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Somali Dialects in the United States: How Intelligible is Af-Maay to Speakers of Af-Maxaa?

Deqa Hassan
Minnesota State University - Mankato

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By

Deqa M. Hassan

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Dr. Karen Lybeck, Advisor

Dr. Harry Solo

ABSTRACT

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By

Deqa M. Hassan
M.A. English: TESL

Minnesota State University, Mankato
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The objective of this study was to determine the degree of intelligibility of Af-Maay to Somali university student speakers (n=21) of Af-Maxaa in the United States by implementing a perceived intelligibility test. The investigator aimed to test whether time spent in the United States, language contact with Af-Maay speakers, native Somali dialect, or the region of origin in Somalia affected the intelligibility of Af-Maay. The one-sample t-test showed that Af-Maay is partially intelligible to speakers of Af-Maxaa; $t(21)=4.623$, $p=.000$. This appears to agree with Crystal's (1987) Type 5 language-dialect relationship category, where there is a partial intelligibility due to the overlapping history between Af-Maay and Af-Maxaa speakers. The results of the Pearson's correlation coefficient revealed statistically significant associations between the participants' level of understanding of Af-Maay and Standard Somali, their association with Af-Maay speakers, and their time spent in the United States. These results imply that there is a combination of linguistic and non-linguistic factors influencing the intelligibility of Af-Maay.

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CHAPTER 1: INTRODUCTION

The exact number of languages in the world is unknown, but is estimated to be at least 6,000 and possibly more than 7,000 (www.sil.org/ethnologu/). The reasons for this ambiguity are mainly twofold: first, is the fact that less than half of the world's spoken languages have a written form. Many such languages are dying out and, thus, it is difficult to know which languages are regularly in use (Skutnabb-Kangas, 2000). Second, the high degree of feature variation that can occur between two linguistic varieties, while still being mutually intelligible, makes it difficult to reach consensus among linguists, governments, and the language communities themselves as to whether two varieties constitute two separate languages or two dialects of the same language.

A language can be considered to be composed of dialects that are all inter-comprehensible or mutually intelligible (Crystal, 1987). Naturally, all languages have changed throughout history and will continue to change; this change results in language variation (Findlay, 1998). So it comes as no surprise that all languages exhibit language varieties and that the Somali language is no exception with the following three major dialect groups: Northern (Af-Maxaa), Benaadir (Af-Benaadir), and Maay (Af-Maay) (Gillette et. al, 2006; Saeed, 1999). Somali, an East Cushitic language and part of the Afro-asiatic language phylum (Crystal, 1987), is spoken by approximately thirteen million speakers worldwide (Lewis, 2009). Af-Maxaa is the most commonly spoken throughout Somalia (Saeed, 1999), and Standard Somali is derived from it (Gillette et. al, 2006). Af-Benaadir is spoken along the central coastal region of Somalia, while Af-Maay, the third dialect group, is spoken in the central regions surrounding the inter-

riverine areas of Somalia (Gillette et. al, 2006; Saeed, 1999; Lewis, 2002), as shown in Figure 1.1.

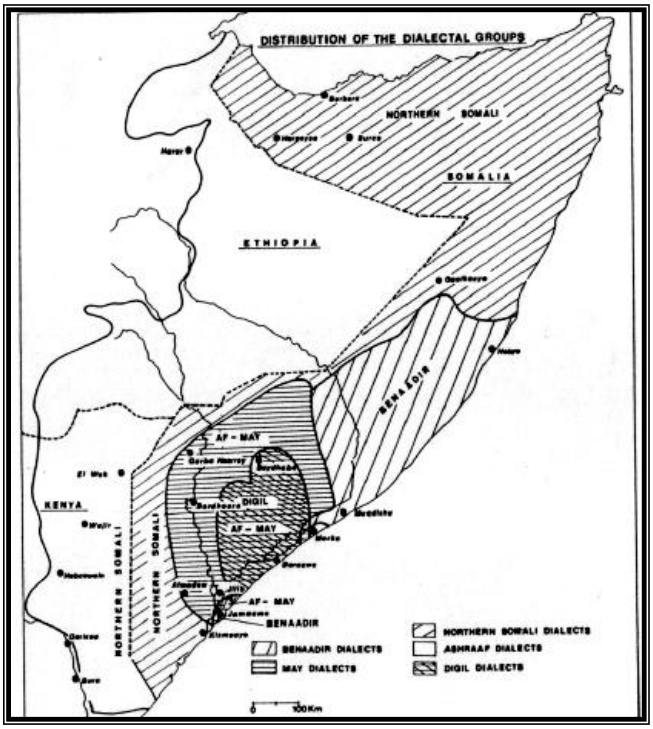


Figure *1.1*. Distributions of Somali Dialect Groups. (Adapted from LandInfo, 2006, p.18).

Since Standard Somali is used extensively in many different arenas, such as in the media, speakers of both Af-Maay and Af-Benaadir usually speak and understand Af-Maxaa too (Lehman & Eno, 2003). Additionally, Af-Benaadir and Af-Maxaa are described as being fairly mutually intelligible (Saeed, 1999). All three main dialect groups have some similarities in their written form, but fewer similarities in their spoken forms (Gillette et. al, 2006), with the least amount of similarities being between Af-Maxaa and Af-Maay (Saeed, 1999). In fact, previous research on Somali students at Lafoole College in Lafoole, Somalia, which lies within the Af-Maay dialect area southwest of Mogadishu, showed that the spoken form of Af-Maay as not being mutually intelligible with Af-Benaadir or Af-Maxaa (Lewis, 2002; Saeed, 1982). Even though Af-

Maxaa has been shown not to be mutually intelligible with Af-Maay in this context, the degree of intelligibility is undocumented, though their differences have been suggested to be analogous to that of Portuguese and Spanish (Lewis, 2002).

In addition to all languages having varieties, there are individual variations within the speakers of each language variety; these unique, individual ways of speaking are referred to as idiolects (Crystal, 1987). A dialect can be said to be a collection of idiolects. Moreover, the term dialect is interchangeable with language variety. A dialect is different from an accent (Chambers & Trudgill, 1998), in that an accent is defined as pronunciation and/or phonological variation, while dialect variation refers to grammar, vocabulary, and pronunciation (Findlay, 1998). For example, if we talk about the differences in British English and American English accents, we could use the example of post-vocalic /r/ deletion, but if we refer to the dialectal variation we would also add features such as the lack of an article in the British phrase *in hospital* as compared to the American *in the hospital*, or the use of blokes vs. guys to refer to young men. Since it is the spoken variety that appears to be in question, we may wonder if accent differences play more of a role in the intelligibility level of Af-Maay to speakers of Af-Maxaa than do dialect differences.

In Table 1.1, Crystal (1987) identifies five ways language varieties can be related to one another based on intelligibility and cultural history. If the dialects in question are mutually intelligible and have a common history, then they are the same language and therefore classified as Type 1. For instance, because American and British English are mutually intelligible and have a common history, they are an example of Type 1. When the dialects in question are unintelligible, on the other hand, nor share a common history,

then they are considered to be different languages and have a Type 2 relationship. An example of this is Hindi and English.

Table 1.1

Language-dialect Relationships (Modified from Crystal, 1987, p. 287)

Type	1	2	3	4	5
Language	Same Language	Different Language	Unclear	Unclear	Unclear
Mutual Intelligibility	Mutual Intelligible	Mutually Unintelligible	Mutually Intelligible	Mutually Unintelligible	Partially (un) intelligible
Cultural History	Common Cultural History	Different Cultural History	Different Cultural History	Same cultural History	Overlapping Cultural History
Example	British English & American English	English & Hindi	Norwegian & Danish	Cantonese (Chinese) & Hakka (Chinese)	Uzbek & Turkish

The third, fourth and fifth types of language-dialect relationships exhibit a more complex situation between varieties where the two criteria are not in sync. Language varieties with a Type 3 relationship, for example, are mutually intelligible, but do not have the same cultural history. As a result, their language-dialect relationship is unclear, such as the case with Norwegian and Danish. Of particular interest to this study are the Type 4 and Type 5 relationships because even though the speakers of Af-Maxaa and Af-Maay share a cultural history, the intelligibility between them is unclear. Cantonese (Chinese) and Hakka (Chinese) are language varieties with a Type 4 relationship because they have same cultural history but are mutually unintelligible. Uzbek and Turkish, however, are an example of a Type 5 language-dialect relationship because they have an overlapping culture history and are partially intelligible, but their exact relationship is also unclear.

Categorizing the relationship between linguistic varieties is further complicated by the presence of a geographical dialect continuum, or "a continuum of dialects sequentially arranged over space: A, B, C, D, and so on" (Wardhaugh, 2009, p. 42). Due to this geographic dialect continuum, dialects at one end may be mutually intelligible, while dialects at opposite ends of the continuum may not be mutually intelligible. Consequently, "the speakers of the same dialects at the two ends of the chain will not understand each other; but they are nonetheless linked by a chain of mutual intelligibility" (Crystal, 1987, p. 25). For example, Norwegian, Swedish, and Danish are connected by the Scandinavian continuum, which may explain the fact that Danish and Southern Swedish speakers understand each other more than do Swedish speakers from other areas, while Swedish and Norwegian speakers have little problems understanding each other (Gooskens, 2007). This same situation could also account for the mutual intelligibility between Af-Benaadir and Af-Maxaa, and/or the lack of intelligibility of Af-Maay to speakers of Af-Maxaa and Af-Benaadir (Saeed, 1999), since some of the dialect groups overlap and/or are very close in proximity in some geographic areas (See Figure 1.1). For example, Af-Benaadir is spoken in the city of Merka, which is very close to the Af-Maay dialect region. Therefore, some Af-Benaadir speakers from Merka could understand Af-Maay, while some Af-Maxaa speakers from the city of Berbera could have difficulty understanding Af-Maay because they are at the other end of the continuum in the northern region of Somalia.

The dialect continuum issue is further exacerbated by the inclusion of a number of non-linguistic factors, such as language contact and politics (Gooskens, 2007; Wardhaugh, 2009). Take the Somali language for example, even though it is arguably the

most documented Cushitic language, particularly in terms of lexicology, research on the possible non-linguistic factors involved is few and far between (Saeed, 1999). One research study that explored their earlier linguistic relationship was conducted by Ali (1983), in which vocabulary from the Somali language varieties were collected and their results were used to construct a graphical representation to demonstrate their relationship (See Figure 1.2). Each line in the graphical representation represents a split or dialect differentiation. For example, the proto-Coastal-Northern dialect split into proto-Cadale-Northern, the ancestral Northern dialect group and proto-Coastal, the ancestral Coastal dialect group, during the end of the first millennium, which eventually further differentiated into more recent dialect groups. Moreover, the proto-Riverine dialect group, which is the ancestral Af-Maay dialect group, split into Afgoi and Baydhaba sometime during the thirteenth and fourteenth century. Even though the exact time of these differentiations is unknown, they appear to suggest that there is a correlation between dialect differentiation and language contact. As the spread and subsequent differentiation of the Northern dialects correlate with the north to south movement of the Somali people.

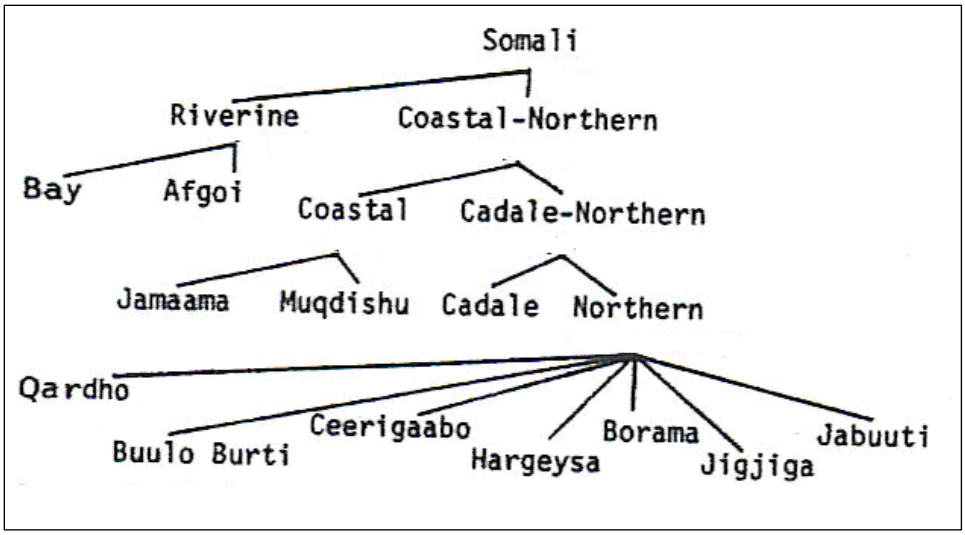


Figure 1.2. Summary of Somali Dialect Differentiation. (Modified from Ali, 1982, p.240).

The non-linguistic factor of politics was also an important aspect in the spread and differentiations of the dialects. For example, southwestern Asian immigrants settled in the coastal regions of Somalia and established trading posts by marriage, which led to Sultanate rulers in the area. This in turn may have led to the split of the proto-Coastal-Northern dialect into Coastal and Northern dialect groups as the Sultanate rulers were politically powerful enough to incorporate their own language varieties into use.

In an effort to further clarify the work of these studies (Ali, 1982; Lewis, 2002; Saeed, 1982; Saeed, 1999), and thereby gain insight into Somali language varieties, this study will examine the relationship between Af-Maay and Af-Maxaa; specifically, the degree of intelligibility of Af-Maay to speakers of Af-Maxaa. This relationship will be explored by first examining previous research in Chapter 2, with an outline of the linguistic and non-linguistic factors that may affect intelligibility, their corresponding criteria used to figure out the relationship between language varieties, and ending with

the specific questions posed by this thesis: (1) “How intelligible is Af-Maay to Somali university-student speakers of Af-Maxaa living in the United states?” (2) “What type of language-dialect relationship does Af-Maay have with Af-Maxaa?” (3) “Is the degree of intelligibility of Af-Maay to speakers of Af-Maxaa due solely to linguistic factors, non-linguistic factors, or a combination of both?” In order to answer these questions, data were collected and analyzed from 21 Somali university students, which will be described in Chapter 3. Chapter 4 will display the results and discuss their possible explanations. Suggestions for future research and implications for the degree of intelligibility of Af-Maay to speakers of Af-Maxaa will be presented in Chapter 5.

CHAPTER 2: LITERATURE REVIEW

According to Chaoju and van Heuven (2009), when deciding whether a linguistic variety is a dialect of another language and a different language altogether, the quantity of differences between the two varieties has to be examined. For instance, if two speech varieties have many differences, then the two varieties are believed to be different languages, while they would be considered to be dialects of the same language if there are fewer differences. The differences and similarities between languages have been used to form linguistic family trees. Establishing the family trees of languages is important in linguistics because it answers questions such as the geographical movement of the speakers historically and the nature of their linguistic interaction with outsiders. However, there is not a universally agreed upon criterion used for examining the differences and similarities between language varieties since both linguistic and non-linguistic are involved, but here we will start with a linguistic description of the variations between Af-Maaxa, the standard variety, and Af-Maay.

Classifying language varieties based on linguistic factors

There are three ways to linguistically classify a language: genetic classification, areal classification, and linguistic typology (O'Grady, Dobrovolsky & Aronoff, 1997). Genetic classification refers to classifying languages based on their ancestral descent, as discussed in Chapter 1, while areal classification refers to language classification based on geography, as discussed in the beginning of this chapter. When languages are classified based on their structural characteristics, it is referred to as linguistic typology.

Structural Differences. There are three linguistic structural levels: phonology, grammar and semantics (Crystal, 1987). Furthermore, the phonology level is divided into

segmental (vowels, consonants, and syllables) and suprasegmental (prosody) units/levels, while grammar is divided into morphology and syntax, and semantics is divided into lexicon and discourse. For instance, the reason why there are some intelligibility problems with Norwegian and Danish speakers is due to differences in phonetics. The intelligibility problem with Danes and Swedes, on the other hand, is due to phonological and lexical differences. The differences in phonology between Af-Maay and Af-Maxaa is shown in Table 2.1, while their grammatical differences are shown in Table 2.2 (Gillette et. al, 2006; Johnson, 2006; Lehman & Eno, 2003; Saeed, 1982; Saeed, 1999; Saeed, 2007; Tosco, 1993).

Phonology. In linguistics, phonology is the study of sounds (Crystal, 2008), broken down into phonemic units including consonants, vowels, and tonal units (Saeed, 1999). Table 2.1 describes phonological differences between Af-Maay and Af-Maxaa, and is organized in the following order: sources, consonants, vowels, pharyngeal and glottal sounds, and double consonants.

Table 2.1

*Phonological Differences between Af-Maay and Af-Maxaa**

Phonological Differences	*Source*	*Consonants*	*Vowels*	*Pharyngeal & Glottal Sounds*	*Doubled Consonants*
Af-Maay	Johnson (2006); Lehman & Eno, (2003); Saeed (1982)	24	5	None	*r, m* and *l* are doubled within some words *b, d, g,* and *n* are not doubled, replaced by *v, ð, ɣ,* and *ŋ*.
	Lehman & Eno (2003); Saeed (1999)	*b, p, t, ǰ, ǰʰ, d, ð, r, s, ʃ, dʰ, g, ɣ, f, q, k,,l, m, n, ŋ, ɲ w, h, j*	*a, e, i, o, u*	≠ ħ (ha) & ʕ (ʻa)	*v, ð, ɣ,* and *ŋ, ɲ,* and *jʰ are* unique to Af Maay
Af-Maxaa (Standard Somali)	Johnson (2006); Lehman & Eno (2003); Saeed (1999)	22	5	Present	*l, b, d, g,* and *n* are doubled within words
	Lehman & Eno (2003); Saeed (1999)	*b, d, t, f, m, w, dʰ, s, n, r, l, j, ǰ, ʃ, k, g, x, q, ħ, ʕ, ʔ, h*	*a, e, i, o, u*	ħ (ha) & ʕ (ʻa)	Not present: *v, ð, ɣ,* and *ŋ, ɲ,* and *jʰ*

* These sources used Somali spelling conventions rather than IPA to represent the sounds of the two dialects.

Vowels. As with other Cushitic languages, the vowel system is quite complex (Johnson, 2006). There are five vowels (*a, e, i, o, u*), with short and long versions in both Af-Maxaa and Af-Maay (Lehman & Eno, 2003). Each vowel also has either a high, low, or falling tone (Saeed, 1999), and is fixed or "each letter has one sound and each sound has one letter" (Lehman & Eno, 2003, p. 27). For example, *diidey* (long i) translates to */I:/ refused,* while *diidey* (short i) translates to */ɪ/ fainted.* The table uses the IPA vowel symbols doubled for long and single for short.

Furthermore, unlike Af-Maxaa, Af-Maay does not have the glottal or pharyngeal sounds: /h/, pronounced ha and /ʕ/, pronounced ‘a (See Table 2.1). Some consonants in both Af-Maxaa and Af-Maay consonants are doubled “within some words (e.g., *arring,* ‘matter,’ *illing,* ‘kernel’) to indicate a sound which is pronounced with much more force than its single counterpart” (Lehman & Eno, 2003, p. 27). Consequently, speakers of both Somali variants “often pronounce the doubled consonants in English such as “bigger,” “middle,” “merry,” “simmer,” and “nibble’ with more strength than they would be pronounced by a native speaker of English” (p. 27). However, some sounds (*b, d, g,* and *n*) in Af-Maay, unlike in Af-Maxaa, are not doubled and instead replaced by the sounds *p, th, gh,* and *ng*. *p, ð, ŋ* Another consonantal difference between Af-Maay and Af-Maxaa is that Af-Maay ends noun and verbs with the consonant *y* or *ieh*.

Grammar. In addition to phonological differences between Af-Maxaa or Standard Somali and Af-Maay, there are also grammatical differences (Lehman & Eno, 2003; Saeed, 1982; Saeed, 1999). Table 2.2 shows the grammatical differences between Af-Maxaa and Af-Maay.

Table 2.2

Grammatical Differences between Af-Maay and Af-Maxaa

Grammatical Differences	*Source*	*Definite & Indefinite Articles*	*Nouns*	*Verb Tense*	*Preverbal particles & Declaratives & Interrogatives*
Af-Maay Word order is not fixed. Most common word order are OSV (object-subject-verb) & SVO (Subject-Obect-Verb)	Lehman & Eno (2003); Saeed (1982)	No equivalents	Have 3 genders (masculine, feminine, neuter), & number (single, plural)	3 verb tenses: past, present, and future and degrees of pastness (i.e. present continuous)	
	Saeed (2007); Tosco (1993)				No preverbal particles, declaratives (*waa*), or interrogatives (*ma);* Interrogative determiners *(ko/to)* present
	Lehman & Eno (2003); Saeed (1982)	Interpretation varies by context	No case		
Af-Maxaa (Standard Somali) Word order is not fixed, most common is SOV (subject-object-verb)	Gillete, et. al (2006); Saeed (2007)	Definite article equivalent. Two types: non-remote article (*ka (m.)/ta (f.);* & remote article *kii (m.)/tii (f.)*	3 genders, number, & case		Preverbal particles, declaratives, & interrogatives present
	Biber (2008); Saeed (1999 & 2007)	Interpretation varies by context		3 verb tenses: past, present, and future and degrees of pastness (i.e. present continuous)	Interrogative determiners present (*kee/tee)*

*Morphology***.** As can be seen in Table 2.2, nouns are inflected for masculine, feminine and the neutral gender, as well as the plural and singular number and case in Af-Maxaa, however, Af-Maay does not inflect for case. Both Somali language variants mark gender accentually (Saeed, 2007). For example, *ínan* translates into boy, but *in**á**n*

translates into girl in Af-Maxaa. The general rule for number inflecting a noun is to classify "onto declensions on the basis of how they form their plurals, whether they exhibit gender polarity in the plural, and their accentual patterns" (Saeed, 2007, p. 551). For example, the countable noun *koób (cup)* is number inflected into *koobáb (cups).* Nouns are also accentually marked by case. For example, the name *Faadumo "*has the following case forms: absolutive *Faadúmo;* nominative *Faadumo;* genitive *Faadumó;* and vocative *Fàadumo"* (p. 552).

Af-Maay unlike Af-Maxaa does not have an English equivalent to definite and indefinite articles. That is, there are no equivalents to the indefinite article *an* or the definite article *the* to a noun in Af-Maay, but Af-Maxaa has the definite article. Consequently, a noun such as *isbataal* can be interpreted as either *a hospital* or *the hospita*l depending on the context, while in Af-Maxaa the hospital would be *istbataalka,* with *ka* being the definite article, and so it is interpreted as *the hospital.*

Lastly, Table 2.2 shows that Af-Maay lacks the preverbal particles used in Standard Somali. Preverbal particles are

> Elements which obligatory follow all the NPs of a sentence and precede the verb, and whose role is to convey various syntactic and pragmatic values (such as the syntactic relation of NPs). According to Hetzron (1989), they are on the most salient features, marking Somali as a typologically 'unusual' language (even within Cushitic; cf. Appleyard 1990: 15) (Tosco, 1993, p. 161).

Preverbal particles are typically presented with a classifier. In the Northern dialect groups, a classifier must be used with a preverbal particle. The dialects in the South, however, do not have the declarative classifier *waa* or the interrogative marker *ma*, and therefore do not require preverbal particles. Also, Af-Maay has different interrogative determiners (*ko/to)* than Af-Maxaa (*kee/tee)* (Saeed, 2007). The interrogative determiner

in Af-Maay is a singulative suffix. For example, *a single man* would be translated into *nanko* in Af-Maay, while *which man?* In Af-Maxaa would be translated into *ninkee.*

Syntax. As Table 2.2 demonstrates, in Af-Maxaa, the common word order is not fixed and is usually Subject-Object-Verb, while Object-Subject-Verb and Subject-Verb-Object word order are more common in Af-Maay (Lehman & Eno, 2003). The use of a particular word order depends on context. The fact that word order depends on context hints at the impact that social reasons or non-linguistic factors have on language variation. As a result, looking into the differences in syntax as well as the differences in morphology and phonology or the linguistic factors is as important in language classification as addressing non-linguistic factors.

Classifying language varieties based on non-linguistic factors

It has been demonstrated that non-linguistic factors are usually intertwined with linguistic factors when language varieties are being classified (Gooskens, 2007). For instance, research on the intelligibility of Frisian appeared to suggest that two of the three main factors involved were non-linguistic factors: "the listener's attitude towards the language, the listener's contact with the language and other language experience, and linguistic distance to the listener's language" (p. 446). In fact, Romaine (2000) noted that "the notions of *language* and *dialect* are fundamentally social and not linguistic constructs" (p. 1). The involvement of non-linguistic factors in language variety differentiation is made obvious with the situation that occurred in Nigeria between the speakers of the Urhobo dialects (Wolf, 1959). In an effort to gain political independence speakers of Isoko refuted the claim that their dialect was intelligible to other Urhobo dialects, even though they were shown to be linguistically intelligible. Wardhaugh (2009)

explains that situations like these stem from ethnicity, identity and/or political reasons, and not merely from linguistic factors. Therefore, it is vital to include the non-linguistic factors when examining the relationship between language varieties. However, the purpose of this study is not to determine whether Af-Maay is a separate language or a dialect of Somali, but to determine the degree of intelligibility of Af-Maay to speakers of Af-Maxaa. At the same time, non-linguistic factors still need to be investigated in order to understand the possible reasons behind the degree of mutual intelligibility. The Somali language is no different from other languages in that the language varieties spoken correspond to different ethnicities, geographic areas, and political divisions (Lewis, 2002).

Ethnicity and geography. The Somali people are classified ethnically as Cushitic (Lewis, 2002). Somalia is usually classified as being a very homogenous society because the majority of its inhabitants are nomads (Lehman & Eno, 2003), and it is suggested that at least 95% of the residents understand Somali (Laitin, 1977). However, it has been shown that approximately one third of the population is composed of minorities that represent a wide range of cultures (Lewis, 2002). The main ethnic division in Somalia is based on tribes; the two major classifications of the tribes are the Samale and the Sab. The Samale is the majority in Somalia and are divided into four main tribes: Dir, Isaq, Hawiye, and Darod. The majority of the Dir live in the area around the city of Merka in the south, in the north live the Isaq and the Darod are found all around Somalia and neighboring Kenya and Ethiopia, while the Hawiye tribes reside mostly in the coastal regions around the capital city of Mogadishu and around the Shebelle river (Laitin, 1977; Lewis, 2008). Presently, the northern region where the Isaq live is referred to as the

Somaliland Republic, while the Darod's northeastern region in Somalia is now called Puntland (Lewis, 2008).

The Sab tribe, on the other hand, are a minority, with the largest tribes falling under the Digil and Rahanweyn. The majority of these tribes are composed of ethnic Somalis, Bantu and Oromo people. The Sab are primarily agro-pastoralists and consequently live near the fertile regions of the Jubba and Shebelle rivers. They mostly speak Af-Maay, while the Samale tribes mostly speak Af-Maxaa (Menkhaus, 2003). In addition to the ethnic Somalis, there are also the following non-ethnic Somali groups living in Somalia: Somali Bantus, Asian settlers (i.e. Persians, Pakistanis, Arabs, etc), and European immigrants (Lewis, 2002). The Asian settlers are referred to as Barawan and Benadiri (Menkhaus, 2003). Also, there are small fishing communities made up of indigenous people called the Bajuni. The Barawan, Benadiri and Bajuni live in the coastal regions, while the European immigrants and Somali Bantus mostly live in the fertile regions between the two rivers due to their farming mode of life (Lewis, 2002; Menkhaus, 2003).

The difference in the mode of life between the majority and minority groups has caused rifts especially in the past. Most Somalis are nomads.

> Some 60 to 70 percent of the population are nomadic or have nomadic affiliation, even though many today live in urban centres for part of the time at least. Most of the remainder, who farm, also keep livestock. A much smaller proportion of the population, primarily living in the urban coastal communities, has its traditional economic base in commerce…and fisheries" (Lewis, 2008, p. 3).

The nomadic lifestyle is considered to be highly esteemed, especially when it involves the herding of camels, which symbolize wealth (Laitin, 1977; Lewis, 2008). Nomads by definition are groups of people that move around according to the seasons for their

livelihood (Nomad, 2011), which explains the reason nomadic pastoralism is favored and held in high esteem because most of the land in Somalia changes with the season, with the dry season only producing a mere four inches of rainfall in some areas (Laitin, 1977). Groups with different modes of life feel stigmatized for not practicing the more prestigious nomadic mode of life as they have been ostracized and left out in government and other social and political arenas of the country (Menkhaus, 2003). Habitually, the Samale tribes do not intermarry with some lower status Samale: Yibir, Midgans, Boni and Tumal, or Sab tribes, and this separation may have made the Somali language varieties diverge from each other (Lewis, 2002; Menkhaus, 2003). For example, the Samale tribes with lower status have been suggested to have their own, unique undocumented language varieties (Lewis, 2008).

Politics. During the late 1800s, Somalia was divided without the consideration of tribal lineages by Italy, who took control of the south, and Britain, who took control of the north (Laitin, 1977). During the 1940s and 50s, the Italians and the British fought over their territories until 1960 when Somalia gained its independence which resulted in the union of the north and the south. This union resulted in nationalism among its inhabitants. There were, however, problems that stemmed from this union as the majority groups wanted to exert their political influence over the minority groups. These ethnic, geographic and political factors may have affected the Somali language varieties so the following section will examine non-linguistic criteria to differentiate language varieties.

Non-linguistic criteria to differentiate language varieties. Due to the involvement of non-linguistic factors in language variation, criteria based on non-linguistic factors have been developed (Rubdy, 2001; Wardhaugh, 2009). Stewart (1962)

developed criteria to classify language varieties dependent on the following four features: vitality and historicity of the language variety community, standardization of the language variety, and autonomy of the language variety (Rubdy, 2001). Bell (1976) added the factors of language reduction, mixture, and de facto linguistic norms (Rubdy, 2001; Wardhaugh, 2009).

Vitality. Vitality is one of the non-linguistic characteristics used to classify language varieties, and looks at whether a community of speakers persists over time. The Somali Bantus are the second largest group of speakers of Af-Maay next to the Digil and Rahanweyn tribes (Lewis, 2002). Even though both the Somali Bantus and the Digil and Rahanweyn tribes are minorities, their continued existence demonstrates a level of vitality (Wardhaugh, 2009). Some of the Somali Bantu living in inter-riverine areas are indigenous (Gillette, et. al, 2006; Lehman & Eno, 2003). However, most of the Somali Bantus are descendants of southeast African tribes that were enslaved during the 18th century by the Sultanate of Zanzibar and brought to Somalia mostly by ethnic Somalis for farming labor, but some were brought by the Somali Bantus as well (Laitin, 1977). The enslaved Somali Bantu were freed in the early 20th century, and settled in the inter-riverine areas of the south. The area was ideal because, not only was the land fertile for farming, but there were also forests around the area that were dense enough to provide shelter for hiding (Menhkaus, 2003).

The Somali Bantu have a long history of marginalization from the majority (Basteman, 1996). For example, during the Italian colonial periods, the Somali Bantus were freed and then forced back into more farming labor, which some argue was the same as being enslaved. Many of the Somali Bantus assimilated with the ethnic Somali

southern tribes in order to enhance their social status. Over the years the name Samale "has come to include the Sab, perhaps in the same fashion as the word 'English' is applied by foreigners to all the inhabitants of the British Isles" (Lewis, 2002, pp. 5-6). There is even evidence that some have assimilated completely and lost their original languages, while others still maintain their original culture and languages (Lehman & Eno, 2003). Unfortunately, the Somali Bantu, the second largest Af-Maay speaking population, have had difficulty living in Somalia, but these interactions with the Samale and Sab tribes has lead to culture and language exchanges.

Historicity. Assimilation usually results in a shared linguistic identity or historicity, which is considered to be another non-linguistic based characteristic to differentiate between language varieties (Rubdy, 2001; Wardhaugh, 2009). Historicity is described as a group forming a shared linguistic identity by the use of one language, "social, political, religious, or ethnic ties may also be important for the group, but the bond provided by a common language may prove to be the strongest tie of all" (Wardhaugh, 2009, p. 37). Some of the Somali Bantu assimilating and maintaining some of their own language and culture at the same time has led to language contact. Any type of language contact is noteworthy because it typically leads to language change. In fact, approximately 1,000 years ago the interaction and subsequent language exchange between Persians, Arabs and East Africans led to the creation of the Swahili language. This natural language change may already be occurring in Somali language varieties as the Lower Jubba dialect of Af-Maay has recently been shown to be significantly different from both the Af-Maay used by other groups and Af-Maxaa (Paster, 2007).

Standardization. Standardization or the codification of a language usually falls under the political realm (Wardhaugh, 2009), since the people in power usually choose the language variety that is standardized. In linguistics prestige is a major factor in determining whether a language is a dialect or a separate language (Chambers, 2009), as the prestigious group's dialect is usually chosen as the standard. One of the reasons that some linguists prefer using the term *language variety* over the term *dialect* is due to the stigma placed on the term dialect (Findlay, 1998), which sometimes has a negative connotation signifying a substandard means of speaking or having less prestige than the standard variety of the language. As Chambers and Trudgill (1998) elaborate "…dialects are also often regarded as some kind of (often erroneous) deviation from a norm - as aberrations of a correct or standard form of a language" (p. 3). This is not the case, however, as all dialects are equal linguistically, and prestige is usually defined by non-linguistic factors. The most impactful non-linguistic factor in this case is referring to the elites or the people in power who place their language variety above other language varieties; an idea that Weinrich (1945) described as "A language is a dialect with its own army and navy" (as in Chambers, 2009, p. 227). Usually the standard language variety is established by the elites in order to label their language variety as the only correct variety (Chambers, 2009). This is usually emulated by those who to increase their social status.

The standardization of Somali happened over a long period of time; it took approximately twenty-five years to codify it (Johnson, 2006). The standardization process took so long due to fear of social disruption, since at the time each region had its own *lingua franca*, with Af-Benaadir in the coastal regions, Af-Maxaa in the northern regions and Af-Maay in the southern regions. However, it was becoming very impractical

to continue the debate and not standardize Somali; for example, government agencies had to employ people who were literate in English, Italian, and Arabic. For the codification of Somali, a total of twenty manuscripts from three categories were examined: newly developed, Latin based, and Arabic based (See Figure 2.1). Disagreements over which orthography was to be used occurred for a variety of reasons, including religious, patriotism and political. Religious scholars advocated for Arabic based scripts because they felt their spiritual lives would benefit, which reverberated with the majority of the Muslim inhabitants. Opponents of the Arabic based scripts noted a deficiency in its vowel system and suggested that it would cause problems with the rich vowel system of Somali. There were also native writing systems developed, with Cismaanya being the forerunner. Supporters for Cismaanya argued for it based on patriotism, while opponents of it argued against it due to the political backing of some political groups, such as the Somali Youth League and not others, and its impracticality in that it could not be used universally, as could the Latin based script.

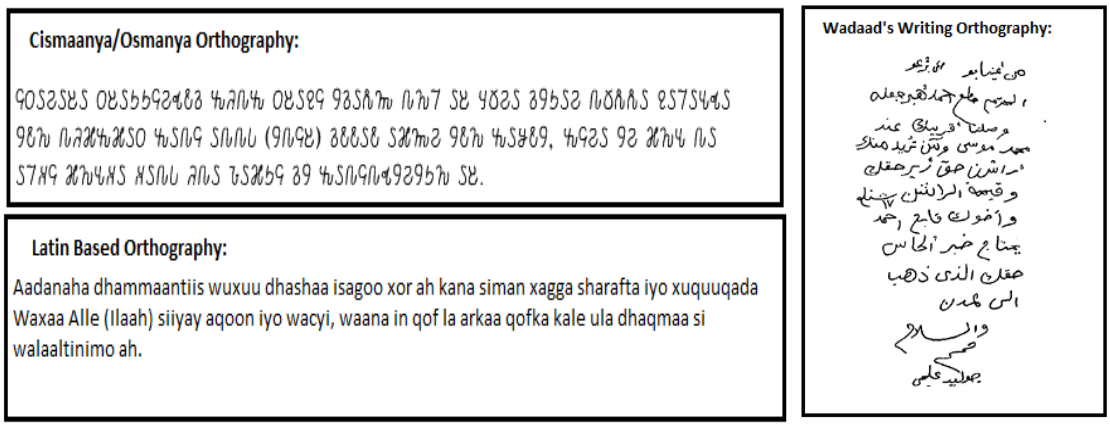


Figure 2.1. Examples of Proposed Orthographies. (Adapted from Ager, 1998-2001).

In 1972, the government standardized Somali by deriving it from Af-Maxaa, the variety used by the ruling majority (Gillette et. al, 2006; Lehman & Eno, 2003). Standard Somali was codified using a Latin based script because (1) a new script would take longer to teach and learn, (2) there was a familiarity with a Latin script because it was already implemented by the Italian and the British colonizers for some news publications, and (3) a Latin based script was practical and easy to implement and cost effective (Johnson, 2006). After the Latin based script was decided on an extensive literacy campaign was launched.

> Beginning in April 1973, the public school system was suspended for a year, and volunteer teachers and students from the schools moved throughout the country, even into the bush, to teach rural populations the new orthography, no easy task considering that over half the population at the time consisted of nomads. Government employees were charged with learning the new writing system or losing their jobs, and they were given a time limit to do so (extended once). National newspapers and magazines were converted to Somali, and the government bureaucracy began to conduct its business on new Somali forms. Teachers and other experts in specific disciplines were paid fees for writing or translating texts into Somali, which were quickly introduced into the school system. Eventually, a complete set of school texts was in use in the vernacular. University students were given the choice of writing senior papers on their own research or translating foreign-language into texts into Somali for the library (p. 127).

The literacy campaign ended in 1975 (Bhola, 1982). Even though the literacy campaign was considered successful as literacy rates started to increase (Baumann et. al, 2004), its impact on the coastal region and the areas between the two rivers was not a pleasant one to its inhabitants as they spoke Somali language varieties that were "significantly different from that represented by the new orthography" (Johnson, 2006, p. 129). Consequently, the Af-Maay speakers felt a great deal of exclusion by the implementation of an Af-Maxaa based literacy system, and some have even described the literacy campaigns as "domestic colonialism" and "Somali Prussianism" (Johnson, 2006, p. 128). There were even accounts of Af-Maay speakers being jailed due to their support for the creation of their own Latin based script. Wardhaugh (2009) considers the exclusion of other language varieties a drawback of standardization because the non-standardized language varieties and their speakers are considered to be "the rejected alternatives with a lack of power" (p. 33). In the case of Somali, standardization gave Af-Maxaa overt prestige, the explicit prestige gained from speaking the standard language variety (Wolfram, 1997).

Even though it seems like there are many drawbacks to standardizing a language, there are also benefits. One of these benefits is that standardizing a language brings together the speakers of the standardized language variety, which is usually the majority of a country's inhabitants (Wardhaugh, 2009). This union that results from standardization is an important aspect in nation-building (Ricento, 2006). For instance, if there are competing languages in a country that cannot be codified into one, then they usually fall apart, which is what is suggested to be one of the factors in the disassembly

Yugoslavia (Wardhaugh, 2009). Another benefit to standardizing a language is that, even after it ceases to exist, there will always be a record of it. The use of Standard Somali has shown this benefit of standardization by withstanding the collapse of the government (Johnson, 2006), after being used as a standard variety for only 15 years. Over a decade later it is still being used by speakers of Somali all over the world.

Autonomy. The process of standardization has close ties with autonomy, a highly subjective attribute used to classify language varieties (Ricento, 2006; Rubdy, 2001; Wardhaugh, 2009). The autonomy characteristic is highly subjective because it involves a person's feelings towards their language; and it is tied with the process of standardization because the process can leave the minority groups who speak the non-standardized language varieties to believe their language variety as inadequate (Rubdy, 2001; Wardhaugh, 2009). Autonomy can also bring together speakers of language varieties due to positive feelings towards the Standard language variety. For example, Cantonese and Mandarin speakers feel that they speak dialects of one language: Chinese, due to positive feelings. In the case of Somali, there would only be speculation on the current attitude that speakers have toward it, but if the use of Standard Somali in Minneapolis-St. Paul area is any indication, most Somali immigrants use Standard Somali as indicated by the media communication having the majority of its broadcasting only in Standard Somali, such as the Minneapolis Television Network (MTN, n.d.). Consequently, Standard Somali speakers could exhibit a higher degree of autonomy than speakers of Af-Maay. However, the Minneapolis Television Network has recently started producing weekly shows in Af-Maay due to the recent arrivals of Somali Bantu in the

area. As a result, the same argument could be made in behalf of Af-Maay speakers in that they also have a high degree of autonomy within their own community.

Reduction. The characteristic of reduction refers to a speech variety that lacks aspects that would classify it as a whole language (Wardhaugh, 2009). Speakers of a language variety that is reduced are usually aware of it. For instance, speakers of Pidgins understand that they are speaking a language variety that is reduced. Bigelow (2011) found that Somali adolescent boys living in the U.S. are multilingual and use a combination of the Somali language and English to express their opinions when she examined their texts. These results may indicate that using parts of the Somali language is not problematic.

Mixture. The mixture attribute is another subjective attribute, and it is defined as how pure a language is considered. For example, a speaker using a language variety with many loan words from another language variety might feel that language variety is more mixed than pure. According to Wardhaugh (2009), specific language speakers feel much more strongly about this attribute than others. Again, only speculations can be made about the Somali language speakers; however, the Somali language has many loan words from various language contacts, especially from the Arabic language (Saeed, 1999; Lewis, 2002). This could result in some speakers thinking that the Somali language is a mixture, while others could think the opposite.

***De facto linguistic norms*.** A characteristic added to Stewart's typology to classify language varieties by Bell is de facto norms (Rubdy, 2001; Wardhaugh, 2009). This criterion is also subjective as it deals with the feelings speakers have towards their language skills when compared to the norm, most often based on the standard language

variety. De facto linguistic norms are linked to less prestigious varieties. Trudgill (1972) demonstrated that covert prestige or hidden prestige was one of the main factors in the preference of working class speech, a non prestigious language variety, in Norwich males. Trudgill examined the actual use of speech patterns and the reported use of speech patterns through self-evaluation tests in Norwich, England. He found the male residents under-reported their speech patterns, in that their actual usage of the working class speech variety was greater than what they reported. The opposite occurred with the female residents. Trudgill suggested the subconscious favoring of the working class speech variety could be from the males associating masculine traits with its use. Therefore, covert prestige builds solidarity between the speakers of a specific language variety regardless of whether it's the standard or not. As Chambers (2009) summarizes "the persistence of non-standard varieties appears, then, to be a direct consequence of the deep-seated feelings, conscious or not, their speakers have for them" (p. 240). As might be the case with Af-Maay and Af-Maxaa speakers, as the Standard is derived from Af-Maxaa and therefore, the speakers of Af-Maxaa have more prestige, while speakers of Af-Maay have less. Also, to complicate things even more, the majority of Af-Maay speakers are the Digil and Rahanweyn tribes who have a lower status in Somali society, and the Somali Bantu, who are mostly descendants of slaves (Lewis, 2002).

Mutual intelligibility tests

In addition to non-linguistic criteria to differentiate language varieties, there is also the linguistic criterion of mutual intelligibility. This criterion is essential to any language variety differentiation as a language is defined as "a collection of mutually intelligible dialects" (Chambers & Trudgill, 1998, p. 3). Mutual intelligibility, however,

is not always asymmetrical (Cheng, 1997). That is, there can sometimes be one-way intelligibility between speakers of language varieties. For example, it has been suggested that Swedes do not understand Danish as well as Danes understand Swedish (Chaoju & van heuvan, 2008). Therefore, mutual intelligibility "is best defined as the average (mean) of the intelligibility of Speaker A for listener B and vice versa" (p. 710). Language varieties that are mutually intelligible are technically not separate languages but rather "dialects of the same language" (O'Grady, Dobrovolsky & Aronoff, 1997, p. 680). Hammarstrom (2008) demonstrated that mutual intelligibility can be used to differentiate language varieties "by divide[ing] language varieties into a minimum of internally mutually intelligible groups where each group counts as one language" (p. 34). The two ways to experimentally test mutual intelligibility are functional, and opinion or perceived linguistic tests (Chaoju & van Heuven, 2009).

Functional mutual intelligibility testing. Mutual intelligibility can be tested experimentally through functional testing (Chaoju & van Heuven, 2009). Functional testing was first utilized to determine the mutual intelligibility of Amerindian languages. Functional testing analyzes how much a speaker of a language variety understands another language variety. For instance, fifteen Chinese dialects were functionally tested with the functional test being divided into two types: word-intelligibility and sentence intelligibility. Both types of the functional test were examined by having speakers listen to recordings. Isolated word recordings were played for the word-intelligibility portion, and isolated sentences for the sentence intelligibility. The listeners determining the word-intelligibility categorized words into ten different categories. The listeners determining the sentence intelligibility translated a specific word into their own dialect. The specific

requirements of the functional test pinpoint the exact reason the rater could or could not comprehend a language variety. Functional testing is usually used when the number of language varieties being tested is small; the test becomes a daunting task when the number of dialects being tested exceeds fifteen. Opinion testing is the second way to experimentally test for mutual intelligibility.

Opinion/Perceived mutual intelligibility testing. Opinion testing examines how much one speaker thinks they understand another speaker, as measured by a rating scale (Chaoju & Van Heuven, 2009). This type of testing is practical when the number of language varieties being tested exceeds fifteen. For example, 15 Norwegian varieties were tested using the opinion experimental mutual intelligibility test rather than the functional one (Gooskens, Heeringa & Beijering, 2004). After listening to recordings, the listeners rated the language varieties on a scale of 1 to 10, with a score of 1 indicating that it was very similar to their own dialect, and a score of 10 indicating very little similarity to their own dialect.

The opinion or perceived mutual intelligibility test also has drawbacks (Beijering, Gooskens & Herringa, 2008). The first problem with the perception test is that the specific reason for the rating is unknown, unlike the functional mutual intelligibility test. For example, the listener could have rated the recording unintelligible for a variety of reasons, such as phonetics, morphemes, etc. Also, the listener could have negative preconceived notions of the dialects based on a variety of aspects, such as geographical knowledge or attitude, which can in turn negatively influence the ratings. However, adjustments can be made to make the perception test more reliable, such as having listeners answer questions about the recordings. Moreover, listeners' preconceived

notions have been shown to be insignificant in their overall rating (Gooskens, 2007). Gooskens (2007) examined the mutual intelligibility of Dutch, Frisian, and Afrikaans and compared the results with previous research on the intelligibility of Danish, Swedish, and Norwegian. The mutual intelligibility tests were compared in order to show that differences in intelligibility levels vary due to differences in linguistic and the rater's contact and attitude towards the language being rated. Gooskens wanted to demonstrate that differentiating between a language and a dialect is not as simple as utilizing a particular test of mutual intelligibility since both linguistic and non-linguistic aspects factor into a listener's differentiation between a dialect and a language. Even with both functional and perceived intelligibility tests having drawbacks, both have been shown to be reliable predictors in calculating the degree of intelligibility between language varieties whether it is a one-way intelligibility, as is the case in this study, or mutual intelligibility (Chaoju & van Heuven, 2009; Hammarstrom, 2008).

Summary

Even though Chambers and Trudgill (1998) have tried to show that "a language is a collection of mutually intelligible dialects" (p. 3), differentiating between a dialect and a language is not an easy task. The differentiation between language varieties is complex; firstly due to common negative misconceptions of the term dialect. Secondly, non-linguistic factors contribute to the differentiation between a dialect and language as much as linguistic factors (Gooskens, 2007). For instance, political and cultural factors can determine a dialect to be a language when linguistically it is not, such as the case with some of the Scandinavian languages. Since linguistic and non-linguistic factors play a role in differentiating between a language and a dialect, there are criteria that are non-

linguistically based (Wardhaugh, 2009), and a criterion that is linguistically based (mutual intelligibility) (Chambers & Trudgill, 1998).

Throughout the years, the social hierarchy of Somalia has been changing, and now includes a variety of factors, such as ethnicity, politics, religion, etc (Lewis, 2002). The biggest division in Somalia has always been based on tribal lineages.

> Traditionally these distinctions are entrenched by the nomad's assumption of proud superiority and contempt for his southern countrymen, and the latter's corresponding resentment and isolation. Yet despite this, the gulf between the two communities is not so wide as might at first appear, or as insuperable as each sometimes likes to suggest. As has been said, many of the Sab are in reality of northern pastoral origin, many again speak both dialects of Somali. Moreover there is much that draws the two groups economically. Many of the southern cultivators not only have pastoral clients, but are also sometimes clients to pastoralists. Nomads moving across the territory of cultivators frequently exchange their milk in the dry season for the right to pasture their herds on the farmers' fields. Similar transactions also regulate the use of water-holes by both parties… (Lewis, 2002, p. 14).

The variety of factors involved in the social hierarchy also plays a role in linguistic divisions even if the factors are non-linguistic in nature. This is the reason that non-linguistic factors as well as linguistic factors must be examined when investigating the relationship between Af-Maay and Af-Maxaa. In order to determine how mutually intelligible Af-Maay is to speakers of Af-Maxaa, the mutual intelligibility criterion will be used to test them (Chambers & Trudgill, 1998: Gooskens, 2007). The criterion of mutual intelligibility, which is used to calculate the degree of intelligibility, is not error proof (Chambers & Trudgill, 1998; Chaoju & van Heuven, 2009; Gooskens, 2007). The two ways to experimentally test mutual intelligibility are the functional and the opinion test and both have benefits and drawbacks. However, either method is reliable enough to show the degree of mutual intelligibility between language varieties.

The degree of intelligibility of Af-Maay to speakers of Af-Maxaa is unknown and it would be very helpful to determine it in order to fill in the missing pieces of the Somali language (Ali, 1983; Saeed, 1999). In order to determine the degree of intelligibility between the Somali dialects, both the linguistic and non-linguistic factors need to be examined in order to better the odds of finding the answers to the following research questions: (1) "How intelligible is Af-Maay to Somali university student speakers of Af-Maxaa living in the United States?", (2) "What type of language-dialect relationship does Af-Maay have with Af-Maxaa?", and (3) "Is the degree of intelligibility of Af-Maay to speakers of Af-Maxaa due solely to linguistic factors, non-linguistic factors, or a combination of both?" in the next chapter.

CHAPTER 3: METHODOLOGY

The purpose of this study is to better understand the relationship between two main variants of Somali (Af-Maay and Af-Maxaa), specifically the degree of intelligibility of Af-Maay to speakers of Af-Maxaa. In order to explore this relationship, data from 21 Somali university students were collected through an online survey. This chapter discusses the participants, data collection, and data analysis procedures.

Participants

The participants were chosen for their Somali heritage and enrollment in higher education in the United States (US). This was, of course, necessary in order to assure that their use and understanding of Standard Somali, the experimental control language of the study. Having at least one experimental control is essential to any study since it attempts to manage other factors, so that the investigated questions of a given study are more likely to be answered (Tokowicz & Warren, 2008). Moreover, the main goal was to investigate the degree of intelligibility of Af-Maay to speakers of Af-Maxaa, which Standard Somali is derived from. Age and gender were not considered relevant to this study and consequently, not included in the data collection. The exact location of their residence and which university in the US the participants were enrolled in were also considered non-mitigating factors.

The Somali participants were recruited from universities in the US because they had a high/native-like level of English proficiency. Moreover, enrollment in a US university ensured literacy skills not only in the English language but also in technology.

Being computer literate was necessary because the data was collected through an online survey.

Table 3.1

Participant Demographic Information

Participant	Years in US	Region of Somalia	Spoken Dialect	Know Maay Speakers
1	6	Coast	Northern and Benaadir	Yes
2	17	Coast	Northern and Benaadir	Yes
3	19	Coast	Benaadir	No
4	20	Coast	Benaadir	No
5	14	North	Northern	No
6	18	North	Northern	No
7	15	North	Northern	Yes
8	10	Coast	Benaadir	Yes
9	17	North	Northern	No
10	15	Coast	Benaadir	Yes
11	17	Coast	Benaadir	No
12	20	Coast	Benaadir	No
13	14	North	Benaadir	Yes
14	15	North	Northern	Yes
15	24	Born in US, Parents from Coast	Benaadir	No
16	14	North	Northern	Yes
17	17	Coast	Benaadir	Yes
18	16	North	Northern	Yes
19	12	Coast	Benaadir	Yes
20	8	North	Benaadir	Yes
21	16	Coast	Benaadir	No

A total of 21 Somali participants contributed to this study. The participants were anonymously assigned numbers. Out of the 21 participants, only one was born in the United States (See Table 3.1), 11 were from the coastal region of Somalia, and 9 were from the northern region. Their native Somali dialects varied: 7 used Af-Maxaa, 12 used Af-Benaadir and 2 used both Af-Maxaa and Af-Benaadir. The number of participants that

had any type of language contact with Af-Maay speakers totaled 7, while 14 participants did not have any language contact with Af-Maay speakers.

Data Collection: Online Survey

Participants were asked to complete an online survey that was delivered online via www.surveymonkey.com (Appendix B). A survey was implemented in order to gather information about the speech community's language abilities in an efficient manner (Codo, 2008, p. 159). Not only was data able to be collected from participants in multiple locations, but, as Codo indicates, the participants were more likely to provide truthful answers during self-administration. The online survey was also efficient and practical in that the results were automatically sent to the investigator instead of relying on the participants to mail them back. The survey was estimated to take about 10 minutes to complete and was only one page in length, within Dornyei's (2003) guidelines recommending a limit of a 30 minute completion time and 4 pages in length.

The online survey was administered in English because the Somali participants were recruited for their high level/ native-like level of English proficiency, which followed Codo's (2008) recommendation of matching the participants' language skills to a given survey in order to promote participation. The online survey was divided into four sections: a description of the study in the consent form, demographic questions, intelligibility ratings of Somali dialect recordings, and space to write the summaries of the recordings. Since addressing the goals as well as the risks and rewards of a study have been shown to encourage participation (Codo, 2008), a consent form outlining these was administered first on the online survey (Appendix A). Once the participants accepted the terms of consent, they were asked several demographic questions (Appendix B). The

purpose of the demographic questions was to explore possible non-linguistic factors that could potentially influence linguistic factors. Moreover, since it has been shown that interrogatives are useful in collecting reliable information, the demographic questions were formatted as interrogatives (Codo, 2008). The participants were asked to report their time spent in the United States, region of Somalia they are from, if they had language contact of any kind with Af-Maay speakers before listening to the recordings of the Somali dialects.

The following section asked the participants to listen to two recordings: one of Af-Maay and one of Standard Somali. The Maay recording was approximately one minute and twenty seconds, while the Standard Somali recording was approximately two minutes and sixteen seconds. Both recordings were obtained from http://globalrecordings.net/en/, a website founded by an Evangelical Christian missionary organization. Even though the organization suggests that a knowledgeable native speaker of each language variety records each recording, there have been accounts of mistakes. Despite this possibility, the recordings were used due to their availability in both dialects. As a native speaker of Standard Somali, I was able to verify the legitimacy of the Standard Somali recording by comparing my translation to the one provided by the website and finding it to be in accordance.

After listening to each of the recordings, the participants were asked to rate their perceive understanding of each recording on a scale of zero to ten, with zero indicating no understanding and ten indicating complete understanding. A ranked scale was utilized because it has been shown to be useful when investigating the degree of an issue as the answers are given in degree increments (Codo, 2008), which coincides with the main

goal of investigating the degree of intelligibility of Af-Maay to speakers of Af-Maxaa. In order to encourage the participants' completion of the ratings, the prompts were formatted as declarative statements that require participants "to state their degree of identification" (p. 173).

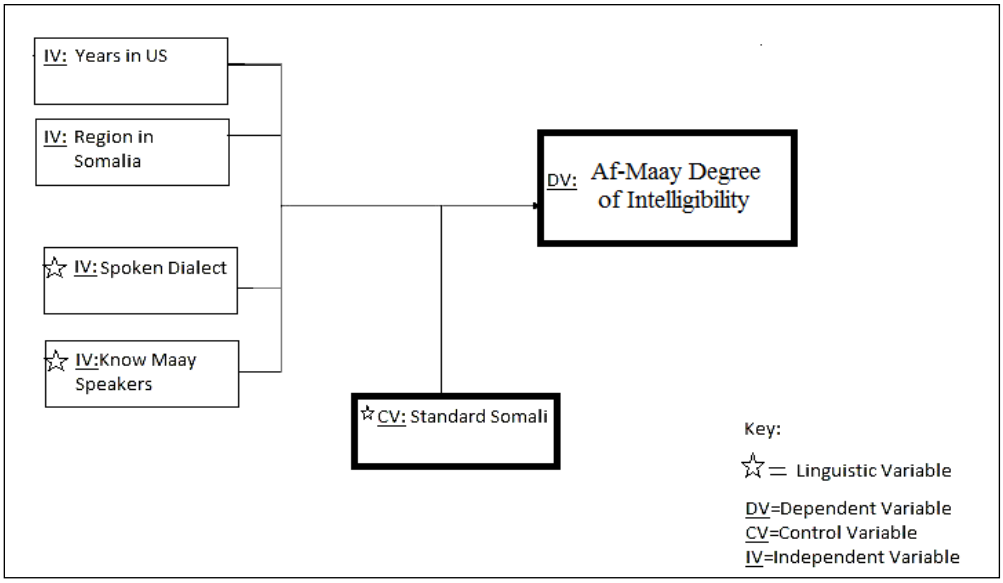
Lastly, the participants were asked to summarize each recording in English in order to verify their level of understanding. Having the participants summarize in addition to rating their understanding of the dialect recordings determined whether their perception of the dialect correlated with their actual understanding.

Data Analysis

Typically, a larger sample size increases reliability so none of the data collected from the 21 participants were excluded from the data analysis (Tokowicz & Warren, 2008). As a result of only having 21 participants contributing to this study, the results of the data analysis can only be generalized within these participants. In order to ease the process of data analysis, the demographic questions were formulated as open-ended questions that could easily be formatted into close-ended questions. For example, the answers to the second demographic question asking which region a participant was from, were converted to numerical values with the number one denoting Coastal origin and the number two denoting Northern origin (Appendix D). The open-ended summaries were also converted into numerical values (Appendix C), with the content of the translations divided into major and minor propositions. The major and minor propositions were totaled for each of the dialect recordings in order to compare the total number of points with the participants' understanding. The rating scores, on the other hand, did not need to be converted into numerical values since they were already formatted as close-ended

questions. Both the rating scores and the summaries for each dialect were used in the data analysis in order increase reliability. Then the data from the survey was divided into two main categories: (1) whether the data variables qualified as non-linguistic or (2) linguistic factors. The linguistic and non-linguistic categories were further categorized as either being independent or dependent (See Figure 3.1).

Figure 3.1. Variable Classification.



A One-Sample Kolmogorove-Smirnov Test was performed to determine if the data were normally distributed (Larson-Hall, 2010). Finding out if the data were normally distributed is essential in that it would verify the use of suitable statistical tests and using the appropriate statistical technique increases the validity of a study (Moyer, 2008). The results of the One-Sample Kolmogorove-Smirnov Test validated the use of the following statistical procedures through the use of the Statistical Practices for the Social Sciences (SPSS) software: Pearson's correlation coefficient, the paired samples t-test, and the one-sample t-test. The Pearson's correlation coefficient was used to determine the strength of the relationships between each variable, while the paired samples t-test were employed

for the variables that showed significant relationships in order to determine their statistically significant differences. In addition, the one-sample t-test was used in order to determine if the average intelligibility of Af-Maay was significantly different from zero, or having no understanding of Af-Maay. The next chapter shows the results of the statistical analysis and their possible explanations by comparing them to past intelligibility research.

CHAPTER 4: RESULTS

The rationale behind this study was to investigate the intelligibility of Af-Maay to speakers of Af-Maxaa by testing their perceptions. This chapter will be divided into three sections with the possible linguistic and non-linguistic factors involved in the intelligibility of these language varieties by (1) quantitatively by listing the analysis of the data from the appropriate conducted statistical procedure, and (2) qualitatively by investigating the reasons for the results through the analysis of the participants' answers from the online survey. The first section will be organized in terms of the conducted statistical procedure. The second section will be organized in terms of the research questions raised in this study. The third section will compare and contrast the quantitative and qualitative analysis of the data with previous mutual intelligibility research.

Table 4.1

Summary of Participant Dialect Intelligibility

Participant	Standard Somali Rating	Standard Somali Summary	Standard Somali Avg	Maay Rating	Maay Summary	Maay Avg
1	10	9	9.5	10	6	8
2	10	8	9	2	1	1.5
3	9	8	8.5	1	1	1
4	5	8	6.5	0	0	0
5	10	9	9.5	1	1	1
6	9	8	8.5	1	1	1
7	10	7	8.5	3	2	2.5
8	10	7	8.5	3	2	2.5
9	10	8	9	1	0	0.5
10	10	8	9	4	3	3.5
11	10	7	8.5	1	1	1
12	6	7	6.5	1	1	1
13	10	8	9	2	2	2
14	10	7	8.5	3	3	3
15	9	8	8.5	0	0	0
16	10	7	8.5	2	3	2.5
17	10	11	10.5	2	1	1.5
18	9	8	8.5	5	3	4
19	10	9	9.5	7	4	5.5
20	10	9	9.5	10	6	8
21	8	7	7.5	0	1	0.5

Table 4.1 displays the participants understanding of Standard Somali and Af-Maay. Each participant's rating and summary for Standard Somali and Af-Maay were averaged by adding the numerical values for the rating and summary and then divided by two. For example, the first participant rated the Standard Somali recording a 10, and their summary for Standard Somali was given a score of 9, so their average Standard Somali intelligibility was 9.5. The total intelligibility average for the participants' Standard Somali and their Af-Maay were calculated by adding the ratings and the summaries separately and dividing by 21, the total number of participants. The averaged intelligibility of Standard Somali was calculated to be 8.64, and the average intelligibility of Af-Maay was 2.40. These values were used in the following statistical analysis.

Data assumption results

Table 4.2

One-Sample Kolmogorove-Smirnov Test Results

One-Sample Kolmogorov-Smirnov Test							
		AvgSS	AvgMaay	YearsinUS	Region	SpokenDialect	MaaySpeakers
N		21	21	21	21	21	21
Normal Parameters[a,b]	Mean	13.2857	3.8095	15.43	1.52	1.76	1.43
	Std. Deviation	1.56980	3.77649	4.106	.602	.625	.507
Most Extreme Differences	Absolute	.285	.194	.173	.332	.315	.372
	Positive	.172	.194	.113	.332	.256	.372
	Negative	-.285	-.157	-.173	-.262	-.315	-.299
Kolmogorov-Smirnov Z		1.306	.890	.795	1.521	1.444	1.707
Asymp. Sig. (2-tailed) (P)		.066	.407	.552	.020	.031	.006
a. Test distribution is Normal.							
b. Calculated from data.							

As Table 4.2 shows, the One-Sample Kolmogorov-Smirnov Test was administered to determine if the distribution of the data was normal. Since all the p-values were greater than 0.05, each variable in the data was normally distributed. That is, the data collected from the selected Somali university students portray much of the ones that could be collected from the Somali population as a whole. Due to the fact that this data did not violate the parametric assumption of normality, the following parametric statistical procedures were utilized: Pearson's correlation coefficient; the paired samples t-test; and the one-sample t-test.

The Pearson's correlation coefficient shows the correlation strengths of variables (Larson-Hall, 2010). The results of the Pearson's correlation coefficient are shown in Table 4.4; the strong correlations are shown with an asterisk by the value and can be negatively correlated as indicated by a negative sign or positively correlated. The strengths of the correlations range from -1 to 1, with 1 representing a perfectly positive correlation, -1 represents a perfectly negative correlations, and a value of 0 represents no correlation. There is no concrete way to interpret the values that fall within the correlation range of -1 to 1, but the layout in Table 4.3 was used for this study.

Table 4.3

Strength of Correlation Interpretation

Strength of Correlation	
.00-.20	**Very Weak**
.21-.40	**Weak**
.41-.60	**Moderate**
.61-.80	**Strong**
.81-1.00	**Very Strong**

There are three types of t-tests: independent-samples t-test, paired samples t-test, and one-sample t-test, but the purpose of all of them is to examine differences between the means of variables.

> Therefore, the t-test determines if the differences between groups are small enough to attribute them to the random variation in scores that would happen each time we take a new sample of the same population, or whether the differences are large enough that the two groups can be said to belong to two different populations (Larson-Hall, 2010, p. 136).

In this study, the paired samples t-test and the one-sample t-test were used. The paired samples t-test was used because the same participants rated and summarized the Somali language varieties. That is, the results of the data are dependent and not independent so the independent-samples t-test could not be applied. The results of the paired samples t-test are shown in Table 4.5. The one-sample t-test was the second t-test used in order to determine if the intelligibility of Af-Maay equaled zero or if the null hypothesis was accepted. That is, if the participants did not understand Af-Maay at all. An examination of the one-sample t-test results revealed that the null hypothesis stating that the understanding of Af-Maay equaling zero as being rejected; $t(21)=4.623$, $p=.000$ (See Table 4.6). This suggests that the Af-Maxaa speakers have some understanding of Af-Maay.

Table 4.4

Pearson's Correlation Coefficient Results

Correlations							
		AvgSS	AvgMaay	YearsinUS	Region	SpokenDialect	MaaySpeakers
AvgSS	Pearson Correlation	1	.446*	-.509*	.247	.274	.538*
	Sig. (2-tailed)		.043	.019	.281	.229	.012
	N	21	21	21	21	21	21
AvgMaay	Pearson Correlation	.446*	1	-.830**	.110	.226	.660**
	Sig. (2-tailed)	.043		.000	.635	.325	.001
	N	21	21	21	21	21	21
YearsinUS	Pearson Correlation	-.509*	-.830**	1	-.189	-.264	-.628**
	Sig. (2-tailed)	.019	.000		.413	.248	.002
	N	21	21	21	21	21	21
Region	Pearson Correlation	.247	.110	-.189	1	.332	.167
	Sig. (2-tailed)	.281	.635	.413		.142	.470
	N	21	21	21	21	21	21
SpokenDialect	Pearson Correlation	.274	.226	-.264	.332	1	.249
	Sig. (2-tailed)	.229	.325	.248	.142		.277
	N	21	21	21	21	21	21
MaaySpeakers	Pearson Correlation	.538*	.660**	-.628**	.167	.249	1
	Sig. (2-tailed)	.012	.001	.002	.470	.277	
	N	21	21	21	21	21	21
*. Correlation is significant at the 0.05 level (2-tailed).							
**. Correlation is significant at the 0.01 level (2-tailed).							

Table 4.5

Paired Samples Statistics T-Test Results

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	AvgMaay	3.8095	21	3.77649	.82410
	AvgSS	13.2857	21	1.56980	.34256
Pair 2	AvgMaay	3.8095	21	3.77649	.82410
	YearsinUS	15.43	21	4.106	.896
Pair 3	AvgMaay	3.8095	21	3.77649	.82410
	Region	1.43	21	.507	.111
Pair 4	AvgMaay	3.8095	21	3.77649	.82410
	SpokenDialect	1.52	21	.680	.148
Pair 5	AvgMaay	3.8095	21	3.77649	.82410
	MaaySpeakers	1.57	21	.507	.111
Pair 6	AvgSS	13.2857	21	1.56980	.34256
	YearsinUS	15.43	21	4.106	.896
Pair 7	AvgSS	13.2857	21	1.56980	.34256
	Region	1.43	21	.507	.111
Pair 8	AvgSS	13.2857	21	1.56980	.34256
	SpokenDialect	1.52	21	.680	.148
Pair 9	AvgSS	13.2857	21	1.56980	.34256
	MaaySpeakers	1.57	21	.507	.111

Table 4.5

Paired Differences T-Test Results

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1	-9.47619	3.38185	.73798	-11.01559	-7.93679	-12.841	20	.000
Pair 2	-11.61905	7.53974	1.64531	-15.05109	-8.18700	-7.062	20	.000
Pair 3	2.38095	3.75468	.81934	.67184	4.09006	2.906	20	.009
Pair 4	2.28571	3.68297	.80369	.60925	3.96218	2.844	20	.010
Pair 5	2.23810	3.46273	.75563	.66188	3.81431	2.962	20	.008
Pair 6	-2.14286	5.08710	1.11010	-4.45848	.17276	-1.930	20	.068
Pair 7	11.85714	1.52597	.33299	11.16253	12.55175	35.608	20	.000
Pair 8	11.76190	1.52986	.33384	11.06552	12.45829	35.232	20	.000
Pair 9	11.71429	1.36539	.29795	11.09277	12.33580	39.316	20	.000

Table 4.6

One-Sample T-Test Results

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
AvgMaay	21	3.8095	3.77649	.82410

One-Sample Test

	Test Value = 0					
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
AvgMaay	4.623	20	.000	3.80952	2.0905	5.5286

The effects of mutual intelligibility in Standard Somali

There was a moderate, positive correlation between the average intelligibility of Af-Maay and the average intelligibility of Standard Somali, r=.446, n=21, p=.043.These results suggest that understanding Standard Somali increases the chances of understanding Af-Maay. This correlation also displayed a statistically significant difference between the mean scores of the average intelligibility of Standard Somali (M=13.3, SD= 1.6) and the average intelligibility of Af-Maay (M=3.8, SD= 3.8); t(20)=12.84, p=.000.

The effects of region in Somali and years spent in the United States

The region of Somalia where the speakers were born did not have a significant relationship with either the average intelligibility of Standard Somali, or the average intelligibility of Af-Maay. However, the number of years spent in the US exhibited a moderate, negative correlation with the control, intelligibility of Standard Somali, r= -

.509, n=21, p=.019; with a statistically significant difference in the mean scores of the intelligibility of Standard Somali (M=13.3, SD=1.6) and the years spent in the US (M=15.43, SD=4.11); t(20)= -1.930, p= .068. These results suggest that as the length of time spent in the US increases, the intelligibility of Standard Somali decreases.

Moreover, there was a very strong, negative correlation between the average intelligibility of Af-Maay and the years spent in the US, r= -.830, n=21, p= .000; with a statistically significant difference in the mean scores of the average intelligibility of Af-Maay (M= 3.81, SD= 3.78) and the years spent in the US (M=15.43, SD=4.11); t(20)= -7.06, p= .000. These results appear to suggest that as the number of years spent in the US increases, the intelligibility of Af-Maay strongly decreases.

The effects of spoken dialect and language contact with Af-Maay speakers

The independent linguistic variable of spoken dialect did not have a significant correlation with either the control intelligibility of Standard Somali, nor with the average intelligibility of Af-Maay.

However, the independent linguistic variable knowledge of Af-Maay speakers had a strong, positive correlation with the average intelligibility of Af-Maay; r=.660, n=21, p=.001. In addition, the paired samples t-test showed that there was a significant difference in their mean scores; t(20)=39.316, p=.000. These results suggest that language contact with Af-Maay speakers correlating with increased intelligibility of Af-Maay is not due to chance.

Summary

The average of each participant's rating and summary indicated that the participants understood Standard Somali more than they understood Af-Maay, averaging

8.64 out of 11.5 and 2.4 out of 10.5, respectively. These averages were used for the following statistical analyses: Pearson's correlation, the paired-samples t-test and the one-sample t-test.

The Pearson's correlation coefficient analysis revealed the following: (1) that the intelligibility of Standard Somali and intelligibility of Af-Maay had a moderate, positive correlation; (2) there was a strong, negative correlation between the years spent in the United States and the intelligibility of Af-Maay; and (3) a strong, positive relationship between the intelligibility of Af-Maay and language contact with Af-Maay speakers. The paired samples t-test showed that the correlation between intelligibility of Af-Maay and the following variables to not be due to chance: the intelligibility of Standard Somali, language contact with Af-Maay speakers, and the number of years spent in the United States. Finally, the one-sample t-test revealed that the Somali university students partially understood Af-Maay.

DISCUSSION

The results of this study show that Af-Maay is minimally understood by college students living in the U.S. whose first language was Af-Maxaa or Standard Somali. The longer the person had lived in the U.S. the less comprehensible Af-Maay was to them; however, language contact with Af-Maay speakers resulted in more Af-Maay comprehensibility. The particular spoken Somali dialect and the region in Somalia the person emigrated from did not appear to influence their ability to understand Af-Maay.

How intelligible is Af-Maay to Somali university student speakers of Af-Maxaa living in the United States?

Since the intelligibility of Af-Maay to speakers of Standard Somali was shown to average 2.40 out of 10.5, it appears that Af-Maay is partially intelligible to speakers of Standard Somali. The Pearson's correlation coefficient analysis showed that a participant's understanding of Standard Somali and Af-Maay had a moderate, positive correlation, and the paired samples t-test showed that the correlation was statistically significant. This implies that increased understanding of Standard Somali increases the chances of understanding Af-Maay. The Pearson's correlation coefficient also showed that there was a strong, negative correlation between the number of years spent in the United States and the intelligibility of Af-Maay. This suggests that as the number of years spent in the U.S. increases, the chances of understanding Af-Maay decreases. It would stand to reason that a longer amount of time spent away from Somalia and in the US would result in decreasing the chances of understanding Af-Maay since English would dominate in the environment of these speakers, namely at U.S institutions of higher education.

Being acquainted with speakers of Af-Maay was shown to have a strong, positive relationship with the participants' understanding of Af-Maay, which implies that knowing more Af-Maay speakers results in increasing the participant's understanding of Af-Maay; furthermore, the paired-samples t-test showed that these results were likely not to be due to chance. These results not being due to chance correspond with the data in that most of the participants who knew Af-Maay speakers demonstrated the highest averages for understanding Af-Maay. For example, participant number 1 and 20 had the

highest degree of Af-Maay understanding with a score of 8. In addition, the participants that have been in the U.S. the longest (14-24 years) have had no contact with Af-Maay speakers, while those who do know Af-Maay speakers have only been in the U.S. between 6-17 years. These results could be explained by the fact that the Somali Bantu, the second largest population of Af-Maay speakers next to the Digil and Rahanweyn tribes, have only recently been resettled in the U.S. beginning in 2003 (Barnett, 2003). So it would be reasonable to assume that participants that stayed in the U.S. longer were less likely to have language contact with Af-Maay speakers.

There were not any significant relationships between the mutual intelligibility of Af-Maay and either the native spoken dialect, or the region of Somalia the participant was from, which suggests that there might not be a geographic dialect continuum or "a chain of mutual intelligibility" (Chambers & Trudgill, 1998, p. 5) between them.

What type of language-dialect relationship does Af-Maay have with Af-Maxaa?

According solely to Stewart's non-linguistic classification of language types, Af-Maay is a dialect, and not a standard, classical, artificial, vernacular, Creole or pidgin (Rubdy, 2001). Af-Maay is a dialect for the following reasons: (1) it has only been recently codified, and is not widely in use (The Culture Orientation Project, 2004); (2) Af-Maay speakers exhibit historicity or a shared linguistic identity (Wardhaugh, 2009) that stemmed from a shared marginalization history due to their agricultural mode of life rather than the dominant nomadic pastoralist mode of life and their slavery origins (Lehman & Eno, 2003; Laitin, 1977); (3) they also exhibit vitality in that a community of speakers still exits and uses the language variety; and (4) the autonomy or the feelings the speakers have towards Af-Maay (Wardhaugh, 2009) can only be speculated about

(Johnson, 2006; Lehman & Eno, 2003). This non-linguistic classification may explain the results of the data suggesting a partial mutual intelligibility in that both speech communities share an overlapping cultural history, yet various social and political reasons have kept the speakers of Af-Maay and Af-Maxaa and therefore, the mutual intelligibility of the language varieties may have diverged. Moreover, this overlapping cultural history along with Af-Maay being partially intelligible to speakers of Af-Maxaa classifies it as having a Type 5 language-dialect relationship (Crystal, 1987), similar to that of Uzbek and Turkish. .

Is the degree of intelligibility of Af-Maay to speakers of Af-Maxaa due solely to linguistic factors, non-linguistic factors, or a combination of both?

The results of the data analysis suggest that both non-linguistic and linguistic factors are involved in the mutual intelligibility of Af-Maay to speakers of Standard Somali. For instance, the linguistic variable knowledge Af-Maay speakers and the non-linguistic variable of years spent in the United States both displayed a statistically significant relationship with the mutual intelligibility of Af-Maay. Linguistic and non-linguistic factors being involved in mutual intelligibility is in accordance with past research (Chambers & Trudgill, 1998; Wardhaugh, 2009; Wolf, 1959). If the distinction between language varieties was solely based on linguistic factors, the Scandinavian languages would be classified into only two groups (insular and continental), rather than the six (Danish, Swedish, Icelandic, Faroese, and two standard varieties of Norwegian) they are presently classified as (Crystal, 1987). The difference lies within the incorporation of non-linguistic factors, and the data analysis suggests that the separation of Af-Maxaa and Af-Maay may have stemmed from taking into account non-linguistic

factors (i.e. politics) over linguistic factors (i.e. intelligibility) when it was classified as a dialect of Somali. However, more research that closely examines both linguistic and non-linguistic factors needs to be conducted before this data analysis can be considered conclusive.

CHAPTER 5: CONCLUSION

The separation of a language and a dialect is a complicated task in that linguistic factors as well as non-linguistic factors are involved (Chambers & Trudgill, 1998; Romaine, 2000; Wardhaugh, 2009; Wolf, 1959). In 1972, the government of Somalia considering mainly non-linguistic factors (i.e. politics) rather than linguistic factors (i.e. intelligibility), standardized Somali by deriving it from Af-Maxaa, thereby giving overt prestige to its speakers and lowering the status of Af-Maay speakers in the process (Laitin, 1977; Lehman & Eno, 2003; Wolfram, 1997).

Linguistically, Af-Maay has been suggested to be as different from Af-Maxaa as Spanish is from Portuguese; however, the degree of intelligibility is unknown (Lewis, 2002). Therefore, the rationale behind this study was to investigate the degree of intelligibility of Af-Maay to speakers of Af-Maxaa using the linguistic criterion, as well as taking into consideration the possible ramifications non-linguistic factors will have on the results of the intelligibility test. The opinion or perceived judgment mutual intelligibility test was administered to 21 Somali university students that spoke Af-Maxaa through an online survey in order to answer the following questions: (1) "How intelligible is Af-Maay to Somali university student speakers of Af-Maxaa living in the United States?" (2) "What type of language-dialect relationship does Af-Maay have with Af-Maxaa?" (3) "Is the degree of intelligibility of Af-Maay to speakers of Af-Maxaa due solely to linguistic factors, non-linguistic factors, or a combination of both?"

The data analyses appear to imply that Af-Maay is somewhat intelligible to speakers of Af-Maxaa. This partial intelligibility seems to agree with the language-dialect relationship of Type 5 (Crystal, 1987), since speakers of both Af-Maay and Af-Maxaa

share an overlapping history. This language-dialect relationship is contingent on a combination of linguistic and non-linguistic factors. For instance, the linguistic factor that had the most statistically significant impact on the intelligibility of Af-Maay appears to be having a solid understanding of Standard Somali; increased understanding of Standard Somali increased the understanding of Af-Maay. Moreover, as the non-linguistic factor number of years spent in the United States increased, the intelligibility of Af-Maay decreased.

Limitations of the study and implications for future research

There were limitations in this study, which may have impacted and possibly skewed the results of the data. Firstly, the recordings utilized for the mutual intelligibility test were universal stories; specifically, the Standard Somali recording described the Biblical story of Noah, while the Af-Maay described the Biblical creation story. It is unknown if the participants recognized specific words or names, such as Noah, and relied on their memories of the stories to facilitate their understanding. However, by rating and summarizing each recording, it was hoped that this problem could be circumvented. The average rating and summary of each recording was used to analyze the data in order to not only increase its reliability, but to also not allow participants past knowledge of these common stories to have too great an effect.

Secondly, the administered opinion/perceived mutual intelligibility could have been affected by the attitudes of the participants. As Wolf (1959) noted, a participant with positive preconceived notions about a language variety may rate their understanding much higher than one with negative preconceived notions. If this is the case, participant attitudes could have only affected the ratings and not the summaries of the recordings;

since the summaries were objectively assigned points rather than solely relying on the subjective ratings of the participants. In addition, Gooskens and Van Bezooijen (2006) found a minimal relationship between the attitude a participant has towards a language variety and their mutual intelligibility scores.

Furthermore, the perceived/opinion mutual intelligibility test tested for the understanding of the spoken form of Af-Maay and Af-Maxaa and not their written form. Therefore, testing the intelligibility through written language could also yield different results, especially since it has been demonstrated that there are more similarities between their written forms than in their spoken forms (Gillette et. al, 2006). In future research, it would be beneficial to use the functional mutual intelligibility test to determine the exact reasons for the partial intelligibility of spoken Af-Maay, as well as to test its written form by specifically employing word and sentence written testing (Chaoju & Van Heuven, 2008). Besides, the scores from word and sentence functional intelligibility testing have been shown not to be significantly affected by the attitudes of the participants, so utilizing them would make the collected data more reliable and garner a more decisive conclusion about the relationship between the language varieties (Gooskens, 2007).

Thirdly, the data was collected from a selective group, that of Somali university students, which limited the scope of the study. In future research it would be useful to collect data from a more diverse, larger Somali population, because a more diverse, larger population increases the reliability of the results of the data (Codo, 2008). Lastly, collecting data through an online survey could have also skewed the results given that the online format does not make certain that each participant takes the survey without any outside help. Therefore, employing a data collection procedure that would assure the

participants are not receiving any help in their mutual intelligibility tests would be advantageous for future research. Moreover, another advantageous future research addition would be to interview participants concerning their attitudes in addition to the online survey. By interviewing the participants, their attitudes can be used to examine the non-linguistic criteria as they could only be speculated on in this study.

Implications

This study has implications for both historical linguistics and English teaching. Finding out any details about the Somali language is important to its history since Somalia has had a rich, oral society for eons (Ali, 1983; Johnson, 2006); as a result its history is hard to prove or disprove without any written history to supplement it. Ali (1983) effectively utilized linguistic tracing by collecting vocabulary terms from the Benaadir, Northern and Maay dialect groups, and got a general idea of their separation overtime. Therefore, tracing Somali history through language is efficient and especially pertinent in this context. So even though there are still many pieces left in the puzzle of how these language varieties are related, one piece has somewhat been made clearer.

APPENDICES

Appendix A: Online Consent Form

You are invited to take part in a study of Somali dialects, specifically the comparison of Maay and Standard Somali. You are a potential participant because you are a Somali immigrant. The research is being conducted by Dr. Karen Lybeck and Deqa Hassan. We ask that you read this form before agreeing to be in the research. This survey should take about 10 minutes to complete.

Participation in this research is completely voluntary, will have no affect on your current or future relations with Minnesota State University, Mankato and will be kept anonymous. However, whenever one works with email/the internet there is always the risk of compromising privacy, confidentiality, and/or anonymity. Despite this possibility, the risks to your physical, emotional, social, professional, or financial well-being are considered to be 'less than minimal'. Submission of the completed survey will be interpreted as your informed consent to participate and that you affirm that you are at least 18 years of age.

If you have any questions about the study, you may contact the researchers at the University via email at karen.lybeck@mnsu.edu or deqa.hassan@mnsu.edu . If you have questions about the treatment of human subjects, contact Dr. Anne Blackhurst, IRB Administrator, at anne.blackhurst@mnsu.edu. If you would like more information about the specific privacy and anonymity risks posed by online surveys, please contact the Minnesota State University, Mankato Information and Technology Services Help Desk (507-389-6654) and ask to speak to the Information Security Manager.

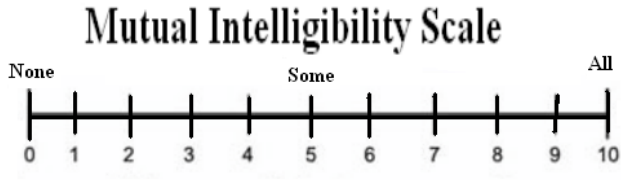
Appendix B: Online Survey Questions

Please answer the following questions:

1. How long have you lived in the United States?
2. Which region of Somalia are you from?
3. Which Somali dialect do you speak (Northern, Benaadir or Maay)?
4. If Maay is not your native dialect, do you know any Maay speakers?

Listen to each of the recordings of Maay and Standard Somali.
After you have listened, rate your understanding of the recording on a scale of 0-10. A score of **0** indicates **no understanding** at all, 5 indicates **some understanding** and a score of **10** indicates **complete understanding**.
Then in the space provided, write in English as much as you have understood and can recall from the recordings.

Scale:



Recording of Standard Somali Summary:

Recording of Maay Summary:

Thank you!

Appendix C: English Translation/Numerical Points

Af Maay Recording English Translation:
Creation. Genesis 1:1-25. Picture 3.
1) God created everything.
2) He said, "Let it be!" and it was He said.
a) He made the sky.
b) He made the sea.
c) He spoke, and land was formed.
3) Then He created all living things:
d) the **fish** in the water,
e) the birds in the air,
f) and all the animals. In this way God created everything.
4) God was pleased with all the He made.
5) Everything that God made was very good! (Bridge music)
Major Propositions: 5
Details: 6
Total: 11

Standard Somali Recording Translation:
Noah and the Great Boat. Genesis 6:1-22 Picture 5.

1) The people who descended from Adam

2) followed the ways of Satan.

3) Only one man tried to please God.

a) His name was Noah.

4) God said to Noah,

5) "I have decided to destroy all mankind because the Earth is full of their evil deeds.

6) Build a boat for yourself.

7) I am going to send a flood on the Earth to destroy every living thing.

b) Go into the boat with your wife and

c) your sons and

d) their wives.

e) Take into the boat with you a male and a female of every kind of animal and bird, in order to keep them alive."

8) Noah did everything that God commanded. (Signal)

Major Propositions: 8
Details: 5
Total: 13

Appendix D: Quantified Demographic Answers

Participant	Years in US	Region of Somalia	Spoken Dialect	Know Maay Speakers
1	6	1	3	2
2	17	1	3	2
3	19	1	1	1
4	20	1	1	1
5	14	2	2	1
6	18	2	2	1
7	15	2	2	2
8	10	1	1	2
9	17	2	2	1
10	15	1	1	2
11	17	1	1	1
12	20	1	1	1
13	14	2	1	2
14	15	2	2	2
15	24	1	1	1
16	14	2	2	2
17	17	1	1	2
18	16	2	2	2
19	12	1	1	2
20	8	2	1	2
21	16	1	1	1

Key:

Region of Somalia:
Coast: 1
North: 2

Spoken Dialect:
Benaadir: 1
Northern: 2
Northern & Benaadir: 3

Know Maay Speakers:
No: 1
Yes: 2

REFERENCES

Ager, S. (1998-2001). Somali (af Soomali). Retrieved March, 2011, from http://omniglot.com/writing/somali.htm

Ali, M. (1983). A linguistic outline of early Somali history. Ufahamu: Journal of the African Activist Association, 12(3), 234-242.

Baumann, R., Yates, L.A., Washington, V.F. (2004). "My clan against the world." US and coalition forces in Somalia (1992-1994). Fort Leavenworth, Kansas: Combat Institute Press.

Barnett, D. (2003). Out of Africa: Somali Bantu and the paradigm shift in refugee resettlement. Retrieved April 2011, from http://www.cis.org/SomaliBantuRefugees

Besteman, C. (1996). Representing Violence and "Othering" Somalia. Cultural Anthropology, 11(1), 120-133.

Beijering, K., Gooskens, C. and Heeringa, W. (2008). Predicting intelligibility and perceived linguistic distance by means of the Levenshtein algorithm. Linguistics in the Netherlands, 25(1), 13-24.

Bhola, H.S. (1982). The theory of the mass literacy campaign. Non-Journal. Retrieved April 2011, from www.eric.ed.gov/ERICWebPortal/recordDetail?accno=ED211687

Biber, D. (2008). In Somali. Oxford International Encyclopedia of Linguistics. Retrieved February 2011, from http://www.mywire.com/a/Intl-Enc-Linguistics/Somali/9461156/

Biber, D., & Saeed, J. (2003). Somali. In W.J. Frawley (2nd Ed.), International encyclopedia of linguistics (pp. 106-108). University of California, LA: Emeritus.

Bigelow, M. (2011). (Con)Texts for cultural and linguistic hybridity among Somali diaspora youth. The New Educator, 7(1), 27-43.

Chaoju, T., & Van Heuven, V. (2009). Mutual intelligibility of Chinese dialects experimentally tested. Lingua, 119(5), 709-732.

Chaoju, T., & Van Heuven, V. (2008). Mutual Intelligibility of Chinese dialects tested functionally. Linguistics in the Netherlands, 25, 145-156.

Chambers, J.K., & Trudgill, P. (1998). Dialectology. Cambridge: Cambridge University Press.

Cheng, C.C. (1997). Measuring relationship among dialects: DOC and related resources. Computational Linguistics & Chinese Language Processing, 2(1), 41-72.

Codo, E. (2008). Interviews and questionnaires. In L. Wei & M. Goyer (Eds.), The Blackwell guide to research methods in bilingualism and multilingualism (pp. 158-176). Malden, MA: Blackwell Publishing.

Crystal, D. (1987). The Cambridge Encyclopedia of Language. Cambridge University Press. New York, NY: Wiley.

Dornyei, Z. (2003). Questionnaires in Second Language Research: Construction, administration and processing. Mahwah, NJ: Lawrence Erlbaum.

Findlay, M.S. (1998) Language and Communication: A cross-cultural encyclopedia. Santa Barbara: CA: CLIO Inc.

Gillette, G., Tracy, R., Anderson, J., & Tomorowitz, G. (2006). On speaking and cultural terms: Somalia. Retrieved April 2011, from http://www.neable.org/wp-content/uploads/files/OnSpeakingandCulturalTermsComplete.pdf

Gooskens, C. (2007). The contribution of linguistic factors to the intelligibility of closely related languages. Journal of Multilingual and Multicultural Development, 28(6), 445-467.

Hammarstrom, H. (2008). Counting languages in dialect continua using the criterion of mutual intelligibility. Journal of Quantitative Linguistics, 15(1), 34-45.

Landinfo. (2006). Rapport Somaliske dialekter. Retrieved October 2010, from www.landinfo.no/asset/520/1/520_1.pdf

Lehman, V.D., & Eno, O. (2003). The Somali Bantu: Their History and Culture. Center for Applied Linguistics in cooperation with Bureau of Population, Refugees, and Migration at the U.S. Department of State. Retrieved October 2010, from http://www.cal.org/co/bantu/sbtoc.html

Menkhaus, K. (2003). Bantu ethnic identities in Somalia. Annales d'Ethiopie, 19(1), 323-339.

Nomad. 2011. In Merriam-Webster Online Dictionary. Retrieved April 2011, from http://www.merriam-webster.com/dictionary/nomad?show=0&t=1303681206

Romaine, S. (2000). Language in Society: An introduction to sociolinguistics (2nd ed.) Oxford, New York: Oxford University Press.

Johnson, J.W. (2006). Orality, literacy, and Somali oral poetry. Journal of African Cultural Studies, 18(1), 119-136.

Laitin, D. (1977). Politics, language, and thought: The Somali experience. Chicago/London: University Chicago Press.

Larson-Hall, J. (2010). A guide to doing statistics in Second Language Research using SPSS. New York/London: Routledge

Lewis, M. Paul (16th ed.), 2009. Ethnologue: Languages of the World. Dallas, Texas: SIL International. Retrieved April 2011, from http://www.ethnologue.com/ethno_docs/distribution.asp?by=country

Lewis, I.M. (2002). The modern history of Somaliland: From nation to state. Athens, Ohio: Ohio University Press.

Lewis, I.M. (2008). Understanding Somali and Somaliland: Culture, History, Society. India: Columbia University Press.

MTN (Minneapolis Television Network). (n.d.) Retrieved April 2011, from http://www.mtn.org/Video/news/somalistory.html

O'Grady, W., Dobrovolsky, M., & Aronoff, M. (1997). Contemporary linguistics: An introduction. New York, NY: St. Martin's Press, Inc.

Paster, M. (2007). Aspects of Maay phonology and morphology. Studies in African Linguistics, 35(1), 73-120.

Ricento, T. (2006). An introduction to language policy: Theory and method (language and social change). Malden, MA: Wiley-Blackwell Publishing.

Rubdy, R. (2001). EL1102 Lecture No. 8: Standardisation and language planning. Retrieved March 2011, from http://courses.nus.edu.sg/course/elltankw/EL1102-wk9.htm

Saeed, J. (1982). Central Somali-A grammatical outline. Afroasiatic Linguistics, 8(2), 1-43.

Saeed, J. (2007). Somali morphology. In A.S. Kaye (Ed.), Morphologies of Asia and Africa (pp. 547-586. United States of America: Eisenbrauns.

Saeed, J. (1999). Somali. Amsterdam/Philadelphia: John Benjamins Publishing Company.

Skutnabb-Kangas, T. (2000). Linguistic genocide in education or worldwide diversity and human rights? Mahwah, NJ & London, UK: Lawrence Erlbaum Associates.

The Cultural Orientation Project. (2004). Somali Bantu: Language and literacy. Retrieved February 2011, from http://www.cal.org/co/bantu/sblang.html

Tokowicz, N. & Warren, T. (2008). Quantifications and statistics. In L. Wei & M. Goyer (Eds.), The Blackwell guide to research methods in bilingualism and multilingualism (pp. 215-231). Malden, MA: Blackwell Publishing.

Tosco, M. (1993). The preverbal particles of a southern Somali dialect. African Languages and Culture, 6(2), 161-178.

Trudgill, P. (1972). Sex, covert prestige, and linguistic change in the urban British English of Norwich. Language in Society 1: 179-196.

Wardhaugh, R. (2009). An introduction to sociolinguistics. West Sussex, UK: Wiley-Blackwell.

Wolf, H. (1959). Intelligibility and inter-ethnic attitudes. Anthropological Linguistics, 1, 34-41.

Wolfram, W. (1997). Dialect in society. In Florian Coulmas. The Handbook of Sociolinguistics, Malden, MA: Blackwell. 107-126.