ORIGINAL   ARTICLE

Over-differentiation in Amharic Orthography and Attitude towards Reform

Fekede Menuta[1]

Abstract

There were a number of academic debates over the superfluous sounds in the orthography of Amharic. Some of the scholars in the area were pro while the others against the possible reforms in the orthography. The over-differentiated sounds were said to have been adopted from Ge'ez, and had sociological significances. As they are used currently, their sociological values are neutralized, and are used more randomly. The superfluous sounds have been adopted by other Ethiosemitic languages, such as Guragina and Tigrinya. Thus, the purpose of this article is to find out whether the over-differentiated sounds in the orthography of Amharic are problems or not in language teaching, software development and dictionary preparation. The research methodology followed was mixed methods; survey and text analysis. Data were obtained through the existing literature and questionnaire. The participants in the survey were teachers who taught at different levels: kindergarten to university. About twenty of them were applied linguistics PhD students at Addis Ababa University. The finding showed that the superfluous sounds are problems in teaching initial reading, preparation of dictionary and in software application developing. The attitudes towards the script reform were largely inconclusive though the majority of the participants were pro reforms. The study suggested reform options, by whom the reform should be made, and how other languages may adapt the Amharic script. Furthermore, the need for EPA (Ethiopian Phonetic Alphabet) is proposed.

*Key words: /*Amharic/ Attitude/ Orthography/ Over-differentiation/ Reform/

[1] Fekede Menuta is assistant professor of Applied Linguistics and Communication at the School of Language and Communication Studies in Hawassa University, Ethiopia. Contact: E-mail: mnutafekede2012@gmail.com, fekedem@hu.edu.et; Phone: +251916839376.

1. Introduction

In this section, background of the study, statement of the problem, objective, and issues pertinent to orthography development are discussed.

1.1. Background

Ethiopia is one of the African countries that use its own writing system, the Ethiopic, unlike others that use Arabic or Latin script. Ethiopic has been used across Ethiopia at different degrees by Semites (Gurage, Tigre, Harare), Cushitic speakers (Oromo as in news paper called 'Berisa', Sidama, and Kambata), Omotic speakers (Wolayta as in the Bible), and Nilo-Saharan speakers (Suri translation), to mention a few among many others. Most of the Cushitic and Omotic languages, however, have shifted to Latin script since the last two decades.

Ethiopic, among other possible choices such as alphabetic in which a sound represents a letter and ideographic in which an ideograph represents a word, uses a syllabic writing system. In syllabic writing, a grapheme represents a syllable (often a consonant and a vowel).

Though there is no tangible evidence, it is believed that Ethiopic writing system was "derived from the cursive version of the South Semitic alphabet" (Abraham, 1981, p.393). Ge'ez was the first Ethiopian language to use the script, and to introduce vocalization of consonants that initially lacked. According to Zenamarkos Endale (2008, p.106) "Ge'ez has 26 basic letters each of which also has six different shapes and readings; hence, total of 182 letters. In addition, there are four hybrid (labialized) letters: /k^w/, /g^w/, /k'^{w}/ and /h^w/. Each hybrid form has five shapes thus constituting 20 letters. Therefore, 182 plus 20 becomes 202 letters [syllabographs]"[2] .

Amharic, which had been used as a court language since 13th Century, and celebrated the status of national official language during Hailesellasie (1931-1974) and Dergue regime (1974-1991), and is still used as language of wider communication in the country and as official language for Federal Government in Addis Ababa, uses Ethiopic. Recently, Ethiopic is adopted by most Ethio-Semitic languages, such as Tigrinya and Guragina[3] which also added a few palatals, such as / /, / /, and / /. A few non-Semitic

---

[2] The quotation is translated from Amharic to English.
[3] I will use the term Guragina to refer to Semitic languages spoken in Gurage zone. This term is preferred for speakers of most Guragina dialect clusters call their language Guragina, where Gurage referring to the place and the people while {-ina} indicating language.

languages, such as K'abena, though there is debate among the community to shift into Latin script, they still use Ethiopic script.

There were a number of script reform efforts. The reforms were successful only with regard to addition of deficiencies, such as the palatal series   (/ /, / /, and / /), the vowel   /ə/ and the consonant /v/. The introduction of /ə/ with the new symbol was due to the attempt to fill the gap caused by the merger of the first and fourth order /a/ sounds. The other aspects of reforms, particularly with regard to reducing over-differentiated sounds and regularizing some of irregularities in the shape of Ethiopic scripts were not successful for a number of reasons: sociological and   attitudinal (Abraham, 1981).

1.2 Statement of the Problem

Though there were a number of academic discussions on superfluous or redundant sounds in Amharic orthography, the suggested reform solutions were not largely successful. It is known that some of the superfluous sounds of Amharic had linguistic and sociological significances in Ge'ez. At present, the said sociological values have faded away since nobody consistently knows and uses the graphemes for the pre-existing social roles. As social system is dynamic, Hailesellasie ኅ no more represents the then king of Ethiopia though the letter may still exist in historical documents.

The software in Amharic has helped programmers in adding all the phonemic and phonetic features available in the traditional orthography system. Recently, Nokia mobile phone also tried to install the Amharic scripts software. The software in Ethiopic is also made available for Tigrinya recently. The software applications developed for Amharic tried to accommodate Amharic orthography in many different and sometimes inconsistent and incompatible ways. One can also clearly see the problem of space in his computer key board, as s/he has to insert many of sounds from "symbol" pop down lists into a text. Recent application developers, such as Abyssinia SIL, however, managed to enter each grapheme into keyboard, yet we have to still use additional shift and caps buttons to access some of the graphemes.

It was argued that the superfluous sounds are also problems for a dictionary entry, and as shall be discussed and were argued in (Fekede, 2010), the over-differentiated sounds are problems for initial reading teaching.

Despite the stated problems, it is not clearly known why the various reform efforts were not successful. It is also not known whether the problems stated are real to the large community of users, or are merely academic exercises. This article, thus, attempts to fill in the gap.

1.3 Objective

The general objective of this study is to find out whether the over-differentiated sounds in the orthography of Amharic are problems or not in language teaching, software development and dictionary preparation. It has the following five specific objectives:

- to find out practical problems associated with over-differentiated sounds
- to find out if there are patterns of use of the superfluous sounds in Amharic
- to investigate views of people about orthography reforms
- to uncover how languages adapting Ethiopic script to their own writing system adapt it
- to assess the attitude of Ethiopic script users towards orthography reforms
- to identify the responsible bodies for implementing orthography reforms

2. Literature Review

Ge'ez was the first Ethiopian language to use Ethiopic. Then, Amharic began extensively using Ethiopic to the extent it is associated with Amhara speakers. Amharic was an official language of Ethiopia for long, and it is still an official language of Federal Government of Ethiopia since 1994. It is the language of wider communication throughout Ethiopia (MoE, 1994, p.24), a language of administration in some regional, such as, Amhara and the SNNPRS. It is the medium of instruction in some primary schools where other local languages are not codified or nominated as medium, and it is taught as a subject in almost all schools in the country. All these functional values of Amharic urge one to study it formally. This presupposes knowing the script.

Almost all the alphabets of Amharic were borrowed from Ge'ez including letters which do not have distinctive linguistic functions in Amharic. Amharic, however, added some sounds that did not exist in Ge'ez, but have distinctive linguistic functions in Amharic, such as palatal consonants (Abraham, 1981). Borrowing and adapting is natural linguistic process, yet clutching everything from language "A" to "B" is not part of a linguistic science.

Languages, such as Tigrinya and Guragina have repeated the same mistakes in taking over the over-differentiated sounds from Amharic though these languages have quite different sound patterns (Fekede, 2010). Such a trend may continue by other languages interested in using Ethiopic. There has to be an intervention in this regard for many of Ethiopian languages are in the process of codification for purpose of mother tongue education and cultural preservation. In order to make such intervention, we have to consider principles of orthography development, and check in line with them how over-differentiated sounds are problems.

According to Berry (1968, p.738), orthography is acceptable if it is based on the following basic scientific principles:

1. Linguistically, the alphabets have to be economical, consistent, and unambiguous.
2. Pedagogically, the alphabet should help to achieve utilitarian aim of economy of time and labor in learning to read and write.
3. Psychologically, the alphabet should respect the psychological and physiological process involved in the reading and writing acts.
4. Typologically, the alphabet should suit to the needs of modern techniques of graphic representation- machine writing.

To achieve linguistic economy, three points are important: 1) every distinctive (contrasting) sound in a language should be represented by one and only one grapheme. This enables to avoid under-differentiation and over-differentiation; hence, it secures unique read-off. The problem with this principle is that there are exceptions in some language for there are what we call archiphonemes in which the same sound represents two distinctive ones. 2) Sounds that do not qualify the status of phoneme should not be represented in orthography. According to this principle, the labialized sounds in Amharic have to be avoided from orthography, as they are predictably found only after rounded vowels. This principle helps to minimize letters of a language that may appear in writing system of a language. The problem with this principle is that some linguists argue that phoneme is too abstract and some phonetic features, such as labialization as in Amharic, should appear in writing in order to maintain phonetic reality. 3) Free variants have to be represented as they have phonemic status in another context.

Lass (198, p.25) also provides three general principles that have to be followed in orthography development: simplicity, symmetry and pattern.   Simplicity is achieved by minimizing phoneme numbers and their types. Symmetry enables orthography developer to identify parallel structures in the sounds of a language; for example ejectives in labial, dental, and velar positions. Pattern is concerned with regularity of all types, including shapes of graphemes.

3. Research Methodology

The study follows cross-sectional research design and mixed methods research methodology. Text analysis mainly, the Amharic Fidel, and questionnaire are used. The participants for the survey questionnaire were teachers who taught in kindergarten, primary and secondary schools and universities. The research sites were Hawassa and Addis Ababa. About 121 participants filled in questionnaire, and of which 20 were applied linguistics PhD students at Addis Ababa University.   The participants were selected purposefully to include teachers from kindergarten to university. Availability sampling was used in all levels. Applied linguistics students were chosen because the topic is directly related to their field of study.

The survey included both objective and open ended questions. The responses from objective questions were entered into a computer and analyzed using the statistical package for social sciences (SPSS). Descriptive statistics, mainly percentile, is used for quantitative data analysis. The subjective questions were thematically summarized.

4. Results

I shall begin the analysis of the results with the phonemic inventories of Amharic language, and then examine the orthography as it is used in the 'Fidel'.

4.1 The Consonant Phonemes

Amharic has twenty-eight phonemic consonant sounds shown in table 1:

Table 1: Amharic Consonant Phonemes in Ethiopic (in bracket are the IPA forms)

Place of articulation ⇨	Labial		Alveolar		Palatal		Velar		Glottal
Manner Articulation ⇩	Vl.	Vd.	Vl.	Vd.	Vl.	Vd.	Vl.	Vd.	Vl.Vd.
Stops	(p)	(b)	(t)	(d)			(k)	(g)	(ʔ)
Fricative	(f)	(v)	(s)	(z)	( )	ሽ( )			(h)
Affricates			(s')		( )	( )			
Ejectives	ጰ(p')		(t')		(')		k' ( )		
Nasals		(m)		(n)		( )			
Lateral				(l)					
Flap				(r)					
Semivowel		w( )				(j)			

Note that voiceless (Vl.) and voiced (Vd.) sounds are placed to the left and right of each cell, respectively in the Table 1.   Bilabials /p/, /b/, p'/ and /m/; labio-dentals /f/ and /v/, and the labio-velar /w/ are categorized together in a more general term labial.

The consonant   (ʔ) which historically existed in Amharic, and does currently exist in some Ethiosemitic languages, such as Inor dialect of Guragina has currently merged with the vowel /a/; hence, no more is contrastive. Amharic Fidel, in addition to those in Table1, has a number of labialized sounds: lʷ, mʷ, rʷ, sʷ, ʷ, tʷ, kʷ, ʷ, bʷ, nʷ, ʷ, ʷ, dʷ, ʷ, t'ʷ 'ʷ, sʷ ' fʷ, most of which are phonetic; compare the two representation of the word   [kʷas] or   /kuwas/ 'ball'.

The non-phonemic Amharic consonants, (a few of which are phonemic in Guragina (cf. Fekede, 2002, p.110) are represented in orthography probably in favors phonetic reality. Another argument for representing the labialized sounds in Amharic is a paradoxical instance of economy. Though the labialized sounds increase the number of

letter in Amharic orthography, they enable to shorten the number of syllables. For instance, /   / pronounced /ku-wan-ku-wa/, when written phonemically is longer by two letters and by two syllables than when written phonetically: [   ] and pronounced [k'^{w}an-k'^{w}a]. Both the phonetic and phonemic forms are quite understood without ambiguity. So, whether, the labialized, phonetic consonants should be avoided or not is still question of debate linguistically. Leaving this debate aside, I will discuss the core of this article, over-differentiation.

4.2 Over-differentiated Graphemes

In addition to the phonemic forms, Amharic has multiple graphemes for certain consonants. For instance, /h/ has seven graphemes: ,   ,   ,   ,   ,   and   ; /s/ has two graphemes: and   ; /a/ has four graphemes: ,   ,   and   ; and /s'/ has two graphemes: and   . This means that 15 graphemes represent 3 actual sounds. Note that   is the fourth order of   [4] which is pronounced hə and not ha.

In Guragina, some literary works, including a 'Guragina-Amharic-English Dictionary' (Belayneh Alemu et al., 2002), have included the superfluous sounds. The orthography "Yeguragina Fider" as presented in Tenkir Tereda (1991, pp.62-64)[5], on the other hand, avoids the superfluous forms. The pronunciation problem of   ,   and   is also avoided by using only   , which was already pronounced with /ə/ sound including in Amharic.

4.3 The Vowel Phonemes

Amharic has seven vowel systems which are contrasting. Though the exact position of these sounds might slightly be different, they are shown in table 2:

Table 2: Vowel phonemes of Amharic

	Front	Mid	Back
High	i		u
Mid	e	ə	o
Low			a

The Amharic orthography also introduced   (ə) as the first order because the first order   which occurs in the Fidel is pronounced the same way as the fourth order

---

[4] In Tigrinya and   are contrastive, thus, are not superfluous.
[5] The year of Publication is as of Ethiopian calendar, and it is 1999 in G.C.

(a). This pronunciation problem resulted in over-differentiated graphemes: ,   which are also adopted by Guragina, Tigrinya and other languages using Ethiopic.

To wind up, simplicity which seeks minimizing phoneme numbers and avoiding variants is violated in Ethiopic in general and in Amharic orthography in particular.

Before I consider problems associated with over-differentiation, I will discuss patterns in Amharic orthography. To begin with, Ethiopic graphemes are characterized by four main shapes: one, two, or three legged, and rounded. The different shapes are the following:

One legged:
   k'ə   tə   ə   pə   gə   nə   ə   jə

Two legged:
   bə və sə ə kə hə zə ə s'ə p'ə də ə lə a

Three legged:
   t'ə   'ə   ha

Rounded:
   a   s'ə   wə   mə

Slightly different to this grouping are   'hə' two legged but the legs upward; 'sə' three legged but again upward, and   'rə'   'fə' one legged but with level flat bottoms. The second order of the consonants are shaped by adding (-) often to their right leg; third orders often add (_) to the bottom of their right leg; fourth orders often shorten their left leg; fifth orders often have a round shape diacritic to their right legs, sixth orders are historically mirror images of second orders, and the seventh order are mirrored image of fourth orders[6].

Thus, it can be argued that the graphemes in Amharic are well patterned despite some irregularities mentioned as exceptions.

---

[6] More detail on the shapes of Ethiopic is found in (Fekede, 2010; David, 1995).

So far, I have discussed the phonemic inventories, non-phonemic sounds, over-differentiated graphemes and the patterns in Amharic orthography. In the following subsection, I shall present the results of survey.

4.4 Problems of Over-differentiation

The problem of over-differentiated graphemes has been felt by many scholars, and attempts were made to reform them. Abraham (1981, pp.394-396) mentions lots individuals, groups and institutes who made such efforts. The individuals and groups Abraham mentioned include: Emperor Menlik-II who wrote his own letters (Abraham, 1981, p.4010), but was not successful to implement it; Teklemariam Semharay who introduced symbols for accent and gemination; Alemu Habtemichael, Ayyana Birru, Aleme Worku, Kidanewold Kifle, and Abbebe Retta, who prepared and /or improved Amharic type writer. According to Abraham (1981), a group called *Yetimihirt Wedajoch* 'lovers of education' made an effort to avoid the superfluous graphemes and had plan to make the shapes of Ethiopic graphemes cursive. Ethiopian Languages Study and Research Center in 1973 had also proposed the use of "one letter for one sound" (ELSRC 1995, p. II). By doing so, the center decided to avoid superfluous form in Amharic. In fact, the center seems more consistent to use the revised orthography in most of its recent publications. Following this decision, Haddis Alemayyehu also tried to avoid the superfluous graphemes in his novel *fikir iske meqabir* 'love up to the grave'.

Despite all these efforts, the problem of superfluous sounds in Amharic still exists, and is concern of linguists, educators, and sociologists. What is important then is discovering the reasons why the various reform efforts were not successful though the problems are persistent. Is the reverse thinking that the superfluous forms are not real problems true? To answer such questions, a number of questions were included in the questionnaire. About 150 questionnaires were administered, but only 121 were returned. Of the respondents, 94 (77.7%) were males and 25 (20.7%) were females; the rest 2 (1.7%) were missing values with regard to gender. The numbers of respondents who taught kindergarten and/or elementary school, high school and university were 36 (29.8%), 59 (48.8%), 24 (19.8%), respectively; again 2 (1.7%) were missing values. Regarding qualification of the respondents, 37 (30.6%), 60 (49.6%), and 24 (19.8%) of them have certificate or diploma, BA degree, and MA degree, respectively. The age of the respondents ranges from 21 to 60.

The problems of superfluous sounds were discussed in terms of pedagogy, electronics use, dictionary preparation, and consistency of use in publication. Each of this is discussed below.

Pedagogical problems of over-differentiation. The superfluous forms cause pedagogical problems for teachers on how to explain the forms with the same pronunciation. A scenario was reported by an informant in open ended question during survey. As to the informant: 'A boy was teaching "Fidel" to his younger brother. The elder brother told to his younger brother to repeat the letters after him. The younger brother also agreed and the lesson was started':

The Elder: ha,   hu,   hi,   ha
The younger: ha,   hu,   hi,   'I already said'.

The younger boy recited the lesson from order one to three, but at the fourth order he interrupted his elder brother saying: 'I already said'. This instance clearly shows difficulty of teaching superfluous forms to children.

To assess if teachers really have or not a problem in teaching such sounds, participants, native and second language speakers of Amharic, of survey were asked whether they agree or disagree to the statement: "It is problem for a teacher how to teach the over-differentiated sounds." Their response is shown in table 3.

Table 3: Teachers Have Problem to Teach

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	82	67.8	67.8	67.8
	Partly Agree	28	23.1	23.1	90.9
	Disagree	11	9.1	9.1	100.0
	Total	121	100.0	100.0	

The response reveals that the superfluous forms are problems for teachers to teach. Of all the 121 respondents, 82 (67.8%) strongly agreed, and 28 (23.1%) partly agreed to the idea. Only, a few, 11 (9.1%), of them disagreed that teachers have problem on how to teach the sounds.

As teaching alphabets is mainly the role of lower primary teachers, correlation statistics was run to check whether there is correlation between grade levels teachers taught. The correlation r = 0.05; Sig (2 tailed) at 95 confidence interval was not significant since the value is less than zero.

If teachers have problems in teaching the superfluous forms to their learners, it is expected in reverse that the learners will have problem to differentiate the forms. To substantiate this, the statement: 'many students fail to differentiate the shape and sounds of the superfluous letters', was asked to the participants to agree or not to it at different scales. Their responses are summarized in table 4.

Table 4: Students Have Problem to Distinguish the Over-differentiated Graphemes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	87	71.9	71.9	71.9
	Partly Agree	25	20.7	20.7	92.6
	Disagree	9	7.4	7.4	100.0
	Total	121	100.0	100.0	

The responses in table 4 show that the highest number of teachers 87 (71.9%) believe that the superfluous forms are problems for students to differentiate their shapes; 25 (20.7%) of them partly agree that learners cannot distinguish the shapes of the forms. Only 9 (7.4%) of the respondents; however, think students do not have problems in identifying the shapes of the graphemes with the same sounds.

Spaces on keyboard. To find out if superfluous forms are problems by occupying extra spaces in computer and mobiles hence causing discomfort in typing, participants were asked whether they agree at various scales to the statement: "The superfluous forms are problems in computer and mobile keyboards hence are problems in writing." The responses are shown in table 5:

Table 5: Homophone Problem in Computers and Mobiles

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	55	45.5	45.5	45.5
	Partly Agree	33	27.3	27.3	72.7
	Disagree	33	27.3	27.3	100.0
	Total	121	100.0	100.0	

As can be seen from the table, 55 (45.5%) of the respondents strongly agree that superfluous forms do occupy extra space and hence are problems in writing. About 33 (27.3%) of them partly agree to the view, but an equal number, 33 (27.3%), of them disagree to the view.

The fact that the superfluous forms are problems is best demonstrated with the Nokia mobile which has only nine keyboard buttons, and had to tackle the problem of accommodating the Amharic letters. Of the buttons, the first button contains punctuation marks; the second   ; the third   ; the fourth   ; the fifth **ጏ**   ; the sixth   ; the seventh   ; the eighth   **ዸ**; and the last   .

The palatal series   and others like labialized consonants are accessed by clicking the buttons again and again until the required letter reached. With such high importance of space, in this case the mobile key buttons, the programmers gave priorities to over-differentiated sounds than the contrastive and meaning bearing sounds that are not overtly shown on the buttons, and have to be searched for long to access them. Figure 1 shows the graphemes on a mobile keyboard:

Figure- 1: Amharic Graphemes on a Mobile Keyboard

Dictionary preparation and use problems. The superfluous forms are said to be problems for dictionary preparation and use. In preparation, there is no way to determine which letter to be used to spell a word having initial letter with the superfluous ones. This means, ordering words in dictionary as an entry is difficult. Similarly, it will be difficult to search meanings and uses of words which are unsystematically arranged as entry due to the superfluous letters. The dictionary preparation problem has already been witnessed by Wolf Leslau (1976) in his Concise Amharic Dictionary as it is stated in his own words as follow:

> As is well known, the Amharic alphabet has various letters that are identical in the pronunciation. This is the case of   and   , both letters being vowel carriers and no longer consonants; ,   and   pronounced h;   and   pronounced s;   and   pronounced s'. As a result of the merger of these letters, there is considerable lack of consistency in the Amharic spelling (Leslau, 1976, p. x).

To assess if similar or different views are felt by the respondents, the statement: 'Superfluous letters create problem in preparing and using dictionaries', was asked to agree or disagree with in a given scales. Their responses are shown in table 6.

Table 6*:* **Homophones Problem for Dictionary Preparation**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	49	40.5	40.5	40.5
	Partly agree	37	30.6	30.6	71.1
	Disagree	35	28.9	28.9	100.0
	Total	121	100.0	100.0	

As shown in table 6, 49 (40.5%) of the respondent strongly agree, and 37 (30.6%) of them partly agree that superfluous forms are problems for dictionary making and using. About 35 (28.9%) of them, however, disagree that the superfluous forms are problems to prepare or use dictionary.

Though the continuum of agreement is between strong or partial, the numbers of respondents who feel that the superfluous forms are problems is 86 (71.1%). Thus, we can conclude that the superfluous forms are felt to be problems by the respondents as was practically witnessed by Leslau (1976).

To cross check the attitudes of respondents the participants in questionnaire were asked in more general term positively worded statement to which they have to agree or disagree as: "The superfluous letters in Amharic cause no problem". Their response is shown in table 7.

Table 7: Many Shapes are not Problems

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	29	24.0	24.0	24.0
	Partly agree	33	27.3	27.3	51.2
	Disagree	59	48.8	48.8	100.0
	Total	121	100.0	100.0	

The largest number of respondents, 59 (48.8%), disagree that the sounds are not problems; 29 (24%), nearly quarter of the total percentage, strongly disagree that they are not problems; only 33 (27.3%) of them agree that the forms are not problems. The overall view of teachers; thus, shows that the superfluous forms are problems and need some kind of solution, if any.

4.5 Consistency in Pattern of Use of Superfluous Forms

Two questionnaire items were designed to find out if there are any definite patterns of use of the superfluous letters by the teachers. These were aimed to investigate whether the sounds are really problems or not on one hand, and to find out whether there are any rules of uses by teacher in this context and in everyday written discourse in general. The first item says: "It is wrong for a student to use   (ha) in a sentence:
[jalmaz jangət k' l b t jamral] 'Almaz's necklace is attractive'. Table 8 shows their responses:

Table 8: Ha Type used is Not Correct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	54	44.6	44.6	44.6
	Partly agree	27	22.3	22.3	66.9
	Disagree	40	33.1	33.1	100.0
	Total	121	100.0	100.0	

Table 8 shows that 54 (44.6%) of the respondents strongly agreed that the student is wrong in using the 'ha' type s/he used; 27 (22.3%) of them partially agreed that shape is inappropriate, yet quite significant number, 40 (33.1%) of disagreed that the student is wrong in using the 'ha' type.

This shows that there is no consistency among the teachers themselves; hence, they will evaluate their student as correct at a time and incorrect at the other implying that different scores for the same answer if a student is evaluated by different teachers. What is more, it implies that the student is evaluated about a lesson for which there was no input for there are no rules of the 'correct spelling use' of the different 'ha' shapes.

The second question, which was aimed at assessing if there is any consistency of use on the different shapes of 'ha' on the parts of the teacher, asks 'from the seven ways of spelling the English equivalence of 'necklace'; which one sounds better' for each participant. The options given as choice were the following: H1:   H2:   H3:   H4:   H5:   H6:   H7:   . Their response is shown in table 9:

Table 9: The Best h Type Accepted as Correct to Spell the Word

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	H1	65	53.7	56.5	56.5
	H2	11	9.1	9.6	66.1
	H3	28	23.1	24.3	90.4
	H4	7	5.8	6.1	96.5
	H5	2	1.7	1.7	98.3
	H6	2	1.7	1.7	100.0
	Total	115	95.0	100.0	
Missing	System	6	5.0		
Total		121	100.0		

The responses here are quite interesting in that they shows some tendency of consistency in use though it is partly matter of preference than any justifiable rule as I will show later in discussing the reasons for preference of various shapes.

Table 9 shows that 65 (53.7%) of respondents thought H1:   is the preferred spelling of use. The next higher number of respondents, 28 (23.1%), preferred the spelling H3:   . The H2:   and H4:   were preferred spelling rules by 11 and 7 individuals with (9.1%) and (5.8%), respectively. H5:   and H6:   were preferred each by only two individuals, each accounting 1.7 %. Surprisingly, no one chose the H7:   as appropriate form. This some how derivatively contradicts with 40 individuals' responses on Table 8 who said that the student was not wrong in using this form.

Another important fact is that six individuals did not supply their preference for they could not decide which one of the seven forms are the correct spellings. These show that there is no any consistent pattern of use of the superfluous forms.

4.6 Attitudes toward Alphabet Use and Reforms

Attitude-based questions were aimed to assess teachers' opinions toward making possible changes in superfluous forms. The first statement is concerned with their attitude towards teaching many shapes. The statement reads: 'Teaching children for instance seven shapes for a single sound is not appropriate'. Their response is shown in table 10.

Table 10: Teaching Many Shapes the Same Sound is Not Good

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	52	43.0	43.0	43.0
	Partly agree	30	24.8	24.8	67.8
	Disagree	39	32.2	32.2	100.0
	Total	121	100.0	100.0	

As can be seen from table 10, maximum numbers of respondents, (43%), strongly agree that teaching the superfluous forms to children is inappropriate. Similarly, 30 (24%) of them partly agree that it is unjust. However, about 39 (32.2%) of them disagree that teaching children the superfluous forms is inappropriate. Though total of 67% think it is unjust to teach superfluous forms whose pattern of use is not clear even for teachers, quite many think students have to learn them.

The other statement asks to agree or disagree participants if 'Sounds having many shapes but representing single sound must be represented by a single grapheme'. Table 11 shows their response:

Table 11: Many Homophones Should be Represented by a Grapheme

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	50	41.3	41.3	41.3
	Partly agree	25	20.7	20.7	62.0
	Disagree	46	38.0	38.0	100.0
	Total	121	100.0	100.0	

As can be seen from the table 11, 50 (41.3%) of the respondents strongly agree that each superfluous form should be represented by a single form. Another 25 (20.7%) of them partly agree to this idea. However, 46 (38%) of the respondents disagree that the superfluous forms to be represented by a form representing each sound. This shows that there is no consensus on the parts of teacher that the superfluous forms should be avoided for one reason or another.

Some of the reasons for and against maintaining the over-differentiated forms are discussed under the respondents' general comments. The other questions seek participants' preferences on the shapes of the alternative letters, provided that only one form is required. The question also requires providing reasons for the preferences made. The preference questions and their responses are discussed below.

'If only one of the 'H's is to be used, which shape do you prefer?' Below in table 12 is their response.

Table 12: The H Preferred as a 'best'

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	H1	104	86.0	89.7	89.7
	H2	11	9.1	9.5	99.1
	H3	1	.8	.9	100.0
	Total	116	95.9	100.0	
Missing	System	5	4.1		
Total		121	100.0		

Of the four shapes of Hs offered to them as a choice: H1 , H2 , H3 and H4 á, the majority, 104 (86%), preferred the H1, only 11 (9.1%) preferred H2, and one person (0.8%) preferred H3. There was no one who chose H4.

The respondents were also asked why they preferred each of the shapes. They offered the following reasons:

H-Type	Reason	Number of response
1	It is the first in order in Fidel	16
	It is easy to shape	63
	It is easy to teach beginners	10
	It is used frequently in written works	3
	I just accustomed to use it	8
2	It is easy to write	6
3	It is Easy to identify	1
4	…	…

'If only one of the S's is to be used, which shape do you prefer?' The preference goes as in table 13.

Table 13: Preference to S' Types

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	S' 1	111	91.7	94.1	94.1
	S' 2	7	5.8	5.9	100.0
	Total	118	97.5	100.0	
Missing	System	3	2.5		
Total		121	100.0		

From the two shapes of S's, the greatest number of the respondents, 111 (91.7%), preferred the S' 1, and only 7 (5.8%) of them favored the S' 2. Three individuals (2.5%) of them did not make any choice. Their reasons for the preference of either shape are the following:

S' Type	Reason	Number of persons
1	It is simple to shape	51
	It is easy to teach (after teaching **0**)	6
	I often use it	5
	is confused with	37
2	I use it more often	4
	It is easy to teach	2
	It has similarity with /l/ and /d/ and easy to shape 1	

What is paradoxical is the fact that the text analysis shows that people more often use the S' 2 than the S'1, yet the respondents suggest the use of the type 1 for reasons they offered above. Another problem is the fact that we do not find the labialized form of S'1 while we have for the S' 2.

'If only one of the As is to be used, which shape do you prefer?' Here is their response.

Table 14: Which A is Better?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A 1	97	80.2	84.3	84.3
	A 2	18	14.9	15.7	100.0
	Total	115	95.0	100.0	
Missing	System	6	5.0		
Total		121	100.0		

As table 14 shows, maximum number, 97 (80.2%) of the respondents preferred the A1, while only 18 (14.9%) chose the A2. Of all, 6 (5%) of them did not give their preferences. The reasons the respondents' preferences of each shape are as follow:

A -Type	Reason	Number of persons
1	It is accustomed by many people	30
	It is easy to shape	22
	0 is confused with 0 (zero) and	22
	It is elegant	4
	This is vocalic and the other is consonant	1
	It can be associated in shaping: , and	2
0 2	It is easy to shape	12
	I accustomed to use it	1

It seems that the glottal stop *0* is confused with the vowel, instance of merger, and its shape confuses students since it is associated with 0 (zero).

Very unfortunately, the preferred shapes for S1   and S2   were not asked in the questionnaire, and why they were not included was asked by participants as shown in general comments below.

The last question asked to participants was 'who is the highest responsible body to make reforms and disseminate, such orthography changes and other writing conventions, should be. The institutes brought into attention were Ministry of Science and Technology (MoST), Ministry of Education (MoE), Language Study Institutes (LSI), and Universities and Schools (USs). The responses are shown in table 15.

Table 15: Greatest Responsible Institute/Office

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MoST	1	.8	.8	.8
	MoE	17	14.0	14.3	15.1
	LSI	93	76.9	78.2	93.3
	USs	8	6.6	6.7	100.0
	Total	119	98.3	100.0	
Missing	System	2	1.7		
Total		121	100.0		

Of the institutes and offices who are thought to be concerned with orthography panning and implementing, language institutes are said to be more responsible by the respondents. The maximum, 93 (76.6%), of them said this. Some respondents, 17 (14%), and 8 (6.6%) of them replied that MoE and universities including schools, respectively are responsible bodies. Only one person (0.8%) said that MoST is responsible. Two individuals did not supply answers.

It is worth mentioning why these offices have been focused. First, Ministry of Science and Technology is the main body held to be responsible in controlling software on orthography, their appropriateness, dissemination, uniformity, etc. At this age of information and technology where language, technology and society are inseparably woven together, the role of this office is tremendous though seemingly not recognized by the respondents. Second, Ministry of Education is one of the main offices responsible in teaching material preparation and dissemination, and the main tool of such writing materials is the orthography. Third, language study institutes of course as their name indicate and preferred by many of respondents, are responsible in orthography reform and standardization process. In fact, the Ethiopian Languages Study and Research Center (cf. Tenkir, 1991), as mentioned so far, has decided to avoid the superfluous forms in Amharic and began implementing that in its publications. The problem, however, is that the publications of the institute are only an iceberg of the publications in the country. Hence, the influence of the institute in implementing the change in all publication is negligible, and this is a question of policy, which needs an official decision by MoE, MoST and other stake holders including schools and universities.

4.6 General Comments of Respondents

The respondents had various comments in favor or against the superfluous forms, possible changes, etc. The comments are grouped as follow:

i.   Comments against maintaining of superfluous forms

- If a single sound can do the role, redundancy is useless (2 individuals).
- There should be reasonable evidence to teach children about each sound, and the sounds to be taught should be limited to those that have phonemic status.
- If the homophones shall remain unchanged, rule of their use should clearly be offered (3 individuals).
- Using such superfluous sounds is particularly difficult for beginners and 2nd language learners; so they should be avoided.
- Not confusing, single grapheme should be used for each sound.
- Language experts should solve these problems.
- 'Fidel' should be rewritten avoiding the superfluous sounds.
- Sounds without real function should be avoided if the language shall be learned by many including, second and foreign language learners.
- Learning the letters is tedious; they consume time; they require 'effort' without having them significant differences; so, they should be reduced.
- If *Yek'es timihirt betoch* "priest schools" were widely used, as we used to learn with, these sounds would have not been difficult; but with the current situation, teaching the differences of the superfluous graphemes is quite difficult.
- In Ge'ez, these sounds have difference, but not in Amharic, so better avoided in Amharic but kept in Ge'ez.
- They simply extend child's letters learning or acquisition time, so better avoided
- Using none confusing and clear letters is important for users and to the development of the language.
- The issue is my concern and my problem; I wish a solution is found.
- Amharic has 274 [202] letters, and the superfluous sounds further complicate it.
- They are complicating things with having them additional importance.
- *0* is not only confused with   but also with zero (0) and English letter o; so may be better to avoided it.
- it is waste of time and money
- The first and fourth orders of the superfluous forms overlap unlike as in bə and ba; so should be solved.
- Language institutes should solve such problems by producing corrected the documents, and then MoE should distribute the changes to all schools and institutes.
- Haddis Alemayehu tried to avoid such superfluous letters in his writings, but the problem still exists in Amharic though Tigrinya journalists made significant progress in avoiding them.

Based on the participants' responses who are against maintaining the superfluous graphemes, it is possible to draw conclusion that the graphemes are time consuming, confusing, and tedious to beginners and second language learners. Therefore, the redundant graphemes should be avoided; if their existence is required for any reason, their rule of use should be provided. As to who should make reform on the orthography of Amharic, in avoiding the superfluous graphemes or providing rule of their use, language institutes and MoE are suggested as responsible for improving the orthography and disseminating the improved forms, respectively. Based on the power structure in Ethiopia, it is ministry of culture which is responsible for the reform and MoE for the dissemination and appropriate implementation.

ii.   Comments in favor of maintaining the superfluous forms

- Though redundancy is not important, no significant harm.
- Instead of avoiding the existing ones, it is good to create functional difference for each homophone; they are problems only to beginners. Once the sounds are acquired, they do not cause problems.
- The existence of the variety offer beauty to the writing.
- Teaching when to use each letter with the same sound is better than avoiding them. For me,   written as   sounds different word than the actual word with a gloss 'sun'.
- Though avoiding these confusing shapes is important, canceling them totally form our dictionary does not seem appropriate to me for they might have historical importance. Therefore, other ways of maintaining them should be studied.
- They should be kept as a heritage.
- Letters like **ዐ** have image creating capacity in words like **ዐ**   and **ዓ**   so may be kept.
- I do not think they are problems, they have different functions.
- May be at earlier stages, students can be taught only one sound and one shape; at a later stage, the other shapes can be taught without losing the heritages.
- First teachers should be taught on how to use the sounds with possible words, and then teachers have to appropriately teach the sounds and their uses.

The main justifications to keep the superfluous forms in summary are: they do not cause much harm; they have different functions which have to be learnt even by the teachers; they offer variety and beauty, and they are historical heritages. With proper teaching methodology, example teaching the homo-graphemes at different stages, they can be maintained and easily learned.

iii.   Mid grounds

- Some documents written with these letters may not be read by the upcoming generation, yet with the technological advancement and government's committed and strong decision, the change can be made possible.
- As using the one instead of the other is simply a habit formation, it is not problem to avoid the superfluous sounds; yet, they are heritages NOT to BE thrown away.
- I think the issue is important, but it might be difficult to make change. However, it is possible to make difference if it is done in consultation with MoE and with schools at the bottom.

iv.   Reminders

- The shape of " " and " " is forgotten, and should be considered (6 individuals).
- What if also making four dots a single to show full stop? And there must be solution for geminated consonants which have to be taught in schools.

4.7 **Adapting Ethiopic to Different Languages Writing Systems**

Based on the survey result, and principles of orthography development, and physiological ease or difficulty in production and/or acquisition of sounds, I propose the following summary of orthography for Amharic:

	ə	u	i	a	e		o
b							
v							
s							
k							
l							
z							
d							
p'							
h							
t'							
'							
s'							
w							

m
g
n

p
t

j
k'
r
f

      Note that the consonants on the left combined with the vowels at the top offer the correct pronunciation of each sound. The fifth order on the left Latin letters form is missing because the fifth orders are the representations of the vowels that appear at the top. If phonetic reality is considered more important than economy, the predictable labialized sounds of Amharic given below, should also appear in the orthography:

      The claim here is based on pedagogical advantage and ease of use in modern technology. At the same times, the proposal assumes maintaining historicity of over-differentiated sounds that are not represented in the current version can still be kept in literature, such as bibles of earlier versions in which the graphemes are well patterned. Acceptability of the graphemes can be created through continuous use of the graphemes; the new generation particularly will know the actual graphemes that they learn.

      Though the proposal made can handle the Amharic sound system, it cannot accommodate other Ethiosemitic languages in particular and Ethiopian languages in general. If Ethiopic has to be used in a wider context, to handle inventory phonemes of Ethiopian languages, 'Ethiopic Phonetic Alphabet (EPA)' has to be established. Thus, languages using Ethiopic can adopt possible letters (graphemes) for their writing system from such a list.

      The main reasons for proposing EPA are the following:

- Nearly all Ethiopian languages are using Ethiopic in one way or another.
- Some languages are using Ethiopic scripts which are quite unfamiliar from what we know in Amharic Fidel. Suri translation that uses different signs; the implosives in many Cushitic and Omotic languages; the full palatal series of k^j, g^j, k^{ij}, h^j; the pharyngeal and glottal differentiation of h in Tigrinya are some examples.

- There are sounds which are not accommodated in computer software and have no place in key board, such as Guragina palatalized and labial phonemes;
- There is a need to accommodate length and germination in the writing system including in Amharic;
- It can help the development and spread of Ethiopic in Ethiopia, Africa and beyond.

As this requires the review of the sound system of Ethiopian languages if described, and describing them if not, it needs a group effort. Thus, the task of developing EPA should be the task of policy makers and linguists in Ethiopia and/or elsewhere.

5. Discussion

The over-differentiated sounds in Amharic are used neither consistently nor have maintained the once said to have sociolinguistic significance. Pedagogically, they overload memory of beginning learners who may be native or second language learners. The orthography of Amharic, though has patterns, does not fit into the Berry (1968)'s principles of economy of time and labor in learning to read and write; it lacks consistency, and there are a number of ambiguities caused by over-differentiation. Regarding the possible reforms, the attitude of participants was divergent; there were pro-maintenance of over-differentiated sounds mainly for historical reason, and pro-reform groups with reasons they provided which are consistent with Berry (1968). Many languages using Ethiopic script are adopting the Amharic over-differentiated graphemes to their language system. If interventions are not made, the graphemes will remain problems not only to Amharic learners, but also to other language users who directly are adopting Amharic orthography. It will also hamper the possible wider use of the writing system to the large groups of Ethiopian languages. Many of the Cushitic and Omotic language users have already run away from using Ethiopic in preference to Latin based script.

6. Conclusion

- There is quite great deal of simplicity in Amharic orthography but, there is a problem of over-differentiation and inclusion of phonetic sounds in the orthography.
- The superfluous graphemes are not used in any consistent ways.
- The pronunciation of the first order *ha* is misleading and must be pronounced as *hə*, similar to others, such as *bə*.
- The vowel   was unnecessarily introduced into Amharic while   could be pronounced ə.
- There are more convincing arguments by participants, closer to principles of orthography development, for possible reforms.

7. Recommendation

- It is suggested that the over-differentiated graphemes should be avoided.
- The phonetic sounds, such as labialized consonants may be maintained in the orthography to account for phonetic reality.
- EPA that includes the possible human speech sounds, representing Ethiopian languages, should be developed so that Ethiopic writing system can be used, instead of Latin based alphabet, to all Ethiopian languages.
- Finally, making reforms on the orthography and implementing it should be the common efforts of stake holders including Science and Technology, particularly in software development, Ministry of Culture, and Ministry of Education as body of decision makers and implementers, and universities and schools at large in codifying and disseminating the writing system.

8. Definitions of Terms

Grapheme: is "the abstract type of a letter and its position in a given writing system, much more like phoneme, the term on which it is modeled"(Coulmas, 2003, p.36).

Letter: is used in the sense of basic symbols used for writing system, without making distinction between syllabograms, a syllable based grapheme or a single segment or phoneme based writing.

Orthography: is "the standardized variety of a given, language-specific writing system" (Coulmas, 2003,p.35).

Over-differentiation: refers to a situation whereby a phoneme or a grapheme is represented by more than one segment or grapheme, such as the /h/ represented by the graphemes   in Amharic.

Phoneme: is "a phone [sound] which fulfils a meaning-differentiating function in a given language" (Coulmas, 2003, p.91).

Under-differentiation: refers to situation in which the same segment or a grapheme represents two or more phonemes. The glottal stop / / and the vowel / / in Amharic are merged, hence representing only /a/, which is *over-differentiation*, yet the glottal stop is not represented at all, an instance of *under-representation*.

References

Abraham Demoz. (1981). "Amharic script reform efforts" in Segert Stanislav (ed.) *Ethiopian Studies: dedicated to Wolf Leslau on Occasion of his 70ᵗʰ Birth Day*, Nov.14, 1981.

Appleyard, D. (1995). *Colloquial Amharic:The complete course for beginners*. Rutledge.

Belayneh Aleme etal. (2002). *Guragina- Amharic- English dictionary*, Gurage Zone Education Bureau (Welqit'e), Bole printing press.

Berry, J. (1968). "The making of alphabet", In Fishman Joshua (ed.), *Reading in the Sociology of Language*, The Hague: Mouton.

Coulmas, F. (2003).*Writing systems: An Introduction to their Linguistic Analysis*. Cambridge, Cambridge University Press.

Fekede Menuta. (2002). *Morphology of Eža*, MA thesis, School of graduate studies, Addis Ababa University, Addis Ababa.

Fekede Menuta. (2010). Analysis of Ethiopic in the lenses of phonemic principles; In: Ayele Tesema, Ajebu Nurfeta, Alemayehu Chala (eds), *Proceedings of Hawassa University Annual Research Review Workshop*, PP.184-211.

Jəitjopia kʷ'ankʲʷawo m r m r ma kəl (ELSRC). (1995*). Jəg z k' nejat: jəs nət' bəb k' rs n babu kənət rgʷamew*; Vol-3, Addis Ababa University.

Lass, R. (1984). *Phonology: An introduction to basic concepts*; Cambridge, Cambridge University Press,

MoE. (1994). *Transitional government of Ethiopia: Education and training policy*. Addis Ababa.

Tenkir Tereda. (1991). *Təmsajit, wəmaka, wəkma ot Jəbetə-gurage m salejawi n g g ro* ; Jəitjopia kʷ'ankʲʷawo m r m r ma kəl (ELSRC); Addis Ababa University.

Wolf, L. (1976). *Concise Amharic Dictionary: Amharic-English, English-Amharic*. Otto Harrassowitz, Weisbaden.

Zenamarkos Endale. (2008). "t' ntawi yəg z t m h rt na k' rsu", In: Prof. Hussein Ahmed (ed.), *Ethiopia philology*, Vol.1. No 1.