

# DOTS IN THE WRITING SYSTEMS OF THE MIDDLE EAST

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The dot, the tiniest writing symbol, is perhaps the oldest continuously used graph with a history spanning over three millennia. Flip to any page in this book, and you will find it placed atop Latin *i* and *j*, at the end of sentences in the form of a period, or after an abbreviation such as <Dr.> (angle brackets are used to denote orthographic transcriptions). The dot is doubled to constitute a colon, <:>, is placed on top of a comma to form a semicolon, <;>, and appears in the exclamation mark, <!>. It can be combined with vowel letters in some languages to form other, similar vowels, as in the German *Umlautpunkte*: <ö> and <ü>.

This is only the tip of the iceberg. The ancient Egyptians used the dot to denote numerical fractions. The Greeks employed it to mark pauses in running texts. The Aramaeans and Phoenicians made a diacritic of it to distinguish a homographic letter. The Romans separated · words · with · dots. Syriacs used and abused the dot to mark, *inter alia*, word homographs, plurals, rising and falling intonation, silent letters, vowels, and even scribal errors. The Hebrews created vowel symbols with dots. The Arabs used dots to expand eight graphs into twenty letters and, initially, to denote vowels. The dot was also incorporated into various notational systems: numerical notation, currency notation, mathematical notation, and even musical notation. We use the dot daily each time we type a URL, the *dot com*. The dot is translinguistic and cross-cultural with a long, rich history.<sup>1</sup>

But where did it all begin? In what follows, I hope to explore, albeit succinctly, the origins and history of the dot in the writing systems of the Near East, arguably the birthplace of the dot and certainly where it receives its most *linguistic* usage. I will proceed chronologically, but when a phenomenon is found that employs dots, that phenomenon is described across various writing systems and periods. This by no means presumes a direct borrowing across the various writing systems, though borrowing and influence should always be kept as a possibility.

## Origins · of · the · Dot

The birth of the dot as a writing symbol took place in the ancient Near East.<sup>2</sup> From its inception around the mid-second millennium BCE, Semitic formal writing separated words by a vertical stroke, <'>, while shorter informal texts, such as graffiti, used *scriptio continua*. This vertical stroke appears in Ugaritic writing (though in the form of a wedge as Ugaritic writing is cuneiform) and South Arabic, as well as early Phoenician. Around the same period, some inscriptions show this stroke in the form of three vertical dots, <:>. This is our first attestation of the dot in the writing systems of the ancient Near East. The absence of the dot in informal, graffiti-like writing points to elite scribes as the inventors of the dot.

Towards the earlier periods of the first millennium BCE, the vertical stroke word separator became shorter and shorter until it contracted into a single dot, <·>. This development was gradual, and by the eighth century BCE, the single dot became the dominant word separator. A century later, Aramaic scribes invented spaces between words. But it would take a few centuries before the single dot, as a word divider, became obsolete, at least in the Near East. Joseph Naveh maintains that when the Greeks adopted the Semitic consonantary, they borrowed along with it the dot word separator, which remained in use in the Latin West for many centuries to come.

The scribal habit of each language community in terms of word division became a defining characteristic. Hebrew continued the dotting tradition, at least in formal writing, but Aramaic scribes seem to have been very keen on their word-space invention. As Aramaic grew to become a world language, word spacing became the norm in many writing systems and supplanted the dot. Even the Phoenicians began to disregard the dot as a word divider while at the same time rejecting the Aramaic word-space. During the fifth century BCE, we begin to see Phoenician inscriptions omitting the dots and by the fourth century the script becomes *scriptio continua*.

As already mentioned, the use of the dot as a word separator appears further west. During the sixth century BCE, in Etruscan Italy, words were separated by either a single dot or two dots.<sup>3</sup> The single dot, as a word separator, also appears in the Meroitic script during the third century BCE<sup>4</sup> and in the ancient Berber script during the second century BCE.<sup>5</sup> Other scripts that employed the dot as a word divider include Iberian (double and single dots),<sup>6</sup> Old Persian (single dot in a cuneiform system),<sup>7</sup> and the runiform alphabet of the ancient Turks (double dot).<sup>8</sup> Today, Microsoft Word uses the dot as a word separator if one turns on hidden formatting marks by clicking on the pilcrow icon, ¶.

### A Structural Dot

At the beginning of the Common Era, another dot was deployed due to developments in the shapes of two consonants that had begun to resemble each other: *d* and *r*. This resemblance can be seen even today in the Aramaic script known as Square Hebrew, where we have 𐤃 for the phoneme *d* and 𐤃 for *r*.

Ancient scribes decided to distinguish between the two letters by adding a supralinear dot on *r*. A second-century Aramaic inscription from Garni in Armenia has such a dot. Initially, one might wonder if this isolated dot could in fact be an error, or even question the existence of this particular dot—the inscription surface is very rough, after all. However, we have two other inscriptions from other languages that corroborate the dotted *r*: a Palmyrene inscription from Dura Europos dated 160 CE and a Nabataean inscription from North Arabia dated 356 CE. These inscriptions do not mark *d* with a dot (the Garni inscription does not contain a *d*). Syriac, the most attested of the Aramaic languages, inherited this dot but added a sublinear counterpart dot for *d*. Hence, we have ܐ for *d* and ܐ for *r*. The first attestation of the Syriac dots comes from the earliest dated codex, British Library Codex BL Add. 12,150, written in November 411 CE. Earlier Old Syriac inscriptions, dating from

the first three centuries of the Common Era, as well as three parchments from the 240s CE, are void of dots. With the passage of time, the dotted forms become the norm, although we still find rare instances of the undotted graph even in late manuscripts. But as the dot became more or less obligatory, it moved from being an optional diacritical dot to a *structural* dot. That is, it became indivisible from **ا** for *d* and **ر** for *r*.<sup>9</sup>

This dot, found in Aramaic, Palmyrene, and Nabataean inscriptions from the second to fourth centuries CE, appears in an early Christian Arabic inscription of the sixth or seventh century.<sup>10</sup> But in this inscription, the dot on *d* is supralinear (which could indicate an independent development). By now, Arabic inscriptions distinguished *d* from *r* in other ways and there was no need for this dot. It seems to be simply a Nabataean Aramaic relic. The Arabic graph for *d*, written as **د**, now represented two distinct Arabic phonemes, /d/ and /ḏ/. Post-Islamic texts leave the graph undotted for /d/ but place a supralinear dot for /ḏ/, **ذ**. As the dot became obligatory later on, it, too, became a structural dot.

By the end of the first millennium, Arabic had taken the structural dot to a new level. Arabic had the disadvantage of having fifteen graphs to represent twenty-eight sounds. One such graph was **ب**, a tiny stroke above the base line that represented five sounds /b t ṭ n y/. When Persian borrowed the Arabic script, it used the same graph for /p/. A combination of single, double, and triple dots was positioned supralinearly and sublinearly to account for the various sounds as shown in the following table:

	Sublinear			Supralinear		
Single dot	◌◌	◌◌◌	/b/	◌◌◌	◌◌◌	/n/
Double dot	◌◌◌	◌◌◌◌	/y/	◌◌◌◌	◌◌◌◌	/t/
Triple dot	◌◌◌◌	◌◌◌◌◌	/p/	◌◌◌◌◌	◌◌◌◌◌	/t/

In a similar manner,

- The dotless graph **ح** for /ḥ/ took a sublinear dot to denote **ج** /j/ and a supralinear dot to denote **خ** /k/.
- The dotless graph **ز** for /z/ took a supralinear dot to denote **ز** /z/.
- The dotless graph **س** for /s/ took triple supralinear dots to denote **ش** /š/.
- The dotless graph **ص** for /ṣ/ took a supralinear dot to denote **ض** /ḏ/ (and an additional stroke to denote **ط** /ṭ/ and **ظ** /ẓ/).
- The dotless graph **ع** for /ʿ/ took a supralinear dot to denote **غ** /ġ/.
- Finally, the graph **ف**, already with a supralinear dot for /f/, took a second dot to denote **ق** /q/.

فتخيل <ftkyl> /fatakayyal/ ‘imagine!, fancy that!’, as the Arabs would say, would turn into ‘well, he is cheap’ if the second graph to the right had a sublinear dot instead of the supralinear double dots, turning a <t> into a <b>, فبخيل <fbkyl> /fabakīl/.

Early Arabic documents are either undotted or partially dotted. Andreas Kaplony studied a papyrus and a parchment, both from the eighth century, and catalogued their dotted words; for example, *قبضت* for *قبضت* /qabaḏtu/ ‘received’, where all the graphs are undotted apart from the last one. While dotting had become more popular, one still encounters undotted words and sometimes phrases in manuscripts of the second millennium, even very late ones especially when the context is clear. Today, however, these dots are purely structural in the sense that they are an integral part of the graphemes they are associated with. The dots are also bound and cannot appear on their own. The graphs <◌◌◌◌◌◌> are meaningless. Only a base graph can give a disambiguating context: *ب* is <b>, *ن* is <n>, etc.

### A Homograph Dot

Being a consonantary rather than a full-fledged alphabet—that is, the graphs represent only consonants—the Semitic writing system was highly prone to ambiguity. Imagine English as a consonantary: <mn> would stand for *man* and *men*, <flp> for *flip* and *slop*, <rng> for *ring* and *rang*, and so on. Initially, this was the case with Phoenician. Around the tenth century BCE, Aramaic began to indicate a few vowels by giving some consonants a double role. For example, the consonant <w> began to be used for the vowel /ū/ in addition to its original consonantal value /w/. Similarly, <y> came to denote the vowel /ī/ in addition to its original /y/ value. Now, a word like /qdūš/ ‘holy (noun)’ and /qadīš/ ‘holy (adj.)’ could be written as <qdwš> and <qdyš>, respectively, instead of the ambiguous <qdš>. <sup>11</sup>

Still, this system gave rise to many homographs. In Syriac, for example, the string *ܡܠܟܐ* <mlk<sup>?</sup>> represented both /malkā/ ‘king’ and /melkā/ ‘advice’, and the string <spr<sup>?</sup>> represented both /seprā/ ‘book’ and /sāprā/ ‘scribe’. Syriac scribes, probably sometime in the fourth century, began to distinguish between pairs of homographs with single dots: /malkā/ ‘king’ took a supralinear dot, *ܡܠܟܐ* <mlk<sup>?</sup>>, and /melkā/ ‘advice’ took a sublinear dot, *ܡܠܟܐ* <mlk<sup>?</sup>>. As it turns out, our hypothetical English string <mn> for *man* and *men* is also a Syriac string. It represents the Greek loan particle /man/ with a supralinear dot, *ܡܢܐ* <mn>, and /men/ ‘from’ with a sublinear dot, *ܡܢܐ* <mn>.

This *homograph* dot had cognition consequences. It required the reader to have far more knowledge about the language than what appears in a parchment. The ◌◌ and ◌◌ dots were meaningless on their own. Even when anchored on a consonantal graph such as <ṁ> or <ṁ>, they were still meaningless (unlike the structural dots on *ܐ* <d> and *ܝ* <r>). The reader needed further linguistic knowledge in order to interpret the significance of the dot on <ṁ>:

1. (S)he needed to know that there exists in Syriac two homographs—in this case /malkā/ ‘king’ and /melkā/ ‘advice’, both of which are written as <mlk<sup>?</sup>>.
2. (S)he also needed to know that placing a supralinear dot above or near <ṁ> denotes /malkā/ ‘king’, while placing a sublinear dot under or near <ṁ> denotes /melkā/ ‘advice’.

Our reader had to be taught these conventions by the *maqr̥yānē*, the class of teachers responsible for introducing pupils to reading the same way we teach our elementary school pupils English spelling.

Syriac had dozens of such homographic pairs. Keeping track of which element in a pair took a dot above and which took a dot below could become quite daunting. But Syriac scribes made the job easier. They did not assign the position of dots vis-à-vis the baseline randomly. The element in the homographic pair that had a ‘narrow’ vowel (as they called it) took a sublinear dot and that with the ‘broader’ vowel took the supralinear dot. In modern phonology, ‘narrow’ corresponds to closed vowels and ‘broader’ to open vowels.

The fifth and sixth century witnessed a plethora of Syriac homographic dots. Singular and plural nouns were also homographs: masculine <mlk<sup>?</sup>> was both /malkā/ ‘king’ and /malkē/ ‘kings’, feminine <pnqyt<sup>?</sup>> was both /panqītā/ ‘codex’ and /panqyātā/ ‘codices’. Scribes left the singular forms unmarked but placed two supralinear dots above plural forms. Now, ܡܠܟܐ <mlk<sup>?</sup>> is /malkā/ ‘king’ but ܡܠܟܝܐ <m̄lk<sup>?</sup>> is /malkē/ ‘kings’; ܦܢܩܝܬܐ <pnqyt<sup>?</sup>> is /panqītā/ ‘codex’ but ܦܢܩܝܬܝܐ <pnqyt<sup>?</sup>> is /panqyātā/ ‘codices’. It did not matter where the plural double dot marks were placed as long as they were placed somewhere supralinearly.

With the passage of time, dotting began to overcrowd words. If a scribe wanted to disambiguate between the plural ‘kings’ and the plural ‘advices’, he would write ܡܠܟܝܐ <m̄lk<sup>?</sup>> for the former (/malkē/) and ܡܠܟܝܐ <m̄lk<sup>?</sup>> for the latter (/melkē/). These forms are summarized in the following table:

	Singular		Plural	
<i>king</i>	<m̄lk <sup>?</sup> >	ܡܠܟܝܐ	<m̄lk <sup>?</sup> >	ܡܠܟܝܐ
<i>advice</i>	<m̄lk <sup>?</sup> >	ܡܠܟܝܐ	<m̄lk <sup>?</sup> >	ܡܠܟܝܐ

The possessive suffix <h> also caused ambiguity: masculine /eh/ ‘his’ but feminine /āh/ ‘her’. Here, too, a dot solved the problem, yielding ܗܘܢ <h̄> to denote the feminine suffix while the masculine remained undotted. Now, ܡܠܟܗ <mlkh> is /malkeh/ ‘his king’ but ܡܠܟܗܘܢ <mlkh̄> is /malkāh/ ‘her king’. And, yes, one can also disambiguate the same string with respect to the lexemes ‘king’ and ‘advice’ with additional dots.

Whenever an ambiguity arose, the dot came to the rescue. Pronouns came in two varieties, enclitic and nonenclitic. They were both written the same way: the auxiliary verb ܗܘܢ <hw<sup>?</sup>> ‘to be’ was both /hwā/ and enclitic /wā/ (where the /h/ was dropped from the pronunciation, but written). The enclitic form took a dot below and the annunciated form was left unmarked: Now, ܗܘܢ <hw<sup>?</sup>> is /hwā/ and ܗܘܢ <hw̄<sup>?</sup>> is /wā/. Later, the annunciated form would take *two* dots below, ܗܘܢ <hw̄<sup>?</sup>>.

The Syriac verbal system posed the most difficulty. Syriac, like other Semitic languages, is driven by templatic morphology: consonantal roots, usually made up of three consonants, give a generic semantic notion and a template of additional elements provides for tense, number, person, gender, and so on. For instance, the root {nsb} gives the notion of ‘giving’ with:

Pronunciation	Meaning	Written form	
/nsab/	'he gave'	<nsb>	ܢܫܒܐ
/nesbat/	'she gave'	<nsbt>	ܢܫܒܬܐ
/nsabt/	'you gave'	<nsbt>	ܢܫܒܬܐ
/nesbet/	'I gave'	<nsbt>	ܢܫܒܬܐ

Change the root letters to {ktb} 'notion of writing' and you get:

Pronunciation	Meaning	Written form	
/ktab/	'he wrote'	<ktb>	ܟܬܒܐ
/ketbat/	'she wrote'	<ktbt>	ܟܬܒܬܐ
/ktabt/	'you wrote'	<ktbt>	ܟܬܒܬܐ
/ketbet/	'I wrote'	<ktbt>	ܟܬܒܬܐ

Recall that the Syriac writing system does not have symbols for vowels. This renders the last three conjugations of each set above homographs: <nsbt> and <ktbt> give rise to three-way ambiguity. How to distinguish them? Well, obviously, with dots: two sublinear dots denoted the third-person feminine form ܢܫܒܬܐ <nšbt> /nesbat/, a single sublinear dot marked the second-person form ܢܫܒܬܐ <nšbt> /nsabt/, and a single supralinear dot denoted the first-person ܢܫܒܬܐ <nšbt> /nesbet/.

Other verbal homographs were also distinguished by such dots. As it happens, the present-tense forms for the above verbs are <nsb> /nāseb/ and <ktb> /kāteb/. Note that these are homographs with the first item in the above tables. To resolve the ambiguity, the past tense took a sublinear dot and the present tense took a supralinear dot. Now, ܢܫܒܐ <nšb> is /nsab/ 'he took' and ܢܫܒܐ <nšb> is /nāseb/ 'he takes'.

### Towards a Vowelization System

Until this point, each word had at most a single disambiguating dot (or a double-dot in the case of plural forms). Sometime during the sixth century, scribes began to link the dots with actual vowels rather than marking a pair of ambiguous words. Now, we begin to see expressions like ܡܩܢܐ <mqn> for /mapnē/ 'he returns'. The first, supralinear dot stood for the vowel /a/ and the second, sublinear dot for /ē/. Even with the two dots, one still needed the consonants to be written in order to decipher what the dots stood for. The dots on their own, <◌◌◌◌>, were meaningless.

It didn't take long before scribes figured out that they could denote each vowel with sets of dots. Prior to the seventh century, we encounter the word <šry> for /šarī/ 'he began' (recall that the consonant for /y/ was also used to denote the vowel /ī/). The first consonant has two dots, one supralinear and one sublinear. This set of dots—and their position—denoted an /a/ vowel. Now, <◌◌> represents /a/. We do not need a word, not even a consonant, to decipher the dots. If you place two dots on a consonant, one above and the other below, then that consonant is followed by an /a/ vowel. A few decades later, during the seventh century, we

begin to see two sublinear dots to denote the /e/ vowel, <◌◌̣>. Now, we can rewrite ܡܦܢܝܢ <ṡpṡṡṡ> for /mapnē/ ‘he returns’.

It took almost another century for the vowel /ā/ to acquire its dots, two supralinear dots but in an oblique manner, ◌̇. Now, we can disambiguate the past tense and the present tense with full vocalization, say for the root {dlq} ‘to blaze’: ܕܠܩ <dlq> is /dlaq/ ‘he blazed’ and ܕܠܩܐ <ḏlq> is /dāleq/ ‘he is blazing’. During the same period, two sublinear oblique dots came to indicate a long /ē/. These dots, along with the use of the consonants <w> and <y> for the vowels /ū/ and /ī/, provided for each vowel its own unique markup. In addition, to denote <w> and <y> as vowels instead of consonants, a dot was placed under them (in the case of <w>, the dot was placed supralinearly to denote an alternative /o/ vowel). Hence, a complete vocalization system by dotting was born. Imagine if you were to write the English phrase *the cat sat on the mat* like this: *ṡḥ ḥṡ ṡṡ ḥ̣ṡ ṡḥ ṡṡ!*

Vocalization dots remained optional and did not replace the optional homographic dot. Both systems are simultaneously used until the present day. This optionality kept the writing system consonantary in nature. Had the vocalization dots become obligatory, Syriac would have transformed from being a consonantary (or an abjad) into a full-fledged alphabet.

### Qurʾānic Dots

We have seen earlier how Arabic made extensive use of the structural dot to disambiguate between graphs. Long before the structural dot appeared on the Arabic scene, Arabic Qurʾānic manuscripts made use of dots to denote vowels from 643 CE onwards. An example is shown below (the text is given first without the structural dots, then with them):

الذين من قبلهم  
كانوا أشد  
مهم وأشد قوة  
وأناروا ... الارض

الَّذِينَ مِنْ قَبْلِهِمْ كَانُوا أَشَدَّ مِنْهُمْ [وَأَشَدَّ] قُوَّةً وَأَنَارُوا ... الْأَرْضَ

A supralinear dot indicates an /a/ vowel, a sublinear dot an /i/ vowel and a linear dot an /u/ vowel. While it is tempting to claim outright that there is a direct reliance on the Syriac dot, a comparative analysis of the early Qurʾānic corpus against the Syriac dot is a desideratum. At first glance, it seems that the Qurʾānic dots may stand somewhere between the Syriac homograph dot and the vocalization dots. The sixth-century case of ܡܦܢܝܢ <ṡpṡṡṡ> for /mapnē/ ‘he returns’, cited above, comes to mind.

The question arises whether the Qurʾānic dot was originally a homographic dot and then became an independent vocalic dot (as was the case with Syriac). We do

know from the later Arabic grammatical tradition that the use of dots to distinguish one reading from another was common in early Islam.<sup>12</sup> Ibn Abī Dāwūd (d. 929), in his *Kitāb al-Maṣāḥif* (The book of [Qurʾānic] codices), instructs the reader to add a dot to distinguish between /mathaluhu/ and /mithluhu/, the stems of which are /mathal/ and /mithl/.

Regardless of whether the Qurʾānic dot was derived from Syriac or not, once it was in use in Arabic, the dot took a life of its own. The dot was doubled to mark *nunation* or indetermination. In ornate Qurʾānic manuscripts, these dots were in red or in gold. Some Qurʾānic manuscripts began to mark variant readings with dots of different colors, green, yellow, and blue. Yasin Dutton has an extensive study classifying these dots by color.<sup>13</sup> With the passage of time, the Arabic dots became thicker and then transformed into dashes as we know them today. Some scholars believe that the writing instrument, Syriac quill vs. Arabic reed, may have contributed to the transformation from dots to strokes.<sup>14</sup> But strokes, instead of dots, can be found in seven milestones that date to the reign of ʿAbd al-Malik (r. 685–705)<sup>15</sup> as well as the inner inscription at the Dome of the Rock. These strokes, however, do not mark vowels, but disambiguate consonants like the structural dots discussed earlier.

### Masoretic Dots

While our earliest attestations of biblical texts come from Qumran (the Dead Sea Scrolls), these texts are all consonantal and lack any vocalic markings. For almost a millennium after that, we hardly have any Hebrew manuscripts to allow us to determine the history of Hebrew dotting prior to the Masoretic period towards the end of the first millennium CE and the beginning of the second. Due to the absence of any data in the intervening period, Frank Blake assumes that the Hebrew dots are a direct derivative of the Syriac vocalization system. William Chomsky argued against Blake for a Rabbinic origin and one that might go back to the time of Ezra the scribe.

The distinction between the two tasks of writing and dotting becomes more clear during the times of the Hebrew Masoretes. “The task of writing codices was generally divided between two specialist scribes,” we are told by Geoffrey Khan. “The copying of the consonantal text was entrusted to a scribe known as a *sopher*... The vocalization, accents and Masoretic notes, on the other hand, were generally added by a scribe known as a *naqdan* (‘pointer’, i.e. vocalizer).”<sup>16</sup> Much of the vocalization and accents added by the *naqdan* were indeed dots. The manuscripts that we have are all from the period after which the dotting system was already fixed, around 1100 CE. By this time, the following vowels were denoted by dots: Seghol with a sublinear triple dot sign, <◌◌◌>; Sere with a double sublinear sign, <◌◌>; Holem with a single supralinear dot on the left, <◌̇>; Hireq, <◌̆>; Shureq, which is a linear dot associated with the consonant w, <◌̆̆>; and Qibbus with three sublinear dots arranged in the form of a stroke, <◌◌◌>.

In addition, the Masoretic tradition gave us the Schwa, <◌◌>, two sublinear vertical dots to denote a short vowel, an /a/ or /e/ in some contexts. While the dots remained within a Hebrew context, the name of these dots became a technical term in modern linguistics to reference a short or zero vowel in any language. (The

term was used in Syriac in the plural, *šmāyā* ‘leveled’, earlier with two linear vertical dots, <:;>, to mark a pause or a subdivision of the protasis.)<sup>17</sup>

One particular dot made its way from Arabic into Hebrew. In the early Kufic tradition, a circle with a dot in the middle was used to mark verse divisions. This same mark shows up later in Hebrew manuscripts.<sup>18</sup>

### Punctuation and Reading Dots

Western punctuation is rooted in the Greek scribal traditions of Alexandria. Aristophanes of Byzantium (ca. 257–ca. 185/180 BCE) was chief librarian at Alexandria circa 195 BCE, and during this period it is believed that he created his punctuation system consisting of three dots placed at varying heights in the text. A *distinctio* dot was placed supralinearly, <^>, to mark a long pause in reading (regardless of whether the sentence ended or not); a *media distinctio* dot was placed midline, <·>, to denote a short pause; and a *subdistinctio* dot was placed similar to our modern period, <.>, to denote a longer pause. This system was developed in the west and resulted in our modern period, <.>, comma, <,>, and semicolon, <;>, respectively.

The use of the dot as a punctuation or reading mark developed further in Syriac in the late antique Middle East. It is said that Joseph of Huzistan (now in southwestern Iran) invented nine punctuation or accent dots sometime in the late fifth or early sixth century. Joseph was at the time a Maqryānā at the School of Nisibis (now on the border between northeast Syria and southeast Turkey). A Maqryānā was charged with teaching pupils how to read correctly. Whether Joseph devised his system independently or was familiar with the Greek dots of Aristophanes of Byzantium is not clear. The earlier Semitic word divider dot would have probably vanished by the time of Joseph.

The dot became essential to the Syriac grammatical tradition. We are told by later grammarians that Joseph himself wrote a book on dots. During the seventh century, another grammarian called Thomas the Deacon authored another book on dots. By the end of the seventh century, Syriac scribes and grammarians had developed a complex system of dozens of dot sets. Dots could be single, double, or triple. They could occur on the baseline, supralinearly, or sublinearly. They could be small or medium or large. They could be black or red. In addition to pause dots—similar to those of Aristophanes of Byzantium in usage but different in shape—there was a set of dots to denote a demonstrative or an interjection. Other dots marked interrogatives. There were dots to mark what would be critical textual criticism in our modern scholarship: dots that mark if a Syriac word corresponded to two Greek words in the New Testament. Already by the thirteenth century, this plethora of dots had become too complicated for Syriac scribes. The polymath Gregory bar ‘Ebroyo (d. 1286) wrote in frustration, “The Malphāne [teachers] said that the accent marks in the Holy Book are beyond human comprehension; they have been inspired by the Holy Spirit!”

Dotting became an independent task for scribes. Jacob of Edessa (d. 708) seems to have been quite particular when it came to having his works copied. “I prohibit all those who copy the books which I have translated or composed,” he wrote, “from changing, in their own will, anything, either in the writing or in the

dotting.” Dotting was so crucial to both scribes and readers that most Syriac grammarians wrote dedicated textbooks on dots. If this state of affairs was used in our modern languages, every university student would be required to take Dottology 101!

### Conclusion

This article has provided a brief outline of the history of the dot in the writing systems of the Middle East. Special attention was paid to Syriac because it provides the longest, continuous tradition of more than 1600 years. A number of traditions have not been covered, such as Samaritan, which has its own dotting system, and Mandaeic, which used dots in colophons to denote the approval for text transmission.

I shall conclude with one final note. The scribes who introduced, developed, and transmitted the dot can be considered the forerunners of the classical grammarians. They were not simple copyists, but indeed innovators whom we may call the *first* grammarians.




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<sup>1</sup> On the dots in general, see Alexander Humez and Nicholas Humez, *On the Dot: The Speck That Changed the World*, Oxford: Oxford University Press, 2008; M. B. Parkes, *Pause and Effect: Punctuation in the West*, Aldershot: Ashgate, 1992; Keith Houston, *Shady Characters: The Secret Life of Punctuation, Symbols and Other Typographical Marks*, New York: W. W. Norton, 2013. For dots in numerical notation, see Stephen Chrisomalis, *Numerical Notation: A Comparative History*, Cambridge: Cambridge University Press, 2010.

<sup>2</sup> The following discussion is based on J. Naveh, “Word Division in West Semitic Writing,” *Israel Explorations Journal* 23, no. 4 (1973), pp. 206–208. (C. Steiner challenges Naveh’s “graffiti” terminology; see his “Phonemic Spelling and Scriptio Continua for Sandhi Phenomena and Glottal Stop Deletion: Proto-Sinaitic vs. Hebrew,” *Journal of Near Eastern Studies* 75, no. 2 [2016], pp. 311–334.)

<sup>3</sup> Emilio Peruzzi, *Mycenaeans in Early Latium*, *Incunabula Graeca* 75, Rome: Edizioni dell’Ateneo e Bizzarri, 1980; Larissa Bonfante, “The Scripts of Italy,” *The World’s Writing Systems*, ed. Peter T. Daniels and William Bright, Oxford: Oxford University Press, 1996, p. 299.

<sup>4</sup> Meroitic script (third century BC) in Daniels and Bright (eds.), *The World’s Writing Systems*, p. 84.

<sup>5</sup> Ancient Berber (second century BC) in Daniels and Bright (eds.), *The World’s Writing Systems*, p. 113.

<sup>6</sup> Daniels and Bright (eds.), *The World’s Writing Systems*, p. 111.

<sup>7</sup> Daniels and Bright (eds.), *The World’s Writing Systems*, p. 145.

<sup>8</sup> Daniels and Bright (eds.), *The World’s Writing Systems*, p. 537.

<sup>9</sup> For the Aramaic inscription, see J. Naveh, *Early History of the Alphabet*, Leiden: E. J. Brill, 1982, p. 140, fig. 124; for the Nabataean inscription, see Naveh, *Early History of*

*the Alphabet*, 159, fig. 145; for the 411 codex, see William Wright, *Catalogue of Syriac Manuscripts in the British Museum Acquired since the Year 1838*, London: British Museum, 1870–72, vol. 2 (1871), pp. 631–633; for Syriac inscriptions and parchments, see Han J. W. Drijvers and John F. Healey, *The Old Syriac Inscriptions of Edessa and Osrhoene: Texts, Translations and Commentary*, Leiden: Brill, 1999.

<sup>10</sup> Y. al-Shdaifat, A. Al-Jallad, Z. al-Salameen, and R. Harahsheh, “An Early Christian Arabic Graffito Mentioning ‘Yazīd the King,’” *Arabian Archaeology and Epigraphy* 28 (2017), pp. 315–324.

<sup>11</sup> For the development of vocalization in the Semitic writing system, see Frank R. Blake, “The Development of Symbols for the Vowels in the Alphabets Derived from the Phoenician,” *Journal of the American Oriental Society* 60, no. 3 (1940), pp. 391–413.

<sup>12</sup> Yasin Dutton, “Red Dots, Green Dots, Yellow Dots and Blue: Some Reflections on the Vocalization of Early Qur’anic Manuscripts – Part I,” *Journal of Qur’anic Studies* 1, no. 1 (1999), pp. 115–140, here: p. 117. A fuller bibliography on the subject is given in Andreas Kaplony, “What Are Those Dots For? Thoughts on the Orthography of the Qurra Papyri (709–710), the Khurasan Parchments (755–777) and the Inscription of the Jerusalem Dome of the Rock (692),” *Arabica* 55 (2008), pp. 91–112, here: n. 1. See also Alain George, *The Rise of Islamic Calligraphy*, London: Saqi Books, 2010, p. 138.

<sup>13</sup> Dutton, “Red Dots, Green Dots.”

<sup>14</sup> George, *Rise of Islamic Calligraphy*, p. 51.

<sup>15</sup> George, *Rise of Islamic Calligraphy*, p. 68.

<sup>16</sup> See Geoffrey Khan, *A Short Introduction to the Tiberian Masoretic Bible and Its Reading Tradition*, Piscataway, NJ: Gorgias Press, 2013.

<sup>17</sup> George Kiraz, *Turrās Mamllā: A Grammar of the Syriac Language*, vol. 1: *Orthography*, Piscataway, NJ: Gorgias Press, 2012, §330.

<sup>18</sup> George, *Rise of Islamic Calligraphy*, p. 39.