kirmān carpets.

[274] Azhand, *Seven Fundamental Modes,* 135.
[275] Ibid*,* 121.
[276] Ibid, 121. Yāqūt ibn- 'Abdullah al-Rūmī al-Ḥamawī was an Arab biographer and geographer of Greek origin, renowned for his encyclopedic writings on the Muslim world.
[277] Ibid, 122.
[278] Ibid, 125.
[279] Ibid, 126.

Girih or band-i rūmī

Girih is a regular mode of geometrical patterns with mathematical elements. The origin and provenance of *girih* is unclear, but most probably it was raised and developed during the Seljuq period (1104--1307).[280] After Mongol invasion, and during Ilkhānīd in Iran, the visual elements changed from geometric forms and were affected by Asian elements.[281] Seljuqs ruling in Anatolia were called Seljuqs of Rum (*Saljūqīyan-i Rūm* or *Anatoly*). They continued the architectural elements of great Seljuqs in Anatolia and one of these elements was *girih*. This was how *girih* came to be called *band-i rūmī*.[282]

Figure 2- 24. Iskandar, in the likeness of Ḥusayn Bāyqarā, with the seven sages.
An inscription in the arch of the window is dated AH 900 (1494/95) (British Library)

In this painting (Figure 2-24) *girih* can be seen in different parts of the architectural pattern. In a Tīmūrīd carpet (Figure 2-30) the pattern is a *girih* made by *islīmī* forms.

Thompson mentioned a pattern called "compass-and-rule," which he believed to be developed by Bihzād and can be seen in carpet depiction in his paintings.[283] Thompson described compass-and-rule as "[a design] formed by drawing circles, rubbing out parts of them and joining the gaps with segments of yet other circles or by straight lines, forming in this way a series of compartments."[284] This was a curvilinear style of earlier Ilkhānīd forms and became current in the first quarter of the 15th century in the art of illumination before Bihzād was born.[285] The description and examples fit the *girih* mode but as a later curvilinear form (Figure 1-6). However, Thompson explained the curved outlines of the compass-and-rule compartments in surviving carpets as "generally more complex in shape and not all of them could have been formed with a compass."[286]

[280] Ibid, 182.
[281] Ibid, 185.
[282] Ibid, 186.
[283] Thompson, *Milestones in the History of Carpets*, 90.
[284] Ibid, 194.
[285] Ibid, 194.
[286] Jon Thompson, "Early Safavid Carpets and Textiles," in *Hunt for Paradise: Court Arts of Safavid Iran 1501--1576*, eds. Jon Thompson and Sheila R. Canby (Milan: Skira Editore, 2003), 313, footnote 76.

2.2 Sources of the seven modes

The first wave: During the Mongol era

The cultural division that separated the western Arab-speaking realm (from Mamluk territories to North Africa and Spain) from the eastern Turco-Iranian areas (from Anatolia to Chinese borders) was reflected in various ornamental designs prevailing in each area, caused by Mongol invasions.[287]

During the Ilkhānīds' hegemonic rule from 1256 to 1335, arts and architecture in Central Asia, Anatolia, Iran and Iraq gave way to post-Mongol visual elements. Chinese motifs were also another artistic streak present in Iranian art in the same period following Chinggis Khan's death, when the Mongol empire was divided between his sons.[288]

Kadoi emphasised the importance of chinoiserie. She said that "in considering the stylistic and technical development of Iranian art, 'the Chinese element' is an inevitable issue."[289] The most frequently recurring motifs included the phoenix, the dragon and the lotus, closely associated with Chinese royalty. Less noticeable motifs and elements included clouds, birds and different kinds of animals. Chinese style painting and drawing were also found in Iran during this time.[290]

Pope wrote about this period, when old patterns were assimilated with new ones, that the Far East contributed "ideas and forms marked by a new naturalism and a new kind of elegance" that resulted in the juxtaposition of extremes, "the most relentless geometry is set beside the most exuberant floriation." Pope defined the change as not a complete substitution, but a continuation and supplementation and he welcomed this revolutionary change:[291]

> The Mongol shock just came at the moment when it was necessary to renew the whole substance of Iranian decoration if it were not to become moribund, for indeed the 13th century had done little more than mark time. Regeneration was affected, not by complete substitution, but by supplementation, so that continuity was not broken but rather sustained by fresh suggestions and saved from lapsing by inertia.[292]

---

[287] Necipoğlu, *The Topkapı Scroll,* 111.
[288] Jon Thompson, *Milestones in the History of Carpets* (Milan: Moshe Tabibnia, 2006), 22.
[289] Kadoi, *Islamic Chinoiserie*, 1.
[290] Thompson, *Milestones in the History of Carpets*, 22.
[291] Necipoğlu, *The Topkapı Scroll,* 111.
[292] Pope and Ackerman 1938-1939, 3: 2754, 2756, 2762-63.

Necipoğlu interpreted Pope's statement about change, as welcoming and used the word 'revolutionary' change. By quoting Frye, Kadoi stated her opinion about the influence of China on Persian art which was the aim of her book;[293] "Unlike China which accepted and then absorbed foreign influences, Iran has adapted them to her own genius with no premium on the blind retention of native features if something more interesting appeared on the scene."[294]

Watt explained how chinoiserie worked in expanding Chinese elements by textile weavers working in the production centres. He believed that the respective reigns of Ogodei and Mongke (r. 1251-59) witnessed a widespread wave of movement by artists and craftsmen over very distant areas, which was one of the key factors in the spread of arts all over Asia.[295] The movement occurred to such a large extent that artists from Nishapūr and Hirāt could be found in Besh Baliq, the capital of the Uyghur kingdom. However, he added some weavers were deported to Hirāt, during 1236--39, to revive its weaving industry.[296]

Trade by land and sea were the two most important means for the reciprocation of artistic patterns, styles and motifs after the establishment of the Yuan dynasty in 1271 and after the conquest of southern Song dynasty in 1279.[297]

Far from being limited to one era or area, the artistic exchange occurred throughout Asia. For instance, Iranian art during the 13th and 14th centuries reflect influences from Chinese stylistic and artistic patterns. An example is silk and gold thread lampas from Iran, which is kept in the Kunstgewerbe Museum, Berlin (Figure 2-25). The patterns and dragons of this lampas are very similar to the Yuan Chinese cloth of gold displayed in the Cleveland Museum of Art (Figure 2-26).[298]

Figure 2- 25. Textile with coiled dragons and inscription (detail).
Eastern Iranian world, late 13th to mid-14th centuries. Lampas weave, silk and gold thread. Preussischer Kulturbesitz, Staatliche Museen zu Berlin, Kunstgewerbemuseum, Berlin (00.53) (Watt, James C. Y. "A Note on Artistic Exchanges in the Mongol Empire." In *The Legacy of Genghiz Khan, Courtly Art and Culture in Western Asia, 1256--1353*, edited by Linda Komaroff and Stefano Carboni. New York: The Metropolitan Museum of Art, 2002, 72, fig. 76))

[293] Kadoi, *Islamic Chinoiserie*, 1.
[294] Richard N. Frye, *The Golden Age of Persia* (London 1975), 3.
[295] Watt, "A Note on Artistic Exchanges in the Mongol Empire," 65.
[296] Ibid, 65. Besh Baliq was in the present-day Xinjiang province.
[297] Ibid, 71.
[298] Ibid, 71.

Figure 2- 26. Textile with dragons and phoenix, China, Yuan dynasty (1271-1368).
Lampas weave (twill and twill), silk and gold thread. The Cleveland Museum of Art (1995.73) (Komaroff, Linda. "The Transmission and Dissemination of a New Visual Language." In *The Legacy of Genghiz Khan, Courtly Art and Culture in Western Asia, 1256--1353*, edited by Linda Komaroff and Stefano Carboni. New York: The Metropolitan Museum of Art, 2002, 176, fig. 206 (cat. no. 1))

The second wave: During the Tīmūrīd era

The decorative category was influenced and defined by East Asia. The Tīmūrīd dynasty engaged in commercial and business exchanges with the Ming court, thereby serving as one of the main channels for borrowing from and the transference of Chinese art and architecture.[299] One of the sources by means of which this great influence from Chinese art can be traced is Ghīyāth ul-Dīn's account of travelling through Central Asia and western China to the Ming court.[300] In his account, Ghīyāth ul-Dīn described ornament and figural imagery which inspired Tīmūrīd's decorative elements.[301]

It is not possible to distinguish between artworks that were mere copies of Chinese models and other 'chinoiserie' Tīmūrīd artifacts at the time, because only a small number of Chinese imitations have survived.[302]

From the second half of the 14th century to the beginning of the 16th century, during the reign of Tīmūrīd and Turkmen kings, the synthesis of the Mongol-Ilkhānīd style matured.[303] Cultural encounters with China, which began during the reign of Tīmūr, reached its peak under Shāhrukh.[304] Such cultural give and take led to the second wave of Chinese styles, motifs and artistic forms (e.g. Chinese mythical beasts) that played a significant role in shaping Iranian decorative art over time.[305]

2.3 Carpet design structure

The structure of Persian carpet design consists of two main elements: field and border. There are different types of field structures which usually define carpet design structure. In this section the specific structures of 15th-century Hirāt carpets will be discussed.

[299] Lentz and Lowry, *Timur and the Princely Vision*, 191.
[300] Ibid, 191.
[301] Ibid, 191.
[302] Ibid, 192.
[303] Necipoğlu, *The Topkapı Scroll,* 111.
[304] These exchanges and visits were discussed in chapter 1, section 1.3.
[305] Thompson, *Milestones in the History of Carpets*, 22.

Background of Tīmūrīd carpets

The tradition of carpet making in Iran can be documented with examples beginning only in the late 15th /early 16th centuries, but the high technical quality of early pieces indicates that carpets had been made there for some considerable time.[306] No substantial information concerning Iranian carpets prior to the Tīmūrīd dynasty is at hand. No piece of carpet can be dated securely back to Ilkhānīd; however, some fragments of rugs date back to the first half of the 14th century in Iran.[307]

Figure 2- 27. Fragment of a flat-weave prayer rug, Iran, early 14th century.
Cotton, weft-faced compound tabby (*zilu*). State Hermitage Museum, Saint Petersburg (IR-2253) (Blair, Sheila. "The Religious Art of Ilkhanids." In *The Legacy of Genghiz Khan, Courtly Art and Culture in Western Asia, 1256--1353*, edited by Linda Komaroff and Stefano Carboni, 104-133. New York: The Metropolitan Museum of Art, 2002, 129, fig. 155 (cat. no. 78))

A fragmentary flat-weave rug is mentioned by Kadoi (Figure 2-27), although the focus of this research is pile rugs. Pictorial evidence shows that carpets were certainly in use in Ilkhānīd Iran; Kadoi suggested these rugs were an example of "the earliest representation of a prayer rug which occurs in the Freer Balcami; and a Central Asian-type kilim is depicted in the scene of the Ka'ba in the Edinburgh *Jāmi' al-Tavārīkh* manuscript."[308]

The same is true of textiles. It is speculated that there might have been an ample production of textiles in Samarqand at the time, though a little less than half a dozen fragments have been found that can be decidedly attributed to the Tīmūrīd period (1370 to 1506).[309] For carpets, our heritage from the 15th century is rare. There is only one fragment which can be attributed to the Tīmūrīd period (Figure 2-30). Based on Denny and Thompson's recent publications, there is a group of so-called "*tapedi damaschini*" carpets, a possible candidate from the 15th century, yet to be confirmed, and if so, these carpets belong to north-west Iran during the Turkmen rule. This will be explained in more detail in chapter 4, together with a medallion carpet, also a possible candidate from the late 15th century from the same area.

[306] Gordon Campbell, *Grove Encyclopaedia of Decorative Arts* (Oxford: Oxford University Press, 2006), 1/191.
[307] Kadoi, *Islamic Chinoiserie*, 12.
[308] Ibid, 12. For the Freer Balcami, see Ettinghausen, R., M. S. Dimand, L. W. Mackie and C. G. Ellis. *Prayer Rugs* (Washington, DC, 1974), 12-13, fig. 2; and for the Edinburgh *Jāmi' al-Tavārīkh,* see Rice, D. S. The Illustrations to the "World History" of Rashid al-Din (Edinburgh, 1976), 100-101.
[309] Thompson, *Milestones in the History of Carpets*, 21.

Early research into 15th century carpet design

The number of existing Tīmūrīd carpets are few, so this has made it difficult to perceive what they would have looked like. Other than the carpets themselves, their depictions in paintings are another source for uncovering their designs.

Carpet design in the 15th century was first examined by Amy Briggs. Based on carpet depiction in Tīmūrīd paintings during this century and in the absence of Tīmūrīd carpets, she was the first to propose two categories of Tīmūrīd carpets [310] She categorised carpets depicted in Tīmūrīd paintings in two groups: geometric, and arabesque and flower carpets.

Although Briggs confidently justified carpet depictions in Persian paintings as a reliable source for carpet design pre Ṣafavīds, it has raised arguments.[311] Thompson believed that Briggs' study has been extremely influential in the way art historians think about Tīmūrīd carpets, and her work has been the basis for many later studies.[312] The fundamental assumption on which her conclusions are based is that "the rugs represented in Tīmūrīd miniatures depict, if not actual carpets, designs of the same type, general composition and character, as those used in the rugs of the period."[313] It is a bold assumption, which it may never be possible to verify, but too important to pass without questioning, merely because it is a notion that has been widely accepted.[314]

To test Briggs' hypothesis, Thompson proposed a method to compare actual carpets and their depiction in contemporary paintings in a later period when the actual carpets were available for comparison.[315] He chose the Shāh Ṭahmāsp *Shāhnāmih* from the 16th century as a good example for comparison. The Shāh Ṭahmāsp *Shāhnāmih* originally had 258 paintings but they are now dispersed. In these paintings over 110 carpets are depicted. Thompson noticed that among them, very few were drawn with attention to detail and most do not convey the sense of an actual carpet, but instead "they are simply rectangular floor coverings with field and border filled with a kind of conventionalised décor that merely conveys the spirit of a carpet."[316] Thompson added "this is quite a long way from conveying the 'type, general composition and character' of carpets of the same period."

---

[310] Amy Briggs, "Tīmūrīd Carpets I. Geometric Carpets," *Ars Islamica* 7/1 (1940): 20-54; and Amy Briggs, "Tīmūrīd Carpets II. Arabesque and Flower Carpets," *Ars Islamica* 11/12 (1946): 146-158.
[311] Briggs explained it in "Tīmūrīd Carpets I. Geometric Carpets," 21-11.
[312] Thompson, "Carpets in the Fifteenth Century," 34.
[313] Briggs, "Timurid Carpets I," 22.
[314] Thompson, "Carpets in the Fifteenth Century," 34.
[315] Ibid, 34-5.
[316] Ibid, 35.

Another important point Thompson noticed is that 15 carpets depicted in the Shāh Ṭahmāsp *Shāhnāmih* have a kufesque border, which is a feature entirely absent from the surviving corpus of Ṣafavīd carpets. One of these carpets even has a simple tile pattern of the type found in stylised depictions of carpets in 14th- and early 15th-century paintings.[317]

Thompson concluded that painting compositions were often modelled on previously established forms, that is, "the painters may likewise be recycling earlier conventions in their depiction of carpets and thus be a long way behind the times."[318] It is reasonable to assume a gap between the physical production of a carpet and its subsequent representation in the paintings. The evidence provided by European paintings is a much closer representation than the works of Persian painters, and in some cases, can be regarded as exact copies of actual carpets.[319]

Tīmūrīd carpet design

Christine Klose divided the design structure of Tīmūrīd carpets into three main groups. She focused on the first two groups, "lattice" carpets and "cartouche" carpets.[320] The third group, vines and medallions, is not considered by Klose, since she believed these carpets "did not flourish until after the Tīmūrīd period and have in any case been extensively covered by several scholars."[321]

Lattice carpets

This group, called Lattice design carpets by Klose and geometric carpets by Briggs, appears in miniature paintings from the late 14th century (Figure 2-28). This design was most popular in the first half of the 15th century, became less so towards the end of the century, and ceased entirely in Iran by the 16th century.[322] Lattice carpets have grid designs with geometric motifs positioned in parallel or staggered rows. The common design consists of the juxtaposition of two alternating motifs that stand side by side. The impression of lattice design can be created through the positioning and arrangement of rows or simply drawn

[317] Ibid, 35.
[318] Ibid, 35.
[319] Ibid, 35.
[320] Christine Klose, "Traces of Timurid Carpets in Contemporary and Later Carpets from the Near East," in *Carpets and Textiles in the Iranian World 1400--1700*, eds. Jon Thompson, Daniel Shaffer and Pirjetta Mildh (Oxford: The May Beattie Archive at the Ashmolean Museum, 2010), 73.
[321] Ibid, 73.
[322] Ibid, 73.

lines.[323] In relation to the character of these carpets, Briggs wrote: "Though relatively simple, typical Tīmūrīd geometric carpets nevertheless possess sophistication and lack the angularity and naïveté of primitive or nomadic design."[324]

Figure 2- 28. Reconstruction by Amy Briggs of a Tīmūrīd lattice carpet in a miniature from an early 15th century.
Khusru va Shīrīn manuscript in the Freer Gallery of Art, Smithsonian Institute, Washington D.C. (Briggs, Amy. "Timurid Carpets I. Geometric Carpets." *Ars Islamica 7/1* (1940), fig. 22))

Figure 2- 29. Diagram of plans of lattice carpets
(Briggs, Amy. "Timurid Carpets I. Geometric Carpets." *Ars Islamica* 7/1 (1940): 23)

The field of lattice design is based on an all-over repeat pattern of squares, octagons, hexagons, stars, or circles, combined in a variety of ways with geometric star-rosettes (Figure 2-29).[325] The internal fields are seldom filled with polygon shapes such as triangles. Instead, one can find various shapes of flowers, stars and ornamental knots decorating the fields. All five lattice groups make great use of interlacing, both in the arrangement of the different elements within the field and in the actual formation of the lattice.[326] Lattice design can be compared with the *girih* mode and specifically geometric form.

A pattern formed by Kufic script has been most frequently used in designing the borders of carpets depicted in miniature paintings. The characteristics of these border patterns are based on ornamental, interlacing knots which have well-resolved corner solutions with 45-degree angle motifs. Also, sometimes floral scrolls and later arabesque have often been used in the borders.[327]

A surviving Tīmūrīd lattice carpet kept in the Benaki Museum in Athens contains an asymmetrical knotted fragment (Figure 2-30). There are quatrefoils within the fields of the diamond lattice. Lattice intersections form knots or points which make a star. Interlaced knots occupy the central position in double lattice lines. While the main border has been destroyed, some small border stripes remain. The fragment has a different colour palette compared to most carpets depicted in miniatures. Patterns have been sharply drawn in orange against a

[323] Ibid, 73.
[324] Ibid, 73. Klose cited it as Amy Briggs, "Timurid Carpets I," 33.
[325] Ibid, 22.
[326] Klose, "Traces of Timurid Carpets," 73.
[327] Ibid, 74.

background of mainly dark brown. It can be surmised that the above design and colouring has recurred in many other carpets, but they have not been depicted in miniatures because they were not in accordance with popular colour schemes.[328]

Figure 2- 30. Tīmūrīd lattice carpet fragment, Iran, late 15th century.
35 x 56cm. Benaki Museum, Athens, inv. no.16147 (Klose, Christine. "Traces of Timurid Carpets in Contemporary and Later Carpets from the Near East." In *Carpets and Textiles in the Iranian World 1400--1700*, edited by Jon Thompson, Daniel Shaffer and Pirjetta Mildh. Oxford: The May Beattie Archive at the Ashmolean Museum, 2010, 74))

Figure 2- 31. A Persian-knotted, silk-piled carpet.
A candidate for being the only Persian carpet of good age with a kufesque border, recently discovered in Tibet. Museum of Islamic Art, Doha, Qatar, inv.no.CA. 19.97 (Thompson, Jon. "Carpets in the Fifteenth Century." In *Carpets and Textiles in the Iranian World 1400--1700*, edited by Jon Thompson, Daniel Shaffer and Pirjetta Mildh. Oxford: The May Beattie Archive at the Ashmolean Museum, 2010, 32))

Figure 2-31 shows a silk carpet in good condition, which has been identified as belonging to the Tīmūrīd period.[329] The carpet, kept in the Museum of Islamic Art in Doha, Qatar, is unlike other Tīmūrīd carpets that have appeared in miniatures. The field of this carpet contains an octagon, alongside which can be found a relatively big square with smaller squares inside it, like the Khotan carpets.[330]

The Kufesque border pattern offers an even more perplexing case. On the one hand, this pattern has been frequently found in carpets depicted in paintings of the 14th and 15th centuries and even the 16th century. On the other hand, only one carpet has been found with this pattern, as seen in Figure 2-31. The pattern also appears in Egyptian, and most importantly, Turkish carpets. Despite the evidence, it can hardly be accepted that these carpets were not present in Iran.[331]

Cartouche carpets

The second group is called cartouche carpets (Figure 2-32) which Briggs calls compartment designs. Briggs noted that they do not appear in Tīmūrīd paintings until the second half of the

[328] Ibid, 74.
[329] Thompson in "Carpets in the Fifteenth Century," 32, mentioned that a 15th century date seems likely, yet its source remains uncertain and an Indian provenance is possible.
[330] Klose, "Traces of Timurid Carpets," 88, footnote 8.
[331] Thompson, "Carpets in the Fifteenth Century," 47.

15th century; they are both later and rarer than lattice carpets. Bihzād and painters following his style offer the best examples of Cartouche carpets depicted in paintings (Figure 2-33).[332]

While lattice carpet designs are angular, cartouche carpets are more round and curvilinear. Also, in the cartouche carpets a complicated series of overlapping designs can be found, similar to what can be seen in earlier carpets with geometric design. Cartouche design can be compared with the *girih* mode, specifically the later forms, as previously mentioned, called "compass-and-rule." Cartouche design carpets do not have single colour fields and usually their contrasting colours form additional cartouches. The colours in the spaces between and inside the cartouches are edged with light-coloured bands and dark-coloured outlines that wind through the field and cross each other. However, interlacing knots can be more commonly found in lattice carpets. Also, in a cartouche carpet, unlike lattice carpets with their repeat designs, a single pattern unit covers the whole space of the field. Floral motifs and arabesque are also used abundantly, with kufesque borders with corner solutions present in most cases.[333]

Figure 2- 32. Reconstruction by Amy Briggs of a Tīmūrīd cartouche carpet.
In a miniature by Bihzād, in a Būstān manuscript, Hirāt, 1488, in the Egyptian Library, Cairo (Briggs, Amy. "Timurid Carpets II. Arabesque and Flower Carpets." *Ars Islamica 11/12* (1946), fig. 10))

Cartouches have overlapping designs that distinguish them from other carpets. They appeared in other earlier art forms but in the depiction of carpets in Tīmūrīd paintings, they are rare and were only evident for a very short period in the late Tīmūrīd period.[334] This design structure is similar to that of a jug or illuminated panel from Hirāt (Figures 1-5 and 1-6).

Although no transitional phase has been recorded before the emergence of cartouche carpets with rounded, overlapping designs, there have been transitional lattice carpets with designs similar to cartouches, which are nonetheless only relatively rounded and arranged in linear rows.[335]

The earliest fragment of a Tīmūrīd cartouche carpet (Figure 2-34) has overlapping cartouches as its main design.[336] Klose explained the design of this carpet as follows:

[332] Briggs, "Timurid Carpets II," 146.
[333] Klose, "Traces of Timurid Carpets," 78.
[334] Ibid, 79. An example can be found in Briggs, "Timurid Carpets II," fig.16. The field pattern of an apparently unique carpet with separate, elongated cartouches alternating with quatrefoils is to be found very early on in other art forms, and often occurs as a border pattern on later carpets in Iran, India and Egypt.
[335] Ibid, 79. An example can be found in Briggs, "Timurid Carpets I," fig. 53.
[336] Ibid, 79. It belongs to the family of the well-known German painter, Hans Purrmann (1880--1966).

The large, yellow, elongated, multi-lobed quatrefoil cartouches are arranged in two columns, touching at the longitudinal axis. In the centre each bears a quatrefoil. The large quatrefoil cartouches are overlapped above and below by a smaller transverse cartouche, also yellow-ground. A central medallion without pendants is superimposed on the cartouches. The overlapping creates a red-ground shield-like motif, integral to and shared by both cartouches. In the large quatrefoil cartouche, the shields are positioned above and below the small central quatrefoil. The cartouches below touch those on the shields above. The areas between the cartouches also form cartouches because of their colours, alternating blue and green. Due to the convex shape of these cartouches, they have concave sides. They are halved at the field edges. All the cartouches are edged with narrow light bands with dark outlining, identical to those seen in the Tīmūrīd miniatures.[337]

Figure 2- 33. Birth of A Prince, attributed to Bihzād.
Hirāt. ca. 1485, Opaque watercolour, ink, and gold on paper illustration 18.2 x 10.6 cm (Soudavar, Abolala. *Art of the Persian Courts, Selections from the Art and History Trust Collection*. New York: Rizzoli, 1992, 99, fig. 35))

Figure 2- 34. Tīmūrīd medallion and cartouche carpet fragment, late 15th century.
Iran, 218 x 224 cm. Hans Purrmann Collection, Germany (Klose, Christine. "Traces of Timurid Carpets in Contemporary and Later Carpets from the Near East." In *Carpets and Textiles in the Iranian World 1400--1700*, edited by Jon Thompson, Daniel Shaffer and Pirjetta Mildh. Oxford: The May Beattie Archive at the Ashmolean Museum, 2010, 79))

She then compared a carpet depicted in a Tīmūrīd miniature (Figure 2-35) with the Purmann fragment, which are similar in field design. As can be seen in Figure 2-36, the painting and the fragment have a similar design. In both, there is an overlap between a large vertical lobed cartouche and a small horizontal cartouche. There is also a quatrefoil in the centre of the large cartouche. On the fragment, there is an overlapping design in the shape of a red shield. While the cartouches of the miniature have fewer arches, the shield cartouches are round with floral and arabesque shapes filling them. On the miniature, only one pattern covers the whole field. On the fragment, however, the design doubles as a mirror image-repeat.[338]

[337] Ibid, 79-80.
[338] Ibid, 80.

Figure 2- 35. Mystic and four disciples (detail). Tīmūrīd miniature.
Attributed to Qāsim'Alī, 1485. Bodleian Library, Oxford, Elliott 339, folio 95v (Klose, Christine. "Traces of Timurid Carpets in Contemporary and Later Carpets from the Near East." In *Carpets and Textiles in the Iranian World 1400--1700*, edited by Jon Thompson, Daniel Shaffer and Pirjetta Mildh. Oxford: The May Beattie Archive at the Ashmolean Museum, 2010, 80))

Since the Purmann fragment bears a central medallion, it makes it a unique piece. Klose mentioned she had not seen any Tīmūrīd miniatures depicting a carpet with cartouches and a medallion.[339] Another important point is the border design of this carpet. Klose pointed out that "unlike the carpet depicted in the miniature, which has the traditional kufesque border, albeit with a floral design on a second, inner band, the Purrmann fragment has a cartouche patterned border that repeats that of the field: rectangular cartouches with lobed ends overlapped by an octofoil."[340]

Figure 2- 36. Left fragment: a detailed section of the Purmann cartouche carpet fragment, Figure 2-30, with the pattern scheme outlined. Right: Reconstruction by Amy Briggs of the carpet depicted in figure 2-31.
(Briggs, Amy. "Timurid Carpets II. Arabesque and Flower Carpets." *Ars Islamica 11/12* (1946), fig. 8; Klose, Christine. "Traces of Timurid Carpets in Contemporary and Later Carpets from the Near East." In *Carpets and Textiles in the Iranian World 1400--1700*, edited by Jon Thompson, Daniel Shaffer and Pirjetta Mildh. Oxford: The May Beattie Archive at the Ashmolean Museum, 2010, 80))

Two more fragments, kept in the F.R. Martin collection (Figure 2-37), belong to another cartouche carpet. This carpet does not have a single background colour, as is the case with miniatures and the Purmann fragment but consists of separate cartouches. One fragment is now kept in the Berlin Museum of Islamic Art while the other fragment is kept in the Metropolitan Museum of Art, New York. The former fragment has a complicated, artistic design with a wide variety of colours used in the background. While one cannot make an accurate guess concerning its place and date of production based on its structure, it can be concluded that it belongs to about 1500, sometime between the Tīmūrīd and Ṣafavīd dynasties.[341]

Figure 2- 37. Reconstruction of a cartouche carpet Iran, circa 1500.
Left fragment, 274 x 76 cm. The Metropolitan Museum of Art, New York, inv.no.1991.154. Right fragment, 193 x 59 cm, Museum fur islamische Kunst, Berlin, inv. no. 98,353 (Klose, Christine. "Traces of Timurid Carpets in Contemporary and Later Carpets from the Near East." In *Carpets and Textiles in the Iranian World 1400--1700*, edited by Jon Thompson, Daniel Shaffer and Pirjetta Mildh. Oxford: The May Beattie Archive at the Ashmolean Museum, 2010, 81))

[339] Ibid, 80-81.
[340] Ibid, 80-81. Definition of octofoil in the Oxford Dictionary: having *or* consisting of eight leaves *or* lobes.
[341] Ibid, 81-82.

Tīmūrīd cartouche carpets have a long history in Persian carpet design. The development of overlapping cartouches into individual, separate ones serve as an index for chronological development. While geometric lattice carpets were not produced in Iran after 1500, though still survive in some regions in western Iran, cartouche carpets were the staple in Iran and India during the later periods.[342]

Medallion carpets

A third category regarding 15th-century Tīmūrīd carpets is evident, which Klose did not discuss. There are some carpets with medallions depicted in paintings (see Figure 2-22), and two other examples from 15th-century Tīmūrīd paintings to be discussed in more detail in chapter 4. There are examples of medallion carpets from the 15th century, but because the probable provenance is north-west of Iran under Turkmen rule, this design and its chronology will also be explained in chapter 4.

Figure 2- 38. "Liylā and Majnūn at School," folio from *Khamsih* of Niẓāmī, 1431-32.
Hirāt, Metropolitan Museum 1994.232.4
(https://www.metmuseum.org/art/collection/search/455041?&searchField=All&sortBy=Relevance&ft=1994.232.4&offset=0&rpp=20&pos=1**)**

Prayer design

Prayer rugs are also seen in Tīmūrīd paintings. Carpets with prayer designs consist of two main types; first with only one *miḥrāb*, used for individual prayer (Figure 2-27), and second, public prayer like a mosque, which consists of several niches known as *ṣaf* (Figure 2-38).[343] The most noticeable and recurrent decoration in prayer design is the Kufic script, which is repeated as mirror image.[344]

Blair wrote about the flat-woven prayer rug, which she assumed as the earliest extant example of a flat-weave carpet from Islamic Iran, which bears a quote from the Quran (*sura* 112).[345] This is strange for prayer rugs, because if there is a s*ura* verse Muslims will not use it on the floor, where there is a possibility of stepping on it.

[342] Ibid, 87.
[343] For further reading on this topic see Michael Franses, "Some Wool Pile Persian-Design Niche Rugs," in *Oriental Carpet and Textile Studies*, eds. Murray L. Eiland and Robert Pinner, 36-136 (Vol. V, Part 2), (Danville: ICOC, 1999).
[344] Sheila Blair, "The Religious Art of Ilkhanids," in *The Legacy of Genghiz Khan, Courtly Art and Culture in Western Asia, 1256--1353*, eds. Linda Komaroff and Stefano Carboni (New York: The Metropolitan Museum of Art, 2002), 262.
[345] Ibid, 262.

Geometric or curvilinear

One of the most important discussions of Tīmūrīd carpet design is the matter of being geometric and curvilinear. After explaining the design of Tīmūrīd carpets, now is a good time to go back to this topic.

The cursive design consists mostly of arabesque and floral forms which are seldom found in geometric carpets.[346] Briggs wrote that arabesque and flower cursive designs flourished during the earlier half of the century and supplanted older early- and mid-15th century geometric all-over repeat patterns.[347] She explained that supplantation happened in three stages. In the first stage, arabesque dominates (Figure 2-23). Later, floral designs are introduced into the arabesque designs (Figure 2-39). In the end, flowers and floral designs take over and occupy the dominant position above the arabesque (Figure 2-40).[348]

Following up on Erdmann's design revolution, Thompson regretted that:

> both he [Erdmann] and Briggs characterized the carpets produced before the supposed "design revolution" as "geometric." By using the term "geometric," their supposition was that the patterns were simple enough to be woven without a pattern guide. Many do have a grid layout, if that is what the term "geometric" means, but the motifs themselves are not rectilinear, nor do they consist of basic shapes, such as circles or rectangles.[349]

Figure 2- 39. Reconstruction of carpet in a miniature from a Niẓāmī manuscript by Bihzād. ca. 1493 (figure 1, introduction) (Briggs, Amy. "Timurid Carpets II. Arabesque and Flower Carpets." *Ars Islamica 11/12* (1946), fig. 13))

Figure 2- 40. Partial reconstruction of carpet in a miniature, probably by Bihzād (Briggs, Amy. "Timurid Carpets II. Arabesque and Flower Carpets." *Ars Islamica 11/12* (1946), fig. 16))

Thompson made a very important comment which is usually overlooked in analysing carpet design: "There appears to be a confusion here between the forms in the old-style carpets, which are often of considerable complexity, and the simple format in which most are

[346] Briggs, "Tīmūrīd Carpets II," 150.
[347] Ibid, 146.
[348] Ibid, 150.
[349] Thompson, "Carpets in the Fifteenth Century," 36.

arranged," Thompson concluded.[350] He explained that endless repetition of a design gives the impression of a "geometric" composition, no matter whether it is a drop repeat or grid layout, and even in complex and curvilinear designs.[351] Their highly complex structure consists of a small field, with a design being repeated endlessly, sometimes mixed with rectilinear elements. They typically use knotted or interlacing curvilinear forms both in the field and on the borders. Several "old style" carpets use floral guard stripes that have been created using curvilinear tracery.[352]

[350] Ibid, 36.
[351] Ibid, 55.
[352] Ibid, 36.

PART II The Tabrīz School: Transition and Continuity (15th–16th Centuries)

Chapter 3. Tabrīz School: Culture of Carpet Making

The Tabrīz School in the 16th century is known as the second Tabrīz school in Persian painting studies. It was shaped by Bihzād and Āqā Mīrak, brought from Hirāt to Tabrīz and who collaborated with master artist, Sulṭān Muḥammad, already active in Tabrīz.[353] The first Tabrīz School was during the Ilkhānīd rule in Tabrīz and most artworks were prepared in Rab'-i Rashīdī. In this research, however, the second Tabrīz School is the focus, adopting the same traditional name, since it was the centre for artistic activities and Persian carpet patterns.

Tabrīz was under Turkmen of Āq-Quyūnlū and Qārā-Quyūnlū rule before Ṣafavīds. Reviewing Tabrīz school in this part will include their rule and contribution though it was before the 16th century.

3.1 City and society

Towards the end of the 14th century Tabrīz was mainly under the control of mainly Turkmen clans and tribes. These clans were nomadic pastoralists, including two subgroups or confederations at war with one another most of the time. They were: Qara-Quyunlu (meaning Black Sheep) and Aq-Quyunlu (meaning White Sheep).[354]

Towards the end of the 15th century, the territory of Āq-Quyūnlū included a major part of today's Iran, Āzirbāyjān and Iraq as well as part of Eastern Turkey (Figure 3-1). The Āq-Quyūnlū to the west were neighbours with the Mamluk Sultanate and the Ottoman Empire, and their eastern territories were adjacent to Hirāt ruled by the Tīmūrīd Empire.[355] The Qārā-Quyūnlū, on the other hand, were concentrated in Tabrīz and occupied areas of Āzirbāyjān in eastern Iran. As their power grew, they occupied more and more eastern territory covering almost half of modern Iran.[356]

Qārā Uthmān (r. 1378--1435) established Āq-Quyūnlū in Eastern Turkey (a place called Amid, known as Diyarbakr today), as a major, semi-sedentary power.[357] After the death of Qārā Uthmān Āq-Quyūnlū in the first half of the 15th century, the power moved to Qārā-Quyūnlū. Inner conflict among Āq-Quyūnlū leaders (such as clashes for power that

[353] Samad Najarpour Jabbari and Muhammadali Rajabi, "Miniaturists, the Master Carpet Designers in the Second Tabriz School," *Negareh* 2 (2006): 108.
[354] Jon Thompson, *Milestones in the History of Carpets* (Milan: Moshe Tabibnia, 2006), 22.
[355] Jon Thompson, "Early Safavid Carpets and Textiles." In *Hunt for Paradise: Court Arts of Safavid Iran 1501--1576*, eds. Jon Thompson and Sheila R. Canby (Milan: Skira Editore, 2003), 274.
[356] Thompson, *Milestones in the History of Carpets*, 22.
[357] Thompson, *Milestones in the History of Carpets*, 22.

followed the death of Shahrukh – the Tīmūrīd ruler – in 1447) offered Jahān Shāh Qārā-Quyūnlū the opportunity to invade lands that originally belonged to Āq-Quyūnlū.[358]

Figure 3- 1. The Near East around 1478.
(Thompson, Jon. *Milestones in the History of Carpets.* Milan: Moshe Tabibnia, 2006, 18)

In 1453 Ūzūn Ḥasan Āq-Quyūnlū (r. 1453--1478), the grandson of Qārā Uthmān, became king. Centered in Amid, his domain was flanked by the opposing forces of Qārā-Quyūnlū (led by Jahān Shāh) on the eastern side, and the Ottoman Empire on the western side. Ūzūn Ḥasan seized his chance when Jahān Shāh died in 1467 and occupied parts of Āzirbāyjān and Iraq. In little more than a decade (in 1469) he had annexed all of Iran to form his own territory.[359] Ūzūn Ḥasan chose Tabrīz as his new capital after he defeated the Tīmūrīd army that was intended to reaffirm Tīmūrīd ascendency over the western areas of Iran.[360]

Ya'qūb Sulṭān (1478--1490) followed his father, Ūzūn Ḥasan to the throne in Tabrīz: "one of the great Islamic capitals of the age...the centre around which revolved not only Ya'qūb's... court, but also the entire political, economic, cultural and religious life of the Āq-Quyūnlū empire."[361]

By 1490, most of the areas under the reign of the Ya'qūb Sulṭān were conceded to Ismā'īl Ṣafavī, who would become the next Shāh.[362]

Ismā'il's situation (1501--1524) was unique. On the one hand, he had inherited the leadership of the Ṣafavīd sect of Ṣūfīs from his ancestors. On the other hand, he was the grandson of Ūzūn Ḥasan (and the son of Ya'qūb Sulṭān's sister).[363] Though at first limited to Āzirbāyjān, Ismā'il's reign extended to a major part of Iran as well as cities in Iraq (such as Mosul and Baghdad) within 10 years. Neglecting the fact that most of the areas recently annexed to his rule were practicing Sunni Islam, Isma'il Safavi announced Shī'īsm as the

[358] Ibid, 23.
[359] *Encyclopedia Britannica*, "Ūzūn Ḥasan," accessed July 2, 2019, https://www.britannica.com/biography/Uzun-Hasan.
[360] Thompson, *Milestones in the History of Carpets*, 23.
[361] Thompson, "Early Safavid Carpets and Textiles," 274. Thompson cited John E. Woods, *The Aqquyunlu, Clan, Confederation Empire: A Study in 15th/9th Century Turko-Iranian Politics* (Minneapolis and Chicago: Bibliotheca Islamica, 1976), 146.
[362] Thompson, *Milestones in the History of Carpets*, 24.
[363] Thompson, "Early Safavid Carpets and Textiles," 274-5.

official religion.[364] The Ṣafavīd dynasty turned the predominantly nomadic and tribal culture into a sedentary civilisation, dependent upon trade and agriculture for its subsistence.[365]

The war that broke out in 1514 in Chāldirān between the Selim I (the Ottoman Sultan) and Ismā'īl ended in Ismā'īl's defeat. The Ṣafavīds later lost Baghdad, Diyarbakir and Kurdistan in conflicts with the Ottomans in the west and the Uzbeks in the north east. Shāh Ṭahmāsp I (1524--76), Ismā'īl's son, was an incompetent ruler during whose rule the power of Iran and the Safavid dynasty diminished considerably.[366]

One of the most important projects, led by Shāh Ṭahmāsp, was moving the capital to Qazvīn. Due to its geographical location (situated on the east-west trade route that extended from India and Khurāsān to the east and passed through Āzirbāyjān and Anatolia to the west), Qazvīn had served as a trade centre for a long time. There was also another major reason for this shift in location of the capital. While Qazvīn was situated in relatively safer areas of central Iran, Tabrīz – the former capital – had been occupied on numerous occasions and was too close to the Ottoman Empire and the dangers it posed to be able to serve as the capital.[367]

3.2 The Ṣafavīds: Cultural background

The origin of the Ṣafavīd dynasty emanated from Ardabīl in Āzirbāyjān, where Shiykh Ṣafī al-Dīn Isḥāq (1252--1334) in the late 13th century established a Ṣūfī order. A charismatic figure, well known as a pious and modest person, Shiykh Ṣafī was able to attract nomads from east Anatolia and Āzirbāyjān as his followers.[368] The Ṣūfī order gradually turned into an influential and powerful sect that attracted many followers in the areas under the reign of the Āq-Quyūnlū and Qārā-Quyūnlū Sulṭāns. Later Ṣūfī leaders included the following: Ṣadr al-Dīn (d. 1391--92); Khājih 'Alī (d. 1427); Junayd (d. 1460); Haydar (d. 1488). The Ṣūfīs received much support, the most important of which came from Qizilbāsh (meaning "redhead", referring to the colour of their headgear) Turkmen tribes and nomads. They paid homage to Ṣafavīd rulers and the 12 Shī'ite Imāms through the 12 gores on their headgear.

---

[364] *Encyclopedia Britannica,* "Ṣafavid Dynasty," accessed July 2, 2019, https://www.britannica.com/topic/Safavid-dynasty.
[365] Rudi Matthee, "Safavid Dynasty," *Encyclopedia Iranica,* accessed July 12, 2019, http://www.iranicaonline.org/articles/safavids
[366] *Encyclopedia Britannica,* "Ṣafavid Dynasty."
[367] Sheila R. Canby, "The World of the Early Ṣafavīds, Shāh Ṭahmāsp at Qazvin, 1550-76," in *Hunt for Paradise: Court Arts of Safavid Iran 1501--1576*, eds. Jon Thompson and Sheila R. Canby (Milan: Skira Editore, 2003), 17.
[368] Ibid, 3.

Although the clans shared a common name, they were driven by animosity and rivalry that sprang from claims of not having a common descent.[369]

3.3 International relations

The Qārā-Quyūnlū, a common enemy to both the Tīmūrīds and to Āq-Quyūnlū, helped bring the latter two together to fight their enemy. Shāhrukh attempted, several times and rather unsuccessfully, to put an end to the westward expansion of the Qārā-Quyūnlū. The first battle took place in 1420, resulting in the occupation of Tabrīz and the killing of Qara Yusuf, the Qārā-Quyūnlū leader. As was discussed in chapter 1, this event led to the movement of artists to Hirāt to continue to work in the Tīmūrīd court.[370] On the other hand, former animosity and rivalry between Āq-Quyūnlū and the Mamluks (due to conflict as a result of common borders) led the Mamluks to form an alliance with the Qārā-Quyūnlū.[371]

In 1472, Ūzūn Ḥasan defeated the Ottoman army, though he was forced to retreat in the end, since his son lost to Mamluk armies. The Ottoman army, led by Mehmet II Fatih, prepared a counter attack that resulted in Ūzūn Ḥasan's defeat at Bashkent in 1473.[372] Ūzūn Ḥasan decided to embark upon a series of diplomatic measures so as to make up for the military loss and secure the western borders from further defeat. He negotiated a series of alliances with Muscovy, Burgundy, Venice, Egypt, Poland and the Karamanid dynasty of south-central Anatolia. He also married the daughter of the Christian emperor of Trebizond (in north-eastern Anatolia), Catherine, in 1458.[373]

Āq-Quyūnlū produced silk in Gīlān and Māzandarān and sold his wares at the Ottoman markets in Bursa. This enabled Āq-Quyūnlū to maintain good economic relations with neighbouring empires and countries. During the Ṣafavīd period, silk was a major source of economic benefit, upholding relations with the Ottoman Empire. The silk produced in Iran was traded in several ways. It was mostly used for silk weaving in Bursa and the rest was exported to other markets that demanded Iranian high-quality silk, especially Italy.[374]

Ismā'il's downfall came when he was about 27. Facing Selim, the Ottoman Sulṭān in Chāldirān in 1514, he lost the battle. Having been victorious, Selim remained in Tabrīz less than a week. When he left he took with him some of the finest Iranian craftsmen, some of

[369] Matthee, "Safavid Dynasty."
[370] Ibid, 22-23.
[371] Ibid, 24.
[372] Ibid, 24.
[373] *Encyclopedia Britannica*, "Ūzūn Ḥasan."
[374] Thompson, "Early Safavid Carpets and Textiles," 274.

whom are known.[375] Therefore, Tabrīz was occupied by the Ottomans twice: as a result of war between Ūzūn Ḥasan and Mehmet II (1474) which ended in Ūzūn Ḥasan's defeat and in 1514 when the Ṣafavīd ruler, Shāh Ismā'il was defeated by Selim I. On both occasions, many valuable items (such as treasures and manuscripts) as well as people (such as craftsmen, scholars and artisans) were taken from Tabrīz to Istanbul.[376] These events give one a general idea of the extent and quality of artistic production in Tabrīz about the time Ismā'il acceded to the throne.[377]

3.4 Art centres and art patrons

In the mid-15th century, patronage of architecture moved to western Iran due to the fact that Tīmūrīd rulers became weaker in terms of politics.[378] It has been surmised that the Topkapı Scroll belonged to a time after the abovementioned period. For this reason, rarely can one find patterns on this scroll that are similar to other designs and patterns found on monuments and artefacts of the same period. Iranian cities such as Qazvīn, Yazd, Tabrīz, Shīrāz and Iṣfahān do not have many architectural artefacts and buildings from the Turkmen and early Ṣafavīd periods. Despite this, it must be noted that the cultural centre around which artistic activity revolved, and through which artistic and architectural novelties spread was Tabrīz.[379]

During Qārā-Quyūnlū, Jahān-Shāh was an important patron in Tabrīz, establishing a substantial empire. The Blue Mosque, built in 1465 during Jahān-Shāh's reign in Tabrīz, is now a ruin. Thompson called this building significant because it is practically the only monument that has survived from the period.[380] Pīr Budāq, Jahān-Shāh's son, was a major patron of the arts, especially the arts of the book in Shīrāz, where he was appointed governor in 1452. As as previously discussed in chapter 1, Shīrāz had also been an important artistic centre earlier in the 15th century, during the Tīmūrīd era, under the governorship of Prince Iskandar Sulṭān (d. 1414) and Prince Ibrāhīm Sulṭān (d. 1435).[381] However, in 1460 Pīr Budāq moved from Shīrāz to Baghdad, transferring his artistic and cultural endeavours to Baghdad.[382]

---

[375] Ibid, 275.
[376] Gülru Necipoğlu, *The Topkapı Scroll – Geometry and Ornament in Islamic Architecture* (Santa Monica: The Getty Centre for the History of Art and Humanities, 1995), 38.
[377] Thompson, "Early Safavid Carpets and Textiles," 275.
[378] Necipoğlu, *The Topkapı Scroll,* 37.
[379] Ibid*,* 37-38.
[380] Thompson, "Early Safavid Carpets and Textiles," 275.
[381] Thompson, *Milestones in the History of Carpets*, 23.
[382] Ibid, 23.

Although Ūzūn Ḥasan's (r. 1468-1478) patronage of the arts is not certain, it is clearly evident that during his reign Tabrīz remained one of the four main centres of Persian culture, together with Hirāt, Shīrāz and Baghdad. Although it is not known for certain what Ūzūn Ḥasan's stance was towards the arts and culture, his son Ya'qūb (r. 1478-1490) is known for his artistic patronage of scholars and poets, such as Jāmī.[383]

Shāh Ismā'il, a famous patron and follower of arts and cultural expression, brought several artists who originally lived in cities conquered by him, such as Baghdad, Iṣfahān and Shīrāz to his new capital, Tabrīz, formerly the Āq-Quyūnlū capital. Apart from this, he also received many libraries and properties and served as patron to many professional artisans, who originally belonged to or were affiliated with Turkmen rulers.[384]

Ṭahmāsp, Shāh Ismā'il's son was a great patron of the arts during the first half of his reign, so much so that Persian art peaked during his reign.[385] He was especially fond of illustrated manuscripts and books after returning from Hirāt in 1522, where he studied painting with Sulṭān Muḥammad. When he ascended the throne in 1524, he assigned Sulṭān Muḥammad to illustrate *Shāhnāmih*, which is believed to have been intended as a glorification of his power.[386] Shiela Canby, Persian art historian, wrote about Ṣafavīd style during Ṭahmāsp's reign, as follows:

> The glorious Ṣafavīd style of painting and ornament that developed in the first half of Ṭahmāsp's reign was then able to evolve and be disseminated to the commercial artists producing books in Shīrāz, textiles in Yazd and metalwork in Khurāsān, to name a few of the artistic centres of Ṣafavīd Iran.[387]

However, Shāh Ṭahmāsp was not consistent in his support of the arts and aesthetic concerns. The year 1534 witnessed the first Edict of Repentance by Ṭahmāsp, which voiced his commitment to Ṣafavīd Shī'īsm.[388] This edict was in line with his tendency, in the late 1540s, to turn to Shi'ism in line with Islamic principles, or Sharī'ah. While Ṭahmāsp no longer

[383] Ibid, 24.
[384] Leonard M. Helfgott, *Ties that Bind: A Social History of the Iranian Carpet* (Washington: Smithsonian Institute, 1994), 65.
[385] Canby, "The World of the Early Ṣafavīds," 11-12.
[386] Ibid, 12.
[387] Ibid, 14.
[388] Ibid, 18.

offered support to poets, musicians, artisans and artists, the vital role of arts patronage was passed on to Bahrām Mīrzā and Sām Mīrzā, Ṭahmāsp's two brothers.[389]

Therefore, despite the fact that Shāh Ṭahmāsp made artistic and poetic expression difficult, due to his increasing devoutness, in the lead-up to 1540, poets and artists were still able to receive support and patronage through Sām Mīrzā who, in 1522, was appointed governor in Khurāsān, succeeding Ṭahmāsp.[390] While Tabriz was pushed to the margins after Qazvīn was announced as the new capital, it was Sām Mīrzā's patronage that revitalised artistic and poetic culture in Tabrīz.[391]

The same can be said of Bahrām Mīrzā, who was a supporter of visual arts such as calligraphy and painting. Bahrām Mīrzā, who delegated the role of artistic patron to his son Ibrāhīm Mīrzā, was influential in the compilation of an album of calligraphy and painting.[392] In 1544-45, Bahrām Mīrzā ordered Dūst Muḥammad al-Sulaymānī al-Haravī, a famous calligrapher, to compile the album. The preface to the album, written by Dūst Muḥammad, offers a historical overview of calligraphy and painting that ended during his time.[393]

Ibrāhīm Mīrzā's appointment as governor of Mashhad in 1554-55 turned this city into a major artistic and cultural centre.[394] He established a school of painting which not only had a significant influence on painting during the second half of the 16th century, but also produced a superb edition of Jāmī's major work, *Haft Urang*.[395] Music and calligraphy also received patronage from Ibrāhīm Mīrzā.[396]

3.5 Court artists and carpet designers

As previously explained in chapter 1 in relation to 15th-century carpet designers, there is no clear evidence of carpet designers in 16th-century Ṣafavīd. Therefore, exploring the possibility of who may have been involved in designing 16th-century Ṣafavīd carpets is the main aim of this section.

[389] Ibid, 14.
[390] Martin B. Dickson and Stuart C. Welch, *The Houghton Shahnameh* (Cambridge and London: Harvard University Press, 1981), 36-37.
[391] Canby, "The World of the Early Ṣafavīds," 13.
[392] Ibid, 14.
[393] Ibid, 14.
[394] Matthee, "Safavid Dynasty."
[395] Ibid.
[396] Canby, "The World of the Early Ṣafavīds," 19.

Atelier (kitābkhānih): Continuing Tīmūrīd art and tradition

Shāh Ṭahmāsp I (r. 1524-1576) was heir apparent to Hirāt as his seat. In 1510, Hirāt had been conquered by the armies of the Ṣafavīd dynasty.[397] As previously discussed in the early sections of this chapter that during Shāh Ṭahmāsp governorship of Hirāt (1516-1522), he became familiar with Tīmūrīd art through the *kitābkhānih* of Sulṭān Ḥusayn Mīrzā (d.1506), the previous Tīmūrīd ruler. Helfgott agrees with Lentz and Lowry that, "the foundations of Ṭahmāsp's taste were laid by artists, calligraphers, musicians and poets who continued to practice according to the ideals of the Tīmūrīd tradition."[398]

In 1522 when Ṭahmāsp returned from Hirāt to Tabrīz, he brought with him skilled artisans, most importantly Bihzād. Bihzād was appointed by Shāh Ismā'il as the director of the *kitābkhānih* in Tabrīz. His task was to serve as the supervisor to several professional artists, artisans and craftsmen who worked in fields such as bookbinding and manuscript illumination.[399] This migration of artists is important in the continuation of court art. On the other hand, Dickson and Welch stated a different and more complete point of view which can be extended to Ṣafavīd art in general. They believed Ṣafavīd painting had its roots in Turkmen and Tīmūrīd art; and similarities were also detected between the two traditions.[400] But they added, both Tīmūrīd and Turkmen princes shared common languages and cultures and thus resorted to the same artists, producers, musicians and scholars. As for differences between the two traditions, there were local variations.[401]

To compare, Turkmen art had a tendency toward unorthodox, illogical wildness. It placed less emphasis on individual expression, used a less subtle form to convey its artistic meaning and was more open to influence from foreign sources. Therefore, in terms of high and low concepts, the Turkmen were lower.[402] Later Dickson and Welch continued that "Because very little 15th-century Tabrīz material has been published, the Turkman style is open to speculation and is far less familiar than the Tīmūrīd style of painting."[403]

As previously explained in chapter 1, *kitābkhānih* played an important role in court art. Apart from *kitābkhānih*, discussions about whether another organisation named *naqqāsh-khānih* existed alongside or within *kitābkhānih* in the 16th century or even earlier. Thompson

[397] Thomas W. Lentz and Glenn D. Lowry, *Timur and the Princely Vision: Persian Art and Culture in the Fifteenth Century* (Washington, D.C.: Smithsonian Institute Press, 1989), 311.
[398] Lentz and Lowry, *Timur and the Princely Vision*, 311; Helfgott, *Ties that Bind,* 65.
[399] Helfgott, *Ties that Bind,* 65.
[400] Dickson and Welch, *The Houghton Shahnameh*, 15.
[401] Ibid, 15.
[402] Ibid, 15.
[403] Ibid, 17.

assured us that "the *naqqāsh-khānih*, which certainly existed in the later Ṣafavīd period, though earlier, if it actually existed, its function appears to have been subsumed within the *kitābkhānih*."[404] Further, Thompson suspected any kind of Ottoman court practices, such as scriptorium, shows the workings of the Iranian court in the 16th century.[405]

Art organisation

Artists had the opportunity to offer their work for support and patronage through guilds and commercial ateliers, through which they could be introduced to royal ateliers as well. Therefore, artists with talent and artistic genius who started from humble beginnings advertised their work in public markets and *bāzār* workshops, which enabled them to offer their work to patrons who were keen on supporting fresh talent. Therefore, arguably one can rarely find fresh ideas and talent in commercial ateliers.[406]

Guilds, the marketplace and the royal *kitābkhānih* seem to have had casual relations. Dickson and Welch gave an example of Dūst Muḥammad who was working at the royal library of Shāh Ṭahmāsp and additionally he was hired or "commissioned" by Bahrām Mīrzā, to assemble an album currently available at the Topkapı palace museum (Album H. 2154).[407]

This is not intended, however, to downgrade the major role of the *bāzār* workshops, that were crucial in publicising the work of unknown talents to princes, who were willing to serve as patrons, and also received and supported artists who had lost favour with a patron.[408]

Bāzārs also provided job opportunities and sources for extra earnings for artists. In other words, in times of economic need or during the time that work was slack, artists could turn to *bāzārs* for extra commissioned work, or in order to find another patron. To approach this from another perspective, the *bāzārs* – economically motivated fields of artistic production and dissemination – provided a more dependable and permanent income. This was because the support offered by a patron was, to a large extent, dependent upon their goodwill as well as political good fortune. A prince who was prosperous and could afford to support and patronise several artists might encounter a political difficulty and downfall that would result in less or no work for the artist. The non-economic relationship between commercial activities of merchants and artists is also noteworthy. Travelling merchants who passed through various lands and cities with their caravans served as critical sources of

[404] Thompson, "Early Safavid Carpets and Textiles," 278.
[405] Ibid, 279.
[406] Dickson and Welch, *The Houghton Shahnameh*, 8.
[407] Ibid, 8.
[408] Ibid, 8.

information for artists about work or patronage. The merchants also provided books to foreign markets, increasing the trade's commercial opportunities.[409]

When the Ṣafavīd dynasty was founded by Shāh Ismā'īl, he filled his atelier mainly with craftsmen and artists who were political hostages, captured during a military conquest. This was mainly true in the early stages of most dynasties. There was also the matter of inheritance, when a newly appointed prince or king inherited artistic and cultural figures together with his kingdom. Finally, artists could easily, for better economic conditions, turn to another workshop.[410] Canby mentioned that those artists who worked for their patron were also free to offer his artistic services to the court, regardless of where they were in Iran.[411]

According to Simpson, Sulṭān Ibrāhīm Mīrzā's atelier in Mashhad, employed artists and craftsmen through contracts and paid them for each specific project, wheras the Shāh's atelier had permanent artists and craftsmen who received a regular salary.[412]

Workshop practices, circulation of designs, and carpet designers

Sources

Thompson referred to Iskandar Biyg Munshī and Qāżī Aḥmad's treatise *Calligraphers and Painters* as an important source on the Ṣafavīd *kitābkhānih* and how it functioned.[413] Thompson makes mention of calligraphers' practices: "In addition to their normal duties concerned with every aspect of writing, calligraphers were called upon to design calligraphic friezes on buildings."[414] However, "nowhere are we told that they undertook design work of other kinds."[415] Thompson, in the section on painters, remarked that some were skillful painters who thrived on drawing, others were specialists in portraiture. The seven modes of decorative design -- an important discussion in this thesis -- could correspond to and be analogised with the six modes in calligraphy. Thompson believed that "the seven modes of decorative design" apply to the art of illumination principally, "an activity much closer to the

[409] Ibid, 8.
[410] Ibid, 8.
[411] Canby, "The World of the Early Ṣafavīds," 13.
[412] Ibid, 22. Canby cited it as Simpson, Marianna Shreve with contributions by Massumeh Farhad, *Sultan Ibrahim Mirza's Haft Awrang: A Prince]y Manuscript from Sixteenth-Century Iran,* Yale University Press, New Haven and London, and Freer Gallery of Art, Smithsonian Institute, Washington, D.C., 1997, 326.
[413] Thompson, "Early Safavid Carpets and Textiles," 278.
[414] Ibid, 278.
[415] Ibid, 278.

world of carpets than to painting."[416] Painters practised various crafts, as diverse as gold-sprinkling, making frontispieces for albums, cut-outs and stencils, and illuminating and gilding.[417]

Dickson and Welch identified three different occupations for workshop artists. *Ustād* was the name given to artists and craftsmen who were aficionados in their field and were master artists. Such professional artists had apprentices or assistants called *ṭarrāḥ* (designer or outliner), which was the name given to those whose level and quality of work deserved special mention. They were distinguished from artists of medium quality who were mere painters, or colourists (*muṣavvir*) or illuminators. Master artists created most of the artistic work, including illustrations and miniatures, found in *Khamsih* of Niẓāmī in the British Library (1539-43) and the *Houghton Shāhnāmih*. The masters, however, did not always play a central role in the creation of such artistic work. Their contributions varied from mere supervision and assistance to single-handed creation. In some cases, the master offered a general sketch of the design, which was then completed and supplemented by lesser artists and/or assistants. In other cases, artists created the designs themselves and only occasionally received assistance or supervision from their masters. Sometimes, the master only hinted at how the art work must be done or completed, while at other times the master would carry out a subtle, painstaking underdrawing, which only needed the application of colour to be considered a complete work of art. Finally, a master would comment on a finished work of art and would add strokes which could be a special face or even a complete figure.[418]

In reference to the Topkapı Palace Museum Archives, Necipoğlu came up with a hypothesis that " 'unapproved projects proposed to the Sulṭān,' since very few of these drawings correspond to extant buildings." In most cases, the artists produced numerous designs for the Sulṭāns. The Sulṭāns in turn would choose a few designs, and the rest were kept in the Inner Treasury, while the chosen drawings went to the architects to be used as decorations for buildings.[419]

---

[416] Ibid. Thompson cited Qāżī Aḥmad [Minorsky], *Calligraphers and Painters*, A treatise by Qadi Ahmad, Son of Mir Munshi (circa A.H. 1015/A.D. 1606), trans. from Persian by V. Minorsky, Freer Gallery of Art Occasional Papers, vol. 3, no. 2, Washington, D.C., 1959, 178.
[417] Thompson, "Early Safavid Carpets and Textiles," 278.
[418] Dickson and Welch, *The Houghton Shahnameh,* 9.
[419] Necipoğlu, *The Topkapı Scroll,* 29-31.

Circulation of designs

As previously as previously discussed in chapter 1 regarding the circulation of design in *kitābkhānih*, Dickson and Welch concluded it was common for Persianate painters to draw inspiration from the motifs found in miniatures and manuscripts they had access to. They usually used the pounce method to copy motifs. Apart from this method of borrowing and inspiration, it was also common for artists' families to pass on their artistic belongings -- including visual ideas that had been recorded through pattern books and sketches -- to younger generations. It has been concluded that dynastic changes did not influence artistic works, since conquerors usually didn't destroy works of art and were willing to spare artists. Based on this conclusion, one can assume that manuscripts, books, sketches and miniatures kept in Tabrīz remained intact while artworks belonging to other dynasties and periods (e.g. Jalāyirīd, Mongol) were handed down decade after decade, their motifs and designs being circulated. The album of Ya'qūb Biyg is a good example, in which many motifs, several of Chinese origin, can be found.[420]

Ṭahmāsp became familiar, by living in Hirāt, with the famous *kitābkhānih* system of Sulṭān Ḥusayn Bāyqarā which consisted of painters, bookbinders and calligraphers working together to produce deluxe versions of books. They also had the duty to produce designs and decorations for other crafts, varying from gem and stone carving to metal- work as well as textiles and carpet making. This was why visual arts and designs under a certain royal dynasty, within a specific period, followed similar veins and frameworks.[421]

Figure 3- 2. Velvet, cut and sewn in the form of a roundel with hunting scene.
Mid-16th century cut, voided silk velvet with precious metal foil wefts, diameter 97 cm, Museum of Fine Arts, Boston, no. 28.13 (Thompson, Jon. "Early Safavid Carpets and Textiles." In *Hunt for Paradise: Court Arts of Safavid Iran 1501--1576*, edited by Jon Thompson and Sheila R. Canby, 270-317. Milan: Skira Editore, 2003, 277, fig. 12.4))

Figure 3- 3. Detail in figure 3-26 (https://collections.mfa.org/objects/49170)

Figure 3- 4. Detail in figure 3-2

In order to discuss the above phenomena, Figure 3-26 is helpful. The designs for animals and riders in the drawing have clearly been taken from a pool of stock images and then compiled under one visual framework. For example, the Vienna carpet and the velvet hunting scene

[420] Ibid, 24.
[421] Canby, "The World of the Early Ṣafavīds, 12.

(Figure 3-2) both have the same figure of the rider engaged in combat with a lion (Figures 3-3 and 3-4). Here, the shape and position of the lion's tail changes. However, in smaller silk carpets, animals are replicas and have been copied in the same way with different combinations from one carpet to another.[422]

Figure 3- 5. Knotted-pile carpet, mid-16th century.
Silk pile and foundation, 230 × 180 cm, Museu Calouste Gulbenkian, Fundaçāo Calouste, Gulbenkian Museum, Lisbon, no. T.100 (Thompson, Jon. "Early Safavid Carpets and Textiles." In *Hunt for Paradise: Court Arts of Safavid Iran 1501--1576*, edited by Jon Thompson and Sheila R. Canby, 270-317. Milan: Skira Editore, 2003, 293, fig. 12.17))

Another example of using stock images is given by Thompson (Figures 3-6 and 3-7). There is a silk carpet in the Gulbenkian Museum (Figure 3-5) that contains a similar depiction, with some differences, in the drawing of the lion which is attacking a bull (see Figure 3-2). This depiction can also be found in three other small silk rugs belonging to the same period.[423] More comparative examples will be discussed in the next section.

Figure 3- 6. Detail in figure 3-2

Figure 3- 7. Detail in figure 3-5

Carpet designers

Regarding our understanding of who the potential carpet designers were comes from different sources, since there is no direct mention of carpet designers until the 16th century. The first example, to be discussed in this section, is sourced from a primary text which mentions an artist working on the design of different media or a design technique similar to carpet design. The second source is some paintings from the same era which offers clues on carpet designers. The third source is a textile designer, with a similar technique to carpet design.

As Thompson claimed, it has been explained in Qāżī Aḥmad that painters were known for practising several other crafts. One artistic commission must be referred to as belonging outside the arts of the book. Muḥammad Khān Takkalū who was the governor of Khurāsān ordered the artist Āqā Ḥasan Naqqāsh, "ornamented with painting the inside of the holy tomb of Imām 'Alī Riżā in Mashhad."[424] This gives us an indication that the painters were responsible in designing ornaments and this supports our assumption to look for

[422] Thompson, "Early Safavid Carpets and Textiles," 286.
[423] Thompson, "Early Safavid Carpets and Textiles," 276.
[424] Ibid, 298. Thompson cited it as Qāżī Aḥmad, *Calligraphers and Painters*, 187.

potential carpet designers among the painters. On the other hand, Dickson and Welch believed that in paintings "certain types of passages, such as arabesque ornament on carpets, thrones, or tents, were occasionally given to specialists for completion."[425]

According to Thompson, not much advanced knowledge was needed to create designs for carpets. Therefore, artists from the *kitābkhānih*, especially those who made illumination, had enough expertise to create designs when the court issued demands for them. However, carpet design could be considered as a separate skill with its own specific group of carpet designers.[426] In this regard, Upham Pope has identified three artists who could be considered as carpet designers in the Ṣafavīd era: Bihzād (d. 1535/6), Sulṭān Muḥammad (d. 1543) and Sayyid 'Alī.[427]

Bihzād was the most influential artist of his age, although only four surviving paintings definitely can be attributed to him. In 1522 he was past his prime, but he nevertheless played a major role in shaping Ṣafavīd art. "The Seduction of Yusuf," a manuscript illustration by Bihzād, belonged to the time when he still lived in Hirāt. The painting contains a carpet with overlapping medallions similar to the design of early Ṣafavīd Tabrīz.[428] Bihzād's direct influence on carpet making in Tabrīz is unclear, but his indirect effect through his position as head of the royal *kitābkhānih* is borne out by the surviving carpets attributed to this time and place.[429] According to Sphuler:

> The detailed reproduction of these textiles seems to have been of particular interest to him and it may be assumed that the development of the new style, which has affinities with that of book illumination, was at least influenced by him. The three principles of composition -- the division of the surface by intersecting lines into various symmetrically arranged panels, the medallion and panel design -- together with individuals motifs used in this context, such as tendrils, flowers and terminal arabesque leaves, form the basis of carpet patterns of the Ṣafavīd period, at the beginning of which indeed Bihzād was still active.[430]

---

[425] Dickson and Welch, *The Houghton Shahnameh,* 9.
[426] Thompson, "Early Safavid Carpets and Textiles," 287-88.
[427] Roger Savory, *Iran Under the Safavids* (Cambridge: Cambridge University, 1980), 136-37.
[428] Lentz and Lowry, *Timur and the Princely Vision*, 294.
[429] Helfgott, *Ties that Bind,* 66. [I think this should be *Ties that Bind*. If so, make a global change]
[430] Friedrich Spuhler, "Carpets and Textiles (1973)," in *The Timurid and Safavid Periods*, eds. Peter Jackson and Laurence Lockhart, vol. 6, *The Cambridge History of Iran*, eds. William B. Fisher, Ilya Gershevitch, Ehsan Yarshater, Richard Nelson Frye, John Andrew Boyle, Peter Jackson, Laurence Lockhart, Peter Avery, Gavin Hambly, C.P. Melville (London: Cambridge University, 1986), 700.

Thompson drew our attention to Bihzād's paintings (see for example, Introduction, Figure 1), describing him as not only a brilliantly innovative master of composition and colour, but an artist who had the ability to express subtle qualities of feeling. He noted that the paintings are filled with carefully observed detail. He added: "In the corpus of his works – those signed by him, those attributed to him, and those believed to have been painted under his supervision – are many exquisite depictions of carpets with a variety of easily readable designs."[431] Because of this, much weight has been given to these depictions and attempts have been made to use them to establish a chronology for the development of carpet design in the later Tīmūrīd period. It has even been suggested that Bihzād may have been responsible for introducing new designs in the late 15th century.[432]

There is a hunting carpet (Figure 3-8) kept at the Museo Poldi Pezzoli, made in 1542-43 in Tabrīz. There is an inscription that reads: "By the diligence of Ghīyāth ul-Dīn Jāmī was completed this renowned work that appeals to us by its beauty in the year 949."[433] This carpet was examined by Thompson who confirmed that we have no information whatsoever about the name Ghīyāth ul-Dīn Jāmī, although this name has sometimes been confused with the textile designer, Ghīyāth ul-Dīn'Alī-yi Naqshband of Yazd. However, this connection cannot be correct, because the latter was no more than 12 years of age at the time this carpet was created.[434]

This carpet depicts 16 human figures – including 14 horsemen -- and more than 100 animal figures including rabbits and some birds.[435] On carefully viewing this carpet, one can find a significant contrast, which Thompson explained that today in Iran, large carpet workshops pay weavers based on the level of their expertise. Therefore, the more subtle and elaborate job of creating the design itself is handed down to the professional artists. The less skilled ones are assigned with simply filling the empty spaces between the main design as well as the background.[436] The strange contrast in the carpet can be explained, more or less, having this approach. First, the medallion situated in the centre, is surrounded by horsemen in a curvilinear way. In the background, however, can be seen a series of jerky, angular and irregular branches and vegetal tracery, whose poor design is only cloaked by the presence of

[431] Jon Thompson, "Carpets in the Fifteenth Century," in *Carpets and Textiles in the Iranian World 1400-1700*, eds. Jon Thompson, Daniel Shaffer and Pirjetta Mildh (Oxford: The May Beattie Archive at the Ashmolean Museum, 2010), 35.
[432] Briggs, "Timurid Carpets II," 146; Kurt Erdmann, *Oriental Carpets*, 31.
[433] Thompson, "Early Safavid Carpets and Textiles," 296. The original Persian inscription is:
شد از سعی غیاث الدین جامی/ بدین خوبی تمام این کار نامی
[434] Ibid, 296-97.
[435] Najarpour Jabbari and Rajabi, "Miniaturists, Great Designers of Carpets," 108.
[436] Thompson, "Early Safavid Carpets and Textiles," 297.

the horsemen in the foreground. According to Thompson it can be surmised, then, there are two standards of workmanship within one carpet.[437]

Figure 3- 8. Hunting carpet, knotted-pile carpet dated 949/1542-43.
Wool and cotton pile on a cotton and silk foundation, 682 x 335 cm Museo Poldi Pezzoli, Milan (Thompson, Jon. "Early Safavid Carpets and Textiles." In *Hunt for Paradise: Court Arts of Safavid Iran 1501--1576*, edited by Jon Thompson and Sheila R. Canby, 270-317. Milan: Skira Editore, 2003, 296, fig. 12.19))

Thompson argued that more skilled artist might have taken up the task of creating the design of the huntsmen, who could have been taken from a pattern book intended for the same purpose. On the other hand, the less skilled artist might have been given the task of filling the background. He might have failed, however, to reproduce the curvilinear tracery that could have been intended in the original design.[438]

Najarpour Jabari and Rajabi have also examined this carpet. They took another approach and proposed Sulṭān Muḥammad as the designer of this carpet. They analysed that the *islīmī* and *khatāyī* are geometric while all animal and human figures are curvilinear.[439] Based on these points, Najarpour Jabbari and Rajabi wondered whether the painter, who designed this carpet, made the *khatāyī* in a geometrical form and the figures curvilinear.[440] This seemed unlikely; instead by drawing our attention to the dissemination of the figures in the field, they suggested first the painters drew the figures and then *khatāyī* motifs were added either by another painter or designer.[441] Then they compared the hunting carpet with a manuscript painting from *silsilat al-Ẕihab* by ʻAbd al-Raḥmān Jāmī, attributed to Sulṭān Muḥammad, made in the 1540s (Figure 3-9).

Figure 3- 9. Shāh Ṭahmāsp's Hunting scene.
Silsilat al-Ẕihab by ʻAbd al-Raḥmān Jāmī, attributed to Sulṭān Muḥammad,1540s, St. Petersburg Library **(**http://expositions.nlr.ru/eng/ex_manus/jami/gallery.php**)**

The first group of figures compared by Jabari and Rajabi are zebras escaping from hunters in the carpet (Figure 3-10). A similar subject can be seen in the painting (Figure 3-11), positioning of the legs in both, the proportion and size of the bodies are the same, and the ears

[437] Ibid, 297.
[438] Ibid, 297.
[439] Najarpour Jabbari and Rajabi, "Miniaturists, Great Designers of Carpets," 109.
[440] Ibid, 110.
[441] Ibid, 110.

and heads seem similar.[442] Similar points can be seen in the figures of deer in both (Figures 3-12 and 3-13).

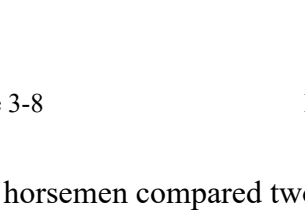


Figure 3- 10. Detail in figure 3-8

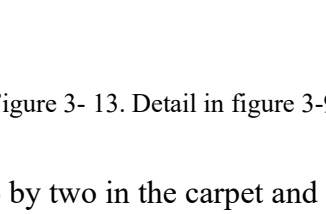


Figure 3- 11. Detail in figure 3-9

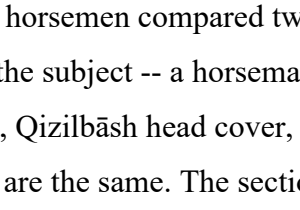


Figure 3- 12. Detail in figure 3-8

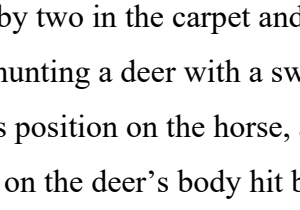


Figure 3- 13. Detail in figure 3-9

The next six figures are horsemen compared two by two in the carpet and in the painting. In Figures 3-14 and 3-15, the subject -- a horseman hunting a deer with a sword -- is the same. The horseman's clothes, Qizilbāsh head cover, his position on the horse, and the hand he is using to hold the sword are the same. The section on the deer's body hit by the sword, the shape, head, body and legs of the horses, and the horse decorations are the same.[443]

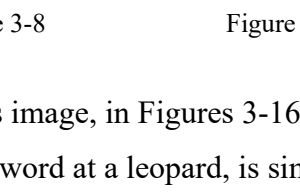


Figure 3- 14. Detail in figure 3-8

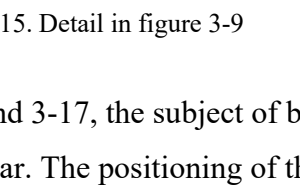


Figure 3- 15. Detail in figure 3-9

Again, like the previous image, in Figures 3-16 and 3-17, the subject of both figures, which is a horseman pointing a sword at a leopard, is similar. The positioning of the horsman on the horse, the hand holding the bridle and the other holding the sword are the same. Like the previous two figures, the horsemen's cloths and other details and the horse decorations are the same.[444]

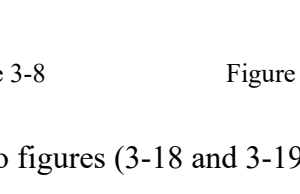


Figure 3- 16. Detail in figure 3-8

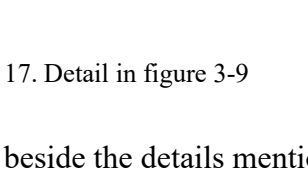


Figure 3- 17. Detail in figure 3-9

The point of the last two figures (3-18 and 3-19), beside the details mentioned above, is the positioning of the horsemen who has turned back and, in the carpet, he is releasing the arrow and in the painting is the moment just after releasing it.[445]



Figure 3- 18. Detail in figure 3-8

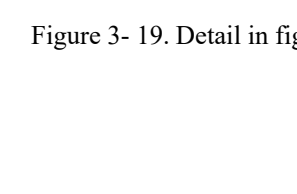


Figure 3- 19. Detail in figure 3-9

[442] Ibid, 110.
[443] Ibid, 111.
[444] Ibid, 111.
[445] Ibid, 112.

Figure 3- 20. The animal scene carpet, Tabrīz (1510-1540).
(Najarpour Jabbari, Samad, and Muhammadali Rajabi. "Miniaturists, the Master Carpet Designers in the Second Tabriz School." *Negareh* 2 (2006): 112)

Based on similarities Jabari and Rajabi observed in the hunting carpet and the manuscript painting attributed to Sulṭān Muḥammad, and the strong composition of figures in the carpet, they concluded that Sulṭān Muḥammad is probably the designer of the hunting carpet.[446]

The second carpet examined by Jabari and Rajabi is the animal scene carpet (Figure 3-20) made in the first half of the 16th century (1510-1540). This carpet was compared with a painting from a manuscript of *Gulistān* by Sa'dī (Figure 3-21) and painted by Āqā Mīrak. Another painting attributed to Āqā Mīrak is included in this comparison (Figure 3-23).

Figure 3- 21. A manuscript from *Gulistān* by Sa'dī.
Āqā Mīrak, 18.5 x 10 cm (Najarpour Jabbari, Samad, and Muhammadali Rajabi. "Miniaturists, the Master Carpet Designers in the Second Tabriz School." *Negareh* 2 (2006): 113)

Besides the comparison of animal figures architectural element is evident in the medallion of the carpet (Figure 3-22) similar to its equivalent in Figure 3-23. In this scene, the entrance to a garden, the fence which is separating two spaces, the figures and their clothes and hats are the same in both the carpet and the painting. Even the chamber where the king and the prince are located are the same.[447]

Figure 3- 22. Detail in figure 3-20

Figure 3- 23. Detail in manuscript painting from *Khamsih* of Niẓāmī attributed to Āqā Mīrak, 1539--1543 (Najarpour Jabbari, Samad, and Muhammadali Rajabi. "Miniaturists, the Master Carpet Designers in the Second Tabriz School," *Negareh* 2 (2006): 116)

Figure 3- 24. Detail in figure 3-20

Figure 3- 25. Detail in figure 3-21

Another interesting point is the detail in the trees. In Figures 3-24 and 3-25, their form is similar, both trees having Shāh 'Abbāsī flowers (*khatāyī*) and the ends of the branches are

[446] Ibid, 114.
[447] Ibid, 118.

covered by either leaves or blossoms.[448] Jabari and Rajabi suggested that the designer of this carpet is probably Āqā Mīrak.[449]

Figure 3- 26. Knotted-pile carpet, 1525-50.
Silk foundation and pile with metal thread highlights, 480 x 255 cm, Museum of Fine Arts, Boston, no. 66.293. (Thompson, Jon. "Early Safavid Carpets and Textiles" in *Hunt for Paradise: Court Arts of Safavid Iran 1501--1576*, edited by Jon Thompson and Sheila R. Canby, 270-317. Milan: Skira Editore, 2003, 286, fig. 12.12)

Thompson, reflecting on the design in Figure 3-26, posed an important question. He asked who the artist was who drew the original drawing that served as the model for the carpet design. He quoted two sources as possible answers to his question. According to Martin, Sulṭān Muḥammad was the designer of the Boston hunting carpet (Figure 3-26).[450] Welch is the other scholar referred by Thompson. Welch pointed out similarities between Sulṭān Muḥammad's work and the style of the horsemen in the carpet, whereas the seated figures resemble the work of Āqā Mīrak.[451]

Mīr Sayyid 'Alī is a painter from the early Ṣafavīd period who was potentially the designer of some Ṣafavīd carpets. According to Dickson and Welch, his work can be divided into two periods: the Tabrīz phase, when he worked at the Ṣafavīd court; and the Mughal phase, when he served emperor Humayun and Akbar. As for the Safavid phase, three biographical sources exist that provide information about him. They include: Mīr Sayyid 'Alī and his father Mīr Muṣavvir in Quṭb al-Dīn's treatise (1556-57), Qāżī Aḥmad's account, and by Ṣādiqī Biyg. According to Ṣādiqī Biyg, Mīr Sayyid 'Alī moved from Iran to India. In India he reached the zenith of his work under the emperorship of Akbar.[452]

Figure 3-27 is among rare works inscribed by Mīr Sayyid 'Alī that can provide a set of criteria for interpreting and understanding his work. The painting consists of a series of bold patterns that show figures, animals, tents and a sunny landscape. By viewing the details, the picture's abundant still life is revealed: a subtle and elaborate arrangement of courtly appurtenances are visible in the picture, consisting of hats, trousers and dresses, head cloths, shawls, women's embroidery and rugs. There are also tent patterns that consist of geometrical

[448] Ibid, 119.
[449] Ibid, 119.
[450] Thompson, "Early Safavid Carpets and Textiles," 286. Thompson cited F. R. Martin, *A History of Oriental Carpets Before 1800* (Vienna, 1908), 117.
[451] Ibid, 117. Thompson cited Stuart C. Jr. Welch, "Two Shahs, Some Miniatures, and the Boston Carpet," *Boston Museum Bulletin* 69, nos. 355 and 356 (1971), 13-14.
[452] Dickson and Welch, *The Houghton Shahnameh,* 178.

designs with bold arabesque.[453] Dickson and Welch expressed the execution and planning of tent arabesque, as if "an actual textile at the royal carpet works would have demanded."[454]

Like Thompson's comment about the hunting carpet, Dickson and Welch also suspected that while other artists might have been able to paint the highly detailed designs in a shorter period of time, Mīr usually spent a great deal of time and effort so as to arrive at perfection in his work.[455]

Figure 3- 27. Majnūn in Chains Led by an Old Lady to Laylā's Tent.
Niẓāmī 1539-43 (Dickson, Martin B. and Stuart C. Welch, *The Houghton Shahnameh*, Harvard University Press, Cambridge and London, 1981, 181, fig. 236 and
http://www.bl.uk/manuscripts/Viewer.aspx?ref=or_2265_f157v**)**

Figure 3- 28. Encampment Scene: Conference of the Rival Clans of Laylā and Majnūn.
Khamsih of Niẓāmī (1529-43), British Library (Dickson, Martin B. and Stuart C. Welch, *The Houghton Shahnameh*, Harvard University Press, Cambridge and London, 1981, 183, fig. 238 and
https://www.harvardartmuseums.org/collections/object/216252?position=1**)**

The second painting (Figure 3-28) depicts an encampment that shows a family council.[456] Here, the atmosphere is one of simplicity of normal folk enacted by refined and culture courtiers who are, in this case, tribal people. This is an integral section of Ṣafavīd tradition and heritage and is similar to what can be seen in Majnūn in Chains. All different kinds of tribal textiles can be found here as well as lavish instances of courtly work. As can be seen, the artist has attempted to depict different aspects of contemporary still life: a feeding bag for horses and mules that has Turkman geometrical patterns on it; a bobbin for spinning with the wool at work; and a water canteen that has been elaborately and subtly painted.[457]

Figure 3- 29. Detail in figure 3-28

Figure 3- 30. Detail in figure 3-28

Figure 3-29 shows the largest tent. Inside the tent can be seen two old men (both bearded), who are sitting on carpets that have elaborately decorated with poetic inscriptions. By

[453] Ibid*,* 180.
[454] Ibid, 180.
[455] Ibid, 180.
[456] Ibid*,* 182.
[457] Ibid, 182.

referring to Walker, Graber believed this type of carpet is well-known and well preserved, which can be found in other miniatures as well.[458] Figure 3-30 shows another tent with its interior fabrics that are quite similar, in terms of design, to Turkmen carpets.[459] In the same figure a woman stands in front of the tent, is spinning wool wrapped around her arm.[460]

It can be said that Mīr Sayyid ’Alī might have been asked to put his expertise as a designer more to use. In other words, as Dickson and Welch argued, Emperor Akbar saw Mīr Sayyid ’Alī more as a designer than painter, since he was actually employed as a textile designer in Akbar’s rug factory. Dickson and Welch refer to a carpet fragment (Figure 3-31) which they assigned to the royal workshop in Akbar’s capital, Fatehpur-Sikri (1571-1585). Joseph V. McMullan described the rug as one of the best examples of its kind in the world. His description seems most befitting when one sees the array of beasts and birds, cheetahs and beasts that are stylish as well as realistic. The powerful arabesque patterns that serve as the background can be seen as a reflection of Akbar’s vital personality as well as the delicacy and subtlety of culture in Tabrīz. To support their hypothesis that Mīr Sayyid ‘Alī was the master designer of the rug, Dickson and Welch compared the white edging of tent walls in Mīr Sayyid ‘Alī’s miniatures (Figure 3-32) with the outline of a bull. Further support was evidenced in the flowers (Figure 3-33) and other elements that served as background to the design of the carpet, compared with, and quite similar to, those in his Tabrīz miniatures. The characteristics of Mīr Sayyid ‘Alī’s work – reproduced in those designs – is that they are full of abstract subtleties and naturalism, and they can be observed from various vantage points, quite unlike conventional designs.[461]

Figure 3- 31. Fragment of a carpet.
(Dickson, Martin B. and Stuart C. Welch, *The Houghton Shahnameh*, Harvard University Press, Cambridge and London, 1981, 191, fig. 249)

Figure 3- 32. Detail in figure 3-28

Figure 3- 33. Detail in figure 3-28

[458] Oleg Grabar and Mika Natif, “Two Safavid Paintings: An Essay in Interpretation,” *Muqarnas* 18 (2001): 180. Graber commented that these have been discussed in an unpublished essay by Daniel Walker, “A Group of Sixteenth-Century Carpets from Tabriz, A Preliminary Study,” Department of Fine Arts, Harvard University, Cambridge, Mass., 1975.
[459] Grabar and Natif. “Two Safavid Paintings,” 183.
[460] Ibid, 183.
[461] Dickson and Welch, *The Houghton Shahnameh,* 191.

Here we must be reminded that according to Thompson, using Persian paintings as evidence for carpet history must be cautiously approached. Details depicted by an artist "tell us more about his approach to painting and his talent as a designer than the history of carpets."[462] Therefore, Thompson highlighted that "the study of carpets in Persian miniature paintings may be a much less reliable guide to carpet history than had previously been thought."[463]

There is a certain signature found on several silk textiles dating from the late 16th century onwards. One of them is Ghīyāth ul-Dīn 'Alī-i Naqshband Yazdī (of Yazd) (1530--1590s).[464] He is known, based on several sources, to have been highly skilled, receiving great wealth and fame for his art. Based on Qāżī Aḥmad, Thompson mentioned that Ghīyāth ul-Dīnfound favour with Shāh 'Abbās's court at Qazvīn during the latter stages of his life and is reputed to have received a salary; however, the amount is unknown.[465] He described himself as *naghshband* and served as the head of a weavers' guild in Yazd, his hometown. Based on this evidence – his fame as a textile designer, the corpus of silks having his signature and self-described as a *naqshband* -- Thompson confirmed that he designed textiles and made the *naqshih* for weaving them.[466]

Textile design, as opposed to carpet design, requires an advanced level of skill and expertise. As Thompson argued, textile design is not something a painter could do without having gone through a certain amount of training beforehand. Complex textile structure and loom technology prevent any designer, out of the world of textile, to be engaged in textile design.[467]

As can be seen from the hunting carpets in Vienna and Boston (Figure 3-26) as well as in the Boston velvet roundel (Figure 3-2) – discussed earlier in the chapter – *naqshbands* made liberal use of styles in book painting and resorted to stock images and designs of the trade, adapting them for their own use. Nevertheless, it must be noted that *naqshbands* did not work with the *kitābkhānih*. They had their own learning paths and used and produced different imagery.[468]

[462] Thompson, "Early Safavid Carpets and Textiles," 304.
[463] Ibid, 304.
[464] Ibid, 281.
[465] Ibid, 284; Qāżī Aḥmad [Minorsky], *Calligraphers and Painters*, 184-87.
[466] Thompson, "Early Safavid Carpets and Textiles," 284.
[467] Ibid, 281 and 287.
[468] Ibid, 285.

Carpet weavers

In order to learn more about carpet design, it is important to know how carpets were made and who the weavers were. The technique of carpet weaving is based on knots wrapped around a pair (usually) of warp threads. The pattern must be pre-planned and cannot be changed later, simply because patterns are built up in horizontal rows, one at a time. Any design can be carried out using such a simple pointillist method.[469]

The most important source for Ṣafavīd carpet weavers is *the ehl-i ḥiref* registers kept in the Topkapı Palace. In 1514, about 38 artists and artisans were brought to the Ottoman court to work from Tabrīz, among whom was Maḥmūd, a carpet weaver (Qālīchī/*Kalicî*).[470] Thompson stated that "Maḥmūd's arrival at the Ottoman court does at least provide clear evidence for carpet weaving at the Ṣafavīd court in Tabrīz during the early 16th century."[471]

The following entries (see Table 3-1) in the list of craftsmen that worked in Istanbul -- the *ehl-i ḥiref* (the people of high stature and achievement) -- show that the abovementioned list was only a partial one.[472] The reason as to why only one carpet master weaver and only three textile specialists in total were mentioned, Thompson believed, is that it is probable that workers might have gone to work at other places, such as Bursa, or textile specialists might not have been recorded as weavers.[473]

Sixteen carpet weavers are listed in the 1526 *ehl-i ḥiref* register.[474] In Tables 3-1 and 3-2, six carpet weavers' wages ranged between seven and 15 and a half *akça* and 10 assistants between one and three *akça*. These wages in comparison with the wages of silk weavers help us form initial conclusions about the method of carpet design in the 16th century in the next section.

Table 3-1. List of carpet weavers (*Cema'at-i kalice-bafan*) and their wages in the *ehl-i ḥiref* register (pp. 57-58)

Names	Wages	Wages (translation)	Comments
Hamza kethüda	*on beş buçuk akça*	Fifteen and a half *akça*	*Sultan Mehmet Han (Fatih) zamanında pençik gelmiş*
İlyas Niğbolu	*on dört buçuk akça*	Fourteen and a half *akça*	*Sultan Bayezid Han zamanında devşirmeden*[475] *gelmiş*

[469] Ibid, 285.
[470] Ibid, 275.
[471] Ibid, 275.
[472] Ibid, 275.
[473] Ibid, 275.
[474] Ibid, 288.
[475] "Janissary, Turkish Military," in *Encyclopedia Britannica,* accessed May 1, 2020, https://www.britannica.com/topic/devsirme, *devşirme* is explained as "a system of tribute by which Christian youths were taken from the Balkan provinces, converted to Islam, and drafted into Ottoman service.". *Devşirme*

Kasım Mora	*sekiz akça*	Eight *akça*	*Mislihu*
Hızır Kosova	*sekiz akça*	Eight *akça*	*Mislihu*
Ahmed Bosna	*yedi akça*	Seven *akça*	*Sultan Bayezid Han zamanında pençik gelmiş*
Mehmed bin Nasuh	*sekiz akça*	Eight *akça*	*Babası hassa üstadlarından pençik kul olub, mezkûr Sultan Bayezid Han zamanında sanatbirle cihet olmuş*

Table 3-2. List of carpet weavers' assistants (*Şagirdan-ı mezkurin*) and their wages in the *ehl-i ḥiref* register (p. 58)

Names	Wages	Wages (translation)	Comments
Ferhad, şagird-i Nasuh	*üç akça*	Three *akça*	*Sultan Selim Han zamanında akça ile alınmış kul*
Hasan Çerkes	*üç akça*	Three *akça*	*Mislihu*
Hüseyin Çerkes	*üç buçuk akça*	Three and a half *akça*	*Mislihu*
Mehmed bin Mustafa	*iki buçuk akça*	Two and a half *akça*	*Babası Sultan Mehmed Han zamanında gelmiş, hassa üstadlarından pençik kul olub, mezkûr Sultan Bayezid Han zamanında şagird ulüfesi olunmuş*
Yusuf Çerkes, şagird-i Ahmed	*iki buçuk akça*	Two and a half *akça*	*Galata Sarayı'ndan verilmiş. Fi gurre-i Şaban sene 926. Ber-mucib-i ruznâme*
Maḥmūd Hırvat, şagird-i Kethüda	*iki buçuk akça*	Two and a half *akça*	*Mislihu*
Hüsrev Hırvat, şagird-i Kasım	*iki buçuk akça*	Two and a half *akça*	*Mislihu*
Ferhat, şagird-i Mehmed	*iki akça*	Two *akça*	*Plşkeş gelmiş. Fi 2 Zi'l-kâde sene 927. Ber-mucib-i ruznâme*
Mustafa, şagird-i İlyas	*bir akça*	One *akça*	*Plşkeş gelmiş. Fi 22 Rebiü'l-âhir sene 925. Ber-mucib-i ruznâme*
Mehmed, şagird-i diger	*bir akça*	One *akça*	*Mislihu*

is translated into "collection" by Thompson in "Early Safavid Carpets and Textiles," 311, footnote 21. The other word which is mentioned as a source for getting the weavers is *Pençik.* Georgios Theotokis and Aysel Yıldız in *A Military History of the Mediterranean Sea: Aspects of War, Diplomacy and Military Elites* (Leiden: Brill, 2018), 432, defined *Pençik* as "one fifth of the war booties that belonged to the Sultan."

3.6 Design processes and methods

Design transferring methods

Similar to the methods explained in chapter 1 (section 1-6), there are different methods of design transfer. According to Dickson and Welch, there were less skilled artists who used pictures already available in libraries or workshops belonging to patrons as models for creating designs. Large workshops were well equipped when it came to art. They provided an inherited store of drawings, pounces and stencils, tracings, scraps and motifs derived from exotic sources (mostly European and Chinese), as well as earlier models of local works.[476]

The following example details the process an artist would go through in order to produce a miniature with the design of a dragon. If the dragon was drawn or painted, he could search the records in order to find a copy of a ready-made dragon. He then traced it on a transparent gazelle skin. After that, he pricked the outline to have a pounce. The pounce was then put on the picture. The artist would apply powdered charcoal through the pinholes. This would leave an outline of the dragon on the painting. The artist would then use ink, paint or other accessories to draw and paint the outline of the dragon. However, the talent of each artist became apparent through the process. Even if a hack had a master's pounce, he might not have necessarily been able to produce a good and satisfactory result.[477] This process may explain the animal figures in the carpets previously discussed.

It is true that the techniques of pouncing and tracing, as described above, were so common that we can, in several cases, recognise 14th century designs in 16th and 17th centuries. However, it must also be taken into account that each new generation of artists preferred to create their own designs and set out to improve on the old ones. The exact copies were rare (see examples in the carpet designers' section). For example, during the late 16th and early 17th centuries, when patrons and connoisseurs were particularly conscious of art history, archaistic artworks were limited.[478]

The technique of transferring design into weaving

It was mentioned earlier that carpet weaving is based on a pointillist technique; therefore, one can create any design as long as a pattern guide is available.[479] The pattern is created row by

[476] Dickson and Welch, *The Houghton Shahnameh,* 9.
[477] Ibid, 9.
[478] Ibid, 9.
[479] Thompson, "Carpets in the Fifteenth Century," 39.

row, following the sequence, similar to a knitting pattern.[480] Denny has described the relationship between technique and design in Islamic carpets. He noted that "a carpet designed with a high knot density is better adapted to intricate and curvilinear designs," and such a design requires shorter pile length to prevent it from looking blurry. However, "a carpet with a lesser knot density is better adapted to bold, geometric designs," and in such a carpet, longer pile produces a soft surface.[481]

It is not known exactly how designs were transferred in the process of weaving a carpet in the past.[482] Thompson named different ways, for example: the weaver might remember a design and work from memory; the weaver can improvise and create designs as he moves on; or an already available pattern – another carpet – can be used as a model to be copied; the weaver could use the outline of the pattern sketched on paper (Figure 3-35), cloth, or drawn on a warp (Figure 3-36); and finally, the weaver can follow notated instructions in the form of a *talim* or squared-paper knot plan (Figure 3-34).[483]

Denny suggested two general categories and defined the first category as the designer and the weaver as one, highlighting village and nomadic carpets.[484] In the second category, the designer and the weaver are separate, highlighting commercial and court carpets.[485] Denny sourced designs in the first category as models, memory and improvisation.[486] He explained that "models -- older carpets -- embodied the stylistic and design traditions unique to each particular village or nomadic tribe or subtribe," and the weaver could follow the process of weaving new carpets.[487] After a village and nomadic weaver copied a model or a design frequently enough, he would sooner or later memorise it so he no longer needed a model or design. This led to a certain level of improvisation and individuality. The designs used for this kind of carpet usually have either an overall geometric pattern or a repeat motif; however both have small units of repetition.[488] The method of using another carpet as the model to be followed in weaving other carpets is so common that it is still adopted in rural areas of Iran and Turkey. *Vāgīrih* is an old Persian word used in Iran that refers to the carpet

[480] Thompson, *Milestones in the History of Carpets*, 30.
[481] Denny, *How to Read Islamic Carpets*, 43.
[482] Thompson, *Milestones in the History of Carpets*, 29.
[483] Ibid, 29-30.
[484] Denny, *How to Read Islamic Carpets*, 32.
[485] Ibid, 42.
[486] Ibid, 32.
[487] Ibid, 32.
[488] Ibid, 32.

whose sole purpose is to be copied. In Turkey and in some parts of Iran, such a carpet is called *örnek*.[489]

For the second category, in which the weaver and designer are separate, Denny named different ways the design moved through the process of producing carpets, from the designer to the weaver. Firstly, a model that the weaver had learned – probably from a mother or grandmother – served as the design. Secondly, the knot plan served as the guide for the weaver. The knot plan is a set of guidelines and instructions to be followed closely by the weaver. And knot plan is itself divided into two types: *talim* and the squared-paper (graph-paper) knot plan. "A *talim*, commonly used in urban carpet factories, is a set of instructions usually written in a kind of shorthand, phrased something like, 'beginning on the right, tie a red knot, then tie six blue knots, then tie another red knot,' and so forth."[490] The *talim* was invented in the 18th or 19th century, and remained limited to the Indian sub-continent through the ages.[491]

In the squared-paper knot plan, each square corresponds to a knot in the carpet.[492] The designer uses watercolour to paint squares on the graph paper, by which the weaver goes through the instructions visually (Figure 3-34).[493] This method creates an exact copy of the design, so it leaves little room for creativity.[494] Today the squared-paper knot plan is the most common method for weaving carpets when the exact reproduction of a design is required.[495] Denny refers to this method of carpet design as being in use with the invention of printing. Thompson believed it probably only became common in Iran in the late 19th century.[496]

Figure 3- 34. A squared-paper (graph-paper) knot plan
(Denny, Walter. *How to Read Islamic Carpets*. New York: The Metropolitan Museum of Art, 2014, 43, fig. 30)

The third option for conveying a design to a weaver is a full-size drawing known as a cartoon. The term "cartoon" in the carpet literature almost invariably refers to a squared-paper knot plan, because carpet weavers no longer use drawings as their pattern guide.[497] But

[489] Thompson, "Early Safavid Carpets and Textiles," 313, footnote 71.
[490] Denny, *How to Read Islamic Carpets*, 42.
[491] Thompson, *Milestones in the History of Carpets*, 30.
[492] Ibid, 30.
[493] Denny, *How to Read Islamic Carpets*, 42.
[494] Ibid, 43.
[495] Thompson, *Milestones in the History of Carpets*, 30.
[496] Denny, *How to Read Islamic Carpets*, 42; Thompson, "Early Safavid Carpets and Textiles," 287.
[497] Thompson, "Early Safavid Carpets and Textiles," 312, footnote 63.

Thompson and Denny both referred to cartoon as the drawing. Denny stated that the original meaning of "cartoon" comes from the general idea of creating a drawing on paper that is then used as guide for creating any kind of artwork in a different medium.[498] According to Thompson, there is a difference between a cartoon used by tapestry weavers (i.e. a drawing) and a knot plan. In knot plans, the weaver is given, through squared-paper, a precise idea of where every single knot must be inserted.[499] Weaving from a cartoon is time-consuming and requires a highly skilled weaver.[500]

Figure 3-35 shows two drawings in the Kāshān Museum (dated 1888) that may have served as carpet designs. Since they are very small, it is surmised that they might have been preliminary sketches for large drawings that were used by weavers.[501] Thompson clarified "there is evidence that designs made by calligraphers for the inscriptions on buildings were drawn on paper."[502] Due to the fact that carpet production took much longer, it was better suited to draw carpet designs on cloth, which is more durable than paper.[503] Based on this fact, Thompson believed that large drawings for the purpose of carpet weaving could be drawn on either filled cloth or paper.[504]

Figure 3- 35. Drawing for a carpet design, dated 1306/1888-89 in the Kāshān Museum
(Thompson, Jon. "Early Safavid Carpets and Textiles." In *Hunt for Paradise: Court Arts of Safavid Iran 1501--1576*, edited by Jon Thompson and Sheila R. Canby, 270-317. Milan: Skira Editore, 2003, 280, fig. 12.8)

It is interesting to know that the cartoon or drawing is a prerequisite step in carpet design today, followed by dotting and colouring which makes the final squared-paper knot plan.

Figure 3-36 shows yet another method of transferring design, mentioned above by Thompson. In this method, the design is marked on the prepared warp with either black pigments or powdered charcoal. The advantage of using this method is that it allows the weaver to arrange the different components of the design precisely. However, no traces of such a method have ever been found in Iran.[505] Thompson suspected that they may well have

[498] Denny, *How to Read Islamic Carpets*, 43.
[499] Thompson, "Early Safavid Carpets and Textiles," 312, footnote 63.
[500] Denny, *How to Read Islamic Carpets*, 43.
[501] Thompson, "Early Safavid Carpets and Textiles," 288.
[502] Ibid, 313, footnote 68. Thompson refers to Rogers, J. Michael, "The State and the Arts in Ottoman Turkey, Part 2. The Furniture and Decoration of Suleymaniye," *International Journal of Middle East Studies,* 14 (1982): 290.
[503] Thompson, "Early Safavid Carpets and Textiles," 313, footnote 68.
[504] Ibid, 288.
[505] Ibid, 285.

been used but they have not been found because no one has yet searched for them and charcoal marks fade and are therefore hard to detect after 400 or 500 years. He observed weavers in Jushaqānī qālī using black ink (or knots with black wool) to mark the warp threads at specific points. According to Thompson, these weavers worked from memory, and used the points as guides to help them at the start of every row of knots, which differs from the method described above.[506]

Figure 3- 36. Marking the pattern on the warp with charcoal as a guide for the weavers.
Royal carpet factory Madrid, 2001 (Thompson, Jon. "Early Safavid Carpets and Textiles." In *Hunt for Paradise: Court Arts of Safavid Iran 1501--1576*, edited by Jon Thompson and Sheila R. Canby, 270-317. Milan: Skira Editore, 2003, 279, fig. 12.7)

Regarding whether Ṣafavīd carpets were made by means of any of the above methods, according to Denny, there is a way of understanding whether a knot plan has been used to weave a carpet or not. One only needs to count the number of knots of similar designs on a carpet under magnification. If the number of knots does not vary from motif to motif, it means that a knot plan has been used. If, however, there is the slightest level of variation, then the method used is a cartoon.[507]

Figure 3- 37. Detail in the border of an Ardabīl carpet.
Dated 946/1539-40, which has a bilaterally symmetrical design. (Thompson, Jon. "Early Safavid Carpets and Textiles." In *Hunt for Paradise: Court Arts of Safavid Iran 1501--1576*, edited by Jon Thompson and Sheila R. Canby, 270-317. Milan: Skira Editore, 2003, 279, fig. 12.6)

The general supposition is that Ṣafavīd carpet weavers in the 16th century used squared-paper plans.[508] Thompson hypothesised that in the early Ṣafavīd period carpet weavers did not use squared-paper plans and supported his hypothesis based on several inconsistencies, irregularities and asymmetries in carpet designs belonging to this period. For instance, the two halves in a symmetrical design may not be equal (Figure 3-37), or the design that is supposed to be situated at the centre may be off centre. Even court quality carpets (Figure 3-38) were worked based on drawings, not knot plans. Figure 3-37 is an example which shows a bilaterally symmetrical design. However, the two different sides might not be similar or

[506] Ibid, 312, footnote 61.
[507] Denny, *How to Read Islamic Carpets*, 43.
[508] Thompson, "Early Safavid Carpets and Textiles," 287.

equal, or the design that is supposed to be situated at the centre may be off centre. Figure 3-38 shows a courtly carpet. Even court quality carpets were worked based on drawings, not knot plans. What seems to be perfect symmetry, at first glance, is actually asymmetry between upper and lower halves. This asymmetry is present in all designs of this type. Although it can be argued that lack of symmetry might have been cryptic, one must note that it is too subtle to have been deliberate. Thompson offered an example to prove his point: at the bottom of the field between two medallions one can find a downward looking leafy palmette with four rosettes. Although the rosettes have the same shape, they do not match each other on either side. The widespread number and high frequency of such mistakes indicate that weavers were not using a square-paper plan (which gave them the opportunity to count the knots and avoid irregularities), but instead they were following shapes. Therefore, "weavers were using a drawing or cartoon as their guide."[509] However, Thompson gave credit to P. R. J. 'Jim' Ford, the first to question whether classical carpets were woven by knot plans.[510]

Figure 3- 38. Knotted-pile carpet, mid-16th century.
Silk pile and foundation, 256 x 165 cm, private collection (Thompson, Jon. "Early Safavid Carpets and Textiles." In *Hunt for Paradise: Court Arts of Safavid Iran 1501--1576*, edited by Jon Thompson and Sheila R. Canby, 270-317. Milan: Skira Editore, 2003, 287, fig. 12.1)

Another reason as to why Thompson believed that drawings were the source of design for carpet weavers was the wages of the most highly paid carpet weaver, compared to highly paid silk workers in the 1526 *ehl-i ḥiref* register. He stated that the steward (*kethüda*) of the weavers *(kaliçe-bafān or qālīchih-bāfān)* was paid 15 and a half *akça* per day while silk workers were paid (*kazazān*) 15 *akça*.[511] Due to the fact that weaving based on a drawing was much more difficult and required a greater level of expertise, compared to the squared-paper method, Thompson deduced that this was the reason for the high payment.[512]

Thompson argued that the master carpet weaver's skill compared to that of the *naqshband*. The *naqshband*, the actual creator of *naqshih*, mostly contributes to the production of patterned silks. A *naqshband,* showing an amazing level of precision and subtlety, sets a drawing of a design and weaves an exact replica to be used as the model for the weaving process. It can be said that the *naqshih* is a scaled-up model of the actual textile

[509] Ibid, 287.
[510] Ibid, 287. Thompson cited P. R. J. Ford, "The Ardebil Carpets," *Rug News*, June 1984, 28.
[511] Ibid, 313, footnote 67.
[512] Ibid, 313, footnote 67.

that has been created using thread.[513] For carpets, when the design is going to be delivered, the precision, size, proportion and choice of binding system all depend on the extent to which the weaver is skilled in using a fabric structure and in loom set-up. However, the squared-paper knot plan does not require the approximations carried out by the weaver. Instead, the artists who create the drawing and add colour are responsible at the design stage.[514]

There are three levels of expertise in the process of silk weaving on a drawloom; the expert *naqshband*, the skilled weaver and unskilled draw boy. According to this categorisation, it can be surmised that *naqshbandān* which appear in the registers of *ehl-i ḥiref* in Istanbul in the latter 16th century, were categorised as designers rather than weavers.[515]

Figure 3-39 gives us an idea of what such a drawing looked like: it is a drawing in black ink, on cloth, that belongs to the later Ṣafavīd period. Apparently designed for a pair of doors, it is evidently the work of an expert designer. The inscription cartouches include poems in Persian along with a dedication to the last Ṣafavīd monarch, Shāh Sulṭān Ḥusayn (1649--1722). It seems to have been designed for a pair of doors for Imām (Shāh) in Iṣfahān.[516]

Figure 3- 39. Drawing on cloth; the design for one of a pair of doors.
Ink on sized and burnished cloth, 342 x 171 cm, sold at Christies, London, 17 October 1995, lot 101
(Thompson, Jon. "Early Safavid Carpets and Textiles." In *Hunt for Paradise: Court Arts of Safavid Iran 1501--1576*, edited by Jon Thompson and Sheila R. Canby, 270-317. Milan: Skira Editore, 2003, 281, fig. 12.9)

In *Milestones in the History of Carpets,* Thompson commented on his assumption that some carpets with curvilinear designs have been woven using drawings. He was more cautious about claiming that weaving based on drawings was the standard method used throughout the carpet producing world. As an exception to his claim, he gave the example of some 15th-century Turkish carpets that had highly complex, interlacing border patterns. Thompson argued that it is difficult to imagine the "over-and- under" interlace pattern, which can be specially drawn, if we know that "the weaver will have to build up the pattern line by line, and that with a border pattern he will have to be able to turn it through ninety degrees."[517] Instead, Thompson believed there might have been a model that allowed the weaver to place

[513] Ibid, 275-6.
[514] Ibid, 312-12-3, footnote 65.
[515] Ibid, 276.
[516] Ibid, 292.
[517] Thompson, *Milestones in the History of Carpets*, 30.

each knot precisely. He had few suggestions. One possibility is that there might have been a separate knotted-pile weaving, prepared by the master weaver to be copied. Another possibility is that there might have been a design worked in cross-stitch embroidery on cloth. Thompson had observed a carpet design that worked in this method in a north-African embroidery from the 17th or 18th century. However, he believed it might have been copied from a carpet rather than serving the purpose of the model for a weaver.[518]

[518] Ibid, 30.

Chapter 4. Tabrīz School: Carpet's Design and Pattern

Tabrīz is located in north-west Iran in Āzirbāyjān, contested between Qārā-Quyūnlū and Āq-Quyūnlū, Āq-Quyūnlū and the Ṣafavīds, and the Ṣafavīds and Ottomans respectively in the late 15th and early 16th centuries.[519] Therefore, this chapter promises to focus on the design aspect of Persian carpets of the Tabrīz School during the late 15th century Turkmen and early Ṣafavīd period.

4.1 Carpet motifs

As previously explained in chapter 2, the motifs in Persian carpets mainly share the same patterns with Persian arts from other media documented in historical texts. They are known as "the seven modes of Persian decorative design."

The seven modes of Persian decorative design

However, "the seven modes of Persian decorative design", known as "*haft aṣl-i naqqāshī"* in original Persian texts, started to appear in the texts in the mid-16th century. They were introduced and defined in chapter 2 which dealt with 15th-century sources. This was because there was no clear textual evidence of their existence in the 15th century, but there were ample visual examples and a few mentions in some historical texts to prove their existence at the time. In this chapter the focus will be more on their background in different texts and accounts.

Before reviewing 16th-century literature, it is important to know where the seven modes fit in Persian art. Islamic art historian, Yves porter commented on Qāżī Aḥmad's text *Calligraphers and Painters* as "fundamental to the history of the arts of Ṣafavīd times."[520] However, he mentioned that in fact some parts of this text were taken from the works of 'Abdī Biyg Shīrāzī -- known also as Navīdī Shīrāzī -- by referring to the Iranian art historian, Muhammad Taqi Danish-Pazhuh.[521] One of Qāżī Aḥmad's accounts is the "theory of the two *qalams*," which refers to calligraphers and painters who use two different pens (*qalams*):

---

[519] Walter Denny. "Anatolia, Tabriz, and the Carpet design Revolution," in *Carpets and Textiles in the Iranian World 1400--1700*, eds. Jon Thompson, Daniel Shaffer and Pirjetta Mildh (Oxford: The May Beattie Archive at the Ashmolean Museum, 2010), 69.

[520] Yves Porter, "From the 'Theory of Two Qalams' to the 'Seven Principles of Painting:'" Theory, Terminology, and Practice in Persian Classical Painting," *Muqarnas* 17 (2000): 109. Porter cited Muhammad Taqi Danish-Pazhuh, "*Rangsāzī dar Kāghaz va rang zudāyī az ān*," *Hunar va mardum* 86-87 (1977): 16-36.

[521] Porter, "From the Theory of Two *Qalams*," 109. Porter cited Danish-Pazhuh, "*Rangsāzī dar Kāghaz va rang zudāyī az ān*,"16-36.

> O key of talent, for which Reason has become a banner! What is this key? The tip of the *qalam*. /The *qalam* is an artist and a painter/ God created two kinds of *qalam*:/ The one, ravishing the soul, is from a plant /And has become a sugarcane for the scribe; /The other kind of *qalam* is from the animal, /And it has acquired its scattering of pearls from the fountain of life./ O painter of pictures that would have enticed Mānī/ Thanks to you, the days of talent have been adorned.[522]

Porter stated that "the 'key to art' would be the tip of the *qalam*" which is the passage that led to the invention of the "theory of the two *qalams*."[523] However, as Porter mentioned, the theory first appeared in 'Abdī Biyg Shīrāzī's *Ā'īn-i Iskandarī* (The Rules of Alexander, ca. 1543), and was then repeated in Quṭb al-Dīn Qiṣṣhih Khān's preface.[524]

Returning to the seven modes, Muhammad Taqi Danish Pazhuh, Iranian historian and Yoshifusa Seki, Japanese Iranologist, have worked intensively on different texts which mentioned the seven modes in the 16th century. Seki wrote that the seven modes first appeared in Quṭb al-Dīn Qiṣṣhih Khān's preface to Shāh Ṭahmāsp's Album (964/1557).[525] But the text seems to be known by siyyid Aḥmad Mashhadī. On how this happened, Seki explained that Qāżī Aḥmad in *Gulistān-i Hunar* (written between 1596 and 1606), modified it and added some parts to it. Qāżī Aḥmad, instead of referring it to Quṭb al-Dīn Qiṣṣhih Khān, made reference to siyyid Aḥmad Mashhadī in his preface to the Amīr Ghayb Biyg Album (written in 1564-65). This made it confusing because they are two different manuscripts.[526] But Seki believed the exact copy of Quṭb al-Dīn's. Seki referred to Danish Pazhuh as the one who discovered that Quṭb al-Dīn had use some lines from *Ā'īn-i Iskandarī* by 'Abdī Biyg Shīrāzī (written in 950/1543). He then explained that this preface was facsimiled by Husayn Khadivjam and kept in the National Library of Iran.[527] This copy, however, is not the one

---

[522] Qāżī Aḥmad, *Calligraphers and Painters, A Treatise* by Qāżī Aḥmad, Son of Mīr Munshī (circa A.H. 1015/A.D. 1606)," trans. and ed. V. Minorsky, *Freer Gallery of Art Occasional Papers* 3, no. 2, (Washington, D.C., 1959): 49-50. Porter instead of "What is this key?" translated "What is this key [of art]?" The original Persian text from Qāżī Mīr Aḥmad Munshī, *Gulistān-i Hunar,* ed. Ahmad Suhayli Khansari (*Bunyād-i Farhang-i* Iran, 1973), 9, is as follows:
کلید خرد را هنر شد علم/ کلید هنر چیست نوک قلم/ قلم نقشبند است و چهره گشای/ قلم بر دو نوع آفریده خدای/ یکی از نبات آمده دلپذیر/ نی قند گشته ز بهر دبیر/ دگر نوع او نوع حیوانی است/ کش از آب حیوان در افشانی ست/ نگارنده نقش مانی فریب/ ازو روزگار هنر دیده زیب.
[523] Porter, "From the Theory of Two *Qalams*," 111.
[524] Ibid, 109. Porter cited 'Abdī Biyg Shirazi, *Ā'īn-i Iskandarī*, ed. A. Rahimof (Moscow, 1977), 102-7.
[525] Yosshifusa Seki, "Quṭb al-Dīn Qiṣṣhih Khān's Preface to Shāh Ṭahmāsp's Album," *Nāmih Bahāristān* 2 (2002), 309; Yves Porter, *Painters, Paintings and Books*, *An Essay on Indo-Persian Technical Literature, 12-19th Centuries* (New Delhi: Centre for Human Sciences, 1994), 109.
[526] Seki, "Quṭb al-Dīn Qiṣṣhih Khān's Preface, 309.
[527] Ibid, 309. Seki cited it as Khadivjam, "*Risālih-'ī dar tārīkh-i khaṭṭ va naqqāshī*."

written by the author, but it is the oldest copy of the manuscript, which has been used in the current research.[528]

With this introduction, the original Persian texts chronologically are: ‘Abdī Biyg Shīrāzī’s *Rużat ul-Ṣifāt*, Quṭb al-Dīn Qiṣṣhih Khān’s *preface to Shāh Ṭahmāsp’s Album* (964/1557), Mīr Siyyid Aḥmad Mashhadī’s *preface to Amīr Ghayb Biyg’s Album* (1564-65), Ṣādiqī Biyg’s *Qānūn al-Ṣuvar* (*Canons of Painting*), written between 1576 and 1602, Qāżī Aḥmad’s *Calligraphers and Painters (Gulistān-i Hunar,* meaning *the Rose Garden of Art*, written between 1596 and 1606). These texts will be explained in more detail below.

The first historical text that mentioned “seven principles (or modes),” is by ‘Abdī Biyg Shīrāzī, in his *Rużat ul-Ṣifāt* written in 967/1559. However, ‘Abdī Biyg does not name the “seven principles:”[529] “Painting has seven principles; / it is like the sky, which has seven spheres, The Islamic brightness of the Muslims / has made manifest the faults of the Franks.”[530]

Based on known 16th-century Ṣafavīd texts, Quṭb al-Dīn Qiṣṣhih Khān (964/1557) is the first who named “the seven modes.” He wrote: “as in calligraphy where there are six styles (principles) of writing, similarly in this technique (painting), seven “brushes” can be recognised: *islāmī, khaṭāyī, farangī, faṣṣālī, abr, dāgh, girih.*”[531]

As as previously discussed, Mīr Siyyid-Aḥmad Mashhadī slightly modified the seven modes. He wrote: “Just as in calligraphy the Six Pens are basic, so in this craft there are seven [fundamental techniques]: *islāmī* (Islamic), *khaṭā’ī* (Chinese), *farangī* (European), *faṣṣālī* (disjointed), *abr* (cloud), [*vāq*], and *girih* (knot).”[532]

Ṣādiqī Biyg (1533--1610), Ṣafavīd court painter and librarian, studied painting in the 1540s at the Royal Scriptorium in Tabrīz (*kitābkhānih*) under Muẓaffar ‘Alī.[533] In *Qānūn al-*

---

[528] Seki, “Quṭb al-Dīn Qiṣṣhih Khān’s Preface, 309.

[529] Porter, *Painters, Paintings and Books*, 109.

[530] Porter, “From the Theory of Two *Qalams*,” 113. Porter in *Painters, Paintings and Books*, 109, has translated it as follows: The drawing has seven principles attached to it/it is like the sky, which has seven principles. The original Persian text in ‘Abdī Biyg Shīrāzī, *Rużat ul-Ṣifāt*, ed. A. Rahimof (Moscow, 1974), 50, lines 456-57 is as follows:

نقش بهفت اصل درو فصل فصل/ همچو سپهریست درو هفت اصل/ رونق اسلامی اسلامیان/ کرده خطاهای فرنگی عیان.

[531](With some modifications in transliteration) Porter, *Painters, Paintings and Books*, 109. The original Persian text from “Seki, “Quṭb al-Dīn Qiṣṣhih Khān’s Preface, 314” is as follows:

و همچنان که در خط شش قلم است درین فن نیز هفت قلم معتبر است. اسلامی، خطایی، فرنگی، فصالی، ابر، داق و گره..

[532] Amīr Ghayb Biyg Album, Preface by Mīr Siyyid Aḥmad (Topkapı Palace Library, H. 2161, dated 1564-65), in Wheeler M. Thackston, *Album Prefaces and Other Documents on the History of Calligraphers and Painters* (Leiden: Brill, 2001), 27. The original Persian text is as follows:

همچنانکه در خط شش قلم اصلست، درین فن هفت اصل معتبرست: اسلامی، خطائی، فرنگی، فصالی، ابر، {واق}، گره.

[533] Gülru Necipoğlu, *The Topkapı Scroll – Geometry and Ornament in Islamic Architecture* (Santa Monica: The Getty Centre for the History of Art and Humanities, 1995), 112.

Ṣuvar (*The Canons of Painting*, written between 1576 and 1602), he explained that the decorative designs (*naqqāshī*) include seven fundamental modes with many variations:[534]

> I speak here of the seven bases (*aṣl*) of decoral art [that is, of its seven basic patterns or design modes]. Yet it should be understood that there are many variations (*far'*) as well. My own master [Muẓaffar 'Alī] in guiding me, cited the basic patterns as follows: first come *islīmī* (the ivy-and-spiral [or vine-and-tendril] pattern) and *khaṭāyī* (the Chinese floral pattern). You may then take as your third and fourth, *abr* [cloudlike or marbled pattern] and *vāq* [grotesque pattern featuring the head-bearing tree]. This leaves *nilūfar* (the lotus) and *farangī* (the Frankish pattern) as your fifth and sixth. And with all these in mind, do not yet overlook the seventh, *band-i rūmī* (the Anatolian knot pattern). Once you have grasped the basic principles involved in these seven patterns, you should have no difficulty with the variations.[535]

Finally, Qāżī Aḥmad in his biographical account, *Gulistān-i Hunar,* mentioned these seven modes as follows: "As in writing there are six basic styles, so in the art of painting seven (manners) are known: *islāmī, khaṭāyī, farangī, faṣṣālī, abr, vāq, and girih."*[536]

Other than the seven modes, Ṣādiqī Biyg classified genres of painting into two main categories: representational and decorative. The representational category is divided into two subcategories: animal design (*jānivarsāzī*) and figural painting (*ṣūratgarī*); and the abstract art of decorators (*naqqāshī*).[537] The decorative category dealt with the seven modes. Ṣādiqī Biyg's classification of painting in general, explains the other art forms added to Persian

---

[534] Necipoğlu, *The Topkapı Scroll*, 112. Necipoğlu used *Asl* translated into modes or principles, literally means "base," or "root," and *far'*, translated into variations, literally means, "branch." She also translated *naqqāshī* into "abstract art of decorators" here.

[535] Necipoğlu, *The Topkapı Scroll*, 112. Ṣādiqī Biyg, *Qānūn al-Ṣuvar (The Canons of Painting)*, trans. as an appendix in Martin B. Dickson and Stuart C. Welch, *The Houghton Shahnameh* (Cambridge and London: Harvard University Press, 1981), 259-69. Necipoğlu has added the bracketed explanations. The original Persian text by "Ṣādiqī Biyg, 36-37," is as follows:

ز نقاشی چو خواهی کام یابی / گشایم بر تو از هر سوی بابی/ اگر اعداد طبعت کارسازست/ تصرف را در آن دست دراز است/ ولی جز هفته {هفت} نبود اصل این کار/ چه گویم لیک دارد فرع بسیار/ چنین کرد اوستادم رهنمایی/ که هست اسلیمی و دیگر خطایی/ ز ابر و واق اگر آگاه باشی/ چو نیلوفر فرنگی خواه باشی/ کنی چو نام هر یک جای در گوش/ مکن از بند رومی هم فراموش/ چو اصل کار دانستی درین کار/ نگردد بر تو فرع کار دشوار.

[536] The English translation with some modifications is from Qāżī Aḥmad, *Calligraphers and Painters*, trans. and ed. Minorsky, 178. However, there are some significant differences between the original text edited by Khansari with Minorsky's edition/translation, the seven modes he mentioned are: *islīmī, khatā'ī, farangī. faṣṣālī, abr, akrah, salāmī.* The original Persian text from Qāżī Mīr Aḥmad Munshī, *Gulistān-i Hunar,* ed. Khansari, 132, is as follows:

همچنان که در خط شش قلم اصل است، دراین فن نیز هفت اصل معتبراست: اسلامی، خطایی، فرنگی، فصالی، ابر، واق، گره.

[537] Necipoğlu, *The Topkapı Scroll,* 112.

carpet design later in the Ṣafavīd period, like animals and figures in the carpets. In other words, it means that painters/decorators had to learn all of them.

Islīmī

The invention of *islīmī* is associated with ʻAlī b. Abī Ṭālib (d. 661), according to the calligrapher and painter, Dūst Muḥammad, in his preface to the Bahrām Mīrzā Album (951/1544):[538]

> It is related in the tradition that the first person who encouraged painting and illumination to add to the decoration of the Word was ʻAlī son of Abī Ṭālib...it is he who invented the foliage called "*islāmī*" in the language of painters.[539]

Porter believed that the attribution of the invention of an "Islamic" design to ʻAlī as significant. He believed it happened during the time in which the " ʻdisciples of ʻAlī,' the Shīʻite Ṣafavīds, were in power in Iran."[540] Since during the Ṣafavīd dynasty, the use of geometric *girih* was replaced by arabesque and floral, Necipoğlu also believed this association may have triggered "the preference of the Twelver Shīʻite Ṣafavīds for floriated vegetal scrolls."[541]

Porter noted that "the *islāmī* is opposed to two other concepts, the Turkish or Byzantian rumi and the Chinese *khatāyī*."[542] Necipoğlu noted that this was also repeated by Mīr Siyyid Aḥmad. He associated vegetal arabesque and kufic script with ʻAlī. It is said that he "invented the *islīmī* or *islāmī* mode upon being challenged in a competition by infidel Chinese painters who designed a tray filled with naturalistic tulips and roses:"[543]

---

[538] Porter, *Painters, Paintings and Books*, 110. *Islīmī* is called "vegetal arabesque" by Necipoğlu in "Necipoğlu, *The Topkapı Scroll*, 113." ʻAlī b. Abī Ṭālib is the Prophet's son-in-law, the revered first imām of the Shi'ites.

[539] The English text, which is the translation of the original Persian text is from "Porter, *Painters, Paintings and Books*, 110." The Persian original text is from Dūst Muḥammad, "Preface to the Bahrām Mīrzā Album." In "*Album Prefaces and Other Documents on the History of Calligraphers and Painters*, Wheeler M. Thackston (Leiden: Brill, 2001), 11" and the text is as follows:

در اخبار چنین آمده است که اول کسی که بنقش و تذهیب زینت افزای کتابت کلام لازم الترحیب شدند حضرت بالنصرت امیر المؤمنین ... علی ابن ابیطالب بودند،... و چند برگ که در عرف نقاشان به "اسلامی" معروفست آن حضرت اختراع فرموده اند.

However, Thackston's translation is as follows: The first person to adorn with painting and illumination the writing of the Word ... A few leaves (*barg*), known in the parlance of painters as *islāmī*, were invented by him.

[540] Porter, *Painters, Paintings and Books*, 110.

[541] Necipoğlu, *The Topkapı Scroll,* 113.

[542] Porter, *Painters, Paintings and Books*, 110.

[543] Necipoğlu, *The Topkapı Scroll*, 114.

> When the king of sainthood [‘Alī] saw that drawing, he seized the pen from them in inimitability. He drew a charming *islāmī* that astonished the people of Cathay. When that prototype fell into their hands, all other designs were lesser in their view.[544]

Khatāyī

It was previously mentioned in chapter 2 that *khatāyī* refers to a large region in China. Azhand added that, some wrote *khatāyī* with a ṭ (*khaṭāyī*) and translated it into “fault” and “mistake” and they believed it referred to lines which are the result of miscue and mistake.[545] Porter wrote that *khatāyī* also means “guilty” which is opposed to *islāmī* or *islīmī* (meaning “Islamic”).[546]

Abr

Abr was named as one of the seven modes by Quṭb al-Dīn and Ṣādiqī Biyg. Porter mentioned that, when referring to this description, ‘Abdī Biyg noted *abr* several times. However, it is not possible to know whether it is related to clouds or any decorative design.[547] There is a painting by Sulṭān Muḥammad (Figure 4-1) in which *abr* can be seen.

Vāq

Vāq was explained in chapter 2 and in the historical texts it was mentioned by Quṭb al-Dīn and Ṣādiqī Biyg, and not anywhere else.[548]

Figure 4- 1. Ascension of the Prophet Muḥammad ascribed to Sulṭān Muḥammad.
From the *Khamsih* of Niẓāmī (ca. 1539–1543) (Azhand, Yaqub. *Seven Fundamental Modes of Iranian Decorative Arts (Haft aṣl-i Taz’īnī-yi Hunar-i Iran)*. Tehran: Piykarih, 2014, 149)

---

[544] Ibid, 114. The English translation and original Persian text are both from “Mīr Siyyid Aḥmad’s preface to Amīr Ghayb in Thackston, *Album Prefaces and Other Documents*, 26.” The original Persian text is as follows: چو شاه ولایت بدید آن رقم/ باعجاز بستد ازیشان قلم/ رقم کرد اسلامی دلربای/ که شد حیرت افزای اهل خطای/ چو آن اصل افتاد در دستشان/ بشد نقشهای دگر پستشان.
This passage is again repeated from “Quṭb al-Dīn Qiṣṣhih Khān, 313;” and *Ā’īn-i Iskandarī*, 106. Necipoğlu in “Necipoğlu, *The Topkapı Scroll*, 114” wrote “one wonders whether the Fatimid preference for the floriated kufic script and for vegetal patterns was informed by a similar set of Shī‘ite associations.”
[545] Yaqub Azhand, “*Khatāyī* Mode in Iran’s Art of Book (*Aṣl-i Khatāyī dar Kitāb-Ārāyi-yi Iran*),” *Nigarih* 10 (2009): 19. The two forms are: *khatāyī* (ختایی) and *khaṭāyī* (خطایی). Writing it in *khaṭāyī* form was by Quṭb al-Dīn Qiṣṣhih Khān’s and Ṣādiqī Biyg. See Seki, “Quṭb al-Dīn Qiṣṣhih Khān’s Preface, 314; and Ṣādiqī Biyg, *The Canons of Painting*, in Dickson and Welch, *The Houghton Shahnameh*, 259-69.
[546] Porter, *Painters, Paintings and Books*, 110. With this meaning the word will be written in Persain, *khaṭāyī* (خطایی).
[547] Ibid, 112. Porter cited it as ‘Abdī Biyg Shīrāzī, *Duḥat al-Azhār,* eds. A. Rahimof and Ali Mina’i Tabrizi (Moscow, 1974)*,* 86, 87, and 99.
[548] Ibid, 112.

Faṣṣālī and nīlūfar

It was explained in chapter 2 that *faṣṣālī* has been interpreted in three definitions. The first two were explained in chapter 2. The third meaning of *faṣṣālī*, by Mujarrad Takestani. He explained that *faṣṣālī* connects *islīmī* and *khatāyī* scrolls when they intertwine and cross over each other.[549] According to Azhand, this definition is very similar to ‘Abdī Biyg’s. ‘Abdī Biyg says: “The nib of the pen which delights the kingdom/has shown the drawing of the “*faṣṣālī*” of thousands of seasons.”[550]

Faṣṣālī appears in the “*haft aṣl*” only in Quṭb al-Dīn. Porter noticed “it is mentioned by Qāżī Aḥmad, not only in the passage borrowed from Quṭb al-Dīn about the seven fundamental modes, but also in the biography of Abū al-Ma‘ṣūm Mīrzā, and in the *Risā’lih-yi jild-sāzī*. In the two latter cases, it is clearly a bookbinding term.”[551] *Faṣṣālī* was replaced by Ṣādiqī Biygt to *nīlūfar* (bindweeds or convolvulus). Porter believed that although *nīlūfar* was mentioned by ‘Abdī Biyg, it is still not clear whether it is related to a technical word.[552] (*Nīlūfar* can be seen in Figure 2-21 in chapter 2: the big flower in the middle.)

Farangī

Farangī was explained in chapter 2. It was mentioned by ‘Abdī Biyg, Ṣādiqī Biyg and Quṭb al-Dīn.[553]

Girih or band-i rūmī

Girih was also explained in chapter 2; however, there are some discussions around it, especially in architectural decoration. Necipoğlu wrote that it was popular in the medieval time in Islamic lands, but later “the predominantly floral visual idioms of the early modern Islamic empires seemed to signal the end of a medieval era and the beginning of a new one.”[554] However, it remained fragmentary in post-medieval Islamic visual culture.[555]

---

[549] Yaqub Azhand, *Seven Fundamental Modes of Iranian Decorative Arts (Haft Aṣl-i Taz’īnī-yi Hunar-i Iran)* (Tehran: Piykarih, 2014), 135. Azhand cited “Arddeshir Mujarrad Takestani, *Book Illumination’s Manner (shīvih-yi Taẕhīb*) (Tehran 1993), 28.”

[550] Porter, *Painters, Paintings and Books*, 112. The original Persian text from “‘Abdī Biyg Shīrāzī, *Duḥat al-Azhār,* 67,” is as follows:

ز فصالی هزاران فصل تصویر/ نموده نوک کلک مملکت گیر

[551] Porter, *Painters, Paintings and Books*, 112. Porter cited both Qāżī Aḥmad, *Calligraphers and Painters*, trans. and ed. Minorsky, 190, and 111-12; Qāżī Mīr Aḥmad Munshī, *Gulistān-i Hunar,* ed. Khansari, 149.

[552] Porter, *Painters, Paintings and Books*, 112.

[553] Ibid, 111. Porter cited “‘Abdī Biyg Shīrāzī*, Duḥat al-Azhār,* 67.”

[554] Necipoğlu, *The Topkapı Scroll,* 116.

[555] Ibid, 116.

4.2 Carpet design structure

Based on the carpets represented in the second half of the 15th century in the Persian paintings of Hirāt, Thompson suggested a chorological development of carpet design, from small-scale endless repeat patterns, to "compass and rule" compartment structure and centralised designs with floral arabesque.[556] In chapter 2, these designs from the 15th century were discussed. But in western Iran and eastern Turkey, Turkmen Qārā-Quyūnlū and Āq-Quyūnlū ruled. In this section, the probability of carpets existing from the 15th century during the Turkmen rule through the 16th century, the nature of carpets in early Ṣafavīd era will be examined.

Āq-Quyūnlū carpets

Fifteenth-century carpets as previously discussed in chapter 2, are less known because so few carpets or fragments survived. This was especially true of Tīmūrīd carpets, but Turkmen carpets are even less known. However, according to Thompson, "we can be certain they existed."[557]

There are accounts of two travellers who visited Tabrīz in the 15th century and wrote about the carpets they saw there. Josafa Barbaro, the Venetian ambassador to the Turkmen court at Tabrīz, wrote in 1474 that he was shown "sylke carpets ... which were mervailouse faire" and also "most beautiful carpets" that he considered much better than Cairo and Bursa carpets.[558] The other account mentioned by Thompson is an anonymous merchant at the beginning of the 16th century who was in Tabrīz, visited Ya'qūb Biyg's former palace and wrote:[559] "On the floor of the hall is spread a magnificent carpet, apparently of silk, worked in the Persian manner with beautiful patterns, which is round, and of the exact measurement the place requires. Likewise, in the other rooms the floor is all covered."[560] The existence of silk carpets "worked in the Persian manner" probably with curvilinear designs was

---

[556] Jon Thompson, *Milestones in the History of Carpets* (Milan: Moshe Tabibnia, 2006), 182. This was explained in chapter 2, section 2.1, in *girih* section.
[557] Ibid, 29.
[558] Jon Thompson, "Early Safavid Carpets and Textiles." In *Hunt for Paradise: Court Arts of Safavid Iran 1501--1576*, eds. Jon Thompson and Sheila R. Canby (Milan: Skira Editore, 2003), 300. Josafa Barbaro and Ambrogio Contarini, *Travels to Tana and Persia*, trans. William Thomas, ed. Lord Stanley of Alderley, together with *A Narrative of Italian Travels in Persia in the Fifteenth and Sixteenth Centuries*, trans. and ed. Charles Grey, 2 vols. (London: The Hakluyt Society, 1873), vol. 1, 59-60.
[559] Thompson, "Early Safavid Carpets and Textiles," 300. Thompson commented "it was Ya'qūb's palace not Ūzūn Ḥasan's pointed out by O'Kane 1993, note 51."
[560] Thompson, "Early Safavid Carpets and Textiles," 300-3. Barbaro and Contarini, *Travels to Tana and Persia,* vol. 2, 175. Thompson questioned, however, "What was round, the carpet or the Persian manner of patterning? Round: 'having a curved outline or form ... not angular or pointed; as, a round arch; round hills.'"

interpreted by Thompson confirming that "late Āq-Quyūnlū and early Ṣafavīd carpets had a Persianate character."[561]

Until now we have no information about Āq-Quyūnlū or Qārā-Quyūnlū Turkmen carpets and what they looked like. But there are a group of carpets known as "*tapedi damaschini*" to the Venetian traders.[562] They came to Europe before Mamluk carpets and after Turkish carpets.[563] This group of carpets has been long puzzled simply because of the wrong choice of their name.[564] Thompson reminds us that these carpets appeared in European paintings before Mamluk carpets.[565]

As Thompson wrote, these carpets "have features in their vocabulary of ornament in common with both Anatolian and Egyptian carpets… They are distinct from Egyptian carpets and yet not Turkish, so what are they? Could they too descend from a common ancestor and be the missing 'descendants' in Turkmen western Iran and eastern Anatolia of an earlier Iranian tradition?"[566] Denny defined the design of so-called *tapedi damaschini* carpets as follows:

> The preferred layout of para-Mamluk carpets is the so-called 2-1-2 version of the large-patterned Holbein, with a larger central octagon and smaller geometric medallions, conveniently called "strap-work stars," in each corner. The para-Mamluk rugs have a great abundance of floating geometric forms -- elongated dart-like hexagons that may represent an iconic cypress tree, as well as smaller vegetal and floral motifs -- that in all probability stem from similar origins in Islamic marquetry and tile-mosaic.[567] …coherent kufesque borders with pronounced ligatures on the letter-like forms, carefully planned corner articulation of borders, and consistent and carefully planned geometric strap-work, with the under-and-over junctures of the notional strap-like bands carefully and logically delineated.[568]

Thompson explained the design of these carpets as: "the field is decorated with a plethora of small ornaments, most radially arranged around a central interlaced star motif."[569] For

[561] Thompson, "Early Safavid Carpets and Textiles," 303.
[562] Thompson, *Milestones in the History of Carpets*, 124.
[563] Ibid, 124.
[564] Ibid, 129.
[565] Ibid, 129.
[566] Ibid, 129.
[567] Denny, "Anatolia, Tabriz," 63.
[568] Ibid, 63.
[569] Thompson, *Milestones in the History of Carpets*, 131.

convenience, he named the style "tessellated style."[570] One form of these "small ornaments" are cypress trees.[571] The border of these carpets are Kufesque, with corner solution, which is, as Thompson said, universal in carpets represented in Persian paintings and also in Doha silk octagon carpets (Figure 2-31 in chapter 2), the only carpet confidently attributed to the 15th century.[572]

Thompson listed nine carpets as main members of the *tapedi damaschini* group, adding another five that related to them.[573] Two examples that best represent this group have been chosen (see Figures 4-2 & 4-3) .

Figure 4- 2. Para-Mamluk carpet with geometric pattern.
Probably southeast Anatolia or Āzirbāyjān, late 15th century or early 16th century. All wool, 141 x 207 cm, Moshe Tabibnia Collection, Milan (Denny, Walter. "Anatolia, Tabriz, and the Carpet Design Revolution." In *Carpets and Textiles in the Iranian World 1400--1700*, edited by Jon Thompson, Daniel Shaffer and Pirjetta Mildh. Oxford: The May Beattie Archive at the Ashmolean Museum, 2010, 58, fig. 1)

They are called different names by various carpet scholars. In early scholarship this group of carpets were known as Damascas carpets, attributed to Egypt and Cairo, known as Mamluk carpets.[574] The term "Para-Mamluk" was first used in 1967 by Ellis which gave the impression of being somehow related to Mamluk carpets.[575] However, Thompson believed the name para-Mamluk has made their place in history "obscure and should be avoided."[576]

Figure 4- 3. The Chihil-sutūn carpet.
The Philadelphia Museum of Art. Inv. no. 55-65-2 (Thompson, Jon. *Milestones in the History of Carpets.* Milan: Moshe Tabibnia, 2006, 137, fig. 116)

In his 1938 publication Erdmann, based on Barbaro's distinction between Bursa and Cairo carpets, related them to Turkish and Cairene carpets and their parallel in Venetian inventories

[570] Ibid, 131. Thompson described "tessellated" as the mosaic-like grouping of small ornaments; the word correctly used should apply to an assembly of rectangular components.
[571] Thompson, *Milestones in the History of Carpets*, 131.
[572] Ibid, 134-35.
[573] For the complete list of *tapedi damaschini* group, see Thompson, *Milestones in the History of Carpets*, 131.
[574] To read more on the literature of *tapedi damaschini* carpets, see Thompson, *Milestones in the History of Carpets,* 126-27.
[575] Thompson, *Milestones in the History of Carpets*, 129. Thompson cited Charles Grant Ellis, "Mysteries of the Misplaced Mamluks," *Textile Museum Journal* 2, no. 4 (1969): 5-22.
[576] Thompson, *Milestones in the History of Carpets*, 124. In "Carpets in the Fifteenth Century," 57, footnote 60, Thompson said that "I find myself no longer able to use the meaningless and misleading term 'para-Mamluk' coined by Ellis. If we must, let us call them the 'Damascus group' or 'Damascus carpets,' which is what the Venetians appear to have called them, even though it is still far from clear that they were made there."

are seen as *tapedi turcheschi* and *tapedi damaschini*. He concluded that *turcheschi*, indicates that the carpets from Ottoman and *damaschini* are Mamluk carpets.[577] Erdmann tested his hypothesis based on their representation in European paintings.[578]

Thompson and Denny are the two main contemporary scholars who worked on this group of carpets.[579] Although they seem to have reached different conclusions, they nevertheless built their assumptions on each other's findings.[580]

It seems that Thompson in "Early Safavid Carpets and Textiles," published in 2003, believed there were no surviving carpets or textiles from Turkmen Tabrīz.[581] He referred to Denny as pointing to a carpet (the Williams para-Mamluk rug in the Philadelphia Museum of Art (Figure 4-3)) with court quality. Denny attributed this carpet to "a product of the Turkmen court at Tabrīz."[582] Thompson however wrote: "It is difficult to accommodate this idea unless we make the Williams carpet a lot older than is currently reckoned."[583] However, three years later in *Milestones* (2006), Thompson worked intensively on the *tapedi damaschini* carpets. His research was later acknowledged by Denny in "Tabriz, Anatolia."

Thompson in discussing *tapedi damaschini* carpets, based his assumption on some design factors which are definitively Persian, such as "corner solution" or "mitred corner," defined as "the treatment of the Kufesque border at the junction between the side and end borders," where it turns 45 degrees.[584] This evidence was also used by Thompson to explain the way carpets were represented in Persian paintings, for example, the Doha silk carpet. This feature is absent in Turkish carpets, however, with few exceptions, Thompson noticed.[585]

There was also another group of carpets called *tapedi turcheschi* by Venetian traders. Based on this, Thompson stated that these two carpet groups are clearly different types, the first group refers to Turkish carpets and the second to *damaschini* carpets, probably shipped

---

[577] Ibid, 126-27.
[578] Ibid, 129.
[579] To read more, see Thompson, *Milestones in the History of Carpets*, 123- 165; Denny, Anatolia, Tabriz, 58-64.
[580] Thompson, *Milestones in the History of Carpets*, 29, footnote 14, wrote "it is interesting that our views [Denny's and Thompson's] had been forming on a convergent path for some time. While many of my conclusions are similar to his, the arguments and thought processes which have led us to the conclusions we both share, are not the same and have been reached independently—perhaps an argument in their favour."
[581] Thompson, "Early Safavid Carpets and Textiles," 300.
[582] Ibid, 313-14, footnote 85. Thompson cited Walter Denny, *The Classical Tradition in Anatolian Carpets* (London: Scala Publishers, 2003).
[583] Thompson, "Early Safavid Carpets and Textiles," 313-14, footnote 85. This prayer carpet of the "*tapedi damaschini"* type in the Chihil-sutūn Palace, Iṣfahān, had been rather overlooked until John Mills in 1981 drew attention to a painting by Giovanni Martino da Udine in Udine Cathedral, dated 1501, which features an extremely accurate representation of a very similar carpet.
[584] Thompson, *Milestones in the History of Carpets*, 131.
[585] Ibid, 131.

from Damascus.[586] To solve this mystery, Thompson continued "in the mid-15th century, Venice had a substantial presence in the commercial district of Damascus, where trade was less restrictive than in Alexandria and Cairo."[587] There is still no clue as to whether Damascus was collecting and shipping these carpets or producing them..

There are two points mentioned by Thompson which seemingly helped him attribute para-Mamluk carpets, not only to Āq-Quyūnlū but to Tabrīz. Thompson referred to old accounts of Amīr Qusun's house, a wealthy man in Cairo in 1341, who "owned a few hundred valuable carpets, which included Anatolian carpets, carpets from Shīrāz, and carpets from Amid (Diyarbakr)."[588] Thompson explained that Amid was under Ilkhānīd rule at the time, "but surrounded by Turkmen tribes not yet under any well-defined political leadership."[589] Thompson also talked about Barbaro's comparison between carpets from Cairo and Bursa, and "the most beautiful" ones in encampment near Tabrīz, when he visited Ūzūn Ḥasan in 1474.[590] Thompson presumed Barbaro was talking about Turkmen carpets.[591]

Denny hypothesised that these carpets were "the earliest surviving products of court-controlled ateliers."[592] They were high quality carpets made of excellent materials and dyes, regular weave in strap-work design, rare, and with intricately articulated corners. Denny also referred to Barbaro's praising of carpets during his visit to Tabrīz in 1474, suggesting their possible place of patronage be "the Āq-Quyūnlū court of Tabrīz."[593]

Denny in "Anatolia, Tabriz," was aware of Thompson's conclusion where he suggested Tabrīz as the weaving place of para-Mamluk carpets.[594] But he suggested Āzirbāyjān, the Jazirah, or northern Syria, though all of them were located within Āq-Quyūnlū at the time.[595]

Thompson made an important point when he justified his attribution of para-Mamluk carpets – in terms of the descendants of this group in Iran and Turkey -- to Iran rather than Turkey. He said "the accidents of history have been favourable to the survival of Turkish carpets, whereas by comparison the number of old Persian carpets to have survived is

[586] Ibid, 144-45.
[587] Ibid, 144-45.
[588] Ibid, 123.
[589] Ibid, 123.
[590] Ibid, 126.
[591] Ibid, 126.
[592] Denny, "Anatolia, Tabriz," 64. Denny mentioned court-controlled ateliers or Islamic *tiraz.*
[593] Ibid, 64.
[594] Ibid, 64.
[595] Ibid, 64.

miserable."[596] This plus the fact that "Iran today has a carpet culture, in its commercial, village and nomadic production, that is richer, more broadly based historically and more widespread than that of any other country."[597]

The existence of *tapedi damaschini* carpets opens up another discussion, which was addressed by Thompson. He believed that Turkish, Mamluk and the *tapedi damaschini* group in the 15th century shared common motifs. This indicates "while possessing a distinctive style of their own, derive their vocabulary of ornament is derived, at least in part, from a common source."[598] Therefore, there was an international style in carpet patterns in the 15th century in which Iran was a full participant.[599] He further explained "the *tapedi damaschini* carpets can be seen as the western Iranian or Turkmen survivors of an earlier style and the chequerboard carpets as its continuation into the 16th century and beyond."[600]

The term "international style" was first pointed out by Ellis in 1963, where he was referring to a carpet "of unknown provenance woven in 'a 15th century international style.'"[601] One mentioned by Ellis is the Chihil-sutūn carpet (Figure 4-3), which he assumed was a copy of a 15th-century carpet.[602] However, the carpet certainly dates from the 15th century and has "international style". Thompson explained in more detail including: a Kufesque border with mitred corners, an octagon with radial volutes, corner-pieces with scalloped edges, cypress trees, triple-hook motif, and small motifs.[603]

Early Ṣafavīd carpets

From the 15th century the compartment design continued into 16th-century Iran and lasted to the 17th century, mainly as a border design (Figure 4-4).[604]

Figure 4- 4. Detail in the border pattern of a carpet from the 16th century
(Thompson, Jon. *Milestones in the History of Carpets.* Milan: Moshe Tabibnia, 2006, 194, fig. 173)

[596] Thompson, *Milestones in the History of Carpets*, 129.
[597] Ibid, 129.
[598] Ibid, 165.
[599] Ibid, 165.
[600] Ibid, 165.
[601] Ibid, 31. Thompson cited Charles Grant Ellis, "A Soumak Rug in a 15th Century International Style," *Textile Museum* Journal 1, no. 2 (1963): 3-20.
[602] Thompson, *Milestones in the History of Carpets*, 31.
[603] Ibid, 137, fig. 116.
[604] Thompson, "Early Safavid Carpets and Textiles," 299.

There is another type of design in the 16th century, somewhat rooted in the 15th century. Thompson explained that "in the Tīmūrīd period an artistic fashion developed for fantastic landscapes inhabited with a variety of animals, at which time other mythical beasts derived from Chinese art were added to the menagerie."[605] However, the composition and signification of these Chinese creatures were changed by Persian artists. They were usually drawn in conflict, a composition which Chinese artists would not contemplate. This composition -- animals in combat -- had been inserted into the shared decorative design of Persian art by the early Ṣafavīd period and decorated a variety of media (Figure 2-21 in chapter 2).[606] A good example for a carpet with mythical beasts and animals in combat can be seen in Figure 3-5 in chapter 3. It is decorated with three pairs of animals in combat: "a lion with a bull; a lion-like, bushy-tailed creature with a cloven-hoofed, deer-like animal; and a striped carnivore with a bull."[607]

However, these motifs of animals occurred earlier in the 13th and 14th centuries in Persian arts. They did not appear in carpets until the 15th century and were established by the 16th century. Erdmann argued that: "the entire motley world of Persian miniature painting with its fantastic blossoms, trees and shrubs, clouds and cloudbands, adopted from China during the Mongol era, and then its animals and animal combats, its hunting scenes and its view of paradise are all carried over to the carpet."[608]

Another example of these animal carpets can be found in hunting carpets (Figures 3-26 in chapter 3 and 4-19). Etttinghausen explained the hunt as a celebration of royal pastimes.[609] However, Thompson wondered that "the depiction of a hunt in the main field and the offering of wine in the border may carry a metaphorical message."[610]

Above all are the medallion carpets. Since they have raised arguments and their development has been the topic of most of the discussions on late 15th and early 16th century Iran, a descriptive section has been allocated to this group.

---

[605] Ibid, 292.
[606] Ibid, 292.
[607] Ibid, 292.
[608] Kurt Erdmann, *Oriental Carpets: An Account of Their History,* trans. Charles Grant Ellis (London: Zwemmer, 1960), 31.
[609] Thompson, "Early Safavid Carpets and Textiles," 286. Thompson cited Ettinghausen 1971.
[610] Ibid, 286.

Medallion carpets

One of most important carpet design structures is the medallion, but despite the research, their true origin is still unknown, or at least there is no agreement.[611] As previously discussed in chapter 2, most information about the 15th century comes from Persian paintings and the representation of carpets in them. Although, the validity of relying on these paintings is questionable they are still an important source of information in the absence of the real carpets.

Figure 4- 5. Painting from a *khamsih* of Niẓāmī, Hirāt 1445-46.
(Thompson, Jon. *Milestones in the History of Carpets.* Milan: Moshe Tabibnia, 2006, 182, fig. 164)

To trace medallion carpets before the 16th century, Thompson referred to paintings in the second half of the 15th century, which are more detailed. He draws our attention to two paintings representing medallion carpets, which interestingly appeared around the same time, in the 1440s, in paintings of Shīrāz and Hirāt (Figure 4-5).[612]

Figure 4- 6. Part of a Persian carpet with a central medallion.
Furnished with cartouche and pendants. 470 x 220 cm, second quarter of the 16th century (Thompson, Jon. *Milestones in the History of Carpets.* Milan: Moshe Tabibnia, 2006, 178-80, pl. 16)

In this regard, Thompson questioned whether there was a close relationship between the depiction of carpets in these paintings and contemporary carpets themselves.[613] He tested this hypothesis with carpets depicted in Persian paintings with mostly Kufesque borders while only one carpet – the Doha carpet (Figure 2-31 in chapter 2) – is known as having a Kufesque border. He then added it might be that "the Persian painters were following an established convention."[614] As previously discussed the so-called "*tapedi damaschini*" carpets – better known as Āq-Quyūnlū carpets today –have Kufesque borders belonging to Persian carpets. However, there remains a question about 16th-century carpets which are more known to us with more surviving examples. There is no example of a carpet from this time with a Kufesque border while their representation in many contemporary paintings has a Kufesque

[611] Thompson, *Milestones in the History of Carpets*, 182.
[612] Ibid, 182.
[613] Ibid, 182.
[614] Ibid, 182.

border.[615] Thompson's evaluation is that "painters frequently based their compositions on previous models."[616] He concluded that other features in their paintings could also be based on previous examples. This makes it difficult to pinpoint the exact age of the oldest carpets with medallions, in comparison to their representation in 15th-century paintings.[617]

Denny defined the medallion as a round centralised element, with the possibility of being decorated in many ways.[618] There are different types of medallion design as mentioned by Thompson; medallions of "cloud-collar" form, circular medallions with 16 rounded lobes, medallion with and without pendants, and medallions with angular and pointed lobes (Figure 4-6).[619]

In medallion designs, one of the most important challenges for artists was how to fit a circular medallion form into the rectilinear carpet. Denny explained that the solution to this problem was by comparing its appearance in other media. He proposed the origin of the medallion in Islamic art came from tile decoration on buildings and in the arts of the book.[620] The first step, seen in tiles, is to add a pendant motif at each end of the medallion and enclose it with a border (Figure 4-7). In bookbinding in the 15th and 16th century, the solution was to add four corner-pieces (or spandrels) to the elongated medallion and its frame (Fig. 4-8).[621] It is useful to mention here that in Persian art, medallions in general are called *turanj* but the round ones are called *shamsih* (Figure 4-9).[622] However, Porter wrote that medallions with an oval shape or, as Denny called them, elongated medallions are called *turanj* ("citron") and round medallions are called *shamsih* ("sun").[623]

Figure 4- 7. Tiles from the Blue Mosque of Tabrīz.
(Denny, Walter. *How to Read Islamic Carpets*. New York: The Metropolitan Museum of Art, 2014, 68, fig. 54)

The field of medallion carpets mainly consists of two types. In some, the field pattern appears to run beneath the medallion (Figure 4-6), which Thompson called the Tīmūrīd style, based

[615] This was explained in section 2-3 in chapter 2.
[616] Thompson, *Milestones in the History of Carpets*, 182.
[617] Ibid, 182.
[618] Walter Denny, *How to Read Islamic Carpets* (New York: The Metropolitan Museum of Art, 2014), 68.
[619] Thompson, *Milestones in the History of Carpets*, 183.
[620] Denny, *How to Read Islamic Carpets*, 68.
[621] Ibid, 68.
[622] *Shamsih* called decorative rosacea by Denny in Walter B. Denny, "Ten Great Carpets in the Museum of Fine Arts Boston," *Hali* 1, no. 2 (1978): 157.
[623] Porter, *Painters, Painting and Books*, 113. Porter wrote "*turonj*," and he said that the medallion -- either *shamsih* or *turanj* -- is compared to the sun placed on the lapis-lazuli page of the sky.

on their similarity to 15th-century Tīmūrīd illumination. The other type is where the field pattern stops short of the medallion and does not disappear beneath it (Figure 4-14).[624] There are many examples of the second type in architectural decoration, bookbinding, and illumination from western Iran.[625] In the first type, however, in which medallions appeared to float above the background tracery, it seems there is no record in Islamic art. However, Thompson traced some examples in Chinese art from the Tang period, through the Song to Yuan periods.[626] Thompson later bolded the fragment in the Benaki Museum (Figure 2-30 in chapter 2) as the only 15th-century surviving carpet, concluding that "the early medallion carpets are more likely to have originated in eastern rather than western Iran."[627]

Figure 4- 8. Quran bookbinding. Iran, 16th century.
35.6 x 25.4 cm (Denny, Walter. *How to Read Islamic Carpets*. New York: The Metropolitan Museum of Art, 2014, 69, fig. 55)

It is likely from Thompson's 15th-century example that by "some way from this type" he means the field disappears under the border, because the Benaki fragment is not a medallion carpet. Also, it must be noted that Thompson's paper was published in 2003, seven years before his 2010 publication including the Doha carpet (Figure 2-31 in chapter 2). It would be interesting to know whether Thompson considered the Doha carpet the same kind.

Figure 4- 9. *Shamsih.*
On the frontispiece of a manuscript of *the Kullīyāt* of Mīr 'Alī Shīr Navāyī. Copied in Hirāt ca. 1526 (Porter, Yves. *Painters, Paintings and Books*, *An Essay on Indo-Persian Technical Literature, 12-19th Centuries.* New Delhi: Centre for Human Sciences, 1994, pl 2)

There is a medallion carpet from the late 15th century in the Museum of Fine Arts, Boston (Figure 4-10), which was first published and discussed by Denny. Denny attributed this carpet to north-west Persia and at the time nominated it as "among the first in the history of

[624] Thompson, *Milestones in the History of Carpets*, 183. Cammann has discussed these two types in detail (especially in regard to the symbolism and meaning of patterns) in two volumes of his three-volum paper: Schuyler V.R. Cammann, "Symbolic Meanings in Oriental Rug Patterns: Part II," *Textile Museum Journal* 3 (December 1972): 22-41, and Schuyler V.R. Cammann, "Symbolic Meanings in Oriental Rug Patterns: Part III," *Textile Museum Journal* 3 (December 1972): 42-54. Also, for further reading about the origin of medallions and their potential relation to Mongol felts and other textiles see Carboni, Stefano, and Komaroff, Linda, eds. *The Legacy of Genghis Khan: Courtly Art and Culture in Western Asia, 1256–1353*, Exhibition catalogue, (New York: Metropolitan Museum of Art, 2002); and Louise W. Mackie, *Symbols of Power: Luxury Textiles from Islamic Lands, 7th–21st Century* (New Haven: Yale University Press, 2015).
[625] Thompson, "Early Safavid Carpets and Textiles," 303-4.
[626] Ibid, 304.
[627] Ibid.

carpets to employ a central medallion."[628] Thompson believed this carpet was from the early 16th century and is a descendant of para-Mamluk carpets in Iran.[629] However, the Boston medallion carpet is attributed to the 15th century by the Metropolitan Museum, so it could be a late Āq-Quyūnlū carpet, or by Denny, who once attributed this carpet to Ṣafavīd times.[630] In either case, this carpet has been discussed in this section rather than the previous section because of its design structure and to give a better chronological idea of this kind of carpet.

Thompson explained the design of this special carpet as an "earlier layer of design -- an endless repeat of a small-scale interlace motif -- combined with a more recent layer in the form of floral motifs and a central medallion" (Figure 4-11).[631] Denny described the design of this carpet having "a sixteen-lobed medallion without pendants, cartouches or corner-pieces, on a field of curling spiral rinceaux and repeating white and blue strap-work stars."[632]

Figure 4- 10. Medallion carpet, north-west of Iran, late 15th to early 16th century.
516 x 214 cm. Inv. No. 65.595. Wool pile, warp and weft (https://collections.mfa.org/objects/117616)

Figure 4- 11. Detail in the carpet in figure 4-10.
(https://collections.mfa.org/objects/117616)

Thompson points to a part of this carpet (Figure 4-12) where the "angular 'new-style' lotus blossoms are combined with an older tradition represented by the interlaced star motif."[633] The Boston example is clearly a medallion carpet, a design which became probably the most common in the entire carpet repertoire later.[634] This carpet thus "marked the transition between the old and the new style."[635]

Figure 4- 12. Detail in the carpet in figure 4-10.
(Thompson, Jon. "Carpets in the Fifteenth Century." In *Carpets and Textiles in the Iranian World 1400--1700*, edited by Jon Thompson, Daniel Shaffer and Pirjetta Mildh. Oxford: The May Beattie Archive at the Ashmolean Museum, 2010, 47, fig. 22)

[628] Denny, "Ten Great Carpets," 156.
[629] Thompson, *Milestones in the History of Carpets*, 129.
[630] Denny, "Anatolia, Tabriz," 64. He referred to his own paper Denny, 1978, 156-164.
[631] Thompson, *Milestones in the History of Carpets*, 129.
[632] Denny, "Anatolia, Tabriz," 64.
[633] Jon Thompson, "Carpets in the Fifteenth Century," in *Carpets and Textiles in the Iranian World 1400--1700*, eds. Jon Thompson, Daniel Shaffer and Pirjetta Mildh (Oxford: The May Beattie Archive at the Ashmolean Museum, 2010), 47.
[634] Denny, "Ten Great Carpets," 157.
[635] Thompson, "Early Safavid Carpets and Textiles," 313, footnote 85.

Figure 4- 13. Detail in the Ardabīl' carpets (in Figure 4-14).
Victoria and Albert Museum, http://collections.vam.ac.uk/item/O54307/the-ardabil-carpet-carpet-unknown/#

The earliest examples of 16th-century medallion carpets are: the Ardabīl carpets (which are a pair, Figure 4-14, dated 1539-40) and the Poldi Pezzoli carpet (Figure 3-8, dated 1542-43).

The Ardabīl carpets (Figure 4-14) were woven in 1539-40 based on the woven inscription (Figure 4-13). The four-line inscription at the top of the field of this carpet reads: "Except for thy threshold, there is no refuge for me in all the world / Except for this door there is no resting-place for my head / The work of the slave of the portal, Maqṣūd-i Kāshānī / Year 946."[636]

The style of Ardabīl carpets, is referred to by Denny as that of Tabrīz, which he defined as the "synthesis of Turkmen and Tīmūrīd styles brought together under Shāh Ṭahmāsp, producing a distinctive kind of ornament of interpenetrating floral and vegetal forms of Āq-Quyūnlū origin."[637] Thompson went further and almost certainly believed them to be commissioned by Shāh Ṭahmāsp sometime before 1539.[638]

The Ardabīl carpets and their complicated design belong to the time when Tabrīz painting was at its peak under Ṣafavīd patronage and some great paintings in the Tabrīz style were being illustrated.[639] The decoration of these carpets is said to be similar to the decoration of Shāh Ṭahmāsp *Shāhnāmih* by Thompson, and the tracery in the field of the carpet (Figure 4-16) was compared to the work of Sulṭān Muḥammad (Figure 4-15) by Denny.[640]

Figure 4- 14. One of the Ardabīl' medallion carpets. Probably Kāshān.
Iran, ca. 1537. Wool pile on a silk foundation, 533 x 1051 cm. Victoria and Albert Museum, London, inv.no. 272-1893. (Denny, Walter. "Anatolia, Tabriz, and the Carpet Design Revolution." In *Carpets and Textiles in the Iranian World 1400--1700*, edited by Jon Thompson, Daniel Shaffer and Pirjetta Mildh. Oxford: The May Beattie Archive at the Ashmolean Museum, 2010, 68, fig. 10).

Denny suggested that paper cartoons were used to weave the carpets which were prepared possibly in Tabrīz but obviously in the Tabrīz stylistic orbit.[641] The central medallion was

[636] Tim Stanley, *Palace and Mosque, Islamic Art from the Middle East* (London: Victoria and Albert Museum Publications, 2004), 74. The original Persian inscription is:
جز آستان تو ام در جهان پناهی نیست/ سر مرا بجز این در حواله گاهی نیست / عمل بنده درگاه مقصود کاشانی/ سنه 946.
[637] Denny, "Anatolia, Tabriz," 69
[638] Thompson, "Early Safavid Carpets and Textiles," 303. For more information see Moya Carey, "Safavid Dynastic Vision in the Ardabil Carpet: Shah Tahmasp's Commission," *Carpets in Iran 1400-1700, New Perspectives (as part of the HALI London symposium)*, Paper given at the Courtauld Institute of Art, June 2019.
[639] Denny, "Anatolia, Tabriz," 69.
[640] Thompson, "Early Safavid Carpets and Textiles," 303; Denny, "Anatolia, Tabriz," 69.
[641] Denny, "Anatolia, Tabriz," 70-1.

discussed by Thompson, which he believed was similar in form to those found in other medallion carpets, but in others ways differed from them:[642]

> First, the background tracery stops short of the medallion and does not (with very few exceptions) disappear beneath it; secondly there is no frill of clouds round the margin; and thirdly the medallion is elaborated by the addition of pendants on each of its 16 points.[643]

Figure 4- 15. Detail of ornament from Lovers Picnicking.
Folio from a *Dīvān* of Hāfiẓ by Sulṭān Muḥammad, Iran, ca. 1526-1527 Ink, colours and gold on paper. Private collection. (Denny, Walter. "Anatolia, Tabriz, and the carpet design revolution." In *Carpets and Textiles in the Iranian World 1400--1700*, edited by Jon Thompson, Daniel Shaffer and Pirjetta Mildh. Oxford: The May Beattie Archive at the Ashmolean Museum, 2010, 70, fig. 11)

Figure 4- 16. Detail of vegetal arabesque from the Ardabīl carpet.
Probably Kāshān, Iran, 1539-40. Los Angeles County Museum of Art, inv.no. 53.50.2. (Denny, Walter. "Anatolia, Tabriz, and the Carpet Design Revolution." In *Carpets and Textiles in the Iranian World 1400--1700*, edited by Jon Thompson, Daniel Shaffer and Pirjetta Mildh. Oxford: The May Beattie Archive at the Ashmolean Museum, 2010, 71, fig. 12).

Figure 4- 17. Plan of the shrine at Ardabīl, showing where the carpets were situated (https://www.khanacademy.org/humanities/ap-art-history/west-and-central-asia/a/the-ardabil-carpet)

Considering the woven description on the Ardabīl carpets, "the references to 'threshold,' 'door,' and 'court' (literally, 'doorway') could have two meanings. Conventionally, words for 'doorway' or 'portal' were used to indicate the residence of the ruler, but they were also applied to shrines. And this would seem to support the association of the carpet with the complex of buildings surrounding the tomb of the Ṣūfī master, Shiykh Ṣafī al-Dīn."[644] Figure 4-17 shows where the carpets were situated in Saykh Safi's shrine in Ardabīl.[645]

[642] Thompson, "Early Safavid Carpets and Textiles," 303.
[643] Ibid, 303.
[644] Stanley, *Palace and Mosque*, 74.
[645] To read more about the symbolic meaning of patterns of Ardabīl carpets see Cammann, "Symbolic Meanings in Oriental Rug Patterns: Part III," 45.

4.3 Court carpets

The existence of court workshops or court-directed workshops has always been raised by Persian carpet scholars. There is no direct evidence they existed in the 16th century or earlier. However, in the neighbouring empire, in Istanbul, during the reign of Sulṭān Selim Yavuz and throughout the 16th century, the *khāṣṣih* carpet workshop existed.[646] The evidence has been stated by Denny, as "a small surviving group of top-quality prayer rugs with silk in the foundation and white cotton in the pile are products of the Istanbul court *kārkhānih.*"[647]

There is no evidence, however, to extend the existence of court-directed carpet weaving workshops in the Ottoman and Āq-Quyūnlū periods, both in the late 15th century, and to the corresponding 16th-century court of Shāh Ismā'īl. However, Thompson believed, if we accept that there was one, it is possible to guess what those carpets look like (Figure 4-18).[648] Thompson described his assumption was based on its complex density -- which is a weaving feature -- and multi-layered design – which is a design feature. He believed that it shares its design with the decoration of other objects of the late 15th and early 16th centuries, which confirm the designer's art.[649]

There is a group of carpets consisting of 15 small and three large silk carpets, grouped together based on their "stylistic grounds." This group were originally classified by Erdmann.[650] Examples of these carpets include Figures 3-5, 3-26, 3-38 and 4-19. Characteristic of these carpets are their silk pile and use of precious metal thread which reflects an overall impression of luxury.[651] Thompson called them "carpets of court quality."[652] For instance, in relation to Figure 3-26 he argued that, "there is general agreement that this carpet was a royal commission, and further that it can be dated on stylistic grounds to the second quarter of the 16th century."[653] However, it is not exactly known whether the two hunting carpets, one based in Vienna (Figure 4-19) and the other based in Boston (Figure 3-26) "were made in a workshop staffed by court employees or a commercial workshop sponsored by the court."[654]

---

[646] Thompson, "Early Safavid Carpets and Textiles," 312, footnote 64. Thompson cited Çetintürk 1963.
[647] Thompson, "Early Safavid Carpets and Textiles," 313, footnote 70. Thompson cited Denny 1979, 10.
[648] Thompson, "Early Safavid Carpets and Textiles," 292.
[649] Ibid, 282.
[650] Ibid, 292. Thompson cited Kurt Erdmann, *Seven Hundred Years of Oriental Carpets,* trans. May H. Beattie and Hildegard Herzog (London: Faber and Faber, 1970), 61-65.
[651] Thompson, "Early Safavid Carpets and Textiles," 286.
[652] Ibid, 286.
[653] Ibid, 286.
[654] Ibid, 287-88.

Figure 4- 18. Carpet fragment, early 16th century.
Knotted pile in wool on a wool foundation. 369 x 247 cm Collections du Mobilier national, Paris, no. GOB 1373 (Thompson, Jon. "Early Safavid Carpets and Textiles." In *Hunt for Paradise: Court Arts of Safavid Iran 1501-1576*, edited by Jon Thompson and Sheila R. Canby, 270-317. Milan: Skira Editore, 2003, 282, fig. 12.10)

There is mention of the production of Persian silk carpets in the 15th and the 16th centuries. Kirmān, Yazd and Khurāsān were the main carpet production centres with excellent quality, adding Kāshān in 17th-century texts.[655]

There is a carpet (Figure 3-8) which Thompson argued is also a candidate for a royal commission. He explained the reasons for this claim as being its inscription, its large size, and horsemen dressed in the style of Shāh Ṭahmāsp's courtiers, engaged in hunting – a royal entertainment.[656] Further, Thompson analysed the design and colours of this carpet and stated it was "more likely to have been commissioned by an important regional governor than the Shāh himself."[657] Also, the design elements, such as the tracery in the background being angular, and its crude colouring.[658]

To understand more about how designs were copied and used in carpets, Thompson made useful suggestions which can help anyone analysing a royal or court commissioned design. Thompson believed that copying was a major factor in the spread of court designs.[659] When royal or princely sponsorship nourishes artistic invention, the court becomes the leader of fashion and designs originating in court spread outwards. On how the designs were copied in different kind of workshops, he hypothesised two different models. The first model is that "court carpets are first copied for the wealthy elite, then more cheaply for clients of lesser means, and ultimately, in an altered form, by villagers wishing to keep in step with urban fashion."[660] The second model is that:

> …when a workshop receives a commission from the court, the design (whether originating at court or in the workshop) will be accurately executed to the highest standards, using the best materials. The same design may then be adapted for use in one of the more commercially orientated workshops which typically spring up in major centres of production. A saving in costs can be achieved by using less skilled workers, cheaper dyes, a coarser weave, and another carpet as a pattern guide instead

[655] Ibid, 292.
[656] Ibid, 297.
[657] Ibid, 297.
[658] Ibid, 297.
[659] Ibid, 298.
[660] Ibid, 298.

of a drawing. However, under these circumstances a progressive departure from the prototype is bound to occur.[661]

Based on the second model, chronologically, the earliest and yet best quality carpet will be a court carpet and the copy will be a commercial carpet.[662]

Figure 4- 19. Hunting carpet, Museum für angewandte Kunst, Vienna, no. T 8336. https://commons.wikimedia.org/wiki/File:Hunting_carpet,_Museum_f%C3%BCr_angewandte_Kunst.gif (assess date 10/07/2019)

[661] Ibid, 298.
[662] Ibid, 298.

PART III Iṣfāhān School: Variation (17th Century)

Chapter 5. Iṣfahān School: Culture of Carpet Making

5.1 Iṣfahān School: City and society

Shāh ʻAbbās (r. 1587-1629) officially moved the capital from Qazvīn to Iṣfahān in 1597/98 (1006 AH).[663] There were two important reasons why he chose Iṣfahān as the new capital as a centre for administrative and cultural activities.[664] The first consideration was the availability of water, which is Zāyandih-Rūd. The second reason was strategic and political. The new capital was located in the middle of the country (Figure 5-1), and therefore far less vulnerable to Ottoman attack. Furthermore, Iṣfahān was located closer to the Persian Gulf and played a fundamental role in Shāh ʻAbbās's commerce and trade, which he began soon after moving to Iṣfahān.[665] This will be discussed in more detail in the following section. .

Figure 5- 1. Map of Ṣafavīd Iran around 1628.
Spanning much of today's Iraq, the Caucasus, and Afghanistan (Babaie, Susan. *Isfahan and Its Palaces.* Edinburgh: Edinburgh University Press, 2008, 3)

Shāh ʻAbbās ordered new building construction in Iṣfahān. The most important were built on a very large square (or *maydān*) including the Chāhār Bāgh boulevard (Figure 5-2). The Maydān-i Naqsh-i Jahān, meaning "Image of the World Square," measures about 83,000 square meters.[666] Thomas Herbert, an English traveller wrote: "The Maydān is without doubt as spacious, as pleasant and aromatic a market as any in the universe. It is a thousand paces from North to South, and from East to West above two hundred, resembling our Exchange, or the Place-Royal in Paris, but six times larger."[667] The Maydān was the centre of the city and many activities happened there, such as popular games including polo, bull fighting, ram fighting, wolf baiting.[668] "Following a military victory, on holidays, and on the occasion of visits by important foreign envoys, the Maydān and the *bāzār* were illuminated and performances of jugglers and rope dancers staged."[669]

---

[663] Susan Babaie, *Isfahan and Its Palaces* (Edinburgh: Edinburgh University Press, 2008), 66. Babaie cited Iskandar Beg Munshī, *Tārīkh-i ʻĀlam Ārā-yi ʻAbbāsī*, ed. Iraj Afshar, 2 vols. (Tehran: Intishārāt-i Amīr Kabīr, 1971), 544.
[664] Masashi Haneda and Rudi Matthee, "Isfahan vii. Safavid Period," *Encyclopedia Iranica*, accessed August 8, 2019, http://www.iranicaonline.org/articles/isfahan-vii-safavid-period.
[665] Ibid.
[666] Babaie, *Isfahan and Its Palaces*, 66.
[667] Ibid. Babaie cited Thomas Herbert, *Travels in Persia 1627--1629*, abridged edn. ed. W. Foster (London: G. Routledge and Sons, Ltd, 1928), 127.
[668] Haneda and Matthee, "Isfahan vii. Safavid Period." Examples can be found in Della Valle, I, 709-10, 713-14
[669] Ibid. Della Valle, I, pp. 821, 829; II, pp. 7-8, 36; Chardin, IX, 329-30.

Figure 5- 2. Iṣfahān, looking north over the Maydān and its principal buildings.
With a glimpse of the *Dulat-khānih* on the left[670] (Babaie, Susan. *Isfahan and Its Palaces.* Edinburgh: Edinburgh University Press, 2008, pl. 5)

The four-kilometer-long Chāhār Bāgh boulevard linked "the older north-western neighbourhoods of the city and its new residential quarters, developed north and south of the Zāyandih River and between the palaces located inside and outside the city."[671]

On each side of the square there is a building. On the north side is the entrance to the *Qayṣarīyyih bāzār*, on the western side ʻĀlī Qāpū palace, on the eastern side the royal chapel-mosque of Shaykh Luṭf ul-Allāh, and on the southern side Masjid-i Jadīd-i ʻAbbāsī, known as masjid Shāh or Imam. The Chāhār Bāgh served as a public park or leisure space which extended south of the Zāyandih-Rūd (river). A few bridges were built over the river including Allāh Virdī Khān Bridge (popularly known as the Sī-yu-sih Pul or Thirty-three-span Bridge) which connected the city to "the Armenian enclave of New Julia and to the mansions of the new Ṣafavīd elite."[672]

During the reign of Shāh ʿAbbās I, Iṣfahān was a cosmopolitan city where Muslims, Armenians, Jews, Georgians, Indians, and some Europeans lived.[673]

In 1604, when Shāhʻ Abbās was fighting the Ottoman Sinan Pasha in Āzirbāyjān and Armenia, he ordered all villages and cities on the way to Iran to be burnt, in order to deprive the Ottoman enemy of food, water and other supplies. He then moved the inhabitants (more than 60,000 families), especially the Armenians of Julfā and Yerevan and their surroundings, to different parts of Iran, in particular Iṣfāhān and Gīlān. Those who were sent to Gīlān to produce silk (about 27,000 families) mostly perished due to incompatible weather, so only 5000-6000 families remained.[674]

The other group were transferred to central and southern parts of the country. About 3000 families were relocated to a town in Iṣfāhān, by the Zāyandih-Rūd River and built their own city, known as New Julfā (Figure 5-3), in memory of the old city, Julfā;[675] others were

[670] According to Babaie (in *Isfahan and Its Palaces,* 67-68), the *Dulat-khānih* was an assemblage of royal spaces and functions clustered separately into inner and outer zones corresponding in turn to restricted and semi-restricted arenas of private and public life.
[671] Babaie, *Isfahan and Its Palaces,* 66.
[672] Ibid, 66
[673] Haneda and Matthee, "Isfahan vii. Safavid Period."
[674] Nasrullah Falsafi, *The Life of Shāh ʻAbbās I (Zendegānī-yi Shāh ʻAbbās-i Avval) v. III* (Tehran: Tehran University Press, 1968), 206.
[675] Vartan Gregorian, "Minorities of Isfahan: The Armenian Community of Isfahan 1587--1722," *Iranian Studies* 7/3-4 (1974), 665; Sheila R. Canby, *Shāh ʻAbbās, The Remaking of Iran* (London: The Trustees of the British Museum, 2009), 64.

relocated to villages between Iṣfāhān and Shīrāz whose descendants converted to Islam and merged with the locals.[676]

Figure 5- 3. Map of Iṣfāhān during the 17th century showing the location of New Julfā.
(Ghougassian, Vazken S. "Julfa in Safavid Period." *Encyclopaedia Iranica*, XV/2, 217-224 and XV/3, 225-231, available online at http://www.iranicaonline.org/articles/julfa-i-safavid-period (accessed 28 September 2016))

Shāh 'Abbās offered Armenians interest-free loans in order to help them establish businesses.[677]After moving them to New Julfā, Shāh'Abbās offered loans to establish their businesses, to be paid back in instalments. If they could not repay their loans, they were forced to work for the Shāh for free (*Ghulām*) and ordered to convert to Islam.[678]

In 1619 Shāh 'Abbās's important edict (*farmān*), granted New Julfā officially to the Armenians in Iṣfahān (Figure 5-4).[679] The significance of the edict, as noted by Canby, was that "it confirms the status of the Armenians of New Julfā as residents of Iṣfāhān, not just as guests."[680] The edict that granted the land of New Julfā to Armenians follows:

> The verdict [edict] is hereby issued that by means of his highness's kingly generosity and immense kindness towards Armenians in Julāh (Julfā), the lands next to the river Zāyandih-Rūd adjacent to the capital city of Iṣfahān, where the said people have established abodes to live in, which belong to his highness, are bestowed upon them through royal benevolence. Let the court officials serving the kingly court officially hand the abovementioned lands to the said Armenians. The vizier and the ruler and the officials of Iṣfahān shall not ignore the verdict issued by his highness and shall act accordingly to grant the lands as instructed. Composed in September 1619. [681]

---

[676] Falsafi, *The Life of Shāh Abbās I, v. III*, 194. Falsafi cited Tavernier, 95.
[677] Gregorian, "Minorities of Iṣfāhān," 666.
[678] Falsafi, *The Life of Shāh 'Abbās I*, *v. III,* 208. Falsafi cited Pietro Dela Valle.
[679] Canby, *Shāh 'Abbās, The Remaking of Iran*, 71.
[680] Ibid, 71.
[681] The English translation is by the author of this research. The original Persian text of the edict is from Abdul-Ḥossiyn Navā'ī, *Shāh 'Abbās: Collection of Historical Documents and Correspondence (Shāh 'Abbās: Majmu'e-i Asnād va Mokātebāt-i Tārikhī)* (Ṭehran: Bonyād-i Farhang-i Irān, 1923), 292. The original Persian text is as follows:

حکم مطاع شد آنکه درین وقت بنا برعنایت بی غایت شاهانه وشفقت بلانهایت پادشاهانه درباره ارامنه جولاه وترفیه حال ایشان، اراضی وزمین واقعه درکناررودخانه زاینده رود دارالسلطنه اصفهان که ایشان آنجا خانه ترتیب داده ا ند وملک نواب همایون ماست به انعام ایشان شفقت فرموده ارزانی داشتیم .مستوفیان عظام کرام دیوان زمین مذکور را ازملکیت دیوان برطرف ساخته به انعام ارامنه مذکوردردفاترعمل نمایند .وزیر و کلانتر وعمالا صفهان حسب المنظور مقرردانسته ازفرموده درنگذرند وزمین مذکوررابه انعام ایشان مقرردارند. تحریرا فی شهرشوال 1028.

Figure 5- 4. Edict of Shāh ‘Abbās I, granting the lands of New Julfā to the Armenians.
(facsimile). Iṣfāhān, 1028/1618, ink on paper, 20 x 14.5 cm, Vank Museum, Iṣfāhān (Canby, Sheila R. *Shāh ‘Abbās, The Remaking of Iran*. London: The Trustees of the British Museum, 2009, 71)

Shāh ‘Abbās I ordered the building of a cathedral in New Julfā in September 1614/ Sha‘bān 1023.[682] Falsafi believed this edict referred to the Vank Cathedral but it was not the only church in New Julfā.[683] Tavernier, a French traveller, counted about 15 or 16 chapels and churches in New Julfā. The edict of Shāh ‘Abbās follows:

> His highness commands hereby that Armenian priests and monks and scholars and chiefs and peasants who are subjects of the capital city of Iṣfahān have received his highness’s immense generosity and have been honored by his regal benevolence and kindness. Since the relations between his royal highness and the honorable Christian kings, most specially the exquisite, grand and magnificent Christian leader the Pope in Rome and the Spanish King, brims with amity and goodwill, and solidarity rules between the two nations, and there is no schism, and his royalty’s conviction is that the Christian people can travel to and from this land as it pleases them, and since Iṣfahān serves as the capital, and people from all walks of life reside in that city, his majesty wills to build a superb church for the Christians in the capital city of Iṣfahān, with the utmost beauty and decoration and order, a church that can serve as their sanctuary where all the Christians can come together and pray and worship, and we will dispatch a delegation to the majestic Pope so that he will delegate a priest of the Christians to the said court, so that the priest take charge of the church and spread the message of Christianity among Christian people and summon them to do worship, so that our majesty can also benefit from the blessings of the worships. There were few stones in the Uch church of Yerevan, and the building of the said church was broken down, and could not be put right, and the priest in charge had exhumed the bones of the prophets buried there and had sold them to the Christian and Jewish people and had desecrated that sanctuary. His majesty has therefore issued an order that the stones of that church be carried to the capital city of Iṣfahān and be installed in the church to be built there. And the kingly verdict will command the Christian nation to receive the stones with the utmost reverence and devotion, and they shall be accompanied by the high and noble vizier and the court members, and they shall take

[682] Falsafi, *The Life of Shāh ‘Abbās I*, *v. III*, 214-15; Navā’i, *Shāh ‘Abbās*, 288-89.
[683] Falsafī, *The Life of Shāh ‘Abbās I, v. III*, 215.

the stones to the location of the church to be, and they shall draw the design of the sacred sanctuary and the holy place on paper and bring it to his majesty, and our highness shall, after authorizing the design, issue the verdict for the architects and the masters to start building the exquisite and the holy church, and they shall put diligent and immense effort into the building of the church, and hope for the unending royal generosity and benevolence. Composed in September 1614.[684]

Despite having citizenship and many freedoms in their quarter in Iṣfahān, Armenians were at the disposal of Shāh ʻAbbās but respected by him. They contributed to the Ṣafavīd monetary via powerful international trade networks that encouraged merchants to come to Iṣfāhān. Canby believed "this stimulated the economy and cultural life of Ṣafavīd Iran."[685] The Armenians had trade networks with Armenian merchants in the Levant, Europe, Ibrkey, and India which enabled Shāh ʻAbbās to expand Ṣafavīd trade and the economy.[686] This will be explained in more detail in the following section.

[684] The English translation is by the author of this research. The original Persian text of the edict is from Falsafi, *The Life of Shāh ʻAbbās I*, *v. III*, 214-15; Navā'i, *Shāh ʻAbbās*, 288-89. The original Persian text of the edict is as follows:

فرمان همایون شد
آنکه کشیشان ورهبانان وملکان وریش سفیدان وکد خدایان ورعایای ارامنه ساکنین دارالسلطنه اصفهان، بعنایت بیغایت شاهانه، وشفقت ومرحمت بی نهایت پادشاهانه مفتخروسرافرازومستظهروامیدوار بوده، بدانند که چون میانه نواب کامیاب همایون ما وحضرات سلاطین رفیع الشأن مسیحیه، خصوصا سلطنت وشوکت پناهی، قدوة السلاطین العیسویه حضرت پاپا (یعنی پاپ رم) و پادشاه اسپانیه، کمال محبت ودوستی است، ودرمیانه ما وطوایف مسیحیه یگانگی است، واصلا جدائی نیست، وتوجه خاطراشرف بدان متعلق است که همیشه طوائف مسیحیه ازاطراف وجوانب بدین دیارآیند وآمدوشد نمایند، وچون دارالسلطنه اصفاهان پایتخت است، وازهمه طبقه ومردم هرملت درآنجاهستند، میخواهیم که به جهت مردم مسیحیه دردارالسلطنه صفاهان کلیسای عالی، درکمال رفعت وزیب وزینت ترتیب دهیم، که معبد ایشان بوده باشد، وجمیع مردم مسیحیه درآنجا بکیش وآئین عبادت نمایند، وکس نزد حضرت پاپا خواهیم فرستاد که یکی از کشیشان ورهبانان ملت مسیحیه به دارالسلطنه مذکورفرستد که درآن کلیسا بآداب عبادت قیام نموده وطوائف مسیحیه را بطاعت وعبادت ترغیب نماید، وما نیزازثواب آن عبادت بهره مند باشیم، وچون چند عدد سنگ بزرگ دراوچ کلیسای ایروان بود، وعمارت آن کلیسا منهدم گشته خرابی تمام به آن راه یافته بود، که دیگرشایستگی تعمیرنداشت، وکشیش آنجا استخوانهای پیغمبران را، که درآن مکان مدفون بود، ازآنجا بیرون آورده بجماعت ترسا و نصارا فروخته، آن مقام را ازعزت وشرف انداخته بود، بنابراین آن سنگهای مذکوررا ازآنجا بیرون آورده روانه دارالسلطنه اصفهان فرمودیم که درکلیساءعالی که درآنجا ترتیب میدهیم، نصب فرماییم، میباید که چون سنگهای مذکوربدانجا آورند،همگی طوائف مسیحیه را جمع نموده ازروی تعظیم واحترام تمام استقبال کرده، سنگها را آورده باتفاق سیادت پناه وزارت واقبال دستگاه شمساً للوزارة العلیا، وزیردارالسلطنه مذکور، ورفعت پناه محب علی بیگ لله، درجائی که مناسب دانند، بگذارند و باتفاق یکدیگرمعماران خاصه شریفه را همراه برند، و درپشت باغ زرشک، درزمینی که بجهت کلیسا قرارداده بودیم، کلیسای عالی طرح نمایند، که کشیشان و پادریان عظام قراردهند، وطرح آنرا درتخته وکاغذ کشیده بخدمت اشرف فرستاده، که ملاحظه نمائیم، وبعد ازملاحظه امرفرمائیم که استادان شروع درکارکرده باتمام رسانند، ودرین باب اهتمام لازم دانسته بهمه جهتی بشفقت بیدریغ خسروانه امیدوارباشند.
شهرشعبان سنه1023

[685] Canby, *Shāh ʻAbbās, The Remaking of Iran*, 71.
[686] Ibid, 64.

5.2 International relations

Importance of the silk trade and the Armenian monopoly

As mentioned in the previous section, Shāh ʻAbbās expanded international trade (Figure 5-5). Silk was the main item of Iranian trade with the West during his reign. It is estimated that somewhere between 600,000 and 2,000,000 pounds of Iranian and Syrian raw silk was traded annually with Europe in the late 16th and early 17th centuries.[687]

Figure 5- 5. Map of commercial links of Iran.
(Lockhart, Laurence. "European Contacts with Persia, 1350--1736." In *The Timurid and Safavid Periods*, edited by Peter Jackson and Laurence Lockhart, vol. 6, *The Cambridge History of Iran*, eds. William B. Fisher, Ilya Gershevitch, Ehsan Yarshater, Richard Nelson Frye, John Andrew Boyle, Peter Jackson, Laurence Lockhart, Peter Avery, Gavin Hambly, C.P. Melville, 410-411. London: Cambridge University Press, 1986).

Silk production was not new to the Ṣafavīd dynasty. At the close of the 15th century, there were important centres of high-quality textile production in Iran including Kāshān, Yazd, Hormuz, Shamakhi, a city near the Caspian Sea, and Khurāsān.[688] "Cassan [Kashan], wheare for the more parte they make sylkes and fustians in so great quantitie that he who wolde bestowe Xml [10,000] ducates in a daie may finde enough of that merchandise to bestow it on."[689] Yazd was another centre of "makers of sylkes, fustians, chamletts, and other like . . . [where there] are wevers and makers of divers kindes of sylkes which came from Straua [Astrabad], from Azzi, and from the cities towardes Zagatai . . . [which] with their workes, do aftrewards furnishe a great part of India, Persia, Zagatai, Cim, and Macim [Tchin and Matchin, China], parte of Catay, of Bursia, and of Turchie."[690]

During the Ṣafavīd period, silk production continued in many Iranian cities and villages. Many luxurious textiles such as velvets, silver and gold cloth, and taffetas were produced in towns including Kāshān, Yazd and Iṣfahān in the 17th century. Willem Floor, historian and Iranologist, wrote:

[687] Leonard M. Helfgott, *Ties that Bind: A Social History of the Iranian Carpet* (Washington: Smithsonian Institute, 1994), 61. Helfgott cited Steensgaard, *Asian Trade Revolution*, 159.
[688] Willem Floor, "Economy and Society: Fibres, Fabrics, Factories," in *Woven from the Soul, Spun from the Heart – Textile Arts of Safavid and Qajar Iran, 16th-19th Centuries*, ed. Carol Bier (Washington, D.C.: Textile Museum, 1987), 20.
[689] Ibid, 20; Barbaro and Contarini, *Travels to Tana and Persia*, 72.
[690] Floor, "Economy and Society, 20; Barbaro and Contarini, *Travels to Tana and Persia*, 73.

> According to Sir John Chardin, a jeweller who travelled to Iran in the 1660s, gold brocade (*zarbaft*) was the most expensive fabric in the world, costing up to fifty *toman* per *gaz* (70 cm).[691] Ordinary *zarbaft* came in about a hundred varieties, but the real luxury items were *zarbaft-i durui*, or two-faced gold brocade, so called because it has no reverse side, as well as *zarbaft-i makhmal*, or gold velvet.[692]

Later Floor, by referring to Jean Baptiste Tavernier, added that in the Ṣafavīd period, "there were more people engaged in silk weaving than in any other trade."[693] Floor stated that in Kāshān and Yazd, superior silk fabrics were woven, and most people were silk weavers. And according to Pierre Chardin, a French visitor to Iṣfahān, "the livelihood and subsistence of Kāshān depends entirely on the manufacturing of all kinds of silken fabrics, as well as of gold and silver brocades . . . one single city quarter of this territory boasts of one thousand houses of silk workers."[694] Thomas Herbert said that "here [there] are full manufactures of silks, satins, and cloth of gold curiously wrought and coloured, no better in the world, and in such plenty that one Cartwright, an English merchant who was there about the year 1600, spares not to aver that there was then more silk brought in one year into Kāshān than broadcloths into London."[695] A royal edict (*farmān*) confirms a similar situation for Yazd. According to Floor, these were traditional textile centres later joined by Iṣfahān, after royal workshops were established.[696] Chardin reported that 6,000 bales of silk were processed in Tabrīz per year to make the best turbans in Iran.[697]

After explaining the extent of silk production in Iran we need to understand how silk was traded in Iran. It was mentioned earlier that the Armenians of New Julfā took over the monopoly of silk trade during the reign of Shāh ʻAbbās I. However, before the Ṣafavīd dynasty, Armenians together with Iranian merchants were trading Iranian silk.[698] During Shāh ʻAbbās's reign, the government took hold of silk-producing provinces and involved the Armenians in the state monopoly of the silk trade, but subordinated their interests. Shāh ʻAbbās policy was to promote the silk trade by sending Armenian merchants to Europe and

---

[691] Floor, "Economy and Society, 20.
[692] Ibid, 20-21.
[693] Ibid, 21. Floor cited Jean Baptiste Tavernier, *Les Six Voyages*, 3 vols. (Paris, 1679), 1:57.
[694] Ibid, 21. Floor cited Chardin, *Voyages*, 3:3-4, 4:152-54.
[695] Ibid, 21. Floor cited Sir Thomas Herbert, *Travels in Persia, 1627--1629*, edited and abridged William Foster (New York, 1929), 218.
[696] Ibid, 21.
[697] Ibid, 21-22. Floor cited Chardin, *Voyages*, 2: 327-28.
[698] Helfgott, *Ties that Bind,* 61; Mehdi Keyvani, *Artisans and Guild Life in the Later Safavid Period* (Berlin: Klaus Schwarz Verlag, 1982), 217.

basically the major capitals.[699] This resulted in the establishment of Armenian merchants in every European trading centre by the early 17th century. According to Chardin, "the Armenians manage alone the whole European trade."[700] For instance, Amsterdam accommodated about 100 Armenian merchants in 1661, and Armenian merchants were allowed to import duty-free commodities to Poland.[701]

According to Helfgott, beside the silk trade, through the Armenian and other merchants, many Ṣafavīd carpets arrived in Europe.[702] The Armenian traders, wherever they went, established commercial networks.[703] According to Chardin, "there are Persian Traders who have Deputies in all Parts of the World, as far as Sweden on the one side, and China on the other side."[704]

Shāh 'Abbās's policies to attract foreigners

Shāh 'Abbās's policies attracted foreign merchants. In Iṣfāhān, for example, there were Europeans who visited and traded there during the 17th century. These policies included designing a large public square (Maydān-i Naqsh-i Jahān) based on the Piazza San Marco in Venice, an expansion of the main *bāzār*, and construction of new caravanserais to accommodate merchants visiting Iṣfahān and other cities.[705] Helfgott referred to Roger Stevens, British Ambassador to Iran, who described the foreigners as follows: "and so we have, passing through Iṣfāhān or settling there for long periods, a motley band of Europeans -- ambassadors and adventurers, monks and mountebanks, traders and travellers, including combinations of each."[706]

East India companies and carpet trade in Iran

The main source of power in the 16th century was the Portuguese following the discovery of sea routes to the east. They gained predominance in the Persian Gulf, by conquering the port

[699] Gregorian, "Minorities of Iṣfāhān," 668.
[700] Helfgott, *Ties that Bind,* 61. Helfgott cited John Chardin, *Travels in Persia* (London: Argonaut Press, 1927), 281.
[701] Baeta Slota, "The Polonaise Carpets and Their Connection with Polish Art and Culture," *Oriental Carpet and Textile Studies* 1, no.1 (1985): 94; Helfgott, *Ties that Bind,* 61.
[702] Helfgott, *Ties that Bind,* 63.
[703] Ibid*,* 63.
[704] Ibid, 63. Helfgott cited Chardin, *Travels in Persia*, 282.
[705] Helfgott, *Ties that Bind,* 63-4.
[706] Helfgott, *Ties that Bind,* 64. Helfgott cited Sir Roger Stevens, "European Visitors to the Safavid Court," in *Iranian Studies: Studies on Iṣfāhān, Part II*, 421.

of Hurmuz in 1514, which Shāh ʻAbbās took as a serious threat to the territoriality of Ṣafavīd Iran.[707]

In 1600 the English East India and Dutch East India companies founded respectively in 1600 and 1602 sought to control trade to the east. Their ships thereafter sailed to the east to bring back silk, spices, and exotic objects. Gradually they became big rivals to the Portuguese. Shāh ʻAbbās I asked the English to help drive out the Portuguese from Hormuz, to secure Ṣafavīd sovereignty in the Persian Gulf. This would also form an alliance to defeat the Ottomans, who controlled overland trade to the west. He succeeded in this goal in 1621 and founded a new port on the Persian Gulf, named after him, Bandar ʻAbbās (Gombroon) (Figure 5-6).[708]

Bandar ʻAbbās became a merchant hub for all nations including the East Indies. The materials were exchanged based on market trends there and abroad. Textiles and other relevant goods were traded in every direction: "furs, raw silk, calicoes, chintzes, and other dyed cottons, carpets by commission, woollen broad-cloth, silk covers, gums for sizing, dyestuffs such as indigo and lac."[709]

While the powerful presence of British and Dutch ships increased in the Persian Gulf, Armenian involvement in the silk trade decreased after the mid-17th century. However, besides silk as a marginal trade, Ṣafavīd carpets were traded from Iran to Europe by Armenian merchants and later by British and Dutch East India companies.[710] In addition, it seems that the crown was engaged in trade. Chardin mentioned that "the King of Persia, for instance, sells and sends to the Neighbouring Kingdoms, Silk, Brocades, and other rich Goods, Carpets and Precious Stones."[711] Helfgott commented that the carpets exported by both Armenian merchants and Dutch and British East India companies, with the exception of those gifts sent by the Iranian court to foreign dignitaries, were probably the product of privately owned rather than crown-sponsored workshops.[712]

Figure 5- 6. View of the port of Gombroon from E. Kaempfer.
Amoenitatem Exoticarum Politico-Physico Medicarum Fasciculi V... (Lemgo, Germany: H. W. Meyer, 1712), 759; courtesy of the Library of Congress (Bier, Carol. "Textiles and Trade." In *Woven from the Soul, Spun from the Heart – Textile Arts of Safavid and Qajar Iran, 16th-19th Centuries*, edited by Carol Bier, 224. Washington, D.C.: Textile Museum, 1987).

[707] Carol Bier, "Textiles and Trade." In *Woven from the Soul, Spun from the Heart – Textile Arts of Safavid and Qajar Iran, 16th-19th Centuries*, ed. Carol Bier (Washington, D.C.: Textile Museum, 1987), 224.
[708] Bier, "Textiles and Trade," 224.
[709] Ibid, 224-25.
[710] Helfgott, *Ties that Bind,* 61.
[711] Ibid, 63. Helfgott cited Chardin, *Travels in Persia*, 279.
[712] Ibid*,* 63.

Armenian merchant involvement in carpet trading and their connections in Europe are evidenced in the following example. In the spring of 1601, Sigismund Vasa III, the King of Poland, commissioned an Armenian merchant, Sefer Muratowicz, to visit Kāshān to purchase silk carpets and tapestries.[713] This order shows that Ṣafavīd carpets, specifically the Polonaise carpets -- a group of 17th-century Ṣafavīd carpets (see chapter 6 for more detail) -- were already known in Europe. Bennett mentioned "there is at least one fine silk piece of Polish provenance, the Branicki carpet, which pre-dates the Shāh 'Abbās pieces."[714] The merchant successfully purchased the order, and presented a bill to the Polish Treasury on 12 December 1602 including the cost of eight carpets.[715] Bier stated the merchant's accounts detail the "Price of the objects which I bought in Persia in the city of Kāshān for his majesty our gracious king:"[716]

Objects	Price
2 pairs of carpets at 40 crowns	160 crowns
2 carpets at 41 crowns	82 crowns
For the execution of the royal arms, extra	5 crowns
2 carpets at 39 crowns, together	78 crowns

The East India companies occasionally – not extensively -- exported Ṣafavīd carpets for wealthy clients or for gifts.[717] As Floor mentioned "carpets were considered too expensive as a commercial commodity."[718] The East India companies sometimes bought carpets in the market and when specific patterns were not available, they ordered them.[719] Carpet sizes were not necessarily the normal size woven.[720] The order-based carpets usually cost more than the ready-made carpets and they could take up to one year to be completed and delivered.[721] For instance, the Dutch East India Company in 1662 wanted to buy gold and silver carpets that were not available in the market, so they had to order them in Iṣfahān.[722] Floor estimated that the price for these carpets was 15 percent more than ready-made carpets because it was more difficult and therefore took more time to weave oversized carpets. Floor reported the ordered

[713] Ian Bennett, *Rugs and Carpets of the World* (London: Ferndale Editions, 1981), 81.
[714] Ibid, 81.
[715] Ibid. Bier in "Textiles and Trade," 235, wrote another date with few months difference which is 12 September 1602.
[716] Bier, "Textiles and Trade," 235. Bier cited "Mankowski, "Cost of Kashan Carpets," 152-53, quoted in King and Sylvester, *Eastern Carpets in Western World*, 95-96.
[717] Floor, "Economy and Society," 22-23; aHelfgott, *Ties that Bind,* 62.
[718] Floor, "Economy and Society," 23.
[719] Helfgott, *Ties that Bind,* 62.
[720] Floor, "Economy and Society," 23.
[721] Helfgott, *Ties that Bind,* 62.
[722] Floor, "Economy and Society," 23.

sizes ranged between $4\frac{1}{2}$ yards $\times$ $2\frac{3}{16}$ yards and 8 yards $\times$ $4\frac{3}{4}$ yards.[723] Also due to the lack of master weavers the Dutch decided to reduce their orders.[724]

The Dutch exported a few silk and woollen carpets, and luxury textiles each year including velvet and gold and silver brocades "as presents for royalty or for other wealthy customers in Batavia (now Jakarta), Ceylon, Malaysia, Coromandel Coast, Bengal, Cochin, and sometimes the Netherlands."[725] However, the Dutch were more interested in Iranian carpets than the British. Nevertheless, their carpet purchase was not more than one thousandth percent of the company's annual turnover in Iran during the 17th century.[726]

Sometimes the British and Dutch complained about carpets in the *bāzār*. Helfgott commented that the Dutch usually complained about irregularities in carpet design. "Borders (hooftwerk) of some silk carpets do not correspond with one another. This cannot be helped, because they seldom do. If one wants it that way one has to order that specifically, because the Moors do not pay much attention to this."[727] The British complained about the length of time custom-made carpets took to be delivered and the cost.[728] For example, the Dutch East India Company's agent in Bandar 'Abbās purchased several silk carpets with design imperfections. He commented: "This cannot be corrected, for this type is seldom produced for the market. If we had ordered them instead of bought them ready-made they would have been more expensive. These carpets are made in a manufactory."[729]

There are some accounts by the Dutch East India Company that evidence Persian carpet trading, for example, incomplete accounting of carpets showing they purchased and shipped 522 woollen and 32 silk carpets over the period of 15 years (1651--1666).[730] Their accounts show they actually bought silk carpets in 1663, 1658, 1660 and 1665 for their customers, both in Holland and along the Indian Ocean trade routes.[731] The Dutch exported around 27 woollen carpets between 1715 and 1719, ceasing carpet trade from Iran in 1719.[732]

The British East India Company accounts however show their purchase of Persian carpets were "in 1620, 1624, 1683, 1685 (seven carpets sold in London at £1 5), 1687

---

[723] Ibid, 23.
[724] Ibid, 23.
[725] Ibid, 23.
[726] Helfgott, *Ties that Bind,* 62. Helfgott cited Willem Floor, "Persian Carpets and the Dutch and English East India Companies in the 17th Century," *Textile Museum Journal*, forthcoming.
[727] Ibid*,* 62. Helfgott cited Floor, "Persian Carpets," forthcoming.
[728] Ibid*.,* 62. Helfgott cited it as Floor, "Persian Carpets," forthcoming.
[729] Floor, "Economy and Society," 22; Helfgott, *Ties that Bind,* 62.
[730] Helfgott, *Ties that Bind,* 62. Helfgott cited Floor, "Persian Carpets," forthcoming.
[731] Floor, "Economy and Society," 23; Helfgott, *Ties that Bind,* 62.
[732] Helfgott, *Ties that Bind,* 62. Helfgott cited Floor, "Persian Carpets," forthcoming.

(fourteen carpets at £15 each), and 1688 (17 carpets at £7 each)."[733] There is evidence to show that the British bought 12 carpets at 30 *shāhīs* per *covid* in 1624, as well as a very large Kirmān carpet at 40 *tumans* and expected to sell in India for 60 *tumans*.[734] In 1683 they ordered a Kirmān carpet measuring 7.5 yards × 3.75 yards that was not available in the market. A pair of carpets of that size could cost £100 and would take a long time to be completed.[735] By the end of the 17th century with the waning popularity of baroque style, the demand for Persian carpets had evaporated. The British had ceased their trade in Persian carpets by the early 18th century.[736]

These accounts are probably not very accurate with regard to Persian carpet trading during the 17th century. According to Helfgott, this was "because agents of both major trading companies also bought and sold rugs on their own account."[737] For instance, Huybert Visnich, the first director of the Dutch East India Company, "sent two bales of carpets to Aleppo for resale between 1623 and 1630."[738] In addition, other European and Indian merchants visited and traded in Iran, and who probably purchased carpets for resale or personal use.[739]

Re-routing export to the Persian Gulf

An important policy of Shāh 'Abbās was re-routing the silk trade (under English and Dutch control) from overland caravan to sea routes. The overland route, previously through Ottoman territory in the west of Iran, was changed to the south through the Persian Gulf and Indian Ocean. This undercut the Turks and Iranian merchants.[740]

5.3 Carpet weaving centres

From the 17th-century Ṣafavīd period, there are some reports by travellers describing their observations when visiting cities in Iran. A traveller in 1603, for example, reported some carpets for sale in the *bāzār* in Qazvīn.[741] In 1628 in Qazvīn, Thomas Herbert, the British traveller, visited a royal palace and observed some silk and gold carpets, "which no potentate

[733] Floor, "Economy and Society," 23; Helfgott, *Ties that Bind,* 62-3.
[734] Floor, "Economy and Society," 23. Floor cited Ferrier, "British-Persian," 354.
[735] Ibid, 23. Floor cited Ferrier, "British-Persian," 393-94.
[736] Helfgott, *Ties that Bind,* 62-63. Helfgott cited Floor, "Persian Carpets," forthcoming.
[737] Ibid*,* 62-63.
[738] Ibid*,* 62-63. Helfgott cited it as Floor, "Persian Carpets," forthcoming.
[739] Helfgott, *Ties that Bind,* 62-63.
[740] Ibid, 61.
[741] Helfgott, *Ties that Bind,* 66. Helfgott cited John Cartwright, "Observations of Master John Cartwright in His Voyage from Aleppo to Hispaan," in *Purchas his Pilgrims* (New York: Macmillan Company, 1905), 18:507.

in the world has more or better."[742] Furthermore, according to Helfgott, a carpet industry probably existed in Kāshān during the 16th century.[743] He referred to Erdmann who attributed 13 silk carpets to Kāshān, a major centre for finished-silk production in the 16th century.[744] Other proof is an order by the Polish royalty for some flat-woven *gilīms* in 1602, from a workshop in Kāshān.[745] From this Helfgott concluded that probably Kāshān was one of the main centres of silk carpet production before the reign of Shāh 'Abbās, with workshops driven by patronage and increasingly market forces to enable Shāh 'Abbās to expand international trade.[746]

However, Helfgott noted that travellers' accounts usually referred to carpets used in the court and elite classes rather than for ordinary people's daily lives.[747] There is a unique report by Thomas Herbert, who visited Tehran in 1628, a town with three thousand houses at that time, who observed:[748]

> The house where we lodged, ore-topping all the other, from its Tarrases I could view all over the City, each house top spread with Carpets, whereon slept a man and his peculiar SARALIO, some had three, some sixe, others twelve female beauties sleeping by him. Twas indeed rashly done of me to view them. Their Orders punish it, with no lesse terror, then by shooting an Arrow into his brain that dares to doe it.[749]

Helfgott named the main centres for carpet production during the 16th and 17th centuries as Kāshān, Iṣfahān, Kirmān, Hirāt and Tabrīz, adding Yazd and Jushaqān, probably where carpets for the court or for export were made (Figure 5-7).[750]

There is some information on a group of 17th-century Ṣafavīd carpets known as Polonaise carpets. Scholars, including Spuhler, believed they were produced in the court workshops. Spuhler specified the Maydān district as the location for these workshops.[751] He

---

[742] Helfgott, *Ties that Bind,* 66. Helfgott cited Herbert, *Travels in Persia*, 202.
[743] Helfgott, *Ties that Bind,* 66.
[744] Ibid, 66. Helfgott cited Kurt Erdmann, *Seven Hundred Years of Oriental Carpets,* Trans. May H. Beattie and Hildegard Herzog (London: Faber and Faber, 1970), 64.
[745] Ibid, 66. Helfgott cited Erdmann, *Seven Hundred Years,* 64.
[746] Helfgott, *Ties that Bind,* 66-7.
[747] Ibid, 69.
[748] Ibid.
[749] Ibid, 69-71. Helfgott cited Ronald Ferrier, "The First English Guide Book to Persia: A Description of the Persian Monarchy," *Iran: Journal of the British Institute of Persian Studies* 15 (1977): 80.
[750] Helfgott, *Ties that Bind,* 69.
[751] Friedrich Spuhler, *Carpets from Islamic Lands* (London: Thames and Hudson, 2012), 75.

also believed they operated from 1598.[752] By categorising the design of Polonaise carpets in twelve groups, Spuhler confirmed that their production was in royal manufacturies.[753] Helfgott's statement confirmed Spuhler's, where he noted they originated on the looms controlled or owned by the court.[754] Denny referred instead to state-controlled workshops.[755] Day believed the main group of Polonaise carpets were the products of *kārkhānih* (workshop) looms.[756]

Figure 5- 7. Carpet production and distribution areas during the Ṣafavīd period.
Eugene Hoerauf, Western Washington University Cartographic Services (Helfgott, Leonard M. *Ties that Bind: A Social History of the Iranian Carpet.* Washington: Smithsonian Institution, 1994, 70)

Based on travellers' reports in the 17th century, the court workshop for the manufacture of Iṣfāhān carpets was located in the Maydān-I Naqsh-i Jāhān area of the city (Figure 5-8 a & b).[757] This was described by the jeweller, Tavernier, who visited Persia in 1664. He reported that the court workshop was located in the Maydān district and gave the exact location, inside the royal palace itself. Tavernier stated, "carpet makers from gold and silk," and again, "beautiful carpets of gold, silver, silk and wool, as well as golden and silver brocades, velvets, taffeta and such like things."[758] In Spuhler's opinion, Tavernier's accounts focused mainly on silk carpets brocaded with gold and silver threads known as "Polonaise" carpets.[759]

The Polish Jesuit missionary, Krusinskij, who lived in Persia, during and just after the last years of the Ṣafavīd dynasty wrote "of the manufacture of silk textiles and carpets of Iṣfāhān, which were made under strict supervision for use in the royal palace, although there was also trade with Europe and India."[760]

To confirm Iṣfāhān as one of the main centres for carpet production toward the end of 17th century, Chardin, another traveller who visited the country in 1666 and 1672, reported on the weavers of Iṣfāhān.[761]

[752] Spuhler, *Carpets from Islamic Lands*, 85.
[753] Friedrich Spuhler, "Four So-Called Polish Rugs in the Rijksmuseum." *The Rijksmuseum Bulletin* 59, no.1 (2011): 90.
[754] Helfgott, *Ties that Bind,* 63.
[755] Walter Denny, *How to Read Islamic Carpets* (New York: The Metropolitan Museum of Art, 2014), 89.
[756] Susan Day, *Great Carpets of the World* (London: Thames and Hudson, 1996), 147.
[757] Not as Wenzel translated market. Market (*bāzār*) is located on the northern side of the square (the *maydān*).
[758] Wenzel, "Carpet and Wall-painting Design in Persia," 10. Wenzel cited F. Spuhler, op. cit., p. 34.
[759] Spuhler, *Carpets from Islamic Lands*, 86.
[760] Bennett, *Rugs and Carpets of the World*, 84.
[761] Ibid, 84.

Figure 5- 8 (a (top) & b (bottom)). View of the Maydān in Iṣfāhān.
From the north (a) and the south (b). From M. Cornelis Le Bruyn, *Travels into Muscovy, Persia and Parts of the East Indies*, vol. I (London 1734), pl. 75-76; courtesy of the Library of Congress (Bier, Carol. "Court and Commerce: Carpets of Safavid Iran." In *Woven from the Soul, Spun from the Heart – Textile Arts of Safavid and Qajar Iran, 16th-19th Centuries*, edited by Carol Bier, 97-106 and catalogue 204-5. Washington, D.C.: Textile Museum, 1987)

Based on variations in metal brocading in Polonaise carpets, Day hypothesised that more than one workshop was involved. She named Iṣfāhān as a most frequently cited centre, and added Kāshān and Jushaqān.[762] However, according to Helfgott, Kāshān, Iṣfahān and Kirmān respectively are accepted among scholars as the centres for silk-animal carpets, Polonaise carpets, and vase-design carpets.[763]

5.4 Workshop practices

Atelier (kitābkhānih)

Immediately after his reign, Shāh 'Abbās expanded his *khāṣṣih* administration.[764] There was "a distinct separation between the palace or crown (*khāṣṣih*) administration and the workings of the state (*dīvān-i mamālik*)."[765] *Taẕkirat ul-Mulūk* is an important source on administration from the end of the Ṣafavīd period. From *Taẕkirat ul-Mulūk* we learn that 33 departments (*buyūtāt*) and *khāṣṣih* administration (*kārkhānih*) were formed by Shāh 'Abbās's order.[766] The number of *buyūtāt* reached 50 by the end of the Ṣafavīd dynasty.[767] The departments dealt with running, servicing and provisioning of the royal household including "the department of refreshing drinks, the tailoring department, the lighting department, the camel stables, the poultry yard, the falconry and the gate keepers."[768] Some of these *buyūtāt* were located inside the palace and some outside, and each was responsible for something.[769] According to Thompson, however, each department was called a *kārkhānih* (lit. factory), or

[762] Day, *Great Carpets of the World*, 148.
[763] Helfgott, *Ties that Bind,* 291, f/n 93. For more information see May Beattie, *Carpets of Central Persia*; Erdmann, *Seven Hundred Years*; Arthur Upham Pope and Phyllis Ackerman, *A Survey of Persian Art from Prehistoric Times to the Present* (London: Oxford University Press, 1938); Charles Ellis, *Oriental Carpets in the Philadelphia Museum of Art* (Philadelphia: Philadelphia Museum of Art, 1988), 151-208.
[764] Yaqub Azhand, "*Kitābkhānih* and *Naqqāsh-khānih* Organization of the School of Iṣfahān," *Gulistān-i Hunar* 2 (2005): 47.
[765] Jon Thompson, "Early Safavid Carpets and Textiles." In *Hunt for Paradise: Court Arts of Safavid Iran 1501--1576*, eds. Jon Thompson and Sheila R. Canby (Milan: Skira Editore, 2003), 276.
[766] Azhand, "*Kitābkhānih* and *Naqqāsh-khānih* Organization," 47. Azhand cited *Alqab va Mavajib-I Durih-yi Salatin-I Safavih*, Ed. Yusuf Rahimlu (Mashhad, 1992), 21.
[767] Azhand, "*Kitābkhānih* and *Naqqāsh-khānih* Organization," 47.
[768] Thompson, "Early Safavid Carpets and Textiles," 276.
[769] Azhand, "*Kitābkhānih* and *Naqqāsh-khānih* Organization," 47.

workshop, and only a few dealt with making things.[770] Azhand wrote the word *kārkhānih* given to administration, because craftsmen were doing the jobs related to the palace and occasionally worked for themselves.[771]

Azhand explained that until the second half of the 16th century, *naqqāsh-khānih* was not separate from *kitābkhānih*.[772] He believed that only by forming the *buyūtāt*, and during the reign of Shāh ʻAbbās, *kitābkhānih* and *naqqāsh-khānih* became two separate departments, each with their own duties. At least 72 painters were working in *naqqāsh-khānih*.[773] Azhand referred to *kitābdār* as the head of *kitābkhānih* and *naqqāsh-bāshī* as the head of *naqqāsh-khānih*, mentioned separately in *Taẕkirat ul-Mulūk*.[774]

The administration of workshops (*kārkhānih*) was directed by the palace. They supplied goods to the royal household and produced a specific amount of goods every six months. The craftsmen working in *kārkhānih*s were paid a salary plus subsistence. And by completing some special works they received a bonus. Those who were employed by the royal workshop were allowed to allocate up to 80 per cent of their time on working on private projects.[775] Some of these craftsmens' duties were to accompany the Shāh on tour in his mobile court. This mostly included staff related to household support (e.g. carpet spreaders and tent pitchers (*farrāsh*)) and craftsmen who dealt with special projects such as jewellers and painters. "Weavers are likely to have been excluded from this duty."[776]

Art organisation

Among the different departments (*kārkhānih*), *sha'rbāf-khānih* was mostly in contact with *naqqāsh-khānih*.[777] However, this was applicable to any other *kārkhānih* which needed designs such as those that dealt with making clay and tile.[778] Azhand explained the

[770] Thompson, "Early Safavid Carpets and Textiles," 276.
[771] Azhand, "*Kitābkhānih* and *Naqqāsh-khānih* Organization," 47.
[772] Ibid, 44-45.
[773] Ibid, 47. Azhand cited Mīrzā Samīʻā and Muḥammad Samīʻ [Minorsky (1943)], *Taẕkirat ul-Mulūk (Memorial for Kings): A Manual of Ṣafavīd Administration*, ed. Muḥammad Dabīr-sīaqī, trans. Masoud Rajabnia, 1955, 49; Chardin, v. 4, 1420.
[774] Azhand, "*Kitābkhānih* and *Naqqāsh-khānih* Organization," 47. Azhand cited Kaempfer, *The Voyage*, trans. Kaykavus Jahandari (Tehran: Kharazmi, 1981), 152; Karri, *The Voyage*, 167.
[775] Thompson, "Early Safavid Carpets and Textiles," 280. Thompson cited Minorsky 1943, 21. Citing Chardin, Thompson added: "This, presumably, could only apply to skilled individual craftsmen such as goldsmiths, calligraphers and painters owning their own tools and equipment and able to undertake individual commissions, not weavers."
[776] Thompson, "Early Safavid Carpets and Textiles," 280.
[777] Azhand, "*Kitābkhānih* and *Naqqāsh-khānih* Organization," 47.
[778] Ibid, 48.

relationship between *naqqāsh-khānih* and *sha'rbāf-khānih* as decorators and painters of *naqqāsh-khānih* who prepared designs for the luxurious textiles made in *sha'rbāf-khānih*.[779]

According to Thompson based on the information from the *Tazkirat ul-Mulūk,* the court acquired luxury craftworks, including textiles, from two sources: court workshops (*khāṣṣih*) administration, and the free market.[780] The free market worked within a system of self-regulating guilds (*aṣnāf*) and they paid taxes to the government. The works were either materials or finished items, purchased from the free market and based on fixed-price contracts. A fixed-price was the result of negotiation between the elders of the guilds and the head of the royal workshops.[781] The quality of the works was controlled by placing a sample of agreed quality kept under seal for future reference.[782] It was also mentioned by Chardin that silk and brocaded threads to be used in brocaded textiles and carpets were sent to outside [of the *kārkhānih*] and the *buyūtāt* organisation paid them according to a specific amount.[783]

Carpet designers

After discussing art administration during the 17th century, we find no information about carpet designers. There is no information about the design of carpets and even textiles or whether they were produced from an order in central *naqqāsh-khānih*. To obtain information from the parallel workshop in the Ottoman court, which has many surviving records, is difficult. From the artistic establishment in a later period, the Qājār court, the only information is that "painters working in the *naqqāsh-khānih*, together with illuminators, designers, architects and craftsmen possessing a variety of skills who belonged to several different guilds were all subordinate to a head of department the *naqqāsh-bāshī* and royal commissions were carried out by artist-craftsmen best suited to the task."[784]

---

[779] Ibid, 47.
[780] Thompson, "Early Safavid Carpets and Textiles," 280.
[781] Ibid, 280.
[782] Thompson, "Early Safavid Carpets and Textiles," 280. Thompson cited Minorsky 1943, 48-49.
[783] Azhand, "*Kitābkhānih* and *Naqqāsh-khānih* Organization," 47. Azhand cited Chardin, v. 4, 1421.
The translated Persian text from Chardin is as follows:
ابریشم و الیاف زری را جهت ساختن منسوجات و زربفت و قالی به خارج می دادند و اداره بیوتات مخارج آن را بر طبق تعرفه مخصوص می پرداخت.
[784] Thompson, "Early Safavid Carpets and Textiles," 280. Thompson cited Willem Floor, "Art (*Naqqāshī*) and Artists (*Naqqāshān*) in Qajar Persia," *Muqarnas* 16 (1999): 125-54.

Circulation of designs

According to Canby, the fashion leader in Ṣafavīd art was the royal court, and she believed this was associated with the reign of Shāh ʻAbbās.[785] Therefore, new ideas in art were showcased in Iṣfāhān, introduced by Shāh ʻAbbās. This included the buildings of Iṣfahān and the goods made in the *bāzārs* of Iṣfahān.[786] Even the motifs on textiles with floral ornament were entirely consistent in different media in the first quarter of the 17th century.[787]

Figure 5- 9. Album page with two hemistichs of poetry**.**
Qazvīn or Iṣfāhān, c.1600, ink, gold and opaque watercolour on paper, text 18.5 x 8.6 cm, British Museum, ME 1936,0710,0.331 (Canby, Sheila R. *Shāh ʻAbbās, The Remaking of Iran*. London: The Trustees of the British Museum, 2009, 46)

According to Canby, good examples were silk and gold carpets of the 17th century, which can be described as the "new look."[788]

Canby compared the design of a pair of Polonaise carpets (see Figure 6-6 a & b in chapter 6) with the so-called *tāj* design of illuminated chapter headings in 17th-century books (Figure 5-9). On the carpet are two bell-shaped outlines on two sides of the field of carpets containing flowers and leaves, which Canby related to the *tāj* design in the illumination located in the upper margins. She believed that these forms existed in the 16th century but in the 17th century they are larger and more prominent. Therefore, their appearance in different media (e.g. a wall decoration in palaces in Iṣfahān) confirms they were introduced during Shāh ʻAbbās's reign.[789]

Figure 5- 10 (a & b). The Bethlehem Church, New Julfā, Iṣfāhān.
Built and painted in 1627/28. Interior looking east. Photo: John Carswell.[790] (Wenzel, Marian. "Carpet and Wall-Painting Design in Persia: An Armenian-inscribed 'Polonaise' Carpet." *Apollo* (1988 July): 9)

Wenzel compared a Polonaise carpet (known as the Yakob carpet (Figure 6-9), to be be explained in chapter 6) with the Ṣafavīd-influenced floral style of wall-painting in the Bethlehem Church, an Armenian church in New Julfā, in the first half of the 17th century

[785] Canby, *Shāh ʻAbbās, The Remaking of Iran*, 228.
[786] Ibid, 36.
[787] Ibid, 228.
[788] Ibid, 242.
[789] Ibid, 244.
[790] Ibid, 9.

(Figure 5-10 a & b). The church was built in the New Julfā's marketplace by Khodja Petros Velidjanian in 1627/28.[791] Wenzel described the decorations on church walls as follows:

> Paintings cover the walls of a central square space where four pointed arches are linked by intersecting groined pendentives which support the dome, and similar painting enlivens the dome itself. Each pendentive is divided at the top into diamond-shaped areas, two of which contain cherubim. These diamonds frame the tops of four recessed arches; each arch is filled with a background of pale flowerheads on a dark field, upon which is laid a row of vertically placed medallions, light on dark. At the base of one row appears classical Armenian lettering very like that on the Yakob carpet.[792]

According to Wenzel, the overall composition, colour, and motifs of decorative designs on the church wall are similar to the Yakob carpet. Colour variations of rose and beige and the sharp accents of green or Prussian blue are characteristic of both. Shared compositional elements such as many rows of medallions which are placed vertically against defined palmettes and flowerheads; and the sub-divided half-palmettes that appear from both sides of a wall niche are very similar to the divided shapes on either side in the central field of the Yakob carpet.[793]

Figure 5- 11. Illuminated frontispiece, *Būstān* of Sa'dī .
Hirāt or Bukhara, early 16th century. Opaque watercolour, gold and ink on paper, page 22.7 x 15 cm, National Library of Russia, Dorn 376, fol. lb-2a (Canby, Sheila R. *Shāh 'Abbās, The Remaking of Iran*. London: The Trustees of the British Museum, 2009, 174)

Another example is a comparison between illuminated manuscripts in the 17th century and other media such as carpets. Canby believed the combination of gold and silver in the illuminated borders of manuscripts (see example in Figure 5-11) would have been a familiar colour harmony to artists who were working in different media at the Ṣafavīd court.[794] Canby attributed this undated manuscript to eastern Iran based on its geometric design style.[795] In

[791] Marian Wenzel, "Carpet and Wall-Painting Design in Persia. An Armenian-inscribed 'Polonaise' Carpet," *Apollo* (1988 July): 7-8. Wenzel cited J. Carswell, op. cit., 50, 51, pls I, II, 45-49.
[792] Wenzel, "Carpet and Wall-painting Design in Persia," 7-8.
[793] Ibid, 8.
[794] Canby, *Shāh 'Abbās, The Remaking of Iran*, 242.
[795] Ibid, 174.

comparing manuscripts produced in art centres during the 16th century Ṣafavīd period, Canby wrote: "Shīrāz illumination displays a higher proportion of gold to blue than found in Tabrīz or Herat, whereas illumination from Tabrīz manuscripts is less geometric than that of the eastern Iranian world but extends less into the margins than that of Shīrāz manuscripts."[796]

However, the style of manuscript illumination changed noticeably during the reign of Shāh 'Abbās. According to Canby, "the preference for gold over blue increased, so did the size of individual lotus blossoms and geometricized floral details, as well as the split palmettes in floral scrolls."[797] Therefore the motifs on the illuminations of the 17th century were similar to 16th-century examples, but the size of motifs were larger. Canby called this change "the new style" which can be seen on different wall decorations in 17th century buildings commissioned by Shāh 'Abbās, such as the Ardabil Shrine, and in some carpets (Figure 6-6 a & b) in the first half of the 17th century.[798]

Figure 5- 12. Two fragments of a tomb cover, Iran.
first quarter of the 17th century, silk brocade with gold threads, 76.3 × 71.1 cm and 174.1 × 88.5 cm, National Museum of Iran, inv. nos. 20228 and 3316 (Canby, Sheila R. *Shāh 'Abbās, The Remaking of Iran*. London: The Trustees of the British Museum, 2009, 181)

Another similar comparison is in Polonaise carpet field design (see figure 6-6 a & b) and division of the field in the textile (Figure 5-12). The design shared between both the carpet and the textile consists of interlocking lobed ellipses and circles which in the textile has written script.[799]

[796] Ibid, 174.
[797] Ibid, 174.
[798] Ibid, 174.
[799] Ibid, 181.

Chapter 6. Iṣfahān School: Design and Production of Carpets

6.1 Iṣfahān School: Various carpet groups

There is a great variety of patterns in the silk rugs of the seventeenth century.[800] The 17th-century Ṣafavīd carpets include group of carpets known mainly as Sanguszko Carpets, Portuguese Carpets, Kashan Silk Carpets, Salting Carpets, and Polonaise Carpets. Some of these are silk rugs which were popular in the 17th century and their designs mostly are in "a symmetrical arrangement of the pattern."[801] Some of them with metal threads (such as Salting carpets and Polonaise carpets) and some without. Each of the above group of carpets have their own features and characteristics, however, this chapter focuses on Polonaise carpets and their design.

6.2 Polonaise carpets

Polonaise (or Polish) carpets are a group of silk and metal thread carpets made in Iran, from the beginning of the reign of Shāh'Abbās I to the early 18th century.[802] "Polonaise" is a misleading word that came into use after the Paris International Exhibition in 1878, at which the Polish Prince Czartoryski exhibited several examples.[803] One example (Figure 6-1a), according to Bennett, beared what was then wrongly assumed to be their coat-of-arms (Figure 6-1b).[804] It was erroneously assumed that the five heraldic shields were those of onetime owner, Prince Czarloryski.[805] Furthermore, woven into the original design, at the four corners of the field and in the middle of the central medallion, is a Persian weaver's somewhat imaginary idea of what a Polish noble coat of arms should look like.[806]

---

[800] Dimand, M.S. "Safavid textiles and rugs," in *Highlights of Persian art*, edited by R. Ettinghausen & E. Yarshater, 273-311. Colorado: Westview Press, 1979, 308.
[801] Ibid, 308.
[802] Friedrich Spuhler, *Oriental Carpets in the Museum of Islamic Art, Berlin,* trans. Robert Pinner (London: Faber and Faber, 1987), 74. However, Marian Wenzel, "Carpet and Wall-Painting Design in Persia. An Armenian-inscribed 'Polonaise' Carpet," *Apollo* (1988 July): 4, wrote this was only during the reign of Shāh 'Abbās I.
[803] Wenzel, "Carpet and Wall-painting Design in Persia," 4; Spuhler, *Oriental Carpets in the Museum of Islamic Art,* 74; Bennett, *Rugs and Carpets of the World*, 80-81; Day, *Great Carpets of the World,* 147. The word "misleading" was used by Spuhler in "*Oriental Carpets in the Museum of Islamic Art,* 74." It is also called "misnomer" by Wenzel, Bennett and Day, respectively in "Carpet and Wall-painting Design in Persia, 4"; Ian Bennett, *Rugs and Carpets of the World* (London: Ferndale Editions, 1981), 80"; "*Susan Day, Great Carpets of the World* (London: Thames and Hudson, 1996), 147"; and called "erroneously" by Denny in "Walter Denny*, How to Read Islamic Carpets* (New York: The Metropolitan Museum of Art, 2014), 89."
[804] Bennett, *Rugs and Carpets of the World*, 80-81.
[805] Day, *Great Carpets of the World,* 147.
[806] Walter Denny, *How to Read Islamic Carpets* (New York: The Metropolitan Museum of Art, 2014), 89.

Figure 6- 1 (a & b). The Czartoryski Carpet, Iran, probably Iṣfāhān, 17th century.
Cotton, silk, and metal-wrapped thread, 486.4 x 217.5 cm (45.106) (Denny, Walter. *How to Read Islamic Carpets*. New York: The Metropolitan Museum of Art, 2014, 88-89)

It was also assumed that the piece was of Polish workmanship and even when its proper place of origin was established, the label "Polonaise" stuck.[807] By the 17th century, pile carpets were in fact being fabricated in Poland, but they differ from those of Persian provenance in design, colour, and technique.[808] It originally belonged to the Czartoryski family, an important ornament of the Polish nobility who by tradition took possession of the carpet in 1683, when the Polish army sacked the besieged Turkish army camp outside Vienna.[809] Although Bode referred to their Persian origin as early as 1892, which became widely accepted as a convenient label.[810] In Persia too they were regarded as symbols of wealth and luxury and were characteristic of the court fashion of the 17th century.[811]

The number of Polonaise carpets exceed 230 pieces or, according to Spuhler, 250 or so.[812] He also mentioned that more than 50 pieces in this group were woven as identical pairs. He commented that the pairs were approximately two sizes: 130 × 220 cm and 180 × 400 cm.[813]

Utility and purpose of Polonaise carpets

Opinions differ about the purpose of weaving Polonaise carpets and how they were used in the 17th century. Based on existing customs records, bills of lading and purchase receipts which have survived in European archives, scholars made their own classification.[814] Spuhler divided the utility of Polonaise carpets into three main groups: diplomatic presents, special commission to European princely courts, or they came into the possession of the Church.[815] Spuhler interestingly mentioned that Polonaise carpets survived almost exclusively in Europe and subsequently, at a later stage, in the United States where they once served as diplomatic gifts, bribes or barter.[816]

---

[807] Bennett, *Rugs and Carpets of the World*, 81.
[808] Day, *Great Carpets of the World,* 147.
[809] Denny, *How to Read Islamic Carpets*, 89.
[810] Spuhler, *Oriental Carpets in the Museum of Islamic Art,* 74; Wenzel, "Carpet and Wall-painting Design in Persia," 4.
[811] Spuhler, *Oriental Carpets in the Museum of Islamic Art,* 75.
[812] Day, *Great Carpets of the World,* 147; Friedrich Spuhler, "Four So-Called Polish Rugs in the Rijksmuseum," *The Rijksmuseum Bulletin,* 59, no.1 (2011): 88-98.
[813] Spuhler, "Four So-Called Polish Rugs in the Rijksmuseum," 90.
[814] Baeta Slota, "The Polonaise Carpets and their Connection with Polish Art and Culture," *Oriental Carpet and Textile Studies* 1, no.1 (1985), 93-99.
[815] Spuhler, *Oriental Carpets in the Museum of Islamic Art,* 74-75.
[816] Spuhler, "Four So-Called Polish Rugs in the Rijksmuseum," 90.

Canby divided these carpets into two main categories: export and local use.[817] She accessed accounts of European travellers to Iran, where they were referred to as "carpets of silk and gold." Denny categorised a big group of Polonaise carpets as royal gifts to noble supporters of the regime and to foreign dignitaries.[818]

Bier's classifications were gifts from Shāh 'Abbās to European dignitaries, by special order, and those presented as pious donations to Muslim shrines.[819] Day has a completely different opinion. She believed that the Polonaise carpets were woven for the trade. Her idea was based on the fact that these carpets were less finely woven, on a cotton foundation, than many classical Ṣafavīd carpets. She said "even the finest examples rarely exceeded 3500 knots per square decimetre, a low density relative to that of some examples previously cited. Such a knot count signifies trade pieces rather than unique works made for court patrons."[820]

Based on the abovementioned scholars' classifications, the utility of the Polonaise carpets can be categorised into four main groups as follows:

1- Local use

Based on travellers' reports, it is confirmed that Polonaise carpets were not only used by foreigners but locally as well. The Carmelite missionaries, Father Paul Simon and Father Peter visited Kāshān in 1607-8 and left accounts of the carpets they saw.[821]

Anthony Sherlry's Brief and True Report of his Persian journey published in London in 1600 mentioned "Persian carpets of a wonderful fineness." Thomas Herbert visited the country in 1627-29, and wrote of the Palace of Iṣfāhān: "Within, the rooms . . . are enlightened with trellices; the rooms are embossed above, and painted red-white, blue and gold; the side painted with sports and landscape; the ground, or floor, spread with carpets of silk and gold, without other furniture."[822]

Adam Olearius, secretary to the German Ambassador, who visited the Iṣfāhān court of Shāh Ṣafī in the 1630s, noted that "the floor was covered all over with tapestry, whereof the ground-work was of gold and silver".[823]

---

[817] Sheila R. Canby, *Shāh 'Abbās, The Remaking of Iran* (London: The Trustees of the British Museum, 2009), 76.
[818] Denny, *How to Read Islamic Carpets*, 89.
[819] Carol Bier, "Textiles and Trade." In *Woven from the Soul, Spun from the Heart – Textile Arts of Safavid and Qajar Iran, 16th-19th Centuries*, ed. Carol Bier (Washington, D.C.: Textile Museum, 1987), 235.
[820] Day, *Great Carpets of the World,* 148.
[821] Bennett, *Rugs and Carpets of the World*, 84.
[822] Ibid, 84.
[823] Canby, *Shāh 'Abbās, The Remaking of Iran*, 76. Canby cited Olearius 1622, 271.

English traveller and historian, Sir Thomas Herbert remarked upon the floor of the royal palace, "spread with silk and gold carpets" in 1626.[824] Presumably, they also covered the floors of the mosques commissioned by Shāh 'Abbās.[825] Thomas Herbert described this type of carpet in the palace of Shāh 'Abbās at Ashraf near the Caspian sea.[826] The French merchant, J. B. Tavernier, visited Persia in 1664, and wrote:

> The floor was spread with gold and silk carpets, made specifically for the palace, and there was a large scaffold covered with a magnificent carpet . . . After I had laid out my goods upon a fair table covered with a gold and silver carpet . . . the King entered, attended by only three eunuchs for his guard, and two old men, whose office it was to pull off his shoes when he goes into any room spread with gold and silk carpet; and put them on again when he leaves.

In 1767, John Fryer visited Iṣfāhān as well and described the carpet *bāzār* which sold "woollen and silk [pieces], intermixed with gold and silver very costly, which are the peculiar manufacture of this country."[827]

2- Gifts

There were four other ways of utilising Polonaise carpets including diplomatic gifts to foreign noble supporters of the regime and foreign dignitaries, donations to shrines, and for dowries.

Figure 6- 2. Silk and silver thread Polonaise carpet.
Presented to the Doge of Venice in 1622. 8ft. 7 in. × 6 ft. 1 in. (259 × 182 cm). Basilica of St. Mark, Venice (Bennett, Ian. *Rugs and Carpets of the World*. London: Ferndale Editions, 1981, 83)

[824] Ibid, 36; Sir Thomas Herbert, 1606-1682, *Some Years Travels into Divers Parts of Africa, and Asia the Great Describing More Particularly the Empires of Persia and Industan : Interwoven with such Remarkable Occurrences as Hapned [Sic] in those Parts during these Later Times : As also, Many Other Rich and Famous Kingdoms in the Oriental India with the Isles Adjacent : Severally Relating their Religion, Language, Customs and Habit : As also Proper Observations Concerning them* London, Printed by R. Everingham for R. Scot, T. Basset, J. Wright, and R. Chiswell, 1677, 175.
[825] Canby, *Shāh 'Abbās, The Remaking of Iran*, 36.
[826] Ibid, 76; Herbert, *Some Years Travels*, 175.
[827] Bennett, *Rugs and Carpets of the World*, 84.

1- Diplomatic gifts

One of five pieces preserved at the Treasury of San Marco in Venice (Figure 6-2) was a gift to Doge Marino Grimani from Shāh ʻAbbās in 1603.[828] This carpet was presented to the Doge, Marino Grimani, by an ambassador of Shāh ʻAbbās. The ambassador explained that the Shāh wished the carpet to become part of the Treasury.[829]

2- Foreign noble supporters of the regime and foreign dignitaries

The "Coronation" carpet (Figure 6-3) in Copenhagen's Rosenberg Castle, so-called because it was used when Frederick IV was crowned King of Denmark in 1701, is recorded as having been a gift from the Dutch East India Company to Queen Sofie Amalie in 1666.[830]

Figure 6- 3. Silk and gold thread Polonaise carpet.
Gifted by the Dutch East India Company to Queen Sofie Amalie of Denmark in 1662. Rosenberg Castle, Copenhagen (Bennett, Ian. *Rugs and Carpets of the World*. London: Ferndale Editions, 1981, 83)

3- Donations to shrines

A group of four complete and three fragmentary brocaded carpets in wool and silk are preserved in the Shrine of Imām ʻAlī in al-Najaf, about six miles west of Kufa in Iraq. An inscription reads that one woollen piece was presented by "the dog of this shrine," that is, Shāh ʻAbbās, who is known to have referred to himself as "the dog of ʻAlī."[831]

Figure 6- 4. One of a pair of silk and gold thread Doria Polonaise carpets.
401.3 × 176.5 cm, the Metropolitan Museum, New York. Provenance:[832] Prince Doria, Rome, Italy; [Sir Joseph Duveen, London; sold to Rockefeller]; John D. Rockefeller Jr., New York (by 1930–50; gifted to MMA). Accession Number:50.190.5 (Bennett, Ian. *Rugs and Carpets of the World*. London: Ferndale Editions, 1981, 83)

4- Dowries

There is evidence of carpets existing in Poland in late 1602, predating the first Venice gift of 1603. According to Erdmann, the eight carpets listed by Sigismund's merchant are now

[828] Day, *Great Carpets of the World,* 147; Bier, "Textiles and Trade," 235; Aga-Oglu, *Safawid Rugs and Textiles*, figs. 4, 5, 7.
[829] Bennett, *Rugs and Carpets of the World*, 81-82.
[830] Day, *Great Carpets of the World,* 147. The date (1666) is written as 1662 by Bennett in Bennett, *Rugs and Carpets of the World*, 83.
[831] Bennett, *Rugs and Carpets of the World*, 84.
[832] http://www.metmuseum.org/art/collection/search/451028. Accessed September 28, 2016.

displayed in the Residenz Museum, Munich. Certainly, a pair of tapestry-woven, silk carpets in the Residenz, once the property of the Wittelsbach family, bear the arms of Sigismund III; they passed into German possession on the marriage of the Polish Princess, Anna Katherina Konstanza to the Elector Palatine, Philip Wilhelm in 1642. Along with the other six pieces, this pair formed part of her dowry.[833]

3- Special commission to European princely courts

In chapter 5 (section 5.2), a special commission to Sigismund Vasa III, the King of Poland, was mentioned. In addition, a pair of carpets once in the possession of Prince Doria, is now housed in the Metropolitan Museum (Figure 6-4) and the other carpet was sold by Colnaghi's of London in 1976.[834] Judging from the high cost of such pieces, illustrated in the account presented to Sigismund, only the nobility would have been able to afford them.[835] Canby supported Bennett's view that expensive materials and high labour costs involved in the production of these tapestries meant they were only accessible to the wealthiest clients. One example was presented by Shāh 'Abbās as a royal gift.[836] But this is in contrast to what Day mentioned about Polonaise carpets in the introduction to this section.[837]

4- Export

Also, in the previous chapter (section 5.2), the export of some Polonaise carpets was discussed.

Characteristic features of Polonaise carpets

Two specific features characterise Polonaise carpets. The first feature is the use of metal-wrapped threads. Wenzel, literally in talking about the provenance of the Yakob carpet, referred to its design as fitting the large group of Polonaise carpets.[838] Therefore the second feature could be their design and colour palette.

---

[833] Ibid, 81.
[834] There is an interesting explanation for this piece in the Metropolitan Museum website. This carpet is one of a pair; its counterpart is in the Carpet Museum in Tehran. The field pattern of both carpets is identical, and a balanced design is achieved when the two carpets are placed end-to-end (http://www.metmuseum.org/art/collection/search/451028).
[835] Bennett, *Rugs and Carpets of the World*, 83-84.
[836] Canby, *Shāh 'Abbās, The Remaking of Iran*, 184.
[837] Day wrote: "Even the finest examples rarely exceeded 3500 knots per square decimetre, a low density relative to that of some examples previously cited. Such a knot count signifies trade pieces rather than unique works made for court patrons." 148.
[838] Wenzel, "Carpet and Wall-painting Design in Persia," 4.

Weaving technique

Spuhler believed that the characteristic feature of Polonaise carpets is their silk pile and extensive gold and silver brocade.[839] This group was distinguished by the use of multi-coloured silk pile for certain individual motifs, which contrasted with areas brocaded with supplementary wefts of metal-wrapped silk thread (Figure 6-5).[840]

Figure 6- 5. Detail of metal-wrapped silk thread.
(Denny, Walter. *How to Read Islamic Carpets*. New York: The Metropolitan Museum of Art, 2014, 17)

Design of Polonaise carpets

The design of Polonaise carpets seems to differ from the field composition of 16th-century Ṣafavīd carpets. Spuher defined such design as follows: "lines were replaced by areas, the ground is no longer monochrome, the sharp separation between medallion and ground has become blurred. A rich, floral decor is the order of the day."[841]

Wenzel suggested that the unusual design of Polonaise carpets was rather baroque and outside Persian repertoire.[842] Although she was aware of arguments by other scholars: that they are not atypical at all and within the bounds of Persian design for this period.[843] Wenzel further suggested that because they were frequently presented by Shāh ʻAbbās and his successors as gifts to foreign envoys, this seems sufficient explanation for their oddity -- they were perhaps woven for what was perceived as foreign taste -- as well as providing a certain justification for the retention of the description "Polonaise."[844]

Figure 6- 6 (a & b). Pair of silk and gold carpets, Iran, second quarter of the 17th century.
Silk pile, with precious metal thread, each 214 × 135 cm, Carpet Museum, Tehran, inv. nos. 150, 151 (Canby, Sheila R. *Shāh ʻAbbās, The Remaking of Iran*. London: The Trustees of the British Museum, 2009, 76 & 78)

In regards to the relationship of Polonaise carpet pattern and layout to proportion and size, Bier concluded that this group of carpets was not designed individually. She proposed instead that they were reproduced from selected stock patterns.[845] See the following examples which

[839] Spuhler, "Four So-Called Polish Rugs in the Rijksmuseum," 90.
[840] Denny, *How to Read Islamic Carpets*, 89.
[841] Spuhler, *Oriental Carpets in the Museum of Islamic Art,* 75.
[842] Wenzel, "Carpet and Wall-painting Design in Persia," 4.
[843] Ibid, 11, footnote 1.
[844] Ibid, 4.
[845] Bier, "Textiles and Trade," 235.

support this argument: the centre of (Figure 6-7 a, b & c) a pair of Polonaise carpets (Figure 6-6 a & b) can be found in a folio (Figure 6-8) from the 15th century. Roxburg stated "textiles, the mosaic faience revetment of architecture, metalwork, stamped or filigreed leather bindings, or carving in wood or stone" as the media for this design.[846]

Canby considered these two carpets (illustrated above as a pair), since their dimensions and designs closely resemble one another, even though they are not identical.[847] Canby defined Polonaise carpets by explaining their design features. Firstly, the central four-lobed form overlaps a projection with a wide base at either end. Moreover, a stylistic development from carefully articulated motifs to more flamboyant decoration is evident, which suggests these carpets continued to be made over a number of decades. Lastly, the large, stylised lotus blossoms in the field are typical of a later stage in the stylistic progression of these carpets towards the end of the reign of Shāh 'Abbās or later.[848]

Figure 6- 7 (a, b & c). The central four-lobed form
(detail from Figures 6-6 (a & b) and 6-8).

Bier added that the layout of the central field almost always represents a section or sections from an overall repeat pattern that was conceived as infinite and arbitrarily cut off by the carpet's borders.[849] Spuhler seems to be a scholar who completed a study of all surviving Polonaise carpets. He then categorised their pattern system into twelve designs.[850]

Figure 6- 8. Designs for textiles, bindings, or architectural decoration.
And studies of flowers and a standing figure. Iran or Central Asia, ca. 1400-1450. Ink, opaque pigment, gold, and paper, 68 × 50 cm (folio). Topkapi Palace Museum, Istanbul [H.2152, fol. 57b] (Roxburgh, David J. *The Persian Album 1400--1600 from Disposal to Collection*. London: Yale University Press, 2005, 106)

[846] David J. Roxburgh, *The Persian Album 1400--1600 from Disposal to Collection* (London: Yale University Press, 2005), 105-106.
[847] Willem Floor, *The Persian Textile Industry in the Historical Perspective, 1500--1925* (Paris: L'Harmattan, 1999), 57.
[848] Canby, *Shāh 'Abbās, The Remaking of Iran*, 79.
[849] Bier, "Textiles and Trade," 235.
[850] Spuhler, "Four So-Called Polish Rugs in the Rijksmuseum," 90.

Colour of Polonaise carpets

Day believed that the most dominant feature of Polonaise carpets is the unusual colour scheme in comparison to other groups of Ṣafavīd carpets.[851] Perhaps this was, as Day pointed out, a concession to European taste.[852] Canby and Day both believed that the colour of Polonaise carpets differs from the palette of Persian carpets with richly chromatic blue - or red-ground carpets to warm hues of yellow-gold, peach and off-white with black accents.[853] However, when referring to the colour combination of Polonaise carpets, Canby wrote "a similar combination of gold and silver occurs in the illuminated manuscripts and would have been a familiar colour harmony to artists of all types working at the Safavid court.[854]

Day and Canby considered Polonaise carpet pallets separately. Day suggests a combination of apricot and lime green is common, together with shades of yellow, pink, orange, beige, mauve, and pale turquoise.[855] Similarly, Canby confirmed peach, pale green or blue, off-white, and touches of black or dark blue, with silver or gold passages predominating.[856]

The gold and silver effect seen in both carpets and textiles of this period was achieved by the use of a precious-metal thread, produced by winding thin strips of gilded silver on the diagonal around a silk thread. The edges of the strips were not contiguous but spaced slightly apart so the colour of silk thread beneath was partially visible. For a gold effect, strips were wound around a yellow silk core, and for a silver effect, around a white silk core. The eye integrates the gleam of the metal with the colour of the silk and thus the perceived difference between gold and silver is actually an optical illusion.[857]

The Yakob carpet

After discovering Armenian lettering on this carpet during professional cleaning in the 1980s, a new perspective on Polonaise carpets opened up. Wenzel called it "enlargement in the corpus of inscribed Ṣafavīd carpets during the reign of Shāh 'Abbās I."[858] It is silk with metal threads and based on its design, fits the description of "Polonaise" carpets. The only paper written specifically about the Yakob carpet (Figure 6-9) is Wenzel's "Carpet and Wall-

[851] Day, *Great Carpets of the World,* 148.
[852] Ibid*,* 148.
[853] Canby, *Shāh 'Abbās, The Remaking of Iran*, 36; Day, *Great Carpets of the World,* 148.
[854] Canby, *Shāh 'Abbās, The Remaking of Iran*, 242.
[855] Day, *Great Carpets of the World,* 148.
[856] Canby, *Shāh 'Abbās, The Remaking of Iran*, 244.
[857] Ibid, 76.
[858] Wenzel, "Carpet and Wall-painting Design in Persia," 4.

painting Design in Persia" in 1988 when the carpet was held in a private collection in France. The carpet is currently held in the Art Gallery of South Australia.

The carpet is unique and bears an inscription. Aga-Oglu is a scholar who has studied the inscription on Ṣafavīd rugs and textiles. He states: "The number of weavers in the Safawid period known from signatory inscription is small."[859] Secondly, as Wenzel claimed, this is the first "Polonaise" carpet with Armenian inscription.

The only piece suspected to be Ṣafavīd Armenian inscribed is a fragment known as the Marcy-Indjoudjian Cope, held in the Victoria and Albert Museum (Figure 6-10). But it cannot be read as Armenian script.[860] This cope or shurjar was a carpet woven with a fine silk pile.[861] It is now fragmentary, as a previous owner had begun to cut it, probably for carpet samples.[862] It was evidently made for a Christian community, such as the Armenian colony settled by Shāh 'Abbās at New Julfā, Iṣfāhān in 1605.

Figure 6- 9. The Yakob carpet, 267 × 165 cm, woven in silk-pile
(https://www.google.com/culturalinstitute/beta/u/0/asset/the-yakob-polonaise carpet/uQEk8SdqiHMKNw?hl=en Accessed September 28, 2016)

Figure 6- 10. The Marcy-Indjoudjian Cope ("The Iṣfāhān Cope").
Church vestment (shurjar), Iran (probably Iṣfāhān), knotted silk, 170 x 260 cm, 1600--1650
(http://collections.vam.ac.uk/item/O93501/the-isfahan-cope-cope-unknown/ Accessed September 28, 2016)

Characteristic features of the Yakob carpet

Colour

The main design elements once stood out against a brocade made of silver-wrapped thread, which has now become brownish-grey. Beyond this change, the colours are not obviously faded; they are coral red, rose, yellow, gold, light green, moss green, turquoise blue, deep

[859] Mehmet Aga-Oglu, *Safawid Rugs and Textiles, The Collection of the Shrine of Imam 'Ali at Al-Najaf* (New York: Columbia University Press, 1941), 43.
[860] Wenzel, "Carpet and Wall-painting Design in Persia," 4.
[861] It is written in the description for this piece on the V&A Museum's website, Armenian priests wore this vestment to celebrate Mass. Its semi-circular form is similar to the Western cope. The Crucifixion would have been at the priest's back, and the figures of Mary and the Archangel Gabriel formed an Annunciation scene on his chest.
[862] The description on the V&A Museum's website.

Prussian blue, black, white, tan, pale and dark brown.[863] Its pile is well preserved, with the exception of one of the green silk threads, which has corroded in a few spots.[864]

Armenian inscription

The carpet bears the name "Yakob" twice, which is the classical form for the modem Armenian, which is "Hakob" and in English Jacob, and further, in two places, character groups which should probably be taken to signify the individual letters corresponding to "Y" and "G."[865]

These two full presentations of the name Yakob are woven into more-or-less horizontal stretches of two of the coral- and rose-coloured cloud bands which flank the top and bottom chief medallions of the inner field (Figures 6-11 & 6-12). The inscriptions are set out in yellow. The words are laid out in tall, slim, classical Armenian letters in a style not commonly found in inscribed Armenian carpets (all of which are a much later date than the present example), but frequently observed in wall-paintings and on tiles in the churches of New Julfã.[866] Within red-pink cloud bands that appear in the upper right and lower left corners, the name Yakob/Hakobis is very finely woven.[867] The inscription appears in classical Armenian lettering or Armenian majuscule (*erkat'agir*).[868]

The other inscriptions, the single letters, flank the small flower-heads in the extreme outside corners of the wide band of the border, again upper right and lower left corners (Figure 6-12). It seems very likely that in both cases the letters concerned are those corresponding to "Y" and "G" -- the flowerhead coming between them.[869]

Figure 6- 11. The Yakob carpet, inscription detail.
(https://www.google.com/culturalinstitute/beta/u/0/asset/the-yakob-polonaise-carpet/uQEk8SdqiHMKNw?hl=en Accessed September 28, 2016)

[863] Wenzel mentioned the detail of the carpet by the owner as follows: warp: cotton, white; weft: silk, green, apparently unspun; knotting: silk, asymmetrical, average: 342 per square inch; brocading: silver metal strip wrapped Z-wise around three S-plied olive-green and mauve silk cores, supplementary wrapping over three warps; selvedge: four bunched warps wrapped in light-green silk; colours: approximately 14.
[864] Wenzel, "Carpet and Wall-painting Design in Persia," 4.
[865] Ibid, 4.
[866] Ibid, 6.
[867] Dickran Kouymjian, "Reflections on Objects from the Pre-20th Century Diaspora with Armenian Inscriptions," *Series Byzantina IX* (2011): 10.
[868] Ibid, 10.
[869] Wenzel, "Carpet and Wall-painting Design in Persia," 6.

Figure 6- 12. The Yakob carpet, drawing of the inscriptions.
(Wenzel, Marian. "Carpet and Wall-Painting Design in Persia. An Armenian-inscribed 'Polonaise' Carpet." *Apollo* (1988 July): 7)

Hypothesis about "Yakob"

There are two main discussions about who "Yakob" might be. One is Wenzel which is the first exclusive publication on this specific carpet, published in 1988 and the second one which is a more recent paper by Kouymjian, published in 2014.[870] Wenzel stated that Yakob was almost certainly the name of the weaver of this carpet.[871] She added that the name is not unusual among Armenian clergy (for instance, Yakob of Julfā, whose name is now spelled Hakob in most English language literature, was *Catholicos*, or head of the Armenian Church, from 1655 to 1680), and one has, of course, to consider the possibility that the carpet was a donation.[872] However, the subtle way in which the letters are concealed suggests a weaver's rather than a recipient's, or even a donor's name. The smaller "YG" groups, if indeed that is what they are, probably represent the initials of Yakob's full name, the "G" standing for his family name, perhaps something like "Gevorgian."[873]

Aga-Oglu (see the Appendix of *Safawid Rugs and Textiles*), has divided known weavers' names into two groups, based on their signatory inscription: "weavers of dated textiles" and "weavers of undated textiles."[874] Based on this, the Yakob carpet will be in the category of the second group, since the date is not prescribed.

Wenzel hypothesised that Yakob is most probably the weaver of the carpet. But based on what Aga-Oglu mentioned about one of the Ṣafavīd textiles, appearing in a name as a signature, it is probably the owner of the manufactory because the name does not come by the word "'*amal*" ("work of").[875] Kouymjian's information is much updated about "Yakob." He wrote:

> [Yakob carpet] was not woven by a mysterious Armenian working in Isfahan-New Julfa in the time of Shah Abbas, but rather Hagop Kapoudjian, established in Paris and considered by many as one of the last masters of the Kum Kapi rug making

[870] Dickran Kouymjian, "The Berlin Dragon-Phoenix Carpet and its Probable Armenian Origin," in *Armenian Rugs and Textiles: An Overview of Examples from Four Centuries, exhibition catalogue* (Vienna: Armenian Rugs Society in association with the International Conference on Oriental Carpets (ICOC), 2014), 24.
[871] Wenzel, "Carpet and Wall-painting Design in Persia," 6.
[872] Ibid, 6.
[873] Ibid, 6.
[874] Aga-Oglu, *Safawid Rugs and Textiles,* 43-47.
[875] Ibid, 44.

school of Constantinople. I had written about him some years ago but failed to make the association with the 'Hagop' signature of this rug in a paper given in Zamość, Poland in 2010 on inscribed Armenian objects.[876]

The design of the Yakob carpet

The border consists of a fairly wide band placed between two narrow guard stripes. The wide band is filled with large palmettes and flowerheads, arranged alternately; its ground is part silver and part varicoloured silk-pile. The narrow guard stripes contain small rosettes alternating with a variety of other blooms.[877]

The inner field of the carpet can be considered as two mirror-image halves arranged around either the vertical or horizontal axis; a lobed blossom medallion acts as its centre.[878]

The pattern has five vertically placed medallions, two above and two below the central medallion, and this row is the most prominent feature in the overall design which includes halves of further medallions abutting the "frame" formed by the inner guard stripe of the border. There are four half medallions on either side, and they occur opposite the gaps and between the medallions of the central row.[879]

A pole, terminating in a palmette at one end and a cluster of leaves at the other, is placed on either side of the central medallion of the inner field, on the horizontal axis. Flanking the medallion on either side and crossing over the pole, is a deep blue cloud band. Cloud bands of identical shape, though truncated at one end by the border, and of coral and rose instead of blue, flank the top and bottom medallions of the central row. The background to these various elements consists of flowerheads, palmettes and exotic leaves, all of which have cream or tan stems, edged with Prussian blue or rose.[880]

The Yakob design group

Wenzel mentioned three carpets in the literature, similar in design structure to the Yakob carpet. She has given some information on each, which can be a clue to trace their current locations.

[876] Kouymjian, "The Berlin Dragon-Phoenix Carpet," 24.
[877] Wenzel, "Carpet and Wall-painting Design in Persia," 4-6.
[878] Ibid, 6.
[879] Wenzel, "Carpet and Wall-painting Design in Persia," 6.
[880] Ibid, 6.

The first example (Wenzel called it the "closest parallel") is a black and white image (Figure 6-13) that once belonged to the private collection of John D. Rockefeller Jr. It was believed in all probability that it was woven from the same cartoon as the Yakob carpet. [881]

After tracing the carpet, it is known to be held in the Iran Carpet Museum in Tehran (Figure 6-14). The design of the field is generally symmetrical, consisting of two truncated bell-shaped compartments separated by an eight-lobed rectangle. Each large compartment contains a floral pattern with a lotus blossom in the cross-section on a light blue background.[882]

Figure 6- 13. Polonaise carpet, ex-collection John D. Rockefeller Jr.
(Wenzel, Marian. "Carpet and Wall-Painting Design in Persia. An Armenian-inscribed 'Polonaise' Carpet." *Apollo* (1988 July): 10)

Wenzel referred to Bennett's book for a published photo of the second carpet, once held in the private collection of A. G. Kolkhurst.[883] Figure 6-15 is the photo published by Bennett, even though it is not good quality, but nevertheless the only clue for current knowledge.

The least information given by Wenzel is for the third carpet. Wenzel mentioned that this carpet passed though Sotheby's London saleroom in November 1976.[884] The carpet (Figure 6-16, a & b) has a similar design to the Yakob group. But it is not confirmed whether this is the third carpet Wenzel mentioned, or another one.

Figure 6- 14. Silk and gold, Iran, 1625-50, silk pile, silk and precious metal thread.
214 × 135 cm, Carpel Museum, Tehran. inv. no. 152 (Canby, Sheila R. *Shāh 'Abbās, The Remaking of Iran*. London: The Trustees of the British Museum, 2009, 244)

Spuhler described this carpet as thus "it gained considerable attention thanks to its Munich Residenz provenance, because this indicates that it might originally have been one of the carpets commissioned by Sigismund Vasa III."[885] He believed that it should be a pair. Wenzel indicated she had not been able to trace the current whereabouts of any of these three

[881] Wenzel, "Carpet and Wall-painting Design in Persia," 7.
[882] Canby, *Shāh 'Abbās, The Remaking of Iran*, 244.
[883] Wenzel, "Carpet and Wall-painting Design in Persia," 7.
[884] Ibid, 7.
[885] Spuhler, "Four So-Called Polish Rugs in the Rijksmuseum," 92.

carpets.[886] This could be the third carpet that Wenzel was not aware of, including its location in the Rijksmuseum in Amsterdam in 1988.

Figure 6- 15. Silk and metal thread Polonaise carpet, ex-collection G. A. Kolkhurst.
201 × 135 cm (Bennett, Ian. *Rugs and Carpets of the World*. London: Ferndale Editions, 1981, 81)

Making this a group of four carpets, including the Yakob carpet, is important in understanding the provenance and possibility they were woven by the same weaver. Being similar in design increases the possibility that they were woven from the same cartoon, as Wenzel pointed out, or a sample design. They could have come from the same workshop in Iṣfāhān, or most probably New Julfā in Iṣfāhān or at least an Armenian weaver in Iṣfāhān.

Figure 6- 16 (a&b). Polonaise carpet, silk, silver and gold-warped thread.
c. 1600-c. 1625, Rijksmuseum, Amsterdam, Netherlands
(https://www.google.com/culturalinstitute/beta/u/0/asset/%E2%80%B0%C3%BB%C3%B7polonaise-carpet%E2%80%B0%C3%BB%C2%AA/DQHHJqdCmcbJ1Q?hl=en Accessed September 28, 2016).

Although Wenzel was not sure whether the other carpets of the Yakob group have been searched for similar inscription, but from the photos she predicted there is not enough space in the similar cloud bands to carry an inscription.[887] Since she does not provide a good quality photo of any of these similar designs and also the inscription of the Yakob carpet was unnoticed for a long period of time, her claim would appear spurious.

Wenzel concluded "it is certainly the case that all three of the carpets in this group demonstrate, perhaps because of the superimposed lattice feature, a strength of composition rarely found in the design of 'Polonaise' carpets. It is therefore worth considering further the possibility that they were all manufactured to conform to Armenian taste, and/or are by Armenian craftsmen."[888]

[886] Wenzel, "Carpet and Wall-painting Design in Persia," 7.
[887] Wenzel, "Carpet and Wall-painting Design in Persia," 7.
[888] Wenzel, "Carpet and Wall-painting Design in Persia," 7.

Table 6-1. Overview of details of the "Yakob Group"

No	Photo	Location	Acquisition	Dating	Size	Provenance	Obj. No.
1		Art Gallery of South Australia, Adelaide, Australia	2000	c. 1625-1630	266.5 × 164.0 cm	Private collection in France, William Bowmore AO	20004A179
2		Carpet Museum, Tehran, Iran		1625-50	214.0 × 135.0 cm	Formerly in private collection, John D. Rockefeller Jr.	152
3						Formerly in private collection, A. G. Kolkhurst	
4		Rijks-museum, Amsterdam, Netherlands	1952[889]	c. 1600-1625	225.0 × 140.0 cm	Originated from Munich resident. Sold 27 May 1930 to S. Drey Art Collection, Dr F. Mannheimer collection	BK-17274

By reviewing the design structure and the motifs of Polonaise carpets in detail, we can see that although some other Safavid carpets continued to elaborate and get more complicated, but still some simpler designs like lattice as seen in Polonaise carpets were popular. Their colour combinations and how they were different from earlier Ṣafavīd carpets, in the 16th century, indicate a new style in Persian carpets. Some of these group of carpets were even commissioned by European royals and some for export. This makes it clear that the variation of Safavid carpets specially in the 17th century could fulfil different tastes and it might be the beginning of playing their role as commercial commodities in later time. Furthermore, by examining Yakob carpet in detail, our attempt to extract information on the potential designer

[889] This date is based on what is written on the Museum's website. Spuhler gave 1960 in his paper "Four So-Called Polish Rugs in the Rijksmuseum," 94.

of this specific carpet, makes us confirm we find no trace of even later Ṣafavīd carpet designers.

Conclusion

This study explored "continuity" and "change" in the Persian tradition of carpet making during the Ṣafavīd period. In order to study continuity and change in Ṣafavīd carpets, especially in the 16th century, 15th-century carpets were also included, when Iran was under Tīmūrīd rule in the east and Āq-Quyūnlū and Qārā-Quyūnlū Turkmen rule in the west. Also, the 17th-century Safavid was considered to see whether this change continued further.

These two concepts – continuity and change – are important in the study of carpet design, because based on some propositions in the field, significant changes in carpet design took place towards the end of the 15th century. Thus, significantly, Ṣafavīd carpets looked quite different from Tīmūrīd carpets. These changes were apparent with the replacement of geometric cross, star, and rosette designs by medallions and scrolls. Some scholars considered such change as marking a "revolution" in carpet design. However, there has been considerable debate on the nature of change, when it occurred and its provenance.

This study argued that there has been continuity in design elements. In other words, motifs continue to live on in an artistic ensemble, just like words in a language. When motifs are replaced by newer ones, the old ones do not disappear immediately. Continuity in design and motifs has been examined in this study from different perspectives.

Designs moved from one court to another, as geographical neighbouring courts contributed to continuity in design. Examples included: when Bāysunqur Mīrzā brought, from Tabrīz to Hirāt, several masters of manuscripts in 1420; during Shāh Ṭahmāsp's governorship of Hirāt (1516--1522), where he became familiar with Tīmūrīd art through the *Kitābkhānih* of the Tīmūrīd ruler, Sulṭān Ḥusayn Mīrzā (d.1506). This influenced Ṭahmāsp's taste according to the ideals of Tīmūrīd tradition. In addition, on his return to Tabrīz in 1522, Shāh Ṭahmāsp brought with him skilled artisans. This migration of artists is important in the continuation of court art.

Continuity of design occurred from one court to another. However, over time, a newly appointed prince or king inherited artistic and cultural figures together with his kingdom. This may be why it was difficult to divide early-16th-century Ṣafavīd carpets made during the reign of Shāh Ismā'īl, and those made in the late Turkmen and even Tīmūrīd dynasties.

Confusion about the nature of change, in relation to carpet design, mainly comes from the fact that carpet design has been largely overlooked. Separating two main components of carpet design – the motifs (forms) and field structure (format) – makes it easier to study and analyse. Carpet motifs, from a broader perspective, were among Persian decorative designs

known as “the seven fundamental modes of Persian decorative design” and constitute shared patterns in various media in Persian arts. Based on this knowledge, other artforms have been examined in this study to show change and continuity throughout the period under study in this thesis.

Designs migrated from one media to another, known as “transmateriality,” and defined as a common pool of design elements appearing in different media. The origin of the changes is believed to be the *kitābkhānih* of in the late 15th century. But *kitābkhānih* and its administration during Tīmūrīd followed almost the same as Ilkhānīd. Therefore, even if we accept that the new designs were brought by artists from other media, this was not a new practice in *kitābkhānih*. Furthermore, no sudden change in carpet design and especially medallions were the result of artists of the art of the book to design carpets.

The evolution of Persian art in the late 13th and early 14th centuries under the Mongols is indebted to Chinese elements including blossoms, trees, and shrubs, clouds and cloudbands, and animals, known as “chinoiserie.” From the latter half of the 14th century to the early 16th century, during the reign of Tīmūrīd and Turkmen kings, the Mongol-Ilkhānīd style merged and matured. Chinoiserie contributed to the evolution of Persian arts including carpets, for instance, the widespread use of khatāyī motifs.

Chinoiserie was the result of Tīmūrīd’s cultural encounter with China, which began during the reign of Tīmūr and reached its peak under Shāhrukh. Commercial policies and relationships with other countries continued during the Ṣafavīd period. This peaked during the time of Shāh ʻAbbās I (r. 1587--1629), to the extent that Ṣafavīd carpets in the 17th century reflected the cultural and economic diversity of the era.

Persian carpet design in relation to design structure has also been the subject of change. The medallion, as the most frequently used design structure in 16th-century carpets, has played an important role. Tracing medallion carpets which predate the 16th century leads us to two paintings, which interestingly appeared about the same time (in the 1440s) in the paintings of Shīrāz and Hirāt. This is in contrast with the view by some scholars that medallion carpets appeared in west Iran at the beginning of the 16th century.

A medallion carpet from the late 15th- and early 16th-century is a good example of change in carpet design, which happened gradually. The carpet bears elements from “the earlier layer of design -- an endless repeat of a small-scale interlace motif -- combined with a more recent layer in the form of floral motifs and a central medallion.” These combinations suggest that this carpet could be a missing link between an earlier geometric tradition and the arrival, later in the 15th century, of the so-called “carpet design revolution.”

Furthermore, there is no evidence that carpets were woven based on the squared-paper (graph-paper) knot plan and neither were designed by specific designers during Ṣafavīd period. However, one might argue that the technical inventions could result in having more elaborated curvilinear designs, but this could only help in the evolution of weaving techniques and were not sudden changes.

It is clearly evident from this study that the change in Persian carpet design over time was never sudden. Such design was affected in many different ways and some elements continued for centuries before they disappeared or were replaced by a new style.

Finally, by all the mentioned factors discussed, this study argued that Ṣafavīd period could not be called the "Golden Age" of Persian carpets. Indeed, it was a significant period in Persian art in general and Persian carpet in particular, but since the corpus of carpets from its past is not large, it cannot be considered as the "Golden Age."

Bibliography

Primary sources

‘Abd ul-Razzāq Samarqandī, *Matla‘ ul-Sa‘diyn va majma‘ ul-Baḥriyn.* Edited by Muḥammad Shafī. Vols. 1& 2. Lahore, 1368/1949.

‘Abdī Biyg Shīrāzī. *Ā’īn-i Iskandarī.* Edited by A. Rahimof. Moscow, 1977.

———. *Rużat ul-Ṣifāt*. Edited by A. Rahimof. Moscow, 1974.

———. *Duḥat al-Azhār.* Edited by A. Rahimof and Ali Mina’i Tabrizi. Moscow, 1974.

Amīr Ghayb Beg Album, Preface by Mīr Siyyid Aḥmad Mashhadī [Topkapı Palace Library, H. 2161, dated 1564--65]. In *Album Prefaces and Other Documents on the History of Calligraphers and Painters*, Wheeler M. Thackston. Leiden: Brill, 2001.

Chardin, John. *Travels in Persia*. London: Argonaut Press, 1927.

Dulatshāh Samarqandī , *Taẕkirat ul-shu’arā (Memoirs of the Poets) 1487*. Edited by Edward Brown in 1900. Tehran: Asatir, 2003.

Dūst Muḥammad (Guvāshānī Hiravī). “Preface to the Bahrām Mīrzā Album [Istanbul, TSM. 2154, fol. 15a].” In *Album Prefaces and Other Documents on the History of Calligraphers and Painters*, Wheeler M. Thackston. Leiden: Brill, 2001.

Ghīyāth ud-Dīn b. Humām al-Din Khāndimīr (1475/76--1534/35). *Ḥabīb ul-Siyr fī Akhbār Afrād al-Bashar*. Edited by Muḥammad Dabīr Sīyāqī. Tehran: Khayyām, 1333/1954.

Ḥāfiẓ Abrū, *Zubdat ul-Tavārīkh*. Edited by Siyyid Kamāl-i Hāj Siyyid Javādī. Tehran: Vizārat-i Farhang va Irshād-i Islāmī, 2001.

Herbert, SirThomas. 1606-1682. *Some Years Travels into Divers Parts of Africa, and Asia the Great Describing More Particularly the Empires of Persia and Industan : Interwoven with such Remarkable Occurrences as Hapned [Sic] in those Parts during these Later Times : As also, Many Other Rich and Famous Kingdoms in the Oriental India with the Isles Adjacent : Severally Relating their Religion, Language, Customs and Habit : As also Proper Observations Concerning them* London, Printed by R. Everingham for R. Scot, T. Basset, J. Wright, and R. Chiswell, 1677.

Iskandar Biyg Munshī. *Tārīkh-i ‘Ālam Ārā-yi ‘Abbāsī*, edited by Iraj Afshar, 2 vols. Tehran: Intishārāt-i Amīr Kabīr, 1350/1971.

Ismail Hakki Uzuncarsili. (1526), *Osmanli Sarayi’nda Ehl-i-Hiref (Sanatkarlar) defterliri, Belgeler*, Cilt XI, Sayi 15, 1981--86.

Mirza Muhammad-Haydar Dughlat (1500--1551). “The Tārīkh-i Rashīdī,” in *A Century of Princes: Sources in Tīmūrīd History and Art,* Wheeler M. Thackston, 357--362. Massachusetts: Cambridge, 1989.

Mīrzā Samī‘ā and Muḥammad Samī‘ [Minorsky (1943)], *Taẕkirat ul-Mulūk (Memorial for Kings): A Manual of Ṣafavīd Administration* (1726), edited by Muḥammad Dabīr-sīaqī, translated by Masoud Rajabnia, 1955.

Qāżī Aḥmad. “Calligraphers and Painters, A Treatise by Qāżī Aḥmad, Son of Mīr Munshī (circa A.H. 1015/A.D. 1606).” Translated and edited by V. Minorsky. *Freer Gallery of Art Occasional Papers* 3, no. 2 (Washington, D. C., 1959).

Qāżī Mīr Aḥmad Munshī. *Gulistān-i Hunar.* Edited by Ahmad Suhayli Khansari. *Bunyād-i Farhang-i* Iran, 1973.

Ṣādiqī Biyg, *Qānūn al-Ṣuvar (The Canons of Painting)*, translated as an appendix in Martin B. Dickson and Stuart C. Welch, *The Houghton Shahnameh.* Cambridge and London: Harvard University Press, 1981.

Sām Mīrzā Ṣafavī, *Taẕkirh-iyi Tuḥfih Sāmī*, Rukn al-Dīn-i Humāyūnfarrukh. Tehran. 1355/1976.

Secondary sources

Aga-Oglu, Mehmet. *Safawid Rugs and Textiles, The Collection of the Shrine of Imam ‘Ali at Al-Najaf.* New York: Columbia University Press, 1941.

Akimushkin, O. F. “The Library-Workshop (*kitābkhāna*) of Bāysunqur Mīrzā in Herat,” *Manuscripta Orientalia*, 3, no. 1 (1997).

Allen, Terry. *Tīmūrīd Hirāt*. Wiesbaden: Reichert, 1983.

Andrews, P. A. “The Tents of Timur: An Examination of Reports on the Quriltay at Samarqand, 1404,” in *Arts of the Eurasian Steppelands*, ed. Philip Denwood, Colloquies on Art and Archaeology in Asia, no. 7. London: University of London, School of Oriental and African Studies, Percival David Foundation, 1977.

Aschenbrenner, Erich. *Rugs and Carpets of Iran* (Oriental rugs, Part II: Iran). Tehran: Farhangsara, 1981.

Azhand, Yaqub. *Seven Fundamental Modes of Iranian Decorative Arts (Haft Aṣl-i Taz’īnī-yi Hunar-i Iran)*. Tehran: Piykarih, 2014.

———. “*Khatāyī* Mode in Iran’s Art of Book (*Aṣl-i Khatāyī dar Kitāb-Ārāyi-yi Iran*).” *Nigarih* 10 (2009): 16--29.

———. “*Kitābkhānih* and *Naqqāsh-khānih* Organization of the School of Iṣfahān.” *Gulistān-i Hunar* 2 (2005): 44--50.

———. “Art Atelier During the Reign of Sultān Ḥusayn Bāyqarā (*Kārgāh-i Hunari-yi Sultān Ḥusayn Bāyqarā*).” *Hunarhāy-i Zībā* 12 (2003): 89--99.

———. “Art Education and Patronage During the Shāhrukh Reign (*Hunar-parvarī va hunarvarī dar duri-yi Shāhrukh).*” *Nashrīyi-yi Takhaṣṣuṣī-yi Guruh-i Tārīkh, Dānishgāh-i Tehran* 3 (2002): 75--90.

Babaie, Susan. *Isfahan and Its Palaces.* Edinburgh: Edinburgh University Press, 2008.

Baer, Eva. *Islamic Ornament*. Edinburgh: Edinburgh University Press, 1998.

Bennett, Ian. *Rugs and Carpets of the World*. London: Ferndale Editions, 1981.

Bier, Carol. "Textiles and Society." In *Woven from the Soul, Spun from the Heart: Textile Arts of Safavid and Qajar Iran, 16th—19th Centuries*, 1--6. Washington, D.C.: Textile Museum, 1987.

———. "Court and Commerce: Carpets of Safavid Iran." In *Woven from the Soul, Spun from the Heart: Textile Arts of Safavid and Qajar Iran, 16th--19th Centuries*, edited by Carol Bier, 97--106 and catalogue 203--223. Washington, D.C.: Textile Museum, 1987.

———. "Introduction." In *Woven from the Soul, Spun from the Heart: Textile Arts of Safavid and Qajar Iran, 16th--19th Centuries*, edited by Carol Bier, xii- xv. Washington, D.C.: Textile Museum, 1987.

———. "Textiles and Trade." In *Woven from the Soul, Spun from the Heart: Textile Arts of Safavid and Qajar Iran, 16th—19th Centuries,* edited by Carol Bier, 224-243. Washington, D.C.: Textile Museum, 1987.

Blair, Sheila. "The Religious Art of Ilkhanids." In *The Legacy of Genghiz Khan, Courtly Art and Culture in Western Asia, 1256--1353*, edited by Linda Komaroff and Stefano Carboni, 104-133. New York: The Metropolitan Museum of Art, 2002.

Briggs, Amy. "Timurid Carpets I. Geometric Carpets." *Ars Islamica* 7/1 (1940): 20--54.

———. "Timurid Carpets II. Arabesque and Flower Carpets." *Ars Islamica* 11/12 (1946): 146--158.

Burckhardt, Titus. *Mirror of the Intellect: Essays on Traditional Science and Sacred Art*. Translated and edited by William Stoddart. New York: State University of New York, 1987.

Cammann, Schuyler V.R. "Symbolic Meanings in Oriental Rug Patterns: Part II." *Textile Museum Journal* 3 (December 1972): 22--41.

Cammann, Schuyler V.R. "Symbolic Meanings in Oriental Rug Patterns: Part III." *Textile Museum Journal* 3 (December 1972): 42--54.

Canby, Sheila R. "The World of the Early Ṣafavīds, Shāh Tahmasp at Qazvin, 1550--76." *Hunt for Paradise: Court Arts of Safavid Iran 1501—1576*. Edited by Jon Thompson and Sheila R. Canby, 3--25. Milan: Skira Editore, 2003.

———. *Shāh 'Abbās, The Remaking of Iran*. London: The Trustees of the British Museum, 2009.

Carey, Moya. "Safavid Dynastic Vision in the Ardabil Carpet: Shah Tahmasp's Commission." *Carpets in Iran 1400-1700, New Perspectives (as part of the HALI London symposium)*. Paper given at the Courtauld Institute of Art, June 2019.

Contadini, Anna. "Threads of Ornament in the Style World of the Fifteenth and Sixteenth Centuries." In *Histories of Ornament from Global to Local*, edited by Gülru Necipoğlu and Alina Payne, 290--305. Princeton: Princeton University Press, 2016.

Çağman, Filiz. “On the Contents of Four Istanbul Albums H 2152, 2153, 2154 and 2160.” *Islamic Art 1* (1981): 31--36.

Danish-Pazhuh, Muhammad Taqi. “*Rangsāzī dar Kāghaz va rang zudāyī az ān*.” *Hunar va mardum* 86-87 (1977): 16--36.

Day, Susan. *Great Carpets of the World.* London: Thames and Hudson, 1996.

———. “Ottoman, Safavid and Mughal Textile Art: Exchanges and Interactions.” In *Istanbul, Isfahan, Delhi: Three Capitals of Islamic Art - Masterpieces from the Louvre Collection*, 92--153. Istanbul: Sakip Sabanci Museum, 2008.

Denny, Walter B. “Anatolian Rugs: An Essay on Method,” *Textile Museum Journal* Ill, no. 4, December (1973): 7--20.

———. “Ten Great Carpets in the Museum of Fine Arts Boston,” *Hali* 1, no. 2 (1978): 156--164.

———. *The Classical Tradition in Anatolian Carpets.* London: Scala Publishers, 2003.

———. “Anatolia, Tabriz, and the Carpet Design Revolution.” In *Carpets and Textiles in the Iranian World 1400--1700*, edited by Jon Thompson, Daniel Shaffer and Pirjetta Mildh, 58--71. Oxford: The May Beattie Archive at the Ashmolean Museum, 2010.

———. *How to Read Islamic Carpets*. New York: The Metropolitan Museum of Art, 2014.

Der Manuelian, Lucy. “An Introduction to Rug-Weaving in Armenia, parts I, II and III.” In *Weavers, Merchants and Kings: The Inscribed Rugs of Armenia*, edited by Emily Santo, 13--50. Texas: Kimbell Art Museum, 1984.

Dickson, Martin B., and Stuart C. Welch. *The Houghton Shahnameh*. Cambridge and London: Harvard University Press, 1981.

Dimand, M.S. “Safavid Textiles and Rugs.” In *Highlights of Persian Art*, edited by R. Ettinghausen & E. Yarshater, 273--311. Colorado: Westview Press, 1979.

Edwards, A. Cecil. *The Persian Carpet: A Survey of the Carpet-Weaving Industry of Persia.* London: Duckworth, 1975.

Eiland, Murray L. “Rug and carpet.” *Encyclopædia Britannica* (March 2016): 1--2. Accessed July 13, 2018. https://www.britannica.com/technology/rug-and-carpet/Introduction.

Ellis, Charles Grant. “A Soumak Rug in a 15th-century International Style.” *Textile Museum* Journal 1, no. 2 (1963): 3--20.

———. “Mysteries of the Misplaced Mamluks.” *Textile Museum Journal* 2, no. 4 (1969): 5--22.

Erdmann, Kurt. *Oriental Carpets: An Account of their History*. Translated by Charles Grant Ellis. London: Zwemmer, 1960.

———. *Seven Hundred Years of Oriental Carpets.* Translated by May H. Beattie and Hildegard Herzog. London: Faber and Faber, 1970.

Falsafi, Nasrullah. *The Life of Shāh 'Abbās I (Zendegānī-yi Shāh 'Abbās-i Avval), volume III*. Tehran: Tehran University Press, 1968.

Farnham, Thomas J. "From Lessing to Ettinghausen: The First Century of Safavid Carpet Studies." *Hali December* (2007): 80--91.

Ferrier, Ronald W. *The Arts of Persia.* Translated by Parviz Marzban. Tehran: Farzan-e Rooz, 1995.

Floor, Willem. "Economy and Society: Fibres, Fabrics, Factories." In *Woven from the Soul, Spun from the Heart: Textile Arts of Safavid and Qajar Iran, 16th--19th Centuries*, edited by Carol Bier, 20--32. Washington, D.C.: Textile Museum, 1987.

———. *The Persian Textile Industry in the Historical Perspective, 1500--1925.* Paris: L'Harmattan, 1999.

———. Art (*Naqqashi*) and artists (*Naqqashan*) in Qajar Persia. *Muqarnas16* (1999): 125--54.

Ford, Peter R.J. *Oriental Carpet Design: A Guide to Traditional Motifs, Patterns and Symbols*. London: Thames and Hudson, 2008.

Franses, Michael. "Some Wool Pile Persian-Design Niche Rugs." In *Oriental Carpet and Textile Studies*, edited by Murray L. Eiland and Robert Pinner, 36--136 (Vol. V, Part 2). Danville: ICOC, 1999.

Ghougassian, Vazken S. "Julfa i. Safavid Period." *Encyclopaedia Iranica*, XV/2, 217--224 and XV/3, 225--231, available online at http://www.iranicaonline.org/articles/julfa-i-safavid-period (accessed 28 September 2016).

Golombek, Lisa. "Discourses of an Imaginary Arts Council in Fifteenth-Century Iran." In *Timurid Art and Culture: Iran and Central Asia in the Fifteenth Century*, edited by Lisa Golombek and Maria Subtelny, 1--17. Leiden: Brill, 1982.

———. "The Draped Universe of Islam." In *Content and Context of Visual Arts in the Islamic World* (Papers from A Colloquium in Memory of Richard Ettinghausen Institute of Fine Arts, New York University 1980, planned and organized by Carol Manson Bier), edited by Priscilla P. Soucek, 25--38. University Park: The Pennsylvania State University Press, 1988.

Golombek, Lisa, and Maria Subtelny. *Tīmūrīd Art and Culture: Iran and Central Asia in the Fifteenth Century.* Leiden: E. J. Brill, 1992.

Golombek, Lisa, and Donald Wilber. *Timurid Architecture of Iran and Turan*. Princeton, N.J.: Princeton University Press, 1988.

Gonnella, Julia, Friederike Weis, and Christoph Rauch. *The Diez Albums: Contexts and Contents*. Leiden: Brill, 2016.

Grabar, Oleg. “The Visual Arts, 1050--1350.” *The Cambridge History of Iran*. Cambridge: Cambridge University Press, 1968.

Grabar, Oleg, and Mika Natif. “Two Safavid Paintings: An Essay in Interpretation.” *Muqarnas* 18 (2001): 173--202.

Gregorian, Vartan. “Minorities of Isfahan: The Armenian Community of Isfahan 1587--1722.” *Iranian Studies* 7/3-4 (1974): 652-680.

Grube, Ernst. “Notes on the Decorative Arts of the Timurid Period.” In *Gururajamanjarika: Studi in anore di Guiseppe Tucci*. Naples: Istituto Universitario Orientale, 1974.

Haneda, Masashi, and Rudi Matthee, “Isfahan vii. Safavid Period.” In *Encyclopedia Iranica*. Accessed August 8, 2019. http://www.iranicaonline.org/articles/isfahan-vii-safavid-period.

Harris, Nathaniel. *Rugs and Carpets of the Orient*. London: Hamlyn, 1977.

Helfgott, Leonard M. *Ties that Bind: A Social History of the Iranian Carpet.* Washington: Smithsonian Institute, 1994.

Hillenbrand, Robert. “The Arts of the Book in Ilkhanid Iran.” In *The Legacy of Genghiz Khan, Courtly Art and Culture in Western Asia, 1256--1353*, edited by Linda Komaroff and Stefano Carboni, 134--167. New York: The Metropolitan Museum of Art, 2002.

Jackson, Cailah. “Persian Carpets and the South Kensington Museum: Design, Scholarship and Collecting in Late Nineteenth Century Britain.” *Journal of Design History* 3 September (2017): 265--281.

“Janissary, Turkish Military.” In *Encyclopedia Britannica*. Accessed May 1, 2020. https://www.britannica.com/topic/devsirme.

Kadoi, Yuka. *Islamic Chinoiserie: The Art of Mongol Iran.* Edinburgh: Edinburgh University Press, 2009.

Klose, Christine. “Traces of Timurid Carpets in Contemporary and Later Carpets from the Near East.” In *Carpets and Textiles in the Iranian World 1400--1700*, edited by Jon Thompson, Daniel Shaffer and Pirjetta Mildh, 72--89. Oxford: The May Beattie Archive at the Ashmolean Museum, 2010.

Komaroff, Linda. “The Transmission and Dissemination of a New Visual Language.” In *The Legacy of Genghiz Khan, Courtly Art and Culture in Western Asia, 1256--1353*, edited by Linda Komaroff and Stefano Carboni, 168--195. New York: The Metropolitan Museum of Art, 2002.

Kouymjian, Dickran. “The Berlin Dragon-Phoenix Carpet and its Probable Armenian Origin.” In *Armenian Rugs and Textiles: An Overview of Examples from Four Centuries, exhibition catalogue*, 16--31, Vienna: Armenian Rugs Society in association with the International Conference on Oriental Carpets (ICOC), 2014.

———. “Reflections on Objects from the Pre-20th Century Diaspora with Armenian Inscriptions.” *Series Byzantina IX* (2011).

Lentz, Thomas W., and Glen D. Lowry, *Timur and the Princely Vision: Persian Art and Culture in the 15th Century.* Los Angeles: Los Angeles County Museum, 1989.

Lockhart, Laurence. "European Contacts with Persia, 1350--1736." In *The Timurid and Safavid Periods*, edited by Peter Jackson and Laurence Lockhart, vol. 6, *The Cambridge History of Iran*, edited by William B Fisher, Ilya Gershevitch, Ehsan Yarshater, Richard Nelson Frye, John Andrew Boyle, Peter Jackson, Laurence Lockhart, Peter Avery, Gavin Hambly, C.P. Melville, 373--411. London: Cambridge University, 1986.

Mackie, Louise W. *Symbols of Power: Luxury Textiles from Islamic Lands, 7th–21st Century*. New Haven: Yale University Press, 2015.

Maktabi, Hadi. "In the Safavid Shadow: The Forgotten Age of Persian Carpets (1722--1872)." PhD thesis, *University of Oxford*, 2007.

———. *The Persian Carpet: The Forgotten Years, 1722-- 1872.* London: Hali Publications Ltd., 2019.

Matthee, Rudi. "Safavid Dynasty." In *Encyclopedia Iranica.* Accessed July 12, 2019. http://www.iranicaonline.org/articles/safavids

Mayel Heravi, Najib. *Bookbinding in Islamic Civilisation (Kitāb-Ārāyī dar Tamaddun-i Islāmī)*, Mashhad: Āstān-i Quds, 1993.

Melville, Charles. "The Mongols in Iran." In *The Legacy of Genghiz Khan, Courtly Art and Culture in Western Asia, 1256--1353*, edited by Linda Komaroff and Stefano Carboni, 36--61. New York: The Metropolitan Museum of Art, 2002.

Najarpour Jabbari, Samad, and Muhammadali Rajabi. "Miniaturists: Master Carpet Designers in the Second Tabriz School." *Negareh*, 2 (2006): 106--119.

Navā'ī, Abdul-Ḥossiyn. *Shāh 'Abbās: Collection of Historical Documents and Correspondence (Shāh 'Abbās: Majmu'e-i Asnād va Mokātebāt-i Tārikhī).* Ṭehrān: Bonyād-i Farhang-i Irān, 1923.

Necipoğlu, Gülru. "Early Modern Floral: The Agency of Ornament in Ottoman and Safavid Visual Culture." In *Histories of Ornament from Global to Local*, edited by Gülru Necipoğlu and Alina Payne, 132--155. New Jersey: Princeton University, 2016.

———. *The Topkapı Scroll – Geometry and Ornament in Islamic Architecture*. Santa Monica: The Getty Centre for the History of Art and Humanities, 1995.

———. "A Kanun for the State, a Canon for the Arts: The Classical Synthesis in Ottoman Artand Architecture during the Age of Süleyman," in *Soliman le Magnifique et son temps, Actes du Colloque de Paris Galeries Nationales du Grand Palais, 7-10 mars 1990*, ed. Gilles Veinstein, Rencontres de l'école du Louvre (1992): 195--216.

O'Kane, Bernard. *Timurid Architecture in Khurasan.* Islamic art and architecture, v. 3. Costa Mesa: Mazdâ Publishers, 1987.

Özdural, Alpay. “Mathematics and Arts: Connections between Theory and Practice in the Medieval Islamic World.” *Historia Mathematica* 27 (2000): 171–201.

Pope Arthur U., and Phyllis Ackerman, Ed., *A Survey of Persian Art from Prehistoric Times to the Present* in 6 vols, vol 3: 2756--2763. London: Oxford University, 1938--1939.

Porter, Yves. *Painters, Paintings and Books*: *An Essay on Indo-Persian Technical Literature, 12—19th Centuries.* New Delhi: Centre for Human Sciences, 1994.

———. “From the ‘Theory of the Two *Qalams*’ to the ‘Seven Principles of Painting’: Theory, Terminology, and Practice in Persian Classical Painting.” *Muqarnas* 17 (2000): 109--18.

Potczynski, Michael. “The Relacyja of Sefer Muratowicz: 1601--1602 private royal envoy of Sigismund III Vasa to Shah ‘Abbas I.” *Turkish Historical Review* 5 (2014): 1--35.

Qelichkhani, Hamidreza. *Encyclopedia of Calligraphy and Related Arts*. Tehran: Ruzanih, 1994.

Roxburgh, David J. “Persian Drawing, CA. 1400--1450: Materials and Creative Procedures.” *Muqarnas* 19 (2002): 44-77.

———. *The Persian Album, 1400--1600: From Dispersal to Collection*. New Haven: Yale University Press, 2005.

———. *Prefacing the Image: The Writing of Art History in Sixteenth-Century Iran*, Studies and Sources in Islamic Art and Architecture 9. Leiden: Brill, 2001.

———. “Our Works Point to Us: Album Making, Collecting, and Art (1427--1565) under the Tīmūrīds and Ṣafavīds,” 3 vols., PhD diss., University of Pennsylvania, 1996.

“Ṣafavid dynasty.” In *Encyclopedia Britannica.* Accessed July 2, 2019. https://www.britannica.com/topic/Safavid-dynasty

Santos, Raquel. “New Carpets for New Markets: The Production and Consumption of ‘Indo-Persian’ Carpets, 16th and 17th Centuries.” PhD thesis, *University of Lisbon*, Portugal, 2017.

———. “Persia, India or Indo-Persian? The study of Sixteenth- and Seventeenth-century knotted Pile Carpets.” In *Persian Art: Image-making in Eurasia*, edited by Yuka Kadoi. Edinburgh: Edinburgh University Press, 2017.

Savory, Roger. *Iran under the Safavids.* Cambridge: Cambridge University, 1980.

Seki, Yosshifusa. “Quṭb al-Dīn Qiṣṣhih Khān’s Preface to Shāh Ṭahmāsp’s Album.” *Nāmih Bahāristān* 2 (2002): 309--316.

Slota, Baeta. “The Polonaise Carpets and Their Connection with Polish Art and Culture.” *Oriental Carpet and Textile Studies* 1, no.1 (1985): 93--99.

Soudavar, Abolala. *Art of the Persian Courts, Selections from the Art and History Trust Collection*. New York: Rizzoli, 1992.

Spuhler, Friedrich. "Carpets and Textiles (1973)." In *The Timurid and Safavid Periods*, edited by Peter Jackson and Laurence Lockhart, vol. 6, *The Cambridge History of Iran*, edited by William B Fisher, Ilya Gershevitch, Ehsan Yarshater, Richard Nelson Frye, John Andrew Boyle, Peter Jackson, Laurence Lockhart, Peter Avery, Gavin Hambly, C.P. Melville, 698--727. London: Cambridge University, 1986.

———. *Oriental Carpets in the Museum of Islamic Art, Berlin.* Translated by Robert Pinner. London: Faber and Faber, 1987.

———. "Four So-Called Polish Rugs in the Rijksmuseum." *The Rijкs Museum Bulletin* 59, no.1 (2011): 88--98.

———. *Carpets from Islamic Lands* (*Dar Al-Athar Al-Islamiyyah, The Al-Sabah Collection, Kuwait).* London: Thames and Hudson, 2012.

Stanley, Tim. *Palace and Mosque, Islamic Art from Middle East.* London: Victoria and Albert Museum Publications, 2004.

Thackston, Wheeler. *Album Prefaces and Other Documents on the History of Calligraphers and Painters*. Leiden: Brill, 2001.

———. *A Century of Princes: Sources in Tīmūrīd History and Art*. Massachusetts: Cambridge, 1989.

Thomas, William, Roy, S. A., and Alderley, Lord Stanley Of. *Travels to Tana and Persia*. By Josafa Barbaro and Ambrogio Contarini. Farnham: Hakluyt Society, 2010. Accessed May 4, 2020. ProQuest Ebook Central.

Theotokis, Georgios, and Aysel Yıldız. *A Military History of the Mediterranean Sea: Aspects of War, Diplomacy and Military Elites*. Leiden: Brill, 2018.

Thompson, Jon. "Carpets in the Fifteenth Century." In *Carpets and Textiles in the Iranian World 1400--1700*, edited by Jon Thompson, Daniel Shaffer and Pirjetta Mildh, 31--57. Oxford: the May Beattie Archive at the Ashmolean Museum, 2010. This book is published and revised from papers delivered at the international conference "Carpets and Textiles in the Iranian World, c. 1400--1700," held at the Ashmolean Museum in August 2003.

———. "Early Safavid Carpets and Textiles." In *Hunt for Paradise: Court Arts of Safavid Iran, 1501--1576*, edited by Jon Thompson and Sheila R. Canby, 270--317. Milan: Skira Editore, 2003.

———. *Milestones in the History of Carpets.* Milan: Moshe Tabibnia, 2006.

Uluç, Lale. "The Common Timurid Heritage of the Three Capitals of Islamic Arts." In *Istanbul, Isfahan, Delhi: Three Capitals of Islamic Art - Masterpieces from the Louvre Collection*, 39--51. Istanbul: Sakip Sabanci Museum, 2008.

"Uzun Ḥasan." In *Encyclopedia Britannica*. Accessed July 2, 2019. https://www.britannica.com/biography/Uzun-Hasan.

Walker, Daniel. "Carpets ix. Safavid Period." *Encyclopaedia Iranica*, IV/7 (1990): 866--875. Accessed January 10, 2016, http://www.iranicaonline.org/articles/carpets-ix.

Watt, James C. Y. "A Note on Artistic Exchanges in the Mongol Empire." In *The Legacy of Genghiz Khan, Courtly Art and Culture in Western Asia, 1256--1353*, edited by Linda Komaroff and Stefano Carboni, 62--73. New York: The Metropolitan Museum of Art, 2002.

Welch, Anthony. "Art in Iran ix. Safavid to Qajar Periods." *Encyclopaedia Iranica* II/6 (1986): 620--627. Accessed February 3, 2016, http://www.iranicaonline.org/articles/art-in-iran-ix-safavid.

Wenzel, Marian. "Carpet and Wall-Painting Design in Persia: An Armenian-inscribed 'Polonaise' Carpet." *Apollo* (1988 July): 4–11.