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The advent of Abrī: the first wave of paper marbling in the long 16th century (ca. 1496-1616CE)

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**The Advent of *Abrī*:
The First Wave of Paper Marbling
in the Long 16th Century (ca. 1496–1616)**

The Advent of *Abrī*:

The First Wave of Paper Marbling

in the Long 16th Century (ca. 1496–1616)

Abstract: This dissertation examines the appearance of paper marbling in the Islamic world and its spread to Europe during the long sixteenth century, circa 1496–1616. Primarily known by the Persian term *abrī*, or “clouded” designs, artists employed it with other decorated papers to cover, mount, or write, and even visually illustrate sixteenth-century Turco-Persian manuscripts. Artists produced such sheets in institutional, commercial, pedagogical, and itinerant contexts. Prevailing literature suggests the art originated in East Asia or Turkistan and then “transferred” elsewhere; however, instead of privileging unproven speculation, this investigation pursues the evidentiary trail instead. It ascertains and articulates how an initial wave of *abrī* first arose and rippled throughout Turco-Persian Muslim culture and ultimately reached Europe. Comparing the earliest Indo-Persian, Ottoman, and Dutch sources on marbling reveals vastly varied technical information in broad circulation amongst marbling artisans or “marblers.” They disseminated their methods when they emigrated elsewhere or recorded their observations in writing. The need to adapt substitute materials for unavailable ones also resulted in regional variants. Others who lacked the requisite technical information also tried to imitate the papers they saw. Despite these differing modes, surviving evidence falls into three main pattern categories: droplet motifs, swirled, and pebbled designs. Gazing at abstract patterns can elicit perceptual responses that likely inspired artists and poets alike to employ the paper. It proves that before seventeenth-century “second wave” technical patterning advancements occurred, Turco-Persian Muslim and European intellectuals viewed these early marbled designs with curiosity, esteem, and delight.

Keywords: *abrī*, marbled paper; decorated paper; Islamic manuscripts; technology history; book history; stationery trade; Islamic calligraphy.

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**The Advent of *Abrī*:
The First Wave of Paper Marbling
in the Long 16th Century (ca. 1496–1616)**

PROEFSCHRIFT

ter verkrijging van
de graad van doctor aan de Universiteit Leiden,
op gezag van de rector magnificus prof.dr.ir. H. Bijl,
volgens besluit van het college voor promoties
te verdedigen op donderdag 21 november
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Prof. dr. Y. Porter (Aix-Marseille Université)
Prof. dr. I. Sturkenboom (Ludwig-Maximilians-Universität)
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They curiously flecke their paper, which is thicke, much of it being coloured & dappled like chamolets, done by a tricke they haue in dipping it in the water.

George Sandys (d. 1644)

“Of the Turks, their Manners, &c.,” *A Relation of a Journey Begun An: Dom: 1610: Foure Bookes: Containing a Description of the Turkish Empire, of Ægypt, of the Holy Land, of the Remote Parts of Italy, and Ilands Adioyning* (London: W. Barrett, 1615), 72.

The Turkes have a Pretty Art of Chamoletting of Paper, which is not with vs in vſe. They take diuers Oyled Colours, and put them ſeuerally (in drops) upon Water; and ſtir the Water lightly; and then wet their Paper (being of ſome Thickneſſe) with it; And the Paper will be Waued and Veined, like Chamolet or Marble.

Francis Bacon (d. 1626)

“Experiment Solitary Touching Chamoletting of Paper, 741,” *Sylva Sylvarum: Or A Naturall Hiftorie in Ten Centuries* (London: William Rawley, 1628), 192.

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Transliteration and Dating

This dissertation employs British English with references and bibliography following the Chicago Manual of Style. Arabic, Persian, and Ottoman Turkish transliteration for names and terms follows standards of the *International Journal of Middle East Studies* (IJMES); however, it replaces a left apostrophe for ‘*ayn* (ع), right apostrophe for *hamza*’ (ء), *ġ* for *ghayn* (غ), and a single *y* for *niṣba* endonyms.

IJMES TRANSLITERATION SYSTEM FOR ARABIC, PERSIAN, AND TURKISH															
CONSONANTS															
A = Arabic, P = Persian, OT = Ottoman Turkish, MT = Modern Turkish															
	A	P	OT	MT		A	P	OT	MT		A	P	OT	MT	
ء	ʾ	ʾ	ʾ	—	ز	z	z	z	z	ك	k	k or g	k or ñ	k or n	
ب	b	b	b	b or p	ژ	—	zh	j	j				or y	or y	
پ	—	p	p	p	س	s	s	s	s				or ğ	or ğ	
ت	t	t	t	t	ش	sh	sh	ş	ş	گ	—	g	g	g	
ث	th	s	s	s	ص	ş	ş	ş	s	ل	l	l	l	l	
ج	j	j	c	c	ض	ḍ	ẓ	ẓ	z	م	m	m	m	m	
چ	—	ch	ç	ç	ط	ṭ	ṭ	ṭ	t	ن	n	n	n	n	
ح	ḥ	ḥ	ḥ	h	ظ	ẓ	ẓ	ẓ	z	ه	h	h	h ¹	h ¹	
خ	kh	kh	h	h	ع	ʿ	ʿ	ʿ	—	و	w	v or u	v	v	
د	d	d	d	d	غ	gh	gh	g or ğ	g or ğ	ي	y	y	y	y	
ذ	dh	ẓ	ẓ	z	ف	f	f	f	f	ة	a ²				
ر	r	r	r	r	ق	q	q	ķ	k	ال	a ³				

¹ When h is not final.

² In construct state: at.

³ For the article, al- and -l-.

VOWELS																
ARABIC AND PERSIAN								OTTOMAN AND MODERN TURKISH								
Long	ا	or	اَ	ā				ā	{	words of Arabic and Persian origin only						
			و	ū				ū								
			ي	ī				ī								
Doubled	ای		ای	īy (final form ī)				iy (final form i)								
	ووی		ووی	uww (final form ū)				uvv								
Diphthongs	او		او	au or aw				ev								
	ای		ای	ai or ay				ey								
Short	ا		ا	a				a or e								
	و		و	u				u or ü / o or ö								
	ی		ی	i				i or i								

For Ottoman Turkish, authors may either transliterate or use the modern Turkish orthography.

Dates: All *Anno Hegiræ* dates, both Islamic and modern Iranian solar calendars appear with corresponding day, abbreviated month, and year, with pre-1582 dates converted to Julian and thereafter to Gregorian formatted thus: 25 *Dhī-l-Qa‘da* 907/1 Jun 1502. Note this transliteration flexibly connoted wherever the cognate prefix *Dhī* (ذی) appears in Turco-Persian manuscripts, instead of the Arabic *dhū* (ذو).

Abbreviations

The following denote features, languages, and manuscript repositories.

Features:

cm.:	centimetres	ff. 3=6:	conjugate bifolium 3 to 6
f. 8r:	folio 8 recto	ff. 4≠5:	fastened bifolium 4 to 5
f. 8v:	folio 8 verso	mm.:	millimetres
ff. 7–8:	folios 7 to 8	§:	section(s)

Languages:

A:	Arabic	Hu:	Hungarian
Ca:	Chagatai	I:	Italian
Ci:	Chinese	J:	Japanese
D:	Dutch	L:	Latin
E:	English	O:	Ottoman
F:	French	P:	Persian
Ge:	German	S:	Sanskrit
Gr:	Greek	T:	Modern Turkish
Hi:	Hindustani/Dakhni		

Repositories:

A&HT:	Art & History Trust, Houston.
AJHL:	Arthur J. Houghton Library, Harvard University, Cambridge MA.
AKM:	Aga Khan Museum, Toronto.
ARBL:	Abu Raihon al-Beruni Library, Tashkent.
BAV:	Vatican Apostolic Library, Rome.
BM:	British Museum, London.
BL:	British Library, London.
BLO:	Bodleian Library, Oxford University, Oxford.
BMA:	Brooklyn Museum of Art, Brooklyn.
BNF:	Bibliothèque Nationale de France.
BNUS:	Bibliothèque Nationale Universitaire de Strasbourg.
BOA:	Ottoman Imperial Archives, İstanbul.
BR:	Biblioteca Reale, Turin.
CBL:	Chester Beatty Library, Dublin.
CGM:	Calouste Gulbenkian Museum, Lisbon
DAKM:	National Library of Egypt, Cairo.
UEL:	University of Edinburgh Library, Edinburgh.
GRI:	Getty Research Institute, Los Angeles.
HAB:	Herzog August Bibliothek, Wolfenbüttel.
HAM:	Harvard Art Museums, Harvard University, Cambridge MA.
HAUM:	Herzog Anton Ulrich-Museum, Braunschweig.
HPWC:	Hauptstaatsarchiv, Piccard Watermark Collection, Stuttgart.
İAE:	İstanbul Araştırma Enstitüsü, İstanbul.
İÜK:	İstanbul University Library, İstanbul.
JKMM:	Jagdish and Kamla Mittal Museum, Hyderabad.
JRRI&L:	John Rylands Research Institute and Library, Manchester.
KAQR:	Shrine of Imam Reza Library, Mashhad.
KBOPL:	Khuda Bakhsh Oriental Public Library, Patna.
KGM:	Kunstgewerbemuseum, Berlin.
KMMM:	Malek National Museum and Library, Tehran.
KMSM:	Library of the National Consultative Assembly, Tehran.
LACMA	Los Angeles County Museum of Art, Los Angeles.

xx Abbreviations

LC:	Library of Congress, Washington, D. C.
MAH:	Musée d'Art et d'Histoire, Geneva.
MAK:	Museum für Asiatische Kunst, Berlin.
MAM:	Amīr al-Mu'minīn Library, Najaf.
MBF:	Martin Bodmer Foundation, Geneva.
MBHDII:	Museum of Islamic Archaeology and Art of Iran, Tehran.
MF:	Mardjani Foundation, Moscow.
MFA:	Museum of Fine Arts, Boston.
MG:	Musée National des Arts Asiatiques-Guimet, Paris.
MIA:	Museum of Islamic Art, Doha.
ML:	Musée du Louvre, Paris.
MK:	Khalidi Library, Jerusalem.
MKA:	National Library, Ankara.
MKG:	Golestān Palace Museum, Tehran.
MKİ:	Millet Kütüphanesi, İstanbul.
MMA:	Metropolitan Museum of Art, New York.
MKKMI:	Museum of Calligraphy of Mīr 'Imād, Tehran.
MPM:	Manial Palace Museum, Cairo.
NAL:	National Art Library, London.
NLN:	Vittorio Emanuele III National Library, Naples.
NLR:	National Library of Russia.
NMAA:	National Museum of Asian Art, Washington, D. C.
NMD:	National Museum, Delhi.
NOK:	Nuruosmaniye Library, Istanbul.
NYPL:	New York Public Library, New York.
OMLC:	Oriental Manuscript Library, Chennai.
ÖN:	Österreichische Nationalbibliothek, Vienna.
PMB:	Palace Museum, Beijing.
QNL:	Qatar National Library, Doha.
RCT:	Royal Collection Trust, Windsor.
SB:	Staatsbibliothek, Berlin.
SUBH:	Staats- und Universitätsbibliothek, Hamburg.
SJM:	Salar Jung Museum, Hyderabad.
SK:	Süleymaniye Kütüphanesi, Istanbul.
SKD:	Staatlichen Kunstsammlungen, Dresden.
SuUB:	Staats- und Universitätsbibliothek, Bremen.
TCLC:	Trinity College Library, Cambridge.
TCLD:	Trinity College Library, Dublin.
TNM:	Tokyo National Museum, Tokyo.
TIEM:	Museum of Turkish and Islamic Arts, Istanbul.
TSMK:	Topkapı Palace Museum Library, Istanbul.
UBERF:	Universitätsbibliothek Erfurt.
UBERL:	Universitätsbibliothek, Erlangen.
UBH:	Universitätsbibliothek, Heidelberg.
UBL:	Leiden University Library, Leiden.
UEL:	University of Edinburgh Library, Istanbul.
UMIL:	University of Michigan Library, Ann Arbor.
V&A:	Victoria and Albert Museum, London.
WAM:	The Walters Art Museum, Baltimore.
WLB:	Württembergisches Landesbibliothek, Stuttgart.