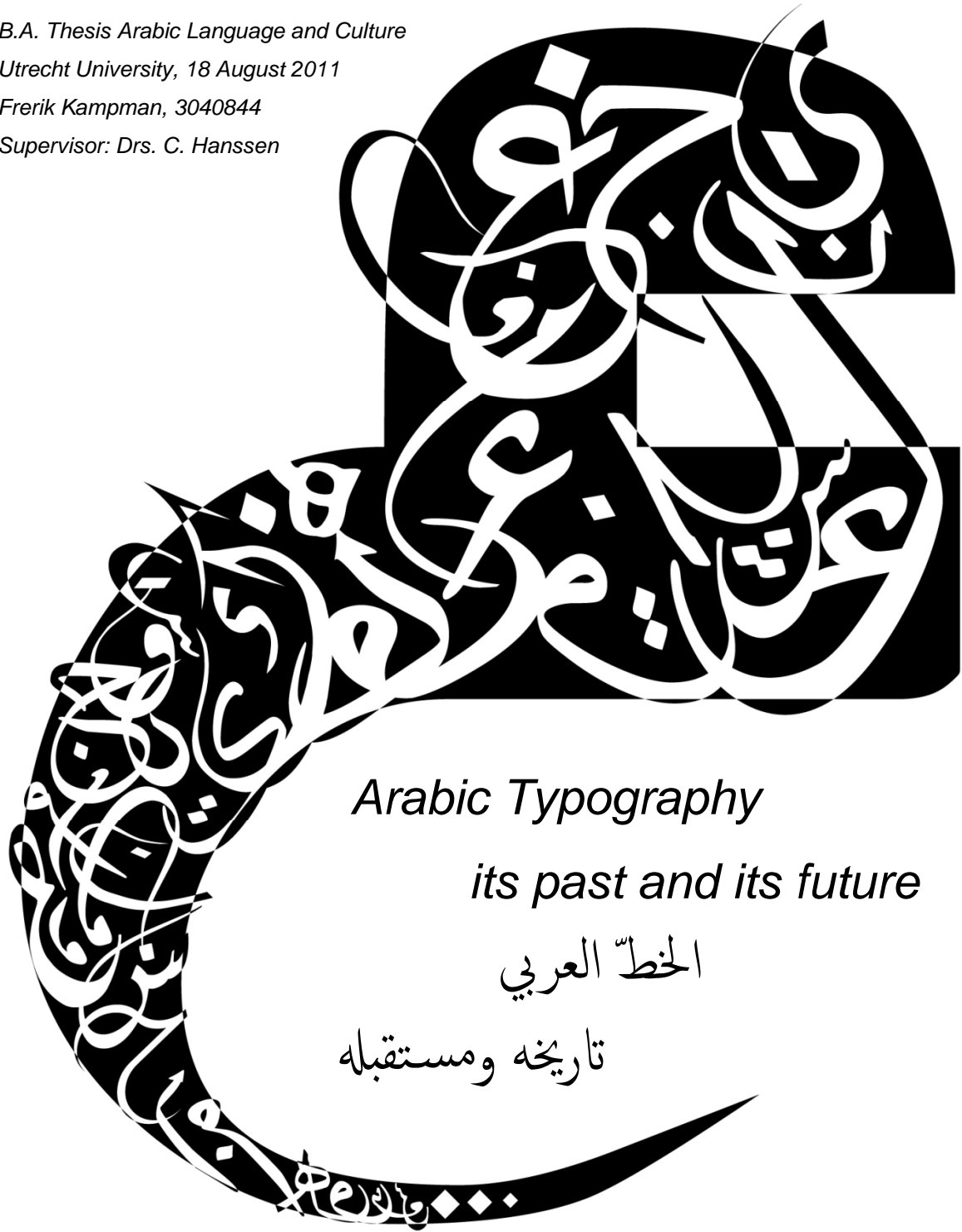


B.A. Thesis Arabic Language and Culture

Utrecht University, 18 August 2011

Frerik Kampman, 3040844

Supervisor: Drs. C. Hanssen



Arabic Typography

its past and its future

الخطّ العربي

تاريخه ومستقبله

والله اعلم

Started in Egypt, continued in The Netherlands and Egypt again, and finished in The Netherlands, this thesis is a product of one unexpected year of my Arabic studies. The Egyptian Revolution that started on the 25th of January has changed a country, and also changed my ideas and views on the relevance of my course of study.

Having been on the famous Taḥrīr square in downtown Cairo, I have seen what strong signals written language can give. On the square calligraphy was omnipresent.

Proud and thankful, this thesis is dedicated to all of those who made the Egyptian Revolution happen, those who currently face the challenge of changing their country, and those who gave their lives to make that possible.

إلى شعب مصر وشهداء ثورة 25 يناير

Contents

Introduction	4
Chapter 1 – The characteristics of Arabic	6
1.1 Origins of the Arabic Script	6
1.2 Characteristics of the Arabic script	8
Chapter 2 – Standardization of the Arabic Script	9
2.1 Arabic sources on calligraphy	9
2.1.1 <i>Tawḥīdī</i>	10
2.1.2 <i>Ibn Muqla</i>	12
2.1.3 <i>Ibn ʿAbd ar-Raḥmān</i>	14
2.2 A Critique on the Arabic Sources	16
2.3 Subconclusion	18
Chapter 3 – Pressing writing into print	19
3.1 Movable Type Printing Technique	20
3.2 Movable Type Printing in Italy	23
3.2.1 <i>Gregorio de Gregorii</i>	23
3.2.2. <i>The Polyglot Psalter</i>	25
3.2.3. <i>Robert Granjon</i>	27
3.3 Movable Type Printing in The Netherlands	32
3.4 Movable Type Printing in the Middle East	37
3.5 Subconclusion	40
Chapter 4 - Arabic Typography today	41
4.1 Mechanization of Movable Type Setting	41
4.2 Digitalization of Arabic Typography	44
4.3 Arabic Typography Development: The Dutch Arena	45
4.4 Subconclusion	49
Conclusion	52
Bibliography	54
Internet sources	58
Illustrations	59
Attachment I	61

Introduction

This thesis focuses on the field of Arabic typography. Taking an historical approach, it examines the changes of the Arabic script through time, starting with calligraphy as part of the history of typography. Especially in the case of Arabic, rules laid down for calligraphy have played an important role in the way Arabic typography developed. The central question that is repeated throughout this thesis is how the Arabic writing changed under the influence of innovations, first manual, then technical and finally digital. The underlying question is why these changes happened and in what circumstances. It will become clear that there were always power relations present that to a certain extent decided the course of development of the Arabic script.

When writing on the Arabic script, one has to bear in mind that this word covers more than comes to mind. Above all, one thinks of the Arabic language as spoken in all its varieties across Northern Africa and the Middle East. Next, there is a large group of other languages that use an adaptation of the Arabic script, of which Farsi, Urdu and Pashtu are the most well known. In the past an important area where Arabic was written was the Ottoman empire. Arabic script has been used to write down languages as distinct from Arabic as Malay, Swahili, Spanish and even Cape Dutch¹.

For these reasons, it has been proposed to use an other name to describe the Arabic script in all these varieties: 'Arabetic script'.² The thought behind this is that the script is being used for many (non-Arabic) languages that all need small adaptations and/or additions. This suggestion has however not been picked up by the extant literature and therefore in this thesis the term 'Arabic script' will be used. The term 'Arabic script' thus covers the writing systems that uses the Arabic alphabet plus the extra letters needed to accommodate sounds unknown to Standard Arabic. On another note, all examples of Arabic script in this thesis are in fact texts written in the Arabic language.

In almost all cases, the Arabic script came along with the spread of Islam. This is clear in the cases of China (the Muslim Uyghur people), Malaysia and even South Africa (with the Malay population). Arabic is intimately connected to Islam, as the holy book of Islam, the Qur'ān, is written in it. However, it took several centuries to develop it from a rudimentary script without diacritic marks to the calligraphic outstanding script we know from manuscripts. In a way resembling the history of the Islamic empires, Arabic calligraphy was

¹ Abu Bakr Effendi, *Uiteensetting van die godsdienst*, ed. A. van Selms (Amsterdam, 1979), V.

² Abdulhab, Saad D., 'The Mutamathil Type Style. Towards Free, Technologically-Friendly 'Arabetic' Types', *Visible Language* 38.3 (2004), 306.

developed and innovated much until the sixteenth century A.D. After that, development turned into stagnation. Just like the Ottoman Empire expanded rapidly in the first centuries of its existence after which it stopped innovating and slid into stagnation from the sixteenth century onwards. Arabic calligraphy meant copying of what has been done before, or at the most, improvisation within very strict rules on measures and proportions. New opportunities arose however with the invention of print, giving birth to a new form of writing, typography.

The structure of this thesis is chronologic. It begins with a reflection on the characteristics of the Arabic script. What distinguishes the Arabic script from other scripts? The answer to this question is widely contested and debated upon, and will be dealt with in the first chapter. Next three major moments in the history of the Arabic script will be covered in three chapters. The first one is the adoption of one standard cursive style in the tenth century, traditionally associated with calligrapher-vizier Ibn Muqla. The second one is the adaptation from writing to print. It will be shown that this was a long process and that it made some radical changes to the Arabic script. The fourth chapter will focus on the next important and more recent step of digitalization, which has shaped a world of possibilities for typographers. After this some conclusions can be drawn, which could be interesting when talking about 'the future of the Arabic script', which is so fashionable among typographers who work on this particular writing system.

Chapter 1 – The characteristics of Arabic

1.1 Origins of the Arabic Script

Vizier Muḥammad Ibn ʿAbd al-Malik: *‘A manuscript that is provided with diacritical points is Arabic; one that is not, is Nabataean’.*³

What did vizier Ibn ʿAbd al-Malik, quoted by Tawḥīdī, know that modern scholars still debate about? As we will show here, his views are confirmed by modern scholarly research.

The Arabic script and the Latin script share a common root. Their first common ancestor is the Phoenician alphabet, one of the first alphabets in the world.⁴ Originally designed to denote a Semitic language (Phoenician), the alphabet was geared for Semitic languages, and not for Indo-European languages like Latin and Greek. There was more attention to consonants than to vowels, as in Semitic languages consonants are the main elements that contribute to the meaning of words. Some signs for consonants were later, by for example the Greek, remade into vowel signs to accommodate the importance of vowels in Indo-European languages like Greek and later Latin, from which our Dutch and English alphabets are derived. The alphabet that is now used to write Arabic in has had a completely different development, that will be discussed here.

The Phoenician script was taken over by many peoples in the Middle East and this led to changes in the script. For Arabic the most important line of development led to Aramaic, the most probable ancestor of Arabic. However, out of the Aramaic two scripts were developed that could be the direct ancestor of the Arabic script, the Syriac and the Nabatean. There is still a discussion among scholars and typographers about which one is the direct ancestor of Arabic. Smitshuijzen-AbiFarès even takes the discussion further into time, by bringing up a semi-hieroglyphic Phoenician script that would be a link to the even older hieroglyphs of ancient Egypt.⁵ This is debatable and definitely a view not shared by any of the other writers here mentioned. However, Smitshuijzen-AbiFarès continues her genealogy from Phoenician to Aramaic and notes the same divide in the scholarly world on what the direct ancestor of Arabic script is. To her, there is an ‘English school’, that regards Nabatean as the direct ancestor of Arabic, opposed to ‘Arab and French historians’ that support the Syriac ancestry

³ Rosenthal, Franz, ‘Abu Haiyan al-Tawhidi on Penmanship’, *Ars Islamica* 13 (1948), 18.

⁴ Earlier alphabets have been found in Egypt and the Middle East. For example a hieroglyphic phonetic writing system discovered in Egypt: Himelfarb, Elizabeth J., ‘First Alphabet Found in Egypt’, *Archaeology* 53.1 (2000).

⁵ Smitshuijzen AbiFarès, Huda, *Arabic Typography. A Comprehensive Sourcebook* (London, 2001), 18.

of Arabic.⁶ Based on visual characteristics of the Syriac script (the baseline⁷ in Syriac as main visual feature) as well as historical reasons (a two hundred year period between Nabatean and Arabic from which written sources are missing), she supports the thesis that Arabic descended from Syriac.⁸ As it is beyond the scope of this thesis to go deep into this subject, I will shortly argue for the opposite here, that Nabatean is most likely the ancestor of the Arabic script. This is important to note for the further discussion on characteristics of Arabic writing.

A popular method that is in use to research the origins of Arabic was started by Nabia Abbott. She was the first who combined Arabic sources of later times with the few fragments of pre-Islamic inscriptions that are handed down to us.⁹ It seems reasonable to use written sources to contextualize the few inscriptions that are available.

Beatrice Gruendler expresses the view of the 'English school' very clear. To her the Arabic script is derived from the Nabatean script.¹⁰ She dives deeper in the scientific debate that this problem has caused and concludes that the Arabic script is based on Nabatean. Her main argument is that *'alignment and spatial arrangement are less important than individual lettershapes for establishing a genetic affiliation. Alignment and spatial arrangement are secondary features that affect an alphabet as a whole during and after its formation'*.¹¹ Her whole study continues to support this thesis with visual material taken from different stages in the development from Nabatean to Arabic and is therefore convincing. Based on her findings she finally argues for a more subtle approach to the ancestry of the Arabic script. To her it seems most likely that Arabic script developed from one of the many cursive styles of Nabatean, around the second or third century A.D.¹² This supports the notion that a script does not develop in a linear way, but in many directions, and even when it is unclear when exactly Arabic formed its own branch from the Nabatean script, Gruendler's conclusions do imply that Arabic and (Late-)Nabatean were used and developed next to each other and that the Arabic alphabet was fully developed by the fourth century A.D.¹³ In defence of the Syriac thesis it should be noted that the similarity between Syriac and (kufic)

⁶ Smitshuijzen AbiFarès, *Arabic Typography*, 26.

⁷ The baseline refers to the line connecting all the separate letters. Especially in Syriac this is a very strong line, while in Arabic the base line can be much more fluent and less of one broad line.

⁸ Smitshuijzen AbiFarès, *Arabic Typography*, 26.

⁹ Abbott, Nabia, *The Rise of the North Arabic Script and its Kur'ānic Development* (Chicago, 1939), 1.

¹⁰ Gruendler, Beatrice, *The Development of the Arabic Scripts. From the Nabatean Era to the First Islamic Century According to Dated Texts* (Atlanta, 1993), 1-3.

¹¹ Gruendler, *The Development of the Arabic Scripts*, 2-3.

¹² *Ibidem*, 129.

¹³ *Ibidem*, 129-130.

Arabic is not completely coincidental. Abbott notes an influence of the Syriac on the development of Arabic, especially when it comes to diacritics, but the origin of Arabic should definitely be searched for in the Nabataean branch of scripts.¹⁴

1.2 Characteristics of the Arabic script

The origins of the Arabic script are important, as in this thesis we want to ask the question what are decisive characteristics of the Arabic script. The origins tell us something about how Arabic was formed, and what were the main features that were developed to form a script we now call Arabic. Is for example the base line feature of Arabic more important than the ligatures? Or is it true as Gruendler stated that the base line is only secondary to the individual letter shapes?

It makes sense here to point out the difference between 'alphabet' and 'script'. I will use the term 'alphabet' here as the set of letters used to denote all the phonemes of a spoken language. In the case of Arabic this means a set of twenty-eight symbols, most of them denoting one phoneme. Exceptions are the *wāw* and *yā'* that are used as consonants as well as '*matres lectionis*' to signify an extended vowel. It gets difficult with the 'alif, which in itself does not represent a phoneme, but can function as the carrier of the hamza, the glottal stop, as well as '*mater lectionis*' for the long vowel *ā*. In some cases the hamza and the *lām*-*'alif* ligature are considered letters in their own right, adding up to thirty letters.¹⁵ As mentioned above, the term 'script' refers to a writing system using a specific set of letters. In the case of Arabic the script governs the connection between the individual letters, the base line, the ligatures, etcetera. In other words, the script sets down the rules about in what way the letters from an alphabet are allowed to be used. This difference between alphabet and script is much more clear for Arabic than for Latin, where the two terms are often mixed up.

To track the change from Nabataean to Arabic, Beatrice Gruendler identified five so-called 'parameters' that define the form of letters. These parameters are: Shape, Connection, Alignment, Style and Diacritics.¹⁶ Gruendler uses these parameters to discuss the development of the Arabic writing, but these points are also valuable to identify, describe and evaluate the characteristics of the Arabic script. This is important, as Gruendler clearly makes a distinction between the basic shape of the Arabic letters, and the forces that work on these individual letter shapes to create the *ductus* of the script, meaning the way a script

¹⁴ Abbott, *The Rise of the North Arabic Script*, 19.

¹⁵ Smitshuijzen AbiFarès, *Arabic Typography*, 86.

¹⁶ Gruendler, *The Development of the Arabic Scripts*, 30-31.

looks like. These forces can be alignment on a base line, connection to previous and following letters, different styles of writing (which through the ages became really sophisticated) and so forth.¹⁷ Later on she explains how the *ductus* of Arabic (the most characteristic being the connected letters and a strong baseline) is actually made up out of three important changes of the letters. The first one was that cursive writing became a style (as opposed to angular writing, carved in stone), the second one that different shapes for different positions within a word were used, and the last change being that these letters became connected through a baseline.¹⁸ If this developed really in this order, it shows how first the letters themselves developed and only in a later stage they were connected through a base line. This seems contradictory to what most (western) people see as the most striking feature of the Arabic script, namely the base line.

The origins of the Arabic alphabet demonstrated, and the features that define the Arabic script shown, we can now continue to move our focus more on an important phase in the history of the Arabic writing, a phase that laid the foundations for the magnificent calligraphy most people associate with 'Arabic writing'. The use of the Arabic script became popular, but not much centralized, so there was a variety of different scripts in use. That these different styles became standardized would lead to what we know now as the canonized styles of Islamic calligraphy, styles such as Naskhī, Thulūth and Nasta'īq.

Chapter 2 – Standardization of the Arabic Script

2.1 Arabic sources on calligraphy

I will now proceed to shed light on the topic of the development of the Arabic script in a traditional way, by using sources from the Arabic world itself. It was very common for Mediaeval Arabic intellectuals to write treatises on a variety of topics, and also on calligraphy. In these treatises it was common practice to first show ones knowledge of what has been written on the topic one was writing on. I will do the same here, by showing what knowledge traditionally has been handed down on the topic of calligraphy and thereafter critically examining this knowledge using more recent research. There are several of treatises on calligraphy available, the most important being the treatise '*risāla fī ʿilm al-khaṭṭ wa l-qalam*', written by Ibn Muqla (886-940 A.D.).¹⁹ Ibn Muqla was and still is traditionally

¹⁷ Ibidem, 2-3.

¹⁸ Ibidem, 29-30.

¹⁹ Text of treatise available in: Rayef, Ahmad Maher, Die ästhetischen Grundlagen der arabischen Schrift bei Ibn Muqlah, Ph.D. Thesis (Köln, 1975).

highly regarded in Muslim sources on calligraphy.²⁰ Besides Ibn Muqla, a treatise by Muḥammad Ibn ʿAbd ar-Raḥmān (1492-1545 A.D.²¹) will be discussed, but first a text of Abū Ḥayyān at-Tawḥīdī (died 1009/10 A.D.). The purpose of these texts was most likely of a didactic nature, to convey thoughts and ideas on calligraphy, but also practical guidelines and instructions.²² According to Blaire the didactic purposes of these texts should not be overestimated. She calls the advices ‘generic’ and thus not able to ‘serve as how-to manuals explaining the art of calligraphy to outsiders’.²³

2.1.1 Tawḥīdī

Tawḥīdī’s treatise on penmanship was brought to the light when Rosenthal published his article. Tawḥīdī’s authorship was contested for several reasons, of which the most important was that a certain Yākūt is mentioned, who –if meant Yākūt al-Musta’šimī– lived later than Tawḥīdī. However, the mentioning of Yākūt could be a later addition, as the article shows. There is, according to Rosenthal, ‘no sufficient reason to reject the manuscript’s attribution of the treatise to al-Tawḥīdī’²⁴. That settled we can focus on the contents. The treatise is basically built up of ninety five quotes by famous calligraphers, philosophers and other well-known people. The first seventeen quotes are supposedly all heard in ‘the salon of Ibn al-Barbarī’.²⁵ After those he gives the other seventy eight quotes as advice to those ‘who study handwriting’.²⁶ Though the latter quotes are interesting enough, the first part of his treatise gives the most insight into Tawḥīdī’s idea of what is important in performing the art of calligraphy. The translation of Rosenthal suffices to grasp the idea of the text, but is criticized for its quality by Ahmad Maher Rayef. He claims that Rosenthal’s translation is insufficient, for which verdict Rayef bases himself on the Arabic version.²⁷ In this thesis Rosenthal’s

²⁰ See: Robertson, Edward, ‘Muhammad Ibn Abd ar-Rahman on Calligraphy’, *Studia Semitica et Orientalia* (Glasgow, 1920), 73-74, Rosenthal, ‘Abu Haiyan al-Tawhidi’, 9, and Blaire, Sheila S., *Islamic Calligraphy* (Edinburgh, 2006), 158.

²¹ Abbott, Nabia, ‘The Contribution of Ibn Muqlah to the North-Arabic Script’, *American Journal of Semitic Languages and Literature* 56.1 (1939), 75.

²² Roxburgh, David J., ‘On the Transmission and Reconstruction of Arabic Calligraphy: Ibn al-Bawwab and History’, *Studia Islamica* 96 (2003), 48.

²³ Blaire, *Islamic Calligraphy*, 157.

²⁴ Rosenthal, ‘Abu Haiyan al-Tawhidi’, 1.

²⁵ *Ibidem*, 4.

²⁶ *Ibidem*, 10.

²⁷ Rayef, *Die ästhetischen Grundlagen*, 39.

translation will be guiding for practical reasons, however in case of multiple interpretations possible, Rayef will be consulted.

Tawḥīdī begins his treatise with four quotes on how to make a proper calamus (compare the Arabic word قَلَمٌ qalam), or reed pen, the fourth quote being taken from Ibn Muqla. The fact he does not introduce the following part with a source would mean it should be attributed to Ibn Muqla. This part is actually quite interesting, where Tawḥīdī sums up ten qualities that a calligrapher should have to write his letters perfectly. After the first characteristic *taḥqīq*, Tawḥīdī remarks that only that one ‘concerns all the letters together. I am going to mention hereafter that which only concerns individual letters’.²⁸ The characteristics that follow focus on qualities to shape similar sets of letters, for example the quality of *takhrīq*, ‘piercing’, meaning the proper openings of letters like the hā’, ʿayn and ghayn.²⁹ Tawḥīdī continues with quotes on the use of the pen (numbers 5 to 11), on which follow another six remarks on handwriting of different people. After this, the second part of the treatise is introduced. The quotes in the second part are mostly well found metaphors for the art and power of writing, with a few quotes of a more technical nature on pens and how to shape them (quotes 47, 68-70) and a number on diacritical marks (74-85, except for 79 and 81). The quotes are from famous and less famous Arabic statesmen, calligraphers and philosophers, but also a selection of mainly Greek philosophers (quotes 56 to 64), like Euclid, Homer, Plato, Galen, Aristotle, the ‘Greek King’ and an unidentified ‘Modotes’.³⁰ The comments made by these Greek men were of a very general nature, about the value of a good handwriting and its power.

Of the parameters Beatrice Gruendler introduced to discuss the development of Arabic letters, Tawḥīdī himself focuses most on shape. The quotes he collected also touch on style and diacritics. Using this focus, he describes the Arabic script very much like Gruendler does, in terms of individual letter shapes. Tawḥīdī is not known for his calligraphic skills, but all the more is Ibn Muqla. Tawḥīdī quotes a certain secretary whom he asked about the handwriting of Ibn Muqla: ‘*He [Ibn Muqla] is a prophet in the field of handwriting; it was poured upon his hand, even as it was revealed to the bees to make their honey cells hexagonal.*’³¹

²⁸ Rosenthal, ‘Abu Haiyan al-Tawhidi’, 5.

²⁹ Ibidem, 5-6. Also, Rayef, *Die ästhetischen Grundlagen*, 40.

³⁰ Rosenthal, ‘Abu Haiyan al-Tawhidi’, 15.

³¹ Ibidem, 9.

2.1.2 Ibn Muqla

Ibn Muqla is often referred to as the inventor of the Naskhī style of writing (and sometimes even more styles), but this seems to be erroneous. Nabia Abbott demonstrated in her article on Ibn Muqla's real influence on the Arabic script that he laid down systematic rules for shaping the letters in a mathematical way, taking the height of the 'alif as a base.³² He has been canonized as one of the great calligraphers, often styled as the 'al-khaṭṭāṭ al-wazīr', the calligrapher-vizier³³, as he was vizier under the Abbasid caliphs three times.³⁴ Despite his political career, he is remembered much more for his calligraphic qualities and for the system he invented.

Of the treatise in which Ibn Muqla laid down the rules for shaping the Arabic letters, just two (differing) copies are known to exist, one in Cairo, the other in Tunis.³⁵ Ahmad Maher Rayef has made an intensive study of these texts and the practical outcomes of Ibn Muqla's system of describing the ideal letter shapes in mathematical language. All shapes are based on the 'alif as a basic unit of measurement, for example as the axis of a circle in which all the round shapes of the letters fit. The length of the 'alif is however not directly specified by Ibn Muqla himself, but generally described as the length of the 'alif being eight times its width.³⁶ We will come back to this later.

³² Abbott, 'The Contribution of Ibn Muqlah', 76-81.

³³ Schimmel, Annemarie, *Calligraphy and Islamic Culture* (London, 1990), 128.

³⁴ Harley, A.H., 'Ibn Muqlah', *Bulletin of the School of Oriental Studies London Institution*, vol. 3, part 2 (1924), 228-229.

³⁵ According to Rayef, *Die ästhetischen Grundlagen*, 30. The one in Cairo is known under the signature of 'Ta^olīm Taymūr 18' in the Taymurian Library of the National Library of Cairo. The one in Tunis under the signature Ms.or.672 in the Library of Tunis. A third manuscript has been identified in the National Library of Cairo (Dar al-Kutub al-Misriyya) 'Şinā^oa 14'. The manuscript from the Taymurian Library seems to have been copied from the Şinā^oa manuscript. This is according to Nājī, Hilāl, *Ibn Muqla. Khaṭṭāṭan wa 'adīban wa 'insānan. Ma^oa taḥqīq risālatihi fī al-khaṭṭ wa l-qalam* (Baghdad, 1991), 114.

³⁶ Rayef, *Die ästhetischen Grundlagen*, 69. The ratio of the 'alif that Rayef describes is 1:8, and this seems to be used by Ahmed Moustafa as well. However, Annemarie Schimmel claims, based on Ibn ar-Rawandi, that according to the style this can also be 1:5, 1:7 or 1:9. Schimmel, *Calligraphy and Islamic Culture*, 18.

Two in-depth studies of Ibn Muqla's system are known. The first one is the theory by Ahmed Moustafa in his M.A.Thesis of 1979, at the University of London³⁷, elaborated even more in his Ph.D. Thesis from 1989³⁸. The second one is by Ahmed Maher Rayef, as his Ph.D. Thesis at the University of Cologne.

Moustafa's thesis supposedly '*unfolds and transforms our knowledge of how Arabic letter-shapes relate to one another*'³⁹. As promising this may sound, momentarily his works, both the M.A. thesis and his Ph.D. thesis are unavailable to consult. An insight in his findings however can be found at two different locations. First, a plate showing the outcomes of his findings in the letter shapes that Moustafa drew based on Ibn Muqla's rules, see

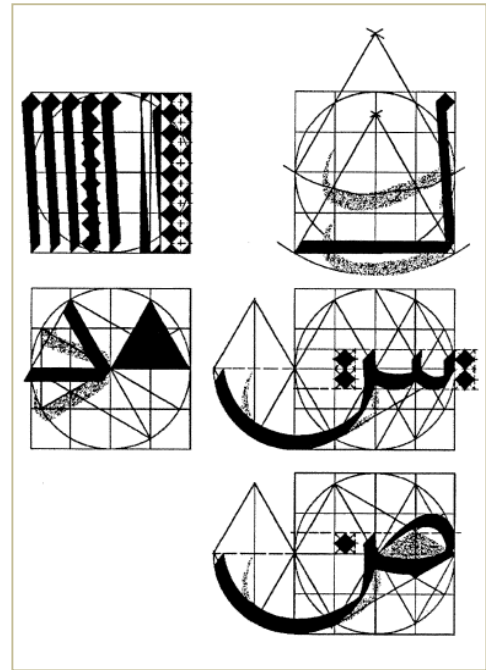


Image 1 - A visual representation of Ibn Muqla's system, by Ahmed Moustafa (1989).

image 1. Secondly, a proposal for a workshop at UNESCO is available, written by Moustafa.⁴⁰ Based on this small proposal it can be argued that Moustafa found a highly metaphysical understanding in Ibn Muqla's writings, attributing higher meaning to the proportions Ibn Muqla used in his system. As interesting as this perspective might be, there is momentarily no access to the theory in his works. Therefore Moustafa's thesis will not be further investigated here.

Rayef's Ph.D. thesis is widely available. His thesis consists of two parts. The first one explains the theory of Ibn Muqla and places it in a philosophical-historical context. In the second part Rayef uses this theory to work out the shapes of the letters of the Arabic alphabet according to his reading of Ibn Muqla's treatise. It is very interesting to see that Rayef connects Ibn Muqla to the obscure '*Ikhwān aṣ-Ṣafā*', a tenth century secret society of intellectuals. He even supposes that it is likely that Ibn Muqla was a member, as this would explain much of the philosophical underpinnings of his work.⁴¹ Member from the '*Ikhwān aṣ-Ṣafā*' or not, Rayef is convinced that Ibn Muqla was acquainted with and had access to the

³⁷ Moustafa, Ahmed, 'The Scientific Construction of Arabic Alphabets', M.A. Thesis (London, 1979).

³⁸ His Ph.D. Thesis was submitted at the Council for National Academic Awards in 1989 and rewarded with a Ph.D. title. According to Ahmed Moustafa himself, this Ph.D. Thesis will be published in two volumes in 2012 (personal correspondence, 31 March 2011).

³⁹ Humble, Richard, 'Arabic Script Revealed', *Ahlan wasahlan* 15.5 (1991), n.p.

⁴⁰ Accessed on line on 30 March 2011: [<http://portal.unesco.org>]

⁴¹ Rayef, Die ästhetischen Grundlagen, 20-21.

works of Greek philosophers like Plato, Aristotle and Euclid.⁴² Especially Euclid was very popular among intellectuals in Ibn Muqla's social milieu.

It goes beyond the purpose of this thesis to explain the exact ways in which Greek philosophy influenced the shaping of Ibn Muqla's theory, but it suffices to repeat an argument of Rayef here, in which he shows how Euclid's work clearly offered some ideas that could help Ibn Muqla in shaping his thoughts on calligraphy. An early translation of Euclid's 'Elements' by 'Ishāq ibn Ḥunayn (died c. 910 A.D.), son of the famous Ḥunayn ibn 'Ishāq, offers an interesting link to calligraphy, as already in the introduction is stated that the introduction to planimetrics could very well be seen as an introduction to the *‘ilm ḥurūf al-ma‘jam*', the science of script.⁴³ Rayef continues by summing up all the points *‘die dem Wazīr [Ibn Muqla] bei seiner Untersuchung nützlich gewesen sein können'*⁴⁴, like definitions of 'point' and 'line'. By comparing Euclid's definitions with the way Ibn Muqla describes these elements of writing, Rayef means to show the direct influence of especially Euclid on Ibn Muqla's work.

Also in the case of Ibn Muqla, it is remarkable how much attention is given to the individual letter shapes and the underlying rules. The way the separate letters interconnect is completely left out of the picture. Again, when using Gruendler's criteria, Ibn Muqla focuses on shape only. Rayef in his thesis does not do anything else than identifying and reconstructing the isolated letter shapes. We can conclude that the shape of the separate letters was the most important feature of a good calligrapher in the days of Ibn Muqla (the end of the tenth century). This was already expressed in the treatise by Tawḥīdī.

2.1.3 Ibn ʿAbd ar-Raḥmān

To place the impact of Ibn Muqla's system in its proper context, it is interesting to have a look at a similar treatise on calligraphy, but then from several centuries later. The treatise is written by a scholar who calls himself Muḥammad Ibn ʿAbd ar-Raḥmān, identified by Edward Robertson as a mystic who lived from 1492 to 1545 A.D. alternately in Mecca and Cairo.⁴⁵ Robertson argues that the treatise is probably a summary of larger texts, based on several authors, among which al-Barbarī (who is quoted by Tawḥīdī) and Ibn Muqla himself. It will shed a light on how Ibn Muqla was perceived centuries after his death, and the icon he

⁴² Ibidem, 21, 24.

⁴³ Ibidem, 43.

⁴⁴ Ibidem, 45.

⁴⁵ Robertson, 'Muhammad Ibn Abd ar-Rahman', 58.

became in the world of calligraphy. Robertson seems quite informed on the topic but mistakingly mentions Ibn al-Bawwāb as a brother of Ibn Muqla, which is not the case.⁴⁶ For the rest, his introduction of Ibn ʿAbd ar-Raḥmān’s text is very helpful in providing the context of the treatise.

After a general introduction of the text to the reader, the treatise of Ibn ʿAbd ar-Raḥmān continues with a history of writing (page 67-72⁴⁷) and calligraphy (72-76), which is different from the other two treatises. Ibn Muqla is venerated here as the inventor of a new method of writing, and giving ‘a *geometric cast to the letters*’⁴⁸. The text continues with chapters on the reed pen, how to use it and how to make ink (pp. 76-80). Ibn ʿAbd ar-Raḥmān finishes his treatise with the design of the letters (pp. 80-83).

The reason why this treatise is so interesting is not so much because of its contents. It tells us basically the same as the other two treatises mentioned above. It is the fact that Ibn ʿAbd ar-Raḥmān writes about five hundred years after the other two, that points out so clearly that the history of Arabic calligraphy became slightly distorted through time. In the text of Ibn ʿAbd ar-Raḥmān three persistent misconceptions of this history are apparent. First, that Arabic originates from the Syriac script⁴⁹. Secondly, that the cursive styles all originate in the Kufic writing style⁵⁰. And finally, that Ibn Muqla was the one who invented the script.⁵¹ In the first chapter, evidence was brought forward to believe that the Arabic script did not originate in the Syriac script, but the Nabataean. Below will be explained how the other two misunderstandings are actually part of one big misunderstanding, that will be criticized using modern scholarly research.

⁴⁶ Ibidem, 59. The use of language here might cause problems. Robertson mentions ‘*his [Ibn Muqla’s] brothers, ‘Abdallah and Ibn al-Bawwāb*’. Perhaps it is a typographical error, where brother should be singular and there shouldn’t be a comma after ‘brothers’. This is likely, as in the treatise that Robertson translated, the chain of instruction between Ibn al-Bawwāb and Ibn Muqla through Muḥammad ibn as-Simsimānī and Muḥammad ibn ‘Asad is explained on pages 74 and 75.

⁴⁷ As Robertson does not provide the original Arabic text, the page numbers here are the ones from the translation in his article.

⁴⁸ Robertson, ‘Muhammad Ibn Abd ar-Rahman’, 73.

⁴⁹ Ibidem, 68.

⁵⁰ Ibidem, 69.

⁵¹ Ibidem, 73.

2.2 A Critique on the Arabic Sources

As interesting as the Arabic sources may be, we have to regard them critically. Ibn Muqla and Tawḥīdī still wrote in the ‘formative years’, when the system was just introduced and Tawḥīdī still worked with people who met Ibn Muqla personally. However, we see that several centuries later, Ibn Muqla was remembered for more than he actually achieved. He was seen as the inventor of the Arabic script, or at least the Naskhī writing style. This is a view that was quite persistent, and only deconstructed for the first time in the nineteenth century by scholars such as Baron McGuckin de Slane, who showed that the style that Ibn Muqla laid out the rules for was not the Naskhī style.⁵² Later, Nabia Abbott specified this by explaining how the script that Ibn Muqla developed, called *Khaṭṭ al-Mansūb*, was wrongly interpreted as a style, and not as its true meaning, ‘a proportioned script’.⁵³ We can conclude that Ibn Muqla was more busy standardizing the script itself, than the individual styles. The system he developed, based on geometric principles, gave enough freedom to develop new styles within this system.

In what context then did Ibn Muqla write his treatise, and how was it possible that his name only is attached to this important innovation of the Arabic script? Several authors have tried to formulate an answer to this question, based as much on the Arabic literature presented above, as on modern historical research. The outcomes give a more nuanced view on this standardization process.

First of all, one example of the overappreciation for Ibn Muqla’s contribution is that in later times people assumed that Ibn Muqla single-handedly changed the angular Kufic script (that was most popular at his time to write Qur’āns in) to an italic Naskhī script. Already long before Ibn Muqla there were cursive scripts next to the monumental scripts like Kufi (that were based on inscriptions in stone). Tabbaa argues that until Ibn Muqlah, there were in fact two separate writing disciplines, that of the calligraphers writing the Qur’ān in Kufic, and that of the scribes writing their secular works in cursive writing.⁵⁴ While there were strict rules governing the script used for Qur’āns, the rules were not so strict for secular writers, resulting in the use of a cursive script that has been labeled ‘broken cursive’, a term coined by Estelle Whelan⁵⁵, and supported by Sheila Blair⁵⁶. Ibn Muqla was a scribe, and thus familiar with the cursive style. It was also this style that Ibn Muqla invented rules for, resulting in the *Khaṭṭ al-*

⁵² Ibidem, 59-60.

⁵³ Abbott, *The Rise of the North Arabic Script*, 33-35.

⁵⁴ Tabbaa, Yasser, ‘Transformation of Arabic Writing: Part I, Qur’anic Calligraphy’, *Ars Orientalis* 21 (1991), 120.

⁵⁵ Whelan, Estelle, ‘Writing the Word of God’, *Ars Orientalis* 20 (1990), 113-147.

⁵⁶ Blair, *Islamic Calligraphy*, 145.

Mansūb. This however does not yet explain why his system became so widely used. Instead of attributing this success to the quality of the system, Blair identifies three possible reasons for the change from the Kufic to the cursive styles as prevalent styles for writing Arabic.⁵⁷

First, a technical innovation of pens and the wider availability of paper asked for a more cursive script. A second reason is more historical, namely that under the Abbasid dynasty in the tenth century, the chancery was developed as part of a better administration. The head of the chancery was the vizier, a position that Ibn Muqla held thrice during his lifetime. A third reason could be a political one. According to Yasser Tabbaa, the script reform was introduced by Ibn Muqla as a part of the campaign to promote official readings of the Qur'ān, in a period in which the Qur'ān became officially canonized.⁵⁸ Blair herself criticizes Tabbaa's thesis for giving too much credit to Ibn Muqla. A combination of the first two reasons seems the most likely, in which the chancery became more influential, and thus the styles used in the chancery became the standard. The styles used in the chancery could very well be influenced by technical innovations, and in that way the first reason indirectly influenced the standardization of the Arabic 'broken cursive' by Ibn Muqla. In this respect, Tabbaa is right when he claims that part of the success of the new script '*resulted from the adoption by the Abbasid state.*'⁵⁹ Blair adds to this that the several reconstructions of the script that Ibn Muqla designed seem to point towards '*crisp, well-defined letters*', making it ideal for scribes from the chancery, where after all legibility was of paramount importance.⁶⁰

The critique on the Arabic sources we discussed then can shortly be summarized as in crediting Ibn Muqla too much. What is important to take from this discussion is the fact that during the days of Ibn Muqla there were several writing styles developing simultaneously, just as in the formative phase of the Arabic script. One of these developments was the innovation that Ibn Muqla proposed. Because of technical reasons as well as historical reasons, this particular system became successful, and outshone other systems in use. Later on Ibn Muqla was rightfully credited for this system, but wrongfully for the impact of it. It does not do justice to all the other contributors to the Arabic script to name Ibn Muqla the inventor of it. For example, even in Arabic sources a calligrapher two generations after Ibn Muqla, Ibn al-Bawwāb, is credited for giving a rounder shape to the script.⁶¹ A script is something that grows organically and only the best options get adopted and become widespread, a sort of

⁵⁷ Ibidem, 173-175.

⁵⁸ Tabbaa, Yasser, 'Canonicity and Control. The Sociopolitical Underpinnings of Ibn Muqla's Reform', *Ars Orientalis* 29 (1999), 98.

⁵⁹ Tabbaa, 'Canonicity and Control', 98.

⁶⁰ Blair, *Islamic Calligraphy*, 160.

⁶¹ Blair, *Islamic Calligraphy*, 160, 165.

'survival of the fittest'. The adoption of Ibn Muqla's system paved the way for the development of the classic styles of Arabic writing, the so-called Six Pens: Thulūth, Naskhī, Muḥaqqaq, Rayḥān, Tawqī^c and Riqā^c.⁶² It is in this perspective that we should evaluate Ibn Muqla's contribution and place this in a proper context.

2.3 Subconclusion

From what has been discussed in chapters one and two, we can conclude a few important issues concerning the development of the Arabic script.

First, in both the formative period of the Arabic alphabet, as well as the period in which the cursive script was adopted, we do not see a linear development of the script, but rather a diffusion of several variations. Out of the abundance of options, one style gets picked out in a process that depends heavily on the context. This does not deny the fact that there were more styles.

Secondly, practical reasons will for sure play an important role in the adoption of one standard style, but also power relations are decisive. The ones in power decide which is the most practical script and thus what becomes the standard.

Thirdly, cultural exchange plays an important role in the formation of script in general, but certainly also in the case of Arabic. Actually, the adoption and adaptation of a script from outside the Arabic culture developed itself in an important symbol of Arabic culture. The spread of Greek philosophy during the early ages of Islam in for example the Abbasid caliphate, through Ibn Muqla had a definite influence on the shaping of the script.

Finally, when looking at Arabic authors writing on the Arabic script and the way it should be written, we lack a focus on the connectedness of the script. Both in the formative period as well as during the transition to cursive script, individual letter shapes received more attention than the connections and the baseline.

⁶² Ibidem, 417-18. In addition, she names the two 'hanging scripts': Ta^clīq and Nasta^clīq.

Chapter 3 – Pressing writing into print

The first major improvement of the Arabic writing system were the standardizations introduced by Ibn Muqla and several calligraphers after him. This standardized calligraphic script became the norm in the whole world that used the Arabic letters. While Europe started a shift from writing to print in the late Middle Ages, printed Arabic was not widely used until the eighteenth century. There are several reasons for this slow adaptation to the new technique. First of all there were political constraints. The Ottoman sultans did not allow printing in Arabic, as they saw it as a threat to their power monopoly over knowledge and the spread of it.⁶³ A second reason was a religious one. It was a heavily debated topic whether the Qur'ān could be printed, instead of copied by hand only.⁶⁴ A third reason is of a more practical nature. The invention of the movable type printing press was designed for non-connected writing systems like the Latin script. The different ways in which the Arabic letters are connected to each other (often in ligatures) require more skills. Also, the knowledge of printing and the techniques to do so were not available in the Arabic writing world. This chapter reflects on the reasons of the slow introduction of printed works in the Arabic world, but will have a greater focus on where and how Arabic was printed, and how this influenced Arabic typography.

The introduction of 'print' often refers to the introduction of 'movable type print'. This means the technique of printing text using loose characters, that are arranged to form the text of one page, after which this page is printed. An earlier technique is to cut out a full page of text from a block of wood and to print the full page, called 'block printing'. Movable type printing offers many advantages over block printing, but the latter is much older.

In the history of Arabic printing block printing also played an –often underestimated– role, as Richard Bulliet recognizes. He demonstrates that the Arabic world first looked eastwards for printing methods, before the West took over. China, inventing print long before Europe, has a completely different writing system. In Chinese the script makes use of pictograms, in which every pictogram signifies one or more ideas or objects. To print, the Chinese carved whole pages out in blocks and used those to multiply the texts. This is exactly what Arabic people did in the ninth or tenth century.⁶⁵ It is therefore possible that the Arabic world formed a link between the Chinese and European world to transfer the

⁶³ Gdoura, Wahid, *Le Début de l'Imprimerie Arabe à Istanbul et en Syrie: Evolution de l'Environnement Culturel (1706-1787)* (Tunis, 1985), 86-89.

⁶⁴ Gdoura, *Le Début de l'Imprimerie Arabe*, 103-108.

⁶⁵ Bulliet, Richard W., 'Medieval Arabic Ṭarsh: A Forgotten Chapter in the History of Printing', *Journal of the American Oriental Society* 107.3 (1987), 427.

knowledge of printing, just as they were the gateway for much more knowledge, products and people.

To downplay these remarks made by Bulliet, it is needed to say that this block printing technique was never widely adopted in the Arabic writing lands and remained refrained to the lower classes, who bought the printed chants, prayers and mystical texts as a part of superstitious beliefs. Bulliett believes it was the rise of Sufism in Central Asia that caused the block printing to become obsolete. This was because text handwritten by Sufis had a spiritual value that could not be attached to printed texts.⁶⁶ And so the first chapter in the history of Arabic printing came to an end in the fourteenth century at the latest.⁶⁷

3.1 Movable Type Printing Technique

As the vocabulary of printing techniques is not very known, this part will start with offering some technical details about printing using the movable type technique. What Gutenberg introduced was a technique using loose letters to spell out words, and thus sentences and whole texts. The benefit of this being that one could design and cut a mold only for the separate characters that one needed to print the text, after which the letters could be multiplied using this mold. In the case of Latin, one needed only to cut the twenty-six letters of the alphabet in lower case and capitals. Besides this some extra characters like numerals, punctuation marks and such were needed. Even though cutting the characters out of iron was more specialized and more expensive, it still meant a huge decrease in work and thus costs, when compared to designing and cutting whole pages from wood. Also, an additional benefit was the hardness of the metal type, with which more copies could be printed than was possible with the softer woodblock prints.

For creating a whole set of characters needed to typeset a page, meaning to put all characters in order to spell out the text, a process was needed that required a specific set of skills. First, one needed to design the characters that were needed. In the case of Arabic, the designer or typographer, had to have knowledge of the Arabic script and the rules that apply to it. The design was then given to the punch-cutter. This was the person who would copy the design onto a bar of iron, the so-called punch. As this asked for the skill to work delicately with metals, the first punch-cutters were mostly gold- or silversmiths. The punch was the main model of the eventual character. The punch, that contains the mirror image of the future character, is used to create a matrix. The matrix serves as a mold to pour lead in to create the final letter sorts. Of these letter sorts, the typesetter would have a huge collection,

⁶⁶ Bulliet, 'Medieval Arabic Ṭarsh', 438.

⁶⁷ *Ibidem*, 427.

depending how frequent letters are used. For typesetting English using this technique, a typesetter would need many more e's than x's. The typesetter puts all the letters in order in a forme, which is the outcome of a typesetter's work. A forme is basically the mirror image of the page to be printed, built up of all the several letter sorts. After the page is printed, the forme can be taken apart again, after which the sorts can be reused. Important to notice is that there are three separate set of skills needed in the process. First the typographer who designs the characters (preferably in a unified style to form a type), the punch-cutter who transfers the two-dimensional design into three-dimensional sorts (using the punch and the matrix to duplicate the shapes), after which it is up to the typesetter to put of all of these letters properly together to create the forme.

A few early examples of Arabic text exist that are printed in Europe using the technique of woodblock printing. Miroslav Krek listed his finds of Arabic printing in Europe, starting with a fourteenth century 'wood stamp' from Almería, Spain. Not surprisingly, the first attempts to incorporate Arabic text in books are from Spain, as the Iberian peninsula used the Arabic writing system until the Reconquista in the fifteenth century. When the Muslim inhabitants got Christianized, and Arabic was replaced by Spanish, the study of Arabic became less important in Spain. Only after these developments, movable type printing arrived to the Spanish empire, and thus Spain has never played a major role in developing this technique.⁶⁸ After the wood stamp from Almería the list continues with six woodcut examples, of which the oldest is an alphabet printed in a pilgrimage description of Bernhard von Breytenbach, printed in Mainz in 1486.⁶⁹ This was however not connected text, but more an illustration of how the Arabic script would look like, an exotic illustration. The list continues with examples from Lyon (1488), Speyer (1490), Zaragoza (1498, a Spanish translation of Breytenbach⁷⁰), Venice (1499, incorporating Arabic text in an illustration) and Granada (1505, the Arabic Grammar of Pedro de Alcalá). The latter being a 'woodcut and wood letters'.⁷¹ It is safe to state that these are the earliest samples of Arabic script printed in European books. Krek's list does not seem to be complete however. Robinson mentions a full Qur'ān printed in Italy

⁶⁸ Nave, Francine de, (ed), *Philologia Arabica. Arabische studiën en drukken in de Nederlanden in de 16de en 17de eeuw*. Catalogue for exhibition in the Plantin-Moretus Museum 25 October - 21 December 1986 (Antwerpen, 1986), 62-64.

⁶⁹ Bernhardt von Breydenbach, *Die heylighe bevarden tot dat heylighe grafft in Jherusalem ende van daen totten bergh Synai* (Mainz: Erhardt Rewich, 1488). Bibliotheca Thysiana 924 (Leiden).

⁷⁰ According to [<http://www.vgesa.com>], accessed on line on 20 May 2011.

⁷¹ Krek, Miroslav, *A Gazetteer of Arabic Printing* (Weston, 1977), 133.

in the fifteenth century and Arabic being printed in Syria in the sixteenth.⁷² Both do not occur in the list of Krek. Perhaps Robinson here refers to the Qur'ān that is believed to have been printed in Venice in 1518, which is the sixteenth century, but of which no copies survived.⁷³



Image 2 - The illustration in the Venice novel (1499)

Die Sarraceni bruchē Arabisch zung
und litter, welche litter hie vnden stec
in rechter form gedrucket.

dal	dal	kech	hach	szym	ach	te	be	aleph
⤴	⤵	⤶	⤷	⤸	⤹	⤺	⤻	⤼
szym	das	ta	chach	had	szym	szym	szym	ke
⤾	⤿	⥀	⥁	⥂	⥃	⥄	⥅	⥆
hehe	nun	myim	lan	lan	aph	kaly	ffa	szym
⥇	⥈	⥉	⥊	⥋	⥌	⥍	⥎	⥏
⥐	⥑	⥒	⥓	⥔	⥕	⥖	⥗	⥘
⥙	⥚	⥛	⥜	⥝	⥞	⥟	⥠	⥡

Image 3 - The Alphabet of Breytenbach (1486)

These earliest examples seem to be either unconnected letters, like the alphabet in Von Breytenbach, or very short phrases, like in Venice. Besides, the examples shown here in images 2 and 3 show that the letters were very crude, roughly cut and not resembling the calligraphic masterpieces that are known from the same period from the Muslim empires. They should not be regarded as examples of printing Arabic text, but more using Arabic writing as an illustration. This view is shared by Geoffrey Roper.⁷⁴ The grammar of Pedro de Alcalá maybe escapes this critique because in this publication the fragments of Arabic are necessary and not merely exotic depictions of an unknown language. An important step

⁷² Robinson, Francis, 'Technology and Religious Change: Islam and the Impact of Print', *Modern Asian Studies* 27.1 (1993), 233.

⁷³ Tracy, Walter, 'Advances in Arabic Printing', *Bulletin of the British Society for Middle Eastern Studies* 2.2 (1975), 87. Also: Krek, Miroslav, 'The Enigma of the First Arabic Book Printed from Movable Type', *Journal of Near Eastern Studies* 38.3 (1979), 208.

⁷⁴ Roper, Geoffrey, 'Early Arabic Printing in Europe', in: Eva Hanebutt-Benz, Dagmar Glass and Geoffrey Roper (eds.), *Middle Eastern Languages and the Print Revolution: A Cross-Cultural Encounter* (Westhofen, 2002), 131.

therefore was when the technique of movable typesetting was applied to Arabic to design full pages of text that were meant to be read instead of serving as an illustration next to Latin text. This was first achieved in 1514 in Italy. We will now continue focusing on movable type setting only, as it was this invention that made it possible to produce books at much lower costs, but that also had an immense impact on the appearance of the Arabic script. Roughly speaking, Italy took the lead in applying the new technique of movable type setting to Arabic. After Italy, England and The Netherlands became centers of Arabic printing. Only in the eighteenth century movable type printing of Arabic was introduced to the Middle East on considerable scale. We will focus on these three centers of Arabic printing.

3.2 Movable Type Printing in Italy

3.2.1 Gregorio de Gregorii

Already in 1489 a patent was issued by the Venetian government to give the monopoly on printing Arabic, Maghribi, Syriac, Armenian, Abyssinian and the 'Barbary languages'.⁷⁵ However, no books in Arabic are known to be printed during the validity of this patent, except maybe for the mythical Qur'ān mentioned above, of which no copies exist anymore. The patent was still valid (after it being renewed in 1513) when the first book in Arabic printed by means of movable type printing was printed in Fano. This was the *Kitāb ṣalāt as-sawā'ī*, a book of prayers for the Christians in Syria, of which still at least eight copies are known to exist.⁷⁶ Not much is known about this publication, other than what we can tell from the publication itself. It is printed in Fano, which was part of the Papal State at that time, but by a Venetian printer, Gregorio de Gregorii. Whether the book was really printed in Fano, or that this place was mentioned in the colophon just to escape the patent in Venice, remains a question, but Krek argues for the latter quite convincingly.⁷⁷ More important is the fact that the book is printed upon request of Pope Julius II.⁷⁸ This reveals much of the motivations to print such a book. After centuries of crusades in which Christian Europe tried to establish Christian domination in the Levant and more specifically in Jerusalem, the Ottoman empire slowly grew in power and in scale. With the capture of Istanbul in 1453, an end came to the Christian Byzantine empire, and with that an end to Christian states in the Levant. The many Christian subjects in the Ottoman Empire were protected under Dhimmi law, providing

⁷⁵ Krek, 'The Enigma', 208-9.

⁷⁶ Ibidem, 203.

⁷⁷ Ibidem, 211-12.

⁷⁸ Ibidem, 203.

religious autonomy for non-Muslim communities in the empire in turn for political submission. The Christian west, no longer the dominant force in the region, stopped organizing crusades, but kept contact with the Levant through trade and occasional wars with the Ottoman Empire. The Papacy in Rome set itself to intensify contacts with the Christians in the Middle East during the Fifth Council of the Lateran in 1514.⁷⁹ The *Kitāb ṣalāt as-sawāṭ* was clearly a result of this aim. We will now have a closer look to the print type itself.

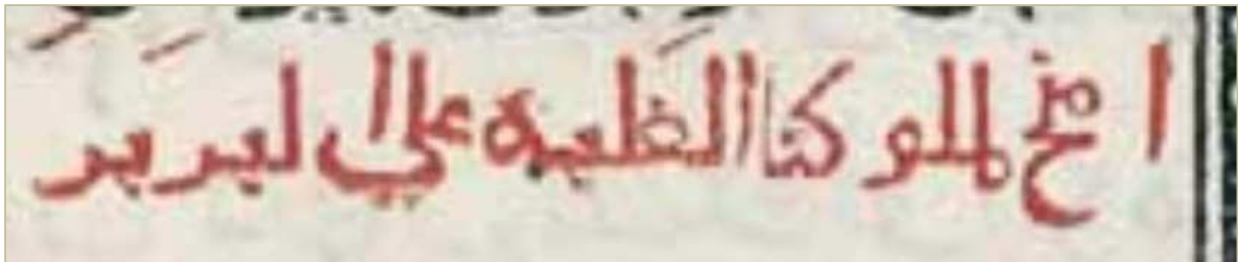


Image 4 - Fragment of the first page from the *Kitāb ṣalāt as-sawāṭ* (1514), full page in Image 5.

As far as is recorded, no reactions to the book and its type have survived. However, we can guess the impression the book would have made on Arabs used to calligraphy; not a good one. The type used for the body of the book is clearly an imitation of Arabic handwriting, but a very bad imitation, and possibly from bad examples. On top of this comes the technical limitation of movable type printing, especially since the printer was experimenting applying this technique to Arabic for the first time.

What immediately comes to mind when looking at this type is the lack of 'obliqueness', characteristic to Arabic writing. In handwritten Arabic (be that calligraphy or informal handwriting) a group



Image 5 - The first page of the *Kitāb ṣalāt as-sawāṭ* (1514)

⁷⁹ Montecchi, Giorgio, 'Analisi bibliologiche sulla prima stampa in lingua araba: *Horologium*, Fano, Gregorio de Gregori, 1514', in: Misiti, Maria Cristina, (ed.) *Le mille e una cultura. Scrittura e libri fra Oriente e Occidente* (Bari, 2007), 75-76.

of connected letters starts high, to slowly descend towards the line on which is written. The height to start is determined by the letters that follow, as the last one should touch the writing line again, causing the base line to be slightly diagonal. It has also been understood as 'secondary baselines', as the letters are positioned on separate baselines derived from the main baseline of the whole text. This effect is caused by most letters not connecting horizontally, but more diagonally. This means that the line starting the letter begins slightly higher than the line coming out of the letter, continuing to form the next one. More extreme height differences are caused by a group of letters that can be connected almost vertically, by placing them on top of each other. This effect is shown in image 4. This effect clearly was too difficult to implement in printing the type in the *Kitāb ṣalāt as-sawāʿī* where we see only a straight baseline, with no diagonal effect noticeable. However, there are occasions where the typesetter tried to imitate the calligraphic style by creating ligatures, as in the case of the word *'amnaḥa* where the mīm, nūn and ḥā' are connected in one ligature. The result seems a bit forced and misses the flow of Arabic calligraphy.

3.2.2. The Polyglot Psalter

The second oldest book with a full Arabic text printed by movable type printing also stems from the Papacy's desire to reach to the Christians in the Orient. In 1516 in Genova the first volume of a polyglot bible was published, the contents of which were according the decrees of the Fifth Council of the Lateran, taking place from 1512 to 1517. This volume contained the Psalter, which was translated in columns next to each other in Hebrew, Latin, Greek, Arabic and Chaldean (Aramaic), compiled by the Dominican bishop of Nebbio (Corsica) Agostino Giustiniani. Printed only two years after the *Kitāb ṣalāt as-sawāʿī* this Arabic text received remarkably less scholarly attention. Yet it is very useful to see if there are any differences in the type used in both productions, or to see whether the types used come from the same source.

The answer is simple and easily recognizable in both documents, it is not the same type being used. Considering the energy it takes to make a fully useable set of letters to print a book of this size, it would have made sense to reuse them. Perhaps Gregorio de Gregorii kept the letters for himself, even though there are no other Arabic prints known to be made with the same type. Another reason could be that the printer of the Polyglot Psalter tried to improve the type. For what reason it may be, Pietro Paolo Porro, who was the printer, used a different set of letters, and printed in the house of Nicholas Justinian Paulus. As Giustiniani, the author of the Polyglot Psalter, could not find a skillful enough printer in Genoa, he worked

together with Porro in Milan.⁸⁰ It is unknown whether Porro was familiar with the book published by De Gregorii, but at least we can see from the type he used that he developed a completely new type. The type of Porro is of better quality than De Gregorii's type, in the sense that the individual letter shapes are nicer carved, less crude and more round. Supposedly both texts are influenced by the Maghrebi style of Arabic, due to the availability of texts in that particular style of Arabic.⁸¹

However, as is visible in image 6, a lot of letters do not connect properly, and this gives an ugly impression of the Arabic text. Also, Porro makes less use of ligatures, and the ones he used are simple, like the *lām-mīm* ligature (middle-right), and the *mīm-jīm* ligature (top right). Especially the smaller Arabic letters like the connected *bā'* or *tā'* are not well executed and cause legibility problems for example in the word *yantathir*, that could be easily read as *yaḥdhathir*, *yandhathir*, *yaḥnathir*, etcetera.

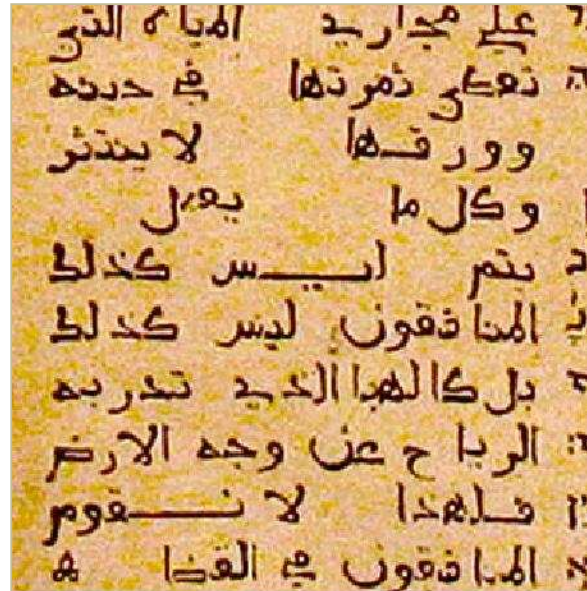


Image 6 - Fragment of the Polyglot Psalter (1516)

Also, it is clear from the text examples that Porro abandoned the concept of

'obliqueness' in Arabic writing. He converted the slightly diagonal handwriting into straight horizontal printed lines. On the other hand, the double usage above each other of the word *kadhālika* shows nicely how regular the script is. Porro manages to use the *kashīda* technique effectively to line out the text column. According to Azmi and Alsaiani the *kashīda* can be defined as 'a connection between Arabic letters and it is not a separate character but a stretch of the previous letter'.⁸² Using this definition of *kashīda*, Porro has used it quite accurately, as the two instances in the example text show that he extended the letters, judging on the position of the diacritic dots, rather than just extension of the baseline.

Above we discussed the two earliest examples of Arabic text printed using the movable type printing technique. There were two main constraints that De Gregorii and Porro were facing

⁸⁰ Grendler, Paul F., 'Italian Biblical Humanism and the Papacy, 1515-1535', in: Rummel, Erika, (ed.) *Biblical humanism and scholasticism in the age of Erasmus* (Leiden, 2008), 234.

⁸¹ Smitskamp, Rijk, *Philologia Orientalis. A description of books illustrating the study and printing of Oriental languages in 16th- and 17th-century Europe* (Leiden, 1976), 33.

⁸² Azmi, Aqil, and Alsaiani, Abeer, 'Arabic Typography. A Survey', *International Journal of Electrical & Computer Sciences* 9.10 (2010), 16-22. Here: 17.

when developing an Arabic type to print their books in. The first constraint is a technical limitation. Book printing with movable type technique was first used by Johannes Gutenberg in 1439, resulting in the first book printed using this technique being the Bible printed in 1455. The technique developed by Gutenberg spread quickly, and was already common in the time of the first experiments printing Arabic. However, it must be noted that the Gutenberg technique was designed for printing Latin script. This was the big problem that both De Gregorii and Porro were trying to solve, how to apply this technique to a writing system that asked for much more flexibility and curved lines. Both printers tackled this problem by simplifying the Arabic script. They used less ligatures, they took a horizontal straight baseline, ignoring the natural 'obliqueness' of Arabic writing, and lined up the letters to make words, instead of merging them. Basically what they did was adapting the Arabic script to fit the demands of the Latin-based printing technique, instead of modifying the technique to accommodate the Arabic script.

The second constraint was clearly a cultural one. Both De Gregorii and Porro were 'merely' printing the Arabic that their clients gave them. Themselves they had no sense of what the Arabic script ideally should look like. The examples given to them were imitated by European eyes. On top of this it is important to note what Tracy already wrote, that printers in Europe mostly had no access to the valuable original Arabic manuscripts, but mostly copies of them. These copies were of inferior quality, let alone the printer's imitation of it.⁸³ In other words, the punch-cutter, the one who carved out the letters from the steel bars, had knowledge of the technique, but not of the language. In the case of the Polyglot Psalter, Giustiniani had knowledge of the language, but did not master the skills to cut them. As it was the punch-cutter who in the end cut the letters, and the printer to combine all the letters in order to form words, sentences and pages, there was only room for the author with knowledge of Arabic, to comment on what was being done. The question is to what extent the author was included in the type-designing process.

3.2.3. Robert Granjon

So it seems that the distinction between knowledge of the language and its script was separated from knowledge of printing techniques. This resulted in a printed type that was –in both examples– far from perfect. The first one who bridged these differences was the French punch-cutter Robert Granjon (1513-1590), who worked in Rome for the *Typographia Medicea*, the printing house founded in 1584 under sponsorship of Cardinal Ferdinand de Medici. There are some examples of Arabic prints from Italy in the period between 1516 and

⁸³ Tracy, 'Advances in Arabic Printing', 87-88.

1584, but the works that were printed using the type cut by Robert Granjon mark a remarkable step forward in the sense that esthetically this type came much closer to the types still in use today. An important impetus for this enhanced result was Granjon's experience as a typographer and punch-cutter on the one hand, and the fact that the *Typographia Medicea* was directed by Giovanni Battista Raimondi, an Arabist himself. Also in this case an important incentive for producing books in the Arabic language was the mission of the Church to spread Christianity to the Middle East. For the same reasons a college for Maronite priests was founded in the same year by Pope Gregory XIII.⁸⁴ The college and the printing house worked closely together, using the Arabic skills of the Maronite students to translate and edit Arabic text editions, like the so-called 'Book of Roger', that was edited by two Maronite priests, and which type we will discuss shortly below.⁸⁵

Many sources claim that the *Typographia Medicea* produced the best type available at the time.⁸⁶ This should be to a large extent be attributed to the work of Robert Granjon. He worked for Plantin in Antwerp, another famous printer of that time, before coming to Rome to use his skills to produce oriental types.⁸⁷ During his time in Rome, Granjon produced several types, the one even better than the other, showing that Granjon's skills grew over time. Also, it is the first possibility to discuss types instead of a singular usage of the type. Where before we discussed Porro's type in the *Polyglot Psalter*, we can now discuss two separate types of Granjon, as the names of the types are recorded, as well as more specific information on the size and the usage of the fonts. We will discuss two examples here, showing how Granjon solved the same problems that De Gregorii and Porro were facing.

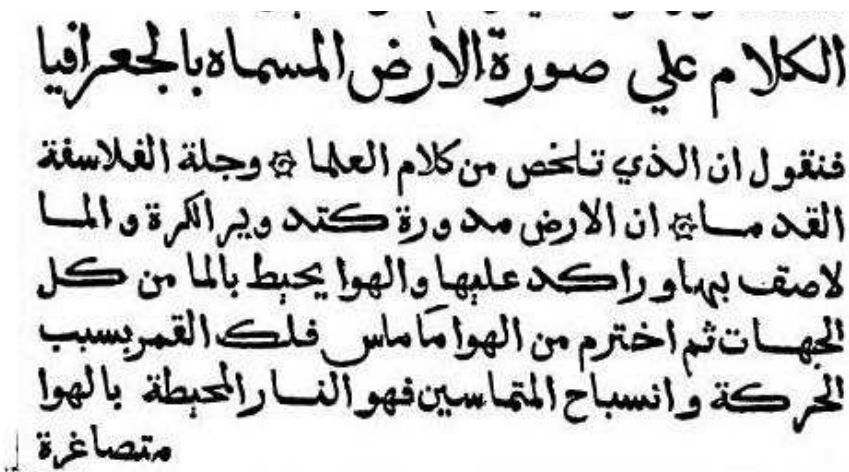


Image 7 - Fragment of the *Nuzhat al-Mushtāq* by al-'Idrīsī (1592)

⁸⁴ Nave, *Philologia Arabica*, 65.

⁸⁵ Smitskamp, *Philologia Orientalis*, 37.

⁸⁶ See Roper, 'Early Arabic Printing', 138, Nave, *Philologia Arabica*, 65, and Vervliet, Hendrik D. L., *The palaeotypography of the French Renaissance. Selected papers on sixteenth-century typefaces*, vol. II (Leiden, 2008), 452.

⁸⁷ Nave, *Philologia Arabica*, 65.

In 1592 the *Typographia Medicea* published the work of the Andalusian Arabic scientist Muḥammad al-‘Idrīsī, the book ‘Nuzhat al-Mushtāq’, or ‘Geography’, or commonly known as ‘The Book of Roger’, after the Sicilian King Roger II, who was Al-‘Idrīsī’s patron. This text is a good example of the ‘secular’ content of the books that the *Typographia Medicea* produced for export to the Middle East. Other examples were the medical works of Ibn Sīnā, some grammars, as well as a translation of and commentary on Euclid’s *Elements* by aṭ-Ṭūsī.⁸⁸ The ‘Nuzhat al-Mushtāq’ contains two types designed and cut by Granjon, see image 7. The first one is ‘Arabe des quatre Evangiles’, named after its use in the Gospels printed just before the ‘Nuzhat al-Mushtāq’, but also known as ‘Trismégiste’.⁸⁹ It was a big type, measuring 30 points⁹⁰ high, and was used for titles in the ‘Nuzhat al-Mushtāq’. We will discuss this type below, using an example from the Gospels printed in 1591. The other type used for the body text in ‘Nuzhat al-Mushtāq’ was called ‘Arabe d’Euclide’, a 22 point type named after its use in aṭ-Ṭūsī’s commentary on Euclid, that was however printed two years later in 1594.

Both ‘Arabe d’Euclide’ and ‘Arabe des quatre Evangiles’ as seen in the example in image 8 immediately appear to be more appealing than the types from De Gregorii or Porro. The lines are more fluent, the letters sharper and more elegant. In general, the appearance of the Arabic type is much closer to handwritten Arabic text. What is especially important that all Arabic letters seem to be in proportion to the others, the diacritic dots are placed correctly, and the connection between the letters appears to be seamless, with some minor exceptions.

⁸⁸ Roper, ‘Early Arabic Printing’, 138.

⁸⁹ Vervliet, *Palaeotypography*, 454.

⁹⁰ In typography, measurements of fonts are done in pica (1/72 of a foot), divided in twelve points. Depending on the length of the foot (that differs from place to place), a point can range anything between 0.18 and 0.4mm.

Since the 'Arabe d'Euclide' was smaller, it must have been harder to carve out the shape of the letters according to wish. It shows clearly how the sīn in this type is a bit ugly, executed in a sharp rather than round fashion. Especially in combination with small letters like bā', this renders an interruption of the otherwise smooth flowing line of the script. Also, reminding the rules laid down by Ibn Muqla, the šād and the ḍād should have been larger in proportion to the other letters. However, when we compare this critique with the comments on the types that De Gregorii and Porro created, we notice that in Granjon's case, the comments are limited to details. The overall appearance of the type is clear, and well-executed within the limits of what was technically possible. Interestingly, this particular type was already designed and cut by Granjon in the first years he worked in Rome, in 1583.⁹¹ Two years after that he cut the type 'Arab des quatre Evangiles', which was bigger, and therefore had the possibility of being more precisely cut.

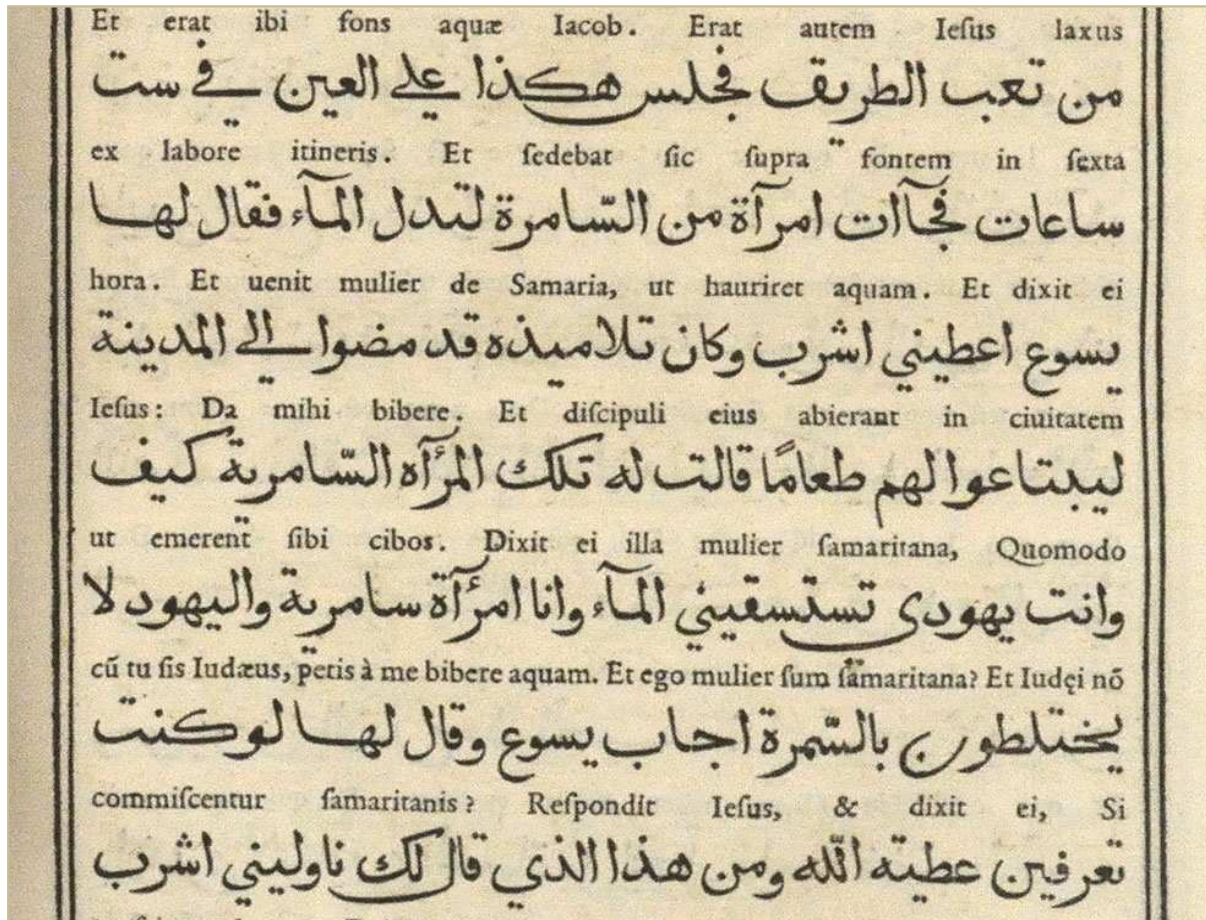


Image 8 - Fragment from page 378 of the Gospels printed by the Typographia Medicea (1591)

⁹¹ Smitskamp, *Philologia Orientalis*, xlv.

‘Arab des quatre Evangiles’, or ‘Trismégiste’, was a very successful type. It has been used in print on at least twelve occasions, either as the body text, like in the Gospels it is named after, or as headings, as we have seen in the edition of al-‘Idrīsī.⁹² To discuss this type we use a fragment from page 378 from the Gospels, see image 8.

To begin with, there are some minor typesetting errors in this fragment. We can see that an [◌]ayn does not connect properly to the following bā’, followed immediately after by a lām not entirely connected to the ṭa’. However, in most other cases the connection between the different letters is smooth, and the border between the cast letter sorts is not discernable. As this is the main technical difference between printing Latin and Arabic, Granjon did a good job in bridging this difference. The other difference being the ‘obliqueness’ of the Arabic calligraphy, Granjon did not pursue this, as it would make the typesetting extremely complex. Once the connections between the Arabic letters are well catered for, it was up to the typographer to focus on the individual letter shapes. Another flaw in this example is the at times very low position of diacritic dots.

To make the type more attractive, Granjon has introduced several ligatures. Some of these are for legibility purposes, others for technical limitations, many others merely for aesthetic reasons. The traditional lām-‘alif ligature is needed, as separate lām and ‘alif would hardly be legible. Because of this the lām-‘alif ligature is sometimes regarded as a letter in its own right. Also, connections with the mīm involve ligatures of different kinds. The second type of ligature Granjon uses are caused by technical limitations. The [◌]ayn in his type is very round and has a short line to connect to the following letter. For an ‘alif to connect properly according to Granjon’s vision of his type, he needed to make a ligature. The most striking ligatures are those for pure aesthetic purpose. On this page only we see many, for example extended sīn, yā’ and lām. Also, Granjon consistently puts fā’ on top of the jīm/ḥa’/khā’ letter shape. He could have saved himself the work of cutting all those extra punches, but the overall outcome of the text becomes nicer, and closer to the manuscripts that Granjon obviously was familiar with.

We can assume that a picture of a letter case layout used by Granjon is in fact the letter case of the ‘Arabe des quatre Evangiles’ type. This is supported by the fact that the caption of the image in question states ‘Case layout of part of one Granjon’s Arabic founts; later used at the Imprimerie Nationale Paris’.⁹³ Vervliet mentions that the ‘punches for this Arabic are preserved in the Imprimerie nationale in Paris, with the appellation ‘Arabic of the

⁹² Vervliet, *Palaeotypography*, 454.

⁹³ Roper, ‘Early Arabic Printing’, 139.

Four Gospels'.⁹⁴ If this assumption is true, then, according to Moginet, this font consisted of no less than 356 different characters.⁹⁵

As said above, the *Typographia Medicea* was reknown for the quality of the fonts they used, that were created by Granjon. Unfortunately, this did not make the printing house more successful. Because of lack of interest in the produced books and change of patronage, the *Typographia Medicea* stopped working in 1614, while the most productive years were already in the early 1590's.⁹⁶ Regardless of her short life, the *Typographia Medicea* proved one important thing, that it was very possible to produce legible, attractive works in Arabic, using the movable type printing technique. In this respect, Roper poses an interesting question, very central to the topic of this thesis: '*Did technical difficulties impede the progress of Arabic typography?*'⁹⁷ He considers the time of Granjon a period after which '*the printing of Arabic rested on a firm foundation of established typographical technique*', and every work printed in Arabic before that just '*an experimental stage*'.⁹⁸ Roper continues by arguing that the technical limitations were not so much a reason for a slow progress, but that it was the other way around. Because there was a very low demand for books printed in Arabic, there was no incentive to tackle these technical difficulties. Something that eventually proved to be very possible. Granjon worked at the dawn of a period of renewed interest in oriental languages, of which Arabic became a prominent example besides the Biblical languages like Hebrew and Aramaic.⁹⁹ It seems then that Granjon was the right man at the right place, to push Arabic typography to a level on which it would stay for many centuries. As right as Roper might be in arguing for this, the technical difficulties of printing Arabic did influence the appearance of the Arabic fonts designed in Europe. A man like Granjon had to make decisions for his font to be printed in a practical, not too expensive way. Many calligraphic features were lost in this process, but a typographic standard for printing Arabic was gained.

3.3 Movable Type Printing in The Netherlands

The Italic peninsula was the place of birth for European typography of the Arabic script. Above we have seen how Granjon laid firm foundations for this in Rome, supported by the

⁹⁴ Vervliet, *Palaeotypography*, 454.

⁹⁵ Moginet, Stefan F., *Writing Arabic. From Script to Type* (Cairo, 2008), 86.

⁹⁶ Nave, *Philologia Arabica*, 65.

⁹⁷ Roper, 'Early Arabic Printing', 139.

⁹⁸ *Ibidem*, 139-40.

⁹⁹ *Ibidem*, 140-42.

Papacy in an effort to reach out to the Christian communities in the Arabic speaking world. Printing Arabic texts soon spread throughout Europe, but not everywhere as successfully as other places. Primarily The Netherlands (at the time the United Provinces) and England became centers of study of the Arabic language and thus places where printing Arabic received constant attention. The Netherlands will be used here as an example of how Arabic typography developed from Italy to Western Europe. As will be shown in this section, the Dutch imitated but never emulated the Italian examples, as they did not invent new ways of accommodating the peculiarities of the Arabic script.

The first time Arabic script was printed in The Netherlands was in 1595, when Franciscus Raphelengius (1539-1597) published his Arabic type specimen in Leiden.¹⁰⁰ This publication took several years of effort in setting up a printing press well equipped to fulfill the job, as well expertise on the side of Raphelengius to design and produce the type of which the publication provides a specimen. As he was married to a daughter of the famous Antwerp-based printer Plantin, he had the knowledge and the connections to fulfill his goal of printing Arabic. Probably the cartographer and punch-cutter Jacobus Hondius (1563-1612) cut the type that Raphelengius designed.¹⁰¹ Raphelengius' interest in Arabic, that he had at least since 1575 according to Lane, was surely an important incentive for his activity in this field. Raphelengius encountered a difficulty as mentioned before, the very limited availability of good written examples of Arabic.¹⁰² He countered this problem by the arrival of Josephus Justus Scaliger (1540-1609) from Paris to Leiden. With him he brought many original Arabic manuscripts, making Raphelengius able to use originals instead of copies as examples for his type to be based on.¹⁰³ In fact another important example for Raphelengius was the *Alphabetum Arabicum*, published by the Typographia Medicea in 1592. Raphelengius based his new type for a large part on the works of Granjon, something he acknowledges in the preface to his specimen.¹⁰⁴ It is known that Raphelengius both admired the efforts of the

¹⁰⁰ Krek, *A Gazetteer*, 133, Lane, John A., *The Arabic type specimen of Franciscus Raphelengius's Plantinian printing office (1595)* (Leiden, 1997), x.

¹⁰¹ Krek, Miroslav, *Typographia Arabica. The development of Arabic printing as illustrated by Arabic type specimens* (Waltham, 1997), 16.

¹⁰² Lane, 'Type Specimen of Raphelengius', x.

¹⁰³ *Ibidem*, x.

¹⁰⁴ *Ibidem*, xiv-xv.

Typographia Medicea and his founders, but was also criticizing the choice of works that they published.¹⁰⁵

In image 9 we see the first page of the specimen, for which Raphelengius chose the fiftieth psalm. Justified in the western way, namely by adding spaces between the words rather than stretching the Arabic baseline using kashīda already reveals Raphelengius' shortcomings. Also it is very notable that a large part of the connections between the letters are showing small white spaces, and thus not reflecting the 'flow' of the Arabic script. Even more striking is the lack of ligatures, as we have seen intensively used by Raphelengius predecessors in Italy. In this fragment we can only discover two ligatures, the mīm-ḥā' ligature in the second Arabic line from the bottom in the word muḥākamatika, and the lām-khā' ligature in the last Arabic line in the word bil-khaṭāyā. These ligatures are not impressive, nor nicely executed. In fact, one could expect more ligatures like a slightly elevated nūn to connect with preceding bā' or yā' or similar letters. Raphelengius clearly took a step back here in comparison to Granjon. Concerning the individual letter shapes Raphelengius produced a clean type, with some shapes reminding closely of Granjon's types. For example the dāl with a strongly curved stroke and the final kāf with a stroke normally only used in medial or initial forms.

All in all Raphelengius produced with his 'Specimen' a nice first showcase of what his printing office was capable of. However, compared to Granjon, his specimen was a mere imitation, and thus not taking European printing of Arabic to a higher level. Still, this type was the only one available in the Netherlands for a long time to come, as Raphelengius' masterpiece, his unfinished lexicon, was set using this type many years after this death in 1612-13. The type originally cast in 1595 was even sold off to England in 1613, and the

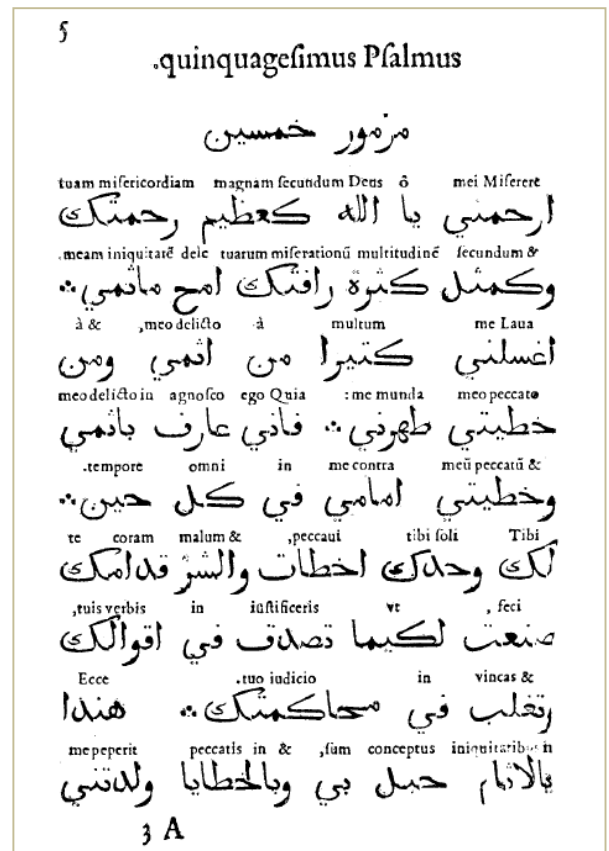


Image 9 - First page of Raphelengius' Specimen (1595).



Image 10 - Two fragments of similar letters. Raphelengius' type is on the left, Granjon's on the right. Both are fragments of images 8 and 9.

¹⁰⁵ Jones, Robert, 'The Medici Oriental Press (Rome 1584-1614) and the Impact of its Arabic Publications on Northern Europe', in: G. A. Russell (ed.), *The 'Arabick' Interest of the Natural Philosophers in Seventeenth-Century England* (Leiden, 1994), 90-91.

whole type altogether was sold to the Plantin office in Antwerp in 1621, twenty six years after it being used for the first time.¹⁰⁶ Lane ends his preface to the specimen of Raphelengius by characterizing Raphelengius' influence as '*But if the Raphelengius type exerted little direct influence on the form of those that followed, the books set in it [...] served as the basis for all that followed, helping to make the Netherlands the centre for Arabic studies for the next seventy years.*'¹⁰⁷ This is no bold remark, but supported by other sources as well.¹⁰⁸

The same Scaliger mentioned above, a French scholar, played an important role in this period, that took approximately from the beginning of the seventeenth century until the 1670's, as his view on Arabic studies was relatively new. It sheds a light on the general motivations for European scholars to be interested in the Arabic speaking world. As we have seen in the Italian context it was mainly a religious motivation to produce Arabic books. In The Netherlands there were more reasons. Of course there were religious motivations, to provide a counterweight to Catholic propaganda, but Scaliger was the first who regarded Arabic as a subject to study in its own right. Not merely as a tool in understanding Hebrew, but as a cultural language worth studying on its own.¹⁰⁹ A third reason was the growing activity of Dutch traders with the Middle East, in which Arabic proved to be a lingua franca that was necessary to master in order to communicate.¹¹⁰ So we can conclude that the period of heightened interest in the Arabic language in The Netherlands was inspired by religious, cultural and economical motivations.

Scaliger was so influential, because two of his students would become very important for the field of Arabic studies in The Netherlands. The first and most renowned of them was Thomas Erpenius (1584-1624), who took effort in finishing Raphelengius' codex, which formed the first true Latin-Arabic dictionary. But Erpenius is especially known for his grammar that he published in 1613 in Leiden, the *Grammatica Arabica*. According to Hamilton, this work stayed a standard work for two centuries.¹¹¹ In the field of printing however he had to develop typographic material on his own after the Raphelengius branch of the Plantin printing house closed down. He did so in the same way as Raphelengius

¹⁰⁶ Lane, 'Type Specimen of Raphelengius', xvii.

¹⁰⁷ Ibidem, xx.

¹⁰⁸ Hamilton, Alastair, 'Arabische Studiën in De Nederlanden tijdens de 16e en 17e Eeuw', in: Francine de Nave, (ed), *Philologia Arabica. Arabische studiën en drukken in de Nederlanden in de 16de en 17de eeuw*. Catalogue for exhibition in the Plantin-Moretus Museum 25 October - 21 December 1986 (Antwerpen, 1986), CXIII.

¹⁰⁹ Hamilton, 'Arabische Studiën', CXV.

¹¹⁰ Ibidem, CXVIII, and Lane, 'Type Specimen of Raphelengius', x-xi.

¹¹¹ Hamilton, 'Arabische Studiën', CXXII.

originally did, by imitating the type of Granjon, which resulted in a similar kind of type as Raphelengius produced, even though Erpenius' type has been judged to be of a better quality.¹¹² The second student of Scaliger, Jacobus Golius (1596-1667) did not contribute much to the quality of Arabic printing in The Netherlands, even though he with his academic activities singlehandedly caused this period of Dutch Arabic scholarship to extend well into the seventeenth century.¹¹³

¹¹² Hamilton, Alastair, *William Bedwell, the Arabist, 1563-1632* (Leiden, 1985), 47.

¹¹³ *Ibidem*, CXXV-CXXVIII

3.4 Movable Type Printing in the Middle East

According to Krek's already quoted list of places where Arabic was printed, the first press to operate in the Middle East was one in Aleppo in 1706, another in Istanbul in 1719 and a third in Dayr Mār Yūḥannā (Lebanon) in 1734. The one in Aleppo and the one in Lebanon were mainly the result of one man's efforts, °Abdallāh Zākhir (1684-1748), a Catholic-born convert to the Melkite rite.¹¹⁴ He printed books in Aleppo and later in a Greek-Orthodox monastery in Lebanon. The type he used in Aleppo was very similar to type used in a monastery in Romania, and it has been argued for that there could be a link between the two, not strange because of the connection between the Orthodox churches of Romania and the Middle East.¹¹⁵ However, the type that we know from his first print from 1706, the *Kitāb az-Zabūr*, is the first one printed by an Arab using a printing press in the Arabic world. The small fragment

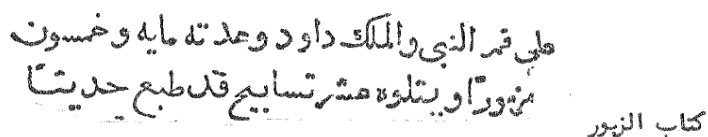


Image 11 - Fragment of text from the *Kitāb az-Zabūr* (1706)

that Krek published in his overview of the typographic development of Arabic shows an unclear image of what otherwise looks like a fine but not special type, see image 11.

Visible is a sloppy line, maybe due to reproduction of Krek, with some misconnections, but also some ligatures. As Zākhir was Arab himself, he should have been able to come up with a better font, were he able to produce type. At the time he established a second press in the Dayr Mār Yūḥannā in Lebanon, he certainly was. According to Pascal Zoghbi he designed



Image 12 – A fragment of the book *Mīzān az-Zamān*, printed in Dayr Mār Yūḥannā (1734).

and cut the unique font himself.¹¹⁶ Examples of this font as we can see in image 12 call back the fonts that Granjon produced. It is unknown whether Granjon's type were at Zākhir's disposal.

If anyone brought the achievements of the *Typographia Medicea* to a higher level, then it would be Ibrahim Müteferrika (1675-1746). He was born in present-day Cluj-Napoca, in a Christian Hungarian family. In 1692 he was

captured by the Ottomans and converted to Islam subsequently, taking the name he is known under. He played an important role in the administration of the Ottoman empire and

¹¹⁴ Gdoura, *Le Début de l'Imprimerie Arabe*, 141-154.

¹¹⁵ Krek, *Typographia Arabica*, 31.

¹¹⁶ According to Pascal Zoghbi on [<http://29letters.wordpress.com>], accessed on line on 4 June 2011.

therefore had a reasonable influence. When he saw the enormous scientific achievements in Europe, he wanted to make this new knowledge accessible to the Ottomans, and thus bringing the progress that Europe was making also to the Turks. As he was familiar with the benefits of print, he came up with the idea of introducing the printing press to the Muslim Ottomans. As we have seen above, it would not be the first printing press in Arabic characters to open up in the Middle East, but it was the first large scale printing press operated by Muslims, who, as we will see below, traditionally were not in favor of printing text.¹¹⁷



Image 13 - First page of the 'Usul al-hukm fi nizām al-uman' (1732).

After Müteferrika presented his plans to the Sultan, and in 1726 received permission to initiate his project, the printing press started issuing works in the same year. Religious books were explicitly forbidden to print, so the works published were mainly of a historical, geographical, military and linguistic nature.¹¹⁸

In image 13 we see the first page of the work 'Usul al-hukm fi nizām al-uman, printed in 1732 in Istanbul.¹¹⁹ One might expect that the first difficulties were overcome by that time, and what we see is a font very close to calligraphy. This is mainly so because of the correct use of ligatures that Müteferrika used in setting the text. This large amount of ligatures also meant that his letterset (the amount of separate characters used to spell out the text) was larger and thus more expensive, as more different punches had to

be made. It has been discussed where Müteferrika obtained the type he used for printing his books. It would be surprising when he created the type himself, so more likely he bought the characters somewhere. Both France and The Netherlands have been proposed, but also that the type was cast in Istanbul itself. Gdoura argues convincingly in favour of the latter option, showing evidence from French and Turkish sources that the type was cast in Istanbul by

¹¹⁷ Gdoura, *Le Début de l'Imprimerie Arabe*, 195-7.

¹¹⁸ Ibidem, 208.

¹¹⁹ Ibidem, 280.

Müteferrika and his workers. Given the availability of skilled engravers in the capital city, this was a good possibility.¹²⁰

As the example from Müteferrika's press shows, it was very possible to get close to calligraphic quality for a printer even a few years after the printing press started running. If it were not esthetical considerations, what then caused the delay in printing arriving in the Middle East. It is important to realize that Müteferrika might have introduced the first printing press in the Muslim Middle East, but the use of print was not nearly as widespread until a long time to come.

Elizabeth Eisenstein has elaborately shown what the impact of print was in a European context. The huge reduction in costs of duplicating scientific works made knowledge more widespread and easier available, but also encouraged scholars to actually publish their works and receive feedback. A social implication of print was that a monopoly on knowledge was broken, and differing groups in society gained means to organize themselves. The introduction of printing in Europe has been many times connected with the religious wars of the sixteenth century.¹²¹ The first main impact inspired Müteferrika to start his printing press. The second impact inspired the Muslim authorities to ban print.

Most scholars point in the direction of Muslim traditions concerning the transmission of knowledge in Islam as an important factor in this hesitance in adopting print as an alternative medium for that transmission. Based on the divine character of the Qur'an and the oral way it was revealed, Francis Robinson demonstrates that this has affected the Muslim concept of authority. Where in the West script had more authority than the spoken word, in the Muslim tradition an oral transmission of a text has more authority than the written version of it. Robinsons argues that this has been so deeply imbedded in Muslim culture that it took ages to convince Muslim societies to use printed texts, and only when '*[the Muslim] saw a good in printing greater than the evil it might cause*'.¹²² Even Müteferrika needed an official Fatwa in favor of print to persuade the Sultan to give permission to open up a printing press, and even then did not receive permission to print religious works, apparently a compromise between the proponents and the adversaries of printing.¹²³ Gdoura mentions that an important group adversaries were the scribes of the Ottoman administration, who would loose their jobs if printing would be introduced. They finally accepted their role in copying

¹²⁰ Ibidem, 206.

¹²¹ Eisenstein, Elizabeth L., *The Printing Press as an Agent of Change. Communications and Cultural Transformations in Early-Modern Europe*, vol. II (New York, 1979), 685-692.

¹²² Robinson, 'Technology and Religious Change', 239.

¹²³ Gdoura, *Le Début de l'Imprimerie Arabe*, 198, 107.

religious works (for which there was still a great demand) and leaving the more profane topics to the printing offices.¹²⁴

3.5 Subconclusion

Thinking about the impact of movable type printing on the Arabic script, the keyword seems to be 'simplification'. Certain elements that are easily used in calligraphy were easily discarded as it proved to be too difficult to accommodate these features in print. Not even in the prints from the Middle East an 'obliqueness' is discernable in the printed works. Next to this we can conclude some striking similarities with the previous chapter.

Just as the introduction of the cursive script, the introduction of movable type printing was one that was not coordinated from above, but mainly a process of trial and error. The best results get picked out and repeated, like the type Granjon created in Rome, that was followed in The Netherlands. It seems that only Naskhī was worth printing, as there are hardly any examples of other Arabic styles in print from the early modern period.

Secondly, it is interesting to see that especially in this period power relations played a huge role. The power of the Catholic Church and its will to reach out to the Christians in the Levant provided financial support for printing the first works in Fano and Genoa, and later the *Typographia Medicea* in Rome. In The Netherlands, the motivations to print Arabic were much more of cultural and economical nature, as the Dutch started trading with the Levant, and the first scientists became interested in Arabic culture to study in its own right.

Cultural exchange certainly played a role in Rome, where the *Typographia Medicea* worked closely together with a Maronite college where Arabic priests were trained. In the Dutch context the cultural exchange was important in the sense that Scaliger for the first time started to be interested in the Arabic culture, and not only in Arabic as an aid to understand Biblical Hebrew better.

Finally, the process of adapting Arabic to be printed using movable type printing put an emphasis on the connectedness of the script, as this was the main feature that set it apart from Latin or other non-connected scripts. Even when in the second chapter was shown that connectedness is only a secondary feature, it became of importance to judge whether a printed type was close to Arabic or not. Nevertheless, it remained important for a punch-cutter to pay close attention to the individual letter shapes as well.

¹²⁴ Ibidem, 115-117.

Chapter 4 - Arabic Typography today

In the previous chapter we had an in-depth look into the introduction of movable type printing and the birth of Arabic typography. Technical limitations forced typographers and typesetters to adapt the script to make it suitable for printing. Arabic calligraphy inspired Arabic typography, even though the latter was much simpler and often criticized. But the development of Arabic typography was not over yet. From the end of the nineteenth century, a series of innovations started that first improved the technique of movable type setting, but later provided completely new forms of printing techniques. All of these new techniques asked the Arabic script to reinvent itself, either by simplification, or by offering new possibilities. We will now show a few important innovations and then show the current debate on the future of Arabic typography.

4.1 Mechanization of Movable Type Setting

At the end of the nineteenth century two inventions were introduced shortly after each other, that would mechanize the type setting process. The first was a machine by the German company Linotype, the other was an English company called Monotype. The latter proved to be more valuable for setting Italics and Arabic, as the technique provided more flexibility for the character relative to the punch. Especially in the case of Arabic, letter shapes were not anymore

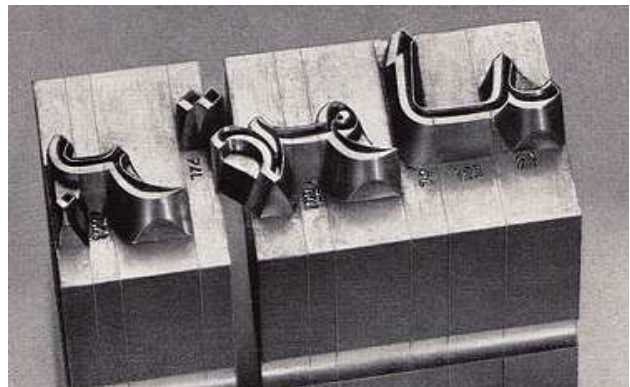


Image 14 - In this picture of a row of Arabic letters it is clear that the tā'-hā' ligature is wider than its punch, and that the diacritic dots are set separately next of it.

confined to the shape of the punch, giving the possibility of placing vowel signs above or

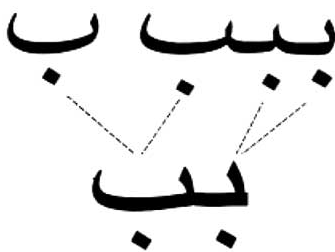


Image 15 - Simplification of Arabic

under letters, see image 14.¹²⁵ Soon, the concept behind this invention was simplified and made into a device that would bring printing to the people, the typewriter. It allowed people to directly 'print' their type on paper. A typewriter with 43 keys could type only 86 different characters, using the 'shift' button to change character set. In the Latin script this was the change between

¹²⁵ Smitshuijzen-AbiFarès, *Arabic Typography*, 131.

capital and lower case letters. For Arabic it meant that out of the possible four letter shapes (initial, medial, final and isolated) only two could be accommodated on the typewriter. This asked for an even more serious simplification of Arabic typography, where the initial and the medium form were merged to one form, and the same happening with the final and the isolated form, which resulted in what is now known as 'simplified Arabic', see image 15.¹²⁶

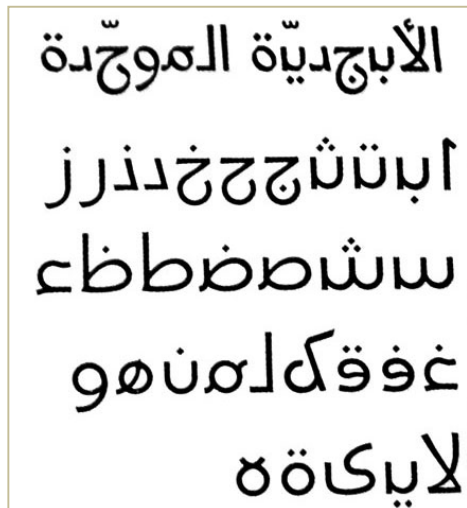


Image 16 - The type proposed by Nasri Khattar.

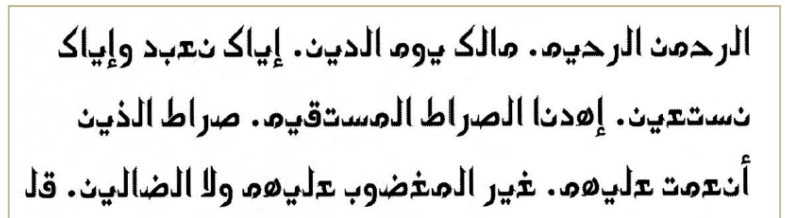


Image 12 - The 'Arabic Serif' proposed by Saad D. Abdulhab.

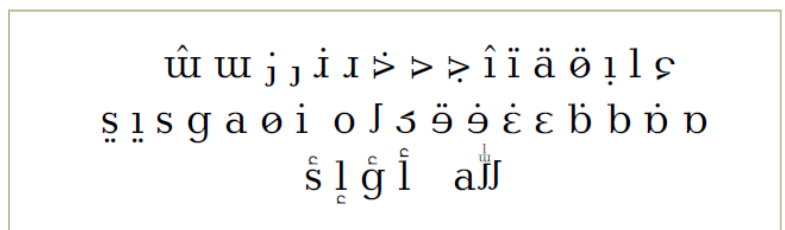


Image 18 - The proposal by Boutemenè.

Other ways of simplifying Arabic have been proposed, but none of them have been successful in becoming a standard. Nonetheless it is interesting to see how far designers were willing to go in order to adapt the Arabic script to the demands of technology. Many initiatives aimed at reducing the amount of characters needed for Arabic. As the example for the typewriter above, where the amount of characters was brought back to two per letter, many proposals showed one character per letter. In different ways this has been proposed by Saad D. Abdulhab (2006)¹²⁷, Nasri Khattar (1947)¹²⁸, the Boutemene project (1955)¹²⁹ and Saïd Akl (1960s)¹³⁰. Abdulhab defends his choice in his article, by claiming that simplification

¹²⁶ Zoghbi, [http://29letters.wordpress.com].

¹²⁷ Abdulhab, Saad. D., 'Typography. Behind the Arabetic Calligraphy Veil', *Visible Language* 40.3 (2006), 294-307.

¹²⁸ Zoghbi, [http://29letters.wordpress.com].

¹²⁹ Haralambous, Yannis, 'Simplification of the Arabic Script: Three Different Approaches and their Implementations', in: Roger G. Hersch, Jacques André and Heather Brown (eds.), *Electronic Publishing, Artistic Imaging and Digital Typography*, Proceedings EP'98 (Berlin, 1998), 147-150.

¹³⁰ Zoghbi, [http://29letters.wordpress.com].

is not necessarily latinization, a label that every Arabic typographer tries to avoid. He argues that *'Latin has no patent or monopoly on the process of simplification, it is not its inventor or owner, and it can hardly claim it alone'*.¹³¹ Abdulhab is quite right here, and the type he designed managed to keep an Arabic touch to it, with sometimes even the impression of letters connecting to each other, even though they do not, as can be seen in image 17. Nasri Khattar however, Lebanese-American, proposed in 1947 to have a similar one character for one letter solution, but based his letter forms seemingly more on the Latin script than the Arabic, see image 16. The result is definitely closer to Latin and misses the 'Arabic' touch of Abdulhab's typeface. In Khattar's opinion simplification clearly equals latinization. The same type of solution was brought up by the Boutemene project, probably introduced by Yahya Boutemène, that used almost exclusively letter shapes known from the Latin alphabet, or the more extensive phonetic alphabet, see image 18. The fourth one, Saïd Akl, actually did not develop a new way of simplifying Arabic, but came up with a transliteration system to Latin. Of the four of them, Abdulhab comes the most close to successfully proposing a one character per letter solution for the Arabic script, without copying the Latin script.

A middle way was explored by introducing basic shapes for all the letters, and separately the descenders and ascenders. So that the sīn, shīn, ṣād and ḍād could all share one 'tail'. We see this concept used by, among others, Lakhdar Ghazal (1958)¹³² and the Academy project (1959).¹³³ The outcome looks very Arabic, but the type was difficult to use, as ascenders and descenders are normally not entered separately. The type by Lakhdar Ghazal however was officially supported by the Moroccan government and was used and digitalized.¹³⁴

All of the above mentioned ideas about simplifying Arabic are interesting from a researcher's point of view, but were never adopted in a practical way (with the exception of Ghazal). They were all products of their time, except for Abdulhab, as the aim was to create less characters in order to be accommodated on typewriters and similar instruments, that simply by the way they worked limited the possible amount of characters. However, with the dawn of digitalization, tables turned.

¹³¹ Abdulhab, 'Typography', 300.

¹³² Zoghbi, [<http://29letters.wordpress.com>].

¹³³ Haralambous, 'Simplification of the Arabic Script', 140-144.

¹³⁴ Zoghbi, [<http://29letters.wordpress.com>].

4.2 Digitalization of Arabic Typography

After many innovations followed each other up in the field of printing text, the next big innovation was the computer. The biggest benefit of the computer for typography was that one could see the text before it was printed. But again, computers, and especially word processors, were developed for the Latin script market and only later redesigned to accommodate non-Latin scripts. Especially for right-to-left scripts like Arabic there was (and still is) a long way to go. On a positive note, the possibilities for Arabic grew, so instead of bringing the number of characters down, more ligatures than ever before were possible. This however took a long process of innovations and standardization. Big companies like Microsoft and Apple first invented their own solutions, but were later forced to make those techniques compatible for accommodating the exchange of files between computers.¹³⁵

An outcome of this standardization was the Unicode system, which was started to being developed in 1987.¹³⁶ The underlying motive was to create a system in which characters (which on a computer screen are merely visual representations of a certain binary code that the computer can recognize) are all ordered into one system, that would be accommodating all the languages of the world. In their own words to 'standardize, extend and promote the Unicode character encoding, a fixed-width, 16-bit character encoding for over 60,000 graphic characters'.¹³⁷ Since sixty thousand characters turned out to be not enough for covering all the possible different characters in the world, Unicode has been updated to include even more characters. The main benefit of the Unicode system is that it is widely accepted and adopted. Secondly, in the case of Arabic, the system allows many forms of ligatures to be inserted as one character. In its simplest form this means that a word processor recognizes an 'alif after a lām and replaces both characters by one single 'alif-lām ligature. This can be done for all possible ligatures in the classic Arabic calligraphy. However, it should be noted that Unicode is only a system for representation only. It gives numerous possibilities of inserting ligatures in otherwise plain text, but the Unicode system does not provide any regulation of connecting the characters (be that ligatures or individual letters).

¹³⁵ Boutros, Mourad, a.o., *Talking about Arabic* (New York, 2009), 54.

¹³⁶ According to [<http://www.Unicode.org>], accessed on line on 5 August 2011.

¹³⁷ Ibidem.

This is where the next step of digital typography is needed. As Thomas Milo puts it: ‘The future must embrace flexible, generative mechanisms of representation, working above the level of Unicode text’.¹³⁸ It is not surprising that he claims this, as Milo is one of the founders of DecoType, a Dutch company developing fonts based on linguistic concepts. The company was founded in 1985 together with Peter and Mirjam Somers. From the beginning onwards, they focused on so-called ‘dynamic fonts’, especially relevant for Arabic typography, as letters change shape in accordance with the letters that precede and follow.¹³⁹ Using a technology they developed called Advanced Calligraphic Engine (ACE), they analyzed the Arabic script on the level of pen strokes instead of characters. The ACE then reproduces these pen strokes, forming words that are truly calligraphic in nature, and can even be written in many different ways. It is interesting that by doing this, the focus on individual letter shapes that was paramount before, now zooms in on the very strokes that these letters are composed of. This technique is already used in the WinSoft plugin ‘Tasmeem’, that produces very convincing calligraphy.¹⁴⁰ Given the possibilities of the Unicode diversity of ligatures, combined with the ACE that governs the way the separate characters connect, for the time being all needs of typographers will be satisfied, and everything seems possible now for Arabic typography that only some sixty years ago still tried to simplify itself. This does not mean that Arabic has to regain its calligraphic form, but that options are open.

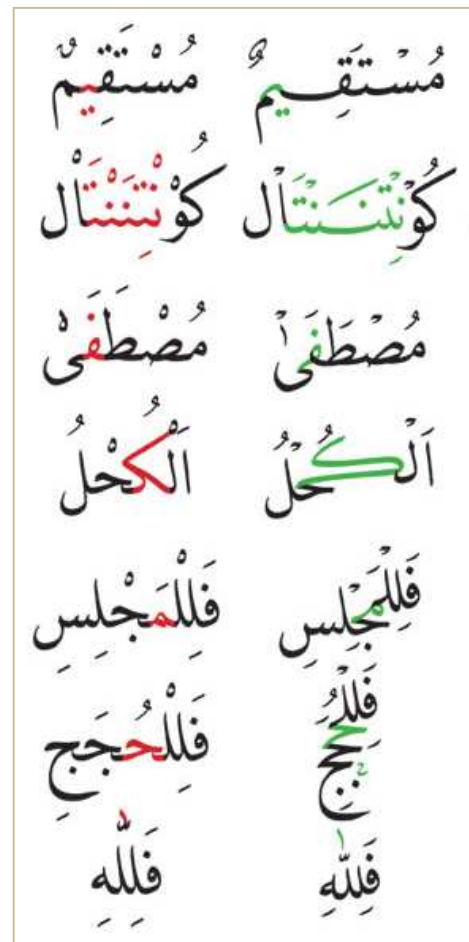


Image 19 - The left column is normally generated Arabic text, in the right column it is clear what the effect of Tasmeem is.

4.3 Arabic Typography Development: The Dutch Arena

Compared to the Latin script, Arabic does not have a wide array of different typefaces to use. We use the word ‘typeface’ in a digital context, where we would use the word ‘(metal) type’

¹³⁸ Milo, Thomas, ‘Arabic Script and Typography. A Brief Historical Overview’, in: John D. Berry (ed.), *Language Culture Type: International Type Design in the Age of Unicode* (New York, 2002), 125.

¹³⁹ Smitshuijzen AbiFarès, *Arabic Typography*, 228.

¹⁴⁰ Boutros, *Talking about Arabic*, 54-56.

when talking about printing techniques. A typeface is the visual style of an alphabet, which mostly also incorporates extra characters, numerals and punctuation marks. A font consists of all the characters of a typeface in one specific font size. A typeface thus contains many fonts, according to the size of the text. One could design new versions of all the letters in the Unicode tables to develop a new typeface, or in the case of Tasmeeem, one need to redesign all the pen strokes. When new typefaces are made available in an OpenType format, which is a format developed by Microsoft and Adobe, it is likely to be supported and used by most other systems.¹⁴¹ When a computer would not support the OpenType format, a text set in an OpenType typeface would not be able to be read.

Acknowledging the lack of variety in typefaces in Arabic, the Khatt Foundation launched a project in 2007 to give attention to this problem. The Khatt Foundation or Center for Arabic Typography was founded by Huda Smitshuijzen AbiFarès and is located in The Hague. It's official mission is mentioned on their webpage: '*The Khatt Foundation is a cultural foundation dedicated to advancing Arabic typography and design research in the Middle East, North Africa and their diasporas. Building cross-cultural creative networks is an important instrument for this end*'.¹⁴² Acknowledging the historical role The Netherlands played in the

Arabic typographic history, this project aimed to re-involve Dutch typographers with Arabic design.¹⁴³ The project mentioned fitted perfectly in this mission. It was called 'Typographic Matchmaking. Building cultural bridges with typeface design'. In this project Arabic typographers were linked to Western

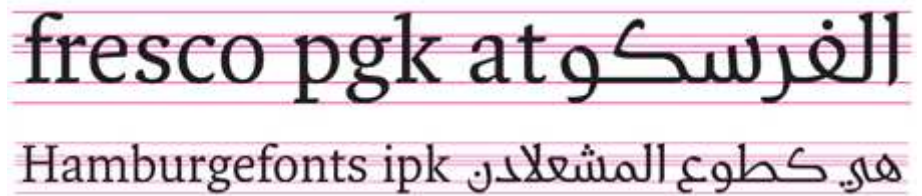


Image 20 - An example from the Typographic Matchmaking project, where the Arabic has an heightened body and limited ascenders and descenders.

typographers to design Arabic typefaces that had a twofold goals, namely to think critically about the development of Arabic typography on the one hand, and 'to create good matching fonts for existing Latin font families'.¹⁴⁴ Smitshuijzen AbiFarès uses the word 'font' here, where 'typeface' would be more appropriate, as the designers' task was to design a typeface, not limited to one height (which would be a font). Especially prominent in this project is the question of dual-script documents, where Latin and Arabic script appear next to each other.

¹⁴¹ According to [http://www.adobe.com], accessed on line on 6 August 2011.

¹⁴² According to [http://www.khtt.net], accessed on line on 6 August 2011.

¹⁴³ Smitshuijzen AbiFarès, Huda, *Typographic Matchmaking. Building Cultural Bridges with Typeface Design* (London, 2001), 17.

¹⁴⁴ Smitshuijzen AbiFarès, *Typographic Matchmaking*, 19.

The typefaces available at the time were not sufficient for this goal, as the two scripts would be too different to combine on one page. To solve this, the Western designers were asked to select one of their existing typefaces and to work with their Arabic counterpart to '*design a matching Arabic version*'.¹⁴⁵ For example, this meant that the designers adapted the proportions of the Arabic script. Latin script has a relatively large body height with limited ascenders and descenders. The latter two are more extreme in Arabic. A solution was mostly to enlarge the body height of Arabic and limit the ascenders and descenders, like what was done with the Fresco Typeface, see image 20, developed by Fred Smeijers and Lara Khoury.¹⁴⁶

This development of adapting the proportions of a script, which is more common in Arabic typography, is heavily criticized by Titus Nemeth as 'latinization' and moreover '*the fundamentally changed, or even inverted proportions of letter shapes form an obstacle in the recognition of memorized word images*' and thus imperils legibility.¹⁴⁷ Nemeth, a researcher of Arabic typography¹⁴⁸, in his M.A. thesis explores the same challenge of combining Latin and Arabic script 'harmoniously', but is searching for a middle form rather than shaping one of the two according to the style and proportions of the other.

It seems then that The Netherlands is an arena in which the future of Arabic typography is fought for. On the one hand there are Dutch designers like Thomas Milo and his company DecoType that played an important role in digitalizing Arabic typefaces. Titus Nemeth belongs to this same group, as they all try to keep the Arabic script void of Latin influences, and aim for a pure Arabic 'look and feel' to its typography. On the other side is the Khatt Foundation, run by Huda Smitshuijzen AbiFarès and her husband Edo Smitshuijzen. They aim for a modernization of the Arabic script, are not afraid of Latinizing the Arabic script, but mostly explore many other directions of modern Arabic script as well. In general, they do not let them being led by the old rules of calligraphy. Their ranks are filled by Tarek Atrissi, a well-known Arabic type designer working from The Netherlands, and Pascal Zoghbi, who was educated at the Royal Academy in The Hague. Both took part in the Typographic Matchmaking project.¹⁴⁹

¹⁴⁵ Ibidem, 21.

¹⁴⁶ Smitshuijzen AbiFarès, *Typographic Matchmaking*, 91.

¹⁴⁷ Nemeth, Titus, *Harmonization of Arabic and Latin Script. Possibilities and Obstacles*, M.A. thesis (University of Reading, 2006), 5.

¹⁴⁸ According to [<http://www.tntypography.com>], accessed on line on 8 August 2011.

¹⁴⁹ Smitshuijzen AbiFarès, *Typographic Matchmaking*, 48, 76.



Image 21 - Cartoon by Vladimir Tamari.

It goes without saying that there are many typographers from around the world, Arabic or non-Arabic, who have a say in this debate as well. But in The Netherlands these two sides come close together, about which Vladimir Tamari, a Palestinian artist and inventor¹⁵⁰, made the cartoon in image 21. From the right the Arabs bring their letters to The Netherlands, where the

windmills power both the calligraphic machine of Thomas Milo and the Typographic Matchmaking project of Smitshuijzen AbiFarès. In other words, both come from the same typographic tradition in The Netherlands.

In such a crowded typographic scene in The Netherlands, one would expect collaboration to explore the different possibilities to bring Arabic typography forward. The opposite is true, there seems to be a divide between the two 'camps'. A nice example of this divide is an article 'A typographic matchmaking project for the 16th century: the Civilité of Granjon and the Naskh of Winsoft', published in 2009 on line on the website of the Khatt Foundation.¹⁵¹ The article itself is short but interesting, posted by Edo Smitshuijzen, on the introduction of Arabic calligraphic typefaces by WinSoft, and drawing a parallel with the work of Granjon in the sense that both developed a typeface with an ancient look and feel. Granjon worked in the sixteenth century on a medieval style latin typeface called 'Civilité', WinSoft created a Naskhī typeface with many calligraphic features, described by Edo Smitshuijzen as '*the aesthetics from the times of '1001 nights'*'.¹⁵² He refers to Tasmeeem in the same fashion, the program developed by Thomas Milo. According to Smitshuijzen developing a very calligraphic Arabic typeface is useless, as there is much more demand for corporate, modern typefaces.

Even more interesting than the article are the reactions to it. Apparently even Geoffrey Roper responded in an e-mail, which is quoted on the page, but more important are

¹⁵⁰ According to [<http://www.ne.jp/asahi/tamari>], accessed on line on 8 August 2011.

¹⁵¹ According to [<http://www.khtt.net/page/1005/en>], accessed on line on 8 August 2011.

¹⁵² All following quotes are taken from the same web page as mentioned in note 151. This website is also copied as Attachment I at the end of this thesis.

the reactions of for example Vladimir Tamari, who tries to appease the two sides. He agrees that *'the aim of typography is not merely to imitate calligraphy'*, but admires the interesting approach Milo takes towards Arabic typography. Edo Smitshuijzen responds to this comment by calling Tamari's view on Tasmeem 'romantic', but asserting that *'the Khatt site is put on the web as a tool to meet and to exchange ideas. There is nobody excluded from any sort of contribution to the site. In contrast, all comments and contributions will be received with the warmest welcome.'* The evolving discussion however proves the opposite. Tamari and a certain Adam Twardoch¹⁵³ complain about the moderation of the website, with comments being deleted, or reactions ridiculed. Twardoch even raises the point of Thomas Milo being dropped as a speaker on insistence of Huda Smitshuijzen AbiFarès. Unfortunately, these facts are not verifiable, but the discussion following on this article tells a lot about the relations within the field of Arabic typography in The Netherlands.

On the other hand, works by the Smitshuijzen couple are constantly criticized by authors from the more traditional side. Nemeth notes the critique on Huda Smitshuijzen AbiFarès' 'Typographic Sourcebook', given mostly by Thomas Milo and Mohamed Zakariya, an American master calligrapher converted to Islam.¹⁵⁴ Also, Titus Nemeth systematically criticizes Edo Smitshuijzen's 'Arabic Font Specimen Book', published in 2009.¹⁵⁵ In his article, Nemeth points out mistakes in historical facts, technological terms and even lay-out failures. Interestingly he notes a complete misrepresentation of DecoType, the company founded by Milo. After his long list of criticisms Nemeth concludes the following: *'This book is a misleading, highly biased and uninformed account of some aspects of Arabic typography. It is written by an author whose querulous lament of 'complex and unpublished rules' (p. 63) of Arabic calligraphy are testimony to an approach that combines a lack of knowledge with preconceived ideas.'*¹⁵⁶ Quite a strong verdict on a book that otherwise only tried to fill a void in literature on Arabic typography. The same aim Huda Smitshuijzen AbiFarès had with her Sourcebook in 2001. Both books, however strongly criticized, are among the few standard works about Arabic typography. This is a opportunity in which both sides of the debate should work together to produce more balanced literature on this topic.

¹⁵³ According to his website at [<http://www.twardoch.com/adam/>], accessed on line on 8 August 2011, he is a consultant in digital typography from Germany.

¹⁵⁴ According to [<http://www.zakariya.net/>], accessed on 10 August 2011. The critical review of both of Smitshuijzen AbiFarès' Sourcebook can be found online at the website of DecoType [<http://www.decotype.com/>], accessed on 18 August 2011.

¹⁵⁵ Nemeth, Titus, 'Complex Dutch Arab Complex', *TYPO* 36 (2009), 86-93.

¹⁵⁶ Nemeth, 'Complex Dutch Arab Complex', 93.

4.4 Subconclusion

Arriving in the present-day debate on Arabic calligraphy an abundance of new innovations took place in a very short period of time. Living in an age of information, all of these novelties are well documented and worth studying. However, in this thesis a selection had to be made covering only innovations that provided new possibilities, like the Unicode system and OpenFont technology. As those are adopted more and more in an open source format (meaning that there is no copyright on the technology) they will probably come out of this period of abundant possibilities as the standards. This is not yet decided, but a parallel with earlier times is possible. From the time of Ibn Muqla, the varieties at that time did not survive history and we actually only know the option that did survive. The early modern period in which Arabic was adapted to fit movable type printing already showed that typefaces were produced that later on were never used again and only the best options were followed and emulated.

The question of power becomes very clear in the so-called Dutch arena of Arabic typography. Two sides of the spectrum compete with each other about the future of the Arabic script. The side of the Smitshuijzen couple seem to do better in using Internet and publishing self-declared standard works to vent their views, the side of Thomas Milo is stronger on an academic level and has their thoughts put down in plug-ins like Tasmeem, that is adopted by major software companies. The way the 'debate' is handled by both parties does not really benefit any solution.

On the other side, in this debate there is a variety of actors, some from the Arabic world, some from the West. Some of them are trained typographers, others have a mere interest in typography or calligraphy. Migration of several Arabic key actors to The Netherlands have made it happen that this non-Arabic country is the stage for this debate. A side effect of this is that this typographic debate gives input to the migration/integration debate in The Netherlands. For example, this happened when the results of the Typographic Matchmaking project were exhibited in the form of an Arabic version of the Dutch warehouse chain HEMA.¹⁵⁷ Dutch people were confronted with a Dutch iconic store with Arabic products and price tags, which made them think about migration and their Arab countrymen.

The focus in the debate about the Arabic script does not cover any separate features anymore, like before individual letter shapes or the baseline. In fact, the discussion has widened to disagreements about the overall direction of where Arabic typography is going. Either it tries to stay faithful to its calligraphic past or it modernizes itself in one of the many ways proposed. Designers on the same side of this bigger debate will have discussions

¹⁵⁷ Article from the Dutch newspaper Trouw, edition 22 August 2007. Online available at [<http://www.trouw.nl>], accessed on line on 10 August 2011.

about the features of the Arabic script in their designs. On the side of modernization discussions are mostly about how to harmonize Arabic scripts with other scripts, notably the Latin one. On the side of calligraphy technology is used to move the focus from letter shapes to the shape of the strokes that are the building stone of Arabic writing.

Conclusion

Vladimir Tamari: *"I hope we can all put our prejudices (including my own) and differences behind us and try to cooperate to pool our various areas of expertise in such a way that the field of typography and specifically Arabic typography can go forward."*¹⁵⁸

This thesis took a long dive into history to show how the Arabic script first of all developed from Phoenician through the Nabataean branch of scripts. Secondly it was explained how the Arabic script was improved by calligraphers like Ibn Muqla in the tenth century A.D. Though in the Arab world calligraphy was developed into an art form of the most exquisite kind, Europe started to experiment with movable type print at the end of the fifteenth century and soon started applying this technique on other scripts as well. Driven by religious motives and later also economical ones, the European printing world produced works printed in an Arabic type that grew in quality and legibility. Typefaces produced by Granjon working for the *Typographia Medicea* in Rome turned out to be of high quality and served as models for typefaces elsewhere in Europe. It was not until the seventeenth century until the printing press slowly made its appearance in Muslim territory, due to bans on printing beforehand. However, the type produced in for example the printing office of Mütferrika in Istanbul turned out to be of high quality. In these centuries constant emphasis was put on trying to imitate calligraphy in print. Especially features like the obliqueness of Arabic writing was very difficult to adopt in print, and therefore was easily discarded. An abundance of ligatures and a focus on the right letter shapes proved to be the best solutions.

In more recent times, technological innovations made anything possible in the field of typography, a new focus on letter strokes rather than full letter shapes even made possible a return to the calligraphic standards. But still the standard Arabic type used today resembles much the simplified typefaces developed in the seventeenth century in Europe, with a flat base line and some simple ligatures. These typefaces offer a high legibility, but are otherwise very uninspired and not making use of the possibilities of modern typographic techniques.

These new opportunities caused a debate between the designers who would be in favor of reintroducing calligraphic features, and the ones who would like to modernize the Arabic script, setting Arabic typography apart from calligraphy once and for all. The traditionalists have been accused of orientalizing the Arabic script, the modernists of latinizing it. Both sides of the debate have been found criticizing the other, sometimes in non-professional ways, like on the website of the Khatt Foundation. Here the quote of Tamari above plays an important role. Looking at the past of Arabic typography, there have been always different options for development of the script. Only the most practical, the most

¹⁵⁸ According to [<http://www.khtt.net/page/1005/en>], accessed on line on 10 August 2011.

demanded options survived time. Best practices were adopted and enhanced, only to bring Arabic printing to a higher level. The same is still happening with software in this digital age. Only the best software gets adopted by the most companies and becomes the standard. For typography this is not different. If both sides of the debate would continue their line of thought, and together would explore the options in between, this would be only to the benefit of Arabic typography, that would become richer and more transparent, no matter which vision on future Arabic typography one supports. Only by working together, using the cultural exchange between designers of Arab and non-Arab origin as we see now in The Netherlands, Arabic typography will become as impressive as its calligraphic counterpart.

Bibliography

Abbott, Nabia, 'The Contribution of Ibn Muḳlah to the North-Arabic Script', *American Journal of Semitic Languages and Literature* 56.1 (1939), 70-83.

———, *The Rise of the North Arabic Script and its Kur'ānic Development* (Chicago, 1939).

Abdulhab, Saad D., 'The Mutamathil Type Style. Towards Free, Technologically-Friendly 'Arabetic' Types', *Visible Language* 38.3 (2004), 306-333.

———, 'Typography. Behind the Arabetic Calligraphy Veil', *Visible Language* 40.3 (2006), 294-307.

Abu Bakr Effendi, *Uiteensetting van die godsdienst*, ed. A. van Selms (Amsterdam, 1979).

Azmi, Aqil, and Alsaiani, Abeer, 'Arabic Typography. A Survey', *International Journal of Electrical & Computer Sciences* 9.10 (2010), 16-22.

Blaire, Sheila S., *Islamic Calligraphy* (Edinburgh, 2006).

Boutros, Mourad, a.o., *Talking about Arabic* (New York, 2009).

Bulliet, Richard W., 'Medieval Arabic Ṭarsh: A Forgotten Chapter in the History of Printing', *Journal of the American Oriental Society* 107.3 (1987), 427-438.

Eisenstein, Elizabeth L., *The Printing Press as an Agent of Change. Communications and Cultural Transformations in Early-Modern Europe*, 2 vols. (New York, 1979)

Gdoura, Wahid, *Le Début de l'Imprimerie Arabe à Istanbul et en Syrie: Evolution de l'Environnement Culturel (1706-1787)* (Tunis, 1985).

Grendler, Paul F., 'Italian Biblical Humanism and the Papacy, 1515-1535', in: Rummel, Erika, (ed.) *Biblical humanism and scholasticism in the age of Erasmus* (Leiden, 2008), 227-276.

Gruendler, Beatrice, *The Development of the Arabic Scripts. From the Nabatean Era to the First Islamic Century According to Dated Texts* (Atlanta, 1993).

Hamilton, Alastair, *William Bedwell, the Arabist, 1563-1632* (Leiden, 1985).

———, 'Arabische Studiën in De Nederlanden tijdens de 16e en 17e Eeuw', in: Francine de Nave, (ed), *Philologia Arabica. Arabische studiën en drukken in de Nederlanden in de*

16de en 17de eeuw. Catalogue for exhibition in the Plantin-Moretus Museum 25 October - 21 December 1986 (Antwerpen, 1986), CXIII-CXXXV.

Haralambous, Yannis, 'Simplification of the Arabic Script: Three Different Approaches and their Implementations', in: Roger G. Hersch, Jacques André and Heather Brown (eds.), *Electronic Publishing, Artistic Imaging and Digital Typography*, Proceedings EP'98 (Berlin, 1998), 138-152.

Harley, A.H., 'Ibn Muqlah', *Bulletin of the School of Oriental Studies London Institution*, vol. 3, part 2 (1924), 213-229.

Himelfarb, Elizabeth J., 'First Alphabet Found in Egypt', *Archaeology* 53.1 (2000).

Humble, Richard, 'Arabic Script Revealed', *Ahlan wasahlan* 15.5 (1991), n.p.

Jones, Robert, 'The Medici Oriental Press (Rome 1584-1614) and the Impact of its Arabic Publications on Northern Europe', in: G. A. Russell (ed.), *The 'Arabick' Interest of the Natural Philosophers in Seventeenth-Century England* (Leiden, 1994), 88-108.

Krek, Miroslav, 'The Enigma of the First Arabic Book Printed from Movable Type', *Journal of Near Eastern Studies* 38.3 (1979), 203-212.

———, *A Gazetteer of Arabic Printing* (Weston, 1977).

———, *Typographia Arabica. The development of Arabic printing as illustrated by Arabic type specimens* (Waltham, 1997).

Lane, John A., *The Arabic type specimen of Franciscus Raphelengius's Plantinian printing office (1595)* (Leiden, 1997).

Milo, Thomas, 'Arabic Script and Typography. A Brief Historical Overview', in: John D. Berry (ed.), *Language Culture Type: International Type Design in the Age of Unicode* (New York, 2002), 112-127.

Moginet, Stefan F., *Writing Arabic. From Script to Type* (Cairo, 2008).

Montecchi, Giorgio, 'Analisi bibliologiche sulla prima stampa in lingua araba: *Horologium*, Fano, Gregorio de Gregori, 1514', in: Misiti, Maria Cristina, (ed.) *Le mille e una cultura. Scrittura e libri fra Oriente e Occidente* (Bari, 2007), 67-86.

Moustafa, Ahmed, 'The Scientific Construction of Arabic Alphabets', M.A. Thesis (London, 1979).

Nājī, Hilāl, *Ibn Muqla. Khaṭṭāṭan wa 'adīban wa 'insānan. Ma'ā taḥqīq risālatihi fī al-khaṭṭ wa l-qalam* (Baghdad, 1991).

Nave, Francine de, (ed), *Philologia Arabica. Arabische studiën en drukken in de Nederlanden in de 16de en 17de eeuw*. Catalogue for exhibition in the Plantin-Moretus Museum 25 October - 21 December 1986 (Antwerpen, 1986).

Nemeth, Titus, 'Complex Dutch Arab Complex', *TYPO* 36 (2009), 86-93.

———, *Harmonization of Arabic and Latin Script. Possibilities and Obstacles*, M.A. thesis (University of Reading, 2006).

Rayef, Ahmad Maher, *Die ästhetischen Grundlagen der arabischen Schrift bei Ibn Muqlah*, Ph.D. Thesis (Köln, 1975).

Robertson, Edward, 'Muhammad Ibn Abd ar-Rahman on Calligraphy', *Studia Semitica et Orientalia* (Glasgow, 1920), 57-83.

Robinson, Francis, 'Technology and Religious Change: Islam and the Impact of Print', *Modern Asian Studies* 27.1 (1993), 229-251

Roper, Geoffrey, 'Early Arabic Printing in Europe', in: Eva Hanebutt-Benz, Dagmar Glass and Geoffrey Roper (eds.), *Middle Eastern Languages and the Print Revolution: A Cross-Cultural Encounter* (Westhofen, 2002), 129-150.

Rosenthal, Franz, 'Abu Haiyan al-Tawhidi on Penmanship', *Ars Islamica* 13 (1948), 1-30

Roxburgh, David J., 'On the Transmission and Reconstruction of Arabic Calligraphy: Ibn al-Bawwab and History', *Studia Islamica* 96 (2003), 39-53.

Schimmel, Annemarie, *Calligraphy and Islamic Culture* (London, 1990).

Smitshuijzen AbiFarès, Huda, *Arabic Typography. A Comprehensive Sourcebook* (London, 2001).

———, *Typographic Matchmaking. Building Cultural Bridges with Typeface Design* (London, 2001).

Smitskamp, Rijk, *Philologia Orientalis. A description of books illustrating the study and printing of Oriental languages in 16th- and 17th-century Europe* (Leiden, 1976).

Tabbaa, Yasser, 'Canonicity and Control. The Sociopolitical Underpinnings of Ibn Muqla's Reform', *Ars Orientalis* 29 (1999), 91-100.

———, 'Transformation of Arabic Writing: Part I, Qur'anic Calligraphy', *Ars Orientalis* 21 (1991), 119-148.

Tracy, Walter, 'Advances in Arabic Printing', *Bulletin of the British Society for Middle Eastern Studies* 2.2 (1975), 87-93.

Vervliet, Hendrik D. L., *The palaeotypography of the French Renaissance. Selected papers on sixteenth-century typefaces*, 2 vols. (Leiden, 2008).

Whelan, Estelle, 'Writing the Word of God', *Ars Orientalis* 20 (1990), 113-147.

Internet sources

Here the full URL's are mentioned of the sources that were consulted on line, all links were working on 18 August 2011.

Note 40: http://portal.unesco.org/culture/en/ev.php-URL_ID=22329&URL_DO=DO_PRINTPAGE&URL_SECTION=201.html

Note 70: <http://www.vgesa.com/vgeinc14i.html>

Notes 116, 126, 128, 130, 132, 134: <http://29letters.wordpress.com/2009/01/05/the-first-arabic-press/>

Note 136-7: <http://www.unicode.org/history/summary.html>

Note 141: <http://www.adobe.com/type/opentype/>

Note 142: <http://www.khtt.net/page/92/en>

Note 148: <http://www.tntypography.com/about.html>

Note 150: <http://www.ne.jp/asahi/tamari/vladimir/influences.html>

Note 151-2: <http://www.khtt.net/page/1005/en>

Note 153: <http://www.twardoch.com/adam/>

Note 154: <http://www.zakariya.net/about/vita.html>

http://www.decotype.com/publications/A_review_of_Arabic_Typography-Huda_Smitshuijzen.pdf

Note 157: <http://www.trouw.nl/tr/nl/4324/Nieuws/article/detail/1329269/207/08/22/Hollandse-hema-op-z-rsquo-n-Arabisch.dhtml>

Illustrations

Image 1 – Source: Tabbaa, Yasser, 'The Transformation of Arabic Writing: Part I, Qur'ānic Calligraphy', *Ars Orientalis* 21 (1991), 122.

Image 2 – Source: [<http://dabirehcollective.com/article/28>], accessed 18/08/2011.

Image 3 – Source: [<http://dabirehcollective.com/article/28>], accessed 18/08/2011.

Image 4 – Source: [<http://expositions.bnf.fr/livrarab/grands/123.htm>], accessed 18/08/2011.

Image 5 – Source: [<http://expositions.bnf.fr/livrarab/grands/123.htm>], accessed 18/08/2011.

Image 6 – Source: [<http://morgue.anglicansonline.org/081012/>], accessed 18/08/2011.

Image 7 – Source: Smitskamp, Rijk, *Philologia Orientalis. A description of books illustrating the study and printing of Oriental languages in 16th- and 17th-century Europe* (Leiden, 1976), 36.

Image 8 – Source:

[http://smu.edu/bridwell_tools/specialcollections/Highlights2010/HIGHLIGHTS.Bibles7.htm], accessed 18/08/2011.

Image 9 – Source: Lane, John A., *The Arabic type specimen of Franciscus Raphelengius's Plantinian printing office (1595)* (Leiden, 1997), 30.

Image 10 – Fragments of images 8 and 9.

Image 11 – Source: Krek, Miroslav, *Typographia Arabica. The development of Arabic printing as illustrated by Arabic type specimens* (Waltham, 1997), 31.

Image 12 – Source: [<http://29letters.wordpress.com/2009/01/05/the-first-arabic-press/>], accessed 18/08/2011.

Image 13 – Source: Suhayl Saban, '*Ibrāhīm Mutafarriqa wa-Juhūduhu fi 'Inshā' al-Maṭba'ā al-ʿArabiyya wa-Maṭbū'atuhu*' (Riyadh, 1416/1995), 114.

Image 14 – Source: [<http://www.typography.com/images/blogImages/arabic-shaded-no-50.jpg>], accessed 18/08/2011.

Image 15 – Source: [<http://29letters.wordpress.com/2007/05/28/arabic-type-history/>], accessed 18/08/2011.

Image 16 – Source: [<http://29letters.wordpress.com/2007/05/28/arabic-type-history/>], accessed 18/08/2011.

Image 17 – Source: Abdulhab, Saad D., 'Typography. Behind the Arabetic Calligraphy Veil', *Visible Language* 40.3 (2006), 299.

Image 18 – Source: Haralambous, Yannis, 'Simplification of the Arabic Script: Three Different Approaches and their Implementations', in: Roger G. Hersch, Jacques André and Heather Brown (eds.), *Electronic Publishing, Artistic Imaging and Digital Typography*, Proceedings EP'98 (Berlin, 1998), 148.

Image 19 – Source: [<http://29letters.wordpress.com/2007/05/28/arabic-type-history/>], accessed 18/08/2011.

Image 20 – Source: [<http://www.khtt.net/page/146/en>], accessed 18/08/2011.

Attachment I: Discussion on [http://www.khtt.net/page/1005/en]

The article 'A typographic matchmaking project for the 16th century: the Civilité of Granjon and the Naskh of Winsoft' and its comments.

You are not logged in
calendar people forums resources news archive our projects about khatt

reviewed by Edo Smitshuijzen - 10 reactions

A typographic matchmaking project for the 16th century: the Civilité of Granjon and the Naskh of Winsoft.

القوية والمتكاملة من أدوبي
*Quo usque tandem abutere, Catili
patientia nostra? Quam diu etiam
furoz iste tuus nos cludet? Quem ad
effrenata iactabit audacia? Nihil
nocturnum praesidium Kalati, nihil utibi
nihil timor Vigiliae populi, nihil
sonorum omnium, nihil hic munitz hab
habendo senatus locus nihil horum
volitusque morbum? Kalate tua
consilia non sentis, constrictam iam*

Matchmaking 16th.jpg

Winsoft is a French company that produces all the specific Arabic ME (Middle East) versions of the Adobe software collection. For some reason Winsoft seems to believe that the Arabic typography never really departed from the Gutenberg era.

The latest software release of the ME Adobe InDesign has a number of new features for creating variations with their special Naskh font. Effectively mimicking calligraphic splendor of centuries ago. Why on earth does Winsoft (or Adobe) believe that Arabic graphic designers are waiting for text that can exclusively be used in calligraphic manuscript size? The Naskh typeface that can do magnificent tricks is totally useless for contemporary graphic design needs, such as for newspapers, brochures, branding, or the internet. It is only applicable for very rare occasions where an ancient atmosphere is required or desired.

Why is the idea so persistent in the minds of the people working at Winsoft that the aesthetics from the times of '1001 nights' is typically Arabic. This is a bizarre way of looking at contemporary Arabic culture and assessing its needs. Winsoft even went as far as to invest in a special plugin for Adobe ME InDesign called Tasmeem. This software attempts to reproduce Arabic calligraphy to perfection using a computer keyboard. Originally this plugin was offered for 50,000 US dollars but this price was taken off their website. Apparently Winsoft is now working to make different types of this Arabic DTP Ferrari available, sales prices are still under study.

In Latin typography there is also a small niche that occupies itself with digitising the typographic glories of the past. But this is more like a nostalgic hobby. Not to be taken too seriously. Because nobody would select these typefaces for everyday use. Also no one would ever consider making complicated 'calligraphic engines' to automate Latin calligraphy.

Everything that is advertised as 'typical' for the Arabic calligraphy is less typical than it is often assumed. Using swashes, abundant ligatures and even 'kashidas' to prolong characters is all done in Latin calligraphy as well. Maybe Winsoft should consider to put the Civilité of Granjon as a matching Latin font for their specific Naskh typeface. Both will be capable of shaping in close harmony nice guirlandes of the past.

Comments (10)

Adobe/Winsoft and Granjon

Quoting from an email from Dr Roper, he says: "I was amused by your piece juxtaposing Adobe/Winsoft and Granjon. The irony is, of course, that Granjon himself in the 16th century designed Arabic fonts which attempted to imitate naskh calligraphy, with umpteen ligatures, etc. They have been much admired for this, but nobody has used them, nor anything like them, for more than 200 years."

Coincidentally, today I myself received a press release from the organizers of the GITEX international computer fair in Dubai, promoting demos by WinSoft of their Tasmeem software. The press release states that the Tasmeem software will come in three different editions: Tasmeem Limited Edition (using customized Tasmeem fonts), Tasmeem Creative Edition (for advertising and print design applications) and Tasmeem Publisher Edition (which claims to be specifically tailored for 'Arabic literary and academic books'). I am very curious.

Quote

Huda Smitshuijzen AbiFares, 8 Sep 2007, 13:04

Tasmeem

Hello Edo and Huda.

I do not know about Winsoft's various fonts, but recently I have heard about Tasmeem and made a point to find out what it is about. The inventor of the system Mr. Thomas Milo of Decotype www.decotype.com/ and your neighbor being in Amsterdam, explains the system in terms of reproducing the old naskh scripts. Your criticism that its is a "1001 Nights approach" to Arabic typography is understandable - in fact I have made a similar point in my earlier 1974 writing in Arabic (republished on my khtt page) that the aim of typography is not merely to imitate calligraphy. Having said that and hearing a video explanation by Mr. Milo about his system I now say- "why not?". More than that I see that Tasmeem is much more than just a method to imitate an ancient script, remarkable as that achievement is.

In its basic approach typography as we all practice it today is attaching glyphs domino-block style one next to the other, a system virtually unchanged since the days of Gutenberg. Indeed in your matchmaking efforts you sort of expect Arabic to fit this sort of geometrical regimentation, because it seemed to most people that this is what typography is all about.

The genius of Arabic handwritten script is the way it flows together in a harmonious whole. It is a dynamic organic way of attaching basic component shapes together not just along the horizontal stem but in various levels according to the curves of the letters. Mr. Milo's approach to creating Arabic is very sophisticated a revolutionary method applicable to any script in any language, new or old. He analyzed the basic geometrical curves that make up all the letters and allowed the computer to discover the best ways to link them together in the best way for any particular font it displays. It is a misunderstanding of Tasmeem that it is merely a system to mimic the old naskh - the system can be of great value for the automatic kerning of modern typefaces, even the development of completely new ones. In the interests of Arabic typography please consider inviting Mr. Milo to explain his ingenious system to the members of khtt and to Arab typographers in general.

I appreciate what you are doing but have only one wish for khtt that it becomes more of a give and take between the many amazing members. Perhaps the main page can stress what is new in the forums, like the Typophile site does. With warm best wishes.

Vladimir

[Quote](#)

Vladimir Tamari, 12 May 2008, 15:15

Tasmeem

Dear Vladimir,

Thank you for your poetic reaction. You are certainly a romantic person.

To get things straight: the Khatt site is put on the web as a tool to meet and to exchange ideas. There is nobody excluded from any sort of contribution to the site. In contrast, all comments and contributions will be received with the warmest welcome.

However, the site is not meant to be a duplication of very specific discussions already going on in other sites. Anybody interested in the travails of Thomas Milo (or others) can choose from a plethora of possibilities to hear his voice or get acquainted with his products. It seems to me that you have a very romantic view on what Tasmeem is doing and not doing. In my view Tasmeem is very much like other proprietary software around and used for showing complicated versions of Arabic type. These types of software all use the same principle, there is very little that makes Tasmeem different. Obviously, there are a lot of different ways to use the ACE (Arabic Calligraphic Engine) in Tasmeem, but it is very confusing to me what DecoType or WinSoft really wish to achieve with their products. Now there appears to be a Tasmeem Tsunami Project, I guess this means that we may expect a deadly shower of new typefaces for Tasmeem anytime soon. If you find new applications of Tasmeem you feel are worth showing I'll be happy to put it on the site. But of course you can also do it yourself.

With the kindest regards,

Edo

[Quote](#)

Edo Smitshuijzen, 13 May 2008, 11:37

Tasmeem

OK

[Quote](#)

Vladimir Tamari, 13 May 2008, 12:45

Tasmeem

Dear Edo

Hello. I think this link explains better than I could the enthusiasm of young typographers about Tasmeem - it is a presentation made at Reading University. www.typeoff.de/?p=282

I take the opportunity to congratulate you and Huda again about the Khtt website's beautiful design and interesting content. We may agree or disagree about various technical or other matters but having this forum to discuss them is important.

With thanks and warm regards

Vladimir

[Quote](#)

Vladimir Tamari, 15 May 2008, 10:10

Nobody excluded, everybody welcome?

Edo,

you say "the Khatt site is put on the web as a tool to meet and to exchange ideas. There is nobody excluded from any sort of contribution to the site. In contrast, all comments and contributions will be received with the warmest welcome."

Is the "nobody is excluded, everybody is welcome" policy the same as the one applied by your wife during the organization of the Kitabat 2006 conference in Dubai, the very policy which led to the withdrawal of the support of Association Typographique Internationale (ATypI) for the conference, to the withdrawal of some speakers and co-organizers? Is it perhaps the same policy that made your wife, who was part of the organizing committee, use her political influence at the American University of Dubai to insist that Thomas Milo be dropped from the speakers list at that conference even though he had been initially invited?

Contrary to what you've written above, what kind of pluralism of opinions can one expect from a website that, when leaving comments under an article, has two optional buttons: "I am a fan" and "Throw flowers". That is, of course, extremely impartial.

From Berlin,
Adam

[Quote](#)

10 Mar 2009, 15:08

Take a deep breath

Adam,

I read both your posts above. Besides Huda and Edo nobody seems to be interested in joining this particular forum. I myself fell silent at Edo's patronizing response to my discussion of Tasmeem. What a pity...here there is this splendid website and forum khtt run by two energetic people with a great many young members from all over the world. khtt can and does play an important role in the multi-cultural world of typography where we can all air our ideas and discuss techniques and trends. I hope we can all put our prejudices (including my own) and differences behind us and try to cooperate to pool our various areas of expertise in such a way that the field of typography and specifically Arabic typography can go forward.

As Adam so ably demonstrates there are many directions that type designers have taken and can take. The Matchmaking project and Tasmeem are only two solutions - there are many more, and in either case we should be able to discuss their merits and criticize their shortcomings without feeling threatened. I still hope that khtt can open itself to frank and amicable discussions in an atmosphere of respect and courtesy. It may be true that anyone can post here but the forums are well "hidden" with no clear updated page of current topics prominently displayed on the first page of this website. It will be ideal if experts like Tom Milo, Nadine Chahine and Adam Twardoch and many others can benefit us from their expertise in this beautiful graphic garden created by Huda and Edo.

With best wishes,

Vladimir

[Quote](#)

Vladimir Tamari, 13 Mar 2009, 8:25

Typophile Special Interest Group for Arabic Typography and Type Design

Adam

A group of font designers started the Typophile 'Arabic' forum and one of the reasons, sadly, was that Khtt seemed to be concerned with one technical issue only - matchmaking. Khtt's strong point is that it emphasizes the aesthetic and branding sides of Arabic typography in modern culture, which is fine, of course, but even so there is almost no open discussion of these issue between members. Ideally both forums will be more open to the discussions presented in each other.

As one of the designers who adapted his font for use within the Tasmeem software I found it a stimulating experience which brings out many interesting issues. These need to be discussed by the community to help bring out the full potential of this amazing approach.

Vladimir

[Quote](#)

Vladimir Tamari, 18 Mar 2009, 5:38

How pitiful

In the best Smitshuijzen tradition, not only has one of my two postings removed from this thread (Vladimir's reply obviously indicates that he has read "both my posts above", yet there is only one remaining). On top of that, my login has been "banned" from being able to post here anymore.

Quoting you: "the Khatt site is put on the web as a tool to meet and to exchange ideas. There is nobody excluded from any sort of contribution to the site. In contrast, all comments and contributions will be received with the warmest welcome."

Way to go, Edo, way to go. You liar.

Adam Twardoch

(using an alternative login because I am banned from posting using my real one)

[Quote](#)

New user, 1 Mar 2010, 11:22

Repost: To the matter

(I'm reposting the text that has been deleted by the administrator. I truly wonder what the reasons for removing the post was, and what the reason for banning my user account was. I'd appreciate some clarification. (Of course you're free to remove this post again, and we can play the same game indefinitely.)

Edo,

Having voiced my opposition to the tone and the partiality of your contribution, I feel that I should add a few lines to comment on some of your assertions, which simply are not true.

It is absolutely right to say that type design should evolve in different directions. But you're trying to create an impression that there is only one direction that is "right". With Latin type, fortunately enough, your authoritarian approach never flew. The tradition of the Latin letter has been formed by the very play of "push-pull", the back-and-forth interaction of hand and machine. On one hand, you've always had the perfectionism and organic nature of the inscriptional tradition, on the other hand, the advances in technology have created opportunities that offered another kind of perfectionism: the ability to reproduce the same shape cleanly and in absolute repetition. On the other hand, you've had the traditionalist conservatism of the calligraphic masters but you've also had technological restrictions and limitations that came with technology. In other words, both the hand and the machine had its strengths and its weaknesses.

The development of Latin type was never monodimensional, never monodirectional. It was always multidirectional and operated on several dimensions. Signpainters and poster artists worked alongside of printers, reproduction of the typographic letter by means of cut-and-paste or photography went hand-in-hand with hand lettering, and today, the computerized clean and

repetitive sanserif letterforms are used at the same time as dirty, organic, photographically enriched lettering. In the digital age, it's bitmaps and vectors — which have the same parallel relationship as hand and machine "in the old days."

When reading your words "In Latin typography there is also a small niche that occupies itself with digitising the typographic glories of the past. But this is more like a nostalgic hobby. Not to be taken too seriously. Because nobody would select these typefaces for everyday use," it sounds like you've been living on a different planet. Have you never heard of Jan Tschichold, one of the 20th century's greatest book and typeface designers, who started his career by publishing "Die neue Typographie", a manifesto of Modernist typography, in which he condemned the use of all typefaces except minimalistic sanserifs, but later actually condemned his earlier views, adopted a strongly Classicist design style, and developed Sabon, a typeface which one can safely call "a digitisation of the typographic glories of the past," namely of Claude Garamond's roman and Granjon's italic.

I thoroughly recommend you a trip to the Frankfurt book fair (this autumn) or the smaller Leipzig book fair (which actually starts today). You may be astonished to discover that roughly three quarters of literature published in Germany is set in Sabon or in Stempel Garamond (yes, another Garamond). The Garamond letter is what the average German reader gets to see by default when opening a book.

There is certainly an abundance of other typefaces in use on the internet, in print advertising, flyers, brochures, newspapers and on mobile phones — but they never really caught on in book design. Well, perhaps with the exception of Robert Slimbach's Minion, which seems to be the third favourite among German book designers, next to Sabon and Stempel Garamond. Minion is another design that draws heavily from the classic Renaissance Latin letter.

I hope that if Jan Tschichold's name doesn't ring a bell with you, at least Robert Slimbach's name will. Apart from designing the hugely-popular Minion (which by the way pairs beautifully with DecoType Naskh, much better than your *Civilité* mockup), Robert has made "a digitisation of the typographic glories of the past," namely of Garamond's type. Actually, he's done it twice. In 1989, he designed Adobe Garamond, a version that became hugely popular but which never satisfied him entirely, so a few years later, he began to work on a second, much more monumental, project, which he only completed in 2005. Needless to say that Robert based all the optical sizes of the Garamond Premier Pro family on the separate design size cuts taken from the original Garamond specimens, found among others at the Plantin-Moretus museum in Antwerp, which Robert visited when researching this project.

Did I mention that Garamond Premier Pro is also on its move to become a popular book typeface — joining Minion and the other Garamonds. But then, perhaps you simply consider reading books "a nostalgic hobby" as well.

Further, you say "Also no one would ever consider making complicated 'calligraphic engines' to automate Latin calligraphy." I don't know about you, but I like to do a little research before flooding the internet with the product of my brain. This usually saves both the writer and the reader some embarrassment.

Had you done some research, no doubt you would have encountered software applications such as Kallculator [1] by Frederik Berlaen, a graduate of the TypeMedia type design program at the Royal Academy of Arts (KABK) in The Hague, or DTL LetterModeller [2] [3] by DTL/URW+, created by Frank Blokland, one of the highest-regarded Dutch type designers and one of the teachers at that very academy.

Had you done some research, I'm sure you would have noticed that as much as 40% of the most popular retail Latin fonts sold by the large font distributors such as MyFonts [4] are calligraphic fonts, and for some font distributors such as Veer [5], it's even 80%.

Had you done some research, you would have found out that among the winners of the Type Directors Club typeface design competition of the past few years, highly complex calligraphic fonts were highly regarded, such as Alejandro Paul's *Adios Script* [6], his *Burgues Script* [7] or Ken Barber's *Studio Lettering script suite* [7]. Had you ever looked at those fonts, you would know that their authors have gone through a lot of trouble of utilizing the contextual alternates mechanism of the OpenType font format to create, in essence, "complicated 'calligraphic engines' to automate Latin calligraphy". In fact, other technologies such as the DecoType ACE font engine would have allowed them to achieve this even easier than the OpenType font format, so I wouldn't be at all surprised if at some point we will see an even more sophisticated emulation of Latin calligraphy done outside of OpenType.

Since you have skipped the research, let me help you and assure you that — based on my ten years of experience in working for and with various font distributors, font foundries and type designers — there has been and continued to be a very strong interest in fonts that emulate Latin calligraphy, and that people are constantly trying to push the technological limitations in order to allow them more flexibility, more organic quality, more randomness etc.

This is not to say that it is the only direction. Of course, as I wrote at the beginning, the trend to clean up, minimize, idealize and polish exists as well — but it does so in parallel with, not in opposition to, the calligraphic direction.

No flower throwing this time either,
Adam

[1] Frederik Berlaen, Kallculator: www.kallculator.com/

[2] DTL LetterModeller download: www.fontmaster.nl/english/demo_rdrct.html
[3] DTL LetterModeller in use: www.flickr.com/photos/fabioaug/3147806901/
[4] MyFonts bestsellers: new.myfonts.com/bestsellers/
[5] Veer: www.veer.com/products/type/
[6] TDC2 2009 winners: tdc.org/tdc/tdc2-2009-winners
[7] TDC2 2008 winners: tdc.org/tdc_site/tdc2_2008_winners.html

12 Mar 09, 18:39

Tasmeem "Tsunami"

Edo,

since you mentioned that there was a Tasmeem "Tsunami" project under way, I guess you were referring to this:
www.winsoft-international.com/en/store/fonts.html

As you can see, Tasmeem-compatible fonts represent a wide range of Arabic styles, not at all restricting themselves to just historical script revival. DecoType's own interest in type design certainly revolves around revival of historical Arabic scripts (Ruq'ah, Naskh, Nasta'liq etc.) and that to the extent and quality that is hardly found in any other digital products. But the other Tasmeem fonts prove how easily this technology can be applied to other styles.

Vladimir,

you seem to be right on one thing: the Typophile special interest group for Arabic Typography and Type Design seems to be a much more impartial place to discuss issues related to the topic: typophile.com/forum/366

Regards,
Adam

15 Mar 09, 16:24

[Quote](#)

New user, 1 Mar 2010, 12:22

© *Frerik Kampman, 2011*

Utrecht University, The Netherlands