

# The Meroitic script and the understanding of alpha-syllabic writing

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## Abstract

At the time of its decipherment by Griffith (1911), the Meroitic writing system was considered an alphabet. This alphabet was found to have a rather limited vowel notation. It was not until 1970 that the system was understood to have a more complex vowel notation. This system of vowel notation is comparable to what is found in an alpha-syllabary, a term used to describe the scripts of the Indian sub-continent, such as Brahmi and Devanagari. Since alpha-syllabaries were rare when the Meroitic writing system was in use (*c.* 200 BCE–*c.* 500 AD), it is tempting to suggest a possible historical connection between the Meroitic kingdom in Sudan and the then existent scripts in India. A systematic analysis, as opposed to a description of alpha-syllabic writing, indicates that the structure of this type of script is less regionally confined. Rather, it places Meroitic writing among scripts that were created in the presence of alphabetic writing both in modern and in ancient times.

## The description of an alpha-syllabary

In the study of writing systems, the classification system in use has given a historical or evolutionary notion about their development. Systems using signs to denote words were eventually superseded by those with a sign for each vowel and consonant, the alphabet. Today, however, a number of scripts are known to use combinations of word, syllable and alphabet signs, creating writing systems that are not easily classified. Some of these systems seem to be limited geographically, such as the Indic scripts (Gelb 1952, Diring 1968 and Daniels and Bright 1996).

A syllabary is a system in which each sign denotes a syllable of the language, while an alphabet has signs for each consonant and vowel. In an abugida, each sign presents a consonant with one particular vowel, with other vowels created by a consistent modification of these consonant plus vowel symbols; this latter type has had a number of different names (Daniels and Bright 1996: 4). Bright introduced the term alpha-syllabary, which in a systematic study of writing systems by Daniels and Bright (1996: 376) was defined as a “diacritically modified consonantal syllabic script”. The definitions of alpha-syllabary and abugida describe the Indic scripts by emphasizing either their use of diacritics or the inherent vowel that is found as part of the consonant signs.

Indic scripts, such as Brahmi, Devanagari and Kharoshthi writing, present a set of consonant signs that have an inherent vowel /a/ or /ə/ depending on the

transcription system (Salomon 1996). The vowel value is changed by adding a diacritic to the consonant sign. A set of consonant signs with an inherent vowel and a set of diacritics representing the remaining vowels allow the creation of the majority of the necessary syllables in the language. Initial vowels and final consonants require special treatment. Enlarged versions of the diacritics with an added sign for the otherwise inherent vowel create the word-initial vowel signs in Kharoshthi. Final consonants in late Brahmi or Devanagari are represented with a special diacritic on the consonant sign that indicates that the inherent vowel is not to be pronounced. In consonant clusters, Indic scripts created ligatures of consonant signs that also indicate the absence of vowels. Some of these ligatures are easily recognized, as in Brahmi, but in later derivatives of Brahmi they have occasionally taken on shapes of their own and need to be treated as independent symbols in the script.

The limited geographical presence of alpha-syllabaries to around the Indian sub-continent makes the Meroitic script exceptional since it was found in northern Sudan, at about the same time as the Brahmi script came into existence. Although today it is generally accepted that Meroitic uses an alpha-syllabary, the script does not use diacritics. The above-mentioned definition of an alpha-syllabary emphasizes the presence of diacritics and largely limits the definition to a description of the Indic and later Ethiopic scripts. In this way Meroitic writing functions as an alpha-syllabary, but it does not “resemble” one.

### **The functioning of an alpha-syllabary**

It is argued that an alpha-syllabary functions as a script with syllable signs but has regular and thus predictable vowel notation. The consonant and vowel sign cannot be separated but their combination is immediately understood. Such a system limits the number of signs to what can be found in an alphabet but requires solutions for word-initial vowels and word-final consonants as in a syllabary. The descriptive characteristics of Indic scripts, diacritic vowel signs and an unmarked vowel /a/, are irrelevant for understanding how this system functions.

This analytic definition of an alpha-syllabary has wider implications. There are other scripts with systematic vowel notation and inseparable consonant-vowel signs. At least one of them is still considered a syllabary and another has been defined as an alphabet.

The Cree of North America use a script, also known as syllabics, which uses a syllable sign that needs to be turned to change its vowel value (Murdoch 1981). This directional change of signs is regular and predictable for each vowel, and requires a separate set of vowel signs for word-initial use. Final consonants appear as diacritics. They are miniature versions of a syllable sign although the direction of this sign is not consistently chosen. The Cree syllabary is used for a number of languages in the region that have made different choices for the syllable sign that is made into a diacritic. Consonant clusters are represented with a series of diacritic consonant signs.

The alpha-syllabic nature of the Cree script is not clear from a descriptive point of view. There is no inherent vowel, the independent final consonant sign is not based on a sign with the same vowel, and it is not the vowels but

the final consonants that appear as a diacritic attached to a previous sign. The functioning of the script, however, makes it an alpha-syllabary in more than one way. The number of signs is limited by creating vowel values in a regular and predictable fashion, while vowel and consonant cannot be separated. Other solutions are developed to note final consonants and initial vowels.

A second example of systematic vowel notation is found in Thaana, and possibly in a number of scripts using vocalized Arabic writing. Thaana is used to write Dhivehi, the language of the Maldives (Gair and Cain 1996, De Silva 1969). The consonant signs are partly derived from Arabic numeral signs. Above or below each consonant sign there is a diacritic that indicates the vowel following the consonant. Unlike an alphabet, the consonant sign does not appear without a diacritic and the vowel diacritic does not appear without a sign to which it can be added. An initial vowel requires a particular consonant sign that has no pronunciation. A final consonant or a consonant cluster requires the consonant sign to have a so-called *sukun* diacritic that indicates the absence of a vowel.

The alpha-syllabic aspect is found in the connection of vowel and consonant signs. They function as syllable signs since they cannot occur independently. Yet the vowels are systematically and predictably attached to the consonant so that the number of signs required to write the language is comparable to that of an alphabet.

Both the Cree and the Thaana scripts were developed at a time when the alphabet and Arabic writing, respectively, had already become known or even dominant writing systems in their region.

## The alpha-syllabic elements in Meroitic writing

The Meroitic script has fifteen consonant signs with an inherent vowel /a/. The three signs for other vowels follow the consonant sign to change its vowel value. The vowel signs are the same size as the consonant signs. There is a separate vowel sign /a/ that can be used in word-initial position. Four syllabic signs, /ne/, /se/, /te/ and /to/, appear in the script; these already have a vowel that cannot be modified by a vowel sign placed alongside it (Rilly 2007: 311–2). Finally, there is a word divider that consists of two or three dots in a row. This description of the script shows an inherent vowel /a/ but the absence of any diacritics. However, for the functioning of an alpha-syllabary, it is irrelevant whether the vowel sign is small or enlarged or written after, above, under or otherwise near the consonant sign. Word-initial vowels, word-final consonants and consonant clusters in Meroitic determine whether the script functions as an alpha-syllabary.

There are five strategies distinguished for representing word-initial vowels in Meroitic (Rilly 2007: 311) depending on the era in which the script was used. The early stage lasted up until the first century AD and the later stage began at the end of the first century AD.

The first strategy makes use of a special sign for all initial vowels. In the beginning this was used for the vowel value /a/, /ə/ and /o/, but in later stages also occasionally for /e/ or /i/. Alternatively, the vowel sign that modified the vowel value of a consonant sign was used, but this only happened in the later

stage and then mostly for /e/ and /i/. Next to these two strategies, the consonant sign for /y/ was used after which the necessary vowel sign could be placed. In the later period, this method replaced the strategy of using just the vowel sign. This strategy of using the /y/ was also widely adopted to indicate vowel sequences. In the more recent period the vowel sign could also be simply omitted; this is mostly found for the vowel /a/ and perhaps for some other vowels. Finally, there is an option to mark the vowel on the preceding consonant, but this method has been difficult to reconstruct.

As is clear from the above strategies, the vowel sign is inextricably linked to the consonant sign and most strategies aim to distinguish between modifying vowel signs and word-initial ones.

Word-final consonants are represented by using the consonant value modified by the vowel value /e/ (Rilly 2007: 312). This vowel has a threefold function: it can represent the vowel /e/, /ə/, or the absence of a vowel. In consonant clusters the first consonant is similarly modified with the vowel sign /e/. The syllable signs with inherent vowel /e/ are particularly frequent in these cases since they have this vowel value.

Again, the script shows that the consonant and vowel signs cannot be separated. The inherent vowel /a/ of the consonant sign may be modified by the vowel /e/ to indicate the absence of a vowel. From a functional point of view, it does not matter if a sign already has an inherent vowel; the complications of the script appear as soon as the vowel and consonant signs are required to appear together. This is further illustrated by the division of words. Meroitic sometimes uses a word divider and if absent the inscriptions may break up the texts in different lines. All breaks in the texts appear after the vowel sign even if this vowel sign is mute in case of a final consonant or if an initial vowel was attached to a consonant of a preceding word (Rilly 2007: 305; 2008).

## Meroitic writing in perspective

The Meroitic writing system is an alpha-syllabary despite the absence of diacritics. But the inherent vowel of the consonant signs that initially led to this characterization is only a descriptive feature. Instead, the systematic connection of consonant and vowel signs, and the predictable way in which syllable signs change vowel value have created an alpha-syllabic system.

In light of the above, the Meroitic writing system operates as an alpha-syllabary in a way that is hardly limited to the Indic scripts. As a result a historical connection with the Indic scripts becomes less tempting.

The functional analysis of the alpha-syllabic script has done little to strengthen the demarcation lines between a syllabary, alphabet and alpha-syllabary. It is possible to move between an alphabet and a syllabary in the development of one script. The rare fossilized ligatures of some Indic scripts created syllable signs. Meroitic always had four syllable signs that were part of its script, creating to some degree a mixed script (Salomon 2000). The systematic vowel notation reduces the number of signs that need to be recognized by the reader and creates an efficiency of signs comparable to that of an alphabet, but it does not make the script less complex when all necessary syllable structures are represented.

The functioning of the Meroitic script is not only comparable to scripts found in India but to all scripts with systematized vowel notation in which vowel signs cannot be separated from their neighbouring consonant sign. All such scripts appeared at a time when the users had already been exposed to other writing systems while they developed a system serving their own needs. This observation makes the Meroitic script less of an anomaly in the history of writing systems.

## References

- Daniels, Peter T. and William Bright (eds). 1996. *The World's Writing Systems*. Oxford: Oxford University Press.
- De Silva, M. W. S. 1969. "The phonological efficiency of the Maldivian writing system", *Anthropological Linguistics* 11, 199–208.
- Diringer, David. 1968. *The Alphabet: A Key to the History of Mankind*. Volume I & II. New York: Funk and Wagnalls.
- Gair, James W. and Bruce D. Cain. 1996. "Dhivehi writing", in Peter T. Daniels and William Bright (eds), *The World's Writing Systems*. Oxford: Oxford University Press, 564–8.
- Gelb, I. J. 1952 (revised 1963). *A Study of Writing*. Chicago: University of Chicago Press.
- Griffith, Francis L. L. 1911. *Karanog: The Meroitic Inscriptions of Shablul and Karanog*. Philadelphia: University Museum.
- Hintze, Fritz. 1974. "Some problems of Meroitic philology", in A. M. Abdalla (ed.), *Studies in Ancient Languages of the Sudan. Papers Presented at the Second International Colloquium on Language and Literature in the Sudan, 7–12 December 1970, Khartoum*. Collections Sudanese Studies Library 3, 73–8.
- Murdoch, John Stewart. 1981. "A syllabary or an alphabet: a choice between phonemic differentiation or economy", in Barbara Burnaby (ed.), *Promoting Native Writing Systems in Canada*. Toronto: OISE Press, 127–36.
- Rilly, Claude. 2007. *La langue du Royaume de Meroe*. Paris: Champion.
- Rilly, Claude. 2008. "What does the Meroitic word-divider divide?", Paper presented at the Vth Symposium The Idea of Writing at Leiden University, the Netherlands.
- Salomon, Richard G. 1996. "Brahmi and Kharoshthi", in Peter T. Daniels and William Bright (eds), *The World's Writing Systems*. Oxford: Oxford University Press, 373–83.
- Salomon, Richard G. 2000. "Typological observations on the Indic script group and its relationship to other alphasyllabaries", *Studies in the Linguistic Sciences* 30/1, 87–103.