

REVIEW ARTICLE

Studies on Comparative Phonology of Highland East Cushitic Languages¹**Eba Teresa Garoma²**

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Abstract

This review presents a comparative analysis of studies on the phonological systems of Highland East Cushitic languages (Alaaba, Burji, Kambaata, Gedeo, Hadiyya, Libido/Marek'oo, K'abeena, Sidaama and T'imbaaro). Comparative method is employed to get the relevant data on the findings of the available studies. Then, peculiar features of the languages are indicated based on the findings. Accordingly, the different phonological aspects which make the target languages similar or different are assessed in the review. There are high similarities in phonemic inventories; there are unidentified statuses of some sounds either as phonemic or as phonetic; there are very common syllable structures among the cognates of the target languages; consonant clusters vary from language to language; vowel and consonant phonemes with high frequencies based on lexicostatistical findings are identified; and, stress placements and consonant positions in the cognates are different across the languages. Based on the discussion provided and findings of the review, possible research gaps and controversies are identified with recommendations for further investigation into the sound systems of the languages.

Key words: /Alaaba / Burji / Gedeo / Hadiyya / Kambaata / Phonology / Sidaama

1. Introduction

This article principally focuses on only comparative studies which targeted the phonology of Highland East Cushitic Languages (HEC, hereafter). Several Scholars claim that there are nine languages under this group: Alaaba, Burji, Kambaata, Gedeo, Hadiyya, Libido/Marek'oo, K'abeena, Sidaama and T'imbaaro. The statuses of these languages under the HEC are debatable and controversial due to high similarity in their phonological aspects, shared lexicons, morphemes and cognates. These similarities have been detected by Hudson (1976a), Wedekind (1980) and Tosco (1988).

Recent works such as Perrett (2000), Crass (2001), Crass (2007b), Fekede (2007), Kawachi (2007), Schneider-Blum (2007b), Tries (2008), Anbessa (2012b), Yri (2012), Tesfaye (2015) and many others focused on different aspects of the target languages

¹ This review focuses only on comparative studies of the phonology of HEC languages, and it does not consider any previous works on individual languages. All previous works on the phonology of the individual languages will be treated independently in another review.

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individually. These studies treated the languages in isolation, but most of them claimed in their introductions that the languages are highly homogenous. Despite such claims, the studies did not show the similarities and differences among the HEC languages. One possible reason could be for granting the former studies which compared the languages. The other could be for the sake of simplicity in collecting data. Leaving aside the studies conducted on the individual languages, this review mainly considers comparative works because the main goal is to show how much the languages are similar in their sound systems as phonology is foundation for any study. Thus, I claim that there is/are no recent comparative studies on HEC languages, and the studies on individual languages did not reveal their similarities or differences. As far as the languages are alive and functional among the speech communities, I strongly argue that reviewing the existing old literature regardless of their publication dates is helpful to show the gaps on the area of linguistic studies as there are no up-to-date relevant works on the topic/area.

2. Background of the Review

Cushitic constitutes one of the six subgroups of Proto-Afroasiatic family. It is mainly spoken in the area stretched along Red Sea and around the vain of Rift Valley. The speakers mostly reside in North Eastern and Eastern Africa. HEC languages, in particular, are located between 5° and 8° latitude, and between 37° and 39° longitude (Perrett, 2000).

Cushitic has over thirty languages, and some scholars extend the number to forty-five (Mous, 2012, pp. 342). The languages under this cluster are categorized into four: North, Central, East and South. East Cushitic has three clusters: Lowland, Highland and Dullay. The focus of this review is on Highland East Cushitic which constitutes controversially nine languages due to uncertainty over the status of some languages in the cluster (Alaaba, T'imbaaro, K'abeena and Libido/Marek'o) (Sim, 1989, p. 4 and Perrett, 2000, pp. 40). The nine languages are Alaaba, Burji, Gedeo, Hadiyya, Kambaata, K'abeena, Libido/Marek'o, Sidaama and T'imbaaro.

Most scholars doubt that Burji is in the cluster of HEC, and so, they group it in isolated branch under HEC. In addition, Leslau (1952b), Bender et al. (1976), Hudson (1976a), Crass (2001, 2005a & 2005b) and Perrett (2000) argue that Kambaata has close relation with Alaaba, T'imbaaro and K'abeena, and Hadiyya has close link with Libido/Marek'o on their phonological and lexical aspects. Thus, the classification proposed by these scholars seems slightly the one that has six clusters: Burji, Gedeo, Sidaama, Kambaata (Kambaata and T'imbaaro), Alaaba (Alaaba and K'abeena) and Hadiyya (Hadiyya and Libido/Marek'o) clusters.

HEC languages are unique in many of their linguistic features within the Proto-Cushitic family. This review is, thus, predominantly important in various aspects. First, it analyzes and evaluates the existing literature so far on the sound systems of the languages, and presents the main and peculiar phonological features for further detail investigations. Second, it systematically identifies possible gaps and controversies between the studies. The third contribution is suggesting possible recommendations for advanced studies on HEC languages. Language experts and pedagogical scientists can get clue on how to approach the study of HEC languages based on the recommendations of this review too.

This review, which focuses on the comparative phonology of Highland East Cushitic languages, answers the following two main questions:

- What did the previous comparative phonological studies identify as peculiar features of HEC languages?
- What are the controversies and existing gaps on the comparative phonology of HEC, and what would be the possible recommendation?

To answer these two main questions and to deal with the studies in detail, I follow the procedures below in the review. First, I identify internationally and nationally available relevant works. Second, I analyze and evaluate relevant studies based on their findings and their time orders. Though most of the studies reviewed here mainly focus on morphological and syntactic aspects, and descriptive grammar than phonological, the phonologies of the languages are slightly discussed as preliminary activities at the beginning of the works, from which I discuss the peculiar findings on the comparative phonology of the languages first, and show controversies or gaps between/among the studies, and recommendation at the end.

3. Results and Discussion

As already stated in section one, HEC languages are claimed to be dialects of a certain proto-language. This argument is raised due to their mutual intelligibility in some respects and due to their similarities in their most linguistic features. Thus, most scholars just focus on a particular language, and generalize the fact of their target language to others which seem structurally similar to the language. Among the various studies on HEC languages, Hudson (1976a), Wedekind (1980) and Tosco (1988) are the three relatively relevant comparative works.

Hudson (1976a) discussed the phonology of HEC as one section along with other linguistic aspects. Regarding segmental phonemes, he has examined five HEC languages: Burji, Gedeo, Hadiyya, Kambaata and Sidaama. He has indicated that Kambaata has similar segmental phonemes with T imbaaro, Alaaba and K abeena, and Hadiyya has similar phonemic inventories with Libido/Marek'o. Accordingly, he has analyzed five short ³*/i, e, a, o, u/* and five long */ii, ee, aa, oo, uu/* segmental phonemes. All HEC languages have twenty-two consonant segments in common, but consonant segments */p, β, z, ñ, r/* are found in some of the HEC languages. From these, bilabial */p/* and palatal */ñ/* are found only in Burji, and the same is true for */β/* though infrequently. Gedeo and Burji prominently have retroflex */r/*, but Kambaata has voiced sibilant */z/*, and only Gedeo and Sidaama have */r, /*. With regard to consonant cluster, one or more of the HEC languages allow phonemically lengthening and/or gemination of */r, h, β/* in intervocalic occurrence. Despite his discussion of phonemic inventories and sound difference among the languages, Hudson only mentioned examples where unique feature is indicated in a particular language from the group.

³ When slash (/) sign comes around speech sounds, it represents phonemes (phonemic writing); phonemes and allophones are written in IPA (International Phonetic Alphabet) and italics form to be identified from the rest text.

Concerning suprasegmental features, Hudson has slightly touched stress. Four of HEC languages exhibit stress as phonemic feature, but the stresses occur contrastively only syllable-finally. Due to this, it is predictable that stresses fall on strong syllables: syllables with long vowels and closed syllables. Besides, stress shows grammatical significance occasionally in Sidaama and rarely in Kambaata. In syllable structure, Hudson has mentioned that CV structure is the most common, but few words have syllables with only V. He, typically, identified eight syllable structures in the languages as common: ⁴CV, VC, CVC, VC₁C₁, CVC₁C₁, VC₁C₂, CVC₁C₂ and V.

Hudson also indicated that HEC languages have different phonological rules which are exceptional to themselves. All HEC languages, except Sidaama, show vowel laxing in closed syllables and in the interior of words. The lax allophones are ⁵[, , , , /]. Though pure vowels predominate Sidaama, the lax allophone [/] occasionally occurs in its lexemes. Inflectional words conform to the properties of HEC words and syllable structures by going through three phonological processes: epenthesis, nasal metathesis and assimilation (Hudson, 1976a).

Wedekind (1980) is another attempt to deal with phonetic and phonemic inventories, suprasegmentals, syllable and word structures, phonemic systems and their contrastive features, and sound correspondences in cognates of Burji, Gedeo and Sidaama. These languages are found in southern part as compared to the rest of HEC languages.

The phonetic and phonemic inventories of the three languages as well as their syllable structures, (-V), CV(V)(-), and word structures are identical in all important parts. There are eight syllable structures found in the languages, with limited distribution of ninth (C₁C₂C₂V, in Gedeo). The study also showed the basic stress rules of the three languages; accordingly, the penultimate syllables of the morpheme are stressed, but some affixes and verb forms demand word-final stress in Sidaama. On the contrary, the final syllable of the stem is stressed, but most suffixes in some noun and verb forms demand penultimate stress in the same language. In Burji, stress appeared to be fully determined by phonological rules, that is, the word-final syllables are stressed regardless of the morphological status. Laryngealization was observed in Gedeo only, and nasalization is rare. Though stress can be detected in morphophonemics, only phonological aspects are dealt with in the study (Wedekind, 1980).

Regarding consonant clusters, the three languages have nasal or liquid plus stops. Nasal or liquid plus continuant clusters can also occur, but undergo morphophonemic change in Sidaama in some cases. In addition, clusters with initial glottal stop are found only in Sidaama and Gedeo. Burji differs from the two in that it allows cluster of the type /sk, sk', zg, fr, ms/, and finally, /y/ plus any other consonant except /w/ (Wedekind, 1980).

With respect to the phoneme systems and their contrastive features, the study showed that different phonetic segments are identified in about thirty phonemes of each language. Sample texts are considered in the three languages, and phoneme frequencies are shown. The result indicated that the confidence interval for any one phoneme in the three languages does not lie below +3%. Accordingly, Sidaama-Gedeo texts show insignificant differences between the frequencies of the consonants. In addition, the

⁴ C=consonant, V=vowel.

⁵ Square bracket is used around allophones.

relative frequencies of phonemes in sounds are shown according to their phonetic features. From manner of articulation, stops have 40%, and from place of articulation, alveolars have 50% frequencies. Peculiar to Gedeo, the most frequent phonemes are / , *h, g, b, m*/, and the least frequent phonemes are /*p', d', n, y*/. In all these comparisons, the results confirmed Greenberg's universal prediction that phonemes of articulatory complexity have lower frequencies in texts (Wedekind, 1980, pp. 143-7).

Sound correspondences in cognates of Sidaama-Gedeo and Sidaama-Burji are also identified in Wedekind's study. From the sample words taken, almost none of the cognates are phonologically different in their status; there would not be any confusion in the status of the cognates, and any difference of phonemes in the pairs of cognates is regarded as sound correspondence. For example, from the pairs of comparable words in Sidaama-Gedeo, 65% were identical in their phonemes, and from the comparable Sidaama-Burji cognates, 33% were identical in their phonemes. In line with these, there are no correspondence chains identified for systematic replacement of Gedeo phonemes from Sidaama, but some sounds are selectively replaced by different sounds in the cognates whilst others are not replaced. In cognates, such as, /*t'ibbe*/ 'hundred' in Sidaama and /*d'ibba*/ 'hundred' in Gedeo, /*t'*/ is replaced by /*d'*/. Similar things occur in the replacement of vowels in the pairs of cognates (Wedekind, 1980, pp. 147-153).

Wedekind concluded that despite the fact that the languages share only 50% similarities in their Swadesh word lists and their mutual intelligibility tests, they have exactly identical phonetic and phonemic inventories, syllable and word structures in all essential areas. Contrary to these, they have four significant differences. The first difference is in the stress placement which can influence vowel quality. Another difference is that Burji has additional phonemes: /*z*/, /*p*/ and possibly /*ñ*/. The languages also differ in the functions and places of their phonemes in syllables and words, and Burji has additional syllable patterns with clusters and word-final length. Further difference is indicated in the frequencies of phonemes; they have slightly different frequencies in texts because of different grammatical function words, and the same thing happens in lexical frequencies.

Tosco (1988) is the third study that scantily dealt with the phoneme [*D*] (equivalent to IPA / /) and reflexive middle voice marker in Eastern Cushitic (EC). He identified the phonetic and phonological properties of the phoneme / / in various EC languages; he emphasized on HEC languages, and showed that / / and reflexive middle voice markers have connection. He also justified that / / and / *t*/ alternate in reflexive middle conjugation in Gedeo, but / / is changed to /*r*/ in intervocalic position in Sidaama. According to the study, / / is changed to /*ʔ*/ in verbs with reflexive middle meaning in Hadiyya and Kambaata. Finally, he has generalized that the phonetic and phonemic properties of segments in verb conjugation reveal the various patterning of reflexive middle voice extension in (H)EC languages. However, Tosco raised some diachronic and synchronic problems of HEC, and proposed the gaps to be filled in further study. The rising of / / in Proto-EC suffix conjugation, the generalizations to be made from the traces of a prefix / / in Burji and the causes of the replacements remained unanswered in the study of Tosco.

4. Controversies and Gaps

Hudson (1976a) has raised very interesting concepts on HEC phonology, but there are differences between his findings and those of others. One is that the phonemes /β, , r/ are not identified by any of his successors as the consonants of any HEC languages. Stress is another point where Hudson (1976a) and other scholars, such as Perrett (2000) who independently dealt with Hadiyya differ in their findings. As to Hudson, stresses always occur controversially word-finally, but according to Perrett, they do not contrast at word-final, and so they are unmarked. Further gaps are shown on Hudson's disregarding of long vowels in syllable structures of HEC, and the identification of lax allophones [, , ,] in all HEC languages, except Sidaama, which are also not discovered by other scholars.

Wedekind (1980)'s study is relatively comprehensive work in that it touched the different phonological aspects. The study also used qualitative and quantitative methods to compare and contrast the languages. Accordingly, the similarities are statistically indicated with percentage description of lexico-statistics. However, considerable gaps are made in the study that it only focused on three languages (Burji, Gedeo and Sidaama) from nine. From the three languages too, the study did not consider the cognates across Burji and Gedeo in its comparison. As most scholars claim for high degree of uniformity among all HEC languages, considering three languages makes a study incomplete.

Tosco (1988)'s study is a bit unique in its focus on phoneme [D] or IPA / / and reflexive middle voice marker. There are no any other studies related to this for further generalization on HEC. In fact, a single sound can affect the whole system of a proto-language let alone contributing to sentence voice change; Tosco has made fine detection in this regard. However, the study lacks validity in that it used only available data from few languages accessible to the researcher. Besides, the existence of the implosive sound / / across all HEC languages has not been clearly justified by arguments. Furthermore, the occurrence and co-occurrence of / / and the triggering factors which affect its reflexive middle voice markers were not explained well.

Despite their shallow discussions of the phonemic inventories, phonotactics, phonological processes and suprasegmentals, the three studies did not put clear boundaries between and among HEC languages for better decision of their statuses and further pedagogical directions. Thus, there are areas of investigation on the comparative phonological aspects of HEC languages.

5. Conclusion

As has been stated in the first section, the main purpose of this review is to assess the available studies on comparative phonological studies of HEC languages. Accordingly, the basic phonological features identified through comprehensive phonological descriptions of HEC languages are assessed in the discussion. Though several scholars conducted studies on HEC languages, most of them treated particular languages, so the studies show only the internal features of the individual languages, not the communalities. However, Hudson (1976a), Wedekind (1980) and Tosco (1988)

showed some common features of the languages. The phonemic inventories of the three languages as well as their syllable structures, (-V) CV(V)(-), and word structures are identical in all important parts. There are eight syllable structures found in the languages, with limited distribution of ninth ($C_1C_2C_2V$, in Gedeo). The studies also indicated the basic stress rules of the languages; accordingly, the penultimate syllables of morpheme are stressed, but some affixes and verb forms demand word final stress. From the three, Wedekind (1980) has better indicated a number of fascinating features which show the significance of the study. Methodologically, he used both qualitative and quantitative approaches which make him effective in triangulation of the findings. The data are exhaustive so that the distinctive features in the similarities and differences of the languages are identified along with the necessary descriptions which are presented and assessed systematically. Finally, potential differences and gaps among the scanty studies are identified for further studies.

6. Recommendation

The results and discussion sections showed some peculiar findings of different studies on HEC languages. The results and discussion of the study have also identified some gaps and controversial points. Hence, more studies are required on such and many other areas of HEC phonology. From several controversies and gaps observed, the first is the confusion over the status of the languages under the group. Another point that requires clear evidence is the issue of phonemic inventories, suprasegmentals, phonotactics and syllable structure. Furthermore, the peculiar features which make HEC languages different from any other Cushitic groups and from Afroasiatic at large are not clearly identified. Therefore, further synchronic and diachronic studies are required so that the typological and genetic relations of these languages can be clear and straight forward among scholars. Furthermore, comprehensive sound systems of the languages should be intensively investigated as speech sounds are pillars for any academic, political, technological and scientific activities performed through/on languages.

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References

- Anbessa Tefera. (2012b). *A grammar of Sidaama: phonology, morphology, and syntax*. Saarbrücken: LAP Lambert.
- Bender, M. L., Bowen, D., Cooper, R., & Ferguson, C. (eds.) (1976). *Language in Ethiopia*. London: Oxford University Press.
- Crass, J. (2001). The position of K'abeena within Highland East Cushitic. *Afrikanistische Arbeitspapiere*, 67, 5-60.
- Crass, J. (2005a). *Das K'abeena. deskriptive grammatik einer hochlandostkuschi-tischen sprache* [K'abeena: Its Descriptive Grammar in Highland East Cushitic]. Cologne: Rüdiger Köppe.
- Crass, J. (2005b). Hadiyya. In Siegbert Uhlig (ed.), *Encyclopaedia Aethiopica*, II (D-Ha), 960-961. Wiesbaden: Otto Harrassowitz.
- Crass, J. (2007b). Grammatical borrowing in K'abeena. In Yaron Matras & Jeanette Sakel (eds.), *Grammatical borrowing in cross-linguistic perspective*, 91-105. Berlin: Mouton de Gruyter.
- Fekede Menuta. (2007). An overview of Qebena noun morphology. In Azeb Amha, Maarten Mous & Graziano Savà (eds.), *Omotiic and Cushitic Studies: Papers from the Fourth Cushitic Omotic Conference*, 157-167. Cologne: Rüdiger Köppe.
- Hudson, G. (1976a). Highland East Cushitic. In Marvin L. Bender (ed.), *The Non-Semitic languages of Ethiopia*, 232-277. East Lansing, MI: Michigan State University Press.
- Kawachi, K. (2007b). *A grammar of Sidaama (Sidamo), a Cushitic language of Ethiopia*. New York: University of Buffalo PhD Dissertation.
- Leslau, W. (1952b). Notes on Kambatta of southern Ethiopia. *Africa*, 22, 348-359.
- Mous, M. (2012). Cushitic. In Zygmunt Frajzyngier & Erin Shay (eds.), *The Afroasiatic languages*, 342-422. Cambridge, MA: Cambridge University Press.
- Perrett, D. L. (2000). *The dynamics of tense construal in Hadiyya*. London: University of London PhD Dissertation.
- Schneider-Blum, G. (2007b). *A Grammar of Alaaba*. Cologne: Rüdiger Köppe.
- Sim, R. (1989). *Predicate conjoining in Hadiyya: A head-driven PS grammar*. Edinburgh: University of Edinburgh PhD Dissertation.
- Tesfaye Baye. (2015). *A descriptive grammar of Burji*. Addis Ababa: Addis Ababa University PhD Dissertation.
- Tosco, M. (1988). The phoneme D and the marker of reflexive-middle voice in Eastern Cushitic. In Marianne Becchaus-Gerst and Fritz Serzisko (eds.), *Cushitic-Omotiic papers from the international symposium on Cushitic and Omotic languages, Cologne, January 6-9, 1986*, 311-333. Hamburg: Helmut Buske.
- Treis, Y. (2008). *A Grammar of Kambaata, Part I: Phonology, Nominal Morphology, and Non-verbal Predication*. Cologne: Rüdiger Köppe.
- Wedekind, K. (1980). Sidamo, Darasa (Gedeo), Burji: Phonological differences and likenesses. *Journal of Ethiopian Studies*, 14, 131-176.
- Yri, K. (2012). Sidaama, grammatical sketch and texts. In Lutz Edzard (ed.), *Semitic and Afroasiatic: Challenges and Opportunities*, 262-277. Wiesbaden: Otto Harrassowitz.