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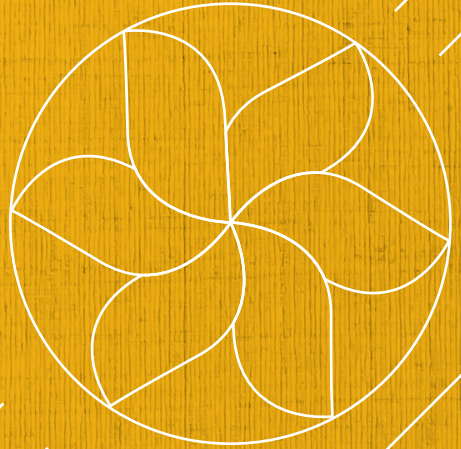
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TÜRKİYE
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5.Uluslararası Öğrenciler Sosyal Bilimler Kongresi 5th International Students Social Sciences Congress

Cilt II
Volume II





5. Uluslararası Öğrenciler Sosyal Bilimler Kongresi

Bildiriler Kitabı - II

5th International Students Social Sciences Congress

Proceedings - II

Psikoloji, Sanat Tarihi, Siyaset Bilimi, Sosyoloji, Tarih, Uluslararası İlişkiler

Psychology, History of Art, Political Science, Sociology,
History, International Relations

7 – 9 Kasım / November 2019, Trabzon



Supporter



İstanbul, 2021

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Kapak Tasarımı / Cover Design

Abdullah Fuad Kılınçlı

İç Tasarım ve Uygulama / Graphic Design

Nuhun Gemisi İletişim Ajansı

Baskı / Printed by

Limit Ofset, Sertifika Nu.: 28397 / Maltepe Mah. Litros Yolu 2. Mat. Sitesi ZA13, Zeytinburnu/İstanbul

ISBN: 978-605-7824-16-5 (2.c) • **TAKIM NO:** 978-605-7824-14-1 (Tk)

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Dear esteemed colleagues,

The International Students Social Sciences Congress have been an important part of Türkiye Scholarships since 2015. This congress receives the output of Türkiye Scholarships, the international students from all major countries of the world who have benefitted from these scholarships in order to receive a qualified university education.

Türkiye Scholarship students, as candidates for producing solutions to the world's problems as well as the countries they are citizens of, discuss various issues falling under the social sciences field at this congress prior to graduating, thus contributing to both their individual careers and overall academic accumulation.

The 5th International Students Social Sciences Congress, organized recently in 2019 in cooperation with the Presidency for Turks Abroad and Related Communities and the Scientific Studies Association (ILEM), was held in Trabzon and hosted by Karadeniz Technical University. 965 researchers enrolled in the application system at this congress, and 476 applications were received from 91 countries. As a result of the rigorous evaluations of the Scientific Committee, 108 of the accepted papers were deemed eligible for submission.

Turkey is a universal country, feeling all of humanity's problems sincerely and attempting to create solutions for these. The International Students Social Sciences Congress, aside from being one of the rare events where youths from nearly a hundred countries can come together, as seen in this 5th Congress, have strengthened this valuable quality through science, and will become enriched by forming a more comprehensive community in the coming years.

I express my sincere gratitude first to the students who have shared their works with us and allowed this book to become an information guide and then to all the institutions and organizations that have not held back in their contributions.

Abdullah EREN

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Impact of Rubrication and Chrysography Techniques on the *Bihari* Style of Qur'an

Saima Syed*

Abstract: The study is modest and based on primary data, collected from the Ganjbkhsh library Islamabad. Qur'an manuscript, especially Bihari style is only consideration here due to its colourful orientation and beautification. The aim and objective of this study to elaborate on the techniques of rubrication and chrysography. Both techniques were not new in the long history of manuscripts. Initially religious books and other important books were decorated with these techniques, by the time it transferred towards the printed books. These techniques are also present in Bihari Qur'an manuscripts in a beautiful way. The study argues that how these techniques helpful for the keen involvement of the reader. It would also helpful for the readers as it is written in many colours. The most significant feature of Bihari Qur'an is word "Allah" is written with golden ink, just to highlight the word. Both techniques are the best part of illumination of the manuscript. The study covers the possible questions regarding the significance of both techniques. The impact of chronological and regional/foreign influences on colour palette used for these techniques is the key factor of investigation. And how these techniques penetrate in Muslim art of the book. Acculturation, assimilation of art forms amalgamates the artist's work. The method used for this research is, physical analysis of manuscripts, chronological study of regional and foreign influences and colour psychology for the judgments of artist/scribe behaviour towards the application of rubrication and chrysography. Secondary data are drawn from the various sources like GBL of Iran, Pakistan institute of Persian studies, Islamabad, E-books and journals.

Keywords: Qur'an, Bihari, Chrysography, GBL, Rubrication.

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Introduction

In the history of art of the book many books were scribed, illuminated and illustrated with the help of different colours and designs. For the beautification of Qur'an manuscript, many colours and design techniques were incorporated in the illumination process. Initially, the Qur'an manuscript was illuminated with red, blue and golden colours. The significant of present study is to present the unpublished data of *Bihari* Qur'an manuscript available in the Ganjbkhsh library (GBL) Islamabad. This study revealed the techniques of rubrication and chrysography that are the main features of the *Bihari* Qur'an placed at GBL. Very few endeavours were done for the study of *Bihari* Qur'an manuscripts.

A study on *Bihari* script conducted by Eloise Brac De La Perrier (2016). Where he studied the corpus (illumination, calligraphy and chronology) and typology (pioneer group, classical and common) of 137 *Bihari* manuscripts (half of the corpus is made up of codices comprised the complete text of the Qur'an). Another study related to the Gawalior Qur'an presented by the Eloise Brac De La Perrier and et all (2010) is based on the main features of illumination and calligraphy of *Bihari* Qur'an of Gawalior region. In this study Perrier describes the importance of chrysography and rubrication techniques in *Bihari* Qur'an.

The technique of rubrication (red /blue) and chrysography (writing with gold) is based on colour. The colour plays a vital role in human life. According to Ayn E Crowley (1993) the colours have a power to stimulate the human brain activity. Colours can be divided due to short and long wavelength (Patil, 2012). Another typology of colours was mentioned by the Sharp, noted as warm (red, orange and yellow) and cool colours (green, blue and violet) (Sharp, 1974). Blue colour is a preferable colour than red, orange and yellow colours for the heading of text in the illumination of Qur'an manuscripts (McCulley, 1988).

Wilson (1966) has a different point of view regarding the red colour that was fashioned for rubrication of ancient manuscripts. According to Wiegersma and Van Der (1988) the preference of colours by the artist of a society may be the result of some cross-cultural differences. To decorate the art piece or manuscripts with warm and cool colours depends upon the consumer's encouragement and appreciation. According to Kroeber-Riel (1979) the process of promotion of a good is depended on arousal. Singh and Churchill (1987) explained the arousal as it is useful for the growth of the long-term memory.



The significance of colours contribution is to identify a culture, social norms and religious trends across the world. The cross-cultural study of Wiegersma and Vander shows that the blue colour got a significant place in most of the cultures of the world. Whereas red and orange considered sacred in Hindu (in India) and green in Muslim culture (Wiegersma and Vander, 1988).

The techniques developed by the artist and scribe through the colour scheme is very impressive in the history of QMs production. Golden, blue and red are most common colours for the decoration and highlighting Arabic text. Gold and lapis lazuli (gold and blue) were the most common colours of art of the book during Timurid and Safavid period (1400-1700). At the end of 1700 CE bright vermilion colour (Mercury Sulphide) were added in the colour palette.

Rubrication Technique

The technique of rubrication is not new. It has a long journey to make evident in the history. It is a familiar feature of western manuscripts as well as eastern manuscripts. The Latin term *rubrica* (adjective *ruber*, meaning red or ruddy) indicates that the text written in red is called rubric. But the dialect of Latin forms *rubric* or *rubrica* are polysemic that cause ambiguity in understanding. In classical Latin '*rubrica*' refers the meaning of red that comes from the natural material like earth (Lewis, 1879). So, it indicates that the text written or copied in red colour, especially heading called the rubrication technique.

The term '*rubrique*' used by the medieval French, metonymically that often referred the red text as well. It also included the title, chapter, section heading or explanations. According to *vocabulaire codicologique* the term '*rubric*' can be defined in two ways, one, text written in red and second, heading or any part of the text executed in a different way through the colour, orientation of the script or by any other means (Muzerelle, 2002-2003).

Ian Doyle and De Hamel favour the meaning of '*rubric*' as a text copied in red specifically and its second meaning used for heading and caption (De Hamel, 2001). However, the Keith Busby explained the rubrics in a different way. According to him all the text written in red found in miniature painting and recommended the term '*titulus*' for the caption or heading written in red (in manuscripts) (Busby, 1999). The explanation of Busby is regarding '*rubrics*' is not enough, it does not cover the all the type of manuscripts.



Gradually, this initial endeavour of the rubrication carved the way for the title of a book. Usually the title of the book, in the form of heading placed at the beginning of the codex. In medieval time, the title of the book, plural noun and circumscribed topics were rubricated. The rubricated headings (prominently written with red ink) of the text were fashioned in the 14th and 15th century. The style of Persian rubrication of the text was the integral part of the illuminated frontispiece.

Chrysography Technique

According to the Dictionary of English Manuscript Terminology 1450-2000 that Chrysography is a Greek word (chrysographe). It is a technical term for writing in gold. This technique was the integral part of the ancient book. According to Maurer the art of chrysography was practiced by the Abrahamic faith community when the metal coinage was introduced into commerce.

Many religious scholars denied the concept that chrysography posed a spiritual value of the Word of God. They thought that chrysography has a monetary value against the commodity. They further explained that the medium of written words was calligraphed in the monetary exchange substance (Shell, 1982). The confusion of spiritual and monetary value of the Words of God faded the value of Chrysography techniques to some extent.

Bihari Quran Manuscript (QMs)

The characteristic of Bihari QMs is distinct from the other style of QMs in the region of subcontinent. According to the Blair the script that belonged to the Indian region called *Bihari* has written in extremely stylized and visually distinct from other QMs of this region (Blair, 2006).

The systematic study of rubricated text in Qur'an manuscript (QMs) was not found. However, it is difficult to examine a wide range of QMs belong to the Subcontinent. So only *Bihari* Qur'an are considered for investigation because it has both techniques, rubrication and chrysography.

Bihar script has many names like it is called *khatti-i-bahar* and *khati-i-Bahari* or *Bihari*. It is a desirable style of the Qur'an, prayers book calligraphy by the scribed of Sultanate Delhi and early Mughals. A mixer of *Naskh* script (noted as new style in this study) called *Bihari/Bahari* style of Arabic script progressed in Khilji era in the subcontinent. W.E Begley discusses the *Bihari* style as "A chief characteristic of *Bihari* style is the thick end terminal endings of certain extended letter" (Begley,

1985). The *Bihari* either originated from the Persian word “*Bahar*” meaning spring or Indian province “*Bihar*”.

There are many opinions regarding its name, but some scholars emphasised that it is not associated to the Indian region because it is beautifully written as the *Gulzar* style of Arabic script and its name *bihar/bahar* due to its characteristics.

According to the scholars that it is purely formed in the Indian land and practised in every region of the subcontinent. Some scholars indicate its origin directly from *Kufic* or *Kufic* style mixing with *Naskh* (Fig.1). Another view, its origin is *Turki* and it rejects the view of a mixer of *Kufic* and *Naskh*. There is no authentic view regarding its name and origin, all discussion is based on assumptions. A very old manuscript that is scribed by the calligrapher Ilyas bin Qazi Abu Bakar bin Nasirullah in 1277CE which belonged to the *Thatha* (now in Pakistan) region (Iqbal, 2007). This evidence indicates that most probably this style of Arabic script is fashioned in Muhammad Tughlaq ‘s period (1324-1351). It is frequently used by the scribes of the 16th and 17th century. Abd-ull-Majeed Salik mentions that the *Bihari* is a transitional style of *Kufic* to *Thuluth*. The identified calligraphers of GBL collection ‘s colophon of *Bihari* style is Hafiz Usman and Abd-ull-Nabi son of Haji Yar Muhammad.

Material and Method

To beautify the religious manuscripts has a significant importance in every religion. Initially, Muslim community’s belief derives from the holy book of the Qur’an. It is transmitted in the form of manuscript from the beginning. These Qur’an manuscripts (QMs) were kept in different institutes, libraries, museums and personal collections. The Ganjbkhsh library Islamabad is an integral part of Iranian culture conciliate and has a wide range of different cultural and religious manuscripts under the one roof.

The criteria of selection of manuscripts is only to study the *Bihari* Qur’an placed at Ganjbkhsh library Islamabad (GBL) with the specific time line of 14th till 16th century. This collection Qur’an at GBL has a less amount of *Bihari* Qur’an. For the analysis of Qur’an many methods were used from time to time. The methodology adopted for this study is a physical analysis (emphasised on illumination and script). The effect of regional and foreign influences on the colour palette and production of QMs under the chronological order is also the part of the investigation. The basic aim and objective of this study to observe the significance of rubrication and Chrysographic techniques on *Bihari* Qur’an.



Physical Analysis of *Bihari* QMs

The physical analysis is based on the following observation.

1. The study of illumination style and script of *Bihari* QMs.
2. The usage of chrysography (*sura* heading, *aya* marks first line of the Arabic text, word Allah, first, middle and last line of the Arabic text in golden ink or colour) and rubrication (*aya* marks, *sura* heading, word Allah, first, middle and last line, translation and explanation are in red) in *Bihari* QMs
3. Chronology (time line) of *Bihari* QMs
4. Typology (translated and without translated) of *Bihari* QMs
5. Old (look like *Kufic*, *Turkistani*, *Thuluth Turkistani* and new style (like *Naskh* and *Thuluth*,) of *Bihari* style
6. Hybrid style of *Bihari* script.

In figure 1 the orientation of the Arabic text is unique. Black Arabic text has a rubricated translation in Persian language. The rubricated *aya* marks (ط) is also designed in this QMs. Page is divided into marginal frame and the text box.

At the top of the text box a simple golden cartouche creates the illumination effect. The first line of the text box is penned (بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ) with chrysography technique.



Figure 1 A: QMs number 320, a 15th century illuminated Qur'an Manuscript, 8 lines of text and some vertical and oblique lines noticed in marginal frames (explanation of Arabic text).

B: in this page the opening of *Sura* heading that has a golden cartouche.



The QMs in figure 2 A has a different *Bihari* style of writing, which is inspired by the *Kufic* style of writing or derive from the *Kufic* style. The word has limited space, though each line has only four to five words. This QMs has multiple illuminated pages. As Blair mentioned in her book “Islamic Calligraphy” that Gawalior Qur'an manuscripts had multiple illuminated (beginning, middle and last) pages (Blair, 2006).



Figure 2: QMs number 3587, A 15th century QMs



A



B



C

Figure 3 A: QMs number 1370, belongs to 14th century. A GBL collection. **B:** QMs number 4008, a late 16th century Qur'an manuscript. Both QMs has 13 text lines per page, enclosed with red ruled frame. **C:** QMs number 2245 is a late 15th century QMs that has a word Allah in chrysography.



The QMs in figure 3 B is a mixture of *Naskh* Arabic script, though this *Bihari* style has a less space between each word. Though both QMs are belonging to the different time line but has some common features. The wedge shape of letters are the main features of the *Bihari* style of Arabic script. The *aya* end marks (ط) and word Allah (الله) in every line is rubricated (Figure A and B) but in QMs 2245 a late 15th century QMs has word Allah in chrysography and *aya* mark is rubricated. The attitudes towards both techniques are may attributed towards the trend or artistic and regional approach.



Figure 4: QMs number 4170

In the figure no 4 the QMs is decorated with a polychrome ruled frame (*jadval*) that enclosed the text box. Simple chromatic cartouches designed for the information box for the starting of the new *sura*. The first, middle and last line of the text is written with golden ink (a technique known as chrysography). The orientation of words (2, 3, 4 and 5 in a line) is different in each line. The Persian translation and explanations are present in the marginal frame of the page. The elongated letters of Arabic text are noticed like (ب، ن، ك، ي) *ba, lam, non, kiaf*, and *ya*. Blair mentioned the characteristics of QMs belonging to the Bijapur style of *Bihari* QMs as it was written with first, middle and last line of Arabic script in large and rest of the lines were in normal size (Blair, 2006). But in this QMs the orientation of the script is same, only first, middle and last line is rubricated.

Result and Finding

The Total available Qur'an manuscripts of *Bihari* style are 27 out of 400 ($27/400 \times 100 = 6.45\%$) QMs placed in the GBL. The 6.45 percentage shows very less amount of *Bihari* QMs found in the GBL. The number of *Bihari* QMs further



divided in QMs with Persian translation and explanation (total 9 QMs= 2.25%) and without Persian translation (18 QMs= 4.20%). The observed data (18 Qur'an manuscripts 12 without translation and 6 with translation) are selected on the basis of chronological order (14th century till 16th century). The results show (table 1 and 2) that initially, both techniques were used in *Bihari* QMs. Gradually, the Chrysography is decline in the late 15th till 16th century. The results (in table 1 and 2) also indicate that the rubrication technique is much used in *Bihari* QMs then the Chrysography. The overall style of *Bihari* script is wedge shaped and most of its letter is elongated. The old style of *Bihari* is examined (table 1 and 2) in most of QMs as compared to new and Hybrid (new mixed with old style).

Table 1.

S. No	QMs #	Year	With out Translation	With translation	Rubrication	Chrysography	Old/New Hybrid
1	13790	1398	√		√	√	Old
2	2245	1494	√		√	√	Old
3	3587	1494	√		√		Old
4	5331	1494	√		√	√	New
5	2434	1591	√		√		New
6	3073	1591	√		√		New
7	3849	1591	√		√		New
8	4008	1591	√		√		New
9	7310	1591	√		√		Hybrid
10	7891	1591	√		√		Hybrid
11	11596	1591	√		√		Old
12	13785	1591	√		√		Old
13	1598	1301		√	√		Old
14	1599	1398		√	√	√	Old
15	4170	1398		√	√	√	Old
16	824	1494		√	√	√	Old
17	1597	1494		√		√	Old
18	320	1494		√	√	√	Old

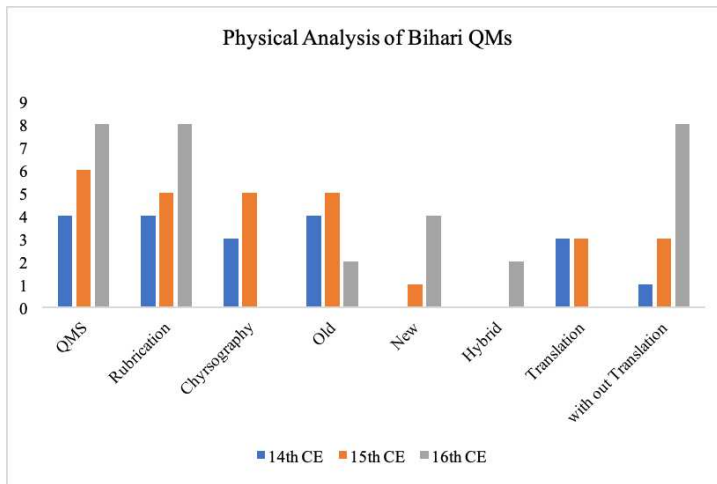
Table 1 the physical analysis of Bihari QMs. Main source of data is GBL.

In table 1 the selected data is analysed with the help of chronology and physical analysis. The number of QMs, rubricated QMs, chrysography, old, new, translated and without translated are marked with (√) sign.

**Table 2.** Results of table one

S. No	Analysis	14th CE	15th CE	16th CE	Total	%
1	QMS	4	6	8	18	100
2	Rubrication	4	5	8	17	94
3	Chrysography	3	5	0	8	44
4	Old	4	5	2	11	61
5	New	0	1	4	5	27.7
6	Hybrid	0	0	2	2	11
7	Translation	3	3	0	6	33.3
8	without Translation	1	3	8	12	66

Table 2 complete results according to chronological order.

**Graph 1** A physical analysis of Bihari Qur'an.

The graph 1 elaborate the results of table 1 and 2. The development of script, excessive use of red colour, decline of translation and golden ink has the key features of the 16th century *Bihari* QMs.

Common Characteristics of Bihari QMs

The following common features are examined in the *Bihari* Qur'an manuscripts (QMs) placed at Ganjibkhsh library Islamabad.

1. Arabic Text written in black ink.
2. Inter linear translation and the translation with explanation placed in marginal frame.
3. The translation is rubricated.
4. The word Allah is either rubricated or in chrysographie.
5. The verse separator are golden rosette or rubricated alphabet (ط،ح،ث).
6. The script has wedge shaped letters.
7. The end of letter is thick rounded bowl.
8. The tail of (ة) is short.
9. The wide spaces between each word is noticed.
10. The short vowels (*fatha* and *kasra*) is also rubricated and marked with a horizontal stroke.
11. The text is divided into thirty part (*juz*).

Implication of the Research

1. The study makes an inclusive collection of observed data related to *Bihari* Qur'an placed at Ganjbakhsh library Islamabad.
2. The results of this study would be helpful to the researchers of manuscriptology and art.
3. The findings identified in this study will carve the way for the future researchers to enhance the study of *Bihari* Qur'an manuscript placed in other libraries of Pakistan.

Conclusion

The data (out of twenty-seven only 18 *Bihari* Qur'an manuscripts are selected) belongs to Ganjbakhsh library Islamabad. The chronologically, these Qur'an manuscripts are from a 14th to 16th century. The result indicates that the contribution of *Bihari* QMs is very low in GBL collection. Under the physical analysis the typology of QMs is observed as QMs with Persian translation with explanation and without translation. Only two calligraphers are identified through colophon, the rest of the manuscript has no clue to find out the calligrapher's name and belonging place.



The colour and design of illumination are varying in all *Bihari* QMs due to chronology. *Bihari* style has some consecutive changes, it may be regional or the choice of a scribe. The 15th to 16th century manuscripts show the *Bihari* style mixed with *Naskh*, whereas 14th century manuscript of Qur'an indicating that the *Bihari* style inspired by the *Kufic* style. The style of rubrication and chrysography technique is different in all *Bihari* style of the manuscript but rubrication is more used in these QMs.

The techniques rubrication and chrysography were very common in the history of the Art of the book but presented in a different way. These were considered as a part of the illumination process. The addition of both techniques in *Bihari* Qur'an manuscripts distinguished them from other QMs produced in the Sub-continent. These techniques not only to beautify the QMs but also facilitate the readers as well. Gradually, rubrication overcome the chrysography due to many possible reasons, at first the red colour is not as much expensive as gold. Secondly, the application of golden ink is difficult as compared to red ink and lastly, the decline of skilled persons or lack of patronage.

Acknowledgement

I pay my gratitude to the Director of Iran, Pakistan Institute of Persian Studies, they opened the door of the library (GBL) and provided me the data without any hesitation. I am also thankful to my supervisor Rafiullah Khan, who guide me in my research endeavours.

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