

SHILHA: A DESCRIPTIVE GRAMMAR WITH VOCABULARY AND TEXTS

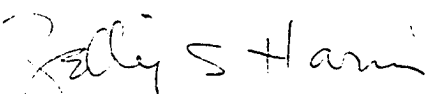
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A DISSERTATION

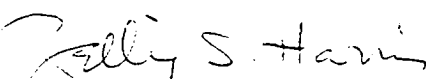
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PREFACE

Shilha is one of the most widely distributed of the Berber languages. It is spoken in southwestern Morocco, and the dialect described in this dissertation is found in the area extending from Agadir to Ifni, and as far east as Tarouant. Although Shilha has been replaced by Arabic in urban areas, it is still the predominant language in rural areas. The presence of Arabic has influenced the dialect, however, and traces of this influence are found in the large number of borrowed words that occur in the language. Another example of the influence of Arabic is found in the fact that two methods of counting are used in Shilha. The first system, in which native Shilha words are used, is found in the speech of women and occasionally in the speech of men in rural areas. The second system which makes use of Arabic words is used generally by men in all business transactions. Traces of Spanish and French influence are also discernible in Shilha. The names of the months, for example, are obviously words that have been borrowed from Spanish.

The analysis presented in this dissertation is based chiefly on the speech of Mr. Madani Embarek, a native of Ifni. Additional material was supplied by his brother, Mr. Houssein Bouchenne. Supplementary evidence to support some of the conclusions reached in the analysis was provided by conversations of Mr. Embarek, his brother and their friends.

The purpose of this grammar is to provide a general description of the structure of the language by examining the phonology, i.e.,

the sound-types and their relative distribution, the morphology, i.e., major form-classes, and the syntax or relative distribution of these form-classes. The description is intended to serve as a general outline of the structure rather than as a minutely detailed grammar. A vocabulary and sample texts are included. The texts have been recorded and deposited with the Linguistics Department of the University of Pennsylvania.

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Chapter I

PHONOLOGY

1.0 The phonemes to be discussed in this section are: /t k b d g f s š z ž x ġ ħ h ʻ m n l r i a u * : # - . ?/.¹ In addition to these phonemes, the symbol <, > is included in this section because of its influence on certain phonological processes.

1.1 Consonants

1.11 /t/ includes the following sound types: [t^h] released and slightly aspirated occurs in the environments #_V, #_V, and _#. An example of this is found in the word t^hibħært^h 'garden'. The sound [t], released but unaspirated occurs in V_V, C_V, #_C, V_C and C_C, e.g., ætbir 'pigeon', ætvrdin 'back', its 'sleep'. It should be noted that the consonant in the last three environments may not be a nasal.² The allophone [t̚], unreleased, occurs before nasals: e.g., nt̚nti 'they'. This allophone may also occur as an alternant of [t] before other consonants in long sequences of rapid speech. [t̚], domal or emphatic occurs with /*/. When it occurs before *#, it is unreleased. In other environments, however, it is released. This is the only allophone of /t/ that may occur in

¹The methods used in phonemic analysis are those described in Harris, Z.S., Methods in Structural Linguistics, pp. 25-125. Certain typographical conventions are followed. Phonemes are placed between diagonal lines; allophones are enclosed in brackets; a single diagonal line is used for the word 'or'. Translations are enclosed in single quotation marks, and words in Shilha are underlined.

²For additional data on consonantal release, see Appendix to Chapter I.

the environments _* or _VC*. [t^h] occurs with the phoneme /:/ in _:, _C: or _V:. When the sequence is V/C_: #, the aspiration is increased.³

1.12 /k/ includes the following sound types: [k^h] released and slightly aspirated occurs initially before /a/ and before /#/, e.g., k^hænun 'fireplace'. [k] released but unaspirated, occurs in V_a. [k^y] is slightly aspirated and palatalized. It occurs before /i/, e.g., k^yimi 'you'. [k^w] differs from the preceding allophones because of the labialized release. It occurs before /u/. It may vary freely, however, with [k^h] and [k]. [k̠] emphatic occurs with /#/. When it occurs before /u/, there may be a labialized release.

1.13 /b/ has few allophones. In borrowed words it occurs as a substitute for 'p', e.g. abor from Spanish vapor 'ship'.

[b] voiced, bilabial, released stop occurs before vowels and voiced consonants. Before /#/ it may occur unreleased, kdub 'lies'.

[b_v] partially voiceless occurs before voiceless consonants, e.g., idub_vt^h 'it melted'. It also occurs in /s_V/.

[β] occurs in the same environments given for the other fortis consonants.

1.14 /d/ like /b/ has few allophones.

[d] released occurs before vowels and voiced consonants. Before #it occurs as a free variant of [d^ʰ]. It should be noted that it does not occur before nasals.

³ Additional data is found in section 1.24 and the Appendix to Chapter I.

[d'] unreleased occurs before nasals and before . In the latter position it may vary with [d].

[d] doma l, emphatic occurs with /*/ or in _V*/ _VC*.

[d] occurs with /:/ in the same environments given for other fortis consonants.

1.15 /g/ does not occur frequently.

[g] released occurs before vowels, consonants or .

[g^w] has a slightly labialized release. It occurs before /u/, but it seems to vary freely with [g] in this position.

[g] The occurrence of this allophone is limited by the same conditions that limit the occurrence of other fortis consonants.

1.16 /f/ There are few restrictions on the occurrence of this phoneme. It occurs before vowels as well as before voiceless consonants. It does not occur before voiced consonants without the introduction of ə or -. In _lV or _rV, it may occur as f^a, or there may be a transposition of the vowel so that i-fraḥ 'he enjoyed' often occurs as i-farḥ.

1.17 /s/ includes the following sound types:

[s] occurs with /:/ as do the fortis consonants already described.

[s] like the sounds [t], [d] and [k] occurs with /*/ in the environments described for other emphatic consonants.

[s] In environments other than those described above, this sound is heard. It should be noted that when it occurs before a voiced consonant there is usually the introduction of ə or -.

1.18 /š/ seems to occur freely and with few restrictions that can be described here. It should be noted that like /s/ it occurs before

voiced consonants with the introduction of ə. A fortis variant occurs in the environments given for other consonants of this type.

1.19 /z/ occurs freely. A variant ʒ occurs as an alternant.

[ʒ] domal, emphatic occurs with /*/ and in the environments described for the other emphatic consonants.

[z] occurs with /:/.

1.110 /ʒ/ There are few restrictions on the occurrence of this phoneme. A variant, ʒ̣, occurs initially and frequently in n_#.

1.111 /x/ voiceless, palato-velar spirant has the following positional variants.

[x^y] with slightly palatalized release occurs before /i/.

[x^w] occurs before /u/. The labial release is not so clear as in [k^w] or [g^w]. Often the release is not detectable so that this sound appears to vary freely with [x].

[x] occurs before consonants (except voiced stops) before vowels and before #.

[x̣] occurs with /:/.

1.112 /g̣/ is a voiced palato-velar spirant. The usual symbol for this sound is ɣ.

[g̣^y] slightly palatalized occurs before /i/.

[g̣^w] occurs before /u/. As in the case of [x^w], the labialized release may be dropped so that the sound is heard simply as [g̣].

[g̣] occurs in environments except those described above.

1.113 /h/ does not occur frequently. It is found before vowels. When it occurs after #, it is preceded by ǎ.

1.114 /ḥ/ occurs with few restrictions. When it occurs before consonants, there is a vocalic release similar to [ə] but differing

slightly because it is whispered.

1.115 /^h/ a voiced pharyngeal spirant apparently occurs only when preceded or followed by a vowel, i.e., in #_V/ V_V/ C_V/ V_C/V_# .

The vowel is usually /a/.

1.116 /m/ includes the following sound types:

[m] as a bilabial nasal this sound occurs before vowels or before /# / after a vowel or in V_C (provided the consonant that follows is not a stop.

[m̥] this is a syllabic sound and occurs in #_C/ C_#/.

[m̚] unreleased occurs before stops.

[m^ə] occurs as a variant of [m̥] in #_C or as a variant of [m̚].

1.117 /n/ as a dental nasal occurs in #_V/ V_V/ V_C (except k or g) V_#/ r_#.

[n̥] syllabic occurs in #_C/ C_#/ C_C: e.g., nta 'he';
ntnti 'they'.

[n^ə] with a short vocalic release occurs as a variant of [n̥] in #_C, e.g., ntnti may occur as n^əntnti.

[ŋ] occurs before /k/ or /g/: e.g., ɪŋkr 'he arose'.

1.118 /l/ occurs when preceded or followed by a vowel.

[l̥] syllabic occurs in #_C or C_#.

[l^ə] with a short vocalic release alternated with [l̥].

[ɭ] slightly backed occurs with /*/. If preceded by a consonant, it has the form ɭ̥.

1.119 /r/ includes a variety of trills.

[r₂] occurs in #_V. After <, > it is preceded by a short glottal stop.

[r₁] occurs in V_V/ V_C (provided the consonant is a stop)

and before # when there is no drop in tone.

[ɹ] occurs before fricatives and nasals. It also occurs before # when there is a drop in tone.

[r̥] syllabic occurs in #_C/. The syllabic quality of this allophone is due to ɚ which always occurs with it. This ɚ sometimes seems to be whispered and may be overshadowed by the trill.

[r'] a domal trill occurs with /*/.

1.2 Vowels

1.21 /i/ includes a variety of sound types.

[i̥] occurs in #_V or #_-V. It also occurs in V_V or C_V. In some cases the initial component is shortened so that it appears to vary freely with [y].

[i] occurs in #_CV/ C_:/ C_C:/ C_#/ #_-C. It should be noted that the following consonant may not be /ġ/, /x/ or /h/.

[ī] occurs as a variant of [i] in #_-C.

[I] occurs in C_C unless the second consonant is /ġ/, /x/, /h/ or followed by /*/. It also occurs before two consonants.

[ɛ] occurs with /ġ/, /x/, /h/ and in _C*. It should be noted that [I] and [ɛ] may be lowered slightly so that they approach the upper mid vowels.

1.22 /a/

[a] occurs before #. After # it varies freely with æ before consonants.

[æ] occurs in C_C (but not C_C* or C_C:). It also occurs in #_C as a free variant of [a].

[ǣ] approaches [a] and occurs before i and u.

[ɛ] occurs in C: or CC.

[a] occurs with /*/.

1.23 /u/

[ũw] occurs in #V or #-V. It also occurs in V_V or C_V. The initial component is shortened so that this sound often occurs as w.

[uŵ] differs from the preceding allophone because the initial component is not shortened while the final component is so that the sound may be heard as u in rapid speech. In slow speech, however, this is not the case, and the two components may be heard. Further evidence for the presence of w is given by the fact that the addition of an affix beginning with a vowel results in a lengthening of the w: e.g., lmitru lmitruwaet.

[u] occurs in #C and C:. It also occurs in C_: or C#.

[v] occurs in C_C but not in C_C*.

[v̥] differs from the preceding sound because it is slightly lower and approaches 'o'. It occurs with /*/.

1.3 Suprasegmental Components

1.31 /*/ This element indicates a back position for certain consonants and all vowels (except ə). It differs from the phonemes described above because its domain extends over the syllable in which it occurs. In the phonemes previously described, the selection of allophones was determined by the phonemes immediately before or after. When /*/ occurs, however, not only the preceding consonant is affected but also the vowel and the consonant before that vowel, e.g., aɖaɖ 'finger'. In this word, both d's are domal while the vowel between them is a back vowel. Because this is the general

structure of sequences containing an emphatic consonant, it may be said that there is an element which extends over the three phonemes so that the point of articulation is further back. The sequence may then be written /adad*/. The domain of the phoneme /*/ may then be described more exactly as CVC₂. It should be noted that not all consonants have special allophones occurring with this phoneme. Those that do are /t, d, k, s, z, r, l/. It should be noted too that in many cases /*/ may be dropped so that many words have two forms gidad/gidad*.

1.32 /:/ This element indicates increased tension. It is like the preceding phoneme because its domain is CVC₂. The consonants in this sequence are characterized by lengthening of the period between closure and release, increased aspiration and a fortis quality. The vowels, on the other hand, are shortened. In the case of ĩ and ũ, the final component is dropped.⁴

1.4 Junctures

1.41 /#/ This phoneme differs from those already described because it is not heard as a distinct sound but rather as an interruption in the sequence of sounds. Because it determines the selection of the allophones of the phonemes around it, however, it must be considered phonemic. It is, perhaps, the most easily recognized juncture, for it occurs between words.

In the description of the sound types included in /i/ it was stated that before vowels the form ĩ was used. The utterance

⁴For spectrographic data on this phoneme, see Appendix to Chapter I.

iyæsi.aksæri 'he brought the bowl' would seem to contradict this statement. Although iy would satisfy the requirements for inclusion in /i/, i occurring before a would not. A further examination of the utterance, however, discloses that it may be divided into two parts each of which satisfies the definition of the term word. An additional element may then be included in the utterance indicating that each part is a word. This element is /#/ . The utterance is then: iyæsi#aksæri. The environments of iy and i are no longer the same. Because there is no contrast, both may be included in /i/.

1.42 /-/ Like /#/ , this is not heard as a separate sound. It is not so easily recognized because it may not be heard as an interruption in the flow of speech. It must be considered phonemic, however, because of its influence on the selection of allophones around it. It occurs between stems and affixes.

In the utterance ifrah 'he enjoyed', the initial sound seems to contradict the conditions for inclusion in /i/, i.e., it occurs before two consonants and should occur as I. When the utterance is examined further, it becomes apparent that there is an additional element between i and fr. This element is /-/.

1.5 Contours

1.51 /./ This is a contour phoneme extending over the utterance in which it occurs. The chief characteristic is a drop in tone for the last vowel of the utterance before /./.

1.52 /?/ This phoneme is also a contour phoneme. It differs from /./ because there is a high tone on the two vowels before /?/.

1.6 /,/ This element marks the end of phrases. It is included

here because of its importance in describing certain morphophonemic changes which depend upon its presence or absence in certain utterances.⁵

1.7 Distribution of phonemes

The phonemes described above may be classified briefly as consonants, vowels, suprasegmental components, junctures and suprasegmental contours. In this section the distribution of these phonemes relative to each other will be discussed.

1.71 Distribution of vowels

The phonemes /i/, /a/, and /u/ may occur before and after consonants. They also occur after /#/ , before /#/ , before /-/ and after /-/ but not in the sequence /# /_# / , that is a single vowel may not constitute a word.

Sequences of two different vowels occur frequently. When the first vowel of the sequence is /a/ , the phonetic form of the second vowel is determined by the phoneme that follows the sequence. If the following phoneme is a non-syllabic consonant, the two vowels are heard as a diphthong: e.g., autil 'hare', aidi 'dog'. If the phoneme that follows is a vowel, the sound before it is consonantal while the first vowel of the sequence is vocalic: e.g., ai 'bring' [æwiỹ], aiur 'moon' [æiyvɹ]. It is clear that in /aVV/ there is a syllabic division after /a/ so that the central vowel is divided between the two syllables. The same is true when the third phoneme of the sequence is a syllabic consonant.

⁵ For a detailed description of this symbol, see Chapter II, 2.5.

When the first vowel of the sequence is /i/ or /u/, the pattern is different. In these cases, it is the initial vowel that loses its vocalic quality (or has the vocalic component shortened) and is heard as a consonant (y or w): e.g., ian 'one' [yæ n], ágiul 'donkey' [ágiyul], ualu 'nothing' [wæ luŵ], i-zuzua 'it is cool' [izvzwa].

Clusters consisting of two of the same vowels (ii, uu) do not occur frequently, but a few examples can be found: iih 'yes' [iyɛh], uuri 'return' [uwvri]. Apparently the sequence aa does not occur.

It can be stated, then, that vowels occur in #_/_/_#/ #_C/ #_V/ C_C/ C_V/ V_C/ V_V/ C_#/ V_#/ . The only exception is /a/ which may occur in any of the environments listed above except before another /a/.

1.72 Distribution of consonants

Consonants may occur after /#/ and before /#/ but not in / #_ #/, i.e., a single consonant may not constitute a word. They may also occur freely before and after vowels, so that sequences such as / #_V/, /V_V/, /VCCV/, / #_V/ and /V-#/ are possible. The chief question to be considered in this section is that of consonantal clusters. Consonants occurring next to each other may be considered a cluster if they are not separated by [ə]⁶ or /#/ . A test of whether two consonants in the sequence form a cluster is the range of /:/ . If the sequence is a cluster, both consonants show increased

⁶The symbol [ə] is used in this discussion of the distribution of consonants for the special type of release discussed in the Appendix to Chapter I.

tension when /:/ occurs after the sequence. If the sequence is not a cluster, only the second consonant shows increased tension when /:/ occurs. It can be stated at the beginning that there are no clusters involving the repetition of one phoneme, i.e., sequences such as /tt/, /nn/ do not occur.

The first group of consonants, /t, k, b, d, g/, may be classified as stops. Consonants of this group do not form clusters with other members of the same group. When the stops occur initially before phonemes of the second group, /f, s, š, z, ž/, the distribution is complementary if the stops are divided into two classes: voiced and voiceless. The voiceless stops may form clusters with /f, s, š/ but not /z, ž/. The opposite is true for voiced stops: e.g., /tfah:/ 'apples'; /tsa*/ 'laugh';⁷ /dzirt/ 'island'; /džnant/ 'garden'. The same is true when /k, t, b, d/ occur initially before /ḥ, h, ʻ/. /g/ does not occur with any of this group of phonemes. With /r/, the distribution is again complementary; the voiceless stops do not form clusters with this phoneme while the voiced stops do. All stops occur initially with /m, n, l/ as clusters but not with /x, ġ/. These stops occur as the initial members of final clusters, i.e., in /_C#/ , only with members of the second group of consonants. Here again the distribution is complementary. The voiceless stops form clusters only with /f, s, š/ while the voiced consonants form clusters only with /z, ž/.

The preceding statements with the following charts make it

⁷The two words cited here give a clear example of the domain of /:/ and /*/ in consonantal clusters. In the first word both /t/ and /f/ show additional tension. In the second word both /t/ and /s/ occur with retraction. In the word tdu: 'she went', only /d/ shows additional tension because /t/ does not combine with /d/ to form a cluster.

possible to determine the occurrence of [ə] in a sequence. In a sequence of two consonants if the phonemes do not form a cluster [ə] occurs with them. In a sequence of three consonants, [ə] will occur between any two members of the sequence which do not form a cluster: e.g., /lfdur*/ 'breakfast'. In this word, /l/ and /f/ may not form a cluster, so the first phoneme occurs with [ə] and is heard as [l]. /f/ and /d/ may not form a cluster so that [ə] occurs between them. The sequence phonetically would then be [ə^δl^δf^δd^δor]. Because it is possible to predict the occurrence of [ə] in a sequence with such regularity, it is not necessary to treat it as a separate phoneme.

1.8 Stress

Stress in Shilha is a non-phonemic feature. The stress patterns may be summarized briefly by stating that primary or heavy stress occurs on the last vowel of the stem provided that the word has no affixes after the stem. If there is an affix after the stem, and this affix contains a vowel; there is secondary or medium stress on the last vowel of the stem and the vowel of the affix. Affixes **occurring** before the stem and containing a vowel, have medium stress; and the final vowel of the stem has heavy stress. The other vowels of the stem have zero stress.

⁸ With /l, m, n, r/ the [ə] may be heard at the end of the consonant so that this word might also occur as [l^δf^δd^δor].

Initial Clusters

		SECOND CONSONANT																			
		t	k	b	d	g	f	s	š	z	ž	x	ġ	ḣ	h	ʼ	m	n	l	r	
FIRST CONSONANT	t						-	-	-					-			-	-	-		
	k						-	-	-					-			-	-	-		
	b									-	-				-		-	-	-		
	d									-	-				-		-	-	-		
	g									-	-							-	-	-	
	f	-	-						-	-								-	-	-	-
	s	-	-					-					-		-			-	-	-	-
	š	-	-					-					-		-			-	-	-	-
	z			-	-	-										-		-	-	-	-
	ž			-	-	-										-		-	-	-	-
	x							-	-	-											
	ġ										-	-							-		-
	ḣ	-	-					-	-	-								-	-	-	-
	h																				
	ʼ																				
	m																	-			
	n																	-			
	l																	-			
	r																	-			

The symbol (-) indicates that the two consonants may occur as a cluster.

Final Clusters

		SECOND CONSONANT																				
		t	k	b	d	g	f	s	š	z	ž	x	ġ	ḣ	h ^c	m	n	l	r			
FIRST CONSONANT	t						-	-	-													
	k	-					-	-	-													
	b										-	-										
	d										-	-										
	g										-	-										
	f	-	-						-	-												
	s	-	-						-													
	š	-	-																			
	z			-	-	-						-										
	ž			-	-	-																
	x	-	-						-	-												
	ġ					-						-	-									
	ḣ	-	-						-	-	-											
	h																					
	e																					
	m	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-
	n	-	-		-	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-
	l	-	-						-	-	-	-	-		-	-				-	-	
	r	-	-	-	-	-			-	-	-	-	-		-					-	-	-

The symbol (-) indicates that the two consonants occur as a cluster.

Appendix to Chapter I

The consonantal release referred to in Section 1.1 is an important feature of the phonology of Shilha. Although the perception of the release may be influenced by the environment, there are certain characteristics that are constant for each consonant. These characteristics were made clearer through the analysis of material with a sound spectrograph. The spectrographic data show clearly not only the positions of vowel formants, but also the frequencies at which concentrations of energy occur in consonants.

In the utterance /ibit/ 'he cut it', the concentrations of energy after [t] occur at approximately 1825 cycles and 2875 cycles and last for approximately 0.2 second. There is also a concentration of energy at approximately 500 cycles which is shorter in duration. The same concentrations of energy are found after [t] in the words /ifat/ 'he gave it' and /bdixt/ 'I started it'.

In the utterance /tagit/ 'hole', the formants of the vowel /a/ appear at 750 cycles and 1500 cycles. These formants do not appear as straight lines, however, as they do for an isolated /a/ but as curves with starting points at approximately 500 cycles and 1800 cycles. These starting points coincide with the frequencies at which concentrations of energy occur after [t] in final position. In the word /tgit/ 'you are' the concentrations of energy occur at approximately the same positions for both the initial and final [t]. There seems to be greater aspiration after the final [t], however; and the duration of the lowest concentration of energy is longer in the initial [t].

The concentrations of energy at 500 cycles and 1825 cycles if extended would be heard as a vowel, possibly [e] or [I]. In final position the lower formant is of such short duration that the vocalic quality is lost. The same is true when [t] occurs before a vowel. When [t] occurs before [g], however, the lower formant is longer than in the preceding cases so that there seems to be a vowel occurring between the two consonants.

An examination of the spectrograms of the utterances /ibi/ 'he cut' and /ibit/ 'he cut it' shows a similar pattern for [b]. The initial [i] has formants at 300 cycles and 2250 cycles, and they appear as relatively straight lines. The second [i], however, has a first formant appearing as a slight curve which begins at approximately 500 cycles and falls to 300 cycles. The second formant begins at 1600 cycles and rises to 2200 cycles. When [b] occurs before a consonant the concentrations of energy occur at 500 cycles, 1500 cycles and 2200 cycles. These concentrations of energy seem to coincide with the starting points for the curves which indicate the formants of the vowels in the previous utterances. An example of this fact is found in the words /i-bda*/ 'he started' and /i-bdat*/ 'he started it'. In each of these words the concentrations of energy for [b] occur at approximately 500 cycles, 1500 cycles and 2200 cycles. In the word /bdig*/ 'I started', the concentrations of energy are found at the same points, but the lowest is longer in duration than in the previous words. In this case, therefore, there seems to be a vowel resembling [ə] between [b] and [d].

Although it has not been possible to obtain spectrograms of all combinations of consonants and vowels and consonants with consonants,

enough have been made to support the conclusion that the release of consonants is characterized by concentrations of energy at definite frequency levels. Furthermore, when the consonants occur before other consonants with which they cannot combine to form clusters,⁹ the duration of the lowest concentration of energy is lengthened so that the sequence of two consonants is heard as CVC. The vocalic sound varies, depending upon the consonant. After the dental consonants, it seems to occur as [I]; after labials, it occurs as [ə]; and after velars as [ʌ].¹⁰

With the phonemes /l, m, n, r/ the vocalic components seem to extend through the entire consonant so that the consonant may be heard as a syllabic sound when it occurs before another consonant or as a sequence of VC or CV. The syllabic nature of these consonants has been recognized in other languages. When the facts presented above are considered, however, it is possible to state that not only /l, m, n, r/ but all consonants in certain environments have a syllabic allophone.

By comparing spectrograms of utterances in which /:/ occurred with those in which it did not occur, it was possible to determine more exactly the influence of this phoneme.

In the word /ibit/ 'he cut him', the period between the closure and release of [t] was approximately 1/2" or 0.1 second. The duration of the vowel [i₂] was approximately the same. In the word

⁹ See Section 1.72.

¹⁰ This would account for the special series of short and very short vowels recognized by some linguists in Shilha. Cf. Stumme, Handbuch des Shilhischen von Tazerwalt, p. 8, and Destaing, Étude sur la tachelhit du Sous, pp. vi et seq.

/ibit:/ 'he cut her' the period between the closure and release of the [t] was approximately $15/16''$ or 0.1875 second while the span of [i] was approximately $1/4''$ or 0.05 second. The aspiration following [t] was greater in the second word than in the first while the span of [b], including the release, was slightly longer in the second utterance.

In the word /i-bdat*/ 'he started him' the duration of [a] was approximately $9/16''$ or 0.1325 second, and the period between the closure and release of [t] was $7/16''$ or 0.1175 second. In /i-bdat*/ 'he started her', the span of [a] was reduced to $3/8''$ or 0.075 second, and the period between closure and release of [t] was increased to $13/16''$ or 0.1625 second. The aspiration after [t] was darker and the concentrations of energy more clearly defined in the second word than in the first. The span between [b] and [d] remained constant, however.

Similar comparisons were made between the words /ifat/ 'he gave him' and /ifat:/ 'he gave her', /bdixt/ 'I started him' and /bdixt:/ 'I started her', /bixt/ 'I cut him' and /bixt:/ 'I cut her'. In each case the results were similar. The consonant occurring before /:/ was lengthened while the vowel was shortened. Moreover, the concentrations of energy in the consonantal release were more clearly defined. In addition the consonant preceding the vowel was lengthened slightly. In /bixt:/ all three consonants were influenced. In /bdixt:/ only [d, x and t] were influenced.

These facts would indicate that the influence of /:/ extends over CVC, VC, CV or CVCC providing that there is no syllabic division.

Chapter II

MORPHOPHONEMICS

2.0 The morphophonemic changes which occur in Shilha may be divided into five classes: assimilation, dissimilation, apocopation, addition or reduplication of phonemes and substitution. Only those changes which affect a large number of morphemes will be discussed in this section. Cases of unique alterations, such as those which occur in the plural morpheme, will be discussed in the description of these morphemes in the section on Morphology.

2.1 Assimilation involves the change of one consonant to another so that it becomes more similar to another consonant in the environment.

2.11 $C_v C_v > C_v C_v^{ll}$

This change takes place in a large number of morphemes consisting of a single voiced consonant or a sequence of phonemes ending with a voiced consonant. When these morphemes occur before a voiceless consonant, the voiced consonant is unvoiced: e.g., zriḡ 'I saw' > zrixt 'I saw him'; iumz 'he took' > iumst 'he took it'.

2.12 $C_v C_v > C_v C_v$

This change occurs in some morphemes consisting of a single voiceless consonant or ending in a voiceless consonant when they occur before a voiced consonant. In this case, the voiceless consonant is voiced: e.g., is- (interrogative particle) > iz-d; s- (causative) > z-bid 'cause to stand'. It should be noted that this change does

^{ll}

The symbol [>] is used in formulae for the word 'becomes'.

not occur with all morphemes. The subjective pronominal affixes, for example, do not show this alteration.

2.2 Dissimilation refers to the process in which one consonant is changed so that it becomes less similar to another consonant in the environment. Unlike assimilation which seems to operate chiefly in voicing or unvoicing of consonants, dissimilation seems to involve a change from one phonetic type to another, i.e., stop to spirant or fricative.

In the discussion of the distribution of consonants it was stated that two stops may not occur together. When <t> occurs before a stem beginning with a stop, it is often changed to /š/ or /ž/: e.g., t-da*lb 'she asked for' becomes ž-da*lb. This change is not a regular one; for the dissimilation may alternate freely with the introduction of [ə].

2.3 Epenthesis and reduplication are similar processes. The first involves the addition of a phoneme in certain environments while the second refers to the repetition of a phoneme or sequence of phonemes in a certain environment.

2.31 The morpheme ra- (future) occurring before a verb stem has the form rad-. When it occurs before another verbal affix, however, it has the form ra-: e.g., raiaf 'he will give' radafg 'I will give'.

2.32 One class of verb affixes, which may be described syntactically as indirect objects, consist of a consonant preceded by /a/. When these affixes occur after a vowel, /i/ is prefixed: e.g., iufaiak lktab 'he gave you the book' urakifi lktab 'he did not give you the book'.

2.33 Reduplication occurs most frequently in prepositional affixes.

It should be noted that this change occurs only when the pronominal affix begins with a vowel or a nasal. When the affix begins with a stop or spirant, the change does not take place. E.g., di- 'with' didi 'with me' didng 'with us' dik 'with you'.

2.4 Apocoptation describes the loss of a phoneme at the beginning or end of a morpheme. It seems to occur when the same phoneme occurs in two adjoining morphemes.

2.41 $VC_1VC_1 > VC_1V / VC_1C_1V > VC_1V$

This change is found in the verbal affixes ar- (progressive) and ra- (future). When these morphemes occur after ur- (negative) the second consonant is dropped. E.g., ratfraht 'you will enjoy' uratfraht 'you will not enjoy', aritfraḥ 'he is enjoying' uraitfraḥ 'he is not enjoying'.

This change also occurs when the morpheme <-t-> occurs with <t->. Then one of the consonants is lost so that arttdu: 'she is going' occurs as artdu:.

2.5 Substitution

In this category are those changes which involve the replacement of one phoneme by another. Changes which involve the change of a sequence of phonemes to another sequence which may have no similarity to the first are discussed in the description of the individual morphemes.

One change of this type is sufficiently general to be discussed in this section. It is important because it furnishes additional information about phrase boundaries which will be considered

in Syntax. This change involves the change of a- (nominalizer) to u-. A large number of nouns in Shilha are formed by attaching this morpheme to verb stems. When these nouns occur after /./ or <, > i.e., at the beginning of a sentence or the beginning of a phrase, there is no change in a-. In other positions, however, the a- changes to u-: e.g., afrux izri, argaz 'the boy saw the man'. The order of words in the utterance may be changed so that it appears as /i-zri ufrux, argaz/. It can be seen that there is some connection between /i-zri/ and /afrux/ because the presence of i- is determined by afrux. If afrux were replaced by tafruxt 'girl', the i- would be replaced by t-. This does not happen when argaz is replaced by tafruxt, however. The two words afrux and i-zri may be said to be members of a phrase. When afrux occurs initially in this phrase, the prefix is unchanged. When it occurs in non-initial position, however, the a becomes u-. Another example of the effect of phrase boundaries is found in the utterances: zriḡ, aḡiul 'I saw the donkey' and zriḡ lḡuš uḡiul 'I saw the stable of the donkey'. It should be noted that this change also occurs after /-/: e.g., ya-uḡiul 'one donkey'.

Chapter III

MORPHOLOGY

3.0 Morphemes in Shilha may be divided into three major classes: stems, affixes and particles. This division is determined by their distribution. Stems may occur as free forms or with affixes. In some cases they may constitute a complete utterance: e.g., as commands, as answers to questions or as exclamations. Affixes are bound forms which can never occur independently. In many cases, affixes consist of a single phoneme, and this is one of the facts that serves to distinguish them from stems and particles. Particles, like stems, are forms which may occur independently, but they are distinguished from stems by the fact that they do not occur with the affixes with which stems occur.

In this section, morphemes will be described, and their distribution as well as the morphological processes involved in the formation of words will be discussed. Words in Shilha may be described in terms of their structure. A word may consist of a single morpheme: e.g., particles. In other cases, a word may consist of a stem with one or more affixes. A third class of words is formed by the combination of affixes. Finally, there are compound words which are formed by the combination of two words.¹²

3.1 Stems

These morphemes may be divided into two classes, nouns and

¹²In this section, isolated morphemes are enclosed in < >, and the juncture between prefix and stem or suffix and stem is indicated by the symbol [-]. Word boundaries are indicated by a space. The transliteration is phonemic rather than phonetic.

verbs, because of the affixes with which they occur. Within each class a further division is possible; for stems may be described in terms of structure as basic or derived. A basic stem is one which may occur independently or with affixes and which has no apparent connection with other stems in the language. A derived stem may be analyzed as a stem, basic or derived, with a formative affix.

3.11 Noun Stems

Nouns are stems which occur only with the affixes in subclasses 1 and 3. There are some which are basic stems, but a large number are derived forms. Many nouns, however, have been borrowed from other languages, chiefly Arabic, and these should be considered basic stems. All stems classified as nouns whether basic or derived have as an implicit characteristic, gender. This is shown by the fact that every noun may be replaced by one of two words: nta 'he' or ntat 'she'.¹³

The largest group of derived nouns are those beginning with <a->. It can be shown that these are forms derived from verb stems. Almost all of these nouns are masculine, and they refer to the performer of an action: e.g., a-mksa: 'shepherd' mksa: 'graze'; a-dal 'mantle' dl 'cover'.

A second group of derived nouns includes those formed from verb stems by the addition of the morpheme <l->. It should be noted that not all nouns beginning with /l/ are members of this class; for many nouns borrowed from Arabic retain the Arabic article although it loses its syntactic function in Shilha and appears merely as an

¹³ A more complete discussion of gender will be found in Section 4.2.

inseparable part of the noun. It is possible that this fact has influenced the formation of nouns with the morpheme cited above. Nouns beginning with <l-> are usually masculine and refer to an action: e.g., l-farḥ 'pleasure' farḥ/fraḥ 'enjoy'; l-ḥma 'heat' ḥma 'be hot'; l-ḥna: 'peace' ḥnu: 'rest'.

A third group of nouns is formed by the addition of <bu-> to noun stems, either basic or derived. These nouns are usually masculine and refer to the owner of an object or the possessor of a characteristic: e.g., bu-lu*taḷ 'owner of a hotel'; bu-l-ḥna: 'one who is at rest'.

A fourth group of nouns has been formed by the addition of the morpheme <t_t> to noun stems, either basic or derived. Many of the nouns formed in this way are feminine counterparts of nouns beginning with <a->: e.g., t-a-mḡar-t 'woman' a-mḡar 'sheik'; t-a-xdam-t 'cleaning woman' a-xdam 'worker'. In some cases the nouns formed with the affix <t_t> may be diminutives: e.g., t-igḏdi-t 'small log' igḏdi/agḏdi 'tree trunk'.

Another group of derived nouns has been formed by the combination of <bab> 'owner, master' with basic or derived noun stems. These nouns occur as alternants of those formed with the morpheme <bu-> in many cases: e.g., bab-l-farḥ 'one who enjoys'; bab-l-ḥna: 'one who is resting'; bab-lu*taḷ 'owner of a hotel'. They must be considered compound words, however, for they are formed by the combination of two words rather than a stem and an affix.

The nouns described above may be considered members of one class; for it is possible to substitute nta or ntat for any of them. Another fact which supports this classification is found in the

syntactic analysis, namely that they occur with verbs to which the third person pronominal affixes have been added. In the following portions of the description the symbol (Na) will be used for this class of nouns.

A second class of nouns includes words which may be described syntactically as pronouns. They are considered members of a subclass of nouns because they occur with the same affixes with which noun stems occur although there are certain syntactic differences which serve to distinguish them from members of the subclass Na. The symbol (Nb) is used in referring to the members of this particular subclass.

The first group of nouns in this subclass includes the personal pronouns. The members of this group are: nki 'I', kii 'you', nta 'he'. When the plural morpheme <i_n> is added, the following changes occur: nki > nukni, kii > kuni, nta > ntni. All of the forms except nki may occur with the feminine morpheme <t_t>. When this morpheme is added, the following changes occur: kii > kimi, nta > ntat, nukni > nuknti, kuni > kuninti, ntni > ntnti. These words may occur as independent forms in the same environments in which the noun stems of Na occur. The fact that distinguishes them from members of the previous subclass is the change that occurs when any inflectional affix is added. Then the forms occur as suffixes rather than independent words. After the possessive morpheme <n-> the following changes occur: nki > -u, kii > -k, kimi > -km, nta/ntat > -s, nukni/nuknti > -g, kuni > -un, kuninti > -unt, ntni > -sn, ntnti > -snt. With the exception of the first, nki > -u, these are the forms that occur with the other inflectional affixes

as well as with <n->. After other inflectional affixes, nki > -i. After <n->, the forms function as possessive pronouns: e.g., tigmi-nu 'my house'. After other affixes, the entire sequence may function as a verb or, in some cases, a noun: e.g., dar-i lktab 'I have a book' (literally, 'to me a book'); i-da: s-dar-sn 'he went to their house'.

The second group of nouns in the subclass Nb includes the demonstrative and relative pronouns. The demonstrative is <gua>. When the feminine morpheme is added, it becomes <xta>. With the addition of the plural morpheme, gua > gui and xta > xti. These forms occur with the locative affixes to form words that may be substituted for members of the subclass Na: e.g., gua-d 'this one'; xta-n 'that one'. The relative pronoun <li:> 'who' is included in this subclass, and it is important to note that it may occur with the demonstrative to form a word that functions as an absolute relative: e.g., gua-li: 'the one who'; xta-li-d: 'this one who'.

The members of the third subclass of nouns (Nc) are numerals and quantifiers. They may be considered nouns because they occur with the same inflectional affixes with which other noun stems occur. The reason for assigning them to a special subclass is the fact that they may occur as prefixes. This is especially true of <ian> 'one'; <sin> 'two'; <kulu> 'each, every'. When <ian> occurs as a prefix, it has the form ia-; and it may function as an article which is similar to the English article 'the': e.g., i-zra* agiul 'he saw a donkey' or 'he saw the donkey'; i-zra* ia-ugiul 'he saw one donkey' or 'he saw one (definite) donkey'. When <kulu> occurs as a prefix, the final vowel is lost.

The Shilha numerals from one to twenty-nine are used in rural areas for counting, especially by women. In cities and towns, the Arabic numerals from three to twenty-nine are used by men in business transactions. The numerals from one to ten are basic stems; those from eleven to twenty-nine are compound words formed by adding the numerals from one to nine to <mrau> 'ten' to which the prefix <d-> 'with' has been added: e.g., ian-d-mrau 'eleven'. <mrau> with the plural morpheme means 'twenty', so that the numbers from twenty-one to twenty-nine are formed by adding the numerals from one to nine to the form mrau-in with the prefix <d->: e.g., sin-d-mrau-in 'twenty-two'. After twenty-nine, Arabic numerals are used.

The ordinal numbers are formed from the cardinal numbers, with the exception of ian, by adding the prefix <uis>. With the feminine morpheme, uis- > tis-.

3.12 Verb Stems

Verb stems are those which occur with the affixes in subclasses 2 and 3. Like nouns, they may be divided structurally into two classes: basic stems and derived stems. Although many basic stems have been borrowed from Arabic, they usually conform to the inflectional patterns of native stems. It is important to note that derived verb stems are formed from basic verb stems. There seem to be no verb stems that have been derived from noun stems.¹⁴

There are three categories of derived verb stems. The most frequent in occurrence are those formed by the addition of <s->:

¹⁴ A possible exception to this is the verb saua 'speak' which may have been derived from the noun aua 'speech, talk, conversation'. No other cases could be found, however.

e.g., s-fsi 'still, silence', fsi 'be quiet'. These stems are usually causative in meaning. Another class of derived stems consists of those formed by the addition of <m->: e.g. ma-kl* 'meet' kl* 'wait for, see'. In many cases, these stems have a reciprocal or reflexive meaning. The third type of derived stems consists of those verbs formed by the addition of <t->: e.g., t-fsr 'be spread out', fsr 'spread'. These verbs are usually passive.

Just as gender is an inherent characteristic of nouns, so tense is an inherent characteristic of verbs. A verb stem occurring without affixes, or with the affix ϕ ϕ , must be considered a command rather than an infinitive.

3.2 Affixes

Affixes have been defined as morphemes which may not occur independently. They may be classified by the type of stems with which they occur: one class occurs only with nouns, a second class occurs only with verbs and a third class occurs with both nouns and verbs. Structurally, they are of three types: prefixes, suffixes and broken morphemes, i.e., prefix and suffix attached to the same stem. Phonologically, they may be distinguished from stems by the fact that many of them consist of a single phoneme. It has been stated above that this is not the case with stems or particles; for a single phoneme may not occur in the environment /#_#/ . In terms of function they may be classified as formative or inflectional. The formative affixes are those which may be added to stems to form new stems to which the same inflectional affixes are added that are added to basic stems. Inflectional affixes are those which when

added to a stem form a word which cannot be substituted for a basic stem, i.e., an inflectional affix determines the subclass of affixes from which subsequent affixes for the word are chosen. It is necessary, therefore, to consider not only which affixes occur with which stems, but also which affixes occur with each other.

3.21 Noun Affixes¹⁵

<t__t> is a formative affix which may be added to noun stems classified as masculine. It occurs most frequently with stems beginning with /a/¹⁶ to form a derived stem which is the feminine counterpart of the first: e.g., a-šfar 'thief' (m.) t-a-šfar-t 'thief' (f.); agiul 'donkey' (m.) t-agiul-t 'donkey' (f.). In some cases the derived stem is a diminutive: e.g., agžif 'palm tree' t-agžif-t 'small palm tree'. With certain nouns which may be described as collective, this morpheme may be used to form a singular: e.g., lbanan 'banana (as a type of fruit)' t-lbanan-t 'one banana'; rial 'dollars, currency' ta-rial-t 'one dollar'. It may be used also to form nouns designating a type of work: e.g., anzar 'carpenter' t-anzar-t 'carpentry'.

When this morpheme is added to a stem beginning with a non-syllabic consonant, it usually has the form ta__t. When the stem to which it is added ends with /d*/, there is usually assimilation so that the derived stem ends with /t*/ or /t:/: e.g., agad 'goat'(m.)

¹⁵The symbol [A] is used for the morphemes in this subclass.

¹⁶This means that the morpheme occurs not only with stems formed from verbs by the addition of <a->, but any noun stem classified as masculine, whether basic or derived.

t-aga-t* 'goat' (f.); a-glid* 'king' t-a-gli-t: 'queen'. With <i_n> (plural) this morpheme is usually apocopated so that it has the form t_ϕ. This does not always happen, and the change usually fails to occur when the derived stem ends with /t*/ or /t:/.

This morpheme also occurs with stems classified as personal pronouns, and the changes occurring have been described above.¹⁷ With other noun stems, it usually has the form ϕ_t. This is always the case when it occurs with numerals: e.g., ian, ia-t 'one'; sdis, sdis-t 'six'.

<bu-> is another formative prefix occurring with noun stems, either basic or derived. It is used in forming nouns referring to the owner of an object or the possessor of a quality: e.g., bu-mhand 'owner of stickers, porcupine'. These derived stems are usually masculine. It should be noted that these derived stems alternate freely with the compound words formed by the addition of <bab> to noun stems.¹⁸

<i_n> occurs with noun stems and is used to form the plural. With nouns beginning with /a/, it usually has the form i_n while /a/ > ϕ: e.g., argaz 'man' i-rgaz-n 'men'; agad 'goat' i-gad-n 'goats'. In some cases, however, the morpheme has the form i-_[V>a]tC: e.g., agru 'frog' i-gra 'frogs'; agiul 'donkey' i-gial 'donkeys'. In these cases, the initial /a/ is also lost. In a few cases, the form becomes i-an, but this is found only with stems ending with a consonant. There are also cases in which

¹⁷ See Section 3.11.

¹⁸ See Section 3.11.

i__n > ∅__n: e.g., a-dag: 'bush' a-dag:-n 'bushes'; adžar 'neighbor' adžar-n 'neighbors'.

When <i__n> occurs with noun stems containing the morpheme <t__> (feminine), it usually has the form i__in. The initial vowel of the stem becomes ∅ while t__t becomes t__∅: e.g., t-afulus-t 'hen' t-i-fulus-in 'hens'; t-amdakul-t 'friend' t-i-mdakul-in 'friends'; t-a-mgar-t 'woman' t-i-mgar-in 'women'. Just as in some cases described in the preceding section, the change of the last vowel of the stem to /a/ occurs in nouns formed with <t__t> when <i__n> is added: e.g., t-a-srgul-t 'lid' t-i-srgal 'lids'. In some cases the form is ∅__in, and the initial vowel of the stem remains unchanged: e.g., t-azan-t 'little girl' t-azan-in 'little girls'.

Another alternant of this morpheme occurs with certain basic stems of native origin. This alternant is id. It is this alternant which occurs with nouns formed by the addition of <bu-> or <bab> to a stem: e.g., bu-mhand 'porcupine' id-bu-mhand 'porcupines'; bab-l-farḥ 'he who enjoys' id-bab-l-farḥ 'those who enjoy'; xali 'uncle' id-xali 'uncles'.

With nouns borrowed from languages other than Arabic, the plural morpheme usually has the form ∅__at: e.g., litru (Sp. litro) 'liter' litru-at 'liters'; simana (Sp. semana) 'week' siman-at 'weeks'; lagar (Fr. gare) 'railroad station' lagar-at 'stations'. Nouns borrowed from Arabic usually retain the Arabic plural, often an internal phonemic change rather than the addition of a prefix or suffix: e.g., lktab 'book' lktub 'books'; lbab 'door' lbiban 'doors'.

This morpheme also occurs with pronouns and, the resulting forms

have been described above.¹⁹ The symbol A2 is used for the plural morpheme.

<n->, the possessive morpheme occurs with all stems classified as nouns. It must be considered an inflectional morpheme; for it limits the syntactic function of the stem with which it occurs. Before stems beginning with /a/ it usually has the form /u/. If the initial /a/ is the morpheme <a-> which becomes /u/ after /-/, there is assimilation so that only one [u] is heard in rapid speech: e.g., agiul u-urgaz > agiul u-rgaz 'the man's donkey'. Before nouns containing the plural morpheme when the initial phoneme is /i/, the possessive morpheme has the form i- as an alternant. In rapid speech the two vowels are assimilated so that only one is heard. Before stems beginning with /l/ this morpheme alternates with \emptyset . Both a-fus n-lbab and a-fus lbab 'the handle of the door' occur. After the verb ga 'be', the morpheme has the form ui-: e.g., agiul i-ga ui-urgaz-an 'the donkey belongs to that man'. When the first noun is feminine, the form ti- is used: e.g., t-agiul-t t-ga ti-t-a mgar-t-an 'the donkey belongs to that woman'. The symbol A3 is used for this morpheme.

The affixes <d-> 'with', <dar-> 'to', <f-> 'for', <g-> 'in' <i-> 'for', <s-> 'to' and <si-> 'with, by means of' may be described as prepositional affixes. They occur with noun stems either basic or derived. The forms given above are those that occur with all except the personal pronouns. With the personal pronouns, f- > fil-, g- > gi- and i- > a-. Furthermore, when d- or g- occurs with nki 'I',

¹⁹ See Section 3.11.

nukni 'we', kuni 'you' (m. pl.) or kuninti 'you' (f. pl.), there is reduplication: e.g., gigi 'in me', didng 'with us', didunt 'with you'. The symbol A4 is used for these affixes.

The remaining prepositional affixes <du-> 'under' <igi-> 'on', <nga-> 'between', <tarf-> 'near' and <ta'ama> 'beside' must be described as members of a special subclass; for they occur only with stems to which <n-> has been added. The symbol used for these prefixes is A5.

An additional affix <ua-> is included in the group of noun affixes. This prefix serves to indicate the vocative forms and the noun to which it is added may function syntactically as a particle. The alternant a- usually occurs with titles and proper names.

3.22 Verb Affixes

The formative affixes for verbs may occur either with basic stems or with derived stems, i.e., they may occur with each other. A given affix does not occur more than once with the same stem, however.

<s-> is added to verb stems to produce a new stem usually causative in meaning: e.g., ird 'be clean'; s-ird 'wash'; lkm 'reach, arrive' s-lkm 'take to a destination'; fsi 'melt' (intransitive) s-fsi 'melt' (transitive). When the morpheme is added to a stem in which /š/, /z/ or /ž/ occurs, there is a morphophonemic change which may be described as reduplication: e.g., s-kšim > ši-ksim 'take in'; s-nz > z-nz 'sell'; s-ži > ži-ži 'cure'. When <s> occurs before voiced stops, there is usually assimilation:

e.g., s-bid > z-bid 'stand'; s-drus > z-drus 'reduce'. This change is not a regular one, and the forms s- and z- may alternate with each other.

<m-> is also a formative affix, but it occurs less frequently than the preceding one. Usually the derived stems formed with this affix have a reciprocal or reflexive meaning: e.g., kl* 'see, wait for'; ma-kl* 'meet'. When <m-> occurs before /n/, there is usually assimilation: e.g., m-nag > m-ag 'fight with each other'. When <m-> occurs before /C_*/ , it becomes ma-.

<t-> is also a formative prefix used to form derived stems. It occurs less frequently than either of the previous affixes. The derived stem formed with this affix is usually passive in meaning: e.g., fsr 'spread out'; t-fsr 'be spread out'. The fact that many verbs are both active and passive in meaning accounts for the low frequency of occurrence of this morpheme.

<t-> used in forming habitual stems differs from the preceding morpheme in distribution and also in its alternants. The most frequent form is the prefix t- added to the stem: e.g., bnu 'build'; t-bnu 'keep building'. In stems containing two consonants /a/ is usually inserted between the consonants: e.g., sn 'know'; san 'always know'. In other cases, when the stem consists of CVC, /a/ may be added after the last consonant: mun 'accompany'; muna 'always accompany'. In other cases, especially when the stem contains /i/ and more than two consonants, /i/ is added: e.g., s-ird 'wash'; s-irid 'always wash'. Finally, there are a few verbs in which the morpheme occurs as reduplication, i.e., C₁VC₂ or VC > C₁VC₂VC₂ : e.g., sum 'sweeten'; sumum 'keep sweetening'.

These four morphemes described above are considered members on one subclass, and in the summary of morphological structure the abbreviation B1 will be used for this subclass.

<a-> is another formative prefix which occurs with verb stems, either basic or derived. Derived stems formed with this affix function as nouns syntactically, and, therefore, this affix must be considered a member of a different subclass. As indicated above, many nouns in Shilha have been formed from verb stems by the addition of this prefix. After /#/ or <,> the affix has the form a-. After /-/ or when it occurs in a phrase in non-initial position, it becomes u-. This change has influenced other nouns beginning with /a/ so that even borrowed nouns, which should be considered basic stems since they have not been formed from other stems in the language, may show this change from /a/ to /u/: e.g., asnus 'donkey' ia-usnus 'one donkey' (Lat. asinus).

<l-> is a member of the same subclass to which <a-> belongs, for it is a formative prefix added to verb stems, either basic or derived, to form a stem which functions syntactically as a noun. The use of this affix may be due to Arabic influence. Usually nouns formed with this affix refer to an action, a state or a condition: e.g., l-farḥ 'pleasure' (farḥ 'enjoy'); l-ḥma 'heat' (ḥma 'be hot').

Because these two morphemes are similar in distribution, they may be considered members of the same subclass. The abbreviation B2 will be used for this subclass.

The inflectional affixes for verbs may be divided into four subclasses. The first three are temporal, modal and pronominal. In addition, there is an imperative morpheme which is equivalent in

distribution to the sum of the first two of these classes. The symbol B3 is used for temporal affixes; B4 for modal affixes; and B5 for pronominal affixes. The symbol B6 refers to the imperative morpheme.

The temporal affixes may be divided into two subclasses on the basis of structure. The first class consists of those affixes which occur as prefixes. In the second class are the morphemes which involve an internal phonemic change.

<ar-> is attached to verb stems to form a progressive tense: e.g., ar-fal-ġ 'I am leaving'; ar-i-t-fraħ 'he is enjoying'. It is important to note that this affix occurs only with derived stems formed with the morpheme <t> 'habitual'. The exact tense of the form is determined by the context: e.g., argaz i-bda*ar-i-t-ni 'the man started to talk'; argaz ar-i-t-ni 'the man is saying/usually says'. When this morpheme occurs after another affix, there is a morphophonemic change so that ar > a: e.g., ur-ar-fal-ġ > ur-a-fal-ġ 'I am not leaving'; is-ar-i-t-fraħ > is-a-i-t-fraħ 'is he enjoying'.

<ra-> occurs with verb stems to form the future tense. It differs from the preceding affix because it may occur either with basic stems or with derived stems: ra-i-du: 'he will go'; ra-i-t-du: 'he will be going'. When this morpheme occurs immediately before the stem, it has the form rad-: e.g., rad-ai-ġ 'I will take'. If another affix occurs between <ra> and the stem, the form ra- is used: e.g., ra-k-ai-ġ s-lu*tał 'I will take you to the hotel'. When it occurs after <ur-> 'not', there is assimilation so that ra- > a-: e.g., ur-ra-i-du: > ur-a-i-du: 'he will not go'.

<P> is the symbol used for a third temporal affix which differs structurally from the preceding affixes because it involves internal phonemic changes rather than the addition of a prefix. It is used to indicate a completed action. There are several alternants of this morpheme which will be described below.

With the first class of stems, <P> has the form $\phi _ \phi$, i.e., the stem remains unchanged and the pronominal affixes are added: e.g., bi 'cut, cross'; bi-g̃ a-g̃aras s-udar 'I crossed the street on foot'; agug 'be far away'; i-agug 'he is far away'.

With a second class of stems, this morpheme appears as a > u. The stems in this class are usually monosyllabic, consisting of /aC/, /aCC/ or /CaC/: e.g., anz 'take'; i-umz 'he took'.

With a third class of stems, <P> occurs as u > i/a. The change u > i occurs with the morphemes <g̃> 'I' and <t_t> 'you', while the change u > a occurs with the other subjective pronominal affixes: e.g., du: 'go'; di-g̃: 'I went'; i-da: 'he went'.

With a fourth class of stems, <P> occurs as i > a. This is similar to the alternant described above, for the change does not occur with the morphemes <g̃> or <t_t>: e.g., ri 'want'; t-ri-t 'you wanted'; ra-n 'they wanted'.

The modal affixes include the negative, interrogative, subjunctive and conditional affixes.

<ur-> 'not' is a negative prefix. It occurs with verb stems and the affixes described above. When it occurs with stem to which <P> has been added, certain changes occur in the stem. In those cases in which <P> = a>u, the same change is found when <ur-> is added. When <P> = ϕ , there is no change in the stem after the

addition of <ur->. In other cases, however, <ur-> is followed by the change V>i: e.g., du: 'go'; i-da: 'he went'; ur-i-di: 'he didn't go'.

<is-> is an interrogative prefix which occurs before verbs and any of the affixes described above. It does not occur with any other interrogative affix, however. In addition to being used to form questions, it may also be used to express doubt or astonishment: e.g., is-t-gi-t a-berani 'are you a stranger'; ur-t-sin-t is-i-ga ġasa: l'aid 'you don't know (that) today is a holiday'.

Both morphemes <is-> and <ur-> may occur independently. In this way they are different from the other verbal affixes. The independent forms in both cases are formed by the addition of /d/. These forms may be classified as particles: e.g., urd lktab a-i-ga 'it is not a book'; izd kii a-i-ga-n a-barani 'are you a stranger'.

<ad-> occurs with verbs and the other inflectional affixes to form a subjunctive or infinitive. When it occurs immediately before any of the pronominal affixes, it has the form a-: e.g., ri-ġ ad-kru-ġ iat-lbit 'I want to rent a room'; i-ra a-i-kra iat-lbit 'he wants to rent a room'. When it occurs before the morpheme <ur>, it serves to form a negative command: e.g., ad-ur-t-du-t: 'don't go'.

The morphemes <iġ> 'if', <liġ> 'when', <ma'ala> 'if', <kudna> 'as soon as', <żu> 'ever' and <sul> 'ever again' may be considered members of this same subclass, for they occur in the same environments. The last of the affixes <sul> occurs only with forms containing <ra> 'future'. All of these affixes occur as prefixes, and although there is a slight pause after them so that in some utterances they seem to be words rather than prefixes, it is clear that

they must be classified as prefixes because the objective pronominal affixes precede the stem when these forms occur just as they do when other prefixes such as <ra-> and <ur-> occur: e.g., i-zra* 'he saw' i-zra-k* 'he saw you' liḡ-k-i-zra* 'when he saw you'.

The pronominal affixes may be divided into three groups on the basis of distribution as well as syntactic function. In the first group, B5a, are the subjective affixes. The second group, B5b, consists of direct object affixes. The third group, B5c, includes the indirect object affixes. The morphemes included in each of the three groups are complementary in distribution to the other members of that group, but they may occur with members of either or both of the other two groups.

The members of the first group are: <-ḡ> 'I', <t__t> 'you', <i-> 'he', <n-> 'we', <t__m> 'you' (m. pl.), <t__mt> 'you' (f. pl.), <-n> 'they' (m.), <-nt> 'they' (f.). These morphemes are attached to verb stems, either basic or derived, with any of the affixes described above. The position of the affixes is fixed, but the selection of the affix depends upon the other words in the environment (see Syntax). Before voiceless consonants, <-ḡ> > /x/.

The affix <i__n> 'the one who' may be considered a special member of this class. It occurs, like the others, with verb stems and its position is fixed so that it always occurs next to the stem. Its distribution is complementary to the other members of the group, for it does not occur with any other member of the subclass. It differs because its selection does not depend on the other members of the phrase. Moreover, its syntactic function is different, for the form produced by the addition of this morpheme seems to be

adjectival rather than verbal. It should be noted that <i_n> may occur as ϕ _n. The symbol B5ax is used for this morpheme.

The members of the second group, the direct object affixes, are: <i> 'me', <C> 'you' (m. sg.), <am> 'you' (f. sg.), <t> 'him', <t:> 'her', <ag> 'us', <kun> 'you' (m. pl.), <kunt> 'you' (f. pl.), <tn> 'them' (m.), <tnt> 'them' (f.). They are complementary in distribution, but their position is not fixed. When they occur with a modal affix or any temporal affix except <P>, they are prefixes. In other cases, they are suffixes.

The members of the third group, the indirect object affixes, are: <ii> 'to me', <ak> 'to you' (m. sg.), <am> 'to you' (f. sg.), <as> 'to him/her', <ag> 'to us', <aun> 'to you' (m. pl.), <aunt> 'to you' (f. pl.), <asn> 'to them' (m.), and <asnt> 'to them' (f.). After a vowel, all of these forms have /i/ prefixed. After consonants, they occur as listed above. The position of these affixes is determined by the other morphemes in the word, and in this way they resemble the morphemes of the second group. When they occur with a modal affix or any temporal affix except <P>, they are prefixes. In other cases, they are suffixes.

<C> is the symbol used for the imperative morpheme. There are three alternants of this morpheme: ϕ _ ϕ , ϕ _at, and ϕ _amt. The first is a singular form, the second is masculine plural, and the third is feminine plural. Each of the plural forms has an alternant, ϕ _iat and ϕ _iamt, which occurs after vowels: e.g., du: 'go'; du:-iat 'go' (m. pl.); du:-iamt 'go' (f. pl.).

In distribution, this morpheme is equivalent to the sum of B3, B4, and B5a; for it does not occur with any of the members of

these subclasses. It may occur with the members of B5b and B5c, however.

3.33 The third class of affixes includes those morphemes that occur as prefixes or suffixes with either noun stems or verb stems. It is this fact which distinguishes them from other affixes whose occurrence is limited to stems of one class or another.

<d> 'here, this, now' and <D> 'there, that, then' may be considered locatives. They occur as suffixes with nouns and noun substitutes, and in this position they have the forms -ad and -an respectively: e.g., tigmi-ad 'this house'; i-rgaz-n-an 'those men'. When they occur with verbs, they appear as prefixes or suffixes depending upon the other morphemes in the word. With <ra>, <ar>, <ad> and <ur> they occur as prefixes. In other words which do not contain these morphemes, they occur as suffixes: e.g., au-d 'bring'; ad-ur-d-au 'don't bring'.

<ma-> 'who, what, anything' is also a member of this class. When it occurs before nouns, it has the form man. Before verbs, the form ma is used: e.g., man-tifii t-ri-t 'what (kind of) meat do you want'; ma-t-ri-t 'what do you want'.

The affixes in this class may be found in those words classified as particles. Almost all of the interrogative words contain ma although a more detailed analysis of these words would be necessary to determine the other constituents: e.g., manik 'how' mani 'where'. The same is true with many adverbs. These may contain the morpheme <d> or <D>: e.g., gilad 'now' gilan 'then' gid 'here' gina 'there'.

3.4 The morphemes classified as particles occur independently

without affixes. It is this fact which serves to distinguish them from stems. Interjections, conjunctions and certain interrogative words are included in this class. It is possible that some of the adverbs have been formed by the combination of two affixes: e.g., gid 'here' and gina 'there' seem to be the results of adding <g> 'in' to the morphemes <d> and <n>. The word gasa: 'today' may have been formed from <g> 'in', as: 'day' and <d> 'this' for an older form, gasad:, is sometimes substituted for gasa:.²⁰

The description of particles depends on their distribution relative to other words, and therefore, it will be discussed in the section on Syntax.

3.5 Equations for the formation of words

The distribution of morphemes has been included in the description of the individual morphemes. For purposes of simplification, however, a summary is given below. The equations are not intended to indicate the syntactic function of the words, but merely to indicate the morphemic constituents of the words. The letters indicate the classes of morphemes: N = noun stem, V = verb stem, A = noun affix, B = verb affix, C = noun and verb affix. The numerals indicate the subclasses of morphemes, and the subscript indicates the class of word in terms of morphemic components.

²⁰ See Stumme, H., Handbuch des Schilhischen von Tazerwalt, p. 121.

$$Na + A1 = N_1$$

$$V + B1 = V_1$$

$$Na/N_1 + A2 = N_2$$

$$V + B2 = N$$

$$Na/N_1/N_2 + A3 = N_3$$

$$V/V_1 + B3 = V_2$$

$$Na/N_1/N_2 + A4 = N_4$$

$$V_2 + B4 = V_3$$

$$N_3 + A5 = N_4$$

$$V_2/V_3 + B5a = V_{4a}$$

$$Na + A6 = \text{Particle}$$

$$V_2/V_3 + B5ax = V_{4b}$$

$$Na + C = Na$$

$$V/V_1 + B6 = V_{4c}$$

$$Nb + A2 = N_2$$

$$V_4 + B5b = V_{5a}$$

$$Nb + A3 > A = N_3$$

$$V_4 + B5c = V_{5b}$$

$$Nb + A4 = V_4/N_4$$

$$V_{5a} + B5c = V_6$$

$$Nc + Na = N_1/N_2$$

$$V_{5b} + B5b = V_6$$

$$Nc + Nc_4 = Nc_1$$

$$V + C = V$$

Chapter IV

SYNTAX

4.0 In considering the syntax of Shilha it is necessary to examine the words described in the previous section, not as isolated units but in terms of their distribution relative to other words in the language. The basic unit for syntactic analysis, therefore, is the phrase. A phrase may be defined as a sequence of morphemes forming one or more words which have a certain interdependence.

4.1 Noun Phrases

The basic noun phrase consists of a single noun stem. This stem may be a member of any of the three subclasses of nouns. When one of the formative affixes is added to a stem that is a member of the first subclass, the word formed may be considered a derived noun stem, for it may be substituted for a basic stem: e.g., i-zra* afrux 'he saw the boy'; i-zra* t-afrux-t 'he saw the girl'. The syntactic symbol N^1 is used for both basic and derived noun stems.

When a noun stem of the first subclass occurs with the possessive morpheme $\langle n \rangle$, a word is formed which may be placed after another noun to construct a sequence which can be substituted for a basic or derived stem: e.g., agiul i-da: s-suk* 'the donkey went to the market'; agiul u-urgaz i-da: s-suk* 'the man's donkey went to the market'. The symbol N^2 is used for this sequence of $Na \langle n \rangle Na$. When the possessive morpheme occurs with a personal pronoun, N_b , the sequence formed occurs as an affix rather than as a separate word. This affix can be substituted for the sequence $\langle n \rangle Na$: e.g., agiul-n-s i-da: s-suk* 'his donkey went to the market'. Because

the sequences $Na \langle n \rangle Na$ and $Na \langle n \rangle Nb$ are syntactically equivalent, the same symbol N^2 is used for sequences in which either occurs.

When a noun stem of the first subclass occurs with one of the third subclass of noun affixes, a preposition, the resulting sequence may be considered a phrase which may be substituted for a particle but not for a noun stem. This sequence is represented by the symbol N^3 . The sequences N^1 and N^2 may be substituted for the noun stem in these utterances: e.g., i-aui-d rbi'a i-ugiul 'he brought grass for the donkey'; i-aui-d rbi'a i-ugiul-n-s 'he brought grass for his donkey'.

The sequence N^3 may also be formed by combining an affix of the fourth subclass with a noun to which the morpheme $\langle n \rangle$ has been added: e.g., lktab i-la igi-n-tbla 'the book is on the table' is syntactically equivalent to lktab i-la ġ-tigmi 'the book is in the house'.

The personal pronouns may also occur with members of the fourth subclass of noun affixes. The resulting sequence, however, differs syntactically from the sequence N^3 . This fact can be seen immediately in the utterances is-t-ri-t a-di-sn 'do you want to (go) with them' and is-t-ri-t a-t-ša-t 'do you want to eat'. The sequence di-sn in the first utterance is replaced by a sequence described structurally as V_4 . Therefore, the two sequences although structurally different must be syntactically equivalent.

4.2 Verb Phrases

The minimal verb sequence occurring in utterances is V_4 , i.e., a basic or derived stem with a temporal affix and a subjective pro-

nominal affix, or a basic or derived stem with the imperative morpheme. These forms serve as the nuclei of phrases for which the symbol V^1 will be used. The presence of the imperative morpheme influences the distribution of other words in the phrase, however, therefore the symbol V^{1a} will be used for those phrases not containing the imperative, and V^{1b} will be used for those in which the imperative morpheme occurs. Utterances such as i-zra* 'he saw'; ra-t-du-t:; ur-i-gi 'he is not' may be considered examples of the first type of phrase (V^{1a}). Phrases such as bi 'cut' and du:-iat 'go' are examples of the type V^{1b} . By adding a member of B5b to the sequence V^1 , a new word is formed which contains a direct object: e.g., i-zra-k* 'he saw you'; bi-t 'cut it'. The symbol V^2 is used for phrases of this type. If a member of the subclass B5c is added to V^1 , however, the sequence contains an indirect instead of a direct object. The symbol V^3 is used for these phrases. When morphemes from B5b and B5c are added to V^1 , the sequence formed contains both the direct and indirect object. This type of phrase is represented by the symbol V^4 . It is possible to describe the syntactic relationships between nouns and verbs in terms of these four types of verb phrases.

The sequence V^{1a} in addition to the morphemic components of the word itself may also contain a noun or noun phrase (N^1/N^2): e.g., i-zra* 'he saw'; argaz i-zra* 'the man saw'; agiul u-urgaz i-zra* 'the man's donkey saw'. Such sequences are syntactically equivalent to V^1 . The order of the words may be changed so that the noun phrase may occur after the verb: e.g., i-zra* urgaz. If the noun which serves as the nucleus of the noun phrase contains the feminine mor-

pheme <t__t>, there is a subsequent change in the morpheme chosen from B5a: e.g., t-agiul-t t-zra* 'the donkey (f.) saw'. It is this fact which makes it possible to divide stems classified as nouns into two classes which are complementary in distribution, one of which occurs only with the morpheme <i-> 'he'. The other occurs only with the morpheme <t-> 'she'. If the noun serving as the nucleus of the noun phrase contains the plural morpheme <i__n>, there is also a change in the pronominal affix chosen for the verb: e.g., i-rgaz-n zra-n* 'the men saw'. It is possible to state, therefore, that the morphemes classified as nouns contain two constituents which are repeated in the subjective affixes in phrases of this type. The first constituent [G], gender, has two classes: [G1] masculine and [G2] feminine. The first has the form ϕ . The second has many alternants of which the most common is the formative affix <t__t>. Almost all nouns with initial /t/ contain the component [G2]. With all subjective pronominal affixes except <g> 'I', <t__t> 'you' and <n-> 'we', it occurs as an addition of /t/. With <i-> 'he' this addition of /t/ is coupled with the subtraction of /i/.

The second constituent [Y] number, has two classes. The first [Y1] 'singular' may be considered ϕ . The second [Y2] 'plural' has many alternants, the most frequent of which is the morpheme <i__n> occurring with nouns. With the subjective pronominal affixes, the chief function of [Y2] seems to be a change of position of the affix, i.e., suffix to prefix or prefix to suffix, rather than the addition of a given phonemic sequence: e.g., ur-fi-g 'I didn't give'; ur-n-fi 'we didn't give'.

Each phrase of the type V^{1a} must then contain two additional

elements [G] and [Y] which extend over the noun and the pronominal affix. The utterance argaz i-zra* could then be symbolized structurally as $GLY1 (NV_4)$ while the utterance t-i-mgar-in zra-nt* would be written $GZY2(N_1V_4)$.

In phrases of the type V^{1b} , the only noun phrase which may occur without changing the syntactic nature of the sequence is N_5 , i.e., a noun stem with the vocative affix.

Sequences of the type V^2 occur in simplest form as V_{5a} . The phrase, however, may consist of $V^1 + N^1/N^2$: e.g., i-zra* argaz 'he saw the man'; i-zra* aḡiul u-urgaz 'he saw the man's donkey'. Both of these utterances are syntactically equivalent to the utterance i-zra-t* 'he saw him'. It is possible to change the order of the words so that the noun phrase may occur before the verb. In this case, the verb must have the form V_{5a} , and the gender and number of the noun which serves as direct object are repeated in the objective affix: e.g., a-garas i-bi-t 'he crossed the street'; t-udi-t i-bi-t: 'he cut the butter'. When the verb contains any affix except $\langle P \rangle$ (perfect), a subjective pronominal affix or an affix of class C, the objective pronominal affixes must occur before the stem: e.g., ur-t-i-bi 'he didn't cut it'.

Words which may be classified structurally as V_{5b} have been defined syntactically as sequences of subject, verb and indirect object. The indirect object affix in such a sequence may be replaced by a noun phrase, but in this case, the phrase must be N^3 , i.e., a noun with a prepositional affix: fi-g-as 'I gave to him'; fi-g i-urgaz 'I gave to the man'. Since the phrase N^3 includes not only utterances of this type, but all combinations of nouns and

prepositional affixes, such sequences as i-da: s-suk* 'he went to the market'; i-la igi-n-tbla 'it's on the table' may be considered examples of **this** type of phrase.

Words represented by the structural symbol V_6 may be defined syntactically as sequences of subject, verb, direct and indirect objects: e.g., i-fa-ias-t 'he gave it to him'. A noun phrase of the type N^1 or N^2 may be added to the sequence to serve as subject or direct object, while a noun phrase of the type N^3 may serve as indirect object. The utterance could then occur as argaz i-fa a-bukal* i-ufrux 'the man gave the jar to the boy'. It should be noted that in utterances of this type, the indirect object affix always precedes the direct object affix. After modal or temporal prefixes, both object affixes occur before the stem and the subjective pronominal affix and after the modal or temporal affix: e.g., ur-as-t-i-fi 'he didn't give it to him'; ra-k-t-i-fa 'he will give it to you'.

4.3 Particles

The particles may be divided into classes on the basis of their syntactic functions. The first class (P^1) includes the interjections. These forms can be distinguished from other particles because usually they occur as complete utterances, i.e., between two periods of silence of relatively long duration. Some of the more common members of this subclass are: iih 'yes'; uhu 'no'; ha 'here'. In some utterances they may occur before a noun to which the vocative affix has been added: e.g., iala a-sidi 'I hope so, sir'. In these utterances, the falling tone which characterizes the phoneme /./ is present

although the pause between the two words may be shortened.

The second class of particles (P^2) includes those which may be classified syntactically as conjunctions. These particles occur between phrases which are usually syntactically equivalent: e.g., lbabur i-safr aškun lukt* t-lkm-as 'the ship sailed because the time came to him'. In this utterance the conjunction aškun serves to join the two verb phrases either of which could occur as a complete utterance. Another example is found in the utterance ur-i-li ruz* uaila t-udi-t 'there is neither rice nor butter'. Here, the particle uaila joins the two noun phrases. This particle, like the other members of this class, could not join a verb phrase with a noun phrase or a noun phrase with a verb phrase.

The third class of particles (P^3) includes those which may be classified as adverbs. It is possible that some of these have been formed from other morphemes in the language, but additional historical data would be needed to establish this fact. Usually the particles in this class are substitutable for the sequence N^3 : e.g., ur-i-li ġ-tigmi 'he is not in the house'; ur-i-li ġina 'he isn't there'.

The fourth class of particles consists of interrogative words. Almost all of these seem to have <ma> as a constituent. Usually they occur at the beginning of the utterance, but they may also occur between phrases. In this way, they are similar to the particles classified as conjunctions, but the distribution is different; for the interrogatives may occur between phrases which are not syntactically equivalent: e.g., manig i-la lktab 'where is the book' may occur as lktab manig i-la. In the second utterance the inter-

rogative occurs between the two phrases, but the first is a noun phrase while the second is a verb phrase. A conjunction could not occur between two such phrases. There are two restrictions on the position of interrogatives: they may not occur at the end of a sequence of phrases before a long silence that marks the end of a sentence, nor may they occur between words which are members of one phrase. It would be impossible, therefore, to rearrange the words of the utterance cited above to form the sequence: lktab i-la manig. If the sentence contained the phrase N^2 , the interrogative would not occur between the two words forming this phrase: e.g., manig i-la lktab n-guma 'where is my brother's book' would not occur as lktab manig n-guma i-la.

Another class of particles (P^5) includes those that serve as expletives: e.g., aiad 'this is'. The words in this class may be used with noun phrases, N^1 or N^2 , to form a sequence which is equivalent to V^2 : e.g., man lukt* aiad 'what time is this'; lukt* lmakla aiad 'this is the time of meals'.

4.4 Word Sequence Equations

The following equations are designed to show the relationship between structural and syntactic classes. The capital letters indicate morpheme classes: N = noun, V = verb stem, A = noun affix, B = verb affix, C = noun and verb affix. The numerals and lower case letters indicate subclasses of morphemes: e.g., B5a = direct object pronominal affix that occurs with verbs. The subscript indicates the class of word in terms of morphemic components: e.g., N_3 = a basic or derived noun stem with the possessive affix. The raised numerals indicate the syntactic classes.

Word Sequence Equations

Noun Phrases	Verb Phrases
$N/N_1/N_2 = N^1$	$V_{4a} = V^{1a}$
$N + V_{4b} = N^1$	$V_{4c} = V^{1b}$
$N^1 + N_3 = N^2$	$N^1/N^2 + V^{1a} = V^{1a}$
$N^1 + (Nb + A3) = N^2$	$V_{5a} = V^2$
$N_4 = N^3$	$N^1/N^2 + V^{1a} + N^1/N^2 = V^{2a}$
$N_4 + N^2 = N^3$	$N^1/N^2 + N^1/N^2 + V^2 = V^{2a}$
$N^1 + P^2 + N^1 = N^1$	$V^{1b} + N^1/N^2 = V^{2b}$
$N^2 + P^2 + N^2 = N^2$	$V_4 + V_4 = V^2$
$N^3 + P^2 + N^3 = N^3$	$N^1/N^2 + P^5 = V^2$
$Na + A6 = P^1$	$V_{5b} = V^3$
	$N^1/N^2 + V^{1a} + N^3 = V^3$
	$N^1/N^2 + N^3 + V_{5b} = V^3$
	$V^{1b} + N^3 = V^3$
	$V_6 = V^4$
	$N^1/N^2 + N^1/N^2 + V^{2a} + N^3 = V^4$
	$N^1/N^2 + V^{1a} + N^1/N^2 + N^3 = V^4$

$$N^1/N^2 + N^3 + V^{2a} + N^1/N^2 = V^4$$

$$V^{1b} + N^1/N^2 + N^3 = V^4$$

$$N^1/N^2 + N^3 + N^1/N^2 + V^4 = V^4$$

4.5 Sentence Structure

The structure of sentences in Shilha may be clearly stated in terms of the word sequence equations given in the preceding section. Any sequence of morphemes occurring after a relatively long period of total silence and having the contour phoneme /./ or /?/ may be considered a complete utterance or sentence.

The simplest type of sentence is that consisting of a single word. Some answers to questions may consist of one word, and some exclamations consist of one word. Both occur after a period of silence and contain the contours which indicate sentences. Therefore, they may be considered sentences of this type.

The most common sentence types are those containing a verb phrase. The verb phrase may be V^1 , V^2 , V^3 or V^4 . Any sequence of morphemes which is equivalent to one of these phrases may be considered a sentence; therefore, a sequence consisting of a prepositional affix with a personal pronoun and a noun may be considered a sentence: e.g., gi-s its 'in him sleep'. In this utterance the first word is equivalent to V^1 . When the second word is added, the entire sequence is equivalent to V^2 and may be described as a sentence if it occurs between two periods of silence.

Sentences are also formed by using the members of P^2 to connect verb phrases. It is possible, therefore, to have sequences

such as $V^1P^2V^1$: e.g., i-ksim aškun i-ḥma lḥal 'he went in because the weather was hot'. The linking of any sequence of verb phrases will form a sequence which may be considered a sentence. In some cases, the linking is accomplished by mere juxtaposition of the phrases rather than by the use of a particle.

Examples of these various sentence types will be found in the sample texts which follow.

V. Texts

The following texts are given as samples of the material on which the preceding analysis is based. The transcription is phonemic; words are separated by a space. Hyphens are used to indicate morpheme boundaries within a word. Two translations are given with each text. The first is literal; the second, idiomatic.

5.1 uš:n d-bu-mhand

1. i-ka:tin uš:n d-bu-mhand ga-n i-mdukal. 2. ia-uas: nkr-n.
3. nga-n n-las. 4. laḥ-asn mat-šta-n. 5. i-nkr bu-mhand.
6. i-na: i-uš:n. 7. ḡrua a-n-š ḡ-ia-t-t-ibḥar-t. 8. du-n: sinit-sn. 9. afi-n t-ibḥar-t si-ia-uugab. 10. laḥ-asn manik ad-skar-n ad-kšim-n. 11. iat-sat afi-n iat-t-nuk*bi-t. 12. kšim-n gi-s. 13. bda-n ar-šta-n. 14. uš:n ar-i-šta ailig i-'amar ahlig-n-s.
15. lig-ra-n ad-fuḡ-n i-fuḡ bu-mhand. 16. i-ka*ma uš:n.
17. ur-i-ufi a-i-fuḡ aškun i-bzug uhlig-n-s. 18. i-na:-ias bu-mhand. 19. ka*ma ḡina arkiḡ-d-i-uška bab n-t-ibḥar-t. 20. i-nḡi-k si-ukurai. 21. ar-i-ala ušn. 22. ar-i-t-da*lb i-bu-mhand.
23. manik ra-i-skr baš a-i-fuḡ. 24. i-na:-ias bu-mhand. 25. gun: f-dhar-n-k. 26. talt i-dar-n-k s-ig:na baš lig-d-i-uška bab n-t-ibḥar-t ra-k-d-i-af ḡikina. 27. ra-k-i-luh s-bra.

1. he-was-then wolf with-porcupine were-they friends. 2. One-day rose-they. 3. died-they of-hunger. 4. nothing-to them what-eat-they. 5. he-stood porcupine. 6. he-said to-wolf. 7. let to-we-eat in-one-garden. 8. went-they both-them. 9. found-they garden with-one-wall. 10. nothing-to them how to-do-they to-enter-they. 11. one-hour found-they one-hole. 12. entered-they in-it.

13. began-they are-eating-they. 14. wolf is-he-eating until he-filled stomach-of-him. 15. when-want-they to-leave-they he-left porcupine. 16. he-stayed wolf. 17. not-he-could to-he-leave because he-is puffed stomach-of-him. 18. he-said-to him porcupine. 19. stay there until-here-he came owner of-garden. 20. he-killed-you with-stick. 21. is-he-crying wolf. 22. is-he-begging to-porcupine. 23. how will-he-do to to-he-leave. 24. he-said-to him porcupine. 25. sleep on-back-of-you. 26. put feet-of-you to-sky to when-here-he-came owner of-garden will-you-here-he find like that. 27. will-you-he-throw to-outside.

Once the wolf and the porcupine were friends. One day they got up. They were dying of hunger. They had nothing to eat. The porcupine got up. He said to the wolf, "Let's go eat in a garden." The two of them went. They found a garden with a wall. They had no way to get in. (After) one hour, they found a hole. They went in through it. They started to eat. The fox ate until he filled his stomach. When they wanted to go out, the porcupine left. The wolf stayed. He could not go out because his stomach was puffed. The porcupine said to him, "Stay there until the owner of the garden comes. He will kill you with a stick." The wolf started to cry. He asked the porcupine what to do to get out. The porcupine told him, "Sleep on your back. Put your feet in the air so that when the owner of the garden finds you like that he will throw you out."

5.2

1. žha i-zri ia-uas: f-lm⁴alm-in. 2. ar-t-ga-n zift i-lflaik.
3. i-sak*sa ian gi-sn f-ma-skar-n. 4. i-na:ias ar-n-t-ga zift

i-lflaik baš a-t-azal-nt igi-u-aman. 5. liġ-i-iuuri žha s-tigmi
i-dub zift. 6. i-gi-t i-i-dar-n u-uġiul. 7. liġ-i-hsu uġiul
si-l-ħma i-luar. 8. i-bda* žha ar-i-t-ni: d-ixf-n-s. 9. lm'alim
i-na:-ii saħt.

1. žha he-passed one-day on-engineers. 2. are-putting-they
tar to-boats. 3. he-asked one in-them on-what-do-they. 4. he-told-
him are-we-putting tar to-boats for to-run-they on-of-water. 5. when-
he-returned to-house he-melted tar. 6. he-put-him to-feet of-donkey.
7. when-he-felt donkey with-heat he-ran. 8. he-began žha is-he-
saying with-mind-of-him. 9. engineer he-told-me all right.

One day žha passed some engineers. They were putting tar on
boats. He asked one of them what they were doing. He told him, "We
are putting tar on the boats so that they will run on water." When
he returned home, he melted some tar. He put it on the donkey's feet.
When the donkey felt the heat, he ran away. žha started to say to
himself, "The engineer told me the truth."

5.3

1. žha i-zra* iat-tklit lžim'at i-mħdar-n ġ-uġaras. 2. i-'ard-asn
s-tigmi-n-s baš a-di-sn i-širk iminsi. 3. na:-n-as iala*. 4. i-kšm
s-t-a-mġar-t-n-s i-na:-ias. 5. žužad: iminsi. 6. ha:ti. 7. dar-nġ
ingbu-in. 8. t-na:-ias ur-i-li ruz* uaila t-udi-t. 9. i-ktid žha
ur-dar-s ma-i-s-nua. 10. i-asi ak*sari i-xuan i-kšim s-i-mħdar-n.
11. i-na:-iasn imil ma'ala dər-i ruz* t-udi-t ra-iaun-t-d-ġi-ġ
ġ-uk*sari-ad. 12. i-fl-tn i-du:.

1. žha he-saw one-time group of students in-street. 2. he-invited-to them to-house-of-him for to-with-them he-share supper. 3. said-they-to him all right. 4. he-entered to-wife-of-him he-told-her. 5. prepare supper. 6. see. 7. to-us guests. 8. she-told-him not-he-is rice nor butter. 9. he-remembered žha not-to-him what-he-cause-cook. 10. he-took bowl he-(who)-is empty he-entered to-students. 11. he-told-them if if only to-me rice butter will-for you-it-here-put-I in-bowl-this. 12. he-left-them he-went.

Once Žha saw a group of students in the street. He invited them to his house to share supper with them. They said, "All right." He went in and told his wife, "Prepare supper. See, we have guests."

She said to him, "There is neither rice nor butter." Then Žha remembered that he had nothing to cook.

He took an empty bowl in to the students and said to them, "If only I had some rice or some butter, I would put it in this bowl for you." Then he left them and went away.

5.4

1. si-brahim i-makl* si-muḥmad. 2. i-na-ias a-salamu-‘alai-kum. 3. i-žaub-as si-muḥmad ua-‘alai-kum usalam. 3. i-sauul si-brahim. 4. i-na:-ias mani t-ki-t ġasa:? 5. i-nġa-iaġ umrgi-n-k. 6. i-na:-ias si-muḥamad ima-kii. 7. manik ad-ga-n taruan-n-k d-sa*ḥt-n-k? 8. i-na:-ias si-brahim labas dar-nġ. 9. ma‘ala i-nġa-iaġ lġla li: la-n ġ-lma‘ašt. 10. si-muḥmad i-na:-ias ma-ra-iaġ-ni-ġ? 11. kulu ġaiad li: i-la-n sabab-n-s klt* u-unzar.

1. Mr.-Brahim he-met Mr.-Mohammed. 2. he-told-him o-peace-on-you. 3. he-answered-him Mr.-Mohammed and-on-you peace. 3. he-talked

Mr.-Brahim. 4. he-said-to him where you-are today? 5. he-killed-us
absence-of-you. 6. he-told-him Mr. Mohammed and-you. 7. how are-
they children-of-you with-health-of-you? 8. he-told-him Mr.-Brahim
nothing bad to-us. 9. only he-killed-us price which is in-living.
10. Mr.-Mohammed he-told-him what-will-you-say-I? 11. all this
which is cause-of-him need of-rain.

Mr. Brahim met Mr. Mohammed. "Hello," he said to him.

Mr. Mohammed answered, "Hello to you."

Mr. Brahim kept talking. "Where were you today?" he said. "We
missed you."

Mr. Mohammed said, "And how are things with you? How is your
family? How is your health?"

"Fine," answered Mr. Brahim. "But the cost of living is killing
us."

"What can I say?" said Mr. Brahim. "All of this is caused by
the lack of rain."

5.5

1. i-zra* ia-uas: ġ-suk* ia-ufulus ar-i-nza sin-d-mrau n-rial.
2. i-la ġ-unsk u-utbir. 3. i-na: d-ixf-n-s i-ġula suk* i-i-fulus-n.
4. sbaḡ ra-d-aui-ġ, afulus li: dar-ḡ. 5. i-'adl-n. 6. sbaḡ-an
i-aui-d afulus s-suk*. 7. i-na: is-ra-t-i-znz si-taman i-mkur*-n.
8. i-ġi-t ġ-adlalt. 9. ur-as-d-i-aui bla sin-d-mrau lgušt i-ar:
u-fka*'u. 10. i-na: i-li-m-suk*-in. 11. sak*sa-ġ mata ġaiad
t-skar-m? 12. idgam zri-ġ ia-ufulus. 13. i-la ġ-unsk u-utbir
i-sbġ-n. 14. i-nza si-sin-d-mrau n-rial. 15. kraigat ian ġigun
i-zaid ġ-taman-n-s. 16. afulus-ad-inu i-taf laluan ugar n-ġua-li:

idgam. 17. i-zigz s-dar-s ia-u-msuk*. 18. i-na:-ias kii t-nufl-t.
19. ur-t-sin-t ualu. 20. afulus li n-saġ idgam ur-i-gi afulus
i-sbġ-n. 21. i-ga bab-aurgi li: i-t-⁶auud-n aual n-binadm.
22. i-žaub-as u-šib-an iġ-a-saual ġuan ġuad ar-i-t-xam: bzaf:.

1. he-saw one-day in-market one-rooster is-he-selling two-with-
ten of-dollars. 2. he-is in-size of-pigeon. 3. he-said with-mind-
of-him he-is high market for-chickens. 4. tomorrow will-here-carry-I
rooster which to-us. 5. he-is good. 6. tomorrow-that he-carried-
here rooster to-market. 7. he-said whether-will-him-he-cause-sell
with price he(who)-is big. 8. he-put-him in-auction. 9. not-him-
here-he-carry only two-with-ten cents he-angered poor man. 10. he-
said to-marketers. 11. ask-I what this you-do? 12. yesterday saw-I
one-rooster. 13. he-is in-size of-pigeon he(who)-is-painted. 14. he-
sold with-two-with-ten of-dollars. 15. each one in-you he-advanced
in-price-of-him. 16. rooster-this-of-me he-has colors majority of-
the one-who yesterday. 17. he-walked to-him one-marketer. 18. he-
told-him you you-are crazy. 19. not-you-know nothing. 20. rooster
which we-buy yesterday not-he-is rooster he(who)-is-painted. 21. he-
is owner of-green who he-recites talk of-humans. 22. he-answered-
him grayed-that if-is-talk that one this one is-he-thinking much.

One day, he saw a rooster for sale in the market for twelve dollars. He was the size of a pigeon. He said to himself, "The market price for chickens is high. Tomorrow I will bring the rooster we have. He is a good one."

The next day he brought the rooster to the market. He thought that he would sell him if the price was high. He put him on sale,

but he didn't bring him twelve cents. The poor man became angry. He said to the market people, "What are you doing? Yesterday I saw a rooster the size of a painted pigeon, and he sold for twelve dollars. Each one of you raised his price. This rooster of mine has more colors than that one had yesterday."

One of the market people went to him and said, "You are crazy. You don't know one thing. The rooster we were buying yesterday was not a painted rooster. He was a parrot that could repeat the talk of human beings."

"If that one talks, this one thinks a lot," answered the old man.

VI. Vocabulary

This section contains words used by the informant in two or more utterances. The class of each word is indicated by the abbreviation immediately following it. The gender of nouns is given as well as the plural form. The perfect, negative and habitual forms of verbs are given when a phonemic change occurs. In some cases, the perfect and negative forms are phonemically the same as the stem, therefore, only the habitual form is given for those verbs. When all four forms are the same, only the stem is given. The following abbreviations are used:

A	Noun affix
B	Verb affix
C	Noun and Verb affix
N	Noun stem
P	Particle
V	Verb stem
sg.	singular
pl.	plural
coll.	collective
m.	masculine
f.	feminine
h.	habitual
n.	negative
p.	perfect
intr.	intransitive
tr.	transitive

a-	B2	(nominalizer)
a-	B3	(altermant of ad-)
abagug	N. (m.), ibugag (pl.), a > u	wolf
abgar	N. (m.), ibgarn (pl.), a > u	cattle merchant
abgaz	N. (m.), ibgazn (pl.), a > u	acrobat
abhat	N. (m.), ibhatn (pl.), a > u	investigator
abidar	N. (m.), ibidarn (pl.), a > u	lame man
abirah:	N. (m.), ibirah:n (pl.), a > u	town crier
abi'ausarai	N. (m.), ibi'ausarain (pl.)	
	a > u	huckster
abkal*	N. (m.), ibkaln (pl.), a > u	merchant, shopkeeper
ablad*	N. (m.), iblad*n (pl.), a > u	stone slab
ablinka	N. (m.), iblankiuin (pl.), a > u	snake
abnai	N. (m.), ibnain (pl.), a > u	builder, mason
abran	N. (m.), ibran (pl.), a > u	wildcat
abra:ni	N. (m.), ibran:/ibra:nin (pl.)	
	a > u	stranger, foreigner
abrbri	N. (m.), ibrabrin (pl.), a > u	Berber
abubu	N. (m.), ibuban (pl.), a > u	penis
abukad*	N. (m.), ibukad*n (pl.), a > u	blind man
abukal*	N. (m.), ibukal*n (pl.), a > u	jar
abulis	N. (m.), (Spanish, policia)	police
abxar	N. (m.), ibxarn (pl.), a > u	burner of incense
ad-	B3	(modal affix = subjunctive)
-ad	C.	this
adad*	N. (m.), idad*n (pl.), a > u	finger

agaiu N. (m.), iguia (pl.), a > u	head
agagn N. (m., pl.)	thunder
agarson N. (m.), agarsonat (pl.)	waiter
agdi* N. (m.), igda*/igdan* (pl.), a > u	hole
agi V. ugi (p.), ugi (n.), tagi (h.)	refuse, be unwilling
aglid: N. (m.), igldan (pl.), a > u	king
agmar: N. (m.), igmar:n (pl.), a > u	horse
agru N. (m.), igra (pl.), a > u	frog
agudi N. (m.), iguda/igudan (pl.), a > u	pile, heap
agudid* N. (m.), igudad* (pl.), a > u	bird
agug V.	be far away
agul V. ugil (p.), ugil (n.), tagul (h.)	hang
agurn N. (m., sg., pl.), a > ua	flour, meal
aguuad N. (m.), iguuad (pl.)	guide
agzar N. (m.), igzarn (pl.), a > u	butcher
agžif: N. (m.), igadžaf: (pl.), a > u	palm tree
ag̃ B5c	to us
agad* N. (m.), igad*n (pl.), a > u	goat
aganim N. (coll.), a > u	cane, reed(s)
agaras N. (m.), igarasn (pl.), a > u	street
aggumi N. (m.), iggumitn (pl.), a > u	hall (in urban areas); stable (in rural areas)
agiul N. (m.), igial (pl.), a > u	donkey
agrūm N. (m. coll.), a > u	bread
agzaiфу N. (m.), igzaiфа (pl.), a > u	tall man
aḥanu N. (m.), iḥana (pl.), a > u	room
aḥdad N. (m.), iḥdadn (pl.), a > ua	blacksmith

aḥlig N. (m.), iḥalḡan (pl.), a > u	stomach
aḥmal N. (m.), iḥmaln (pl.), a > u	porter
aḥžam N. (m.), iḥžamn (pl.), a > u	barber
aia P ¹	Oh!
aiad P ⁵	this is
aian P ⁵	that is
aidi N. (m.), idan (pl.), a > ua	dog
aiis N. (m.), isan (pl.), a > u	horse, stallion
aillig P ²	until
aiur N. (m.), aiurn (pl.), a > ua	moon, month
ak B5c	to you (m. sg.)
aka* N. (m.), ikan* (pl.), a > ua	nut, kernel
akal N. (m.), ikaln (pl.), a > ua	earth, ground, soil
akidar N. (m.), ikidarn (pl.), a > u	draft horse
akitar N. (m.), ikitarn (pl.), a > u	horse
akm B5c	to you (f. sg.)
ak*ndar N. (m.)	a measure, 100 kilograms
akr V. ukr (p.), ukr (n.), takur (h.)	steal
akrai N. (m.), ikrain (pl.), a > u	renter, landlord or tenant
aksar N. (m.), a > u	ascent, climb
ak*sari N. (m.), ik*sara (pl.), a > u	bowl, dish
akšud* N. (m.), ikšudn (pl.), a > u	stick
ak*ta ⁶ N. (m.), ik*ta ⁶ n (pl.), a > u	pirate, robber (insult)
aku*ri N. (m.), iku*ran (pl.), a > u	fig
al V. ul (p.), al (n.), tal (h.)	raise
alaḥad P ¹	that is enough
alim N. (m. coll.), a > u	hay

aman N. (m. pl.), a > ua	water
amarikan N. (m.), imarikanin (pl.), a > u	American
amɖakul N. (m.), imɖukal (pl.), a > u	friend
amɖuz: N. (m.), imɖuz:n (pl.), a > u	dump, rubbish heap
amɖar N. (m.), imɖarn (pl.), a > u	sheik
amɖarbi N. (m.), imɖarbin (pl.), a > u	Moroccan
amɖdar N. (m.), imɖdarn (pl.), a > u	student
amksa N. (m.), imksaun (pl.), a > u	shepherd
ams:mar N. (m.), ims:marn (pl.), a > u	nail
amsxar N. (m.), imsxarn (pl.), a > u	waiter
amxzni N. (m.), imxaznin (pl.), a > u	police
amz V. umz (p.), umz (n.), tamz (h.)	take, sieze
andalab N. (m.), indalabn (pl.), a > u	beggar
anil N. (m. coll.)	blueing
anu N. (m.), una (pl.), a > ua	well
anzar N. (m. coll.), a > u	rain
anz̃ar N. (m.), inz̃arn (pl.), a > u	carpenter
ar- B3	(progressive tense prefix)
ar: V.	become angry
aram N. (m.), iraman (pl.), a > u	camel
arba ^a Nc	four
arfak N. (m.), irfakn (pl.), a > u	caravan
argan N. (m.), argan: (pl.), a > u	kind of tree
argaz N. (m.), irgazn (pl.), a > u	man, husband
arkig- B4	until
artl N. (m.), irtaln (pl.)	1/2 kilogram
arud V.	be clean
aru*mi N. (m.), iru*min (pl.), a > u	Christian, European

as B5c	to him, to her
as V. us (p.), is (n.), tas (h.)	tie, bind
as: N. (m.), usan: (pl.), a > ua	day
asalamu'alaikum	Hello
as:ardun N. (m.), is:ardan (pl.), a > u	mule
asaru N. (m.), isura (pl.), a > u	ditch
asfaž N. (m.), isfažn (pl.), a > u	baker
asi V. usi (p.), usi (n.), tasi (h.)	carry
asif N. (m.), isafn (pl.), a > u	river
asimid* N. (m.)	cold
asi*ud* N. (m.), isi*ud*n (pl.), a > u	hunter, fisherman
askiu N. (m.), askiuun (pl.), a > u	horn of an animal
askrz N. (m.), iskraz (pl.), a > u	plow
aslim N. (m.), islman (pl.), a > u	fish
asman N. (m. pl.), a > ua	lightning
asn B5c	to them (m.)
asnt	to them (f.)
asnus N. (m.), isnas (pl.), a > u	young donkey
asugas N. (m.), isugasn (pl.), a > u	year
asuk: N. (m.), isu:ka (pl.)	street, road
(see tasukt:)	
ašfar N. (m.), išfarn (pl.), a > u	thief
ašib N. (m.), išuban (pl.), a > u	he who is gray, old man
ašifur N. (m.), ašifurat (pl.), a > u	chauffeur
ašk V. uški (p.), uški (n.), tašk (h.)	come
aškun P ²	because
ašuari N. (m.), išuarin (pl.), a > u	saddle bag

atai: N. (m. coll.)	tea
at*bib N. (m.), it*bibn (pl.), a > u	doctor
atbir N. (m.), itbirn (pl.), a > u	pigeon
atlbax N. (m.)	cook
at*ma N. (m.), it*man (pl.), a > u	greedy person
aturdi N. (m.)	back
aual N. (m.)	speech, talk
aui V. iwi (p.), iwi (n.), tawi (h.)	
auid	bring
auin	take
autil N. (m.), iutal (pl.), a > ua	hare, rabbit
aun B5c	to you (m. pl.)
aunt B5c	to you (f. pl.)
axbaz N. (m.), ixbazn (pl.), a > u	baker
axdam N. (m.), ixdamn (pl.), a > u	hotel employee
axdar N. (m.), ixdarn (pl.), a > u	green grocer
axraz N. (m.), ixrazn (pl.), a > u	shoemaker
azalim N. (m. coll.)	onion
iat-tazalimt	one onion
azar: N. (m. coll.)	hair
azgr N. (m.), a > u	bull
azigzau N. (m.)	green, blue
azl V. uzl (p.), uzl (n.), tazal (h.)	run
azlmad N. (m.)	left side
azru N. (m.), izran (pl.), a > u	stone
azugag N. (m.), a > u	red
azur N. (m.), izurn (pl.), a > u	roof

až V. uža (p.), užì (n.), taža (h.)	permit, let
a'aba V.	play a trick, dupe
a'ak* V.	remember
a'akaz N. (m.), i'akazn (pl.) a > u	cane
a'aluš N. (m.), i'alaš (pl.), a > u	calf
a'aram N. (m.), i'aram (pl.), a > u	pile (used as a measure)
a'askri N. (m.), i'askrim (pl.), a > u	soldier
bab N. (m.), idbab (pl.)	master, owner
baba N. (m.), idbaba (pl.)	my father, my parents
(this word is used only with the possessive pronouns.)	
babargiu N. (m.), idbabargiu (pl.)	parrot
bablfarḥ N. (m.), idbablfarḥ (pl.)	enjoyer
bablhamum N. (m.), idbablhamum (pl.)	worrier
bablhana: N. (m.), idbablhana: (pl.)	rester
babludu* N. (m.), idbabludu* (pl.)	bather
bablžuuab N. (m.), idbablžuuab (pl.)	answerer
babur* N. (m.), babu*rat (pl.)	ship
babulad* N. (m.), idbabulad* (pl.)	stone owner
baġ/bġ N. (m.), idbaġ (pl.)	paint
bain V. tbain (h.)	be clear, appear
baki*: V.	crack (intr.)
balk V.	clear away, get out
bar N. (m.), barat (pl.)	bar, cafe
bard: V. bird: (p.), bird: (n.), tbar:ad (h.)	make cool
bar:m V. bar:m (p.), barim: (n.), tbar:m (h.)	turn around

bas/ba?as	sorrow, trouble
labas dar-i	I am well
ur labas dar-i	I don't feel so good
baš P ²	in order to
baš:r V.	give good news
batata N. (m. sg. and pl.)	potato
ba'ada P ³	then, hereafter
bdu V. bda (p.), bdi (n.), tbda (h.)	begin, start
bdu* V. bda* (p.), bdi* (n.), ata*: (h.)	cut, divide
bdl V. bdl (p.), bdil (n.), tbdal (h.)	change
bġaiž N. (m.), ibġaižn (pl.)	acrobatics
bhara P ³	too much, very
bħara P ³	just now
bħat V. bħat (p.), bhait (n.), tbħat (h.)	investigate
bi V.	cut, cross
bid:/bid V. bdid/tbdad (h.)	stand
bida* P ³	always
bilag V. bilag (p.), bilig (n.), tbilag (h.)	deliver
bird V.	be cool
bitlžan N. (m. coll. and pl.)	eggplant
bku* V. bka* (p.), bki* (n.), tbka* (h.)	remain
bla P ²	without, only
bl:ati N.	slowness
blu V. bla (p.), bli (n.), tblu (h.)	be old; grow older (n.)
bnadm N. (m. coll.)	human

bnu B. bna (p.), bni (n.), bna: (h.)	build
bra N.	outside
brahim	Abraham
bri V.	rub, grind
brm V. brm (p.), brim (n.), tbram (h.)	roll, turn, twist (tr.)
bsaḥtk P ¹	enjoy it/you're welcome
bu- A1	owner of
bublad* N. (m.), idbublad* (pl.)	owner of stone
bufarḥ N. (m.), idbufarḥ (pl.)	enjoyer
bufugus N. (m. coll.)	dates
buizgar N. (m.), idbuizgar (pl.)	cattle owner
bukd* V.	be blind
bulhamum N. (m.), idbulhamum (pl.)	worrier
bulhana: N. (m.), idbulhana (pl.)	rester
buludu* N. (m.), idbuludu* (pl.)	bather
bulu*tal N. (m.), idbulu*tal (pl.)	hotel owner
bumhand N. (m.), idbumhand (pl.)	porcupine
bxar V.	burn incense
bzaf: Nc	much
bzig V.	be puffed, wet, angry
bziz N. (m. coll.)	force
bž V. bž (p.), biž (n.), tbž (h.)	crush
d C	(emphatic affix)
(with nouns a prefix; with verbs a suffix.)	
d- A4	with
-d C (see -ad)	here, now, this
dabr: V. dabr: (p.), dabir: (n.), tdabar: (h.)	look for

dada N. (m.), idada (pl.)	grandfather
(may be used only with possessive pronoun.)	
daḡ P ³	again
da*lb V. da*lb (p.), dalib (n.), tda*lab (h.)	ask for, beg
da*lm N. (m.), du*lam (pl.)	unjust person
da*man N., ida*man (pl.)	guarantor
da*mant N., ida*mantn (pl.)	guarantee
da*mr N. (m.), ida*mrn (pl.)	breast
dar A ₄	to, at
daua V. tdaua (h.)	cure
dbaḡ N. (m. coll.)	tanning fluid
d:bart N. (f.)	sore
dbliž N. (m.), dbalž (pl.)	bracelet
dbr V. dbr (p.), dbir (n.), tdbar (h.)	injure
dbr V. dbr (p.), dbir (n.), tdbar (h.)	do something without help
dḡul N. (m.)	badness
dhar V.	appear
dhar N. (m.), dhur* (pl.)	back
dhaš V. dhaš (p.), dhiš (n.), tdhaš (h.)	become dizzy, faint, nervous, frightened
dhašt N. (m.)	sickness
dhb N. (m.)	gold
dif*: N. (m.), d*raf (pl.)	guest
dl V. tdl (h.)	cover
dlaḡ N. (m.), tidlaḡin (f. pl.)	watermelon
dm V.	sink, dive

d*nu V. d*na (p.), d*ni (n.), td*nu (h.)	think
d*ni V. td*ni (h.)	be fat, thick, become fatter (h.)
dr* V. dr* (p.), dir* (n.), tar* (h.)	fall, slip
dr: V. tdr: (h.)	remain alive
drf V. drf (p.), drif (n.), tdaraf (h.)	be handsome, polite, pretty (of children)
dršt N. (f.), druž (pl.)	step
dru V. dra (p.), dri (n.), tdru (h.)	1. be deep, become deeper (h.) 2. join
druis̃ N. (m.), drauš (pl.)	poor man
drus V. tdrus (h.)	be little, be small (quantity)
du A5	under
du: V. da: (p.), di: (n.), tdu: (h.)	go
dua N.	drug, medicine
dub V. tduuab (h.)	melt (tr. and intr.)
duhur* N.	afternoon prayer
dunit N.	world
du*ru* V. du*ru* (p.), du*ri* (n.), tda*ru* (h.)	injure, harm
dux V. tduuax (h.)	become sick, dizzy
dužnbir N.	December
dzirt N. (f.), tidzirin (pl.)	island
džahad V. džahad: (p.), džahid (n.), džahad: (h.)	bet, contradict
d'a V.	pray for
f- <u>Al</u>	for, on, through
fad N.	thirst

fard V.	change
farḥ V. tfarḥ (h.)	enjoy, celebrate
fark*: V. furk*: (p.), furik*: (n.), tfarak*: (h.)	separate
farta*tu* N., idfarta*tu* (pl.)	butterfly
fars V.	slash
farž: V. furž: (p.), furizž: (n.), tfarazž (h.)	gaze at
fdah* V.	ridicule, gossip about
fġ V. fuġ (p.), faġ (n.), tfaġ (h.)	go out
fhm V. fhm (p.), fham (n.), tfham (h.)	understand
fi V. fa (p.), fi (n.), tka (h.)	give
fis: V. tfsas (h.)	be quiet
fil- Aḷ	(see f-)
fl V. tfal (h.)	leave (tr.)
flaiu N.	mint
flḥ V. tflaḥ (h.)	grow, succeed (impersonal)
fraḥ V.	(see farḥ)
frank N. (m.)	franc
fsi V.	untie, melt, open (a package)
fsr V. fsr (p.), fsir (n.), tfsar (h.)	spread out
fsir V.	spread out to dry
fsus V. tfsus (h.)	be light, soft; become lighter, softer (h.)
ftl V. ftl (p.), ftil (n.), tftal (h.)	roll (tr.)
fuks* N. (m. sg. and pl.)	bug
fuku: V. fuka: (p.), fuki: (n.), tfuku: (h.)	separate, release

fulki V.	be beautiful
ga V. ga (p.), gi (n.), ga (h.)	become, be, put on
gabl V. gabl (p.), gabil (n.), tgabl (h.)	watch
gada V.	be equal to, be straight (in comparison to)
gal: V. gul: (p.), gul: (n.), tgala: (h.)	swear
gam: V. gum: (p.), gum: (n.), gama: (h.)	be unable to
gaur V. gauar (p.), gauir (n.), gauar (h.)	sit
gdu: V. gda: (p.), gdi: (n.)	be similar to
gi- A ₄	(alternant of ġ-)
gilb V. gilb (p.), glib (n.), tgilab (h.)	turn around (tr., intr.)
gli V.	lead
gmr V. gmr (p.), gmir (n.), gumur/gumar (h.)	chase, hunt
gnu V. gna (p.), gni (n.), tgnu (h.)	mend
gr V. gr (p.), gir (n.), gar (h.)	touch
gru V. gra (p.), gri (n.), tgru (h.)	pick up
gru: V. gra: (p.), gri: (n.), tgra (h.)	be last
gudm: V. gudm: (p.), gudim: (n.), tgudam: (h.)	turn over (tr.)
guma N. (m.), uaitmatn (pl.) (may be used only with possessive pronouns)	my brother

gun V. gun (p.), gin (n.), guna (h.)	sleep
gut V.	be abundant, accomplish much
guz V.	descend
gzar V. gzar (p.), gzir (n.), tgzar (h.)	butcher
gzul V.	be small, short
ġ- A4	in, at
-ġ B5a	I
ġašu: V. ġaša: (p.), ġaši: (n.), tġaša: (h.)	become faint, get dizzy
ġaiad Nb	this which
ġaian Nb	that which
ġaili Nb	what, which
ġakudan P ³	from time to time
ġars V. ġurus (p.), ġuris (n.), kars* (h.)	slaughter
ġasa: P ³	today
ġaz V. kaz* (h.)	bury
ġfr V. ġfr (p.), ġfir (n.), tġfar (h.)	forgive
ġid P ³	here
ġikina P ³	in that way, so
ġilad P ³	now
ġilan P ³	then
ġina P ³	there
ġiud* P ³	at night
ġiuran P ³	over there
ġml V. ġml (p.), ġmil (n.), tġmal (h.)	be musty, smell mouldy
ġmu V. ġma (p.), ġmi (n.), tġmu (h.)	paint, be painted

ġnu: V. ġna: (p.), ġni: (n.), tġnu: (h.)	be rich, become richer (h.)
ġr V. ġra (p.), ġri (n.), k*ra (h.)	read, call out
ġrua N. (m.)	cold (disease)
ġruaġ V.	let, allow
ġua Nb	the one
ġuali Nb	the one who
ġui Nb	these
ġula V.	be high
ġuli V. ak*lai (h.)	climb, boil
ġuni: V.	sing
ġunšk Nc	as big as
ġur* V. tkur* (h.)	be hard, get hard (h.)
ġu*ru V. ġu*ra (p.), ġuri (n.), tġara (h.)	deceive, cheat
ġus V.	be clean
ġušt N.	August
ġušu V. ġuša (p.), ġuši (n.), tġuša (h.)	cheat, deceive
ġu*zan V.	be right, tell the truth
ġzif V. tġzif (h.)	be tall
ha P ¹	see, look, here
hadr V.	be present
hakak N.	force
hali P ³	only
han V.	bless
har V. thar (h.)	tickle
harhar V. tharhar (h.)	bray
harma N. (m.), idharma (pl.)	clown

hati P ⁵	here is
hbil V. thbil (h.)	become silly
hdn V. tahdn (h.)	be quiet
hdu V. hda (p.), hdi (n.), thda (h.)	present, give
hirdiz V.	calculate
hmim V.	worry
hnu: V. hnu: (p.), huni: (n.), thana: (h.)	rest
huul V.	be troubled
hžm V. hžm (p.), hžim (n.), thžam (h.)	invade
ḥabarsād N. (coll.)	spice
ḥakan* P ³	perhaps
ḥalil V. ḥulal (p.), hulil (n.), tḥalal (h.)	beg, request
ḥal:s V. ḥal:s (p.), halis: (n.), tḥalas: (h.)	saddle
ḥamam V.	bathe
ḥamu V. ḥama (p.), ḥami (n.), tḥamu (h.)	protect
ḥana N.	dear
ḥanu: V. ḥana: (p.), hani: (n.), tḥana: (h.)	pity
ḥarar V. ḥurur (p.), ḥurur (n.), tḥarar (h.)	free, release
ḥarg V. ḥarg (p.), ḥirg (n.), tḥrag (h.)	burn (tr. and intr.)
ḥarima N., ḥarim (pl.)	dancer
harir N. (m.)	silk
hark: V. tharak: (h.)	shake, stir, move (tr., intr.)

ħarm V. ħarm (p.), ħirm (n.), ħarm (h.)	be forbidden
ħarṣ V. ħarṣ (p.), ħirṣ (n.), thraṣ (h.)	be sharp, be intelligent
ħaru: V. ħara: (p.), ħari: (n.), tħaru: (h.)	be tough, bitter, strong, hard to convince, hard working
ħarz V. ħarz (p.), ħirz (n.), tħraz (h.)	endure
ħbu V. ħba (p.), ħbi (n.), thaba (h.)	cover
ħdad V.	forge
ħdr V.	be low
ħdu* V. ħda* (p.), ħdi* (n.), tħda* (h.)	hide
ħfu V. ħfa (p.), ħfi (n.), tħfu (h.)	be dull; become duller (h.)
ħiu V.	live
ħkm V. ħkm (p.), ħkim (n.), tħkam (h.)	judge
ħlu: V. ħla: (p.), ħli: (n.), ħla: (h.)	be permitted
ħma V. ħma (p.), ħmi (n.), tħma (h.)	be hot
ħml V. ħaml (p.), ħamil (n.), tħamal (h.)	load, carry, endure
ħas V. ħsa (p.), ħsi (n.), tħsa (h.)	feel
ħsab N. (m.), lħsabat (pl.)	amount, sum
ħsu: V. ħsa: (p.), ħsi: (n.), tħsa: (h.)	memorize
ħta P ²	also
i- A4	to, for
i- B5a	he
i B5b	me
i-n A2	(plural affix)
i-n B5a	the one who

iala: p ¹	hurry up
iala* p ¹	certainly, yes, all right, that's good
-iamt B6	imperative (f. pl.)
ian Nc (m.)	one
iat Nc (f.)	one; anything, nothing (with negative)
-iat B6	imperative (m. pl.)
ibarž N. (m.), ibaržn (pl.)	feather
ibaun N. (m.)	beans
iblis N. (m.)	devil
ibril N.	April
ibrir N.	February
ibrin N. (m.)	meal, ground corn or wheat
ibxu*sn N. (pl.)	insect
id* N. (m.), adan* (pl.)	night
idamn N. (m.)	blood
idgam p ³	yesterday
idli N. (m.)	black
ifis N. (m.)	hyena
ifr N. (m.), ifraun (pl.)	leaf
ifrurain N. (m.)	crumbs
ifrgan N.	wall of thorns, hedge
igi A5	on top of
igigil N. (m.), igugal (pl.)	orphan
igiz N. (m.), igizn (pl.)	small camel
iglgiz N. (m.), iglgizn (pl.)	beetle

iglin N.	wretch
(apparently formed from an obsolete verb stem.)	
ig:na N. (m.), idgi:na (pl.)	sky
igždi N. (m.)	tree trunk
(alternant of agzdi)	
igđ N. (m.)	ashes
igđ B4 (also ig)	if
igil N. (m.), igaln (pl.)	cloth measure = the distance from elbow to tip of middle finger
igurad* N. (m.)	shoulders
iinair N.	January
ilahi P ¹	God help me!
ilf N. (m.), ilfan (pl.)	hog
ili V. la (p.), li (n.)	be (location)
ilis N. (f.), istis (pl.)	daughter
ilm N. (m.), ilmaun (pl.)	leather
ima- P ²	and
imig: N. (m.), imign (pl.)	battle
imik Nc	a little
imil P ²	but, if
imimn N. (m.)	sweetness
iminsi N. (m.), iminsauun (pl.)	supper
imkli N. (m.), imklin (pl.)	lunch
imlal N. (m. coll.)	sand
imzdi N. (m.), imzdan (pl.)	guest, visitor
ina N. (f.)	my mother
(this word is used only with possessive pronouns.)	

ini V. na: (p.), ni: (n.), tni (h.)	say
ingbi N. (m.), ingbuun (pl.)	guest
inšala: P ¹	I hope so
ird V.	be clean
irg N. (m.), irgan (pl.)	nut shell
is- B4	(interrogative affix)
ism N. (m.)	name
itri N. (m.), itran (pl.)	star
its N. (m.)	sleep, drowsiness
iuis N. (m.), taruans (pl.)	son
iuisnsukt: N. (m.)	urchin, tramp
iuisnxali N. (m.)	cousin
iulusa N.	July
iuniuh N.	June
ixf N. (m.), ixfauun (pl.)	head, mind, self (with possessive pronoun)
ixs N. (m.), ixsan (pl.)	bone
izd P ⁵	(interrogative particle)
izi N. (m.), izan (pl.)	fly
iziki: N. (m.), izkan: (pl.)	sparrow
izimr N. (m.), izamarn (pl.)	ram
iznak* N. (m. pl.)	streets
izri N. (m.)	glance
izʹad* N. (m.)	clothing
k B5b (m. sg.)	you
k V. ka (p.), ki (n.), ka: (h.)	exist
ka*bl V. ka*bl (p.), ka*bil (n.), tkabl (h.)	look at

ka*du*: V. ka*da* (p.), ka*di*: (n.),	
tkad*: (h.)	satisfy
kafai N. (m.), kafaiat (pl.)	cafe, bar
ka*ma/k'a*ma V.	remain, stay
kar* V.	close
kanun N. (m.)	fireplace
k*da' V. tk*da' (h.)	rob, steal
kdu* V. kda* (p.), kdi* (n.), kda* (h.)	sniff, smell
kdub N. (m.)	lying
kfu N. (m.), kfin (pl.)	coffin
kid V. kad (p.), kid (n.), tkad (h.)	visit
kii Nb (m. sg.)	you
kim V. tkim (h.)	beat, hit
kimi Nb (f. sg.)	you
km1 V. km1 (p.), kmil (n.), tkmal (h.)	finish, end (tr. and intr.)
kl* V.	wait
km B5b (f. sg.)	you
km V. kma (p.), kmi (n.), tkma (h.)	smoke (tobacco)
knu V.	bend, stoop
kra Nc	some, any
krad* Nc	three
kraigat Nc	everyone
krm V. tkrm (h.)	be cold, become colder (h.)
kru V. kra (p.), kri (n.), tkru (h.)	rent to, rent from
krz V. krz (p.), kriz (n.), tkraz (h.)	cultivate
ks/kis V. ksa (p.), ksi/kis (n.),	
ksa: (h.)	take off, pull off, cut off

ksa: V.	graze
k*sd* V. k*sad* (p.), k*sad* (n.), tk*sad* (h.)	go toward, approach, intend
ksha V.	be hard
ksud* V. tksad* (h.)	fear
ksim V.	enter
ktud V. ktid (p.), ktid (n.)	remember
kudna B4	whenever
kulu Nc	each, all
kulma Nb	each one
kulsi Nb	everything, all
kun V. tkun (h.)	live
kuni Nb (m. pl.)	you
kuninti Nb (f. pl.)	you
kur* V. tkur* (h.)	be hard, become hard
kurai/akurai N. (m.)	stick
kutu: V.	comb, groom
kuz* Nc	four
la P ¹	no
labas	nothing wrong
labuda: P ⁵	it is necessary
lagar N. (m.), lagarat (pl.)	station, depot
lahl N. (f.)	wife
lah P ⁵	there is
lak*raba A5	beside
lala: N. (f.)	miss, madam

(used only with first name.)

larub Nc	three-fourths
la'afit N. (f.)	fire
lbab N. (m.), lbiban (pl.)	gate, door
lbakit N. (m.), lbakitat (pl.)	package
lbanan N. (m. coll.)	bananas
lbgar N. (m.), lbiguri (pl.)	cattle
lbḥar N. (m.), lbḥur* (pl.)	sea
lbḥat N. (m.)	investigation
lbigri N. (m. coll.)	beef
lbit N. (f.), lbiut (pl.)	room
lbitludux	wash room
lbni/libni N. (m. sg. and pl.)	building
lbrkuk* N. (m. coll.)	plums
lbsis N. (m.)	cereal
lboxur* N. (m.)	incense
lbzar N. (m. coll.)	pepper
lazm P ⁵	it is necessary
ldi V.	pull
lfakit N. (m. coll.)	fruit, nuts
lfarḥ N. (m.)	pleasure
lfdur* N. (m.)	breakfast
lfilḥ N. (m.)	success
lflaik N. (m.), lflukt (pl.)	boat
lflus N. (m.)	money
lgaru*/lgaru N. (m. sg. and pl.)	cigarette
lgira: N. (m.)	battle field
lguag V. tilguag (h.)	be soft, become softer (h.)

lgudam N. (m.)	front
lgurnt N. (f.), lgurnat (pl.)	slaughter house
lġarb N.	Morocco
lġnmi N. (m. sg. and pl.)	lamb
lġuat N. (f.), laġuat (pl.)	noise
lġuŝ N.	deception, fraud
lhar N. (m.)	tickling
lhna: N. (m.)	peace, rest
lhad: N.	Sunday
lhal N. (m.), laħual (pl.)	weather, atmosphere
lħalua N. (m.), lħaluat (pl.)	cake
lħamam N.	bath
lħamil N. (m.), lħmul (pl.)	load
lħana: N. (m.)	henna
lħams/lħains N. (m. coll.)	chickpeas
lħarf N. (m.), lħu*ruf* (pl.)	letter of the alphabet
lħažt N. (f.), lħuaiz (pl.)	thing, clothing (pl.)
lħazimt N. (f.), lħazum (m. pl.)	bunch
lħlib N. (m.)	milk
lħma N. (m.)	heat
lħmuat (pl.)	excessive heat
lħrir N. (m.)	silk
lħska N. (f.), lħskat	lamp
lħuŝ*/luħuŝ* N. (m.), idluħuŝ* (pl.)	stable
li: Nb	who (relative)
liġ Bł	when
liiali N. (f.)	nights

likksu N.	kuskus (a food)
limari N. (f.), limaraiat (pl.)	mirror
litru N. (m.), litruat (pl.)	litre
lka*hua N. (m.)	coffee, cafe, bar, gratuity
lkal*b N. (m.)	heart
lkamun N. (m.), lkamunat (pl.)	truck
lkard* N. (m.)	measure used for grain, approximately one gallon
lkarit N. (m.)	paper
lk*bilt N. (m. pl.)	people, tribes
lk*lim N. (m.), lk*lum (pl.)	pen
lkm V. tlkm (h.)	arrive, reach
lkra N. (m.)	rent
lktab N. (m.), lktub (pl.)	book
lktan N. (m.)	cotton cloth
lkursi N. (m.)	bench, chair
lku*uad N. (m.)	pander (used in insults)
lmaida N. (f.), lmiadi (pl.)	table
lmakla N.	meals, food
lmaxzin N. (m.)	government
lmdad N. (m.)	ink
lmdint N. (f.)	city
lmitru N. (m.), lmitruat (pl.)	meter
lmkib N. (m.)	bowl
lmnun/limnun N. (m.)	melon
lmrkub N. (m.)	fare
lmsiiḥ N. (m.)	clown, minstrel

lmuda N. (f.)	occasion
lmugib N.	Morocco
lmus N. (m.)	knife
lm ^ʿ alim N. (m.)	engineer
ls V. lsa (p.), lsi (n.), tls (h.)	dress
ltnin N.	Monday
lubia N. (m. coll.)	string beans
lu*du* N. (m.)	hot water for washing before prayer, act of washing before prayer
luḥ V. tluah (h.)	throw away, lay an egg
luhr V.	throw out
lukan P ²	then
lukid* N. (m.)	matches
lukil N. (m.)	lawyer
lukt N. (f.)	time, hour
lurak* N. (m. pl.)	leaves
lu*tal N. (m.)	hotel
luuali N. (m.), luliia (pl.)	prophet
lxamit N. (f.), lxamiat (pl.)	curtain
lxar N. (m.)	material, goods
lxatr N. (m.)	desire
lxmis N.	Thursday
lxul*uk* N. (m.)	person
lxunšt N. (f.)	bag
lzaub N. (m.)	answer
lzar ^ʿ a	Friday

lzdid N. (m.), lzuad (pl.)	goodness
lzib N. (m.), lziub (pl.)	pocket
lzm'at N. (m. sg. and pl.)	group
lzuuab N. (m.)	answer
l'ab V. l'ab (p.), l'ib (n.), tl'ab (h.)	play (games, tricks)
l'abrt: N. (m.)	a measure for grain equal to 4 lkard*
l'aid N. (m.), l'aiad (pl.)	holiday
l'akl* N. (m.), l'aukul* (pl.)	mind
l'alu N. (m.)	height
l'am N. (m.), 'am (pl.)	year
l'arba N.	Wednesday
l'ark* N. (m.), l'aruk* (pl.)	vein, root
l'as N. (m.)	hunger
l'askar N. (m.), l'askr (pl.)	soldier
l'auaisir N. (m.)	holiday season
l'ažib N. (m.), 'ažub (pl.)	wonder, miracle
ma C	what
	nothing, anything (with negative)
mag V.	fight
maiuh N.	May
makar*/magr* V.	meet
makl* V.	meet
malḥ V. tmalḥ (h.)	be salty
man Nb	who, what
manaku P ⁴	when
mani P ⁴	where

manik P ⁴	how
manza P ⁵	where is, where are
marḥba P ¹	welcome
mars N.	March
masasarkan* V.	heat
mata: P ⁴	which one
matla V.	wait for a long time
matln V.	delay, be late, take a long time
matnit N.	good things
ma'ala/m'ala B ₁	if
ma'ana P ⁴	why
ma'da P ²	without, except
mbarak P ¹	happiness
mdi V.	reach over
mdl* V.	be buried
mḡi V. tmḡi (h.)	sprout, plant
mḡur* V. tmḡur*	grow bigger
mia Nc idmia (pl.)	one hundred
midn N. (m.)	people
mim V. timim (h.)	be sweet
mimsaḥ N.	evening
minbad P ³	after
minšċ P ⁴	how much
mit Mb	whose
mksa: V.	tend sheep, cattle
mkur* V.	be large

ml V. mal: (p.), mil: (n.), mal (h.)	direct, conduct, show
mlih P ¹	that's fine
mlul V. tmlul (h.)	be white, grow whiter (h.)
mnau P ⁴	how many
mrau Nc	ten
mriam	Miriam
msad V.	be very sharp
mskin N. (m.), msakin (pl.)	poor fellow
mta V.	die
mun V. muna (h.)	accompany
musa: V. musa: (p.), musi: (n.), tmusu: (h.)	move, tremble
mut V.	die
mzi V. tmzi (h.)	be small, grow smaller
n- A3	(possessive prefix)
n- B̄a	we
-n B̄a	they
-n C	there, that, then
nafl V. nufi (p.), nufil (n.), nufal (h.)	be crazy
anafal N. (m.)	madman
namus N. (m. sg. and pl.)	mosquito
na'am P ¹	yes
ndadana P ³	last year
ndu V. nda: (p.), ndi: (n.), tndu (h.)	be wet
ngi V.	run, wander, rush
nḡ V. nka (h.)	kill
ngat A5	between

nišn V. nišan (p.), nišin (n.), tuišan (h.)	be straight, be honest
nki Nb	I
nkr V.	stand up
-nt B5a (f.)	they
nta Nb	he
ntat Nb	she
nua V.	be ripe, cook
nukni Nb	we
nuknti Nb	we (f.)
nukurt* N.	silver
nus Nc	one-half
nuua V.	wish
nuuambir N.	November
nz V. nza (h.)	be for sale
nžm V.	escape
n'ala V.	curse
n'ana N.	mint
ra- B3	will, shall
rab'a Nc	one-fourth
rar V.	return (tr.)
rastarant N. (m.), rastarantat (pl.)	cafe, bar
rbḥ V. rbaḥ (p.), rbiḥ (n.), trbaḥ (h.)	gain, earn, succeed
rb'a Nc	four
rbi: N.	God
rbi'a N. (m.)	grass
rdu* V. rda* (p.), rdi* (n.), trdu* (h.)	accept

rgig V.	tremble
rgm V. rgam (p.), rgim (n.), trgam (h.)	ridicule
rġ V. rġa (p.), rġi (n.), rka*: (h.)	become hot
ri V. ra (p.), ri (n.), tri (h.)	wish, want
rial N. (m. coll.)	money, currency, dollars
riḥ V.	give off an odor
riḥ: N. (m.), lariaḥ (pl.)	wind
riḥt N. (f.)	odor
riš N. (m. pl.)	feathers
rks* V. rkas (p.), rkis (n.), trkas* (h.)	dance
rmi V.	be tired
rtl* N. (m.), rtal* (pl.)	1/2 kilo
ruah V.	let, permit
ruu V. rua (p.), rui (n.), truua (h.)	be beautiful
ruz* N. (m. coll.)	rice
rz V. arz (p.), irz (n.), trz (h.)	break
rza N. (f.), rzu (pl.)	turban
ržū V. ržā (p.), ržī (n.), tržā (h.)	hope
rʿad V. trʿad (h.)	thunder
s- A4	to, toward
sa: Nc	seven
safr V.	sail
sa*fr V.	travel
sag/sġ V. sag (p.), sig (n.), tsag (h.)	buy
sak*sa V.	ask
sa*if N. (m.)	summer
saḥt p ³	right

sa*ht N. (f.)	health
samḥ V.	forgive
saruat V.	thresh
sat N. (f.)	time, hour
saua1 V. sau1 (p.), sau1il (n.), tsaua1 (h.)	speak
sbah N. (m.)	morning
sbah P ³	tomorrow
s*bah V.	wake up
sbain V.	make clear
sbḡ V.	paint
sbid/zbid V.	make stand
sbr V. sbr (p.), sbir (n.), s:bar (h.)	move slowly
sdis Nc	six
sdrus/zdrus V.	reduce
sfar V.	be yellow
sfau V. sfau (p.), sfai (n.), tsfau (h.)	be bright
sfinZ N. (m.)	doughnuts
sfis: V.	calm, soothe, quiet
sfsi V.	melt (tr.)
sfud* V.	wipe, sweep
sgudi/zgudi V.	pile
ḡara N. (m.), ḡari (pl.)	desert
ḡdar V.	teach
ḡur* N.	breakfast before sunrise
	during the month of fasting
si- Al	with, by means of

sibt N.	Saturday
sidi p ¹ (formal)	sir, mister
si = familiar form	
sigl V. tsigil (h.)	look for
simana N. (m.), simanat (pl.)	week
simgi V.	plant
simus Nc	five
sin Nc	two
sin ^{at} N. (f.)	occupation, profession
sird V.	wash
sirs V.	place
sirur N. (m.)	shoeshine
skr V. skr (p.), skir (n.), skar (h.)	do
sksud* V. sksad* (h.)	frighten
skus V. tskus (h.)	sit
sl V. sla (p.), sli (n.), sla: (h.)	hear
sli ^{at} N. (f.)	merchandise
slkm V.	take to a destination
sm N. (m.)	poison
smaḥ N. (m.)	ink made from burnt wool
smak*1 V.	look for
smid* V.	be cold
smun V.	collect
sn V. san (p.), sin (n.), san: (h.)	know, understand
sngi V.	turn on the water
sraf V. tsraf (h.)	spend
srbḥ V. srbaḥ (p.), srbiḥ (n.), sr:baḥ (h.)	reward

srdu* V.	cause to accept
srf N. (m.)	change (money)
srir N. (m.)	bed
sržm N. (m.), sražm (pl.)	window
su V. sua (p.), sui (n.), sua: (h.)	drink
sudu V. suda (p.), sudi (n.), tsuda (h.)	ride (on a horse)
suf V.	blow
sufs V. sufus (h.)	spit
suguan V.	be black
suguli V.	boil (tr.)
suk* N. (m.)	market
sukuar/sukuur* N. (m.)	sugar
sul- B ₄	never
sus V. susa (h.)	shake (tr.)
suua V.	cost
sxsar V.	spoil
s'adl V.	make good, repair
ša V. ša (p.), ši (n.), šta (h.)	eat
šalada N.	lettuce
šatr V.	be wise
ša'ar N. (m.)	hair
šbikt N. (f.), šbikat (pl.)	net
šfr V. šfr (p.), šfir (n.), šfar (h.)	steal
šgl V. šgal (h.)	work, be busy
šhar N. (m.)	moon, month
šib V.	age, become gray
šimandifir N. (m.)	train

ška* V. tška* (h.)	be hard, cruel, dangerous, difficult
škal N. (m.), škaln (pl.)	hobble
škr V.	thank
škšm V.	take in
šlhait N.	Shilha
šm'a N. (m.)	candle
šrk V. šrk (p.), širk (n.), širk: (h.)	share
šul* N. (m.)	job
šutambrir N.	September
šuur V.	slow
šžurt N. (f.), šžari (pl.)	tree
t- B5a	she
t B5b	him
t: B5b	her
tabrat N. (f.), tibratin (pl.)	letter, correspondence
tadwait N. (f.), taduaiin (pl.)	pot, inkwell
taf V.	have
tafirast N. (f. coll.)	pear
tafukt N. (f.)	sun
tafulust N. (f.), tifulusin (pl.)	hen
tafunast N. (f.), tifunasin (pl.)	cow
tafruxt N. (f.), tifruxan (pl.)	girl
tagana N. (f.)	sleep
tagant N. (f.), taganin (pl.)	forest
tagdift N. (f.), tigdifin (pl.)	carpet, mat
tagdurt N. (f.), tigdurin (pl.)	large earthenware pot
taglait N. (f.), tiglai (pl.)	egg

taglit: N. (f.), tiglatin (pl.)	queen
tagunžauit N. (f.), tigunžauin (pl.) (from aḡunža - ladle)	spoon
tagut N. (f.)	fog
tagžif N. (f.), tigžaf (pl.)	small palm tree
tagat*/tagat: N. (f.), tigatn (pl.)	goat
tagiult N. (f.), tigial (pl.)	donkey
tagrut* N. (f.), tigurad* (pl.)	shoulder
tahanut N. (f.), tiḡuna (pl.)	store
taiuga N. (f. sg. and pl.)	pair
taitmatin N. (f. pl.)	sisters
taka* N. (f.)	powder
takat: N. (f.), takatin (pl.)	family, fireplace
takfait N. (f.)	milk
taksi N. (m.), taksiat (pl.)	taxi
tak*sart N. (f.), tik*sarin (pl.)	hill
tak*ta'at N. (f.)	robbery
takurt* N. (f.)	noise
ta*lib N. (m.)	teacher
taluh̄t N. (f.), tiluḡa (pl.)	blackboard
talunt N. (f.), tilunin (pl.)	strainer
tam Nc	eight
taman N. (m.)	price
tamart N. (f.), timarin (pl.)	beard
tamazirt N. (f.), timizar (pl.)	countryside
tamdakult N. (f.), timdukal (pl.)	friend
tamḡart N. (f.), timḡarin (pl.)	woman, wife

tamubil N. (f.), tamubilat (pl.)	bus (in rural areas)
tanut N. (f.), tiuna (pl.)	small well
tanutfi N. (f.), tinutfa (pl.)	cistern
tanžart N. (f.)	carpentry
tarf A5	near
tarialt N. (f. sg.)	dollar, bill
tarikt N. (f.), tarikin (pl.)	saddle
taruans	(see iuis)
tas* V.	sleep
tasar:dunt N. (f.), tisar:dan (pl.)	mule
tasksut N. (f.), tisksan (pl.)	pot
tasmi N. (f.), tasmiuin (pl.)	needle
tasraft N. (f.), tisrafin (pl.)	granary
tasrgult N. (f.), tisrgal (pl.)	lid
tašlhait	Shilha
tasukt: N. tisuka (pl.)	street
tašbnit N. (f.), tišbna (pl.)	handkerchief
taškart N. (f.), tiškarin (pl.)	small bag
tatbir N. (f.), tibirin (pl.)	dove
tatsa* N. (f.)	laughing
tauarukt* N. (f.), luuarukt* (m. pl.)	leaf
tauka N. (f. sg. and pl.)	worm
taxdamt N. (f.), taxdim (pl.)	cleaning woman
taxsait N. (f.), tixsai (pl.)	squash
tazalit N. (f.), tizula (pl.)	prayer
tazant N. (f.), tazanin (pl.)	child
tazlaft N. (f.), tazlafin (pl.)	bowl

tažbanit N. (f.), tažbanin (pl.)	bowl
tažžin N. (f.), tažžin (pl.)	frying pan
tažir/tažr N. (m.), tatažir (pl.)	wealthy man, merchant
ta'am N. (m.), ta'am (pl.)	food, grain
ta'ma A5	near, beside
tbla N. (f.), tblat (pl.)	table
tfaḥ N. (f. coll.)	apples
tfar V.	follow, pursue
minšk aiitfart - how much do you follow me = what do I owe you	
tgalagal N. (f.)	echo, one who talks too much
tgausa: N. (f.), tgausi:uin (pl.)	thing
t:ha V.	push
tibḥart N. (f.), tibḥarin (pl.)	garden
tidi N. (f.), tadiuin (pl.)	height, height of a man (used as a unit of measure)
tifaut N. (f.), tifauin	light
tifii N. (f.)	meat
tifliut N. (f.), tifliuin (pl.)	door, gate
tigmi N. (f.), tigma (pl.)	house
tigždit N. (f.), tigždin (pl.)	small log, beam, rafter
tigri N. (f.)	reading
tigzi N. (f.)	length, height
tiiara N. (f.), tiiarat (pl.)	airplane
tiini N. (f. coll.)	dates
tili N. (f.), tatn (pl.)	ewe
timkilt N. (f.), timkiltin (pl.)	bowl, first dish served at a meal

timzgida N. (f.), timzgadiuin (pl.)	mosque, school
tinglist N. (f.)	English (language)
tinuit N. (f.)	cooking
tira N. (f.)	printing
tirgi N. (f.), tirgiuin (pl.)	fever
tirkmin N. (f. coll.)	turnips
tisnt N. (f.)	salt
tišišť N. (f.), tišišň (pl.)	tray
tit N. (f.), aln (f. pl.)	eye
tiuutšĭ N. (f.)	evening
tizuarmin N. (f.)	midday prayer
tizuit N. (f.), tizua (pl.)	bee
tižĭuit N. (f.), ižauan (m. pl.)	hurricane
tižľuba N. (f.)	robes
tk*bilt N. (f.), lk*bil (pl.)	tribe
tklit N. (f.), tĭkal (pl.)	time, occasion
tlata N.	Tuesday
tlbanant N. (f.)	banana
tlž* N. (m.)	snow
t-m B5a	you (m. pl.)
t-mt B5a	you (f. pl.)
t*ma N.	greed
tmzin N. (f.)	barley
tn B5b	them (m.)
tnt B5b	them (f.)
tnak*bit N. (f.)	hole
tniltit N. (f. coll.)	lentils

tsa Nc	nine
tsa* V. atsa* (h.)	laugh
t-t B5a	you (sg.)
tub N. (m.)	cloth
tubis N. (m.), tubisad (pl.)	bus
tudit N. (f.)	butter
turigza N. (m.)	strong man, hero
tusu* V.	cough
tusut N. (f.)	cough
tur*žut* N. (f.)	odor, stench
tuzut N. (f.)	something good
tu*žut* N. (f.)	stench
ua- A6	(vocative affix)
uala/uaila P ²	nor, neither, and not
ualakin P ²	but
ualu Nb	nothing
uaxa P ¹	yes, certainly, all right
udad N. (m.), udadn (pl.)	antelope
udai N. (m.)	Jewish man
udm N. (m.), udmaun (pl.)	face
uf V. tuf (h.)	blow, breathe
ufal: N. (m.), ufal:n (pl.)	rake
ug V. uga (p.), ugi (n.), tuga (h.)	shine
ug V. ug (p.), ig (n.), tuga (h.)	wash
ug:d V. tugad: (h.)	be frightened
ugz V.	get down, get off
uhu P ¹	no

ukan P ²	hardly, only
uktubr N.	October
ula P ²	and
ultma N. (f.), taitmatn (pl.) (always used with possessive pronoun)	my sister
umlil N. (m.)	whiteness
unsad N. (m.)	weaving
ur- B ₄	not
urig V. urag (p.), urig (n.), tiurig (h.)	be green, be yellow
usman N. (m.)	lightning
usmid* N.	cold
uš:n N. (m.); uša:nin (pl.)	wolf, jackal
ut V. tkat (h.)	strike, hit
utaš V. tutaš (h.)	kneel
uuri V.	return (intr.)
uxs N. (m.), uxsn (pl.)	tooth
uxšn V. uxšan (p.), uxšin (n.), tuxšn (h.)	be disagreeable
uzn V. uzn (p.), uzin (n.), tuzan (h.)	weigh
uzr V.	sink, go down
užad V. užid (p.), užid (n.), tužad (h.)	prepare
xa V.	leave
xalas: V. xulus: (p.), xulis: (n.), txalas: (h.)	pay for
xalat: V. xulut: (p.), xulit: (n.), txalat: (h.)	mix, mingle

xali N. (m.), idxali (pl.)	maternal uncle
xalti N. (f.), idxalti (pl.)	maternal aunt
xamim V. txamam (h.)	consider
xamsin Nc	fifty
xatr N. (m.)	wish, pleasure, desire
xa:zu N. (m. coll.)	carrots
xdm V. xdam (p.), xdim (n.), txdam (h.)	work
xsr V. xsar (p.), xsir (n.), txsar (h.)	spoil, rot
xsu:/xsu*: V. xsa (p.), xsi (n.), txsa (h.)	be missing, be lacking
xta Nb (f.)	the one
xtaian Nb (m.)	no one
xtali: Nb (f.)	she who
xuu V. xua (p.), xui (n.), txua (h.)	be empty, deserted
zdaḡ V.	live, reside
zdar V. zdar (p.), zdir (n.), dzdar (h.)	be able, can
zdu V. zda (p.), zdi (n.), zda: (h.)	grind
zgr V. zgar (p.), zgir (n.), dzgar (h.)	cause to touch, pass by, walk on
zḡur V. zuḡur (h.)	smear
zift N. (m.)	tar, pitch
zigz V.	walk
zigziu V. zigzau (p.), sigziu (n.), zigzau (h.)	be green
zik P ³	early
zit N. (m.)	oil

zitun N. (f. pl.)	objects
zlg V. zlg (p.), zlig (n.), dzlig (h.)	slip
zlzit N. (f.)	earthquake
zlm V. zlm (p.), zlim (n.), dzlim (h.)	peel, pare
znz V. znza (p.), znzi (n.), zinza (h.)	sell
zr* V. zra* (p.), zri (n.) zra*: (h.)	see
zrb V. zrb (p.), zirb (n.), dzrab (h.)	hurry, hasten
zri V. zra (p.), zri (n.), zrai (h.)	pass by
zri: V. zra: (p.), zri: (n.), zrai: (h.)	cause to pass, pass with
zug V. tzug (h.)	milk
zuguig V. zuguag (p.), zuguig (n.), tzuig (h.)	be red, become red (h.)
zugz V.	bring down
zund P ²	like, as
zur V.	be thick
zuur V. zuar (p.), zuir (n.), zgur (h.)	precede, guide
izuarn - the first	
žā V.	stink
žarḥt N. (f.), žarḥat (pl.)	injury
žaru V. žuru (p.), žuri (n.), džura (h.)	pull, drag
žaub V.	answer
žbid V. džbad (h.)	pull, extract
žda N. (f.), idžda (pl.)	grandmother
žha N. (m.)	man's name (used in many folk stories)
ži V.	be well, strong, fat, rich

žiži V.	cure
žlbana N. (m. coll.)	green peas
žma'ʉ V. žma'a (p.), žma'i (n.), džma' (h.)	gather, collect, congregate
žnžm V. žnžm (p.), žnžim (n.), žnžam (h.)	save, rescue
žrḥ V. žrḥ (p.), žirḥ (n.), džarḥ (h.)	injure
žru V. žra (p.), žri (n.), džra (h.)	take place, happen
žu Bḥ	never
žua' N. (m.)	hunger
žužad: V.	prepare
'abri V.	weigh
'adl V.	be good
'adl: V. t'adl: (h.)	improve
'afak P ^l	please
'afu V. 'afa (p.), 'afi (n.), t'afa (h.)	forgive
'alah P ^l	why
'alaš N. (m.), i'alaš (pl.) (also a'alaš)	calf
'alu V. 'ala (p.), 'ali (n.), t'alu (h.)	be high, become higher (h.)
'am N. (m.)	year
'ami N. (m.), id'ami (pl.)	my uncle (paternal)
'amr V. 'amr/'amar (p.), 'amir (n.), 'amar: (h.)	fill, become full
'amti N. (f.), id'amti (pl.)	my aunt (paternal)
'amu V. 'ama (p.), 'ami (n.), t'amu (h.)	be blind

'an'a N. (m.)	mint
'ard V.	invite
'ašrin Nc	twenty
'atar N. (m.), i'atarn (pl.)	medicine man, druggist
'auud V. t'auud (h.)	repeat, recite
'auun V.	help
'auž V.	be crooked
'ažub V.	be pleasant, be wonderful

(with negative - be unhappy, disturbed)