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The Development of the Hijazi Orthography

Abstract: This paper examines the main orthographic innovations of the early Islamic orthography in comparison to the Nabataean orthography and traces through new epigraphic evidence when and where these innovations came to be used. It is shown that a number of them clearly develop already in the pre-Islamic period. Besides this, the paper looks at the complexities of Arabic orthography and morphophonological spelling as it is reflected in the Quranic orthography as well as pre-Islamic inscriptions and argues that the early Islamic orthography represents the continuation of a developed Hijazi scribal tradition.

1 Introduction

The Arabic script started as an offshoot of the Imperial Aramaic script adopted by the Nabataean kingdom (ca. 3rd century BCE to 106 AD). Throughout the centuries during which it has been in use, it has undergone radical change. The Aramaic script was already a poor match for the Arabic language to begin with, as it lacked many signs to distinguish sounds absent in Aramaic but present in Arabic, yet as the centuries progressed and the script became more cursive, some originally distinct signs started to merge. This led to a highly ambiguous Arabic script that in word-medial position only distinguishes 14 of its 28 letters by shape, and in word-final position has only 18 distinct shapes. The development of the script was a fairly gradual process, as laid out in detail by Laila Nehmé.¹

The spelling principles, on the other hand, would initially strike one as having undergone a much less gradual and more radical transition. The start of the Islamic period looks like a marked departure from the principles present in the pre-Islamic orthography – primarily found in the onomasticon as the (transitional) Nabataean inscriptions are mostly written in Aramaic. The orthographic developments were laid out in detail in a series of extremely insightful articles by Werner Diem written around the early 1980's.² These studies were strikingly prescient but do show their

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1 Nehmé 2010: 47–88.

2 Diem 1979: 207–57; Diem 1980: 67–106; Diem 1981: 332–83; Diem 1983: 357–404.

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age today. Diem's observations of the Islamic era orthography were based on the 1924 Cairo Edition of the Quran. This print edition uses very archaic spelling but is nevertheless based on medieval works describing the Uthmanic orthography, rather than being based on early Islamic manuscripts to reconstruct the actual original Uthmanic orthography. This is understandable, as at the time early Quranic manuscripts were not easily accessible to the researcher.³

In recent years, research into the Arabic language both in its late pre-Islamic and early Islamic phases has seen a (digital) transformation. Both amateur and professional epigraphers have started collecting hundreds of both pre-Islamic and early Islamic inscriptions – photographs of many of which are freely available online. Likewise, the access to early Islamic Quranic manuscripts has seen a revolution, and many of our early codices are now easily accessible through digital repositories like Corpus Coranicum (<https://corpuscoranicum.de>). As a result, it has become possible to conceive of a much more detailed picture of the development not just of the Arabic script, but also the appearance of the distinctive Islamic orthography from the earlier Nabataean orthography. The current article wishes to re-evaluate the evolution of Arabic orthography as it eventually comes to be accepted in the Islamic period. With a more detailed insight, can we determine to what extent this was a concerted effort at an orthographic reform?

Diem considered the Quranic orthography to be “the result of a very deliberate and clever spelling reform”⁴ (das Resultat einer sehr überlegten und klugen orthographischen Reform) and Robin appears to place such a reform with the start of the Medinan caliphate.⁵ Now that we have a much higher-resolution view of the crucial years when such a reform could have taken place, we are able to see that there was not a single “deliberate and clever” spelling reform, but that it was rather a series of steps that seem to have occurred over the course of the fifth and sixth centuries.⁶ Moreover, to whatever extent some of the innovations were a single event, it seems clear that no such event took place in the early Islamic period during the time of the ‘rightly guided caliphs’. Rather, several of these innovations already took place in the pre-Islamic period and some of these specifically within the Hijaz. Therefore, we need to think of the spelling reform as a specifically Hijazi process, and the Quran, which was composed in Hijazi Arabic,⁷ as the prime example of this Hijazi orthography in the early Islamic period.

This article consists of two main sections. Initially, it will examine the main orthographic innovations that can be identified as setting apart the Islamic era orthography

³ Many of the necessary corrections to Diem's original observations have been published in recent years, most recently in the appendices to van Putten 2022: 233–319 and the articles cited therein.

⁴ Diem 1983: 257.

⁵ Robin 2006: 157–202.

⁶ This possibility was already anticipated by Al-Jallad previously, and with these recent discoveries this can largely be confirmed, see Al-Jallad 2021: 209–11.

⁷ Van Putten 2022: 99–149.

and examines new epigraphic evidence to evaluate when these innovations are first introduced into Arabic writing. From this it will be clear that, while not all innovations are first attested in pre-Islamic period, a significant portion are, which challenges the idea of a single early Islamic reform of the Arabic script. The second part of the article then focuses on some of the complexities of the Islamic orthography. It will demonstrate that the Islamic era orthography from its earliest period has a well-developed and thoughtful orthography with significant orthographic depth. This orthography cannot be the result of a first impromptu attempt at writing the Hijazi Arabic dialect. Instead, it is one that shows significant complexity that could only be achieved with the presence of formal institutions. This points to the existence of a distinct formal scribal school which has developed a number of its idiosyncrasies already in the pre-Islamic period.

2 The Corpus

To examine the development of Hijazi orthography, it is necessary to make use of a variety of early sources, both from the Islamic and pre-Islamic period. For the Islamic period, the main point of departure is the Quranic text, by far the longest text that we can access from the early Islamic period, which therefore gives us quite detailed insight into the early Islamic orthography. Besides this, also several of the early Islamic inscriptions and papyri will be referenced. Such sources are sometimes earlier than the Uthmanic text of the Quran, and on occasion give earlier evidence for orthographic practices.

For the pre-Islamic period, the current paper focuses on the growing number of late pre-Islamic inscriptions (ca. 5th to 7th century) in the so-called palaeo-Arabic script.⁸ The palaeo-Arabic script is defined as the evolution of the Nabataean script that is recognisably similar to the Islamic Arabic script. Based mostly on the inscription's contents and several small palaeographical differences that disappear in the Islamic period, however, the script remains identifiable as pre-Islamic. Important sources of palaeo-Arabic inscriptions are several well-known and previously published examples such as the Zebed inscription (512 CE), Jabal Usays inscription (528–9 CE), the Harran inscription (568 CE)⁹ as well as DaJ144PAr1 (548–49 CE)¹⁰ and the few inscriptions found near Ḥimā as published by Robin, al-Ghabban and al-Said.¹¹ But especially in recent years, a number of exciting inscriptions have been collected by a group

⁸ Al-Jallad and Sidky 2021: 203.

⁹ The most up-to-date editions of these three inscriptions may be found in Michael Macdonald 2015: 373–433.

¹⁰ Nehmé 2017: 121–64.

¹¹ Robin 2014: 1033–128.

of amateur enthusiasts on social media.¹² The amateur group Fariq al-Sahra¹³ have started publishing several palaeo-arabic inscriptions from the Hijaz.¹⁴ These inscriptions as well as an as-of-yet unpublished palaeo-Arabic inscription in preparation by Ahmad Al-Jallad and Laila Nehmé will form an important basis for our discussion of the development of the Hijazi orthography.

3 The Main Innovations

A number of suggested orthographic differences between the Quran and earlier Arabic writing more properly belong, I believe, to the realm of linguistic change, rather than being the result of a spelling reform. For example, the Quranic Arabic use of the *yā'* for what in Classical Arabic becomes *ā* is not so much an orthographic practice of writing *ā* with the letter *yā'*, but clear evidence that Quranic Arabic had a fourth vowel *ē* which in later forms of Arabic shifted to *ā*.¹⁵ The loss of the *hamzah* spelling which I do discuss below belongs to this category as well, but this development is an important prerequisite for another orthographic innovation (use of *'alif* for word-internal *ā*), which is why I have chosen to include it. The seven main orthographic innovations in early Islamic orthography compared to the earliest stages of Arabic written in the Nabataean script are discussed in the following sections.

3.1 Loss of wawation

In the earliest phases of pre-Islamic inscriptions in the Nabataean script, triptotic names are as a rule followed by *wawation*, a word-final *wāw* at the end of a name.¹⁶ Many of the Nabataean inscriptions are written in Aramaic, so we only ever find Arabic names that show such *wawation*. But in the earliest Arabic language inscription, the En Avdat inscription (can be dated after 95 BCE and before 125 CE)¹⁷ such *wawation* (and indeed also *yā'* for the genitive and *'alif* for the accusative) represent living final case vowels in Nabataean Arabic. In the centuries that follow the case

¹² Most importantly the Hijazi 'Abd Šams inscription, an initial edition of which was published by Al-Jallad and Sidki 2021: 210.

¹³ Their website: <https://alsahra.org> (accessed March 6, 2023).

¹⁴ See the collection of palaeo-arabic inscriptions published here <https://alsahra.org/2017/09/%d9%86%d9%82%d9%88%d8%b4-%d8%b9%d8%b1%d8%a8%d9%8a%d8%a9-%d8%a8%d9%84%d9%83%d9%86%d8%a9-%d9%86%d8%a8%d8%b7%d9%8a%d8%a9> (accessed March 6, 2023), which I will cite here under the sigla names FaS 1–8. A publication of these inscriptions is currently in preparation by Laila Nehmé.

¹⁵ Van Putten 2017: 47–74; *pace* Diem 1979: 237–40; Robin 2006: 347.

¹⁶ Nöldeke 1885: 73; Al-Jallad 2022: 87–103.

¹⁷ Fiema et al. 2015: 400.

system starts to break down, thus in JSNab 17 (267 CE), both names and nouns have *wawation*, but they no longer inflect for case.¹⁸

In the course of the 4th century CE, *wawation* appears to have been lost completely, at least in some varieties of Old Arabic, and it had become a completely orthographic device retained on triptotic names only, and irregularly even there.¹⁹ By the 6th century in Arabic inscriptions, such as the Zebed inscription (512 CE),²⁰ some names are still found with *wawation*, while others that one would expect to have it, lack it completely. The first dated Arabic inscription that lacks any *wawation* on names is the Jabal Usays inscription (528–9 CE).²¹

The orthographic situation that we find in the Jabal Usays inscription is eventually what we see feeding into the early Islamic period, where *wawation* is only consistently retained in the spelling of the triptotic name ‘*amr* عمرو. Due to the lack of the name ‘Amr in the Quran, there are no examples at all in the Uthmanic text of this once widespread practice. In the corpus of late (but mostly undated) pre-Islamic inscriptions collected by Fariq al-Sahra we see a mixed situation. Some names lack *wawation*, while others preserve it, thus FaS 5b attests فسو with *wawation* for *qays*, whereas حلد *hālīd* in FaS 7 lacks it. To my knowledge, the only Islamic era texts that retain *wawation* on a name other than ‘Amr are PERF 558 (22 AH / 643 CE)²² and the Yazid, which if it indeed refers to the Umayyad caliph Yazid the I would not date later than the time of his death in 683 CE.²³ PERF 558 contains the wawated name حدندو *hudayd*, and the Yazid inscription shows *wawation* on يزدو *yazīd*.

3.2 Loss of hamzah

One of the most notable changes in orthography between the pre-Islamic inscriptions in the Nabataean/transitional Nabataean script and that of the Quranic and early Islamic writing, is that its orthography reflects a dialect that has lost the *hamzah*. This is surprising, as what comes to be accepted as Classical Arabic has a very conservative retention of the *hamzah*. Research into the Quranic rhyme and orthography, however, has made it highly plausible that – unlike most Quranic reading traditions – the language of composition of the Quranic consonantal text had indeed lost the *hamzah* in almost all positions.²⁴ Its use of *wāw* and *yā*’ as “seats of the *hamzah*” there is not just an orthographic device, but a genuine reflection of the dialect it was meant to rep-

¹⁸ Fiema et al. 2015: 403.

¹⁹ Al-Jallad 2022: 97–101.

²⁰ Fiema et al. 2015: 410–11.

²¹ Fiema et al. 2015: 412.

²² Grohmann 1924.

²³ Younis al-Shdaifat et al. 2017: 315–24.

²⁴ Van Putten 2018: 93–120; van Putten 2022: 257–58.

resent. This loss of the *hamzah* has traditionally been identified as a typical feature of the dialects of the Hijaz.²⁵

The pre-Islamic inscriptions denoted the *hamzah* with the sign that is, historically, to be expected: the 'alif. This makes it clear that the Nabataean Arabic had conservative *hamzah* realization.²⁶ In the rare cases where a word carrying a *hamzah* shows up in palaeo-Arabic inscriptions, these still use the archaic 'alif for *hamzah* rather than the innovative *wāw* or *yā'* as we see in the Islamic era orthography. For example, the month name *al-mu'tamar* in the PalAr1 (513 AD) as لمامر[ا],²⁷ and the name *hunay'* as هسا in the Zebed inscription (512 AD) are both spelled with 'alif for *hamzah*.²⁸ In the Hijazi palaeo-Arabic inscriptions, no examples of spelling that point to a loss of *hamzah* have been attested so far. This absence is not particularly striking, however, as there are not many opportunities for it to appear in the palaeo-Arabic inscriptions that have been found. The only unambiguous example is found in FaS 1 سمال for the name *Samaw'al* with 'alif for post-consonantal *hamzah*.²⁹ The other rather doubtful case is FaS 4 الداه which, if it represents *al-dī'bah* 'the she-wolf', would be an example of *hamzah* still being written with 'alif. But this interpretation is far from secure. Almost always inscriptions of this type are clearly patrilineal, and it is difficult to imagine how a name with the meaning 'the she-wolf' would have been carried by the father.

The only apparent examples of a lost *hamzah* can be found in theophoric names that end with 'Ēl. Examples for this occur in the Harran inscription (568 CE)³⁰ in the name سرحل *šuraḥil* and in FaS 2 طعل which should probably be understood as the Arabic Theophoric name with the Arabic verb *ṭā'a* 'to obey' followed by 'Ēl: 'He obeys 'Ēl'.³¹ The lack of the *hamzah* in both of these names could be interpreted as a pre-Islamic example of the loss of *hamzah*. But theophoric names with 'Ēl more frequently lack the *hamzah*. Compare, for example, Quranic *Ismā'il* 'Yishmael', perhaps a reflection of a later Hebrew pronunciation, as the aleph in the Hebrew reading tradition is also silent in ישמעאל *yisṁā'el*. One might also compare Quranic *ḡibrīl/ḡabril* 'Gabriel' (also read with *hamzah*: *ḡabra'il* and *ḡabra'il*).³² However, that name retains the glottal stop in the Hebrew reading tradition גבריאל *gabriel*. This irregular behaviour of the *hamzah* of such Elistic names seems to be ancient. The name *Ṭā'(')il* is also attested

25 Van Putten 2022: 120–22.

26 Of note however is that the 'alif *al-waṣl* of the definite article/theonym *allāh* is treated quite irregularly in Nabataean inscriptions, see Norris and Al-Manaser 2020: 450–51.

27 Robin, Al-Ghabbān, and Al-Sa'īd 2014: 1122–23.

28 Fiema et al. 2015: 410–11.

29 This spelling of 'alif for post-consonantal *hamzah* followed by *fathah* is later introduced again into much later medieval orthography, but in the Quran, and most early Islamic writings a word like *yas'alu* would be spelled without an 'alif, i.e. يسل. For a discussion of a notable exception in the early Quranic manuscript DAM 01–29.1 see van Putten, "Hamzah in the Quranic Consonantal Text," 111–17.

30 The most up-to-date editions of these three inscriptions may be found in Michael Macdonald's contributions to Fiema et al. 2015.

31 I thank Fahad Alsharif for pointing out this compelling interpretation of this name to me.

32 'Abū al-Ḥayr ibn al-Ḡazārī, *Naṣr al-Qirā'āt al-Aṣr*, ed. Suwayd (2018), iv, 2180.

in Safaitic both with (<ʔl>, HCH 196, C 1584, WH 3008, ZeGa 6, RQ.D 7, BES15 559) and without *hamzah* (<ʔl>, C 1138, C 1877, C 1879, C 5232, AbaNS 672),³³ even though Old Arabic of the Safaitic inscription is usually very conservative in terms of retention of *hamzah*. We therefore probably cannot make too much of the absence of *hamzah* in either of these names to inform us about the state of the *hamzah* spelling in pre-Islamic times.³⁴

3.3 Use of 'alif for word-internal ā

As a result of the loss of the *hamzah*, words that historically had the sequence *a'* shift this sequence to *ā*. E. g. رأس 'head' or تاكل 'you eat' were originally spelled etymologically to represent *ra's* and *ta'kul*, but came to be pronounced as *rās* and *tākul*. This phonetic shift allowed the 'alif to be reinterpreted as a *mater lectionis* in word-internal position for *ā* rather than be a sign for the *hamzah*.³⁵ This shift is complete in the early Islamic period, and 'alif for *ā* is used frequently both in our earliest Quranic manuscripts, papyri, and inscriptions.

In the early Islamic period, many cases of word-internal *ā* are still spelled defectively. In what eventually becomes Classical Arabic orthography, most of these cases of defective spelling eventually come to be spelled plene, with only a few high frequency words that retain a historical defective spelling (e.g. هذا for *hādā* and إله for *ilāh*). While there appears to have been some degree of optionality of defective or plene spelling in the early Islamic period, this does not mean it was a free-for-all. A clear set of rules, dependent on the shape of the word, determines whether *ā* is written plene or not. Only words that fall outside the general rules that either require plene or defective spelling show some amount of optionality. Some of these rules were described first by Diem.³⁶ However, his description was based on the modern Cairo Edition and therefore contains a number of inaccuracies in comparison to our earliest manuscripts. I have elsewhere described rules that better represent the orthography of the 'alif in early manuscripts.³⁷

Plene spelling of *ā* is as of yet unattested in the pre-Islamic record. This does not necessarily need to mean that such a spelling practice is an innovation of the Islamic period. The inscriptions that are attested indeed lack plene spellings where they could have had them (e.g. *qital* as قتل in FaS 8), but even in early Quranic manuscripts these are not the type of words that would usually be spelled plene. Only in the Islamic pe-

33 Safaitic inscriptions were accessed through the OCIANA database (<http://krccm.orient.ox.ac.uk/fmi/webd/ociana>) and the sigla used therewith (accessed March 6, 2023).

34 Compare also the name *Šarahīl* well-attested in the Islamic historical record and in the Harran inscription.

35 Diem 1976: 258; van Putten 2018: 96–97.

36 Diem 1979: 255–56.

37 Van Putten 2019a: 284–86; van Putten 2022: 234–35.

riod do we have a large enough corpus that the presence of plene spelling can easily be confirmed, for example in our earliest Islamic papyrus PERF 558 from 22 AH, which spells *šāh* ‘sheep’ as سَاه.³⁸

3.4 Invariable feminine ending

In the earliest layer of Nabataean writing, Aramaic words with the feminine ending follow the feminine spelling convention <-h> in the absolute, <-t> in construct and <-t’> in the definite form. However, Arabic names show a different distribution. Here, we see that the feminine ending is invariably <-t> even in what would be an absolute position. This suggests that in early Nabataean Arabic the feminine ending was pronounced /-at/, as was the case in the Arabic of the Safaitic inscriptions. Construct phrases are of course also spelled with <-t>, as, for instance, in the Namara inscription <mdynt šmr> /madīnat šammar/ ‘the realm of Shammar’.

In later writings in the Arabic script, we increasingly see that the feminine ending has undergone a shift of *-at* to *-ah* and thus the feminine ending is with هـ (e.g. FaS 2 كنه for *Kinānah*, FaS 5b والعوه for *wa-l-quwwah*, FaS 6b بعنه for *ʿIṭlabah*). The feminine ending in construct, when it occurs, is still spelled phonetically with ت (e.g. FaS 4 وكرمب الصف *wa-kirāmat ad-dayf* ‘and kindness to guests’).

By the time we get to the Uthmanic text, the orthography has undergone an unusual development. Not only does it use the هـ for all the indefinite and definite forms where it would be pronounced as *-ah*, it even starts to be written as such in construct, an environment where it was presumably never pronounced *-ah*. This orthographic development is therefore decidedly non-phonetic. This shift to this new non-phonetic spelling is not yet complete, and a good number of construct feminine forms (about 22 % of the total) in the Quran are still written with ت in construct, while many phrases occur in both spellings.³⁹

Only once Classical Arabic orthography crystallizes does the regular use of هـ in all positions become the standard. The Uthmanic text thus serves as a nice example of an orthographic reform in progress, although the construct feminine form in the pre-Islamic record is not attested often enough in our corpus to be sure that such a change was not already underway. The absence of a construct feminine spelled with هـ may just be an accidental gap.

³⁸ Robin appears to have missed this spelling, and instead says that the earliest example is found in an inscription of 40 AH, near the end of ‘Alī b. ‘Abī Ṭālib’s reign (40 AH / 661 CE). Of course, since the standard text of the Quran, which has *plene* spelling and likely dates to the reign of ‘Uṭmān, we have textual evidence that predates 40 AH, even if we for some reason do not accept the data found in PERF 558, see Robin 2006: 345.

³⁹ Van Putten and Stokes 2018: 164.

Tab. 1: Spelling of the feminine ending in different periods

	Nabataean	Nabataeo-Arabic/ Palaeo-Arabic	Early Islamic	Classical
Definite/Indefinite	<-t>	<-h>	<-h>	<-h>
Construct	<-t>	<-t>	<-h> & <-t>	<-h>

3.5 'Alif al-Wiqāyah

One of the more remarkable features of the Quranic orthography is its use of the *'alif al-wiqāyah*. This is the employment of a non-phonetic word-final *'alif* after an expected word-final *wāw*. In Classical Arabic orthography, this is a purely morphological sign, which marks plural endings *-ū* and *-aw*. But this is not the spelling practice found in pre-Classical orthography. In the Uthmanic text as well as in early-Islamic writing the *'alif al-wiqāyah* is used for any word-final *-ū* or *-aw*, regardless of whether it is a plural verbal ending or not. Other cases of word-final *wāw* such as a consonant followed by *-w* or word-final *-āw* or *-uww* are spelled without the *'alif al-wiqāyah* in early Islamic orthography.⁴⁰

This orthographic device is not present in our earliest Nabataean inscriptions, where word-final *-ū* is simply written with *wāw*. This is clear in the transparently Arabic word *'adhalū* 'they introduced' which is spelled <dhlw> in UJadhNab 109, dated to 455–56 CE.⁴¹ However, a recent discovery of a palaeo-Arabic inscription has now confirmed that the orthographic innovation of adding *'alif al-wiqāyah* to word-final *-ū* predates the Islamic period. The inscription is dated to 548–49 CE and contains *fa-'ağābū 'amra-hū* 'so they obeyed/answered his command' spelled فاحنوا امره, proving that the orthographic innovation of the *'alif al-wiqāyah* was already in use in the middle of the 6th century.⁴²

3.6 Morphologically spelled definite article

In the Islamic period, the Arabic definite article is spelled morphologically, that is, it is spelled with ﻻ regardless of whether the *lām* is actually pronounced or is assimilated to the following consonant. This could be explained in two ways: 1) this could be an indi-

⁴⁰ Van Putten 2022: 239–49.

⁴¹ Nehmé 2018: 142.

⁴² The inscription in question was photographed by the amateur archaeological group Fariq al-Sahra, and was read by A. Al-Jallad and L. Nehmé and presented by L. Nehmé at the conference "Epigraphy, the Qur'an, and the Religious Landscape of Arabia" held in Tübingen on September 8–10, 2022. An edition of the text is currently in preparation.

cation that the definite article did not assimilate to the following coronal consonants in the register on which the orthography is based. This would find support in Greek transcriptions of Arabic that lack this assimilation, such as the Damascus Psalm fragment and the Petra Papyri.⁴³ 2) it could be morphological spelling, which at least in the Quran appears to be the more likely explanation. There, the definite article is even written as ال before words that start with *l*, a place where it is certainly a morphological spelling, as a word like اللطيف *al-laṭīf* or الله *allāh* would always be pronounced with a geminate and thus always have assimilation.

This is an orthographic innovation from the perspective of Nabataean Arabic, where the definite article is <l> before most coronals (presumably because the definite article did not assimilate in Nabataean Arabic) but assimilates to *l*, as can be seen primarily in instances where the divinities *allāh* and *allāt* are mentioned, spelled <lh> and <lt> with only a single *lām* respectively. In the Quran, such phonetic spellings occur in a couple of cases, most notably seen with the regular spelling of *al-layla* as الليل (an idiosyncrasy it shares with FaS 5b, if that word is read correctly) as well as all relative pronouns that are spelled with a single *lām*. But in the majority of cases, it is spelled morphologically with two *lāms*, e.g. اللعنه *al-la'nah* 'the curse' and الله *Alḷāh* 'God'.⁴⁴

While in a number of the late pre-Islamic inscriptions *Alḷāh* is still written with a single *lām* (FaS 4, FaS 7, FaS 8), the vocative *Alḷāhumma* اللهم with double *lām* has now been found in two inscriptions: FaS 4a and the 'Abd Šams inscription⁴⁵ found in the region of Tabuk. Moreover, the spelling الله is now found in two inscriptions near al-Ṭā'if.⁴⁶ Al-Jallad & Sidky argue that writing the definite article may be an orthographic innovation that specifically belongs to the Mecca/al-Ṭā'if orthographic practice. This would then also be the way through which the Quran would have inherited this orthography.

3.7 Loss of BAR logogram

A typical feature of the pre-Islamic Arabic inscriptions, which betray the origins of the Nabataean script, which used to be employed primarily to write Aramaic, is the use of the logogram BAR. This logogram started off as the consonantal spelling of the Aramaic word
 bar 'son of', to write the Arabic word *ibn*. This shape becomes more and more cursive, so that eventually the shape looks neither like Arabic بن nor like Arabic بر, but it is transparently an evolution from the original Aramaic
. As shown by Sijpesteijn,⁴⁷ this orthographic practice continues in the Islamic period in the admin-

⁴³ Al-Jallad 2020: 24; Al-Jallad 2018: 39.

⁴⁴ Diem 1983: 379; van Putten 2019b: 14–16; van Putten 2022: 251.

⁴⁵ Al-Jallad and Sidky 2021: 210; The inscription was first photographed and published, though not read or edited in Nayeem 2000: 79–80.

⁴⁶ Al-Jallad and Sidky forthcoming.

⁴⁷ Sijpesteijn 2020: 446–50.

istrative papyri and inscriptions, and as I point out elsewhere,⁴⁸ also in a number of early Quranic manuscripts (e.g. DAM 01–29.1, Arabe 330 g; Codex Amrensis I).

Nevertheless, writing the word *ibn* phonetically with (*ʿalif*) *bāʾ nūn* becomes more and more dominant in the early Islamic period. In inscriptions, we probably see its first securely dated example in 43 AH / 663–64 CE.⁴⁹ A little earlier than that, it probably also was part of the Uthmanic archetype. While several early manuscripts use the BR logogram, the majority of early manuscripts including, for example, the *Codex Parisino-Petropolitanus* (last quarter of the 7th century?) use ابن. It is noteworthy that Quranic manuscripts that use the modern spelling always use ابن with the *ʿalif al-waṣl*, even in ‘Name son of Name’ constructions like عيسى ابن مريم *ʿīsē ibn maryam*, where strict classical Arabic orthography would require the spelling بن.

3.8 Dating the innovations

The above seven changes are the most notable developments of the Arabic orthography that can be shown to have been more-or-less complete in the early Islamic period and are reflected in the orthography of the Uthmanic text. Some of these innovations have been attested now in pre-Islamic inscriptions whereas others are only first evidenced in the early Islamic period, so far. The table below lists these seven innovations along with their earliest attestations.

Tab. 2: Seven innovations of the Arabic orthography and their earliest attestations

	Earliest Attestation	Example
Loss of wawation	Jabal Usays Inscription (528 CE)	انه رفهم بر معرف الاوسي <i>ʿana ruqaym bin muʿarrif al-ʿawsī</i> ‘I am Rqym son of Mʿrf the Awsite’
Loss of hamzah	PERF 558 (22 AH / 643 CE)	كتايبة <i>katāyiba-hū</i> ‘squadrons’
ʿAlif for word-internal <i>ā</i>	PERF 558 (22 AH / 643 CE)	ساه <i>ṣāh</i> ‘sheep’
Invariable feminine ending	PERF 558 (22 AH / 643 CE)	خلفه تدرو <i>ḥalīfat tidrāq</i> ‘the representative of Theodorakos’
ʿAlif al-Wiqāyah	Unpublished (548–49 CE)	فاحبوا <i>fa-ʿaḡābū</i> ‘so they obeyed’
Morphological definite article	ʿAbd Šams inscription (late 6th / early 7th century CE)	بسمك اللهم <i>bi-smika lllāhumma</i> ‘in your name O God’
Loss of BAR logogram	Hisma 1 (43 AH / 663–64 CE) Uthmanic text (ca. 650 CE)	عدي بن كعب <i>ʿAdiyy ibn Kaʿb</i> عدي بن كعب <i>ʿIsē ibn Maryam</i>

⁴⁸ Sijpesteijn, 446 n. 47.

⁴⁹ Al-Saʿīd and al-Baytār 2017: 14.

So far three of these appear in the 6th century:

- Loss of *wawation*
- 'alif al-wiqāyah
- Morphological definite article.

Three more can be seen to have become complete in our very earliest Islamic documents:

- Loss of *hamzah*
- Use of 'alif for word internal *ā*
- Invariable feminine ending.

One innovation is not yet complete in the early Islamic period (loss of BAR logogram). The first clear evidence of the replacement of the BAR logogram appears a couple of decades after the earliest Islamic attestations. But the use of the BAR logogram continues into the 2nd century AH.

The difference in attestation suggests that the Hijazi spelling reform that gives us the Islamic era orthography was not a single event in which the whole spelling system was abruptly changed. Although it should be noted that earliest attestation of an innovation of course does not mean that this represents the first employment of said innovation.⁵⁰

What we can exclude with certainty is that all of the typical orthographic developments that we see in the Islamic period were only innovated with the rise of Islam. But we may ask ourselves to what extent it is possible that the three innovations that we only see for the first time in the Islamic period did indeed originate at that time.

Robin believes that the use of 'alif for *ā* was innovated in the Islamic period.⁵¹ Yet his conviction seems to be based on the mistaken notion that our earliest piece of evidence of the 'alif used as a *mater lectionis* is first attested in 40 AH. But, in fact its first attestation is already in PERF 558 from 22 AH, as well as in the Uthmanic Archetype, which must have been canonized somewhere during the reign of 'Uṭmān b. 'Affān (23 AH–35 AH).⁵² The Uthmanic text as seen in the earliest Quranic manuscripts, and thus also the archetype, already displays a fairly complex and conventionalized set of rules of when to write and not to write the 'alif to represent *ā*, which means that it already had had some time to develop. It is worth noting that the one preserved non-Uthmanic Quranic text, the Sanaa Palimpsest, likewise follows these scribal conventions.

I would therefore carefully propose that this innovation was already under way in the pre-Islamic period. This innovation was presumably localized to the Hijazi scribal school as it presupposes the typically Hijazi phonetic innovation of the loss of the *ham-*

⁵⁰ For similar cautionary observations about readily attributing innovations to the early Islamic state see Al-Jallad 2021: 206–8.

⁵¹ Robin 2006: 351.

⁵² Van Putten 2019a.

zah. Given that this innovation is dependent on the loss of *hamzah* spelling, that innovation too must be placed in the pre-Islamic period.

As for the generalization of the feminine ending, I agree with Robin that this seems to be a continuation of an orthographic development that was already under way.⁵³ The feminine endings that were actually pronounced as *-ah*, i.e., when the feminine ending was not in construct, already began to be spelled that way some centuries before Islam. The central innovation then is the rather unusual choice to apply this spelling non-phonetically to construct forms. Even in the early Islamic period, spellings with *tā'* are not at all uncommon. In the Quran, as many as 22 % of the construct feminine nouns are still spelled phonetically.⁵⁴ It is possible that this spelling practice – perhaps a wish for a standardized spelling that enforced a single word form regardless of context⁵⁵ – was indeed only introduced in the Islamic period, and the relative frequency of the older phonetic spelling in the early period is then explained as a not quite complete application of this reform. Hopefully, in the future more palaeo-Arabic inscriptions in the Hijaz will be discovered that will allow us to confirm or disconfirm the hypotheses about the date of the innovations of these innovations that up to now have not been attested in the pre-Islamic record.

4 The Orthographic Depth of the Early Islamic Orthography

As we have seen above, several of the typical features that mark the Islamic orthography already started developing in the pre-Islamic period. The apparently continuous development of the orthography from the pre-Islamic to the Islamic period suggests that a continuous presence of a developing writing tradition. Another piece of evidence that shows that the early Islamic orthography represents the outcome of a developed scribal tradition that started in pre-Islamic times and continued with the expansion of the early Islamic state is the significant amount of “orthographic depth” of the early Islamic orthography. Orthographic depth is an indication of the degree to which an orthography deviates from a one-to-one mapping of sound to letter. Scripts, like the unvocalized Arabic script, already have some amount of inherent orthographic depth because of the fact that they do not write vowels. A pronunciation therefore cannot be derived unproblematically from a written form. However, of greater importance for the evidence of a developed scribal tradition is rather the difficulty one has in repre-

⁵³ Robin 2006: 339–40.

⁵⁴ Van Putten and Stokes 2018: 164.

⁵⁵ Such a movement towards generalizing spellings is also found with nouns that end in *'alif mamdūdah* in construct, which in the Quran are still frequently written with final *wāw* in the nominative and final *yā'* in the genitive, but are mostly spelled with final *'alif* – which is the practice that eventually becomes standard in Classical Arabic, see van Putten 2022: 286–87.

senting the sounds of a language into writing, and the unintuitive deviations that may appear in. As we will see below, the Arabic orthography of the Quran and the early Islamic papyri and inscriptions show a number of complexities which are unlikely to have been produced by naive scribes and rather point to a systematic form of education in writing.

One of the axes along which languages may differ in orthography is the extent of morphological spelling. Many languages, especially in early stages of adoption of a script, display a fairly one-to-one mapping of letters to sounds. Depending on the influencing languages, such mapping of letters to sound may be irregular, or chaotic – perhaps because the donor language and script had multiple signs to express the same phonetic representation. But nevertheless, such uses of script have little “orthographic depth” and knowing the signs basically allows for the reader to write the language as they pronounce it, and write correctly according to the norms of such a society. In such orthographies, assimilations are often written exactly as pronounced. Literacy in such orthographies is not particularly difficult: to learn the signs is to learn to be able to write the language. Examples of such low depth orthographies are seemingly the old Arabic as written in the Safaitic script and less controversially the mass folk literacy among the Tuareg which does not have any regulation on orthography, but nevertheless sees most people literate.⁵⁶

On the other end of the spectrum, however, are languages with a significant amount of orthographic depth which can present itself in a variety of ways. A situation of chaotic orthographic norms may crystallize so that only one of the chaotic spelling options comes to be considered correct, but as a consequence spelling any word correctly becomes highly unpredictable. Such an example may be found in English, e.g., *red* and *reed* are both homophonous to *read* depending on how one pronounces the latter (cf. “I will read (= *reed*) a book” and “Yesterday, I read (= *red*) a book”), but none is allowed to be confused for the other in writing. In other cases, the standard orthography is in fact a decent representation of the phonetics of a stage of the language, but not its current stage. Orthography became crystallized in an ancient phonetic spelling, which lost its connection with its modern pronunciation. Such a situation may be found in Tibetan orthography, whose orthography remembers a stage of the language with highly complex consonant clusters, like *bsgrubs* ‘completed’, but has lost such complex onsets entirely: *bsgrubs* these days is pronounced [t̪up̪]. Syriac is another example that is perhaps closer to home for those who work with Arabic. Syriac has lost all word-final vowels, and has assimilated pre-consonantal *n* to following consonants, but in its orthography, these are still written. Thus, ܡܕܝܢܬܐ <mdynt’> spells *mḏittā* (from early **madintā*) and ܟܬܐܒ ʾ‘he wrote’ and ܟܬܐܒܝ ʾ‘they wrote’ are homophonous but spelled distinctively as ܟܬܐ <ktb> and ܟܬܐܒܝ <ktbw> respectively (for earlier **katab* and **katabū*).

56 Macdonald 2005: 45–113.

A third way that an orthography can have orthographic depth is through the use of morphological rules. Rather than representing certain forms phonetically, morphological spellings represent the underlying structure of a word. Such spellings may be the result of historically regular spellings like Tibetan and Syriac but need not necessarily be. A good example of an orthography that has a rather phonetic spelling, but one with quite some orthographic depth due to a number of morphological rules, is Dutch.

For example, Dutch devoices word-final /d/ to [t], merging with /t/ in this position. But in Dutch orthography this distinction is maintained, and the only way a speller may recover which form to use is to look to the plural formation of said word, compare *raat* ['rat] 'honeycomb' pl. *raten* ['ra.tə] to its homophone *raad* ['rat] 'council' pl. *raden* ['ra.də]. The correct spelling cannot be deduced from its sound, but only from its morphological behaviour. Another similar issue where one needs to have access to morphologically underlying form in order to correctly spell Dutch is found in the verbal system. The second- and third-person present verb ends in *-t*. *Ik loop* 'I walk', *hij loopt* 'he walks'. But this final *-t* is even added to words that end in *-d* which are already pronounced with a final [t]. While the verb *worden* 'to become' is pronounced identically as [vɔrt] both in *ik word* and *hij wordt*, the spelling distinguishes the two words. Both of these rules carry with them significant complexity, and naive young spellers of Dutch who have just started learning to write will usually spell such words phonetically, thus *raad* as *raat*, and *word* or *wordt* both as *wort*. The rules to distinguish *raad* from *raat* are internalized by most spellers, but correctly spelling the *word~wordt* distinction remains quite difficult even for writers of Dutch that have finished primary education – or even have a PhD. Due to the otherwise rather phonetic spelling of Dutch, it is fairly easy to learn to spell words correctly by hearing alone (something that is impossible for English or Tibetan), but the morphological rules of Dutch cannot easily be learned by exposure and can only really be internalized through a degree of formal education. Such formal education is only necessary because there is an official standard which considers phonetic spellings such as ***wort* for *word* or *wordt* to be incorrect.

This preamble into the specific types of orthographic depth and the troubles a child that learns to write Dutch runs into serves a purpose: Early Islamic Arabic as it is attested in the Uthmanic Text likewise shows signs of significant amount of orthographic depth, especially of the morphological type as we find in Dutch orthography, although sometimes it also shows signs of the historical crystallization type that we find in Syriac or Tibetan.

Two examples of morphological spelling we have already seen. On the one hand there is the morphological spelling of the definite article *al-*, which is written *'alif-lām* even if the next word starts with an *l* (with some exceptions), or if it stands before a consonant where we might expect it to have assimilated. On the other hand, there is the surprising innovation of writing the feminine ending as *-* even in construct position, where it would never be pronounced as *-ah* but always as *-at*. There are several other examples that betray a rather developed scribal practice which we will discuss below.

4.1 Morphophonological spelling of suffixes

In Arabic (and even more generally Semitic) orthography, geminate consonants are not spelled distinctly from singleton consonants. Thus, *nazala* and *nazzala* are written homographically as نزل and can only be distinguished by context. The same is true when a verbal form ends in the same consonant as a subject pronoun suffix. Thus *mit-tu*⁵⁷ ‘I died’ (Q19:23) is spelled مت with only a single *tā*, and likewise ‘*āman-nā*’ ‘we believe’ (Q2:8) is spelled امنّا with only a single *nūn*. This is different, however, when the pronominal suffix is a second- or third-person object suffix.⁵⁸ If these occur right after an identical consonant, they are consistently spelled as two separate consonants. Thus, *yudrik-kum* ‘overtake you’ (Q4:78) is not spelled phonetically *يدركم with a single geminate *kāf* but morphologically يدرككم with two *kāfs*. The same is true for *yuwaḡḡih-hu* ‘he directs him’ (Q16:76) and *yukrih-hunna* ‘compels them’ (Q24:33). To correctly spell words like these in such a manner requires a significant amount of morphological awareness on the side of the scribe and implies formal education in proper orthographic spelling.

It is worth noting that with the first-person pronominal suffixes *-nī* and *nā*, no such morphological spelling principle is observed. Thus, *lā taftin-nī* ‘don’t put me on trial’ (Q9:49) is spelled with only a single *nūn* لا تفتني. This same process is observed quite frequently even across vowels. Thus, we find examples like مكني (Q18:95) which is recited *makkan-nī* ‘has established me’ for what in Classical Arabic would be *makkana-nī*, and تامنّا (Q12:11) which is recited *ta’man^wnā*, *tāman^wnā* or *tāmannā* ‘trust us’ for what in Classical Arabic would be *ta’manu-nā*.⁵⁹ This kind of assimilation across short vowels is seemingly attested once in the pre-Islamic record for the second person plural *bār-aka-kum* spelled برکم in the Rī’ al-Zallālah inscription.⁶⁰

4.2 La-’ as لا

One of the orthographic practices that is rather unusual, as it creates ambiguity rather than resolving it, is the frequent appearance of the spelling of the asseverative particle *la-* followed by a word that starts with a *hamzah* with *lām-’alif* (resulting in a sequence *lām-’alif-’alif*). The most well-known example is no doubt the one found in modern print editions of the Quran, Q27:21 لا اذبحنه *la-’adbaḥannahū* ‘I will certainly slaughter him’, but a decent number of other examples are found irregularly in early manuscripts, as well as a fair number where the readers disagree whether the لا should be read as *la-* or *lā*. Moreover, it is clear that this orthographic practice continued

⁵⁷ There is also a variant reading *mut-tu* for this verb, see ibn al-Ġazārī, *Naṣr*, iv, 2245–46.

⁵⁸ Diem 1983: 382–83.

⁵⁹ Van Putten 2022: 261–67.

⁶⁰ Al-Jallad and Sidky 2021: 204–5.

also in early Christian Arabic.⁶¹ It should be noted that this specific orthographic practice needs to likewise be learned by the scribe to do correctly. The obvious spelling would simply be with a single *'alif*, and doing so actually helps the reader as in such cases the *la-* cannot be mistaken for the negative particle.⁶²

Due to the frequent appearance in the corpus of late pre-Islamic inscriptions of the formula *la-ūšikum* 'let me certainly urge you', likewise spelled several times with two *'alifs*, we now have clear evidence that this unusual orthographic practice had already developed in pre-Islamic times. This spelling occurs in three inscriptions: FaS 4, FaS 5b, FaS 8 فلاوصكم. The inscription FaS 7 فلاوصكم spells it with only a single *'alif*.

4.3 Consonantal dotting

Robin suggests that the consonantal dotting as we see it in the Islamic period is an innovation of the early Islamic Medinan polity.⁶³ But there are certainly some caveats to be placed with this conclusion. While it is true that as yet, not a single pre-Islamic Arabic inscription has been found that has consonantal dotting, this can hardly be considered compelling evidence of its absence. Of the thousands of early Islamic inscriptions that have been documented, only an extremely small percentage uses any consonantal dotting at all – significantly less even than contemporary papyri. Considering the much smaller corpus of pre-Islamic inscriptions, the absence of consonantal dotting in the pre-Islamic period could be entirely coincidental. It is a bizarre stroke of luck that the very earliest Islamic Arabic inscription, the Zuhayr inscription (24 AH / 644–45 CE), just so happens to have consonantal dots.

The evidence so far remains inconclusive, but I can think of some arguments in favor and against the idea that the consonantal dotting was introduced in the early Islamic period. In favor is the fact that the use of consonantal dotting was not yet entirely standardized, something we could perhaps have expected had the dotting been in use for a long time already. Nevertheless, the points of disagreement are quite sparse. Most words are distinguished with consonantal dotting as they are used to today, save for the *qāf/fā* distinction, which are distinguished with a dot above and below. There is, however, some disagreement between different documents which of the two gets which placement. Some manuscripts follow the Maghrebi practice of putting a dot above for the *qāf* and a dot below for the *fā*, while other (most notably manuscripts in the C.I style) have the reverse situation with a dot below the *qāf* and a dot above the

⁶¹ Van Putten 2022: 249–50.

⁶² Note that al-Farrā' (d. 207/822) explicitly considered this "among the terrible spelling practices of those of old", clearly suggesting he disapproved of this idiosyncrasy and that it was an ancient one, see Sidky 2020: 181; 'Abū Zakariyyā Yaḥyā al-Farrā', *Ma'ānī al-Qur'ān*, ed. al-Naḡḡār and al-Naḡātī (1983), i, 439–40.

⁶³ Robin 2006: 343–45.

fā.⁶⁴ Likewise, manuscripts in the LH/A style seem to systematically use an undotted denticle to denote *yā*' whereas *bā*', *tā*', *ṭā*' and *nūn* are consistently dotted, whereas the consistent dotting with two dots below only developed later.⁶⁵ Both of these behaviors seem to suggest that dotting was not yet completely standardized. The lack of standardization of dotting might lead us to the conclusion that the system had not been in use for a long time yet.

What speaks in favor of the system being more archaic, however, is that its usage is highly idiosyncratic, and scribes almost appear to go out of their way in order to dot exactly the words that least need it. There is a pervasive pattern both in Quranic manuscripts as well as early papyri to dot word-final *nūn*, one of the few letters that is completely unambiguous in the Arabic script. Adam Bursi shows that there are a number of recurring practices of dotting that seem to point to a developed and often idiosyncratic scribal practice.⁶⁶ Such idiosyncrasies give the impression of a system that has already had quite some time to develop. As it stands now, it is impossible to be sure whether the dots really were invented in the Islamic period, the absence of dots in pre-Islamic inscriptions can certainly not be used as compelling evidence in favor of that.

4.4 Other complexities

There remain several other orthographic complexities that show up in early Quranic manuscripts which are sufficiently specific and difficult to understand, that it seems unlikely that they are recent innovations. For example, we find that if a word starts with a *hamzah* and is followed by a *yā*' with an intervening short or long vowel, and such words are preceded by the prepositions *bi-* or *li-* the *yā*' is spelled twice. Thus, we find forms like لايتنا for *li-'āyātina*, فبايى for *fa-bi-ayyi*, باييم for *bi-'ayyāmi* etc.⁶⁷ Such orthographic practices have not yet been attested in the pre-Islamic record but are quite complex while not resolving any ambiguities. Such an idiosyncrasy suggests a developed scribal practice.

Another case in what appears to be a related practice is a mixed-historical spelling of words that historically contained a *hamzah* that was adjacent to *i*, *ī* or *y*.⁶⁸ These are irregularly spelled with *'alif* followed by *yā*' word-internally. The most well-known case of this is مائه for *mī'ah* '100', which is an orthographic practice that continues into the Islamic period, but several other cases occur in early Quranic manuscripts. The *'alif* no doubt points to a historical memory of the presence of a *hamzah*, but what is surpris-

⁶⁴ Cellard and Louis 2020: 61–62.

⁶⁵ Cellard forthcoming.

⁶⁶ Bursi 2018: 111–57.

⁶⁷ Van Putten 2022: 253–54.

⁶⁸ Van Putten 2022: 251–53.

ing is that it always occurs in the order 'alif-yā', even if logically the yā' precedes the hamzah, such as in *ġī'a* 'it was brought' spelled جأى,⁶⁹ *šay* 'something' spelled شأى.

5 Conclusion

In this paper, I have examined the specific orthographic developments of early Islamic writing. I identify seven main orthographic innovations that one finds in the early Islamic orthography which do not yet show in the earliest phases of Arabic being written. These seven are:

- 1 loss of wawation
- 2 loss of *hamzah*
- 3 introduction of 'alif as a *mater lectionis*
- 4 introduction of the invariable feminine ending
- 5 the introduction of the 'alif *al-wiqāyah*
- 6 the morphological spelling of the definite article *al-*
- 7 the replacement of the logogram BAR with the phonetic *ibn*.

Of these seven, recent pre-Islamic epigraphic discoveries have uncovered that at least three already developed in pre-Islamic times (1, 5, 6), one actually continued some time into the Islamic period (7), and three for now remain only attested in the Islamic period (2, 3, 4), although are quite likely to have developed in the pre-Islamic period already.

Especially the innovations 4 and 6 are quite complex non-phonetic morphophonological spellings, which could not have developed in a context of informal script learning, but rather point to a well-developed scribal practice that undoubtedly requires some form of formal education. In the second part of the article, I highlight several other cases of advanced morphophonological spelling that suggest the scribes had a sophisticated understanding of word-formation. Likewise, a number of idiosyncrasies such as the unusual semi-historical spelling of *hamzah* in the vicinity of ī, i, or y with اى as well as the highly unusual practice to spell *la-* with لا – which is now demonstrably attested in the pre-Islamic Hijaz – all point to a single conclusion: Not only has the Arabic script had a long and storied history, it is clear that there was a formalized system of scribal practice with significant sophistication and idiosyncrasy that must have been present and developed already in the pre-Islamic period. This challenges the notion that the pre-Islamic Hijaz was a “non-literate” society as for example Ste-

⁶⁹ Robin says that such words are spelled جأ and that it spells *ġā'a* not the passive *ġī'a*. This seems to be a misunderstanding of Gerd Puin's explanation of such forms. Gerd-R. Puin, like Diem, has indeed hypothesized that جأ was the original spelling of *ġī'a*, since this would be the etymologically expected order. However, it is vital to note that جأ spellings are quite frequent, whereas spellings with the “expected” order yā' followed by 'alif are completely unattested in early Islamic manuscripts. See Robin 2006: 348; Diem 1980: 104; Puin 2011: 164.

phen Shoemaker would have it.⁷⁰ Neither the Quran, nor the pre-Islamic inscriptions of the centuries leading up to the rise of Islam, show the kind of *ad hoc* non-literate literacy as one sees among the Tuareg or may hypothesize for the nomadic pre-Islamic Arabic writers that employed the Safaitic script. Instead, there was a formalized scribal practice that required formal education to properly execute according to the existing norms.⁷¹

Bibliography

- Abdul Nayeem, Muhammad. *The Rock Art of Arabia. Saudi Arabia, Oman, Qatar, The Emirates & Yemen*. Hyderabad: Hyderabad Publishers, 2000.
- Al-Jallad, Ahmad. "The Arabic of Petra." In *The Petry Papyri V*, edited by Antti Arjava, Jaakko Frösén, and Jorma Kaimio, 35–58. Amman: American Center of Oriental Research, 2018.
- Al-Jallad, Ahmad. *The Damascus Psalm Fragment: Middle Arabic and the Legacy of Old Ḥigāzī*. Chicago, IL: Oriental Institute, 2020.
- Al-Jallad, Ahmad. "'May God Be Mindful of Yazīd the King': Further Reflections on the Yazīd Inscription and the Development of Arabic Scripts." In *Late Antique Responses to the Arab Conquests*, edited by Josephine van den Bent, Floris van den Eijnde, and Johan Weststeijn, 195–2011. Leiden & Boston: Brill, 2021.
- Al-Jallad, Ahmad. "One Wāw to Rule Them All: The Origins and Fate of Wawation in Arabic and Its Orthography," 87–103. Chicago, IL: The Oriental Institute of the University of Chicago, 2022.
- Al-Jallad, Ahmad, and Hythem Sidky. "A Paleo-Arabic Inscription of a Companion of Muhammad," forthcoming in the *Journal for Near Eastern Studies*.
- Al-Jallad, Ahmad, and Hythem Sidky. "A Paleo-Arabic Inscription on a Route North of Ṭā'if." *Arabian Archaeology and Epigraphy* 33, no. 1 (2021): 202–15.
- Al-Sa'īd, 'Abd al-ʿAzīz, and Muḥammad Šafīq Ḥālid al-Bayṭār. *Nuqūṣ ḥismā. Kitābāt min ṣadr al-ʿislām ṣamāl ġarb al-mamlakah*. Riyadh: al-Mağallāh al-ʿArabiyyah, 2017.
- Al-Shdaifat, Younis, Ahmad Al-Jallad, Zeyad al-Salameen, and Rafe Harahsheh. "An Early Christian Arabic Graffito Mentioning 'Yazīd the King.'" *Arabian Archaeology and Epigraphy* 28, no. 2 (2017): 315–24.
- Bursi, Adam. "Connecting the Dots: Diacritics, Scribal Culture, and the Qurʾān in the First/Seventh Century." *Journal of the International Qurʾanic Studies Association* 3 (2018): 111–57.
- Cellard, Éléonore, and Catherine Louis. "From Coptic to Arabic: A New Palimpsest and the Early Transmission History of the Qurʾān." *Journal of the International Qurʾanic Studies Association* 5 (2020): 41–96.
- Cellard, Éléonore. "Consonantal Dotting in Early Qurʾanic Manuscripts: A Fully Dotted Qurʾān from the AH. 1st/AD. 7th Century," forthcoming in *Qurʾān manuscripts in current research*. Leiden & Boston: Brill.
- Diem, Werner. "Some Glimpses at the Rise and Early Development of the Arabic Orthography." *Orientalia N.S.* 45 (1976): 251–61.

⁷⁰ Who cites Michael Macdonald to make this point. But one must stress that Macdonald is not talking about the Hijaz of the 6th century but rather the Nomadic writers in the South Arabian scripts. See Macdonald 2010: 5–28; Shoemaker 2022: 125.

⁷¹ One may further note Petra Sijpesteijn's observation that early Islamic Arabic administrative formulae from the very beginning of Islam are distinct from the Greek ones (even in bilinguals) and are not calques. This seems to suggest an already established administrative practice. See Sijpesteijn 2020: 468.

- Diem, Werner. "Untersuchungen zur frühen Geschichte der arabischen Orthographie I. Die Schreibung der Vokale." *Orientalia N.S.* 48 (1979): 207–57.
- Diem, Werner. "Untersuchungen zur frühen Geschichte der arabischen Orthographie II. Die Schreibung der Konsonanten." *Orientalia N.S.* 49 (1980): 67–106.
- Diem, Werner. "Untersuchungen zur frühen Geschichte der arabischen Orthographie III. Endungen und Endschreibungen." *Orientalia N.S.* 50 (1981): 332–83.
- Diem, Werner. "Untersuchungen zur frühen Geschichte der arabischen Orthographie IV. Die Schreibung der zusammenhängenden Rede. Zusammenfassung." *Orientalia N.S.* 52 (1983): 357–404.
- Farrā', 'Abū Zakariyyā Yahyā al-. *Ma'ānī al-qur'ān*. Edited by Muḥammad 'Alī al-Naǧǧār and 'Aḥmad Yūsuf al-Naǧǧātī. Beirut: 'Ālam al-Kutub, 1983.
- Fiema, Zbigniew T., Ahmad Al-Jallad, Michael C. A. Macdonald, and Nehmé, Laila. "Provincia Arabia: Nabatea, the Emergence of Arabic as a Written Languages, and Graeco-Arabica." In *Arabs and Empires before Islam*, edited by Greg Fisher, 373–433. Oxford: Oxford University Press, 2015.
- Ǧazarī, 'Abū al-Ḥayr ibn al-. *Našr al-qirā'āt al-ašr*. Edited by 'Ayman Rušdī Suwayd. 5 vols. Beirut & Istanbul: Dār al-Ġawṭānī, 2018.
- Grohmann, Adolf. *Corpus Papyrorum Raineri Archiducis Austriae III*, 2. Vol. 2. Vienna: Ferdinand Zöllner, 1924.
- Macdonald, Michael C. A. "Literacy in an Oral Environment." In *Writing and Ancient Near Eastern Society. Papers in Honour of Alan R. Millard*, edited by Piotr Bienkowski, Christopher Mee, and Elizabeth Slater, 45–113. New York & London: T&T Clark, 2005.
- Macdonald, Michael C. A. "Ancient Arabia and the Written Word." In *The Development of Arabic as a Written Language*, 5–28. Oxford: Archaeopress, 2010.
- Nehmé, Laila. "A Glimpse of the Development of the Nabataean Script into Arabic Based on Old and New Epigraphic Material." In *The Development of Arabic as a Written Language*, edited by Michael C. A. Macdonald, 47–88. Oxford: Archaeopress, 2010.
- Nehmé, Laila. "New Dated Inscriptions (Nabataean and Pre-Islamic Arabic) from a Site near al-Jawf, Ancient Dūmah, Saudi Arabia." *Arabian Epigraphic Notes* 3 (2017): 121–64.
- Nehmé, Laila. *The Darb Al-Bakrah. A Caravan Route in North-West Arabia Discovered by Ali I. al-Ghabban. Catalogue of the Inscriptions*. Riyadh: Saudi Commission for Tourism and National Heritage, 2018.
- Nöldeke, Theodor. "Noten zu den Nabatäischen Inschriften." In *Nabatäische Inschriften aus Arabien*, edited by Julius Euting, 73–80. Berlin: Reimer, 1885.
- Norris, Jérôme, and Ali Al-Manaser. "Epigraphica Dusaria I. Some Nabataean, Hismaic and Hismaic/Nabataean Inscriptions with Rock Drawings from the Ḥismā Desert, North-West of Tabūk (Saudi Arabia)." *Arabian Archaeology and Epigraphy* 31, no. 2 (2020): 436–72.
- Puin, Gerd-R. "Vowel Letters and Ortho-Epic Writing in the Qur'ān." In *New Perspectives on the Qur'ān. The Qur'ān in Its Historical Context 2.*, edited by Gabriel Said Reynolds, 147–90. London & New York: Routledge, 2011.
- Putten, Marijn van. "The Development of the Triphthongs in Quranic and Classical Arabic." *Arabian Epigraphic Notes* 3 (2017): 47–74.
- Putten, Marijn van. "Hamzah in the Quranic Consonantal Text." *Orientalia N.S.* 87, no. 1 (2018): 93–120.
- Putten, Marijn van. "The Grace of God' as Evidence for a Written Uthmanic Archetype: The Importance of Shared Orthographic Idiosyncrasies." *Bulletin of the School of Oriental and African Studies* 82, no. 2 (June 2019a): 271–88.
- Putten, Marijn van. "Inferring the Phonetics of Quranic Arabic from the Quranic Consonantal Text." *International Journal of Arabic Linguistics* 5, no. 1 (2019b): 1–19.
- Putten, Marijn van. *Quranic Arabic: From its Hijazi Origins to its Classical Reading Traditions*. Leiden & Boston: Brill, 2022.
- Putten, Marijn van, and Phillip W. Stokes. "Case in the Qur'ānic Consonantal Text." *Wiener Zeitschrift für die Kunde des Morgenlandes* 108 (2018): 143–79.

- Robin, Christian. "La réforme de l'écriture arabe à l'époque du califat médinois." *Mélanges de l'Université Saint-Joseph* 59 (2006): 157–202.
- Robin, Christian, 'Alī Ibrāhīm Al-Ghabbān, and Sa'īd Fāyiz Al-Sa'īd. "Inscriptions antiques de la région de Najrān (Arabie séoudite méridionale): Nouveaux jalons pour l'histoire de l'écriture, de la langue et du calendrier arabes." *Comptes Rendus de l'Académie des Inscriptions*, no. 3 (2014): 1033–128.
- Shoemaker, Stephen J. *Creating the Qur'an: A Historical-Critical Study*, 2022.
- Sidky, Hythem. "On the Regionality of the Quranic Codices." *Journal of the International Qur'anic Studies Association* 5 (2020): 133–210.
- Sijpesteijn, Petra M. "Arabic Script and Language in the Earliest Papyri: Mirrors of Change." *Jerusalem Studies in Arabic and Islam* 49 (2020): 433–94.