SOMALI SOUNDS AND INFLECTIONS

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J.J.P.

0. INTRODUCTION

0.0 The problem and this study

This paper presents a portion of the results of an analysis of the Burao subdialect of the Isaq of the Somali language. The study is limited to a presentation of the facts of the segmental phonology, with extremely limited attention devoted to the suprasegmentals, and of the inflectional morphology.

In every way this analysis is different from those conducted by earlier workers whose ranks included not only some of the great names among Italian[1] and German[2] philologists but also some relatively unknown people whose interests in Somali were occasioned by sojourns in Somalia as military personnel[3], civil servants[4], or missionaries[5]. Among the distinctions which set this analysis off from earlier studies is the fact that it is based on the speech of two informants from Burao. While there has been extensive comparison of the Burao data with those obtained from other speakers, this attempt at a phonemic statement, for example, has been more successful than others precisely because it was limited to one subdialect. Consequently, the vocalization system which has been a source of frustration for other workers now is relatively transparent, though far from straightforward. Another significant difference in this study has been the application of the approach of generative and transformational

grammar to these corpora. Even though much remains to be learned about Somali -- this study only scratches the surface -- a new step has been taken in that some of the most sophisticated techniques of modern linguistics have been applied to the language, and its structure is beginning to appear. The important fact which emerges is that after all Somali appears to behave much like other languages, a fact hitherto obscured by a phonology extraordinarily perverse in its defiance of previously employed analytical techniques.

Because the number of speakers whose speech was studied was so small, all the statements herein must be taken as forming a hypothesis which remains to be tested against the evidence of hundreds of speakers. The reader is requested to keep in mind this note of caution as he proceeds through the paper.

It is well to point out, further, that the statements made in this paper have resulted from certain operations, or discovery procedures, performed on the data in accordance with the well known and widely accepted canons of descriptive linguistics. The aim has been to discover the significant units -- phonemes and morphemes -- of sequences of which syntactic units are composed. While some attempt is made at statements designed to generate morphological sequences, no claim is made that those statements will specify all and only the grammatical sequences. Rather, they are presented as an exercise in the application of the notions of generative and

transformational grammar to a language previously unstudied in such a way. Truthful and fully adequate transformational grammars of any given language require that the investigator have an intuitive grasp of that language equivalent to native speaker command. The present writer does not claim such an intuitive knowledge of Somali.

0.1 Background of this study

The investigator began his study of Somali in the summer of 1961 under contract with the United States Office of Education. The investigation occupied the analyst full time from the summer of 1961 to the end of 1962, part time at odd times from then until June of 1964 when full time was again devoted to Somali during a Peace Corps training project at Eastern Michigan University. Some seven months, March through October of 1962, were spent in Somalia, all of that time being spent in Mogadiscio, the capital.

The Office of Education contracted first with the investigator directly and later with the University of California, Los Angeles to support the development of a grammar of and a basic course in the Somali language. The analyst was retained by the University of California, Los Angeles to serve as Principal Investigator of the project under the direction of Professor William E. Welmers. Subsequently a structural outline and a very short set of lessons was prepared. The dialect reported on and taught in those documents was Mudug, a dialect

immediately mutually intelligible with Isaq, the major dialect of the Northern Region, and with Benadir, the dialect of the southern coastal region including the towns of Mogadiscio and Merca.

After leaving Somalia the analyst no longer had available to him Mudug speaking informants. However, in the spring of 1963 the investigator, while he was part of the research staff of the African Studies Center at Michigan State University, was asked to teach Somali to a group of educators from Eastern Michigan University who were preparing to serve in Somalia as the faculty of the U.S. A.I.D. sponsored National Teacher Education Center at Afgoi. He expanded his short course to include sufficient drills and materials for about fifty hours of instruction. In addition he modified the lessons from Mudug to Isaq to match the speech of the informants available in Ypsilanti.

In the summer of 1964 the investigator served as language coordinator for the Peace Corps project training teachers to serve in the Somali Republic. In the course of expanding his lessons to provide for two hundred forty hours of instruction and in working with six informant-drill masters the investigator became better acquainted with Isaq and its sub-dialects. Consequently, the dialect reported herein is Isaq, and a sub-dialect of that, Burao.

0.2 The Somali language

The Somali language is spoken by some three to five million people who inhabit the Horn of Africa. The majority of speakers reside in the Somali Republic, a union of the former United Nations Trusteeship administered by Italy and the former British Protectorate of Somaliland. That union became independent July 1, 1960. The remainder of the speakers are found in French Somaliland, which is a French colony, in the Ethiopian Ogaden, and in the Northern Frontier District of Kenya.

Somali is one of a number of languages spoken by the inhabitants of Somalia, Ethiopia, Eritrea, northern Kenya and Uganda and the southwestern Sudan. Italian scholars, who have done most of the work on them, follow an earlier tradition of calling these languages "Cushitic," from the Biblical name "Land of Cush," thought by eighteenth and nineteenth century scholars to have referred to the Horn of Africa. Recently Greenberg in his monumental study followed the same tradition and attempted to demonstrate that Cushitic is a coordinate branch, along with Berber, Chadic, Ancient Egyptian, and Semitic, of a large family he designated as Afro-Asiatic[6]. While some work has been done to establish that some Cushitic languages are related to each other, there has been no evidence published to support the view that they form a separate group within Afro-Asiatic. Clearly they are related to languages such as Arabic, but the kind and degree

of that relationship remains to be determined.

0.3 Somali dialects

There are in Somali four major dialect divisions. The dialects are: Isaq, Mudug, Dir, and Benadir. The highest prestige is accorded Isaq, which is spoken in the former British Protectorate, now the Northern Region, principally around Hargeisa. Mudug occurs in the north of the former Trusteeship, in the area known as Mijertinya. Galcaio is the urban and administrative center of the Mudug dialect area. The Dir dialects are spoken in the western portion of the Northern Region, extending into French Somaliland and into Ethiopia. Benadir occurs along the southern Indian Ocean coast, principally around Mogadiscio. To the south and west of the Juba River and in the Ogaden the people speak a dialect similar to that of the Northern Region. At this writing it is not known whether that speech is closer to Isaq or to Mudug.

The dialects of Isaq and Benadir are rather distant; travelers going from one area to the other encounter some difficulty in understanding or making themselves understood at first. The person from Hargeisa who visits Mogadiscio finds more difficulty than a resident of Mogadiscio does in Hargeisa. The difference lies in the fact that Radio Mogadiscio uses Isaq or Mudug speaking announcers. The problems seldom last for more than a few days. Mudug, on

the other hand, is immediately mutually intelligible with both Isaq and Benadir.

During the informant sessions the investigator became aware of certain structural differences which serve to break up the Isaq dialect into subdialects. In all likelihood there are more differences present than those discovered to date and that those differences are only suggestive of a network of sub-dialects within each of the major dialects.

From what is known about the rise of dialects within languages one would expect to find in a society as highly atomized as that of the Somali pastoralists a large number of dialectal differences. However, the Somali mythology asserts that all Somalis speak alike. Previous workers have, to some extent, accepted the Somalis' appraisal of the situation and have found very little dialectal differentiation. Such uniformity of speech is at variance with the data obtained by this writer.

0.4 Other languages in Somalia

Among the other languages spoken in the Somali Republic, that spoken by the largest number of people occurs in a large portion of the area between the Juba and Shebeli rivers. It is the language of the Rahanweyn people, the settled agriculturalists. While this language appears to be very closely related to Somali, the two are not mutually intelligible. Consequently, by the usual rule-of-thumb approach they must

by considered separate languages. The language of the Rahanweyn people seems also to have within it some sharp dialectal divergencies, though there are no data at hand to illustrate. Whether the speech of several other groups of agriculturalists who live along the rivers are dialects of Rahanweyn or different languages is unknown at present. They are not varieties of Somali; similarly the Somali people consider them as other people, outside the mainstream of Somali lineage traditions.

There are also isolated pockets of Bantu languages in the Somali Republic. The best known is Chimini, the language of the town of Brava. Assertions that Chimini is a dialect of Swahili remain to be proven. Other languages which may belong to the Bantu stock occur along the lower Juba River and on islands off the coast between Kismayo and the Kenya border.

At this writing, there is no official language of the Somali Republic. The colonial languages -- English in the North and Italian in the South -- are used for official documents. In addition, Arabic, which is the language of culture and education throughout Moslem Somalia, is used on occasion in official situations and for official documents. Somali has not been designated as the official language because there is not yet an accepted means of writing it. The difficulties in selecting a script on the one hand and orthographic conventions for use with that script on the other can be expected to occupy the Somali Ministry of Education for some years. Only after the problem has been thoroughly studied and a consensus reached,

can Somali be adopted as the Republic's official language.

0.5 The corpora

This study is based on two corpora. The first was gathered while the investigator was in Somalia. It consists of some thirty-five hours of tape recorded interviews, a small collection of about twenty texts transcribed from informants and consisting largely of stories, proverbs, and shaggy dog stories, and a series of sentences and citation forms of single items used as examples in the progress and other technical reports submitted in connection with the contract. These materials are all Mudug.

The securing of these data proves most instructive. Apparently many of the analytical grammars of unwritten languages have been done in societies in which the investigator, as an outsider, enjoyed considerable prestige even though he may not have been trusted. The Somali people, however, are not inclined to give any foreigner any prestige. On the contrary outsiders are viewed as well-meaning but simple minded souls of varying degrees of wealth. Indeed, in the eyes of the Somali, foreigners, with a few very notable exceptions, are incapable of learning the Somali language or of evaluating the truthfulness of what they are told about it. Consequently, the investigator was deliberately given false, if not simply inaccurate, information.

The analyst's desires for orderly elicitation of data and for accurate translation met continual resistance. Only twice in the seven months of the field trip was he able to secure a verbal paradigm. As a result it became necessary to obtain information in a way in which an informant could not, deliberately or otherwise, falsify for long periods either his pronunciation or his syntax. Hence, the analyst resorted to interviews; about twenty men were interviewed by three chief informants, entire conversations being recorded. The aim was to construct paradigms for each of the form classes on the basis of data recovered from the texts. Actually, only a very small portion of that corpus has been analyzed to date, since each minute of tape requires about one hour, and an informant, for processing.

The men who were interviewed ranged in age from eighteen to fifty. Most had been born in or near Galcaio; some were businessmen from the town; most were pastoral nomads. All of them were interviewed in Mogadiscio soon after their arrival there. Most of them intended to return to the Mudug region after completing their business or terminating either their vacations or their visits with relatives.

First approximation transcriptions and translations were provided by the chief informants, sometimes with the help of linguistically untrained Americans -- Peace Corps volunteers awaiting assignment -- but more often under the investigator directly.

The second corpus consists of tape recordings of the drills and dialogues of the set of lessons prepared for the Peace Corps training project together with the extensive field notes taken in connection with the preparation of those lessons. These data were supplied, in contrast with the situation in Mogadiscio, by informants who were cooperative and interested in supplying the best and the most accurate of information. The six men were very concerned that the Peace Corps trainees be given every opportunity to learn as much as possible of the language so that they might be effective teachers. Even so, the investigator discovered what seemed to be inconsistencies and other differences in the information elicited. It soon became his practice to elicit only in the presence of two or more men. What emerged was a complicated picture of sub-dialectal divergencies. Such variations, when taken into account, served to explain the apparent confusion not only in this corpus but also in the Mudug data. Moreover, the obvious difficulties encountered in making sense of the work of other scholors could now be understood. A detailed discussion of this aspect of the study is included in the section on the vocalization system.

It should be pointed out that this writer's knowledge of Somali rests not only on the two corpora mentioned above but also on the reports of the language published by earlier workers. For some forms and patterns, especially in the inflectional morphology, which have not appeared in the corpora

or which have not otherwise been elicited, the analyst has relied on the documentation of Somali found in previously published works. Wherever possible those forms have been checked with informants, but those which have not been so checked do not serve as the basis for argument.

0.0.1 Notes

1. For example Moreno and Cerulli.

2. Including Reinisch, Klingenheben, and von Tiling.

3. J.W.C. Kirk and R.C. Abraham are examples.

4. C.R.V. Bell is an outstanding example.

5. Larajasse immediately comes to mind.

6. J.H. Greenberg, The Languages of Africa, Publication Twenty-five of the Research Center in Anthropology, Folklore and Linguistics, Indiana University (Bloomington: Indiana University, 1963).

PART ONE

PHONOLOGY

1. INTRODUCTION TO THE PHONOLOGY

1.1 The segmental phonemes of Burao Somali include twenty-one consonants and eight vowels. There are also at least two pitch contours, two accents, and one internal open juncture.

1.2 In the following discussions reference is made to the positions initial and final. These terms are to be interpreted respectively as "following pause" and "preceding pause".

2. VOCALIZATION

2.0 Though Somali has been the most extensively studied of all the Cushitic languages, earlier workers were often troubled during their studies and not altogether happy with their findings regarding the vowel system. For example:

> "The vowel system of Somali is a baffling one. It is in itself, because of the number and nature of its sounds, and it is complicated by the presence of vowel harmony . . ."[1]

> "In representing the vowels of the Isaaq dialect of Somali we meet with many difficulties not only because of a large number of vowel distinctions but also on account of the operation of Vowel Harmony."[2]

> "Somali is very rich in vowel sounds. There are twenty (and also eight diphthongs). In the transcription used in this book, each symbol represents two sounds . . . . It may well be that you have difficulty in distinguishing them (but this will not as a rule prevent you from being understood)."[3]

While most authors agree that there are "many vowel sounds" in Somali, there is no consensus of opinion regarding the number of vowels. Statements range from twenty[4] to five,[5] with Armstrong insisting on eighteen.[6] Those scholars arguing for five vowels usually accept length as a separate feature, thus arriving at ten "significant" vowels.

Another indication of discomfort with the results of such investigations lies in the fact that while there is widespread agreement on a large number of items, the transcription systems vary markedly in many places, and there seems to be no way to go mechanically from one system to another with any degree of accuracy. Some examples follow:

'go' third singular past tense appears as

tégei (Kirk[7]), taagay (Andrzejewski)

'bring' imperative singular appears as

kèn (Kirk), keen (Andrzejewski), kèen (Armstrong)

'six' appears as

liH (Bell), lehh [where hh is a digraph for /ḥ/] (Kirk),

'ten' appears as

toban (Bell), tòban (Kirk)

'twenty' appears as

labaatan(Andrzejewski), labàton (Kirk)

'seventy' as

toddobaatan(Bell), tadōbátan (Reinisch)

'three' as

saddeḥ (Armstrong), saddeH (Bell)

'take, catch, seize' imperative singular appears as

qabo (Bell), ghobo [where gh = /q/] (Kirk)

'say, tell' imperative singular appears as

sheg (Kirk), sheeg (Bell)

'one' as

kow (Bell), kâu (Reinisch)

'salt' appears as

'usbo (Bell), ósbo (Reinisch)

The problems clearly center about length, on the one hand, and the quality of the short vowels in "unstressed" syllables on the other. Further, there seems to be difficulty in identifying the quality of the back vowels even in syllables which others agree are stressed. In addition, Professor Reinisch has some trouble hearing the voiced pharyngeal fricative, ʕ, as is evidenced by his transcription of ósbo 'salt' in which the other authors and this investigator regularly hear an initial /ʕ/. Doubtless his failure in this regard had some effect on his analysis of the vowels in some forms.

The present writer feels rather certain that such disagreements in transcription as cited above indicate that the vowel system of Somali was not properly understood. This contention is given additional strength by the fact that in previous work the morphology has been complicated in either of two ways: Those investigators who have postulated a large inventory of vowels have been forced to do business with an unrealistically large number of unconditioned allomorphs of countless vocabulary items.[8] Those who have settled on fewer vowels have found that, in spite of great efforts, there remains an uncomfortably sizeable group of unpredictable allophones. An instance of the former situation appears throughout Moreno's discussion of the inflectional morphology; for example, he cites

as the past tense marker "ay (äy, ey, ē, ę, i)."[9]

2.0.1 The solution presented in this paper seeks to avoid the unhappy results of earlier works while at the same time arriving at a simple but truthful statement of the facts. The sources of error in all previous work, including much of this investigator's, have been, first, the failure to recognize, and act upon that recognition,[10] that there are more than two phonetic degrees of length and, second, the implicit assumption that the short and long vowels operated as counterparts of each other much as they have often done in Indo-European languages. Typically the short vocoids were identified as "the vowels" of Somali and the longer vocoids as long, lengthened, or geminate counterparts of the short ones.

2.0.2 It is this investigator's contention (1) that there are four degrees of quantity on the phonetic level: shortest, short, long, and longest, (2) that the shortest vocoids are predictable in their occurrence by some very simple phonotactic rules and, thus, they need not be considered part of the vocalization system, (3) that because certain monosyllabic vocabulary items are distinguished from others solely by the occurrence of particular short vocoids, the latter must be grouped together into the number of phonemes appropriate to the dialect under discussion, (4) that the short and long vowels function synchronically at least as two separate and distinct series, (5) that there is in any given dialect of Somali a maximum of five qualitative

distinctions within each of the long and short series, and (6) that at this writing it appears that the longest vocoids occur simultaneously with a particular pitch contour and may, therefore, be considered lengthened long vowels, the extra length being a function of a suprasegmental feature.

This solution is given added strength by measurements of vocalic length in a small sample of about ten spectrograms of Somali utterances. The short vocoids range in length from about four centiseconds to about twelve, the latter occurring in very slow, deliberate speech and in some citation forms. The long vocoids range from about ten centiseconds to twenty, the longest occurring simultaneously with the pitch contour noted above. The shortest vocoids range from one to four centiseconds; in some circumstances they do not appear at all. In citation forms the short vocoids tend to be as long as the shortest long ones, indicating that where no contrast is required, no contrast in length is maintained. Minimal pairs for length uttered as citation forms, however, exhibit the length contrast. Examples are cited in the section on vocalic inventories below.

2.1 The shortest vocoids and the short vowels

The elimination from the vocalization system of the shortest vocoids was suggested by Applegate's work in Berber.[11] In his work with Shilha Applegate found that large numbers of frequently occurring phones were entirely predictable. A similar situation occurs in Somali. A full discussion of the

place of the shortest vocoids in the phonemic solution presented here appears in the section dealing with consonants.

The necessity for postulating a series of short vowels apart from the predictable vocoids was suggested by Harris in his treatment of Biblical Hebrew.[12] Both in Biblical Hebrew and in Somali there are pairs of words distinguished only by short vocoids; in Somali many of the few such pairs are monosyllabic. Clearly such monosyllables require that some distinguishing feature be established as a phoneme. It is simplest to ascribe that distinction to the vocoid; hence, a separate series of short vowels is postulated. In the Hebrew tradition vowels analogous to the Somali short series are known as <u>hateph</u> vowels; and they are written with a special diacritic. In the transcription of Somali employed in this paper special symbols are also used for the short vowels.

2.2 Burao inventories and allophonics

2.2.1 In the Burao sub-dialect the eight vocalic contrasts yield the following inventories:

<u>Short Vowels</u>

/ I U/
e

<u>Long Vowels</u>

/ i u/
e o
a

The contrasts appear in the following forms.

Short Vowels

ḍIg 'put down (impv sg)'

ḍeg 'ear'

teg 'go away (impv sg)'

tUg 'small stream, wadi'

Long Vowels

nInkì 'the man'

nInkè 'which man'

nInkà 'that man'

nInkù 'the man'

i 'me, to me'

e 'and'

u 'to, toward'

ge 'lead, take (impv sg)', nInkèdu 'her man'

go 'cut (impv sg)', nInkòdu 'their man'

kena 'he brings'

keno 'he might bring'

Short versus Long

cIr 'be, exist (impv sg)'

cir 'mouse, rat'

bed 'eggs'

bed 'sea'

ḍer 'clothes'

ḍar 'oath'

tUg 'small stream'

tug 'theif'

tog 'shoot (impv sg)'

2.2.2 General Allophonics

A. All vowels may have nasalized, pharngealized, or voiceless allophones. Nasalized phones occur in continguity with nasal consonants; pharngealized phones appear next to pharyngeal consonants; voiceless vocoid phones may appear between voiceless consonants or before pause.

B. Long vowels may be lengthened before pause and internal open juncture as well as when they occur with the pitch contour written /ˋ/. The long vowels /o u/ may be centralized or "fronted"[13] before /i/ in the following syllable or an immediately following /y/. The vowel /e/ may be raised before a following /i/ or /y/.

C. The vowels /a/ and /e/ are fronted before a following /i/ or /y/.

D. In the presence of the pharyngeals and /q/ the vowels tend to be lowered. The vowel /a/ before /ʔ ḫ/ is fronted.

E. In addition phones contiguous to /ʔ ḫ q ḏ/ are accompanied by vocalic onsets to or releases from those consonants. Because such transitions are assigned arbitrarily in this study to the consonants in question, they are not included again in this discussion.

2.3 Descriptions of the phonemes

2.3.1: /I/. This phoneme is realized as a class of front spread lax phones. The phone [e][14] occurs next to /q/ and the pharyngeals. The phone /I/ occurs elsewhere.

Examples:

q[e]q 'smoke'

ḫ[e]r 'tie, fasten (impv sg)'

ʕ[e]d 'person, family, group'

d[I]g 'warn (impv sg)'

d[I]l 'kill (impv sg)'

[I]n̂n 'girl'

2.3.2: /ɐ/. This vowel is realized as a class of mid front to central spread lax phones. The front phone is between the American English phones of [ɛ] in /bet/ and [æ] in /bæt/; it is transcribed arbitrarily as [æ].

The phone [æ] may occur before /i y/ in the following syllable: t[æ]gey 'he went,' ḏ[æ]gtì 'the ear.' It may also occur immediately before /y/, especially in the past tense and imperfective markers both of which are of the shape /ɐy/, [æ]y. In careful speech [e] is used. The phone [ɐ] occurs elsewhere.

t[e]g 'go (impv sg)'

nb[ɐ]d 'peace'

b[ɐ]d 'sea'

ḫ[e]ys 'unexpected rain shower'

h[ɵ]ys 'camel with a deformed hump'

m[ɵ]hd 'thanks'

ḫ[ɵ]d 'steal (impv sg)'

ḏ[ɵ]r 'clothes'

2.3.3: /U/. This phoneme is realized as a class of back rounded lax phones. The phone [ö], higher mid, occurs next to pharngeals and /q/. The phone [U] occurs elsewhere.

q[ö]r 'write (impv sg)'

ʕ[ö]ql 'work'

q[ö]rḫ 'beauty'

ʔ[ö]n 'eat (impv sg)'

ḫ[ö]n 'bad'

g[U]n 'bottom of a well'

r[U]n 'truth'

f[U]r 'open (impv sg)'

r[U]g 'turn over (impv sg)'

b[U]n 'coffee'

k[U]n 'thousand'

g[U]d 'hole'

t[U]g 'small stream'

2.3.4: /i/. This vowel is realized as a class of high front spread tense phones. Examples include:

t[i˘]ḫ 'rain shower'

ʕr[i] 'east'

ḫc[i] 'hold carefully (impv sg)'

ʔ[iᵕ]d 'sand'

f[iᵕ]ʔn 'clever, good'

m[i]ya 'is it?'

c[i]r 'cut (impv sg)'

[i]d 'Islamic festival'

ken[i] 'this'

somal[i] 'Somali'

2.3.5: /e/. This vowel is realized as a class of mid front spread tense phones transcribed herein as [ɛ]. Examples include:

b[ɛ]n 'lie'

ḥegg[ɛ́] 'where?'

ḥ[ɛ]b 'coast, beach'

h[ɛ]s 'song'

ʔUnt[ɛ̀]da 'her food'

b[ɛ]r 'liver'

ʔ[ɛ]l 'well'

d[ɛ]g 'settle (impv sg)'

The long phone [æ] is also assigned to this phoneme. Speakers who are bilingual in Arabic or who wish to display their knowledge of Arabic will often employ the phone [æ] in items which Somalis identify as Arabic loans because they know that Arabic /ʔ/ is pronounced [æ]. Less learned speakers will sometimes use [æ] in native Somali items with /e/ in order to give an "Arabic flavor" to their speech. While most

of the informants with whom this writer worked would readily admit to such self conscious efforts on their own parts, other speakers heatedly denied that they were using anything but the purest of Somali pronunciations. Off guard comments from them usually substantiated the thesis that [æ] is not native to them. Examples of such Arabicizing pronunciations include b[æ]d for b[ɛ]d 'eggs,' and ḥ[æ]b for ḥ[ɛ]b 'coast, beach.'

2.3.6: /a/. This vowel is realized as a class of low spread tense phones. The phone [A], low fronted central, occurs before /i y/ in the following syllable or in the presence of the pharyngeals.

ʕ[A]ws 'grass'

ḥ[A]l 'clean, wash (impv sg)'

n[A]ḥ 'become fat (impv sg)'

m[a]gʕ[À] 'your name?'

mḥ[A]d heysa 'what do you have . . .?'

š[A] i ken 'bring me tea'

[A]ni 'I'

The phone [ɒ], low back unrounded, occurs with /q/.

q[ɒ]d 'take (impv sg)'

[ɒ]q[ɒ]n 'to know'

q[ɒ]li 'expensive'

The phone [a], low central, occurs elsewhere:

[a]f 'mouth, language'

[a]fr 'four'

[a]dg 'difficult'

ḏ[a]r 'oath'

Imis[a] 'how much/many'

hg[a]g '0.K.'

l[a]b[a] 'two'

sg[a]l 'nine'

m[a]nt[a] 'today'

2.3.7: /o/. This phoneme is realized as a class of lower rounded tense vocoids. The phone [ö], lower mid central rounded, occurs before/w/ and before /i y/ in the following syllable.

k[ö]w 'one'

md[ö]w 'black'

The phone [ɔ], higher low back, occurs contiguously with the pharyngeals.

ḥ[ɔ]l[ɔ] 'livestock'

ʕ[ɔ]l 'enemy'

ḥ[ɔ]g 'strength'

f[ɔ]ḥa 'incense'

f[ɔ]qa 'story of a building'

The phone [o], mid back, occurs elsewhere.

[o] 'and'

r[o]b 'rain'

h[o]g 'despair'

xIyam[o] 'trick'

h[o]s 'below, down'

bh[o]l 'hole'

s[o]mali 'Somali'

ʔsb[o] 'salt'

ḏ[o]f 'abroad'

brš[o] 'become acquainted'

d[o]neya 'he wants'

2.3.8: /u/. This phoneme is realized as a class of high back rounded tense phones.

t[u]g 'thief'

l[uᵛ]q 'singing'

s[uᵛ]q 'market'

b[uᵛ]q 'clamor'

m[u]s 'bananas'

[u] 'to, toward'

[u]bahnehey 'I need'

ds[u]d 'cooking pots'

2.4 Diphthongs

For purposes of this paper a diphthong is defined as a sequence of vowel and consonant which patterns like a vowel in its conditioning of the allophones of the other consonants. The diphthongs include:

/ey/:

ey 'dog'

eyg 'look at (impv sg)'

-ey past tense and imperfective markers

/ew/:

kew 'one'

mdew 'black'[16]

2.5 Sub-dialect variation

In the course of an instructional program certain complicating factors came to light, factors which led first of all to the notion of sub-dialect described above and then to the hypothesis of an overall pattern inventory of vowel phonemes.

In the Peace Corps program there were six informant-drill masters: one from the Gadabursi (a variety of Dir) dialect area and the others from the Isaq region: two from Hargeisa, one from Berbera, and two from Burao. The lesson materials were based on the speech of the Burao men, but all the others taught the lessons. It was soon discovered that among the Isaq speakers the incidence of vowels in given vocabulary items varied with often two of the sets agreeing as opposed to the third; sometimes, however, Hargeisa, Burao and Berbera were all different. The Gadabursi speaker provided still another complication by having a fourth short vowel.

It was necessary, then, to admit as an unavoidable fact the existence of sub-dialects within Isaq, as well as the expected divergence from Isaq found in the Gadabursi speech, and the consequent impossibility of a transcription for the lessons which would serve all Isaq speakers equally well. There are implications here also, of course, for the problems of language standardization and the establishment of a Somali orthography.

Any transcription of Somali, it must be concluded, designed to serve speakers of several of the major dialects must necessarily be based on the maximum number of vocalic distinctions found in those dialects, i.e., an overall pattern. There must also, of course, be a postulation of one of the dialects as the standard. The major change in the inventory presented so far would be an expansion of the list of short vowels to include at least four rather than only three. There might well be dialects which exhibit five short vowel contrasts or at least four which are different from those of the Gadabursi, in which case the inventory ought to include five short vowels:

I U
e o
a

Unfortunately the availability of a larger number of contrasts is of little assistance in predicting from dialect to dialect the phonemic shape of many items. They must still be written for each dialect or sub-dialect.

2.6 Notes

1. Lilias E. Armstrong, "The Phonetic Structure of Somali" Mitteilungen des Seminars der orientalischen Sprache 37(1934) Part 3, P. 116.

2. B. W. Andrzejewski, "The Problem of Vowel Representation in the Isaaq Dialect of Somali" Bulletin of the School of Oriental and African Studies [henceforth BSOAS] 17(1955) Part 3, P. 567.

3. C. R. V. Bell, The Somali Language (London: Longmans, 1953) P. 3.

4. Andrzejewski and Bell, for example, insist that the long and short vowels must be totalled, making for ten, and multiplied by two to take care of "fronting" and "backing."

5. Leo Reinisch, Die Somali Sprache (Wien: A. Hölder, 1901-03); Martino Mario Moreno, Il Somalo dello Somalia (Roma: Instituto Poligrafico dello Stato, 1955); S. Warsma and R. C. Abraham, The Principles of Somali (London: by the author [Major Abraham], 1951).

6. Ibid.

7. J. W. C. Kirk, A Grammar of the Somali Language (Cambridge: the University Press, 1905). In Kirk's transcription the grave accent marks long vowels.

8. Andrzejewski's narrow transcription is an example of this situation. His efforts at setting up Harmonic Groups succeeds only in pushing the phonemic feature into the suprasegmentals where chances of proper treatment are more remote than if it

were left within the vocalization.

9. Moreno, Ibid., P. 65.

10. Moreno, Ibid., P. 4, says "un annotazione accuratissima dovrebbe distinguere nelle lunghe varie durate. In teoria una lungha dura il doppio d'una breve, ma ci sono anche della semilunghe e della ultralunghe." But, he continues, "No indicheremo qualche case nei testi; ma imbroglieremme le idee se volessimo seguire tutte le sfumature nella Grammatica."

11. While the investigator was at UCLA preparing to go to Somalia, he had the advantage of many hours of informal talks with Professor Applegate. In conversation and in his work Outline of Shilha Structure Washington: ACLS, 1958) Dr. Applegate made many helpful suggestions. His work probably rests on that of Z. S. Harris, "The Phonemes of Moroccan Arabic." Journal of the American Oriental Society LXII (1942) 309-318.

12. "Linguistic Structure of Hebrew" Journal of the American Oriental Society LXI (1941) 143-167. Though Professor Harris' article has been subject to attack by those who feel that his examples were not always well chosen, it is only his approach to the problem of the hateph vowels that is of interest here.

13. Andrzejewski's term to refer to the alternation between central and back, front and central, and higher and lower phones in the presence of /i/ or of backing elements such as the consonants /q ḍ/ etc.

14. In the discussion of the short vowels the phone symbols are assumed to refer to short vocoids, only quality being noted. Hence, what may appear as overlapping with the long phones is not actually such because of the differences in length.

15. In the discussion of the long vowels all the phone symbols are assumed to refer to long vocoids. Thus, there is no overlapping with short phones of similar qualities even though there may appear to be superficially.

16. These are alternate pronunciations of the forms previously cited as /kow/ and /mdow/.

3. CONSONANTS

3.0 There are twenty-one consonant phonemes in the Burao sub-dialect of Somaili.

		Labial	Dental	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
STOPS	Fortis		t	ɖ	c	k			
	Lenis	b	d			g	q		
FRICATIVES	vls	f	s		š	x		ḥ	h
	vd							ʕ	
NASALS		m	n						
			l						
LIQUIDS			r						
GLIDES		w			y				

3.1 Organization of the consonant system

3.1.1 The stop series is divided into two groups on two grounds: distribution of the phonemes and the patterning of allophones. The terms fortis and lenis are used because only those features seemed truly distinctive, while others, such as voicing, were inconsistent in their occurrence.

The lenis stops function as a group: they occur in utterance initial and final positions as well as intervocalically; and they share the allophonic pattern of spirantization in intervocalic position. In contrast the fortis series does not behave as a group: the phonemes /ḍ/ and /c/ occur finally, while in careful speech /t/ and /k/ do not. This situation seems to the present writer to justify the postulation of the two series.

3.1.2 The glides /w/ and /y/ are granted phonemic status in opposition to /u/ and /i/ because, though there are no contrasts in the corpus of the vowels with the glides, there are morphophonemic alternations of /w/ with /b/ but none of /w/ with /u/. In addition the phonological conditioning of the masculine gender marker on nouns argues for the separation of /w/ and /u/: the allomorph /-g-/ occurs after /i y w/, but /-h-/ appears after all other vowels, including /u/. It would appear that assigning phonemic status to /w/ and to /u/ is justifiable. By analogy /y/ and /i/ are also given the status of separate phonemes.

3.1.3 As noted above the lenis stops are analyzed as occurring doubled and single in intervocalic position. The single consonants are realized as homorganic spirants, while the doubled ones occur as phonetic stops. This analysis is similar to that applied in other languages, most notably Biblical Hebrew, which belongs to the Afro-Asiatic family as does Somali. This analysis reduces in Somali, as it does in Classical Hebrew, the number of consonant phonemes and eliminates a series of voiced fricatives with an extremely limited distribution.

3.2 General allophonics

A. All contoid articulations are rounded in contiguity with rounded vowels.

B. In the environments $\{\begin{matrix}C\\V\end{matrix}\}$____ and ____$\{\begin{matrix}C\\V\end{matrix}\}$ the phonemes /ʕḥḍq/ are accompanied by vocoid transitions which are considered inherent features of the consonants in question.

C. The following rules account for the occurrence of intrusive vocoidal cluster breakers. The symbol C = any consonant; V = any vowel or diphthong; ^{v} = intrusive vocoid.

/#CCV . . ./ ⟶ [#C^{v}CV . . .]

/. . . VCC#/ ⟶ [. . . VC^{v}C#]

/. . . VCCC#/ ⟶ [. . . VCC^{v}C#]

/#CCCV . . ./ ⟶ [#C^{v}CCV . . .]

/#CC#/ ⟶ [#C$^{\circ}$C#]

/#CC#/ ⟶ [#C$^{\circ}$C$^{\circ}$C#]

/#CCCC#/ ⟶ [#C$^{\circ}$CC$^{\circ}$C#]

The intrusive vocoids assume the quality of the vowel phoneme in the item. When there is no vowel phoneme written, as the sequence /CCC/, the quality is schwa-like.

3.3 Description of the phonemes

3.3.1 The lenis stops

/b/: This phoneme is a voiced bilabial. Examples include:

bḫ 'go away (impv sg)'

ḫ́br 'back, shoulders'

ʕb 'drink (impv sg)'

/d/: This phoneme is a voiced apico-dental. Examples include:

dəb 'fire'

badn 'many, much'

qad 'take (impv sg)'

/g//: This phoneme is a voiced dorso-velar. Examples include:

ǵbḫ 'girl, daughter'

kəlligə̀d 'all of them'

lʕg 'money'

/q/: This phoneme is a voiceless dorso-uvular. Examples include:

qab 'take, seize/(impv sg)'

bqol 'hundred'

qIq 'smoke'

3.3.1.1 The allophones of this series may conveniently be described as a group.

A. In initial position voicing may be present throughout or only at the end of the phone:

/b/: [b]er, [p]er 'liver'

/d/: [d]əb, [t]əb 'fire'

/g/: [g]el, [k]el 'camels'

B. In the environments [V____V] on theone hand and [^{v}____V] and [V____^{v}] on the other the lenis stops are realized as voiced homorganic fricatives.

/b/: di[β]i 'ox'

dI[β]ó 'tails'

/d/: a[ð]on 'slave'

a[ð]iga 'you (sg)'

/g/: d[ɣ]al 'battle'

ey[ɣ]a 'he sees'

/q/: b[G]ol 'hundred'

fo[G]Ir 'poor'

C. In final position the lenis stops are realized as voiceless stop phones, as noted in 3.1.4 above.

/b/: də[p] 'fire'

dI[p] 'tail'

/d/: də[t] 'people'

be[t] 'eggs'

/g/: lʕ[k] 'money'

ad[k] 'difficult'

3.3.2 The fortis stops

/t/: This phoneme is realized as a class of apico-dental voiceless aspirated stops.

[t^h]Imó 'hair'

[t^h]əg 'go (impv sg)'

lUg[t^h]a 'the log'

nag[t^h]a 'the woman'

/k/: This phoneme is realized as a class of dorso-velar voiceless aspirated stops.

[k^h]ow 'one'

[k^h]UntUn 'fifty'

bqor[k^h]a 'the king'

ʔel[k^h]a 'the well'

/ɖ/: This phomeme is realized as an apico-alveolar or prepalatal voiced retroflexed stop. Initially it may be imploded. Finally it is checked.

[ɖ]ińʔ 'side'

[ɖ]ig 'blood'

á[ɖ]i 'sheep and goats'

be[ɖ]i 'sheep's tail'

ǵb[ɖ] 'girl, daughter'

ci[ɖ] 'flesh'

/c/: This phoneme represents the phonetic sequence [$t^{\check{s}}$]. Because it is distributed like any other single consonant, it is considered a unit in this study. Intervocalically the phoneme is frequently realized as [$d^{\check{z}}$].

[t$^{\breve{z}}$]og 'wait, be (in a place), (impv sg)'

[t$^{\breve{z}}$]Id 'road'

þ[d$^{\breve{z}}$]Udey 'he sinned'

wada[d$^{\breve{z}}$]Ir 'together'

þa[t$^{\breve{z}}$] 'pilgrimage to Mecca'

3.3.3 The fricatives

/f/: This phoneme is realized as a class of voiceless labio-dentals.

fri 'see (impv sg)'

afúf 'blow (impv sg)'

qUf 'person'

/s/: This phoneme is a class of voiceless grooved apico- or fronto-alveolars.

slÚb 'smooth'

ʕsbo 'salt'

tUs 'show (impv sg)'

/s/: This phoneme is a class of slit apico-alveolars or post-alveolars.

šáley 'yesterday'

ʕlÚša 'the stomach'

ʕrIš 'house'

/s/: This phoneme is realized as a class of voiceless dorso-velars. It occurs infrequently and is said by the Somali themselves to occur only in words of Arabic origin. This investigator tends to agree with their judgment. Uneducated speakers tend to use /g/ or /k/ instead of [x].

wsx, wsg 'dirty'

šeyx, šeyg 'Sheikh (a town name)'

xatalp̣n, katalp̣n 'deceit'

/ḥ ʕ/ These phonemes are voiceless and voiced pharyngeals similar to those described for Arabic. In each case the oral cavity assumes the shape for [a], and the pharynx muscles are constricted. For /ʕ/ the vocal bands are activated as well, though at irregular intervals so that the spectrograms show a laryngealized vocoid [a̰].

ḥggé 'where, which place?'

ǒḥl 'wild animal'

bḥ 'go away (impv sg)'

ʕàno 'milk'

ʕid 'sand'

šʕo 'walk, move 'impv sg)'

kʕ 'stand up, depart (impv sg)'

/h/: This phoneme is a class of vocoids produced with audible friction. Intervocalically /h/ is voiced; elsewhere it is voiceless; it does not occur finally.

[ñ]yo 'mother'

[ñ]br 'old woman'

biyí[ĥ]i 'the water'

a[ĥ]a 'he was'

3.3.4 The resonants

/m/: This phoneme is a class of bilabial nasals; it does not occur finally.

mǒye 'mortar (with pestle)'

maln 'day'

magʔ 'name'

ǎmbe 'next, after'

ǎmbi 'sin'

/n/: This phoneme is a class of non-labial nasals. The phone [ŋ], dorso-velar, occurs before velars:

nI[ŋ]kǐ 'the man'

se[ŋ]ka 'the nose'

The phone [n̪], apico-dental, voiceless, may occur in final position.

se[n̪] 'nose'

ḅU[n̪] 'evil'

nI[n̪] 'man'

The phone [n], apico-dental, voiced, occurs elsewhere.

[n]ag 'woman'

ma[n]ta 'today'

ḍI[n]tey 'she died'

/l/: This phoneme is a class of apico-dental lateral resonants. It is everywhere a palatal, "clear," or "light" l.

lába 'two'

libḅ 'lion'

wǐli 'again'

wǐlka 'the boy'

ʔol 'enemy'

ʔálaʔál 'palm (of hand)'

/r/: This phoneme is a class of apical flaps and trills. Initially /r/ is realized as a preaspirated voiceless trill [$^{h}\underset{o}{r}$]. In final position it is realized as an unaspirated trill, usually voiceless. In medial position -- pre-, post-, or intervocalically -- /r/ is realized as a single flap; a trill in these environments is interpreted as /rr/.

[$^{h}\underset{o}{r}$]eg 'man'

[$^{h}\underset{o}{r}$]Id 'throw (impv sg)'

b[$\underset{o}{r}$]i 'tomorrow (/brri/)

ʕ[$\underset{o}{r}$]ab 'tongue' (/ʕrreb/)

b[r]i 'east'

a[r]g 'see (impv sg)'

ʕ[r]U[$\underset{o}{r}$] 'children'

bU[$\underset{o}{r}$] 'mountain, hill'

3.3.5 The glides

/w/: This phoneme is a rounded non-syllabic vocoid of the shape [$\underset{\wedge}{u}$].

wtey 'he carried, drove'

wIl 'boy, son'

ẃdacIr 'together'

ʕows 'grass'

howd 'Ogaden'

dawʕ 'fox'

mdow 'black'

/y/: This phoneme is a class of spread non-syllabic vocoids of the shape [$\underset{\wedge}{i}$].

yr 'small'

yel 'make, do (impv sg)'

ḿya 'no'

bíyu 'water'

-ey 'past tense'

4. SUPRASEGMENTALS

4.0 The Somali suprasegmental inventory includes an internal open juncture, three pitch contours, and two accents.

4.1 /+/, internal open juncture: This phoneme is realized in several ways.

The shape [?] occurs between vowels.

-la[?]an 'not' + adjective marker

lo[?]ed 'cow' + marker of possessive construction.

In other environments the occurrence of /+/ is marked by its influence on neighboring phonemes, for example in forms of the shape C_1VC_2VC. When C_2 is a lenis stop, /b d g q/, it is, as noted in the discussion of the consonants, realized as the appropriate homorganic fricative intervocalically. However, when C_2 is preceded by /+/, it is realized as the stop phone characteristic of initial position.

Similarly assimilation across morpheme boundaries may be prevented by the insertion of /+/. For example

/labanImba . . ./ '[there were] two men . . .'

but

/labanIn+ba . . ./ '[there were] two men . . .'

4.2 The pitch contours

4.2.0 Attention is devoted here to three pitch contours which extend over sentences or parts thereof. That is, Somali is here recognized as a language which employs an intonation system. Because other workers, notably Pike and Wells, have

found that comprehensive and detailed investigations of intonational systems lead to full scale studies sufficient unto themselves -- they require as much or more effort as that needed for an entire structural sketch -- the consideration of pitch contours in this paper is limited to that degree of understanding required to comprehend in a crude way the accent system which seems to be operating in Somali.

4.2.1 The medial contour consists of what might be called "mid pitch" occurring before a pause. A listener encountering this contour expects the speaker to continue, or he recognizes that the speaker is listing items. Spectrograms show an apparently coincidental very slight rise or fall in pitch immediately before the pause.

4.2.2 There are two sentence final contours. That which marks statements includes a rise from the preceding level followed by a drop to and rapid fade out of a level lower than that on which the sentence began. The contour which marks questions is similar except that a much higher rise occurs before the drop. Spectrograms show a rise of one to one and one-half semitones for statements and two to three plus for questions. The final pitch may be as much as three or as little as one and one-half semitones below "mid" pitch.

Some samples in the corpora of excited speech show that for one speaker the "mid" pitch is about two semitones higher than when he is talking "normally." Similarly, the amount of rise and fall is considerably compressed. From a possible one

to one and one-half semitone rise for statements (no questions are recorded) the range is reduced to one-half to one.

4.2.3 It seems possible to "establish" four relative pitch levels on the basis of information such as that presented above, though there is no effort being made here to postulate pitch phonemes: mid [^{m}], high[^{h}], highest [^{H}], and low [^{l}].

4.3 The accents

4.3.1 There occur in Somali minimal pairs which sound to an English speaker like stress contrasts:

^{h}I^{l}nn 'boy'

^{l}I^{l}nn 'girl'

^{h}n^{l}rIg 'male baby camel'

^{l}n^{l}rIg 'female baby camel'

Spectrograms made with the continuous amplitude display unit show that there is little evidence to support the postulation of amplitude, or loudness, stress or prominence. The prominent syllable, however, has a higher pitch than the other syllables of an item. The occurrence of [^{h}] or [^{H}] is for purposes of this paper tentatively defined as /ˊ/ or "high accent."

Sentences also occur with one high pitch, i.e., with sentence final contours. Individual vocabulary items may also be said to occur with sentence final contours, polysyllables having a prominent syllable or monosyllables showing a drop from [^{h}] to [^{l}].

Within sentences individual items give up their [^{h}] to the [^{h}] of the final contour. One result is that the [^{m}] is characterized by ups and downs corresponding to the variations between [^{h}] and [^{l}] within polysyllabic items. For example:

^{h}ke^{l}ni 'this'

^{h}hi^{l}lb 'meat'

^{h}ʔel^{l} 'well'

but:

^{m}keni wa ^{h}hi^{l}lb^{l} 'This is meat' and

^{m}keni wa ^{h}ʔel^{l} 'This is a well'.

Moreover,

^{m}ʔelkeni wa ^{h}weyn^{l} 'This well is big.'

^{m}hilbkeni wa ^{h}mʔn^{l} 'This meat is good.'

4.3.2 There are items, however, which in this frame never take [^{h}]. For example:

nIn 'man'

^{m}keni ^{h}wa ^{l}nIn^{l} 'This is a man.'

lḥoḥ 'bread'

^{m}keni ^{h}wa ^{l}lḥoḥ^{l} 'This is bread.'

In other frames these items behave similarly.

^{h}whan^{m} doneya ^{h}hilb^{l} 'What I want [is] meat.'

^{h}whan^{m} doneya ^{h}bed^{l} 'What I want [is] eggs.'

but

^{h}whan^{m} doneya ^{l}lḥoḥ^{l} 'What I want [is] bread.'

^{h}whan^{m} doneya ^{l}ʔano^{l} 'What I want [is] milk.'

These data suggest the necessity of postulating a "low accent", /ˋ/, which occurs with a relatively small number of vocabulary items. A redundant feature of the low accent is the lengthening of long vowels under it, with the short vowels apparently not so affected. Thus, in some situations where the semantics requires that an item with low accent be emphasized, that item will occur with [^{h}] or [^{H}] but will retain its lengthened long vowel. For example:

A. ^{l}ʔana^{m} doneya^{l} 'He wants milk.'

B. ^{m}m^{h}ḥa^{m} doneya^{l} 'What does he want?'

A. ^{h}ʔ[a:]na^{m} doneya^{l} 'He wants milk!'

4.3.3 The transcription, then, must show the peak of a given contour and the accents as they occur on the individual polysyllabic items within sentences. Contour peaks may be written [']: mḥá dóneysa 'What do you want?'

5. PHONOTACTICS

Because the corpora on which this study is based are so small and because the transcriptions in the literature are untrustworthy, it seems of little value to attempt to specify permissible phoneme sequences. The results would doubtlessly be skewed, but the direction and degree of that skewing would remian undetermined, hidden, as it were, by the fortuitous inclusion of items in the corpora.

PART TWO

MORPHOLOGY

6. INTRODUCTION

6.0 In the following pages is a description of Somali inflectional morphology stated in generative and transformational terms. Underlying the generative statement is, of course, a field worker's analysis, which analysis, while "Bloomfieldian," is neither strictly IA nor IP since such partisanship is irrelevant, given the final form of the statements.

There are problems associated with the generative grammar itself. The limiting of this study to a feasible scope, while serving to simplify matters, has also complicated the study enormously in that it has cost perspective, so that certain external morphophonemic patterns (or boundary phenomena) which probably run throughout the language have been withheld from sight. Similarly, construction markers are deliberately omitted from this study even though such omission leads to a rather lopsided picture of the language. For example, no study of Somali should be considered complete without a discussion of the plural marker /-od/, which occurs on some nouns after numbers, and /-ed/, of the construction X Y-ed which means 'X of Y', yet they are deliberately excluded from this study because there is no way to account for their conditioned occurrence in a grammar which does not deal with sequences of words as well as sequences of morphemes.

Aside from the fact that the description is piecemeal, covering only about ninety-five per cent of the inflectional morphology, the major results are that (1) no truth claims

whatever can be made for the description as a whole and (2) there are ad hoc and arbitrary manouvers to produce real sequences in situations where some of those sequences are probably part of the underlying structure of the language.

The description has been more useful to the investigator in the writing than it will probably be to the reader. For the most part, though, the description works, i.e., produces only grammatical strings of Somali morphemes. In all likelihood, however, probably not all the possible sequences may be produced by this description. Nonetheless, if this description is viewed as a step along the way toward a complete syntactic study of Somali, then it has fulfilled a useful purpose.

6.1 Among the assumptions upon which this study is based are the following.

A. Every morpheme in Somali is an affix or a base. Bases may be grouped together into three form classes: Particles, Nouns, and Verbs. It is assumed that there will be in any given language, including Somali, some but not complete correlation between morphological and syntactic form classes.

B. Particles are defined as those bases which never occur with any affix.

C. Nouns include those bases which share the ability to take the inflectional suffixes of Gender marker and Article. Subsumed under this class are Substantives, Pronouns, Numbers, and Adjectives.

D. Verbs include the remaining bases which take a set of affixes none of which are shared by Nouns.

6.2 Operational approaches include the following.

A. Every Noun or Verb can be completely described as one or more morphemes in an ordered sequence.

B. When alternatives are possible, that segmentation is made which will simplify the morphophonemics of the inflectional affixes.

C. No segmentations are made which will permit the occurrence of more than one zero allomorph in any one sequence of morphemes.

7. NOUNS

7.0

1. NOUN ⟶ { STEM1 / STEM2 (+DEFINITIVE) } (+INFLECTION)

2. STEM1 ⟶ { PRONOUN / ADJECTIVE }

3. STEM2 ⟶ { NUMBER / SUBSTANTIVE / DUMMYM / DUMMYF }

4. DEFINITIVE ⟶ { POSSESSIVE / DEMONSTRATIVE }

7.1

1. PRONOUN ⟶ { iya+ T 'she' / Z }

2. Z ⟶ {
áni	'I'
ádi	'you (sg)'
isá	'he'
aná	'we (excl)'
iná	'we (incl)'
IdÍn	'you (pl)'
iyá	'they'
}

7.2

1. ADJECTIVE ⟶ ADJ(+T)

2. ADJ ⟶ { BAJT
BADJ(+AN)
ADJV+SN

3. BAJT ⟶

weyn	'big'
yr	'small'
ḏer	'tall, long, deep'
ḏow	'near, shallow'
etc.[2]	

4. BADJ ⟶

bad	'many, much'
fog	'far'
la	'not'
fiʔ	'clever, good'
etc.[3]	

5. ADJV[4] ⟶

wneg	'good'
celʔ	'weak'
etc.[5]	

6. AN ⟶ en

7. SN ⟶ sen[6]

7.3

1. NUMBER ⟶ { SIMPL / COMPD }

2. SIMPL ⟶ { ONE / Q+T / NINE / HUN / TOB }

3. COMPD ⟶ { Q+T / NINE } +TOB

4. ONE ⟶ { kow + T[7] / hal / mId }

5. Q ⟶ { lába 'two' / śddḥ 'three' / áfr 'four' / šen 'five' / lIḥ 'six' / tóddUbo 'seven' / sIddeyd 'eight' }

6. NINE ⟶ sgal

7. HUN⟶ { boq́l 'hundred' ; kun 'thousand' }

8. TOB⟶ { den/lIb⟶ ; ten/{Q, NINE}⟶ ; tUbán }

7.4

1. SUBSTANTIVE⟶ BASE(+PLURAL)

2. BASE⟶ { BARB ; BASEf, BASEm } /⟶PLURAL ; BASEf + T ; BASEm }

3. BARB[8]⟶ { BARSGl ; BARPL + T }

4. BARSG⟶ { mŕkIb 'ship' ; sndúq 'box' ; kŰrsi 'chair' ; bnduq 'rifle' ; mʕlIn 'teacher' ; dísti 'cooking pot' ; etc. }

5. BARPL⟶

mrékIb	'ships'
snéduq	'boxes'
krésI	'chairs'
bnéduq	'rifles'
mʕlImín	'teachers'
dsúd	'cooking pots'
etc.	

6. BASEf⟶

- BSOM
- CLFM
- DUMMYF

7. BSOM[9]⟶

srIr	'bed'
kmis	'bread'
ḏḥul	'charcoal'
míndi	'knife'
mro	'cloth'
ñyo	'mother'
sḥIbed	'friend (fem)'
ǵbḏ	'daughter, girl'
wraq	'paper'
etc.	

8. CLFM[10]⟶

ʕrUr	'children'
lo	'cattle'
etc.	

9. BASEm ⟶ { BMSC1, BMSC2, BMSC3, CLMSC, DUMMYM }

10. BMSC1 ⟶

sḥIb	'friend (masc)'
ẃdne	'heart'
ber	'liver'
ábbe	'father'
etc.[12]	

11. BMSC2 ⟶

deb	'fire'
ʕel	'well'
nIN[12]	'man'
beḏ	'half'
etc.	

12. BMSC3 ⟶

ʕ́rIš	'house'
beld	'town'
ḏagḥ	'stone'
qUdḥ	'thorn'

13. CLMSC ⟶ { CLMSC1, CLMSC2 }

14. CLMSC1 → { ded 'people'; reg 'men'; gel 'camels'; bed 'eggs'; rob 'rain'; ged 'tree'; ɖer 'clothes'; hbló 'girls'; gedó 'grass'; ʔàno 'milk'; hal 'place'; etc.[13] }

15. CLMSC2 → { dumar[14] 'women'; áɖi 'sheep and goats' }

16. PLURAL → { Ø / { CLFM, CLMSC, BARPL } ——; PL1/ BSOM——; PL2/ { BMSC1, CLMSC1 } ——; PL3/ BMSC2——; PL4/ BMSC3—— }

17. PL1 ⟶ { yó/i____ ; yín/o____ ; ó }

18. PL2 ⟶ YAL+T

19. YAL ⟶ { ó/{b, d, ḍ, n, l, r}____ 15 ; yó ; yál }

20. PL3 ⟶ — ác (Where C = final consonant of BMSC2)

21. PL4 ⟶ ón

7.5

1. POSSESSIVE ⟶ GENDER + BPOSS

2. BPOSS ⟶

óy	'my'
à	'your (sg)'
èd	'her'
ìs	'his'
ón	'our (incl)'
eyó	'our (excl)'
in	'your (pl)'
òd	'their'

7.6

1. DEMONSTRATIVE ⟶ GENDER + { DEMDP / { STEM1, NUMBER, SUBSTANTIVE } ——, DEMDP, DEMIN }

2. DEMDP ⟶ { en 'this, these'; às 'that, these' }

3. DEMIN ⟶ { uwen 'these'; uwàs 'those' }

7.7

1. INFLECTION ⟶ GENDER + ARTICLE

2. ARTICLE ⟶ { { ù, ì } / DEMONSTRATIVE (+ X +)——, ù, ì, a[16] }

3. GENDER ⟶ { T/T(+ X +)——, K }

7.8

Unless otherwise noted, all transformations are obligatory.

1. X + T + #

   1 2 3 ⟶ 1 + 3

2. Q + T + TOB ⟶ 1 + 3

   1 2 3

3. X + T + T + Y

   1 2 3 4 ⟶ 1 + 3 + 4

4. [DUMMYM / DUMMYF] + [K / T] + X

   1 2 3 ⟶ 2 + 3

5. ADJECTIVE + INFLECTION

   1 2 ⟶ 2 + 1

6. X + { èd 'her' / ìs 'his' / en 'our (incl)' / ín 'your (pl)' / òd 'their' / DEMONSTRATIVE } + GENDER + ARTICLE

   1 2 3 4 ⟹ 1 + 2 + 4

7. $\begin{bmatrix} \text{lába} \\ \text{śddḥ} \\ \text{áfr} \\ \text{tóddUba} \end{bmatrix} + \begin{Bmatrix} \text{TOB} \\ \text{INFLECTION} \end{Bmatrix}$

1 2 $\Longrightarrow$ $\begin{bmatrix} \text{labá} \\ \text{sdd́h} \\ \text{af́r} \\ \text{toddUbá} \end{bmatrix} + 2$

8. X + eye + #

1 2 3 $\Longrightarrow$ 1 + eyó + 3

9. $\begin{bmatrix} \text{às} \\ \text{uwàs} \end{bmatrix} + \#$

1 2 $\Longrightarrow$ $\begin{bmatrix} \text{à} \\ \text{uwà} \end{bmatrix} + 2$

10. sddḥ + TOB $\Longrightarrow$ soddon 'thirty'

11. sen + TOB $\Longrightarrow$ kUntUn 'fifty'

12. T_{optional}

$\begin{Bmatrix} \text{ḱyo} & \text{'mother'} \\ \text{ábbe} & \text{'father'} \\ \text{wIl} & \text{'son'} \\ \text{ǵbḍ} & \text{'daughter'} \\ \text{wlal} & \text{'sibling'} \\ \text{áfo} & \text{'wife'} \end{Bmatrix} + \text{BPOSS} + \text{INFLECTION} + \#$

1 2 3 4

$\Longrightarrow$ 1 + 2 + 4

7.9

1. K ⟶

$$\begin{cases} \emptyset \;/\; \left\{\begin{matrix} \underset{\cdot}{h} \\ \text{ʕ} \\ q \\ \text{gel} \quad \text{'camel'} \end{matrix}\right\} \text{———} \\ g \;/\; \left\{\begin{matrix} i \\ y \\ w \end{matrix}\right\} \text{———} \\ h \;/\; V \text{———} \quad \text{(Where V = vowel)} \\ k \end{cases}$$

2. T——

$$\begin{cases} d \;/\; \left\{\begin{matrix} d \\ \underset{\cdot}{h} \\ y \\ w \\ V \end{matrix}\right\} \text{———} \quad \text{(Where V = vowel)} \\ t^{17} \end{cases}$$

3. X +

$$\left\{\begin{matrix} \text{à} & \text{'your (sg)'} \\ \text{eyé} & \text{'our (excl)'} \\ \text{isá} & \text{'he'} \\ \text{aná} & \text{'we(excl)'} \\ \text{iná} & \text{'we (incl)'} \\ \text{iyá} & \text{'they'} \end{matrix}\right\} + h + \text{ARTICLE}$$

1 2 3 4

⟹ 1 + 2 + g + 4

4. Vowel + $\begin{Bmatrix} h \\ d \end{Bmatrix}$ + $\begin{bmatrix} a,e \\ i,e,I \\ \grave{u},o,u \end{bmatrix}$ + X

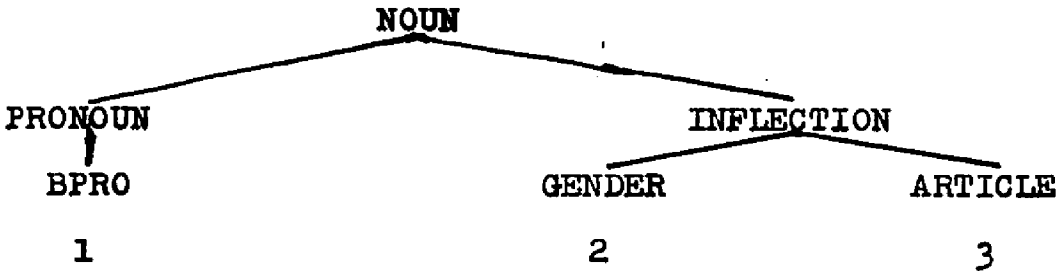
1 2 3 4 $\Longrightarrow$ $\begin{bmatrix} a \\ i \\ u \end{bmatrix}$ + 2 + 3 + 4

In this rule #1 is either the final vowel of the base or the vowel of PLURAL; #2 is GENDER; #3 is the first vowel of POSSESSIVE, DEMONSTRATIVE, or ARTICLE.

7.10 Examples

1. Pronouns

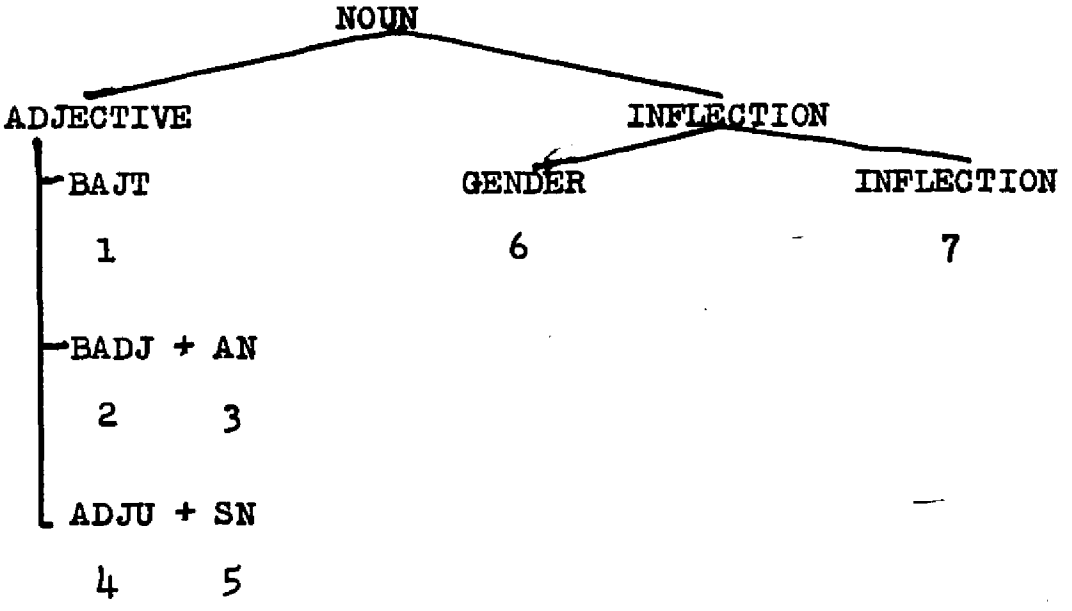
A. Tree



B.	áni	'I'	áni - g - a
C.	ádi	'you(sg)'	ádi - g - a
D.	iyá	'she'	iyá - d - a
E.	isá	'he'	isá - g - a
F.	aná	'we (excl)'	aná - g - a
G.	iná	'we (incl)'	iná - g - a
H.	idÍn	'you (pl)'	idÍn - k - a
I.	iyá	'they'	iyá - g - a

2. Adjectives

A. Tree



B. BAJT

B.1	weyn	'big'	k - ì - weyn 6 7 1	t - ì - weyn 6 7 1
B.2	yr	'small'	k - ì - yr 6 7 1	t - ì - yr 6 7 1
B.3	ḍow	'near'	k - ì - ḍow 6 7 1	t - ì - ḍow 6 7 1

C. BADJ (+AN)

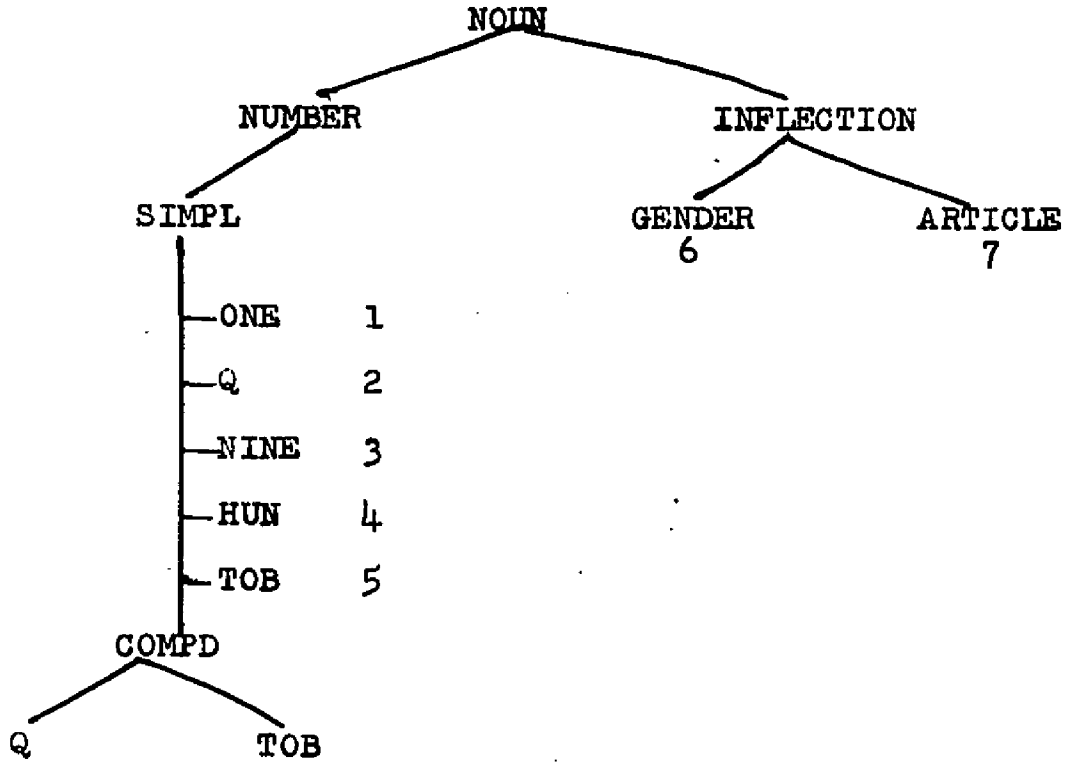
C.1	'fog	'far'	k - ì - fog 6 7 2	t - ì - fog 6 7 2
	fog-en 2 3		k - ì - fog-en 6 7 2 3	t - ì - fog-en 6 7 2 3
C.2	ceb	'broken'	k - ì - ceb 6 7 2	t - ì - ceb 6 7 2
	ceb-en 2 3		k - ì - ceb-en 6 7 2 3	t - ì - ceb-en 6 7 2 3

D. ADJV + SN

wneg-sn 'good'		k	-	ì	-	wneg-sn		t	- ì - wneg-sn
		6		7		4	5	6	7 4 5

3. Numbers

A. **Tree**



B. ONE

kow	kow	-	d	-	a	
	1		6		7	
mId	mId	-	k	-	a	
	1		6		7	
hal	hal	-	k	-	a	
	1		6		7	

C. Q

'2': lába labá - d - a
2 6 7

'20': labá - ten labá - ten - d - a
2 5 2 4 6 7

'3': sddḥ sdd́ḥ - d - a
2 6 7

'30': sóddon soddon - k - a
2+5 2+5 6 7

'4': áfr áfŕ - t - a
2 6 7

'40': afŕ - ten afŕ - ten - k - a
2 5 2 5 6 7

'5': šen šen - t - a
2 6 7

'50': kUntUn kUntUn - k - a
2 +5 2 +5 6 7

'6': lIḥ lIḥ - d - a
2 6 7

'60': lIḥ - den lIḥ - den - k - a
2 5 2 5 6 7

'7': tóddUbo toddUbá - d - a
2 6 7

'70': toddUba - ten toddUba - ten - k - a
2 5 2 5 6 7

'8': sIddéyd sIddeyd - k - a
2 6 7

'80': sIddey - ten sIddey - ten - k - a
2 5 2 5 6 7

'9': sgal sgal - k - a
3 6 7

'90': sgašen sgášen - k - a
3 + 5 3 + 5 6 7

D. HUN

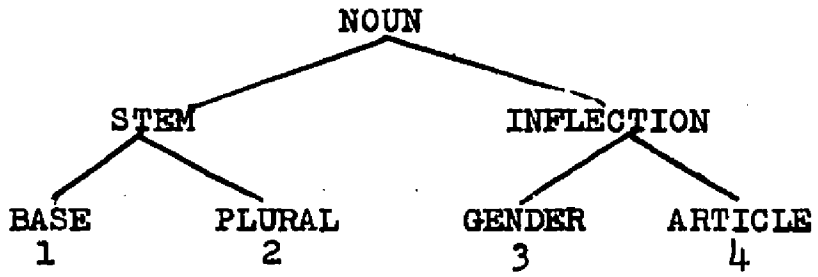
boq́l boql - k - a
4 4 6 7

E. TOB

tUbán tUban - k - a
5 5 6 7

4. Substantives

A. Tree



B. BARB

mrkIb	'ship'	mrekIb	'ships'
		1 + 2	
mrkIb - k - a	'the ship'	mrekIb - t - a	'the ships'
1 3 4		1 + 2 3 4	

C. BSOM (+PL1)

mIndí	'knife'	mIndi - yó	'knives'
		1 2	
mIndí - d - a	'the knife'	mIndi - yá - h - a	'the knives'
1 3 4		1 2 3 4	

D. CLFM

ʕrUr 'children'

ʕrUr - t - a 'the children'
1 3 4

E. BMSC1 (+PL2)

/b/

ṣhIb	'friend'	ṣhIb - ó	'friends'
		1 2	
ṣhIb - k - a	'the friend'	ṣhIb - á - d - a	'the friends'
1 3 4		1 2 3 4	

/l/

šbel 'leopard'

šbel - ó 'leopards'
1 2

šbel - k - a 'the leopard'
1 3 4

šbel - á - d - a 'the leopards'
1 2 3 4

/r/

bebUr 'wheeled device'

bebUr - ó 'wheeled devices'
1 2

bebUr - k - a 'the wheeled device'
1 3 4

bebUr - á - d - a 'the wheeled devices'
1 2 3 4

/-V/

ábbe 'father'

abbe - yó 'fathers'
1 2

abbá - h - a 'the father'
1 3 4

abbe - yá - h - a 'the fathers'
1 2 3 4

F. BMSC2 (+PL3)

deb 'fire'

deb - áb 'fires'
1 2

deb - k - a 'the fire'
1 3 4

deb - áb - k - a 'the fires'
1 2 3 4

ʃel 'well'

ʃel - ál 'wells
1 2

ʃel - k - a 'the well'
1 3 4

ʃel - ál - k - a 'the wells'
1 2 3 4

nIn 'man

nIm - án 'men'
1 2

nIn - k - a 'the man'
1 3 4

nIm - án - k - a 'the men'
1 2 3 4

G. BMSC3 (+PL4)

ʔ́rIš 'house' ʔ́rš - én 'houses'
1 2

ʔ́rIš - k - a 'the house' ʔ́rš - én - k - a 'the houses'
1 2 3 4

H. CLMSC1

ded 'people'

déd - k - a 'the people'
1 3 4

bed 'eggs'

béd - k - a 'the eggs'
1 3 4

I. CLMSC2 (+PL2)

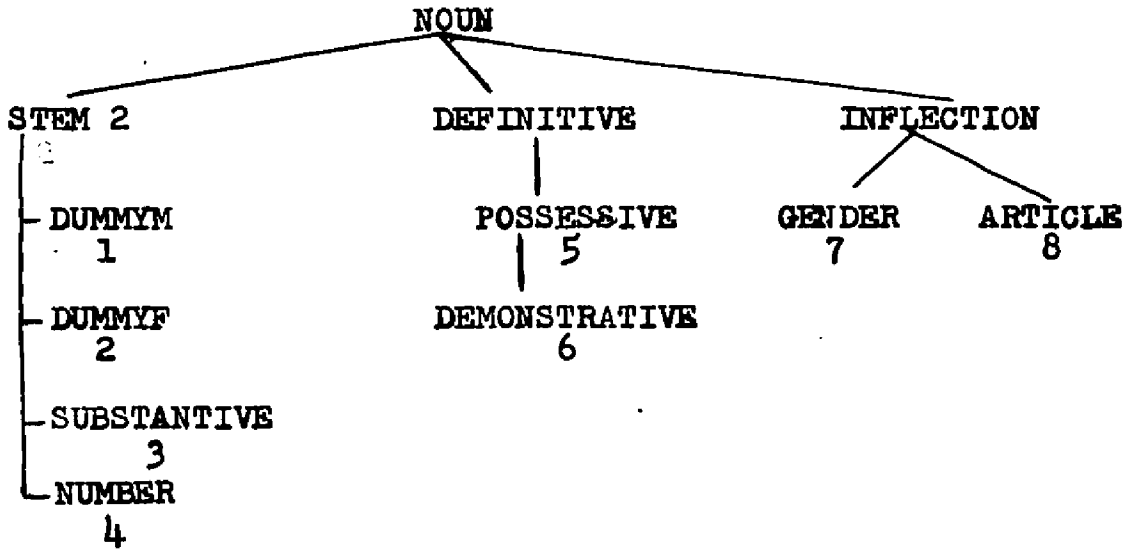
áḍi 'sheep and goats' aḍi - yó 'flocks of sheep and goats'
1 2

áḍi - g - a 'the sheep and goats'
1 3 4

aḍi - yá - d - a 'the flocks of sheep and goats'
1 2 3 4

5. Possessives and demonstratives

A. Tree



B. {DUMMYM / DUMMYF} + Possessives

'my/mine'	ø - k - ə́y - g - a 1 7 5 7 8	ø - t - ə́y - d - a 2 7 5 7 8
'your/yours (sg)'	ø - k - à - g - a 1 7 5 7 8	ø - t - à - d - a 2 7 5 7 8
'her/hers'	ǫ́ - k - ə̀d - a 1 7 5 8	ø - t - ə̀d - a 2 7 5 8
'his'	ø - k - is - a 1 7 5 8	ø - t - is - a 2 7 5 8
'our/ours (excl)'	ø - k - əyó 1 7 5	ǫ́ - t - əyó 2 7 5
	ø - k - əyə́ - g - a 1 7 5 7 8	ø - t - əyə́ - d - a 2 7 5 7 8
'our/ours (incl)'	ø - k - ə́n - a 1 7 5 8	ø - t - ə́n - a 2 7 5 8
'your/yours (pl)'	ø - k - ín - a 1 7 5 8	ø - t - ín - a 2 7 5 8
'their/theirs'	ø - k - ò̀d - a 1 - 7 5 8	ø - t - ò̀d - a 2 7 5 8

C. $\left\{\begin{matrix}\text{DUMMYM}\\ \text{DUMMYF}\end{matrix}\right\}$ + Demonstratives

'this, these'

ø - k - én - i	ø - t - én - i
1 7 6 8	2 7 6 8

'these'

ø - k - uwén - i	ø - t - uwén - i
1 7 6 8	2 7 6 8

'that, those'

ø - k - às - i	ø - t - às - i
1 7 6 8	2 7 6 8

'those'

ø - k - uwàs - i	ø - t - uwàs - i
1 7 6 8	2 7 6 8

D. Substantive + $\left\{\begin{matrix}\text{Possessives}\\ \text{Demonstratives}\end{matrix}\right\}$

1.a

mrkIb 'ship'

mrkIb - k - éy - g - a 'my ship'
3 7 5 7 8

mrkIb - k - én - i 'this ship'
3 7 5 8

mrkIb - k - às - i 'that ship'
1 7 5 8

1.b

mrekIb 'ships'

mrekIb - k - éy - g - a 'my ships'
2 7 5 7 8

mrekIb - k - én - i 'these ships'
1 7 6 8

mrekIb - k - às - i 'those ships'
1 7 6 8

2.a

ṣḥIb 'friend'

ṣḥIb - k - éy - g - a 'my friend'
1 7 5 7 8

ṣḥIb - k - én - i 'this friend'
1 7 6 8

2.b

ṣḥIb - ó 'friends'
1 pl

ṣḥIb - a - d - éy - d - a 'my friends'
1 7 5 7 8

ṣḥIb - i - d - én - i 'these friends'
1 7 6 8

3.a

deb 'fire'

deb - k - ey - g - a 'my fire'
1 7 5 7 8

deb - k - en - i 'this fire'
1 7 6 8

3.b

deb - áb 'fires'
1 pl

deb - ab - k - éy - g - a 'my fires'
1 7 5 7 8

deb - ab - k - én - i 'these fires'
1 7 6 8

4.a

ʕrIš 'house'

ʕrIš - k - éy - g - a 'my house'
1 7 5 7 8

ʕrIš - k - én - i 'this house'
1 7 6 8

4.b

ʃrš - én 'houses'
1 pl

ʃrš - en - k - éy - ɛ - a 'my houses'
1 7 5 7 8

ʃrš - en - k - én - i 'these houses'
1 7 5 8

=4

7.11 Notes

1. The selection of AN seems to be a syntactic matter which lies outside the scope of this paper.

2. Because the largest available lexicon lists only about 2500 items, it is impossible to estimate accurately the size of any of the classes. All estimates are at best guesses. In this light the investigator estimates that this class probably consists of roughly twenty items.

3. This class may consist of as many as fifty items.

4. The symbol ADJV is meant to imply that such adjective bases are derived from verbs. That such bases are so derived is asserted in the literature, but this investigator has yet to substantiate that assertion. Moreover, the derivational morphology lies outside the scope of this paper.

5. If it is true that these bases are derived from verbs, there are as many members of the class as there are verbs whose meanings allow such derivation.

6. Bell states (P. 77) that both AN and SN are suffixed to verb bases, with those in AN having "basically an active meaning" and those in SN a passive one. Bell's examples do not substantiate his claim. As yet the present writer has not been able to investigate the matter.

7. The selection of /kow/, /mId/, or /hal/ is a syntactic matter which lies outside the scope of this paper.

8. These items are probably Arabic loanwords, though demonstra-

tion is impossible synchronically. Many of these items are consciously employed as loans by speakers who wish to appear educated and cultured. Probably several hundred items comprise this class.

9. The symbol BSOM is intended to imply that these items are Somali in origin. However, some of them, e.g. /srIr/ 'bed,' /sḥIbəd/ 'friend,' and /wraq/ 'paper,' may be Arabic loans. If they are loans, they have been completely "naturalized," occurring in forms which Somalis assert are Somali. This is the largest class of feminine nouns, probably consisting of tens of thousands of items.

10. These items are collectives; they probably number in the hundreds.

11. There are probably hundreds of thousands of items which belong to this class and to BMSC2 and BMSC3.

12. The final N of nIN is a morphophoneme which is realized as follows: $N \longrightarrow \begin{cases} n \\ m \end{cases} / \_\_\_\_ \begin{cases} + \\ \# \end{cases}$

This rule operates throughout the language, as does another:

$$T_{ob} \quad lt \longrightarrow \text{[illegible]}$$

13. This class of masculine collectives may consist of as many as two hundred items.

14. Because the investigator has never heard dumar, it is presented in Bell's orthography.

15. This list of final consonants includes /d, ḍ/ and N which

are not found in the corpora under study. However, because they are cited in the literature (Bell, P. 15), they are listed here. Bell himself does not cite examples for his equivalents of /d, ḍ/ or N.

16. The selection of /ù, ì, a/ seems to be a syntactic matter which lies outside the scope of this paper.

17. In some dialects and in other sub-dialects of Isaq the sequence /ḍt/ is realized as /ḍḍ/ or as /ḍ/. Thus, 'the girl,' gbḍ-t-a, may be pronounced as /gbeḍḍa/ or /gbḍa/ instead of /gbeḍta/.

8. VERBS

8.1 Phrase Structure

1. VERB ⟶ STEM + INFLECTION
2. STEM ⟶ BASE + MARGIN
3. MARGIN ⟶ (DERIVATION +) W
4. W ⟶ (IMPERFECTIVE +) PERSON
5. INFLECTION ⟶
   - IMPV
   - INFINITIVE (+ IMPVNG)
   - TENSE (+ SUBJUNCTIVE)
6. BASE ⟶
   - CVC
   - KEN
   - IRREG
7. IRREG ⟶
   - M
   - BE
8. M ⟶
   - COME
   - SAY
   - LIVE
   - KNOW
9. CVC ⟶
   - qab 'seize'
   - ḍegeys 'listen'
   - ḍuf 'pull, jerk'
   - feḍis 'sit down'
   - seḥ 'sleep'
   - etc.[1]

10. KEN ⟶ { Q ; ɖeq 'save' ; keri 'cook' ; Ibi 'sell' ; etc.[2] }

11. Q ⟶ { ken 'bring' ; teg 'go' ; cog 'be (inaa place)' ; qad 'take' ; fur 'open' ; etc.[3] }

12. IMPV ⟶ { IPVSG ; IPVPl }

13. IMPVNG ⟶ { INGSG ; INGPL }

14. IPVSG ⟶ { o/ ; ø } { CVC ; DERIVATION } (+ X +) ——

15. IPVPL ⟶ a

16. INGSG ⟶ { n/Q(+ X +) —— ; ø }

17. INGPL ⟶ { na/Q(+ X +) —— ; Ina }

18. INFINITIVE ⟶ { i/Q(+ X +) —— ; in }

19. TENSE ⟶ { PRES / PAST }

20. PRES ⟶ a

21. PAST ⟶ ey

22. DERIVATION ⟶ s

23. IMPERFECTIVE ⟶ { ∅ / ——— (X+) { IMPERATIVE / INFINITIVE (+X) } / ey }

24. PERSON ⟶ { FIRST / SECOND / THIRD }

25. FIRST ⟶ { ICH / WE }

26. SECOND ⟶ { THOU / YOU }

27. THIRD ⟶ { SHE / HE / THEY }

28. WE ⟶ n

29. THOU ⟶ T

30. SHE ⟶ T

31. HE ⟶ y

32. THEY ⟶ y

33. YOU ⟶ { do/BE(+ X +)——— + PAST / T }

34. T ⟶ { d/BE(+ X +)——— + PAST / t }

35. SUBJUNCTIVE ⟶ o

36. BE ⟶ ehey

37. COME ⟶ Imd

38. KNOW ⟶ aqan

39. LIVE ⟶ al

40. SAY ⟶ Idi

8.2 Transformations

Unless otherwise noted, all are obligatory

1. ehey + {ICH / HE} + PAST
   1 2 3 ⟹ aha + 2 + 3

2. ehey + {YOU / THEY} + PRES
   1 2 3 ⟹ Ihin + 2 + 3

3. RREG + DERIVATION + Y
   1 2 3 ⟹ 1 + 3

4. Imd + { (X +) INFINITIVE / IMPERFECTIVE (+ X) }
   1 2 ⟹ Imen + 2

5. Imd + { {YOU / THEY} + PAST / X + PRES }
   1 2 ⟹ Imed + 2

6. {aqan / al} + {YOU / THEY} + PRES
   1 2 3 ⟹ 1 + in + 2 + 3

7. [aqan / al / Idi] + {YOU / THEY} + PAST
   1 2 3 ⟹ [Iqinan / Ila / Idahden] + 2 + 3

8. Idi + X + PRES
   1 2 3 ⟹ Idahd + 2 + 3

9. $\begin{bmatrix}aqan\\al\end{bmatrix}$ + X + PAST
   1 2 3 ⟹ $\begin{bmatrix}Iqin\\Il\end{bmatrix}$ + 2 + 3

10. $\begin{bmatrix}Idi\\al\end{bmatrix}$ + X + INFINITIVE
    1 2 3 ⟹ $\begin{bmatrix}dehen\\Il\end{bmatrix}$ + 2 + 3

11. IRREG + IMPERFECTIVE + X
    1 2 3 ⟹ 1 + 3

12. BE + PERSON + PRES
    1 2 3 ⟹ 2 + 1 + 3

13. M + PERSON + X
    1 2 3 ⟹ 2 + 1 + 3

14. X + $\begin{Bmatrix}KNOW\\LIVE\\BE\end{Bmatrix}$ + PRES + #
    1 2 3 4 ⟹ 1 + 2 + 4

15. X + IRREG + PAST + #
    1 2 3 4 ⟹ 1 + 2 + 4

16. X + $\begin{Bmatrix}BE\\LIVE\\KNOW\end{Bmatrix}$ + SUBJUNCTIVE + #
    1 2 3 4 ⟹ 1 + 2 + 4

17. IRREG + INFINITIVE + #
    1 2 3 ⟹ 1 + 3

18. X + PERSON + $\begin{Bmatrix}IMPV\\INFINITIVE\end{Bmatrix}$
    1 2 3 ⟹ 1 + 3

19. X + PAST + SUBJUNCTIVE
    1 2 3 ⟹ 1 + 2

20. X + $\begin{Bmatrix}I\\THOU\\SHE\\HE\\WE\end{Bmatrix}$ + PRES + SUBJUNCTIVE
    1 2 3 4 ⟹ 1 + 2 + 4

21. X + $\begin{Bmatrix}YOU\\THEY\end{Bmatrix}$ + Y + SUBJUNCTIVE
    1 2 3 4 ⟹ 1 + 2 + 3

22. $\underset{1}{X} + \underset{2}{\left\{\begin{matrix}\text{YOU}\\ \text{THEY}\end{matrix}\right\}} + \underset{3}{\text{TENSE}} \Longrightarrow 1 + 2 + 2 + n$

23. $\underset{1}{X} + \underset{2}{\text{DERIVATION}} + \underset{3}{\left[\begin{matrix}\left\{\begin{matrix}\text{SECOND}\\ \text{WE}\\ \text{THEY}\\ \text{INFINITIVE}\end{matrix}\right\}\\ \left\{\begin{matrix}\text{TENSE}\\ \text{SUBJUNCTIVE}\\ \text{IPVPL}\end{matrix}\right\}\end{matrix}\right]} + \underset{4}{Y} \Longrightarrow 1 + \begin{bmatrix}\text{sed}\\ \text{s}\end{bmatrix} + 3 + 4$

24. $\underset{1}{\text{CVC}} + \underset{2}{\left[\begin{matrix}\text{TENSE}\\ \left\{\begin{matrix}\text{IMPERFECTIVE}\\ \text{SECOND}\\ \text{WE}\\ \text{THEY}\end{matrix}\right\}\end{matrix}\right]} + \underset{3}{X} \Longrightarrow 1 + \begin{bmatrix}\text{t}\\ \text{e}\end{bmatrix} + 2 + 3$

25. $\underset{1}{\begin{bmatrix}\text{h, d, q, ʔ, h}\\ \text{ḍ}\end{bmatrix}} + \underset{2}{t} + \underset{3}{X} \Longrightarrow 1 + \begin{bmatrix}\text{d}\\ \text{ḍ}\end{bmatrix} + 3^4$

26. $\underset{1}{\left\{\begin{matrix}\text{CVC}\\ \text{KEN}\end{matrix}\right\}} + \underset{2}{\left\{\begin{matrix}\text{HE}\\ \text{THEY}\end{matrix}\right\}} + \underset{3}{X} \Longrightarrow 1 + 3$

27. $\underset{1}{\left\{\begin{matrix}X\\ \#\end{matrix}\right\}} + \underset{2}{\text{ICH}} + \underset{3}{Y} \Longrightarrow 1 + 3$

28. $\underset{1}{\text{Vowel}} + \underset{2}{\left\{\begin{matrix}\text{IPVPL}\\ \text{TENSE}\\ \text{SUBJUNCTIVE}\end{matrix}\right\}} + \underset{3}{X} \Longrightarrow 1 + y + 2 + 3$

29. $\underset{1}{\text{Vowel}} + \underset{2}{\text{IMPERFECTIVE}} \Longrightarrow 1 + n + 2$

30. $\underset{1}{\text{Vowel}} + \underset{2}{(y+)}\ \underset{3}{\text{in}} + \underset{4}{X} \Longrightarrow 1 + yn + 4$

31. $\underset{1}{X} + \underset{2}{n} + \underset{3}{n} + \underset{4}{y} \Longrightarrow 1 + n + 4$

32. $\underset{1}{X} + \underset{2}{y} + \underset{3}{t} + \underset{4}{Z} \Longrightarrow 1 + 2 + s + 4$

33. OPTIONAL:

$$\underset{1}{\left\{\begin{matrix}\text{KEN}\\ \text{CVC}\end{matrix}\right\}} \quad \underset{2}{(+X)} + \underset{3}{T} + \underset{4}{\text{SUBJUNCTIVE}} + \underset{5}{\#} \Longrightarrow 1 + 2 + 3 + id + 5$$

8.3 Notes

1. This class probably consists of several hundred items.

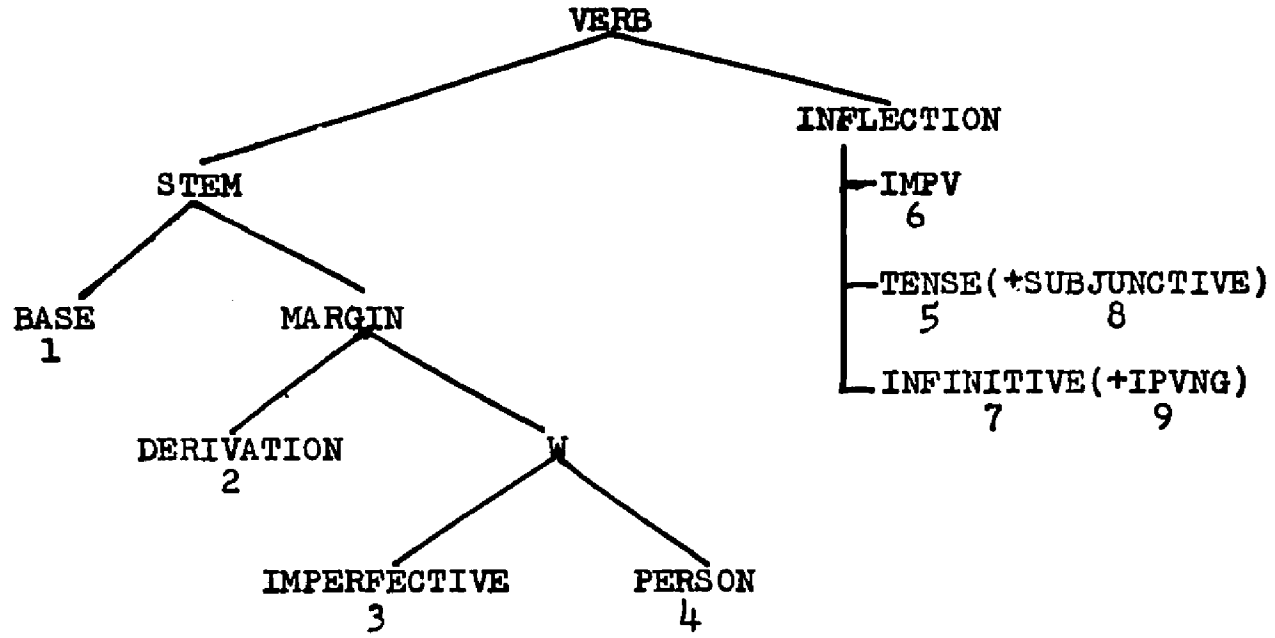
2. This class consists of tens of thousands of items.

3. This subclass probably consists of about fifty items.

4. Rules 24 and 25 are ordered with respect to each other, with the output of 24 being the t of rule 25.

8.4 Examples

1. Tree



2. CVC

A.1 qab-o 'seize'
1 6

A.2 qabt-a 'seize (pl)'
1 6

B. qabe-n 'to seize'
1 7

C. Present

	Singular	Plural
1,3m	qabt-a 1 5	1. qabe-n-a 11 4 5
2,3f	qabe-t-a 1 4 5	2. qabe-t-an 1 4 5
		3. qabt-an 1 5

D. Past Indicative

	Singular	Plural
1,3m	qabt-ey 1 5	1. qabe-n-ey 1 4 5
2,3f	qabe-t-ey 1 4 5	2. qabe-t-eyn 1 4 5
		3. qabt-eyn 1 5

E. Imperfectives

	Present	Past
1,3m;sg	qabe-ney-a 1 3 5	qabe-ney-ey 1 3 5
2,3f;sg	qabe-ney-s-a 1 3 4 5	qabe-ney-s-ey 1 3 4 5
1pl	qabe-ney-n-a 1 3 4 5	qabe-ney-n-ey 1 3 4 5
2pl	qabe-ney-s-an 1 3 4 5	qabe-ney-s-eyn 1 3 4 5
3pl	qabe-ney-an 1 3 5	qabe-ney-eyn 1 3 5

F. Subjunctives

1+3msg	qabt-o 1 8	qab-ney-o 1 3 8
2+3fsg	qabe-t-o	qabe-ney-s-o
	qabe-t-id 1 4 8	qabe-ney-s-id 1 3 4 8
1pl	qabe-n-o 1 4 8	qabe-ney-n-o 1 3 4 8

2. KEN + DERIVATION

A.1 cog-s-o 'stop'
1 2 6

A.2 cog-sed-a 'stop(pl)'
1 2 6

B. cog-se-n 'to stop'
1 2 7

C. Present

1+3mSg	cog-sed-a 1 2 5	cog-se-ney-a 1 2 3 5
2+3fSg	cog-se-t-a 1 2 4 5	cog-se-ney-s-a 1 2 3 4 5
1pl	cog-se-n-a 1 2 4 5	cog-se-ney-n-a 1 2 3 4 5
2pl	cog-se-t-an 1 2 4 5	cog-se-ney-t-an 1 2 3 4 5
3pl	cog-sed-an 1 2 5	cog-se-ney-an 1 2 3 5

D. Past

1+3mSg	cog-sed-ey 1 2 5	cog-se-ney-ey 1 2 3 5
2+3fSg	cog-se-t-ey 1 2 4 5	cog-se-ney-s-ey 1 2 3 4 5
1pl	cog-se-n-ey 1 2 4 5	cog-se-ney-n-ey 1 2 3 4 5
2pl	cog-se-t-eyn 1 2 4 5	cog-se-ney-s-eyn 1 2 3 4 5
3pl	cog-sed-eyn 1 2 3	cog-se-ney-eyn 1 2 3 5

E. Subjunctive

1+3mSg	cog-sed-o 1 2 8	cog-se-ney-o 1 2 3 8
2+3fSg	cog-se-t-o	cog-se-ney-s-o
	cog-se-t-id 1 2 4 8	cog-se-ney-s-id 1 2 3 4 8
1pl	cog-se-n-o 1 2 4 8	cog-se-ney-n-o 1 2 3 4 8

4. KEN

A.1 ken 'bring'

A.2 ken-a 'bring(pl)'
1 6

B ken-i 'to bring'
1 7

C. Present

1+3mSg	ken-a 1 5	ken-ey-a 1 3 5
2+3fSg	ken-t-a 1 4 5	ken-ey-s-a 1 3 4 5
1pl	ken-n-a 1 4 5	ken-ey-n-a 1 3 4 5
2pl	ken-t-an 1 4 5	ken-ey-s-an 1 3 4 5

D. Past

1+3mSg	ken-ey 1 5	ken-ey-ey 1 3 5
2+3fSg	ken-t-ey 1 4 5	ken-ey-s-ey 1 3 4 5
1pl	ken-n-ey 1 4 5	ken-ey-n-ey 1 3 4 5
2pl	ken-t-eyn 1 4 5	ken-ey-s-eyn 1 3 4 5
3pl	ken-eyn 1 5	ken-ey-eyn 1 3 5

E. Subjunctive

1+3mSg	ken-o 1 8	ken-ey-o 1 3 8
2+3fSg	ken-t-o	ken-ey-s-o
	ken-t-id 1 4 8	ken-ey-s-id 1 3 4 8
1pl	ken-n-o 1 4 8	ken-ey-n-o 1 3 4 8

6. IRREG

A. No imperatives.

B.	COME	SAY	KNOW	LIVE	BE
	imn	ḍohn	oqon	ol	eheyn

C. Present

1+3Sg	imed-a 1 5	iḍahd-a 1 5	aqan 1	al 1	ehey 1
2+3fSg	t-imed-a 4 1 5	t-iḍahd-a 4 1 5	t-aqan 4 1	t-al 4 1	t-ehey 4 1
3m	y-imed-a 4 1 5	n-iḍahd-a 4 1 5	y-aqan 4 1	y-al 4 1	y-ehey 4 1
1pl	n-imed-a 4 1 5	n-iḍahd-a 4 1 5	n-aqan 4 1	n-al 4 1	n-ehey 4 1
2pl	t-imed-an 4 1 5	t-iḍahd-an 5 1 5	t-aqanin 4 1	t-alin 4 1	t-ihin 4 1
3pl	y-imed-an 4 1 5	t-iḍahd-an 4 1 5	y-aqanin 4 1	y-alin 4 1	y-ihin 4 1

D. Present Imperfective

1+3mSg	imen-ey-a	1 3 5
2+3fSg	imen-ey-s-a	1 3 4 5
1pl	imen-ey-n-a	1 3 4 5
2pl	imen-ey-s-an	1 3 4 5
3pl	imen-ey-an	1 3 5

E. Past

1Sg	imid 2	iḍi 1	iqin	il	aha
2+3fSg	t-imid 4 1	t-iḍi 4 1	t-iqin 4 1	t-il 4 1	ehey-d 1 4
3mSg	y-imid 4 1	y-iḍi 4 1	y-iqin 4 1	y-il 4 1	aha
1pl	n-imid 4 1	n-iḍi 4 1	n-iqin 4 1	n-il 4 1	ehey-n 1 4
2pl	t-imed-n 4 1 5	t-iḍahd-n 4 1 5	t-iqin-n 4 1 5	t-il-n 4 1 5	ehey-d-en 1 4 5
3pl	y-imed-n 4 1 5	y-iḍahd-n 4 1 5	y-iqin-n 4 1 5	y-il-n 4 1 5	ehey-n 1 5

7. Some examples of change of meaning with the addition of DERIVATION.

1.	cog-	'be (in a place)'	*cog-s	'stop'
2.	ḅah	'leave'	*bah-s	'escape'
3.	bug	'be sick'	*bug-s	'get better'
4.	buhi	'fill'	*buh-s	'be full'
5.	ḍaf	'pass by, overtake'	*daf-s	'exchange'
6.	ḍaq	'save'	*daq-s	'hurry'
7.	faḍi	'dwell'	*fadi-s	'sit down'
8.	gur	'marriage'	*gur-s	'marry'
9.	hub	'be sure'	*hub-s	'find out'
10.	ib	'sell'	*ib-s	'buy'
11.	qab	'take, seize'	*qab-s	'conquer'

9. PARTICLES

9.0 Introduction

A particle is a free form to which no other elements may be affixed. Somali particles occur as enclitics, proclitics, and as high-accent bearing elements to which other particles may be proclitic. The high-accent seems to be assigned to individual items rather than to classes, with the rules for such assignment not now known.

The particles are listed below in groups corresponding to their translation value, i.e., pronouns, prepositions, etc. They are so grouped because it is easier to keep track of them in groups and because they share certain distributional properties.

With the exception of the Conjunctions the placement of the particles in the verb phrase may be shown by the following formula:

A^B (+C) (+D) (+E) + Verb

where

A = Introducers (9.6)
B = Subject Pronouns (9.1)
C = Object Pronouns (9.2)
D = Prepositions (9.3)
E = Adverbs (9.5)

An example is:

duken	w-an	u	tegeya	'I'm going to the store'
noun	A	B D	verb	

9.1 Subject Pronouns

The following elements are employed as subjects of verbs, i.e., the items with which the verb agrees in person, gender, and sometimes number. Most frequently they occur as enclitic to one of the verb phrase Introducers; but there are examples in the corpora of their free occurrence. While they often agree in gender and number with preceding Noun subjects, such agreement does not always obtain.

/a/. This item does not agree in gender or number with a preceding Substantive and usually co-occurs with the third person masculine singular person marker, HE.

/an/. Somali speakers cite /ánigu/ 'I' as the item with which this element agrees, though there are examples in the corpora of agreement with /anágu/ 'we (excl)'.

/ad/. When a preceding Substantive occurs, it is regularly /ádigu/ 'you (sg)' and, less frequently, /ídInku/ 'you (pl)'. Verb forms show a corresponding THOU or YOU person marker.

/ey/. This element co-occurs with the person markers of SHE or THEY and may appear after feminine Nouns or Nouns with PLURAL markers.

/u/. The form /iságu/ 'he' is regularly given by Somalis as the form with which this item agrees. It may also occur after

masculine Nouns, especially those which refer to persons, e.g., /boq̇r/ 'king'.

/eyn(u)/. This form calls for a WE marker in the verb and may be preceded by /iná́gu/ 'we (incl)'. The final /u/ of this form is sometimes dropped.

/anu/. This form also precedes a verb from containing WE and may follow /aná́gu/ 'we (excl)'.

/eydIn/. Though infrequently used, this element co-occurs with YOU.

9.2 Object Pronouns

The following items appear between the Introducer and the Verb.

/i/. 'me, to me'

/ku/. 'you, to you (sg and pl)'. This item has the shape /ka/ when occuring before prepositions ending in /a/.

/na/. 'us, to us'

/IdIn/. 'you (pl)'

/la/. This form is not well understood. In the literature it is cited as "a sign of the passive," but there is no corresponding verb form which is distinctly passive. It has been translated as 'someone' or '-self'. It is listed here because it shares with the Object Pronouns the property of occuring between the Introducer and the Verb and seems to have a pronoun translation value.

9.3 Prepositions

These forms may occur freely between the Introducer and the Verb or they may appear as enclitic to the Object Pronouns. In some circumstances they may occur in sequence, with the semantic value of that sequence (as contrasted with the occurrence of a single item) unknown; that is, the sequence translates as a single English preposition.

/u/. 'to, toward'. This form may appear after only /ɪdɪn/ 'you (pl)' of the Object Pronouns.

/ku/. 'in, at, concerning'. Alternate shapes /ga/ or /gu/ appear as the second member of sequences the first member of which ends in a vowel.

/ka/. 'away from'. The alternate shape /ga/ appears in sequences after vowel final items.

/la/. 'with'

9.4 Conjunctions

The following items link clauses.

/sey/. 'but'. This form is enclitic either to a Verb form or to /amá/ 'or'.

/na/. 'and'. This form is enclitic to the first element in the clause.

/amá/. 'or'.

/hddi/. 'if'.

/In/. 'that, so that'. This form usually occurs with the subjunctive on the following Verb.

/iyo/. 'and'. This item joins noun phrases as well as clauses.

The item /o/ joins elements within the verb phrase. Examples include:

wIlkì wa gaɓn o ńʃs 'The boy is young and foolish.'

nInkì wa sineya o ɖibeya 'The man gives and gives.' (i.e., he is generous.)

9.5 Adverbs

The five items listed below occur immediately before the Verb; all other verb and phrase modifiers must occur elsewhere.

/so/. 'that way'.

/si/. 'this way'.

/wada/. 'all, together'.

/kala/. 'separately, apart'.

/wIli/. 'again'.

9.6 Introducers

The following items introduce verb phrases. They have no lexical meaning. The glosses cited indicate the category by which the entire verb phrase is usually translated or the pattern of co-occurrence with verbal endings.

/w/.

/b/.

/m/. 'negative, interrogative'.

/ha/. 'negative, imperative; hortatory in third person ("let him . . .")'.

/an/. 'negative subjunctive; hortatory in first person ("let us . . .")'.

/ey/.

/ya/. 'negative hortatory ("let us not . . ." let him not . . .")'.

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