
Shinasha Number Words

*Description and Analysis of Modifications*¹

Gebre Bizuneh Guadie²

Abstract

This study deals with the description of Shinasha number words and the analysis of modifications made on borrowed number words in comparison with modifications made on borrowed general words of the language. Background and linguistic data for the study are obtained from primary sources (mainly by the techniques of elicitation with natives, interviewing, and observation) and secondary ones. The conceptual framework employed in the study is simply a general descriptive analysis framework or Basic Linguistic Theory (BLT). The study finds that most of the basic number words of Shinasha are borrowed; and borrowed number words as well as borrowed general words are modified word-externally and word-internally to conform with the phonological system of the language; that is, foreign sounds and structures are changed to native ones and word forms are modified to appear like the native isolated and constructional phonological forms; even though, borrowed number words exhibit some word-external and word-internal modifications different from borrowed general words. Among all the modifications discussed in the study, the addition of a high tone on some of the vowels of the borrowed number and general words is apparently random, and it is difficult to say where it applies; and some of the other changes (for example, $s \rightarrow sh$, $k \rightarrow k'$, $p \rightarrow p'$) on some words appear to be exceptions to the rule. So, these kinds of apparently random and exceptional changes need further explanatory investigation. Significance-wise, this work aligns with the national agenda of documenting, preserving, and developing Ethiopian languages.

Key words: [borrowed number words, borrowed general words, modifications]

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²Ethiopian Languages and Cultures Research Center, Institute of Ethiopian Studies, Addis Ababa University, gebre.bizuneh@aau.edu.et

1. Introduction

1.1 The Language and the People

Shinasha is an Omotic language spoken in the Benishangul-Gumuz Regional State (BGRS), Metekel Zone, Bulen, Dangur, Dibat'e, and Wonbera Districts ("Weredas"). Under the Omotic family, it is a member of the North Omotic (Hayward 2003) or Gongga (Hudson 2004) group of languages that consists of Kafa, Anfillo, and Shinasha. The language is alternatively called Shinasha and Borna. It has two dialects: the lowland dialect and the highland dialect locally known as "Taribora" and "Gaybora", respectively (Wedekind and Lemma 2002).

The number of Shinasha people, according to *the 2007 population and housing census* of Ethiopia, is 52,637. The Shinashas in their area are neighbored by or intermingled with communities of different language speakers, mainly Gumuz, Oromo, Amharic, and Awingi speakers. Shinasha mother tongue speakers are greater in number than each of the neighboring/intermingling mother tongue speakers in Bulen District only. In the other districts of their settlement, however, they are surpassed by one or the other language's mother tongue speakers (*the 1994 population and housing census* of Ethiopia). This situation has been a real threat to the language's survival as it is manifested by the fact that it is now one of the endangered languages of the country.

Since 2005, Shinasha has been written using Latin Script and is used as a medium of instruction in primary schools. However, this recent mother tongue education venture needs the development of improved textbooks and supplementary reading materials that greatly depend on research and documentation of the language. In return, the mother tongue education engagement with sufficient research and documentation process would boost the pride and strengthen the degree of loyalty the speakers have for their language and consequently revitalize the language or make it resistant to threats to its survival.

1.2 Related Literature

Shinasha is one of the least studied languages in Ethiopia. Even though, there are a few studies done on its purely linguistic and other language-related aspects; namely, 1) Grottanelli (1941), Claudi (1983), and Grosby (1901) on the presentations of some of its lexical items; 2) Gebre (1986), Ashenafi and Wedekind (1990) and Bergfjord (2013) on its phonology; 3) Plazikowsky-Brauner (1950), Fekadie (1988), Rottland (1990), Daniel (2001), Binyam and Tsehay (2009) and Gebre (2014) on its morphology; 4) Fleming (1976) on both its phonology and morphology; 5) Ashenafi (1989) and Tsehay (2011) on its syntax; 6) Lamberti (1993), Daniel (1999) and Joswig (2008) on its grammar in general; 7) Wedekind and Lemma (2002) on its sociolinguistics; and 8) Addisu (2000) and Plazikowsky-Brauner (1970) on Shinasha people, their origin, religion, language, and the likes. These works may have some information on the list and syntax of Shinasha's number words. Other than that, there is no study so far that specifically deals with the description of the number words of the language, their system, their forms and meanings, their structure and function, their borrowed and native origins, and the similarities and differences between the forms and modifications of borrowed number words and borrowed general words.

Relatively, more expansive coverages are made in Gebre (2014) on borrowing and number words than in the other previous studies. But in the actual study, the number words of the language and modifications made on them are treated independently in comparison with modifications made on borrowed general words. Changes in description and analyses between the present study and Gebre (2014) can be summarized as follows: 1) the description of number words, including borrowed and native ones, is independently treated and reinvigorated now with more data; and the description and analysis of modifications on borrowed number words is newly added or is a new treatment on the number words of the language; and 2) modifications on borrowed general words, included for comparative reasons, are re-analyzed now; that is, analyses and labelings of modifications are changed from root-external and root-internal to word-

external and word-internal; to be specific, the domain of application of the modifications is changed from root to word and hence the analytical organization/grouping of borrowed general words in the previous presentation is altered now.

1.3 Objectives of the Study

The general objective of the study is to describe Shinasha numerals and analyze modifications made on borrowed number words in comparison with borrowed general words of the language.

The specific objectives are: 1) to describe the system and subsystems of the number words (one to ten, between ten and twenty, tens, hundreds, thousands, millions, and the interplay between all these levels), 2) to identify native and borrowed number words, 3) to analyze how borrowed number words are linguistically incorporated into the language, 4) to examine how borrowed general words are incorporated into the language, and 5) to show comparative findings related to modifications made on borrowed number words and borrowed general words of the language.

1.4 Significance of the Study

The study has the following significance: 1) it can be applied in Shinasha language development activities like terminology (it can give hints on how to transliterate, blend, etc., number words and other categories of words not introduced into the language so far), textbook writing, supplementary reading material preparation, and the like; 2) it contributes to the meager linguistic literature available (description and documentation) of the language; hence, 3) it can be directly useful for synchronic and diachronic linguistic investigations on the lexicon and morphology of Shinasha, its sister languages, and Omotic languages at large; 4) it can be indirectly useful for investigators working on genetic classification by providing them information about the borrowed number words and modifications characteristic to them (that would otherwise be misleading); and 5) it can give information about the history of socio-cultural relations of Shinasha

speakers with speakers of other Ethiopian languages (by inference from the borrowed number words).

1.5 Conceptual Framework

Basic Linguistic Theory - BLT (Dixon 1997, 2010a, 2010b, 2012, Dryer 2001, 2006) is employed in the linguistic description of the language. Currently, the most acceptable theoretical framework to describe the least-known languages of the world is basic linguistic theory. The theory is characterized in Dryer (2006) generally as descriptive in objective, eclectic in insights, typological in orientation, and accessible in language and formalism. Accordingly, the linguistic description and analysis of the form and structure of the number words of Shinasha and comparative investigations dealt with utilized insights from different linguistic approaches, and the best possible efforts are exerted to make the descriptive research output accessible in language and formalism not only for linguists but also for non-linguists.

1.6 Methodology

The data for the study are collected from primary and secondary sources. Data from primary sources are collected in the field from native language informants in different live interactions by different techniques; namely, elicitation, interviewing, observation, and photographing. Data from secondary sources are obtained from different relevant research works done previously. Especially works available at Addis Ababa University (AAU), Bahir Dar University (BDU), and Injibara University (IU) libraries and archives preserved in the culture, education, and administrative offices of Benishangul-Gumuz Regional State (BGRS) and Metekel Zone are examined thoroughly.

2. Phonological Overview

This section briefly overviews segmental phonemes, suprasegmentals, distribution, clustering, syllable structure, and phonological processes in Shinasha. Gebre (2014) is the source of information for this.

2.1 Segmental Phonemes

2.1.1 Consonants

Shinasha has 28 consonant phonemes as shown in the table below. In the table, (ny) and (c) are enclosed within brackets to show that they are rare phonemes of the language.

		Bi-labial	Labio-dental	Alveolar	Palato-alveolar	Palatal	Velar	Glottal
Stop	vl	p		t			k	ʔ
	vd	b		d			g	
	ej	p'		t'			k'	
	imp			d'				
Fricative	vl		f	s	sh			h
	vd			z				
	ej			s'				
Affricate	vl			ts	(c)			
	vd				j			
	ej				c'			
Nasal		m		n	(ny)			
Lateral				l				
Flap				r				
Glide		w				y		

Table 1: Consonant Phonemes of Shinasha

2.1.2 Vowels

Shinasha has basically 5 short vowel phonemes with 2 more short vowels (indicated with brackets in the chart below) whose phonemic status is questionable when systematically compared to the other vowel phonemes.

	Front	Central	Back (Rounded)
High	i	(ə)	u
Mid	e	(ä)	o
Low		a	

Table 2: Short Vowel Phonemes of Shinasha

2.2 Suprasegmentals

2.2.1 Length/Gemination

In Shinasha vowel length is contrastive; except ə and ä all the rest of the vowels contrast in length. As in the table below, length is represented by doubling the vowels concerned and the long vowels will be depicted this way in the forthcoming discussions.

	Front	Central	Back (Rounded)
High	ii		uu
Mid	ee		oo
Low		aa	

Table 3: Long Vowel Phonemes of Shinasha

Note that, as indicated above, ə and ä have no long counterparts; they are also distributionally deficient; so their phonemic status is questionable.

Consonant length, i.e. gemination, is not common and not favored in this language; it is not common because it is found only with some of the consonants and mostly in a few classes of words (number and borrowed words) of the language; with those geminated consonants in number and borrowed words, it can be contrastive. It is not favoured (gemination disallowed) because C_1C_1 changes to C_1 or $C_1əC_1$ across morpheme boundaries.

2.2.2 Tonemes

Shinasha has 2 lexically and grammatically contrastive tones; that is, high (ˊ) and low (ˋ). (For the details, cf.: Gebre 2014).

2.3 Distribution

All sounds of the language occur word-medially and word-finally. But it is not the case word-initially; that is, **p, d', s, z, r**, the geminates and the vowels (underlyingly) do not occur at this position. The vowels may occur at this position on the surface as a result of the optional deletion of /'/ preceding them in the underlying representation of words.

2.4 Clustering

Clustering in Shinasha is allowed only for consonants, not for vowels; and clustering of consonants is allowed only word-medially and word-finally. There is an exception to this generalization, however; that is, there is one word in the language that has a CC type of initial cluster, **granza** ‘hyena’, which is hard to explain how it came about. In general, the language could have CC and CCC clusters at word medial and final positions. The distribution of these clusters across word boundaries differs in that: 1) CC cluster occurs in word-medial and word-final positions, but 2) CCC cluster occurs only in word-medial position and only in reduplicated words as a sequence of root final CC and root initial C.

2.5 Syllable Structure

The general schema of the Shinasha syllable structure is CV₁(V₁)(C)(C). Hence, the syllable types of the language can be any combination of Cs and Vs in CV₁(V₁)(C)(C), and even V or V₁V₁ initial syllable types are also possible phonetically whenever the word-initial /'/ is deleted.

2.6 Phonological Processes

Sound changes across segment, morpheme, or word boundaries in Shinasha are exhibited as assimilation, weakening, deletion, and epenthesis; and even as the free variation between different types of segments. Assimilation can be of glottalization, homorganic nasal assimilation, regressive vowel assimilation, progressive vowel assimilation, and tone spreading. Weakening can be of fricativization, vowel shortening, consonant shortening, and vowel reduction. Deletion can be of ' (glottal stop) deletion, **h** (glottal fricative) deletion, and **e** (initial of a coordinating word **ette** ‘and’ in conjunct NPs) deletion. Epenthesis can be of vowel insertion and glide insertion. Free variation involves the alternation between **d** and **ts**, **z** and **y** (that is restricted to some morphological environments: the alternation of **d** and **ts** in lative forms and that of **z** and **y** in converted compound nouns), **s'** and **c'** and **j** and **zh** (that is phonological or phonetic). (For the details, cf.: Gebre 2014).

3. Borrowed General Words

3.1 Word Classes

Borrowed general words of Shinasha are found to be members of three different word classes. They are noun (most of the words), adjective (a few of the words), and verb (a few of the words) classes. Examples of borrowed Shinasha words of these word classes are given below with source language word forms and the source languages in brackets in front of them.

- (1) Noun
- | | | |
|----------|----------------------------|-------------------------|
| madabiya | ‘mud bed/a sleeping place’ | mädäb (Amharic) |
| oduwa | ‘message’ | odu ‘news/talk’ (Oromo) |
- (2) Adjective
- | | | |
|----------|--------------|----------------------------|
| k’ac’əna | ‘small’ | k’äc’c’ən ‘thin’ (Amharic) |
| woraha | ‘bow-legged’ | woraha (Amharic) |
- (3) Verb
- | | | |
|--------|------------|-------------------|
| kafala | ‘to pay’ | käffälä (Amharic) |
| asaba | ‘to think’ | assäbä (Amharic) |

3.2 Source Languages

Borrowing happens as a result of social, cultural, economic, and political interactions between speaking communities. This occurs everywhere but normally happens between neighboring and nearby speaking communities. Therefore, potentially the source languages of borrowed words (in our case here general words) of Shinasha could be at least the following: 1) Amharic (Amh), 2) Awingi (Awi), 3) Gumuz (Gum), and 4) Oromo (Oro).

To give background to the potential source languages, Amharic though not a native tongue of immediately neighboring communities of Shinasha, is the working language and lingua franca of Ethiopia, and it has been the medium of instruction in all the elementary schools of the nation for a long time until about 3 decades ago. The native Amharic and Shinasha-speaking communities, even though they are not immediate neighbors, are not spatially very far apart from one another for social, cultural, economic, and

political interactions; that is, they are separated only by the Awingi-speaking community and they were all under one provincial administration of Gojjam until recently. Students from all communities have been sharing similar high schools at some big urban centers in the province, and all the people at large including Shinasha, Awi, Oromo, Gumuz, and Amhara community members have been utilizing adjacent urban areas in their localities as common market places. As to the rest of the potential source languages, Oromo, Awingi, and Gumuz, their speaking communities are the immediate neighbors of Shinasha speakers.

So, social, cultural, economic, and political interactions can be expected between Shinasha and the potential source languages' communities given above, and hence word borrowing. However, the existing data show that the borrowed general words of Shinasha came only from the languages of 1) Amharic and 2) Oromo, not from Awingi and Gumuz.

3.3 Modifications on Borrowed General Words

Modifications on borrowed words were treated in Gebre (2014) as root-external and root-internal modifications, but here they are treated as word-external and word-internal modifications. This reanalysis helps to avoid the apparent confusion between the terminological concepts of root and word that exists in the previous work. It is to say that the source language words borrowed by Shinasha are not only root forms of source languages; rather they can be full-fledged/free words that can be either roots or derived or formally altered words in the source languages. So word-external and word-internal modifications suffice well for the unit on which modifications are made and for labeling the types of modifications being undergone in the processes. Stating this, let us proceed to the presentation of word-external modifications.

3.3.1 Word-External Modifications

To begin with, in this study, the borrowed general words of Shinasha are treated in their isolated singular forms. How their isolated singular forms

behave in construction (in conjugation and derivation) will be shown later in the discussion. Word-external modifications are additions of endings on borrowed general words. They are realized as **-iya**, **-ya**, **-wa**, or **-a**. The formal differences between the endings are mainly conditioned by the phonological environments (word-final segment types) of the source language words.

Examples are given below with headings of Modification (*addition of endings*), SLW (Source Language Word), SL (Source Language), Shinasha (borrowed general word of Shinasha), and Gloss (English translation of the word).

(4)	<u>Modification</u>	<u>SLW</u>	<u>SL</u>	<u>Shinasha</u>	<u>Gloss</u>
(a)	-iya	mädäb	Amh	madabiya	‘mud bed’
		atkəlt	Amh	átiklitiya	‘vegetable’
		mənt’af	Amh	mint’afiya	‘mat’
		fanos	Amh	fanosiya	‘lamp’
		muz	Amh	muziya	‘banana’
		wäyn	Amh	weyiniya	‘wine’
		täñkol	Amh	tóonkóliya	‘malice’
		ambar	Amh	ambariya	‘bracelet’
(b)	-ya	gize	Amh	gizeya	‘time’
		tämari	Amh	temariya	‘student’
(c)	-wa	tərəngo	Amh	tərəngowa	‘citron’
		odu ‘news/talk’Oro		oduwa	‘message’
(d)	-a	sä'at	Amh	sa'ata/sayita	‘time’
		mäs'af/mäs'haf	Amh	mas'afa	‘book’
		t'ärmus	Amh	t'armusha	‘bottle’
		rəkkash	Amh	rakasha/rakáshá	‘cheap’
		k'äc'c'en	Amh	k'ac'əna	‘small/thin (Amh)’
		däftär/däbtär	Amh	daftara/daftára	‘exercise book’

Word-External Modification Summaries

- 1) **-iya** is added on most consonant final words of the source language.
- 2) **-ya** is added on words that end in a front vowel.

- 3) **-wa** is added on words that end in a rounded vowel.
- 4) **-a** is added on some exceptional consonant final words, probably on consonant final words that are in frequent use by Shinasha natives (especially by students, teachers, and all educated individuals) in schools and urban settings.

The formal differences of the endings are mainly conditioned by the phonological environments (word-final segment types) of the source words; and comparing their distribution, **-iya** can be taken as the basic form of them. Otherwise, the addition of endings, in general, is made to conform to the grammatical form of isolated singular words of Shinasha that end in a characteristic copular vowel, **-a**.

3.3.2 Word-Internal Modifications

Word-internal modifications on borrowed general words of Shinasha concern modifications made on constituent vowels and consonants of the source language words. These modifications can occur on segments at different positions of words.

3.3.2.1 Vowel Modifications

Vowel modifications can be manifested as changes of vowel qualities (segmental and suprasegmental qualities like length and tone), vowel deletion, or vowel insertion. Examples are given below with headings of Modification (*changing vowels*, *vowel deletion*, and *vowel insertion*), SLW (Source Language Word), SL (Source Language), Shinasha (borrowed general word of Shinasha), and Gloss (English translation of the word).

(5)	<u>Modification</u>	<u>SLW</u>	<u>SL</u>	<u>Shinasha</u>	<u>Gloss</u>
(a)	i → í	gize	Amh	gízeya	‘time’
		mākina	Amh	makína	‘car’
(b)	i → a	koppi	Amh	k’op’a	‘pen/to write’
(c)	e → a	c’ululle	Amh	c’ulúla/c’ulúúla	‘eagle’
(d)	ə → i	mənt’af	Amh	mint’afiya	‘mat’
(e)	ə → a	rəkkash	Amh	rakasha/rakáshá	‘cheap’

(f)	ä → a	mädäb	Amh	madabiya	‘mud bed’
		märz	Amh	marziya	‘poison’
(g)	ä → á	näw(u)r	Amh	náwuriya	‘taboo’
(h)	ä → e	atär	Amh	ateriya	‘pea’
		tamari	Amh	temariya	‘student’
(j)	ä → o	shämbäk’k’o	Amh	shombok’a	‘bamboo’
(j)	ä → óó	tänkol	Amh	tóónkóliya	‘malice’
(k)	a → á	atkəlt	Amh	átiklitiya	‘vegetable’
(l)	o → ó	tänkol	Amh	tóónkóliya	‘malice’
(m)	o → a	bok’k’ollo	Amh	bok’ola/book’óla	‘corn’
(n)	u → ú	c’ululle	Amh	c’ulúla/c’ulúúla	‘eagle’
(o)	ə → ø	atkəlt	Amh	átiklitiya	‘vegetable’
(p)	ä → ø	färäs	Amh	farsha/farshá	‘horse’
(q)	ø → i	wäyn	Amh	weyíniya	‘wine’
		atkəlt	Amh	átiklitiya	‘vegetable’
(r)	ø → a	dans	Amh	danasa	‘dance’

Word-Internal Vowel Modification Summaries

- 1) **ä** changes to **a** almost elsewhere.
- 2) **ä** changes to **e** mostly between **t** and **r** and preceding **y**.
- 3) **ä** tends to change also to **o** if there is another **o** vowel in the syllable that follows the syllable of **ä**.
- 4) **ə** changes to **i**, but it also changes to **a** most likely if there are other **a** vowels in the syllables that follow the syllable of **ə**.
- 5) Non **a** vowels change to **a** at the word-final position.
- 6) In an instance a short vowel changes to a long one.
- 7) **ø** changes to **i** and **a** between consonant clusters that precede syllables of **i** and **a**, respectively.
- 8) A high tone is found to be added on some vowels (for a reason not yet known).

The modifications of vowels **ä** and **ə** to other kinds of vowels may follow from the fact that in the vowel system of Shinasha **ä** and **ə** are deficient in distribution and in having long counterparts, and hence questionable to be

taken as phonemes of the language. So they are prone to be changed to other properly functioning vowel phonemes of the language when found in borrowed words.

3.3.2.2 Consonant Modifications

Consonant modifications can be manifested as changes of consonant qualities (segmental and suprasegmental quality of length), consonant deletion, and consonant insertion. Examples are given below with headings of Modification (*changing consonants*, *consonant deletion*, and *consonant insertion*), SLW (Source Language Word), SL (Source Language), Shinasha (borrowed general word of Shinasha), and Gloss (English translation of the word).

(6)	Modification	SLW	SL	Shinasha	Gloss
(a)	pp → p'	koppi	Amh/Eng	k'op'a	'pen/to write'
(b)	kk → k	rəkkash	Amh	rakasha/rakáshá	'cheap'
(c)	k → k'	koppi	Amh	k'op'a	'pen/to write'
(d)	k'k' → k'	bok'k'ollo	Amh	bok'ola/book'óla	'corn'
		shāmbāk'k'o	Amh	shombok'a	'bamboo'
(e)	ff → f	kāffälä	Amh	kafala	'to pay'
(f)	ss → s	assäbä	Amh	asaba	'to think'
(g)	s → sh	t'ärmus	Amh	t'armusha	'bottle'
		färäs	Amh	farsha/farshá	'horse'
(h)	cc → c'	occoloni	Amh	oc'oloniya	'peanut'
	(occ → inyc'	occoloni	Amh	inyc'oloniya	'peanut')
(i)	c'c' → c'	k'äc'c'ən	Amh	k'ac'əna	'small/thin (Amh)'
(j)	n → m	barnet'a	Amh	barmet'a	'hat'
(k)	ll → l	bok'k'ollo	Amh	bok'ola/book'óla	'corn'
		c'ululle	Amh	c'ulúla/c'ulúúla	'eagle'
(l)	rr → r	k'ork'orro	Amh	k'ork'orowa	'tin'
(m)	h → ø	hakim	Amh	akimiya	'physician'
(n)	ø → n	anyc'ote	Oro	anyc'onteya	'a kind of food'

Word-Internal Consonant Modification Summaries

- 1) Geminates (C₁C₁) change to plain (C₁) consonants.
- 2) Voiceless consonants tend to change to ejective consonants in a notable number of cases.
- 3) **s** changes to **sh** at the final syllable of a word.
- 4) **h** changes to **ø** word-initially.

In addition, there seems to be a tendency of homorganic nasal insertion preceding non-initial affricates and stops. It seems that the process is a sign of favoring coda or coda creation for codaless syllables found before affricate or stop onsets (cf: examples (6h) and (6n) above).

The change of (C₁C₁) to plain (C₁) consonants may follow from the descriptive fact that gemination is not common and not favored in Shinasha.

4. Borrowed Number Words

Borrowed number words of Shinasha and modifications made on the forms of the source language number words will be presented below with the description of the system of all the number words, native and borrowed words, of Shinasha in subsections of *Borrowed Number Words in One to Ten*, *Borrowed Number Words in Tens*, *Number Words between 10 and 20 and between Other Tens*, *Borrowed Number Words for Hundred, Thousand and Million*, and *Modification on Borrowed Number Words*. In the beginning, languages identified as sources for the borrowed number words of Shinasha are given.

4.1 Source Languages

The data reveal that the source languages of Shinasha borrowed number words are 1) Amharic, 2) Awingi, and 3) Oromo.

4.2 Borrowed Number Words in One to Ten

Borrowed number words found in “one to ten” are two of the numbers in the list of Shinasha number words one to ten below; they are given with theSLW (Source Language Word), SL (Source Language), and Gloss

(English translation of the word). As demonstrated in the list, except for the two number words the rest are native Shinasha words.

(7)	<u>Shinasha</u>	<u>SLW</u>	<u>SL</u>	<u>Gloss</u>
	'ikka			'one'
	gittá			'two'
	keeza			'three'
	'awuda			'four'
	'uutsá			'five'
	shíróta			'six'
	shawata	shawata	Awi	'seven'
	shímméta	səmmənt	Amh	'eight'
	jeed'iya			'nine'
	tátsa			'ten'

4.3 Borrowed Number Words in Tens

Shinasha number words of tens; that is, twenty to ninety, are all borrowed words except the number word, a compound one, standing for fifty which is a mix of borrowed and native words. It appears that three of them (number words for twenty, thirty, and forty) are borrowed from Amharic and four of them (number words for sixty, seventy, eighty, and ninety) are borrowed from Oromo. The mixed compound number word (for fifty) can be from Amharic or Oromo for its left counterpart and from Shinasha itself for its right counterpart words.

Following is the list of Shinasha number words twenty to ninety with the SLW (Source Language Word), SL (Source Language), and Gloss (English translation of the word).

(8)	<u>Shinasha</u>	<u>SLW</u>	<u>SL</u>	<u>Gloss</u>
	hiya	haya	Amh	'twenty'
	shaasha	sālasa	Amh	'thirty'
	habba	arba	Amh	'forty'
	bál k'átsa	balla	Amh/Oro	'fifty'
	'hundred half'	'two-way forked object'		
	jatama	ja'aatama/jahaatama	Oro	'sixty'

torbatama	torbaatama	Oro	‘seventy’
sadetama	saddeetama	Oro	‘eighty’
sagaltama	sagaltama	Oro	‘ninety’

The Shinasha word for fifty does not come from the source language number word (SLW) for fifty. The actual SLWs for fifty are **(h)amsa** (Amh) and **shantama** (Oro). It is stated before that the left-hand counterpart Shinasha number word for fifty comes from Amharic or Oromo because the left-hand counterpart Shinasha number word for fifty **bál** or in isolation **bála** happens to come from Amharic or Oromo non-number word **balla**. The source word **balla** exists in Amharic and Oromo as a common noun with the meaning ‘two-way forked/branched object’; it could be a two-way forked/branched wood or any object. The word **bála** exists also in Shinasha as a borrowed common noun from Amharic or Oromo with the same meaning as in the latter languages, ‘two-way forked/branched object’. On the other hand, the meaning of the right-hand counterpart Shinasha number word for fifty, **k’átsa**, is ‘half’. It seems then that Shinasha uses the word **bála** as a number word metaphorically to mean a full number that is to mean also hundred, and hence **bál k’átsa** literally ‘half of a two-way forked object’ is ‘half of a full number/hundred’ which is numerical ‘fifty’.

Alternative Number Words for Sixty and Eighty

Borrowed Shinasha number words *jatama* ‘sixty’ and *sadetama* ‘eighty’ have alternatives. Each of the alternatives given below consists of compound words unusual for number words of tens and the formation of the compounds is hard for generalization. In the case of eighty, the compound is formed from the left-hand side word for the number forty (the bigger factor) and the right-hand side word for two (the smaller factor), a multiplication of which gives eighty. But this pattern does not work for the formation of sixty where the left-hand side word is three (the smaller factor) and the right-hand side word that does not have an obvious meaning or predictable form but that could be guessed to be an alternative Shinasha number word for twenty (the bigger factor), a multiplication of which gives sixty.

- (9) keez uba 'sixty'
three ?
habí gittá 'eighty'
forty two

4.4 Number Words between 10 and 20 and between Other Tens

Number words of Shinasha between “10 and 20” are compounds of words for 10 and 1 to 9; between the compound number words, a postpositional morpheme (postp) **-e**³ is suffixed at the first or the left-hand side counterpart words of the compounds as in the following examples.

- (10) táts-e 'ikka (tátseyikka) 'eleven'
ten-postp one
táts-e gittá 'twelve'
ten-postp two
...

Number words between “tens” are also compounds of words of tens (20 - 90) and 1 to 9. As in number words between “10 and 20”, in number words between tens a postpositional morpheme **-e** is suffixed at the compounds' first or left-hand side counterpart words. This is as in the following examples.

- (11) hiy-e 'ikka 'twenty-one'
twenty-postp one
hiy-e gittá 'twenty-two'
twenty-postp two
...
shaash-e 'ikka 'thirty-one'
thirty-postp one
shaash-e gittá 'thirty-two'
thirty-postp two

³ It marks that the right-hand side of a compound number word is 'from' the left-hand side number word (in grammatical sense), or it marks that the right-hand side number word is 'with' the left-hand side one; equally, it may be semantically interpreted as 'plus' (Gebre 2014).

...		
habb-e	'ikka	'forty-one'
forty-postp	one	
habb-e	gittá	'forty-two'
forty-postp	two	
...		
bál k'áts-e	'ikka	'fifty-one'
fifty -postp	one	
bál k'áts-e	gittá	'fifty-two'
fifty-postp	two	
...		
jatam-e	'ikka	'sixty-one'
sixty-postp	one	
jatam-e	gittá	'sixty-two'
sixty-postp	two	
...		
torbatam-e	'ikka	'seventy-one'
seventy-postp	one	
torbatam-e	gittá	'seventy-two'
seventy-postp	two	
...		
sadetam-e	'ikka	'eighty-one'
eighty-postp	one	
sadetam-e	gittá	'eighty-two'
eighty-postp	two	
...		
sagaltam-e	'ikka	'ninety-one'
ninety-postp	one	
sagaltam-e	gittá	'ninety-two'
ninety-postp	two	
...		

4.5 Borrowed Number Words for Hundred, Thousand, and Million

4.5.1 Hundred

As indicated before, the Shinasha number word for hundred is borrowed from Amharic or Oromo, a common noun turned a number. Otherwise, the number words of Amharic and Oromo for hundred are different as shown in the examples below.

- | | | | | |
|------|-----------------|------------|-------------------------|--------------------------|
| (12) | <u>Shinasha</u> | <u>SLW</u> | <u>SL</u> | <u>Gloss</u> |
| | bála | balla | ‘two-way forked object’ | <i>Amh/Oro</i> ‘hundred’ |

The number words of Amharic and Oromo for hundred are:

- | | | |
|------|-------------|-----------|
| (13) | mäto (Amh) | ‘hundred’ |
| | d’íba (Oro) | ‘hundred’ |

4.5.2 Thousand

The number word of Shinasha for thousand is borrowed from Oromo; it is the same number word in Oromo for thousand.

- | | | | | |
|------|-----------------|------------|-----------|--------------|
| (14) | <u>Shinasha</u> | <u>SLW</u> | <u>SL</u> | <u>Gloss</u> |
| | kú má | kú má | Oro | ‘thousand’ |

An Alternative Number Word for Thousand

Borrowed Shinasha number word **kú má** ‘thousand’ has an alternative. The alternative word that is shown below is a native Shinasha word but has a very restricted usage in the language.

- | | | |
|------|--------|------------|
| (15) | shitsá | ‘thousand’ |
|------|--------|------------|

But one may ask what if Shinasha’s **shitsá** ‘thousand’ is a borrowed word sourced from Amharic **shi** or **shih** ‘thousand’ looking at the similarity of the first syllable of the Shinasha word and the Amharic entire word (or the word without the final consonant **h**)? I cannot rule out this possibility; however, considering the nonexistence of the second syllable **.tsá** or similar segments to it of the Shinasha word **shitsá** from the Amharic monosyllabic word **shi** or its alternative **shih**, I support more the native word analysis of the Shinasha word **shitsá**.

4.5.3 Million

The number word of Shinasha for million is borrowed from Amharic or English (Eng).

(16)	<u>Shinasha</u>	<u>SLW</u>	<u>SL</u>	<u>Gloss</u>
	miliyona	miliyon/miliyän	Amh/Eng	‘million’

When number words for hundred, thousand, and million are constructed with other number words to form one and multiple hundred, thousand, and million, for example, one hundred (100), two hundred (200), and so on, one thousand (1,000), two thousand (2,000), and so on, one million (1,000,000), two million (2,000,000), and so on as compounds, they structure after the added number words of one, two, and the likes. The added number words that come before words for hundred, thousand, and million drop their characteristic final vowel **-a**. This is as in the following examples.

(17)	'ikk bála	‘one hundred’
	one hundred	
	gitt bála	‘two hundred’
	two hundred	
	...	
	'ikk kúma	‘one thousand’
	one thousand	
	gitt kúma	‘two thousand’
	two thousand	
	...	
	'ikk miliyona	‘one million’
	one million	
	gitt miliyona	‘two million’
	two million	
	...	

But when they are constructed with other number words to form for example *hundred and one*/one hundred and one (101), *hundred and two*/one hundred and two (102), and so on, *thousand and one*/one thousand and one (1,001), *thousand and two*/one thousand and two (1,002), and so on, *million and one*/one million and one (1,000,001), *million and two*/one million and two (1,000,002), and so on as compounds, they appear with the

postpositional suffix **-e** and without their final vowel **-a** just as in the pattern of number words between ten and twenty shown before.

- (18) **bál-e** 'ikka '*hundred and one*/one hundred and one'
 hundred-postp one
 bál-e gittá '*hundred and two*/one hundred and two'
 hundred-postp two
 ...
 kúm-e 'ikka '*thousand and one*/one thousand and one'
 thousand-postp one
 kúm-e gittá '*thousand and two*/one thousand and two'
 thousand-postp two
 ...
 miliyon-e 'ikka '*million and one*/one million and one'
 million-postp one
 miliyon-e gittá '*million and two*/one million and two'
 million-postp two

One and multiple hundreds, thousands and millions on forms like **bál-e 'ikka** '*hundred and one*/one hundred and one', **bál-e gittá** '*hundred and two*/one hundred and two', and so on, **kúm-e 'ikka** '*thousand and one*/one thousand and one', **kúm-e gittá** '*thousand and two*/one thousand and two', and so on, **miliyon-e 'ikka** '*million and one*/one million and one', **miliyon-e gittá** '*million and two*/one million and two', and so on, add the number words that come without the final vowel **-a** at the left-hand side of them like the following.

- (19) 'ikk **bál-e** 'ikka 'one hundred and one'
 one hundred-postp one
 'ikk **bál-e** gittá 'one hundred and two'
 one hundred-postp two
 ...
 gitt **bál-e** 'ikka 'two hundred and one'
 two hundred-postp one
 gitt **bál-e** gittá 'two hundred and two'

two	hundred-postp	two	
...			
'ikk	kúm-e	'ikka	'one thousand and one'
one	thousand-postp	one	
'ikk	kúm-e	gittá	'one thousand and two'
one	thousand-postp	two	
...			
gitt	kúm-e	'ikka	'two thousand and one'
two	thousand-postp	one	
gitt	kúm-e	gittá	'two thousand and two'
two	thousand-postp	two	
...			
'ikk	miliyon-e	'ikka	'one million and one'
one	million-postp	one	
'ikk	miliyon-e	gittá	'one million and two'
one	million-postp	two	
...			
gitt	miliyon-e	'ikka	'two million and one'
two	million-postp	one	
gitt	miliyon-e	gittá	'two million and two'
two	million-postp	two	
...			

A Shinasha number word for hundred can be compounded with words for thousand and million to form other number words like the following.

- (20) 'ikk bál kúmá 'one hundred thousand'
 gitt bál kúmá 'two hundred thousand'
 ...
 'ikk bál miliyona 'one hundred million'
 gitt bál miliyona 'two hundred million'
 ...

Though they were not included in the data collected for the actual study and hence do not appear now, it is predictable that the number words of Shinasha for billion, trillion, and so on would be borrowed words from Amharic/English (with the patterns of modifications observed on the other

borrowed number words). It is to say for example, “million” is borrowed as *miliyona*, so “billion” would be borrowed as *biliyona*.

As a final remark, there is a number word for zero in Shinasha that appears to be a borrowed word but behaves unlike other borrowed words or behaves like a borrowed general word in that in isolated occurrences it adds **-wa** after a back rounded final vowel of the source language word.

(21)	<u>Shinasha</u>	<u>SLW</u>	<u>SL</u>	<u>Gloss</u>
	zeerowa	zero	Amh/Eng	‘zero’ (SIL Ethiopia 2016)

There is also another word standing for zero stated by some of my informants that is also used in SIL Ethiopia (2016) as having the meaning of *empty*.

(22)	báásha	‘zero’/‘empty’
------	--------	----------------

All cardinal numerals presented above become ordinal numerals by adding a suffix **-la** in isolated occurrences; in construction, however, the final vowel of the suffix disappears.

(23) ⁴	'ikkəla	‘first’
	gittəla	‘second’

	...	
(24)	'ikkəl shíra	‘first rank’
	gittəl shíra	‘second rank’
	...	

4.6 Modification on Borrowed Number Words

4.6.1 Word-External Modifications

Borrowed number words of Shinasha in their isolated forms show external modification by adding a characteristic copular vowel **-a** (which is dropped in construction, or conjugation and derivation, as observed also in borrowed general words discussed earlier). This is as in the following examples.

⁴**ə** is an epenthetic vowel in the ordinal numerals of **'ikkəla** ‘first’ and **gittəla** ‘second’ and in their phrasal constructions in the examples below.

(25)	<u>Modification</u>	<u>SLW</u>	<u>SL</u>	<u>Shinasha</u>	<u>Gloss</u>
	-a	səmmənt	Amh	shímméta	‘eight’
		miliyon/miliyän	Amh/Eng	miliyona	‘million’

When the source words come with the word-final vowel **-a**, Shinasha borrows them as they are without adding any more **-a** as in the following examples.

(26)	<u>SLW</u>	<u>SL</u>	<u>Shinasha</u>	<u>Gloss</u>
	shawata	Awi	shawata	‘seven’
	torbaatama	Oro	torbatama	‘seventy’

Word-External Modification Summaries

1) **-a** is added on consonant final number words of the source language.

The formal difference of the endings in the borrowed number words is mainly conditioned by the phonological environment (word-final segment types) of the source words; otherwise, the addition of the ending, in general, is made to conform to the grammatical form of isolated singular words of Shinasha that end in a characteristic copular vowel, **-a**.

4.6.2 Word-Internal Modifications

4.6.2.1 Vowel Modifications

Word-internal vowel modifications on borrowed number words can be manifested as changes of vowel qualities (segmental, and suprasegmental qualities like length and tone) and vowel deletion. Examples are given below with headings of Modification (*changing vowels*, and *vowel deletion*), SLW (Source Language Word), SL (Source Language), Shinasha (borrowed number word of Shinasha), and Gloss (English translation of the word).

(27)	<u>Modification</u>	<u>SLW</u>	<u>SL</u>	<u>Shinasha</u>	<u>Gloss</u>
(a)	ee → e	saddeetama	Oro	sadetama	‘eighty’
(b)	ə → í	səmmənt	Amh	shímméta	‘eight’
(c)	ə → é	səmmənt	Amh	shímméta	‘eight’
(d)	ä → a	sälasa	Amh	shaasha	‘thirty’
(e)	aa → a	torbaatama	Oro	torbatama	‘seventy’

(f)	a → i	haya	Amh	hiy-a	‘twenty’
(g)	aa → ø	ja'aatama/jahaatama	Oro	jatama	‘sixty’
(i)	a → ø	balla	Amh/Oro	bál k'átsa	‘fifty’
		‘two-way forked object’			
		haya ‘twenty’	Amh	hiy-e keeza	‘twenty-three’

Word-Internal Vowel Modification Summaries

- 1) ä changes to a almost elsewhere.
- 2) As dissimilation across syllables, ə changes to í before a syllable of another ə and a changes to i before a syllable of another a.
- 3) Long vowels change to short ones (ee and aa change to e and a, respectively).
- 4) A vowel nucleus is deleted with its glottal onset word medially.
- 5) A word-final vowel of a number word is deleted preceding another counterpart word of a compound number word. And
- 6) A high tone is found to be added on some vowels (for a reason not yet known).

As stated earlier for similar modifications on borrowed general words, modifications of vowels ä and ə on borrowed number words to other kinds of vowels may follow from the fact that in the vowel system of Shinasha ä and ə are deficient and questionable to be taken as phonemes of the language. So they are prone to be changed to other properly functioning vowel phonemes of the language when found in borrowed words.

4.6.2.2 Consonant Modifications

Word-internal consonant modifications on borrowed number words can be manifested as changes of consonant qualities (segmental and suprasegmental quality of length), consonant deletion, and consonant insertion. Examples are given below with headings of Modification (*changing consonants*, *consonant deletion*, and *consonant insertion*), SLW (Source Language Word), SL (Source Language), Shinasha (borrowed number word of Shinasha), and Gloss (English translation of the word).

(28)	<u>Modification</u>	<u>SLW</u>	<u>SL</u>	<u>Shinasha</u>	<u>Gloss</u>
(a)	dd → d	saddeetama	Oro	sadetam-a	‘eighty’

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(b)	s → sh	səmmənt	Amh	shímméta	'eight'
		sālasa	Amh	shaasha	'thirty'
(c)	ll → l	balla	Amh/Oro	bála	'hundred'
		<i>'two-way forked object'</i>			
(d)	r → b	arba	Amh	habba	'forty'
(e)	l → ø	sālasa	Amh	shaasha	'thirty'
(f)	'h → ø	ja'aatama/jahaatama	Oro	jatama	'sixty'
(g)	ø → h	arba	Amh	habba	'forty'

Word-Internal Consonant Modification Summaries

- 1) Geminates (C₁C₁) change to plain (C₁) consonants (though not always).
- 2) s changes to **sh** in the majority of its occurrences.
- 3) A flap **r** assimilates to an immediately following stop.
- 4) A glottal **'h** and liquid **l** consonant onsets are deleted with their nucleus word-medially. And
- 5) A voiceless glottal **h** is inserted word-initially before a vowel.

As stated earlier for similar modifications on borrowed general words, the change of (C₁C₁) to plain (C₁) may follow from the descriptive fact that gemination is not common and not favored in Shinasha.

5. Conclusion

Basic number words of Shinasha, which also make other compound number words, are mostly borrowed. They are number words for 7 and 8 (in 1-10), number words for 20, 30, 40, 50, 60, 70, 80, and 90 (in tens or 20-90), a number word for 100, a number word for 1000 and a number word for 1,000,000; they are all fully borrowed except the compound number word for 50 which is a mix of a borrowed noun and a native adjective. Even though obvious from the statements above, it is worth emphasizing comparatively that unlike Amharic and Oromo (and English, too), Shinasha tens of 20-90 are not derivatives of number words of 2, 3, 4, 5, 6, 7, 8, and 9; they are independently borrowed words. Native basic number words of

Shinasha which are also employed in creating some of the compound number words of the language are words for 1, 2, 3, 4, 5, 6, 9, and 10 (and partly 50). The borrowed number words of Shinasha are found to be sourced mostly from Amharic and Oromo, and only a single number word from Awingi.

Borrowed general words of Shinasha are plenty but not as such greater than the native general words of Shinasha. They are found to be borrowed mostly from Amharic and some from Oromo; their word classes are noun, adjective, and verb; and they are from different semantic domains; that is, they can be plants, foodstuff, household materials, body parts, learning materials, actions, shapes, behaviors, and so on. They are not only technological and cultural objects or performances as one might usually expect. This fact about borrowed general words, and the amount of borrowed number words given, shows that there has been a deep connection between Shinasha and the source language communities.

The modifications observed on borrowed number words are not identical to those of borrowed general words. In some instances, they are the same and in others they are different. Concerning word-external modifications, the similarities and differences between borrowed number words and borrowed general words are:

- The ending **-a** is added on consonant final borrowed number words of the source languages, while on borrowed general words **-iya**, **-ya**, **-wa**, and **-a** are added, respectively, on most consonant final words, words that end in a front vowel, words that end in a rounded vowel, and some exceptional consonant final words (probably on consonant final words that are in frequent use by Shinasha natives, especially by students, teachers, and all educated individuals, in schools and urban settings).
- What is common between additions on the borrowed number and general words is the ending **-a**. This follows from the general structure of the language; that is, it is made to conform to the

isolated form of singular words of Shinasha that end in a characteristic copular vowel, **-a**. Otherwise, the formal differences of the endings in borrowed general words from the ending **-a** are mainly conditioned by the phonological environments (word-final segment types) of the source language words (except for a few exceptions). In construction, in inflectional and derivational forms, **-a** and all the other endings are dropped; it is also true to non-borrowed (native) words of Shinasha that this ending **-a** is dropped in construction unless it comes with singular words as copular predicates.

Concerning word-internal modifications, there are also similarities and differences between borrowed number words and borrowed general words. The most significant similarities are:

- The vowel **ä** changes to **a** almost elsewhere. Though, in borrowed general words, **ä** changes also to **e** mostly between **t** and **r** and preceding **y**, and tends to change also to **o** if there is another **o** vowel in the syllable that follows the syllable of **ä**.
- A high tone is found to be added on some vowels (for a reason not yet known).
- Geminates (**C₁C₁**) change to plain (**C₁**) consonants. And
- **s** changes to **sh** in the majority of its occurrences in borrowed number words and at the final syllable of a word in borrowed general words.

The differences in the word-internal modifications on borrowed number words and borrowed general words are:

- When in borrowed number words (as a dissimilation process) **ə** changes to **í** before a syllable of another **ə**, and **a** changes to **í** before a syllable of another **a**, in borrowed general words **ə** changes not only to **í**, but it also changes to **a** (as an assimilation/vowel harmony) most likely if there are other **a** vowels in the syllables that follow the syllable of **ə**.

- When in borrowed number words long vowels (V_1V_1) change to short ones (V_1) (as cases of vowel shortening, evidenced by **ee** and **aa** changing to **e** and **a**, respectively), in borrowed general words it is not so; rather the opposite happens in an instance.
- In borrowed general words, it is observed that **ø** changes to **i** and **a** between consonant clusters that precede syllables of **i** and **a**, respectively. But it is not recorded in connection to borrowed number words. And
- A voiceless glottal **h** is inserted word-initially before a vowel in borrowed number words whereas it changes to **ø** (deleted) word-initially in borrowed general words.

However their environments of application are similar or different, the modifications of **ä** to **a** mostly (or to **e** or to **ø** sometimes), and that of **ə** to **i** mostly (or to **a** sometimes) in both borrowed number and general words may follow from the descriptive fact of the language stated in the phonological overview section of the study that says that **ä** and **ə** are systematically deficient vowels and questionable to be taken as phonemes of the language; that is, they could be prone to be changed to properly functioning vowels when found in borrowed words. The modification of geminates (C_1C_1) by changing them to plain (C_1) consonants can also be accounted for by the descriptive fact of the language that says that gemination is not common and not favored in Shinasha.

In addition to the given main similarities and differences between borrowed number words and borrowed general words on modifications made on them indicated above, there are some other differences between them in undergoing conditionally unrelated/independent modifications as presented in detail in the foregoing discussions. It may be because one cannot find as many borrowed number words as borrowed general words to make sufficient comparisons across these categories of words.

Among all the modifications, adding a high tone on some of the vowels of the borrowed number and general words is apparently random, and it is difficult to say where it applies; that is, why it applies on some vowels but not on others is hard to know now. Besides, even though modifications are made largely to integrate

foreign sounds and phonotactics into the native system, some of the changes (for example, $s \rightarrow sh$, $k \rightarrow k'$, $p \rightarrow p'$) appear to be exceptions to the rule. So, these changes, and the addition of a high tone on some of the vowels indicated above need further explanatory investigation.

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