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AN EVALUATION OF MA'IL QUR'AN MANUSCRIPT

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ABSTRACT

This paper examines Ma'il Qur'an Leaf manuscript housed in Tareq Rajab Museum in Kuwait. It discusses the manuscript's vocalization, dating, script, writing material, special inks formulated for parchment and manuscript's origin. The manuscript is not vocalized, it dates to the 1st c. AH (7th c. AD). It is written in Hijāzī script with the "slanting" writing. The manuscript scribe used a parchment as a writing material and an ink made of gallnuts (hibr). Originated probably from the Arabian Peninsula, writing lines appear to be uniformly distributed which implies the scribe concern to write in accurate style.

KEYWORDS: manuscript, vocalization, dating, script, parchment, inks, origin.

1. INTRODUCTION

The aim of the current study is to examine the manuscript as archaeological source. The Museum authority of Tareq Rajab Museum in Kuwait gave their permission to study and publish the Ma'il Qur'an Leaf manuscript. (<http://www.trmkt.com/>; Rajab, 1994; Rajab, 1995; Fehèrvàri & Zakariya,1997). The present study questions the dating and origin of the manuscript, it also sheds some light on the typology of Arabic scripts, the composition of the codex, inks, and writing surface.

2. DESCRIPTION

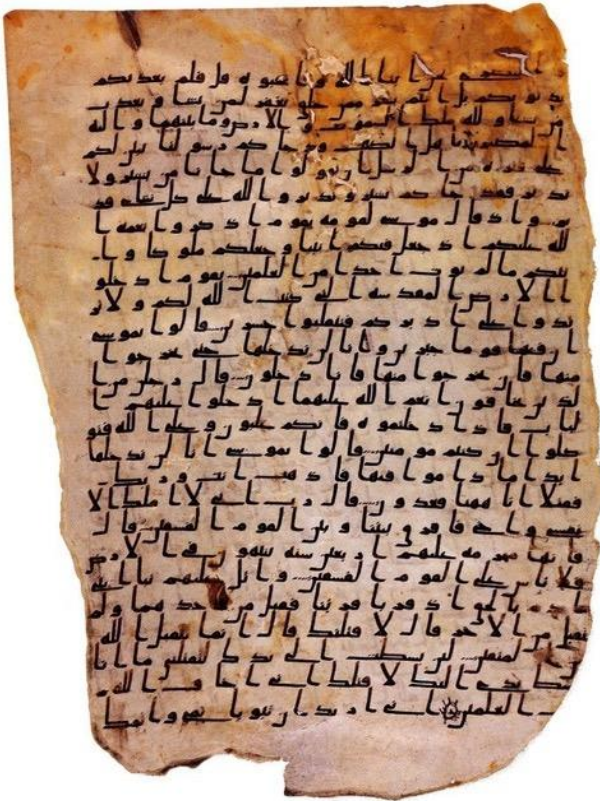


Figure 1. Ma'il Qur'an Leaf manuscript (after <http://www.trmkt.com/>)

The Ma'il Qur'an Leaf manuscript (Fig.1) is among Tareq Rajab Museum in Kuwait. The museum houses group of objects from the Islamic world. It includes ceramic ware, metal-work, manuscripts, fabrics and ornaments. (<http://www.trmkt.com/>; Rajab, 1994; Rajab, 1995; Fehèrvàri & Zakariya,1997). There are 26 lines to page written in vertical format from Surat al-Ma'idah, chapter 5: verses 18-29. (470 x 350mm; 26 lines.).

The manuscript seems to be in a good state of preservation. The Qur'anic text is shown in black Ma'il on a rectangular parchment with letters in black. The text is not vocalized, yet, arranged to spot the end of the verses are two dashes above each oth-

er followed by a group of seven black dashes (Fig. 2.a-b).

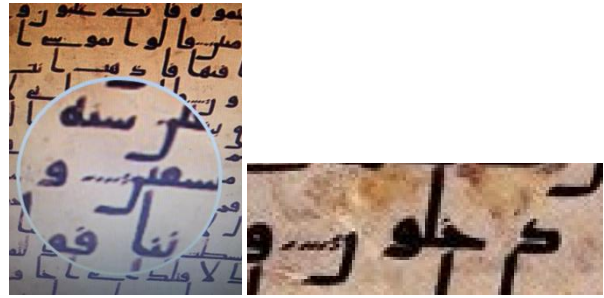


Figure 2.a-b Two dashes above each other followed by a group of seven black dashes to spot the end of the verses (after <http://www.trmkt.com/>)

At the end of the Tenth verse a hollow circle surrounded by glowing dashes is shown (Fig. 3), which implies a primary counting system that indicates the end of the verses. (Gacek, 2009).

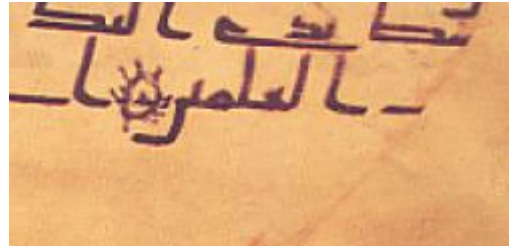


Figure 3. A hollow circle surrounded by glowing dashes (after <http://www.trmkt.com/>)

The museum records for the studied manuscript provide very limited information, as follows in table 1.:

Table 1. Tareq Rajab Museum information provided about the studied manuscript

Museum Inventory Number No	QUR-0001-TSR
Folio(s)	Only one folio exists and there are 26 lines to page
Measurements	49.4 cm x 39 cm
Material	Manuscript on parchment
Script	Hijāzī

3. VOCALIZATION & DATING

Examples of Ma'il Qur'ans are very rare. Vocalization is communicated in Arabic by a number of words such as *naqt*, *i'rāb*, and *tashkīl* as Arabic script in its earliest form did not have signs for the short vowels—as is the case from the studied manuscript—while the long vowels, (*ā*, *ī*, *ū*), were not always

showed. The manuscript is not vocalized, therefore, this particular example illustrates the earliest progression of Arabic writings and largest of Ma'il folios. It is thought to be one of the earliest styles of Qur'an copies, it dates back to the 1st c. AH (7th c. AD) that regarded among the major historical periods manuscripts' age in the Islamic context, which is between the 1st c. AH (7th c. AD) till early 14th c. AH (20th c. AD). (Gacek, 2006; Gacek, 2009).

However, Muslims aim was to adjust the Qur'anic text, so as not to be distorted, therefore Abu Al As-soud Al Doawali (67 c. AH/ 686 c. AD) added the dots to the moshaf, by means of coloured dots nokkat (Abbott 1939). Vocalization was later developed by Nasr ibn 'Āsim al-Laythī, and Yaḥya ibn Ya'mar (d. 129/746). The practice was used in writing Qur'anic texts, probably as early as the 2nd c. AH (8th c. AD). The vowel-signs in the early period were shown with red dots used. These are called Tashkeel, they are namely: *fathah* فتحة superscript dot/ *kassrah* كسرة subscript dot/ *dammah* ضمة dot before a letter and *tannween* تنوين two dots. (Abbott 1939).

4. SCRIPT

The studied manuscript is written in "ma'ili" or "slanting" writing known as Hijāzī script used until the last quarter of the 1st c. AH (7th c. AD). The script is highly well-organized and well dispersed onto the surface. The Hijāzī style comprise the bent or slanting alif, and the straight and upright lengthening of its letterforms and other letters are leant to the right. Sharp angles in the form of letters were dedicated to writings engraved on stone and parchment with copies of Qur'anic texts during this historical period. Hijāzī script was first identified by Michele Amari in the 19th century AD based on Ibn al-Nadīm's account of Makkah and al-Madīnah writings, and afterwards characterized by Nabia Abbott after the region Hijāz. (Déroche, 2002). Hijāzī scripts written Qur'anic fragments are datable to the 2nd half of the 1st c. AH (7th c. AD) or early the 2nd c. AH (8th c. AD). (Gacek, 2009).

Déroche (2002; 641) mentioned that it: "gives us the picture of an age unaffected by official rules governing the script, unconcerned by a teaching of writing aiming at a perfect imitation of the model. Each scribe was writing in his way, following a general rule as to the appearance of the script, but sole master of the execution of its details". The scribes seem to be more keen about spreading the Qur'anic texts rather than how the letters form look like.

5. WRITING MATERIAL

This manuscript is written on a parchment, which is known in Arabic as rekk and jild (Déroche et al. 2006). Parchment was the primary writing material

in the Near East throughout most of the 1st and 2nd c. AH (7th & 8th c. AD) [1]. (Déroche et al. 2006). Parchment dominated an advantaged status in composing the handwritten books (Grohmann, 1952; Deroche et al. 2006: 32ff; Deroche 1995; Endress 1991). Despite the wide-spread use of parchment in the 1st and 2nd AH centuries of Islam (7th & 8th c. AD), there are very limited examples of parchment codices, however, parchment fragments are abundant, where most surviving examples are ones written in Qur'anic verses (Bothmer 1988: 178; Dreiholtz 2003: 9).

Parchment was made from the skins of animals such as sheep, goats, calves and gazelles, who usually lived in the same environment (Al-Tabbae, 2011). There is a direct correlation between the size of the parchment and the size of the animal. Thus, the skin of small size animals such as gazelles can provide a small fragments of parchment to write on. It is notable that most parchment scrolls have a rectangular shape, as the one we are presenting in this research paper, but rarely square. The parchment maker used lime or dates solution to take away the hair from the skin. He also used instruments such as scraper and a blade to clean the flesh side of the skin. The skin is later stretched for drying using a wooden frame. Pumice stone was used to flat the surface and afterwards chalk was scrubbed into the parchment in order to acquire white smooth surface. (Reed, 1972; Bloom, 1989; Endress, 1991; Gacek, 2009).

The gazelle skin was the preferred animal skin for writing of Qur'an verses among Muslims. Most of the Qur'anic texts written from the 1st (7th c. AD) until the 4th c. AH (10th c. AD) are almost entirely on a parchment made of gazelle skin, would this studied parchment is made out of gazelle skin? (Bnbeen, 1993).

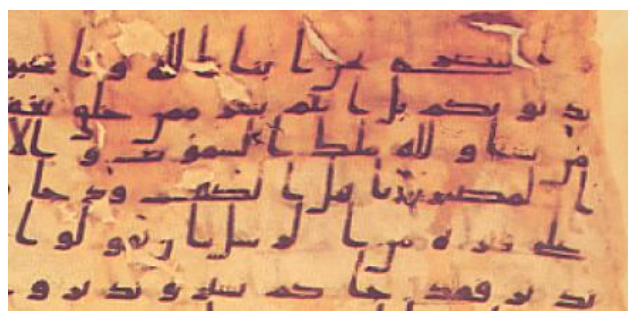


Figure. 4 Minor cracks are shown on the upper right corner(after <http://www.trmkt.com/>)

The present parchment display minor crack or scratch on the upper right corner (Fig. 4) the cracks or stretch marks seems to break the black-inked writing, which may suggests that the damage occurred after the manuscript was written and it was not in the original skin. It is not likely that such cracks has occurred during the preparation process, since the

parchment-maker checks the animal's skin before sloughing to be sure that the animal is not suffering any wounds, which possibly could be reflected on the skin's condition. (Déroche *et al.* 2005).

6. SPECIAL INKS FORMULATED FOR PARCHMENT

Ink is known in Arabic literature as *midād*, *ḥibr*, *niqs*, *sawād*, *murakkab*. Al Moezz Ibn Baddess In his book "*eumdat alkitab waedat dhawaa al'albab*" Al Moezz Ibn Baddess mentioned how to make black and coloured inks, how to mix dyes and extract them from each other. He also stated about writing with golden letters and silver and copper markers. (Al-Tabaa, 2011). Categories of inks appeared in recipes composed (Fig. 5): "Carbon, iron-gall, mixed and incomplete inks" (Deroche *et al.* 2006: 111-115; Gacek, 2009).

Scribes have written early Qur'anic texts either with *midād*, made of carbon ink (soot) or with *ḥibr* made of iron-gall (tannin) ink (al-Nadīm, 1996: 19), where the shade of black would vary in relation to the ink ingredients used.

Carbon-based inks were not suggested to be used on parchment as they were temporary and could be clearly removed. (Gacek, 2009). Although iron-gall ink was permanent, yet, when incorrectly integrated, it would cause burns on parchment.

Arabic literature indicates that specific inks were used for parchment, for example al-Ziftāwī (1986: 212-213) suggested using "Western gallnuts mixed in fresh water, gum Arabic and vitriol" (Gacek, 2009).

Arab scribes recommended writing with gallnuts (*ḥibr*) because it was more glistening than carbon soot (*midād*), which suggests that the studied parchment was written in *ḥibr* rather than *midād* [2].



Gall nuts (a) & Gum Arabic (b)
Figure 5. (after Gacek, 2009)

Inks were sometimes scented using camphor (*kāfūr*) and musk (*misk*). Other ingredients such as aloe (*sabir*) were added to protect against flies and worms, while honey was used as a protective (Masoudy, 2002; Gacek, 2009).

7. MANUSCRIPT'S ORIGIN

The Baghdadi bookseller and bibliographer Ibn al-Nadīm (380 c. AH/ 990 c. AD) mentioned that: "*The first of the Arabic scripts was the script of Makkah, the*

next of al-Madīnah, then of al-Baṣrah, and then of al-Kūfah. For the alifs of the scripts of Makkah and al-Madīnah there is a turning of the hand to the right and lengthening of the strokes, one form having a slight slant". (Dodge, 1970; Abbott, 1939; Abbott, 1941). Also, Blair mentioned that: "*In their alifs [of the scripts of Makkah and al-Madīnah] there is a turning of the hand to the right and an elevation of the ascenders, and in their form a slight incline*" (Blair, 2006).



Figure 6. Map showing the origin of the studied manuscript (after <http://www.canadianarabcommunity.com/sevenarabkingdoms.php>)

This would suggest that the origin of this folio appears to be from the Arabian Peninsula (Fig. 6), late 1st c. AH (7th c. AD). Since One can't differentiate between the script of both geographical cities located in North-West Arabia, One would also argue that those manuscripts probably travelled with the spread of Islam in areas far from their motherland (Al-Tabaa, 2011).

8. DISCUSSIONS & COMMENTS

Evaluating early Qur'anic manuscripts is relatively challenging exercise as it demands an interdisciplinary research that consider and combine the fields of Arts and sciences. This would probably require analysis of the physical properties and chemical composition to investigate dating, skin type and possibly ink material, which would support the historical approach.

For research questions that concerned with dating, scientists were able to determine the age of a parchment by using ¹⁴C carbon-dating technology, however, it is debated that the acquired date would be for the preparation of a parchment rather than the beginning of using it for writing. (Ludwig, 2002). Whereas, to investigate the exact animal type of a skin in terms of its species or animal's age, Cains argued that it requires scientific analysis. (Cains,

1994). Another challenging aspect that requires scientific examination is investigating the type of ink and its chemical composition used in writing, an example is the study of Hahn et al. (2004) using micro X-ray fluorescence analysis (Hahn, 2010).

Using Multispectral imaging can be applied to document the deterioration of parchment, which would have supported our argument regarding the minor cracks in this studied manuscript. (Larsen, 2007).

The manuscript has some letters to differentiate one character from another by black dots as:

ب, ت, ن, ي, ف, ق, ج, خ, ذ, ش which might indicate adding those dots on the original copy later on. This requires using Multispectral (MS) imaging known as “non-invasive method of investigation” using ultraviolet, infrared and visible light without initiating any physical harms to the materials in order to extract (segmenting) the original text (old writing) and uncover the newly overwritten text. MS would also differentiate and identify the chemical material composing the ink to reveal the different inks used written on different layers respectively. (Al Maadeed, Suchithra & Bouridane, 2014).

Manuscript lines appear to be uniformly distributed. To prove that we obtained the histogram of the manuscript shown in (Fig. 7). Histogram of an image is a graph that displays the number of pixels in an image. For this case, peak values of pixels indicate a line. Histogram plot represents the intensity of grey level in an image. For this case, we converted the image into a binary image of two colors white and black. In a binary image, background is represented by white pixel, and written material by black pixels. Next, we applied the histogram plot on the horizontal level to show the differences between the written lines, where the lines represented by black or maximum points on the plots, and the gap between lines represented by the white pixels or minimum points. The histogram of the manuscript shows that the dis-

tance between peaks are relatively equal values, which indicates the care of the scribe to write the lines to appear in accurate style.

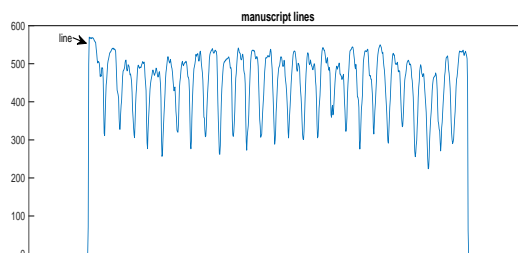


Figure. 7 Histogram plot for the manuscript to show uniform gaps between lines

Finally, by studying this manuscript, we wish to provide additional information on a manuscript that is attributable to the 1st c. AH (7th c. AD) and to update scholarly literature. More studies need to be conducted as there are still hundreds of Islamic manuscript that require to be examined.

NOTES

[1] When the Arabs ruled Samarkand city which was under the supremacy of China 93 c. AH/ 709 c. AD, the Muslims get to know the paper (Al-Tabbae, 2011). Paper was known in China 5 centuries before Islam, it was invented by Ts'ai Lun, a court administrator. Arabs were introduced to papers in 133 c. AH/ 751 c. AD, during the battle on the river Talas, now south Kazakhstan. Muslim forces arrested Chinese prisoners around 20,000, among whom were some papermakers. They moved to Samarqand where the first paper mill was founded. The usage of paper expensed from Samarqand to Baghdad and during the reign of the caliph Hārūn al-Rashīd (170 c. AH/ 193 c. AD) paper began to be used in government offices. He decreed that all documents should be written on paper, as it was difficult to remove script from paper than from parchment without this being observed. (Grohmann 1952; Déroche et al. 2006; Gacek, 2009).

[2] *hibr* is an application of iron-gall ink, whereas *midad* is of carbon ink. (Ibn al-Nadīm, 1996: 19).

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