

## The Orthography of Hamar

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### Abstract

Hamar is a language spoken in Ethiopia in South Nations, Nationalities and Peoples Region by some 46,000 people (CSA 2007). Linguistically it is classified as a member of the Aroid group within the South Omotic branch of the Omotic family of languages (Fleming 1976).

Hamar has never been reduced to writing and this is the first attempt to design a practical orthography for the purpose of providing basic literacy in the Hamar language. This orthography is an outcome of an ongoing research on Hamar grammar and it has not been yet approved by local authorities. Neither the script choice has been decided upon. The orthography is presented in its current form only for the purpose of initiating discussion among the stakeholders - the local authorities, community members and other concerned individuals and researchers.

This article, therefore, presents a Latin-based orthography along with an update of the phonology of the language.

### 1 Introduction<sup>1</sup>

Hamar (also called by its speakers as *Hamar apo*) is a language spoken in Ethiopia in South Nations, Nationalities and Peoples Regional State (SNNPR) of the South Omo Zone by around 46,000 people (CSA 2007). Linguistically it is classified as a member of the Aroid group of languages along with Aari, Kara and Dime. The genetic classification of Aroid languages as a southern branch of the Omotic family (cf. Fleming (1974, 1976, 1988)) has been debated and different proposals have been forwarded. See Lamberti (1991, 1993), Zaboriski (2004),

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Moges (2007, 2015) and Theil (2012) on the ongoing debate regarding the genetic position of Aroid languages.

Hamar has never been reduced to writing and it was only in 2011 that the local administration took the initiative to design an orthography for the purpose of providing basic literacy in the Hamar language. To this end, a Latin-based orthography has been designed by the authors<sup>2</sup>. The aim of this article is, therefore, to present a practical orthography along with an updated summary of the phonology of the language.

Descriptive studies on Hamar have been scanty and a few phonological and grammatical descriptions were made in the past. The first pioneering contribution on Hamar was by Lydall (1976) followed by Mary (1987). Lydall's grammatical sketch gives a brief description of the phonology in which the author discussed the consonant and vowel phonemes, the syllable structure, phonotactics and some phonological processes in brief. Marry's (1987) description of the phonology is similar to that of Lydall. Other descriptions such as Getahun (1991) and Binyam and Moges (2014) focus on the syntactic aspects of the language. Binyam and Moges provide the summary of the sound pattern of the language as a background to the syntactic description on the copula. The present contribution takes off from the previous summary given by the same authors and gives an update of the phonology of the language with the aim of designing an orthography for the envisaged mother tongue education.

According to the summary given in Binyam and Moges (2014), Hamar has 24 consonant phonemes that include voiceless stops [p, t, k, ʔ], voiced stops [b, d, g], ejectives [s'/t', tʃ', k'], implosives [ɓ, ɗ], fricatives [s, z, ʃ, h], affricates [tʃ, dʒ], nasals [m and n], liquids [r and l] and semi-vowels [w and y]. As shown below the current study recorded 30 consonant phonemes for Hamar. This is in accord with Lydall's analysis except that the glottal stop is a full-fledged phoneme in the current study while it is a marginal consonant in Lydall's analysis, and the alveolar affricate [ts], which was identified in Lydall as a full-fledged phoneme and found to be a marginal consonant in this study.

Regarding the vowel phonemes, all studies agree that Hamar has a ten-vowel system. Lydall (1976) states that Hamar has a complex vowel system with two sets of vowels that can be distinguished by [ATR] feature. ATR is a feature used to describe vowel quality differences in some languages where two set of vowels occur. In the production of the first set of vowels, known as [+ATR], "... the root of the tongue is drawn forward and the larynx is lowered, so that the part of the

vocal tract in the pharynx is considerably enlarged” while for the second set of vowels, known as [-ATR] vowels, “... there is no advancement of tongue root or lowering of the larynx” (Ladefoged, 2001:211). In his comparative study of Aroid languages, Moges (2007) reconstructed a ten-vowel system for Proto-Aroid and states that Proto-Aroid must have had a ten-vowel system which may be distinguished by the feature [ATR].

In what follows, this study presents an update of the phonology, particularly on the status of consonant and vowel phonemes, and recommends their possible representations in the orthography of Hamar.

## **2 A brief summary of the phonology**

With a closer look into the phonology, this study makes some refinements regarding the status of some consonant and vowel phonemes.

### **Consonants**

Thirty consonant phonemes have been identified that need to be represented in the orthography. These include:

- voiceless stops [**p, t, k, ʔ**]
- voiced stops [**b, d, g**]
- ejectives [**s’/t’, tʃ’, q’**]
- implosives [**ɓ, ɗ, ɠ**]
- fricatives [**f, s, z, ts, ʃ, ʒ, h**]
- affricates [**tʃ, dʒ**]
- nasals [**m, n, ŋ** and **ɲ**]
- liquids [**r** and **l**]
- semi-vowels [**w** and **j**]

In the list of ejective consonants both [**t’**] and [**s’**] have been listed. There is an alternation between the ejective fricative [**s’**] and the ejective stop [**t’**]. In the speech of some speakers the consonants occur in free variation; nevertheless, the fricative ejective is the more frequent one in its occurrence. In addition, the alternation between [**s’**] and [**t’**] serves as a dialect marker between Hamar and Benna. In Hamar the fricative ejective [**s’**] is used quite frequently while in Benna it is consistently replaced by the alveolar ejective [**t’**]<sup>3</sup>.

As can be seen from the above list of consonant phonemes, Hamar exhibited a four-way contrast in the stop series having voiceless stops, voiced stops,

implosives and ejectives. While the occurrence of the first three groups (voiceless stops, voiced stops and implosives) is symmetrical in the sense that they all occur in three places of articulation, namely, bilabial, alveolar and velar, the distribution of ejectives in terms of places of articulation is asymmetrical occurring at alveolar, palatal and uvular places of articulation. The asymmetrical behavior of ejectives in Hamar cannot be explained at this stage. The occurrence of the uvular ejective in Hamar is, nevertheless, unique because in many of the neighboring Omotic, Cushitic and Nilo-Saharan languages, if the back articulated ejective appears in the phonemic system it is usually the velar ejective stop.

Some minimal and sub minimal pairs that show the phonemic status of plain stops and ejectives in Hamar are given below<sup>4</sup>.

- |     |               |                        |
|-----|---------------|------------------------|
| (1) | <b>pula</b>   | ‘hole’                 |
|     | <b>bula</b>   | ‘draw out!’ (2sg Imp.) |
|     | <b>ɸula</b>   | ‘jump!’ (2sg Imp.)     |
| (2) | <b>taɣa</b>   | ‘cut!’ (2sg Imp.)      |
|     | <b>daɣa</b>   | ‘dirt on one's body’   |
|     | <b>ɸaɣa</b>   | ‘tie!’ (2sg Imp.)      |
| (3) | <b>kára</b>   | ‘fish’                 |
|     | <b>gara</b>   | ‘leave!’ (2sg Imp.)    |
|     | <b>q’ara</b>  | ‘wise’                 |
| (4) | <b>q’anta</b> | ‘sorghum stores’       |
|     | <b>kantá</b>  | ‘joint’                |
| (5) | <b>ʔami</b>   | ‘breast’               |
|     | <b>kami</b>   | ‘donation’             |
|     | <b>hami</b>   | ‘farm’                 |
|     | <b>q’ami</b>  | ‘ear’                  |
| (6) | <b>wuta</b>   | ‘small stream’         |
|     | <b>wutʃ’a</b> | ‘drink!’ (2sg Imp.)    |
| (7) | <b>s’ija</b>  | ‘black’                |
|     | <b>ɸija</b>   | ‘wash!’ (2sg Imp.)     |

Two voiced fricatives /z/ and /ɣ/ and four voiceless fricatives /f, s, ɸ, h/ have been identified as phonemes.

- |     |             |                    |
|-----|-------------|--------------------|
| (8) | <b>sija</b> | ‘bad’              |
|     | <b>zija</b> | ‘brave’            |
|     | <b>ɸija</b> | ‘wash!’ (2sg Imp.) |

- |      |                |                      |
|------|----------------|----------------------|
| (9)  | <b>halpa</b>   | ‘knife’              |
|      | <b>χantʃ’a</b> | ‘laugh!’ (2sg. Imp.) |
| (10) | <b>lah</b>     | ‘stand up to go’     |
|      | <b>lak</b>     | ‘gift’               |
| (11) | <b>naʔa</b>    | ‘come!’ (2sg Imp.)   |
|      | <b>baχa</b>    | ‘cook!’ (2sg Imp.)   |
| (12) | <b>daq’i</b>   | ‘hunger’             |
|      | <b>ɸΛχi</b>    | ‘imprisonment’       |
|      | <b>ɸaki</b>    | ‘rope (twisted)’     |

Three affricates /tʃ/, /dʒ/ and /tʃʔ/ have been recorded

- |      |                 |                    |
|------|-----------------|--------------------|
| (13) | <b>tʃɔbΛr</b>   | ‘under’            |
|      | <b>dʒibΛrɛ</b>  | ‘wind’             |
|      | <b>tʃ’imare</b> | ‘a kind of insect’ |

The alveolar affricate [ts] occurs in a few vocabularies as in **jΛtsa** ‘attach to something’ and **jitsa** ‘to spread seed’. The occurrence of [ts] is more common in the Benna dialect; comparison of the Benna words with those of Hamar shows that the alveolar affricate in Benna is consistently replaced by a geminated alveolar stop [tt] in Hamar. Some examples are as follows.

- |      |              |                           |
|------|--------------|---------------------------|
| (14) | <b>hatsa</b> | ‘tear! 2sg. Imp’ (Benna)  |
|      | <b>hatta</b> | ‘tear! 2sg. Imp’ (Hamar)  |
|      | <b>ɸatsa</b> | ‘split! 2sg. Imp’ (Benna) |
|      | <b>ɸatta</b> | ‘split! 2sg. Imp’ (Hamar) |

The sonorant consonants include /m, n, ŋ, ɲ, r, l, w and j/ and the following are some examples that demonstrate the phonemic status of these consonants.

- |      |             |                        |
|------|-------------|------------------------|
| (15) | <b>maa</b>  | ‘female’               |
|      | <b>naa</b>  | ‘yesterday’            |
| (16) | <b>koɲa</b> | ‘incense’              |
|      | <b>loɲa</b> | ‘shield (rarely used)’ |
| (17) | <b>kara</b> | ‘fish’                 |
|      | <b>kala</b> | ‘wait!’ (2sg Imp.)     |
| (18) | <b>waa</b>  | ‘meat’                 |
|      | <b>ja</b>   | ‘you’                  |

### Frequency of consonant phonemes

In order to find the token frequencies of Hamar consonants a frequency count of all consonants has been made based on a list of 350 basic lexical items and a six-minute story recorded and transcribed by the authors. The result of the frequency count is given below.

Table I: Frequency of Consonant Phonemes

Phoneme	Number of tokens
/n/	240
/j/	187
/k/	162
/d/	144
/s/	139
/m/	114
/r/	104
/ɣ/	104
/t/	102
/b/	98
/ʔ/	90
/l/	90
/g/	87
/dʒ/	66
/w/	65
/qʰ/	63
/ʃ/	44
/p/	42
/b̥/	41
/z/	37
/ŋ/	33
/tʃʰ/	30
/f/	15
/sʰ/	11
/h/	10
/tʰ/	8
/ts/	5
/dʒ/	4

/tʃ/	4
/ɲ/	2
/g/	2
Total number of tokens	= 2143

From the frequency count it can be gathered that five consonants, namely, /g/, /ɲ/, /tʃ/, /dʒ/ and /ts/ have the least frequencies and they are all marginal phonemes. One could be tempted to exclude these marginal phonemes from the orthography. But the same phonemes have been identified in the Benna dialect (except for /ɲ/) and this orthography is expected to serve both dialects. Although Hamar and Benna are recognized as different ethnic groups by the local and federal governments, it is clear that linguistically they are mutually intelligible dialects with some phonological and lexical variations (Moges, forthcoming). The phoneme /ɲ/, on the other hand, is found in some cultural vocabularies such as in **bijare** ‘necklace of first wife’ and in Amharic loan words, e.g. **sabaja** for the Amharic word **zabaja** ‘house keeper’. Amharic as the official working language of the South Nations, Nationalities and Peoples Regional government as well as the Federal government happens to be the major source of borrowing for Hamar.

Thus all the marginal phonemes are included in the orthography so that the orthography can be used across dialects and also inclusive of loan and/or archaic phonemes.

## Vowels

In this study, the existence of ten vowels has been confirmed in agreement with previous studies discussed under Section 1 above. The analysis of the vowel phonemes below shall be presented following the traditional way of describing vowels. That is, vowels shall be described in terms of the horizontal and vertical dimensions of the tongue position. Accordingly, the front vowels shall be discussed first followed by back and central vowels.

### Front vowels

- (19)     **apá**                    ‘spread!’ (2sg Imp.)  
          **apé**                    ‘spread!’ (2pl Imp.)  
          **epá**                    ‘cry!’ (2sg Imp.)  
          **epé**                    ‘cry!’ (2pl Imp.)

**epí** ‘mourning’

As the minimal sets in (19) above demonstrate, all the front vowels [i, ε, e] are in contrast with each other implying that there is a three-level distinction in vowel height among the front vowels, i. e. **high, mid and low-mid**.

### Back vowels

The phonemic opposition between back vowels is not as robust as it is for the front vowels but minimal pairs are available to prove the phonemic distinctions. Like the front vowels, there is a three-way height distinction among the back vowels.

- (20)
- |            |                      |
|------------|----------------------|
| <b>utá</b> | ‘go out!’ (2sg Imp.) |
| <b>otá</b> | ‘calf’ (m.)          |
| <b>oto</b> | ‘calf’ (generic)     |
| <b>ɔno</b> | ‘home’               |

### Central vowels

There are also two central vowels in Hamar, namely, [a] and [ʌ]. Examples that illustrate the contrasts between these vowels are given below.

- (21)
- |              |                     |
|--------------|---------------------|
| <b>gada</b>  | ‘crooked’           |
| <b>gʌdá</b>  | ‘huge/big’          |
| <b>kára</b>  | ‘fish’              |
| <b>kʌrá</b>  | ‘encircle’          |
| <b>dis’a</b> | ‘close!’ (2sg Imp.) |
| <b>dʌs’a</b> | ‘heavy’             |

### Marginal vowels

The last two vowels concerns [ɔ] and [ɪ], which are marginal in the system due to their limited occurrences. Some near minimal pairs have also been found that prove the existence of these vowels in the system.

- (22)
- |               |                            |
|---------------|----------------------------|
| <b>kina</b>   | ‘today’                    |
| <b>kɪra</b>   | ‘these’                    |
| <b>mɪʃi</b>   | ‘satisfaction’             |
| <b>meeʃi</b>  | ‘Satan’                    |
| <b>gɔŋgɔɓ</b> | ‘coffee pot made of gourd’ |

**gəŋgəla**                    ‘canoe’

The fact that Hamar has two sets of ten vowels has also been supported by a historical-comparative evidence where it is argued that Proto-Aroid had a ten-vowel system and there are clear cognates in all Aroid languages that prove the existence of these contrasts historically (Moges 2007). The limited occurrences of [ɔ] and [ɪ] in the system may suggest that Hamar is in the process of losing two of its high vowels.

The Hamar system also has contrastive vowel length but the length contrast is limited to one set of vowels, i.e. the [+ATR] vowels. Hence, out of the ten vowel phonemes only five vowels [i, u, o, e, and a] have length contrast. Though generally vowel length is not a productive feature of the language it occurs in all positions within a word. Some contrastive examples are as follows.

(23)	[e] vs. [ee]	<b>ená</b>	‘in old times’
		<b>eena</b>	‘new’
	[a] vs. [aa]	<b>haq’á</b>	‘tree’
		<b>haaq’a</b>	‘to stay’

Although minimal pairs or sub-minimal pairs are not easy to find that show length contrast there are a number of lexical items that have lengthened vowels as in the following examples:

(24)	<b>ii</b>	‘belly’
	<b>nuu</b>	‘fire’
	<b>roo</b>	‘foot’
	<b>bee</b>	‘and’
	<b>maa</b>	‘female’

In summary, Hamar has two sets of ten vowels. The two sets can be distinguished by the ATR feature. Length is contrastive but only for one set of vowels, i.e. the [+ATR] vowels can be lengthened whereas the [-ATR] vowels do not have a length contrast. Of the ten vowels, two of the high vowels, [ɔ] and [ɪ], are marginal and have a limited occurrence in the system signaling the fact that the shift from ten-vowel system to eight-vowel system is on its way.

### **3 Hamar Orthography**

#### **3.1 Representation of vowels**

In the preceding section, we have established that Hamar has two sets of ten vowels and two of the vowels are marginal. In the orthographic representation, only the eight full-fledged vowels will be included. The vowels [u] and [o], as well as [i] and [ɪ] shall be represented by [u] and [i] respectively. The difference between [u] and [o], and [i] and [ɪ] can be inferred from the context since there are few vocabularies that make these contrasts. This representation makes the orthography more economical and practical given the limited graphemes at our disposal representing the vowel sounds in the Latin alphabet.

Hence, the five vowels [i, u, e, o and a] have a straight forward representation in the Latin alphabet while the representation of the three remaining vowels [ʌ, ɛ and ɔ] require some flexibility and modification in using the existing graphemes. It is suggested that the vowels [ʌ, ɛ and ɔ] be represented by the graphemes [ɶ], [ɛ̣] and [ɔ̣] respectively. The following is the list of vowels and their representation in the orthography of Hamar.

Table II: Representation of vowel phonemes

Vowels in IPA	Graphemes
/i/	[i]
/u/	[u]
/a/	[a]
/e/	[e]
/o/	[o]
/ɛ/	[ɛ̣]
/ɔ/	[ɔ̣]
/ʌ/	[ɶ]

### 3.2 Representation of consonants

The representation of consonant phonemes has been divided into two groups for ease of presentation. The first group are consonants that have similar sounds with English and can be represented by corresponding graphemes as in English<sup>5</sup>, which are relatively straight forward cases. The second group consists of consonants that do not exist in English and as a result do not have corresponding graphemes in the Latin alphabet. As we shall see below, the representation of these consonants is quite challenging from the perspective of the Latin alphabet.

#### Straight forward cases

Hamar consonants that are similar to the consonants of English have been represented by the same graphemes as that of English. In Ethiopia, in many cases primary education involves the use of three languages, namely, the mother tongue, the language of wider communication, Amharic, and the international language, English. As a result, English is taught as a subject in all primary schools in the country as of grade one along with the mother tongue language. In a school situation where the mother tongue language adopts the Latin script bridging between the orthographies of English and the mother tongue language has pedagogical advantages in the teaching learning process. According to Odlin (1989:125-126) while designing an orthography for the mother tongue language keeping similar graphemes between the orthographies of the mother tongue language and English will have a pedagogical advantage if we consider the transfer of skills students may apply in learning English as a foreign language. Odlin further notes that when students learn an alphabet having some similarities with the one they have mastered, they make interlingual identifications of similar letters which reduces the amount of time needed to learn to encode and decode written symbols. The consonants that are similar to the consonants in English and have a relatively straight forward representation in terms of graphemes are the following.

Table III: Representation of Group I Consonants

Consonants in IPA	Graphemes
/b/	[b]
/p/	[p]
/d/	[d]
/t/	[t]
/g/	[g]
/k/	[k]
/tʃ/	[ch]
/dʒ/	[j]
/z/	[z]
/s/	[s]
/ts/	[ts]
/ʃ/	[sh]
/f/	[f]
/h/	[h]

/m/	[m]
/n/	[n]
/ŋ/	[ŋg]
/ɲ/	[ny]
/l/	[l]
/r/	[r]
/w/	[w]
/j/	[y]

**Problematic cases**

The second set of consonants are those consonants that do not exist in English or that do not have corresponding graphemes in the Latin alphabet. These include glottalized consonants such as the glottal stop /ʔ/, ejective consonants /tʃʼ, sʼ and qʼ/, implosive consonants /ɓ, ɗ, ɠ /and the velar fricative consonant /χ/. The following graphemes have been suggested for the glottalic consonants and the velar fricative consonant.

Table IV: Representation of Group II Consonants

Consonants in IPA	Graphemes
/ʔ/	[ʼ]
/ɓ/	[bh]
/ɗ/	[dh]
/ɠ/	[gh]
/tʃʼ/	[cʼ]
/sʼ/	[sʼ]
/qʼ/	[qʼ]
/χ/	[x]

**(a) The glottal stop**

The glottal stop has been represented by an apostrophe [ʼ] and it is suggested that it must be written in the same way word initially, word medially between identical vowels as well as between non-identical vowels. The glottal stop does not occur word-finally but it does occur at root final position within verbs. Besides, the glottal stop in Hamar cannot be geminated and occurs only in its simplex form. Representing the geminate form of the glottal stop would have been problematic since it makes the relationship between simplex and geminated glottal stop rather

cumbersome by invoking the use of a quotation mark [’] for the geminated form. The use of an apostrophe for representing the glottal stop may not be the best solution given the fact that an apostrophe has the function of a punctuation mark in English. But under the circumstances this seems to be a better option.

### **(b) Implosive consonants**

Implosives are represented by the grapheme [h] appended to the graphemes representing the voiced stops [b], [d] and [g] as in [bh], [dh] and [gh] respectively. The [h] grapheme is used to represent the glottal fricative phoneme /h/ as well, which is an independent phoneme in Hamar. The grapheme [h] has also been used to represent another feature, the palatal place of articulation as in [ch] and [sh]. Using the same grapheme to represent implosives as in [bh], [dh] and [gh] may bring about a heavy burden on the grapheme [h]. In spite of this problem, the use of the grapheme [h] seems to be a better option, but may not be the best solution.

An alternative way of representing implosives can be done by the use of an apostrophe. That is, an apostrophe can be appended as a diacritic mark after [b], [d] and [g], as in [b’], [d’] and [g’]. One of the consequences of this choice is that the orthography gives the impression that the clusters such as [ʔl], [ʔn], [ʔm] have the same phonological status with [b] and [d], where [b’] and [d’] graphemes are used respectively. It might be confusing to differentiate between the clusters [’l], [’n], [’m] and the implosives [b’] and [d’]. In the former, the apostrophe is representing the glottal stop /ʔ/ and in the latter it represents implosive consonants such as /b/ and /d/. This representation makes the relationship between simplex and geminate consonants as well as clusters involving a glottal stop and implosives rather opaque.

Another practice is the use of capital letters to represent the implosives as in [B], [D] and [G]. This too can be confusing since the use of capital letters in English has a different function and it could cause problem of transfer in learning English.

### **(c) Ejectives**

Ejectives have been represented partly following the IPA convention of adding an apostrophe on the graphemes representing the non glottalized consonants as in [s’], [c’] and [q’]. Again an apostrophe is representing a glottaic feature. In order to keep uniformity all ejectives are represented with a diacritic marker of an apostrophe. This practice helps us to distinguish the graphemes representing the

ejectives from the graphemes of non-glottalized consonants such as [s], [c] and [q] since the latter graphemes have different representations in English. In order to minimize problem of transfer while learning English making a distinction between ejectives and their non-ejectives counterparts would be useful and makes the orthography more transparent.

#### **(d) The velar fricative**

The velar fricative consonant [χ] is represented by the grapheme [x] in order to distinguish it from the glottal fricative [h] which is also a phoneme in Hamar. Although the grapheme [x] has a different representation in English and may cause some level of confusion in the teaching of English it appears to be the best option since graphic consistency is not always easy to achieve.

#### **Endnotes**

<sup>1</sup> The authors would like to acknowledge the support of various organizations in the preparation of Hamar orthography. Initially the project was financially supported by the Federal Ministry of Culture and Tourism and the implementation was jointly carried out by the Culture and Tourism Bureau of the SNNPR and the Academy of Ethiopian Languages and Cultures of Addis Ababa University. Two field trips were conducted in Demeka and Turmi area among the Hamar in 2010-11 and the authors are grateful for the financial and logistics support provided by the Federal Ministry of Culture and Tourism as well as the Culture and Tourism Bureau of the SNNPR. After the funding from the Federal Ministry of Culture and Tourism ceased before the completion of the project, the project has been supported by Norwegian Agency for Development Cooperation (NORAD) under the project entitled “Linguistic Capacity Building - tools for the inclusive development of Ethiopia”.

<sup>2</sup> The orthography under discussion is not an official orthography that has been approved by the local authorities. Neither the script to be adopted for Hamar has been decided upon. Since script choice in Ethiopia is largely a political decision the task is left to the local authorities. This orthography is presented in its current form only for the purpose of initiating discussion among those interested in the issues of orthographic design as well as on the language. Another version of the orthography prepared based on the Ge'ez script has been already in use for another dialect, Benna, by the Ethiopian Kale Heywet Church of SIM who has published the New Testament in Benna in 2014. For those stakeholders who would be interested in making a comparison of the two scripts there is an opportunity to do so.

<sup>3</sup> Concerning the dialect variation, Lydall (1976) claims that Hamar, Benna, Beshada and Kara

are varieties of the same language within the Hamar-Benna cluster. Moges (forthcoming), however, argues on the basis of mutual intelligibility test and a lexicostatistic survey that Hamar and Benna are clearly varieties of the same language whereas Kara is an independent language but a closely related language to Hamar-Benna. Beshada is identical to Hamar and no linguistic variation has been observed in the speeches of Hamar and Beshada speakers.

<sup>4</sup> Hamar is a pitch-accent language but pitch has not been represented in the orthography.

<sup>5</sup> We are not claiming that the writing system of English uses a one-to-one representation in its orthography.

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