Review of Chaha Phonology and Morphology

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Abstract

The article focuses on reviewing the phonology and Morphology of Chaha, a Gurage variety belonging to the Ethio-Semitic language family. The study relies on previous works in Chaha variety and utilizes a secondary data collection method. The review incorporates all existing works of Chaha Phonology and Morphology, as well as the author's knowledge as a second-language speaker of Chaha. It was observed that there is a lack of consensus among the linguists on certain points, particularly regarding certain sounds, and a lack of detailed discussion of morphology.

1. Introduction

There are several publications on the structure of Gurage varieties in general and Chaha in particular. Among these, Bedilu (2010), Fekede (2015, 2013), Gutt (1997), (Hetzron 1972, 1977, 1997), Meyer (2001, 2002, 2005, 2006, 2011, 2012, 2014), Rose (1997), and Ullendorff (1955) deal in general with the grammar of Gurage varieties. Studies on particular aspects of Chaha grammar include Degif (2000), Ford (1986), Leslau (1950, 1957, 1983), Polotsky (1951) and Rose (2007).

The paper is structured as follows. Section 1 presents the main phonological properties and briefly reviews Chaha consonants, vowels, phonological processes, and syllable structures. The subsequent section, 2 presents the morphology of Chaha. Nominal and verbal morphology are also addressed in this section. Finally, a summary is given according to the review.

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2. Chaha phonology

Skandera and Burleigh stated that phonology is the study of the organization and structure of the sounds of a language while 'phonetics deals with all the possible human speech sounds – it is an inventory of possibilities, as defined by the human vocal apparatus, or the human perceptual system' (Skandera and Burleigh 2005: 5). In this part, a brief review of Chaha core phonological properties is presented.

Völlmin (2009: 83) states that Chaha and Gumer are so similar, that they should be considered two dialects of the same language. According to Hetzron (1977: 4), all varieties of Gurage are related; the passage from one variety to the other is easy. Some mixed idiolects such as Chaha–Ezha, Chaha- Muher, have also been found, especially among children of mixed marriages.

Hetzron (1977: 34-38) discusses phonetic changes of similar phonemes in different Gurage varieties. He argues that Central Western Gurage has rare occurrences of nasalized vowels (like the vowel *ã* in *ãŋf* 'mouth'). I agree with him because the nasalized vowels occur only where the nasal consonant precedes and leads to nasalization. There is no vocalic nasalization in Central Western Gurage differing from Peripheral Western Gurage groups. Völlmin (2009: 83) states that Chaha and Gumer are so similar, that they should be considered as two dialects of the same language.

1.1 Consonants

Hetzron (1997: 536) notes that in the phonetic inventory of Gurage, there are 40 consonant sounds and seven vowels making them a total of 47 sounds. According to Ford (1986: 1), the Chaha variety consists of 37 consonants, and they are shown in the following table:

	BILABIAL	LABIODENTAL	ALVEOLAR	ALVEO-PALATL	PALATAL	VELAR	VELAR Rnd.
PLOSIVE	p pʷ		t		kʲ	k	kʷ
	b bʷ		d		gʲ	g	gʷ
			t'		k'ʲ	k'	k'ʷ
FRICATIVE		f fʷ	s	ʃ	xʲ	x	xʷ
	β		z	ʒ			
AFFRICATE				ʧ			
				ʤ			
				ʧʼ			
NASL	m mʷ		n	ŋ			
LIQUID			r				
			l				
APPROXIMANT	w				j		

Table 1: Consonant inventory of Chaha (Adapted from Ford 1986: 12)

Ford (1986: 45) states that the phoneme /p/ does not occur in word initially; however, as far as my knowledge of the language, it occurs rarely word initially, for example, *pirapirat* 'kind of food'. Leslau (1950: 12-13) outlines the phonology of Chaha. He states that the occurrence of *l* is rare in Chaha, and it occurs in the initial position. For example, *ləmʧa* 'twins'. In addition, he also states that geminated *nn*, *rr* and *ll* became *n* and initial *n-*, *r-* and *l-* also became *n-*. In another place, all they became *r*. Example, *arrət'ə* → *ant'ə* 'he cut', *bəlla* → *bəna* 'he ate', *rəkkəbə* → *nəkəβə* 'he found'. Hetzron (1997: 537) also states that the phoneme /l/ is weak throughout the area. Völlmin (2017: 15) again states that *l* is rare in Gurage. Degif (2000: 153) states that /r/ → [l] when followed by –/rV/, and this is realized as [ll]. In Chaha, it usually occurs after *r* for example, *ji - səβir-lə* 'he breaks for him' in this case this would be pronounced as *jisəβillə*. However, in Chaha [l] appears as the result of stem final /r/ and a suffix beginning with /r/ so it would be *imar-ro* becomes *imallo* 'they are donkeys'.

Völlmin (2017: 17) states that word initially *r* becomes *n,* and when *n* is preceded by any affix, it becomes *r*. The following examples show the

occurrence of [n] which occurs in word-initial position. Then, it is changed into [r] when it is preceded by affix in the imperfective form, it is found in word-medial position.

(1) (a) **nəgədə**   'he touched'   jɨ-**rəgd**   'he touches'
     (b) **nəkəsə**   'he bit'   jɨ-**rəkəs**   'he bites'

Hetzron (1977: 34-38) states that *β* is phonemic in Chaha, Gura, Gyeto, and Ennemor. In Endegen and Ener, *β* has become *w* while in the other varieties, *β*, is an allophone of *b*. Hetzron (1997: 535-536) describes the phonemes that occur in all Gurage varieties. However, he states that *β* is predictable, and it comes after a vowel. In addition to this its distribution is also restricted. Thus, it is an allophone of the phoneme *b*.

According to Ford (1986: 42), the consonant phoneme /b/ occurs word-initially and (rarely) word-medially as in *xəbəbəm* 'he surrounded'. It does not occur word-finally, except in ideophones. Hence, xəβəβəm is the right expression if we consider the phonetic environment. The circumstances under which one gets *b* and β *are far more complicated. Degif (2000) shows that certain verbs have [b] between vowels (*zabək'* 'has daubed', *t'əbət'ə* 'he seized/held') and he concludes that β in Chaha is a sonorant more precisely, an approximant. In this regard, I agree with Leslau (1992: 625) suggestion that it is better to be reexamined again in detail.

a. Vowel

Hetzron (1997: 538) distinguishes seven vowels that occur in all Gurage dialects, and the open low vowels *ɛ* and *ɔ*. Leslau (1950: 13) also identifies nine vowels as phonemes in Chaha whereas Ford (1986: 43) comes up with ten vowel phonemes. In addition to the seven vowels, she has added *æ*, *ɔ*, and *ʉ*.

Ford (1986: 43) states that [æ], it is Hetzron's *ɛ*, must come from the diphthong [aj] and [ɔ], Hetzron's *ɔ*, must come from the diphthong [aw]. She also discusses that [ʉ] does not occur in some dialects, and she suggested that these three vowels are non-semitic vowels, and they are odd vowels to the Chaha language. She proposes that they are resulted because of the influence of Cushitic languages. Völlmin (2017: 26) states that open vowels *ɛ* and *ɔ*

occur only a small extent in Gumer in the combinations of [aj] and [aw] result in the diphthongs, especially those closer to the Chaha area, realized as *ɛ* and *ɔ* respectively.

<div align="right">Völlmin (2017: 26)</div>

(2)   (a)   əraj   ərɛ   'cows'
          (b)   t'aj   t'ɛ   'sheep'

          (c)   kʲʧ'aw   kʲʧ'ɔ   'it is law'

In this regard, Völlmin agreed with Hetzron and Degif, that Chaha has the open mid vowels *ɛ* and *ɔ*, and that *ɛ* is the result of the combination *a+y/i*, either within a lexeme, as in *ərɛ (əraj)* 'cows' and the *ɔ* which is infrequent sound; it is in the contraction of *a+w/u* example as in *onaw ona-u* shout-COP:3SM 'it is shouting'. However, the occurrence of both vowels is rare.

The vowels which occur in most Gurage varieties are given in the following table:

	FRONT	CENTRAL	BACK
HIGH	i	ɨ	u
Mid	e	ə	o
Low	(ɛ)	a	(ɔ)

Table 2: vowels in most Gurage varieties (adapted from Hetzron 1997: 538)

Furthermore, Ford (1986) and Hetzron (1977) do not agree on the vowel [ɨ]. Hetzron (1977: 34) argues that [ɨ] is not a phoneme; it is rather an epenthetic vowel. Whereas Ford (1986: 44) states that there are cases that it stands as a phoneme. In addition, Degif (2000: 25-29) states that the close central [ɨ] is an epenthetic vowel. It is used to separate an initial cluster of two distinct consonants (or glides), a final cluster of two consonants (second member is a sonorant) and a cluster of more than two consonants in any position. He identifies the three distinct sites of epenthesis in Chaha. The first one is any two distinct word-initial consonants, $\#C_1\_C_2$ (where $C1 \neq C2$). A cluster of

three consonants $C_1C_2C_3$ can be broken as $C_1C_2 ɨ C_3$, $C_1ɨC_2C_3$ depending on the nature of the consonants, as $C_1C_2\text{-}C_3$ (where C1 = /r/, C2C3 is obstruent-sonorant cluster, $C_1C_2C_3$ is sonorant-fricative-stop cluster, or C_2 = C3), $C_1\text{-}C_2C_3$ (where C_1 is an obstruent and C_2C_3 is sonorant obstruent or fricative-stop cluster) and $C_1C_2\text{-}C_3$ or $C_1\text{-}C_2C_3$(elsewhere). He concludes that [ɨ] is not an underlying segment. It is true that [ɨ] is an epenthetic vowel that is used to break impermissible consonant sequences and can contrast the meaning of words; for example.

(3)   ə vs ɨ
(a)   zəgər   'bride house'
         zɨgər   'jump' 3MS

              ɨ vs a
(b)   ɨmɨr   'stone'
         ɨmar   'donkey'

I agree with Hetzron and Degif that [ɨ] is considered as an epenthetic vowel that is used to dissolve undesirable consonant sequences, and it is predictable.

1.2   Phonological processes
1.2.1   Palatalization

Alveolar and velar consonants can be palatalized. This usually occurs with second person singular female subjects in imperfective and imperative verbs.

(Rose 2007)

(4) (a)	dɨmd	'unite (sm)!'	dɨmdʒ	'unite (SF)!'
(b)	tot	'do (sm)!'	totʃ	'do (SF)!'
(c)	tora	'sit down(sm)'	tojə	'sit down(SF)!'
(d)	dɨrg	'hit (sm)!'	dɨrg^j	'hit (SF)!'
(e)	dak'	'laugh (sm)!'	dak'^{j}	'laugh (SF)!'

1.2.2.   Gemination

Hetzron (1977: 39) states that original geminate voiced consonants were devoiced and they are degeminated in Chaha, Gumer, Gura, Gyeto and Ennemor. For example, *səpər-ə* 'break-PFV-3SM' whereas in Ezha *səbbər-*

ə break- PFV-3SM'. In general in Chaha gemination does not exist where Ezha has gemination. Polotsky (1951: 12) argues that the most striking feature of Chaha is the complete loss of original consonant doubling, and its compensation by the devoicing of voiced geminates. Leslau (1950: 13) also argues that there is no gemination in Chaha; originally, gemination existed. There is evidence in the devoicing of the original voiced geminates like *zz* → *s bəsam* 'be abundant'; the voiced geminates in related languages become devoiced consonants in Chaha. However, Ford shows that liquids in Chaha may geminate at morpheme boundaries.

Ford (1986: 42)

(5)   k'ar-ro   k'allo
        thing- COP.3PM
        'They are things.'

However, this is the result of assimilation at morpheme boundary environment, since the word is *k'ar* 'thing'. Ford (1986: 20) also provides other examples for gemination in Chaha, like the following:

(6)   (a)   ɨkkɨm   'without'
        (b)   amənnəm   'He had done.'
        (c)   aβənnam   'He gave for her.'

Lesalu (1950: 13) also has a different opinion on the above examples. Gemination may occur as a result of assimilation of two phonemes like *bibɨnna* derived from *bibɨrna* 'when he says to her'. Gemination also occurs when two homologous phonemes meet at morpheme boundaries: *nɨkˈkˈar* 'much' derived from two independent words in which the final phoneme of the first word and the first phoneme of the second word are similar, *nɨk* and *k'ar* where the former refers to 'big'; while the latter refers to 'thing'. Thus, we can understand that gemination is not a feature of Chaha; its feature is devoicing; the main characteristic of Chaha is that voiced geminated consonants historically became devoiced.

As Leslau said, gemination existed originally. However, it lost its feature, and geminated voiced become devoiced and degeminated. Nevertheless,

regarding *n, r, l* sounds, if a stem final *r* is followed by *n*, the phoneme *r* is totally assimilate to *n*. In addition, a stem final *r* following beginning with *r* assimilate to *ll* in the morpheme boundaries. Here are the examples for this:

(7)	(a)	wəxe k'allo	→	k'ar-ro
		good thing-COP. 3P		
		'They are things'		
	(b)	amən-nə-m	→	amər- nəm
		do.PFV-3MS-PAS		
		'He had done'		
	(c)	dʒəpən- nə-m	→	dʒəpər-nəm
		finish.PFV-1P-PAS		
		'we finished'		
	(d)	jɨ-xəl-lo	→	jɨxər-lo
		3MS-become-3PM		
		'it is possible for them'		

Thus, the above examples show that assimilation of *r*, *n*, *l* attested across word boundaries. Like the stem final *r* following *n* changes to *nn* and *r* following to *r* becomes *ll*. Accordingly, Ford's example above, *k'ar-ro*, becomes *k'allo*; it is because of the environment, not the case of a gemination. We can also look at other examples that show sound change because of the environment of neighboring sounds like *bet* 'house'; when we add the locative marker *bə* it becomes *bəβet* 'inside the house'. $b \rightarrow \beta$ because of the environment of the neighboring sound. Another example *səpərə* vs *jɨsəβɨr* 'break' $p \rightarrow \beta$. Thus, we can understand that the above examples are not cases of gemination, it is because of the environment of neighboring sounds and occurrence of homologous sounds at morpheme boundaries.

1.2.1 Labialization

According to Ford (1986: 48) and Leslau (1950: 14), labialization can be rearranged from morphological pronoun, namely the impersonal form of the verb and on verb forms with the 3MS object pronoun. We can look at the following examples:

(8)	(a) k'əpərəm	'he planted'	→	k'əpʷərənm	'He planted it'
	(b) dənəgəm	'he hit'	→	dəngʷənɨm	'He hits him.'

| (c) | jaβəsr | 'he cooks' | → | jawəsɨrn | 'He cooks it.' |
| (d) | jaβəra | 'he feeds' | → | jawəran | 'He feeds him.' |

1.3 Syllable structure

Leslau (1950: 15) states that a word can begin with any vowel or a single consonant like *ədija* 'midday meal', *'ədərg* 'I hit', and *ɨmɨr* 'stone'. All vowels of Chaha occur in word-initial and final positions except /ɨ/, which does not occur in word-final position except in a word *xɨ* 'that'. This contradicts to Ford (1986: 45) who states that a word could end in any consonant and vowel. However, it does not work for Chaha because t h e r e are consonants which do not occur in the word-final position. For example,

j, p^w, η. Chaha has open and closed syllable structures; the possible structures are V, CV, VC, CVC, VC_1C_2 and CVC_1C_2.

Following are open and closed syllable structures of Chaha:

(9)	Syllable structure	Example	Gloss
	V	o	'yes'
	CV	be	'no'
	VC	aβ	'father'
	CVC	wɨr	'small ox'
	VC_1C_2	ərʧ	'boy'
	CVC_1C_2	dɨrg	'hit 3sm'

2. Morphology

The verbal system of Chaha is highly inflectional, with prefixes and suffixes indicating categories such as person, number, gender and aspect (Rose 2007: 403). Nouns are not inflected for number or gender. However, there are few lexically gender specific words.

2.1. Nominal morphology

Chaha has few nominal forms. Nouns are not inflected for number or gender except in a very few cases (Rose 2007: 417). The nominal forms and the derived Chaha nouns have no restriction on the syllable structure since closed and open syllable structures are observed in Chaha noun like *ərʧ* 'boy' VCC, *aβ* 'father' VC, and *beʃa* 'friend' CV-CV. The Chaha noun starts in any consonant found in the phonetic inventory of the language except *β*

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and *r*. However, we can find *β* in the final position of Chaha noun like *aβ* 'father' and *k'ɨβ* 'butter'. Regarding vowel, I could not find a noun which starts with the vowel *u* and *i*. However, there are future tense verbs which start with the vowel *u* and *i*, like: *udɨʃə* 'I will talk' and *iβʃə* 'I will give'. The low mid vowel, *a* is a frequent sound in Chaha noun in the initial position, for example, *adot* 'mother', *aβ* 'father', *aŋgaʧa* 'cat', *aɱf* 'mouth', and so on.

2.1.1. Derivational nominal morphology

According to Rose (2007: 423) and Völlmin (2017: 195), the suffix *-nət* is attached to nouns and adjectives to form abstract nouns. The following are adjectives in Chaha-Gurage (Rose 2007: 423) where the suffix is added to some adjective stems to form nominals.

Rose (2007: 423)

(10) (a) wəxe 'good/well' wəxenət 'generous'
(b) dəngənə 'rich' dəngənət 'richness'
(c) beʃa 'friend' beʃɨnət 'friendship'

Instrumental nouns are formed by attaching the prefix *wə-* and the suffix *-ja*, while abstract nouns are formed by attaching the morpheme *-ər* (cf. Leslau 1950: 16). Instrumental nouns are commonly derived from verbs.

(11) *wə- and –ja*
(a) dənəgəm 'hit' wədɨrəgɨja 'hammer'
(b) nət'ərəm 'melt' wənt'ɨja 'liquefier'
(c) darəm blessing' jɨdərəta 'the way of blessing'

In example (12), the suffix *-jə* can be attached to adjectives to form nouns; then, the meaning is extended (Rose 2007: 424).

(12) t'ɨk'^{W}ir 'black' t'ɨk^{W}ir-jə 'black bread'

Rose (2007: 425) states that the suffix *-əna* is attached to cardinal numbers to form ordinals. However, Völlmin (2017: 196) also presents words that are formed with the suffix *-əna* added to nominals and form agentive nouns.

(13) dəm 'blood' dəmənə murderer'

2.1.2. Noun inflections

Völlmin (2017: 195) states that gender and number distinctions are almost non-existing; the verbal conjugation and pronouns distinguish gender and number. Nouns show the distinction between feminine and masculine and also singular and plural number with definite articles, pronouns, possessive suffixes, and verbal subject and object agreement affixes. Thus, we can understand that gender and number are not inflected on noun. Rose (2007: 45) states that Chaha nouns are uninflected for gender and number. There are a few suppletive singular/plural pair: *ərʧ/dəngʲa* 'boy/s', *miʃt/iʃta* 'woman/women'. Noun stems lack number and gender marking and there is no expression of definiteness on the noun. Possessives are suffixed to nouns and mark the possessor, and demonstratives are separate words preceding nouns or can stand alone. Subjects are not marked for case, but objects may be marked with a prefix.

2.1.3. Gender

Meyer (2011: 1211) states that gender distinction is not marked directly on the noun in Gurage varieties; it is marked on verbs. It is true that in Chaha gender is not marked on the noun; it is marked in syntactic relations with verbs and pronouns, not on the noun itself (Leslau 1950: 16). However, there are some lexically gender-specific nouns as follows (cf. Hetzron 1977: 52).

(14)	(a)	ərʧ	'boy'	gərəd	'girl'
	(b)	aβ	'father'	adot	'mother'
	(c)	mɨs	'man'	miʃt	'woman'

There are few gender specific words for animals; sex differentiation is used by using independent words for 'male' and 'female' animals, such as *təbat/wur* 'male', *arsɨt* 'female' (see: Hetzron 1977: 52, Leslau 1950: 16).

2.1.4. Number

Chaha nouns distinguish singular and plural numerals. However, the plural is usually not marked on the noun, but it is marked on the verb and in pronominal usage. For example, *fərəz* 'horse' and 'horses' e.g. *fərəz-əna tan-t'əβt'-no wərxum* 'horse- 1S.POSS NEG-1S-take.IPVF-3P go-1S-PAS' 'I did

not take my horses' Vs *fərəzəna tant'əβt' ərxum* 'horse-1S-POSS NEG-1S-take.IPFV-go-1S-PAS 'I did not take my horse'. However, few nouns have different roots for singular and plural (see: Leslau 1950: 16).

(15)   Singular   Plural

(a) ərʧ   'boy'   dəngija   'boys'

(b) mɨʃt   'woman'   iʃta   'women'

(c) mɨs   'man'   gəmja   'men'

2.1.5. Case

Rose (2007: 47) states that in Chaha subjects are not marked for case, but objects may be marked with a prefix *jə-* for accusative. Hetzron (1977: 54) states that the basic case markers appear in the form of prefixes; subjects are not characterized by case markers.

(16)   k'ɨb k'əpaʧ

        k'ɨb k'əp-aʧ

        butter smear-PFV-3F

        'She smeared (with) butter'

The locative, instrumental, ablative and comitative cases are marked by *bə-* 'in, at', *bə-* 'with', *tə-* 'from', and *tə-* 'with' morphemes respectively. Völlmin (2017: 243) also states that the preposition *bə-*, expresses locative [in, at] meaning and instrumental meaning [with]. Thus, the case prefixes might have more than one functions.

According to Rose (2007: 422) a prefix *jə-* is used to mark accusative. The object must have a specific reference, and object agreement appears on the verb. In addition to accusative, oblique cases are also marked with the prefix *jə-*. Thus, we can understand that the prefixes do not have limited functions; they are used to mark several kinds of relations.

Ford (1986: 57) also argues that the case marker *bə-* used as instrument and location. Völlmin (2017: 246) adds that the case marker *jə-* serves for many functions, in addition to the above functions. It marks for dative such as recipients, addresses, beneficiaries, and certain direct object.

<div align="right">Völlmin (2017: 246)</div>

(17)   satəta   jəgərəd   aβəm

          sat-əta jə-gərəd   aβ-ə-m

          watch-3SM.POSS DAT-girl give-3SM-PAS

          'He gave his watch to a girl.'

Nevertheless, the case marker *tə-* serves as in partitive, comparative, source and direction. Völlmin (2017: 248) also states that the preposition *bə-* has two different functions. It expresses locative meaning and marks instrumental meanings.

Rose (2007: 422) states that the comitative *tə-* and the oblique *bə-* markers are used for locatives and ablatives, often in combination with postpositions. For example, *bə-bet* 'at/in the house', *tə-gərəd* 'with the girl', *bə-satɨn dən-e* 'under the box', *bə- bet fʷər* 'on the house', and so on. Völlmin (2017: 249) asserts that the preposition *tə-* functions as a comitative case marker on the one hand and an ablative case marker on the other.

<div align="right">Völlmin (2017: 246)</div>

(18)   təmsəxinəma jɨtirakəsəma.

          tə-mɨs-əxnəma jɨ-tirakəs-əma.

          COM-husband-3PF.POSS 3P-quarrel.IPFV-3PF

          'They quarrel with their husbands.'

          Völlmn (2017: 249)

2.1.6. Definiteness, possessives and demonstratives

Rose (2007: 421) claims that in Chaha Gurage, definiteness is not expressed by a separate word. Rather, it is suffixed to the noun. For example, the 3rd person possessive marker is suffixed to the noun or the 3rd person pronoun following the noun.

(19)   mɨsxuta   mɨʃtxita

          mɨs-xuta   mɨʃt-xita

          'the man'   'the woman'

Lesalu (1950: 18) also states that definiteness can also be expressed by the third person pronoun placed after the noun; however, it has the value of demonstrative pronoun like *ərtʃ-xuta* 'the boy', 'this boy'. However, it is not only the third person singular feminine and masculine; the choice of the

article is determined by the gender and number they are attached to, like *iʃta-xinəma* 'the women', *dəngja-xino* 'the boys' (cf. Völlmin 2017: 235).

Rose (2007: 422) argues that possessive pronouns are suffixed to nouns and mark the possessor. Meyer (2011: 1235) classifies possessive pronouns into two ways: those which prefix genitive case marker attached to the personal pronoun, such as *ja-xut-bet* (GEN-3SM.POSS-house) 'his house' and those which possessive suffixes are attached to noun, example *bet- axə* (house-3SM.POSS) 'your home'.

<div align="right">Rose (2007: 422)</div>

(20) gəgiməta k'ət'ərəm
      gəg-(m) - əta   k'ət'ər-ə-m
      body- REF-3MSPOSS   kill.PFV-3MS-PAS
      'He killed himself.'

In Chaha, demonstratives are separate words and they precede nouns. It can be stand alone with possesive suffixes (Rose 2007: 422). Hetzron (1977: 56) states that in Chaha the general pattern is *zix/zɨ* 'this' and *zax/za* 'that'. Leslau (1950: 22) and Völlmin (2017: 213) also explain that the two demonstratives, *zɨ* and *xɨ*, are used to show something which is near distant while *za* and *xa* are used to show something far.

<div align="right">Rose (2007: 422)</div>

(21) zɨ (x) mɨs   'this man'
      xɨ (x) mɨs   'that man'
      zɨx-əta   'this one'
      xɨx-əta   'that one'
      zɨx -əxɨno   'these ones'

I agree with Völlmin. In Chaha, demonstratives are expressed by four morphemes: *zɨ(x)*, *xɨ (x)* and *za*, *xa*. Both *zɨ* and *xɨ* are used to show the nearness of something; the difference is that *zɨ* is used to express something which is near to the speaker; while *xɨ* is used to express the nearness of something to the recipient. The demonstrative *za* and *xa* show something which is far from both the speaker and the receiver, but Völlmin states that the difference between the two is not clear. The vowel [a] expresses far

distance whereas [ɨ] expresses near distance, and the last sound (x) is optional, sometimes they use it and sometimes ignore it. In addition, Ford (1986: 69) also agrees with both Leslau and Hetzron on the demonstrative pronoun *xa* and *za*, and he notes that these demonstratives can also be used to show sequences of actions or narrations into former and latter.

2.2. Verb morphology
2.2.1.   Verbal stem

The common feature of all Semitic languages is that verb roots are formed by combining consonant with vowel sounds. The Chaha root and pattern morphology form the three main aspectual verb forms; perfective, imperfective and jussive forms (Rose 2007: 403). The Chaha roots /mgr/ 'suppurate', /srf/ 'be afraid', /kft/ 'open' illustrate the verbal root-and-pattern system. She also stated that the medial root consonant is devoiced in the perfective form, or /r/ is changed to [n]. Chaha does have gemination in the imperfective. It shows a single original consonant in the examples (21). It is [k] which is the reflex of the original geminate.

		Rose (2007: 404)
(22)	'to suppurate'	'to be afraid'
Perfective	məkər-ə	sənəfə
Imperfective	jɨ-məgɨr	jɨ-sərf
Jussive	jə-mgɨr	jə-sɨrəf
Rose (2007: 404)		

Meyer (2016b: 5) states that verbs of all Ethio-Semitic languages are usually consisting of three consonants. Völlmin (2017: 45) also discusses the characteristics of Ethio-Semitic verb types; the basic types are A, B, and C. Most verbs belong to either the Type A or Type B categories in the Chaha language. Hetzron (1977: 70) states about Type A verbs, and he says that the second radical has an alternation between geminate and non-geminate. Type A further characterized by the vowel between the first two radicals *ə* in the indicative and zero in the jussive.

(23)	Ezha:	səbbərə	jisəβər	'break'
	Chaha:	səpərə	jisəβər	'break'

Type B verbs are characterized by the presence of a palatal element or a front vowel in the first position of the stem. If the initial consonant is palatalized, it is velar obstruent or coronal as with the examples *dʒəpər-ə* and *gʲənəz-ə* 'finish' and 'cut in big slice'. The other characteristic is that if the first consonant is labial consonant or the second one is velar, the second consonant is palatalized, or the front vowel [e] appears instead of [ə]. See example c and d from Rose:

Rose (2007: 405)

(24)	Perfective	Imperfective	Jussive	Gloss
(a)	dʒəpər-ə	ji-dʒəβir	jə-dəpir	'finish'
(b)	gjənəz-ə	ji-gjənəz	jə-gəniz	'cut in big slice'
(c)	məkjər-ə	ji-məkjir	jə-məkir	'to burn'
(d)	met'ər-ə	jɨ -met'ir	jə -mət'ir	'to select'

Type C verbs are characterized by [a] vowel which occurs between the first two radicals. The mid radical is geminated in a language with gemination (see: Hetzron (1977: 71).

Rose (2007: 404)

(25)	Perfective	Imperfective	Jussive	
(a)	manəx-ə	ji-manx	jə-mar	'capture'
(b)	banər-ə	ji-banr	jə-barɨr	'demolish'

Völlmin (2017: 43) and Rose (2007: 406) described Type D verbs. It is similar to Type B except that Type D verbs are characterized by the presence of labialized element. For example, *bʷənəs-ə*, *wənis* and *wərs* 'to feel lonely'. The quadriconsonantal verbs consist of four radicals; it is also used in Ethio-Semitic languages. However, its occurrence is rare. Following are examples of quadriconsonantal forms:

Rose (2007: 406)

(26)	Perfective	Imperfective	Jussive	
	misəkər-ə	ji-msəkir	jə -məskir	'to testify'
	gɨrətəm -ə	ji-gɨrətɨm	jə-gərdɨm	'break something in two'

Different literature like Meyer (2011), Hetzron (1972), and Rose (2007) argue that biradical can be found even as mono-radical verb stems in Ethio-Semitic languages, specifically in Chaha. Völlmin (2017: 43) also states that in modern Ethio-Semitic languages, there are biradicals and mono- radicals; they are originating from triradicals and quadr-radicals.

2.2.2.   Reduplicated verbs

Degif (2000: 37) states that Chaha has three kinds of reduplicated verbs. These are medial (frequentative), final and total reduplication. The prefix *a-*, *tə-* and *at-* are used to expand reduplicative verbs. The bilateral and triliteral verbs can form a frequentative stem, and the stem is formed by the repetition of the second radical with vowel *a* or *ə* on the added syllable. However, there are semantic and phonological restrictions on which verbs can form the frequentative.

Verbs that duplicate medials (frequentatives) are as in the following:

Degif (2000: 37)

(27)	Root	Perfective	Imperative	Imperfective	
	(sβr)	siβəpər-xə-m	siβəβir	ji-siβəpir	'smash'
	(rgd)	nigagəd-xə-m	nigagd-	ji-rgagd	'stir'

The final radical of verbs can be reduplicated. Because the final reduplication, biradical verbs become triradical while triradicals verbs become quadradicals. The following are representative examples:

Degif (2000: 38)

(28)	Root	Perfective	Imperative	Imperfective	
	k'b	k'ipəβ- xə- m	k'iβiβ	ti-k'əβiβ	'shave'
	br	bənər-xə-m	birər	ti-βərir	'fly'

2.2.3.   Reduplication in compound verbs

Rose (2007: 411) states that compound verbs are formed by combining of a reduplicative stem and the verb *barə* 'say' or *amənə* 'make'. The shape of the stem is $C_1VC_2C_1VC_2$ where V is one of the vowels, [ə], [a] and [i]. The following are representative examples:

Rose (2007: 411)

(a)	basbas barə		'wander'
	(b)	bək'bək' barə	'smell bad'
	(c)	zəfzəf barə	'walk gracelessly'
	(d)	gwafgwaf barə	'fluff out'
	(e)	t'əbt'əb barə	'drip'

2.2.4. Derivational verbal prefixes

Rose (2007: 411) and Völlmin (2017: 82) agree that Chaha has three valency changing prefixes, *a-*, *at*, and *tə*. These prefixes occur close to the stem. Negation and subject markers are affixed outside the derivational prefixes. Here are brief examples to show these prefixes in sentences.

Rose (2007: 411-412)

(29)   (a)   Amadu ɨndʒapa səpərəm
Amadu ɨndʒapa səpər-əm
Amadu glass   break.PFV-3MS.PAS
'Amadu broke a glass.'

        (b)   ɨndʒapa təsəpərəm
ɨndʒapa tə-səpər-ə-m
glass pass-break.PFV-3MS-PAS
'A glass was broken.'

As we have seen in the above examples, the prefix *tə-* attaches to transitive verbs and results in a passive verb. When the prefix *a-* is attached to verbs, it does not change the internal shape of the stem.

Rose (2007: 412)

(30)   k'ɨb nət'ərəm
k'ɨb   nət'ər-ə-m
butter melt.PFV.3MS-PAS
'The butter melted.'

According to Rose (2007: 413), the prefix *at-* indicates the causative of the passive. She explains this through examples like *at-səpərə* 'cause to be broken'. She attempts to demonstrate the difference between the prefix *a-* and *at-* by the following example: *notʼə* 'run', *a-rotʼə* 'made someone to run' whereas the verb *at-rotʼə* means 'forced someone to run'. I agree with Rose because the prefixes *at-* and *a-* are used to show cause. We can add

other example here: *bəna* 'eat' *at-bəna* 'forced to eat' *a-bəna* 'made someone to eat'.

2.2.5.   Tense and aspect

Ford (1986: 62) discusses the three basic stems of verb forms which are perfective, continuous/imperfective and Jussive (including imperative). Each stem takes many forms in relation to person, gender and number. Völlmin(2017: 174) also states that perfective and imperfective (continuous) aspects can be furnished with the verb *banə* or *ba* 'was' for past tense. The morpheme *-te* and *ʃə* are used for future tense. The main verb marker *-m* is attached to the verb in affirmative perfective forms. However, it is not used in negative sentences. Meyer (2016a: 159) argues that modern Ethio-Semtic languages are primarily aspect-based, and tense system is secondary. The tense markers are used to distinguish past and non-past time reference.

Rose (2007: 413) and Hetzron (1977) also argue that the perfective form has a final suffix *-m*, and has been described as the main verb marker, and it is identified as past tense marker. Nevertheless, it does not occur in negative forms and in subordinate clause. This morpheme occurs word in final position after subject and object markers.

Völlmin (2017: 177)

(31) Main verb   Negative verb   Subordinate verb
       tʃənə-xw-im   antʃəna-xw   bə-tʃənə-xw
       Come.PFV-1S-past   NEG-come.PFV-1S   COND-come 1S

2.2.5.1   Perfective

Völlmin (2017: 177-178) states that the perfective is used to expresses the perfective aspect that is as a completed event. Ford (1986: 62) states that perfective aspect is also expressed by the perfect form followed by the verb *banə*: such as *tʃotəm* 'he worked' *tʃotəm banə* 'he had worked'. Völlmin also states that action verbs are commonly used as an event placed on the actual time; time adverbs can additionally underline the past.

Völlmin (2017: 175)

(32)   tɨrama wɨsa fak'inəm tɨrama wɨsa fak'-nə-m
              yesterday wɨsa scrape.PFV-1P-M
              'We scraped bread yesterday.'

2.2.5.2 Imperfective

Imperfective refers to the terminal point of the event not being predicted and used to express the imperfective aspect in contrast to perfective. Völlmin (2017: 175) states that in many cases, the word *barə* is used to expresses habitual action.

<div align="right">Völlmin (2017: 178)</div>

(33) getam g^wəmarəm jitiwaka.

geta-m g^wəmarə-m ji-tiwaka.
Geyeto-also Gumer-also 3SM-fight-IPFV
'The Geto and the Gumer fight each other.' (regularly).

2.2.5.3 Jussive

Völlmin (2017: 179) stated that jussive belongs to imperative and they are used to express orders, wishes, intentions, permission and similar meanings. According to Ford (1986: 63), indefinite future or willingness is expressed by the jussive stem with continuous prefix and suffix plus the suffix *-ʃə*.

<div align="right">Ford (1986: 63)</div>

(34) (a) ətotʃə
          'I am willing to work.'
      (b) tibirəmaʃə
          'You (FP) will/may eat.'

2.2.6 Definite and Indefinite Future

According to Rose (2007: 414), there are two future markers in Chaha, *-te* and *-ʃə*, which appear in the final position of the verb, and they only appear in main clauses and in affirmative constructions. In Chaha, the imperfective form is used in present tense forms not in the future tense forms. The future tense is expressed by suffixes attached to the end of the verb stem following subject and object markers.

<div align="right">Rose (2007: 414)</div>

(35) (a) ʃəwa jarte?
          ʃəwa j-ar-te?
          Shoa 3SM-go.IPFV.-FUT
          'Has it been decided?'

    (b)   ʃəwa jɨwərʃə
              ʃəwa jɨ- wər- ʃə
              Shoa 3SM-go-JUS. -INDF. FUT.
              (i.e., will he be allowed to go, or is it likely he is going?)

Leslau (1950: 30) states that the imperfective followed by *-te* expresses future tense like *jɨrəxɨb-te* 'he will find' and also the jussive followed by *-ʃə*, *jɨnkəb-ʃə* 'he will find'. In addition, Ford (1986: 63) also claims that definite future is expressed by the suffix *–te*, for example. *iβərate* 'I will eat'/'I am going to eat'. As we have seen the example above, indefinite future is expressed by the jussive stem with continuous prefixes and suffixes *ʃə*, for example, *əʧ̣otʃ'* 'I am willing to work' or 'I will probably'. Both Leslau and Ford agree that imperfective followed by **-te** and jussive followed by **-ʃə** are used to express future tense. As Rose states, the Chaha imperfective form is used only for present tense; it is not used in the future tense forms. The future is expressed by two suffixes attached to the verb at the end following subject and object markers.

2.2.7   Negation

The negative marker is expressed by a prefix *an-* and *a-* attached to the verb in perfective and non-perfective forms, respectively. The perfect marker suffix *-m* is omitted (Ford 1986: 68 and Rose 2007: 415).

(36)	dəpərə	'he added'	an-dəpərə	'He did not add.'
	bənərə-m	'he flew'	an- bənərə	'He did not fly.'
	jɨβərɨ	'he flies'	a-jɨβərɨr	‹He does not fly.'

The perfect (with dropping of perfect suffix *–m*) is attached to the prefix *in-* with the same sense as the negative jussive: for example, *indəpərə* 'let him not add' (cf. Rose 2007: 415).

2.2.8   Converb

In the central and the peripheral Western Gurage, the suffix *–m* and *-tə* are used as converb markers (Meyer 2011: 1247). Rose (2007: 416) states that a sequence of events can be joined, and the last verb inflects while the first verb is conjugated as a converb. Hetzron (1977: 94) stated that the *–m* converb consists of perfect, imperfect, jussive or infinitive followed by *–m*.

In the future, the converb is expressed by imperfect *+m jisəbɨrm jarte* 'he will break and will go' (cf. the following *tə* converb examples of Rose 2007: 416).

(37)　nikʃitəxə tifiwan　niks-tə-xə tif-wa-n
　　　　bite.IPFV-CON-2MS spit out.
　　　　JUS-2SM-3SM 'bite it and spit it out (2SM)'

The converb marker *m-* does not carry tense or object markers. It consists of the suffix -m attached to the verb of any aspect (Rose 2007: 416). Here is an example:

(38)　jisəbirm jarte
　　　　ji-səbir-m j-ar-te 3SM-break-CON
　　　　3SM-go.IPFV-FUT
　　　　'He will break and go'

2.2.9　Copula

Rose (2007: 415) claims that the present tense copula is attached to nouns and adjectives as a word-final suffix. All forms have an initial *n*; however, the 3SM and 3P have different forms.

Rose (2007: 415)

(39)　| 1S | nxw | 1P | -ndə |
|---|---|---|---|
| 2SM | nxə | 2MP | -nxu |
| 2SF | nxj | 2FP | -nxma |
| 3SM | -u | 3MP | -ro |
| 3SF | nja | 3FP | -əma |

We can understand that the above present tense copula verbs are used to join the subject of a sentence or clause to a subject complement, for instance, *zər-u* (summer-COP) 'it is summer' *zəngərənə-nja* (aggressive-COP.3SF) 'she is aggressive', *oʤama-nxɨma* (talkative-COP.2FP) 'you (F) are talkative'. The negative copula is also attached to a word, for example, *oʤama-anxər-əʧ* 'she is not talkative'.

Summary

To summarize, this article has been mainly concerned about reviewing Chaha phonology and morphology research. The phonology of Chaha has been treated by different researchers, as we have discussed above. However, there is no agreement on some points with in the above linguists. Like, there is no clear argument and decision about [b] and [β], it is because some stated that /b/ is a phoneme but others have a different argument that it is / β/ and [b] is the allophone. Again, the vowel *i* is also another issue that some identify as a phoneme and others debated that it is an epenthetic vowel, not a phoneme. Regarding the Grammar description, Ford (1986) works the phonology and grammar of Chaha, however, she does not have detailed description of the sound distribution and their status and the morphology part is also not discussed in detail. Again, Rose (2007) works on the Chaha morphology; it is an overview and focuses on the verbal system. Degif's (2000) work is a detailed analysis on sound mutations and subject affixes and object clitics. He shows a number of different and unifying analyses. However, the morphology and syntax of the language are not covered. Thus, the Chaha grammar needs further detailed investigation.

Abbreviations and symbols

COP   *Copula*
CWG   *Central Western   Gurage*
F   *Feminine*
F   *Feminine*
FUT   *Future IPFV   Imperfective*
JUS   *Jussive*
M   *Masculine*
NEG   *Negative*
P   *Plural*
S   *Singular PFV   Perfective*
#-   *Word initial*
#-#   *Word medial*
-#   *Word final*
Ø   *Zero, absent*
~   *Nasal*
→   *Becomes*

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