

HALQ'EMÉYLEM POSSESSIVES¹

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0. INTRODUCTION

This paper has two main goals: one descriptive the other theoretical. This is reflected in how the paper is structured. Every section is divided into an empirical and a theoretical part. The reader who is mainly interested in the descriptive observations can skim through the theoretical parts.

0.1. Empirical Focus.

Empirically, this paper focuses on the possessive construction in (Stó:lō) Upriver Halq'eméylem. I will give a detailed overview of a variety of different data, some of which have not been discussed in the literature.

0.2. Theoretical Focus.

On basis of the possessive construction in Halq'eméylem, I will show that the possessive affixes occupy functional heads and that some of the attested affixation is a result of syntactic head-movement. This means that, from a theoretical perspective, this paper is a contribution to the debate concerning the locus of word-formation.

Within generative Grammar there has been a long lasting debate about whether or not complex words are formed in the syntactic component. There are two extreme positions that characterize this debate.

On the one hand there is the strictly LEXICALIST approach in which (morphologically) complex words are syntactic atoms. In other words, complex words are not derived in the syntax, nor is the internal structure of words visible within the syntactic component.

On the other hand there is the view that at least some instances of complex words are derived in the syntactic component; and therefore their "internal" structure is syntactically visible. This view can be dubbed the ANTI-LEXICALIST or SYNTACTIC approach towards word-formation. In this approach, affixes commonly occupy syntactic positions (for example functional heads). Consequently, much affixation is treated as a result of syntactic head-movement.

The debate as to where word formation takes place is obviously of considerably significance, for at least two reasons. First, an answer to this question can give insights into how the language faculty is organized. Second, it has consequences for the theory of syntax proper. If all word-formation is lexical, then functional projections in the syntactic tree become obsolete (cf. Williams 1996). Thus, a solution to the above debate can potentially be helpful in determining the syntactic structure of natural languages.

This paper demonstrates that the intricate pattern of the Halq'eméylem possessive construction receives a straightforward and elegant solution under the assumption that the

¹ Unless otherwise indicated, the Halq'eméylem data were provided by Rosaleen George and Elisabeth Herrling. Furthermore Shirley Norris was of great help in eliciting them. I am grateful to all of them for sharing their knowledge. I also wish to thank Donna Gerds and Henry Davis for helpful comments as well as Strang Burton for his help with the fieldwork and developing the analysis. The data belongs to the Stó:lō Nation, Language Program (Stó:lō Shxwelf). The research on this paper was funded by the Academy of Science Austria (APART 435).

possessive affixes occupy functional heads. Consequently, Halq'eméylem provides crucial evidence for the syntactic and against the lexicalist view on word-formation.² Therefore the paper also provides evidence for the existence of functional projections at least in the nominal domain.

1. HALQ'EMÉYLEM POSSESSIVES I: 1ST AND 2ND SINGULAR

Given the complexity of the possessive paradigm in Halq'eméylem I will treat different forms in different sections. I will start with the 1st and 2nd person singular forms.

1.1. Empirical observations.

In (1), I have listed examples of regular DPs as well as 1st and 2nd singular possessive phrases³:

(1)	REGULAR DP	1 ST SG	2 ND SG
	te má:l - 'the father'	tel má:l - 'my father'	te' má:l - 'your father'
	te kapú: - 'the coat'	tel kapú: - 'my coat'	te' kapú: - 'your coat'
	te pú:s - 'the cat'	tel pú:s - 'my cat'	te' pú:s - 'your cat'

As Galloway (1993) observes, the 1st and 2nd singular endings "attach to the word before [the possessed noun]" (Galloway 1993: 179)⁴. This means that whatever word precedes the possessed noun, it will carry the possessive endings. Below I will show a variety of different data that exemplify this observation.

1.1.1. Possessive endings are attached to different determiners

In many cases a noun is preceded by a determiner. Halq'eméylem has a variety of different determiners. They vary along the dimensions NUMBER, GENDER and REMOTENESS (cf. Galloway 1993).

Crucially, possessive constructions allow for all the attested determiners and consequently, the possessive ending can attach to any of them (cf. Galloway 1993). In the examples below, the possessive endings attach to the plural determiner (*ye*) (2) and the feminine determiner (*the*) (3), respectively:

² Note that Chomsky's (1995) *Minimalist Program* shares with the lexicalist approach the assumption that fully inflected words are inserted into the syntax. However, the affixes are associated with (but do not occupy) syntactic positions (i.e. functional heads). These syntactic positions contain abstract features, against which the "word-internal" affixes (associated with the same features) have to be checked. The latter feature of this program is obviously reminiscent of the anti-lexicalist approach, in that it denies the strict atomicity of complex words. For reasons of space, I will not go into a detailed discussion of a possible minimalist analysis of the Halq'eméylem possessive. Given its lexicalist stance on where word-formation itself takes place, I take it that the present paper is also a case in point against this particular assumption of the Minimalist Program.

³ Throughout the paper, the Halq'eméylem data are presented in the Halq'eméylem writing system. The key to this orthography as well as a list of abbreviations is given in an appendix to this paper. I would like to thank Shirley Norris for her help in spelling the data.

⁴ Note that the possessive endings in other Salish languages are usually described as being prefixed onto the noun (cf. Davis 1997). We will see evidence that this is not the correct description for the Halq'eméylem facts (cf. section 1.1.2).

- (2)a. iwólem **ye-l** pelúps
playing det.pl-1sg.poss cat.pl
 'My cats are playing.'
 b. iwólem **ye-** pelúps
playing det.pl-2sg.poss cat.pl
 'Your cats are playing.'
- (3)a. i:tet **the-l** sísele
sleeping det.fem-1sg.poss grandmother
 'My grandmother is sleeping.'
 b. i:tet **the-** sísele
sleeping det.fem-2sg.poss grandmother
 'Your grandmother is sleeping.'

1.1.2. Adjectives in possessive constructions

Given Galloway's (1993) description of possessive endings mentioned above, we expect that they can attach to a word other than a determiner, as long as it linearly precedes the possessed noun. This is indeed the case. If an adjective precedes the noun, the possessive ending can be attached to the adjective:

- (4)a. te **ts'q'éyɣ-el** pú:s
det black-1sg.poss cat
 'my black cat'
 b. te **ts'q'éyɣ-e-** pú:s
det black-2sg.poss cat
 'your black cat'
- (5)a. te **híkw-el** swáqeth
det big-1sg.poss husband
 'my big husband'
 b. te **híkw-e-** swáqeth
det big-2sg.poss husband
 'your big husband'

However, there are also other possibilities, which are not expected under the assumption that the possessive affix simply attaches to the preceding word.

First, the possessive affix can also attach to the determiner, even if an adjective intervenes between the possessed noun and the determiner⁵:

- (6)a. **te-l** ts'q'éyɣ pú:s
det-1sg.poss black cat
 'my black cat'
 b. **te-** ts'q'éyɣ pú:s
det-2sg.poss black cat
 'your black cat'
- (7)a. **te-l** híkw swáqeth
det-1sg.poss big husband
 'my big husband'
 b. **te-** híkw swáqeth
det-2sg.poss big husband
 'your big husband'

Secondly, if an adjective is present, the possessive affix can appear twice: once on the determiner and once on the adjective⁶:

⁵ Note that this phenomenon clearly indicates that the Halq'eméylem possessive endings cannot be described as being prefixed onto the noun (cf. Fn.4)

- (8)a. **te-l** ts'q'éyɣ-el pú:s
det-1sg.poss black-1sg.poss cat
 'my black cat'
 b. **te-** ts'q'éyɣ-e- pú:s
det-2sg.poss black-2sg.poss cat
 'your black cat'
- (9)a. **te-l** híkw-el swáqeth
det-1sg.poss big-1sg.poss husband
 'my big husband'
 b. **te-** híkw-e- swáqeth
det-2sg.poss big-2sg.poss husband
 'your big husband'

Now consider what happens if two adjectives are present in a possessive construction. The possessive ending can either occur on the determiner (10) or on the first adjective (11), or on the second adjective (12)

- (10) **te-l** axwí:l tsmíth' kyó
det-1sg.poss small blue car
 'my small blue car'
 (11) te **axwí:l-el** tsmíth' kyó
det small-1sg.poss blue car
 'my small blue car'
 (12) te axwí:l **tsmíth'-el** kyó
det small blue-1sg.poss car
 'my small blue car'

However, there is one possibility that is not acceptable, namely, the possessive ending cannot occur simultaneously on both adjectives:

- (13) *te **axwí:l-el** **tsmíth'-el** kyó
det small-1sg.poss blue-1sg.poss car
 'my small blue car'

1.1.3. Possessives without determiners

Finally, there are environments where nothing at all precedes the possessed noun. In this case, the possessive ending can obviously not attach to the preceding element. However, this pattern is still attested. There are two environments where the determiner can be dropped, which I will discuss in turn.

1.1.3.1. Predicate position

It is a well-known fact about Salish languages that nouns in predicate position are not preceded by a determiner:

- (14) mámele ye i:mex
man det walking
 'That's the children that's walking.'

⁶ According to Leslie (1979) this is the standard pattern in the closely related Cowichan dialect.

(15) el mámele ye láyem
1sg.poss. child det laughing
'My children are laughing.'

1.1.3.2. Coordination

(16) a. **the** **shá:lí** qas te-léwe ye í:mex
 det woman and det-2sg.Indep det.pl walking
 ‘The woman and you are walking.’
 b. **swíyeqe** qas te-á:lthe í:mex
 man and det-1sg.Indep walking
 ‘The man and I are walking.’

Crucially, the same phenomenon can be found with coordinated possessive DPs as shown in the following examples:

- (17) a. **te-l** **pú:s** qas **te-l** swáqeth iwólem
det-1sg.poss *cat* *and* *det-1sg.poss* *husband* *playing*
 'My cat and my husband are playing.'
 b. **el** **pú:s** qas **te-l** swáqeth iwólem
1sg.poss *cat* *and* *det-1sg.poss* *husband* *playing*
 'My cat and my husband are playing.'

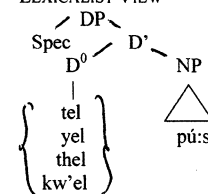
1.2. Theoretical consequences.

⁷ Sentences with this kind of SVO order are found quite commonly in Halq'eméylem.

- Any adequate analysis of the possessive has to be able to account for the properties in (18). In what follows I will compare the two approaches to word-formation introduced in the introduction, i.e. the lexicalist and the syntactic view.

1.2.1. The morphological complexity of the determiner.

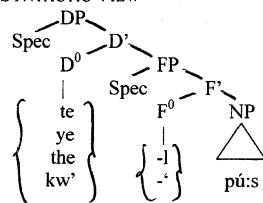
(19) LEXICALIST VIEW



⁸ Of course, one can hold the view that there is a morphological component, which is responsible for suffixation of the possessive endings onto any lexical element of category D(eterminer). This however, does not change the situation w.r.t. syntax, because the morphologically derived 'possessive determiners' are still syntactic atoms.

⁹ On the appropriate label of the category F, see section 5.2.

(20) SYNTACTIC VIEW

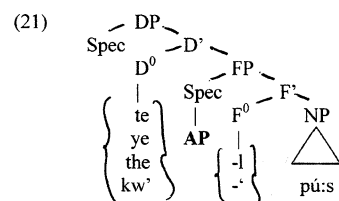


Note that under this view we need to determine how the possessive suffix is suffixed onto the determiner. Without going into any detail, I propose that the affixation is a result of phonological cliticization onto a linearly adjacent element (i.e. the determiner).

So far it seems that the syntactic view fares slightly better, based on simplicity. The property in (18)a is merely suggestive, however, not conclusive.

1.2.2. The interaction with adjectives.

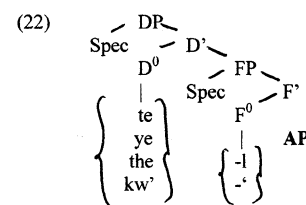
The properties of 1st and 2nd singular possessives in interaction with adjectives (property (18)b) is even less conclusive, given the fact that the different possibilities argue for different analyses. Let me start with the fact that the possessive ending can attach to the adjective. This property further supports the syntactic view (i.e. the structure in (20)). Under the assumption that the possessive ending occupies a functional head (F⁰), we actually expect that the specifier position of FP can be filled as well. We can assume that an adjective phrase (AP) can occupy SpecFP as shown in (21):



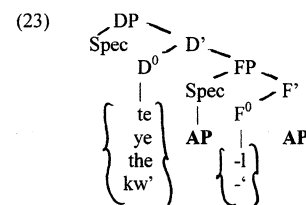
Thus, the syntactic view straightforwardly explains how the possessive ending can attach to the adjective: the possessive ending occupies its own functional head and it cliticizes onto the linearly preceding element. Note that this possibility also accounts for fact that in case of two adjectives the possessive ending can occur on the one immediately preceding the noun (12). In that case the adjective position in (21) is simply occupied by two adjectives.

The second possibility, i.e. the possessive ending attaching to the determiner even in the presence of an adjective is still accounted for in a straightforward way. It can be assumed that

one or more APs can occur lower in the tree as shown in (22). The exact position of AP is irrelevant at the moment.¹⁰



It then follows straightforwardly, that the possessive ending attaches to the determiner rather than the adjective, even though the adjective linearly precedes the possessed noun. Note that the possibility of an AP occurring in a position lower than the FP also accounts for the fact that in the presence of two adjectives, the linearly first one can carry the possessive affix. In that case both adjective positions are filled with one AP respectively, as shown in (23)



The last possibility, causes some severe problems for the syntactic view: We have seen that the possessive ending can attach to both the determiner and the adjective simultaneously. This is quite unexpected under the assumption that the possessive ending is associated with a functional projection. Even though there might be a way to deal with this phenomenon (presumably in terms of movement and copying) I will not go into the possible analyses. Note in this connection that the possessive ending cannot simultaneously appear on two adjectives. This is in accordance with the syntactic view.

Now let me turn to the lexicalist view. It has to be assumed that all kinds of determiners as well as adjectives are stored in the lexicon with the possessive ending. This assumption is less elegant than the syntactic analysis. Alternatively, it could be assumed that in the morphological component the possessive ending [-el] can attach either to a determiner or to an adjective. This assumption then straightforwardly predicts that the possessive ending can simultaneously show up on both the determiner and the adjective. Thus, under the lexicalist view, we have to essentially assume an "everything-goes" analysis: all kinds of determiners as well as adjectives must be lexically inflected for 1st and 2nd possessive endings. When it comes to syntactic insertion, we have to make sure that the possessive ending occurs at least once in the tree -either

¹⁰ Later, I will show that there is evidence for an additional functional projection below the one we have already introduced. We can therefore assume that an AP can occupy either of the specifier positions of the two functional projections involved (cf. section 4.2.2)

on the determiner or on one adjective. Nothing prevents a second occurrence of a possessive ending, i.e. the occurrence of the possessive ending on both and adjective and the determiner. However, notice that this analysis has an immediate drawback given the fact that in the presence of two adjectives, they cannot both simultaneously carry the possessive affix. This is quite unexpected, given the “everything-goes” nature of this analysis.

1.2.3. Possessives without determiners

Let me now turn to the last property (18)c, the fact that if nothing precedes the possessed noun, the possessive ending appears by itself in a position preceding the noun. This property follows straightforwardly under the syntactic view. However, it would be quite unexpected if the possessive ending were attached to the determiner (or an adjective) pre-syntactically (i.e. in the lexicon). In that case we would expect the elimination of the whole unit <Det+possessive> (*tel*) in this kind of construction since under this assumption *tel* occupies the position to be deleted (i.e. D⁰).

However, under the assumption that *-el* occupies its own functional projection, different from D⁰, the sentence in (17)b is fully expected. Only *te* occupies D⁰ and thus only *te* gets deleted.

1.3. Summary

Thus far the situation is not clear. The syntactic view fares better for most of the properties, in that it provides a more elegant analysis for all of the properties it can account for. However, neither approach straightforwardly accounts for one respective property. This situation is summarized in the following table. For most of the properties, both the syntactic and the lexicalist view can provide an analysis (indicated by the checkmark). The exclamation mark indicates, which analysis provides the more elegant solution.

(24) The syntactic analysis vs. the lexicalist analysis

		Syntactic analysis	Lexicalist analysis
Poss on Det (18)a	Det-l	✓!	✓
Interaction with Adjectives (18)b	Det Adj-l N	✓!	✓
	Det-l Adj N	✓!	✓
	Det-l Adj-l N	✗	✓
	Det-l Adj Adj N	✓!	✓
	Det Adj Adj-l N	✓!	✓
	*Det Adj-l Adj-l N	✓	✗
Nothing preceding (18)c	el N	✓	✗

The above is at least suggestive: at this point the syntactic view is slightly superior to the lexicalist approach. However, the properties are not quite decisive yet.

2. HALQ'EMÉYLEM POSSESSIVES II: 1ST PLURAL AND 3RD SINGULAR/PLURAL

In this section I will discuss 1st plural and 3rd singular and plural possessive endings. As before, I will first introduce the empirical facts and then discuss the theoretical consequences.

2.1. Empirical observations.

2.1.1. The basic pattern.

(25) lists the regular DP as well as the 1st plural and 3rd singular and plural forms of the Halq'eméylem possessive paradigm:¹¹

REGULAR DP	1 ST PL	3 RD SG/PL
te má:l - 'the father'	te má:ltset - 'our father'	te má:ls - 'his/her father'
te kapú: - 'the coat'	te kapú:tset - 'our coat'	te kapú:s - 'his/her coat'
te pú:s - 'the cat'	te pú:stset - 'our cat'	te pú:s - 'his/her cat'

Obviously, these forms differ significantly to the ones discussed in section 1 (cf. *tel má:l* - 'my father'). Here the possessive ending is “attached to [the] thing owned” (Galloway 1993: 179), i.e. to the possessed noun.

2.1.2. Interaction with “swa”

There is a significant exception to the simple description given above (i.e. that 1st plural and 3rd possessive endings “attach to the thing owned”). A possessive phrase can contain an element *swa*, which is best characterized as emphasizing possession. The use of English *own* as in *My/your/his own cat*. comes closest to the proper meaning of Halq'eméylem *swa*. The data below exemplify the use of *swa* with the forms we have discussed so far:

(26)	sg.		pl.
1.	iwó:lem te-l	swa pú:s	iwó:lem te swa-tset pú:s
	playing det-1sg.poss own cat		playing det own-1pl.poss cat
	'My own cat is playing.'		'Our own cat is playing.'
2.	iwó:lem te-	swa pú:s	
	playing det-2.poss own cat		
	'Your own cat is playing.'		
3.	iwó:lem te	swa-s pú:s	
	playing det own-3poss cat		
	'His/her/their cat is playing.'		

The interesting fact about this paradigm is that the behavior of the possessive endings differs in a regular way. The behavior of 1st and 2nd singular endings does not change with the presence or absence of *swa*. However, 1st plural and 3rd singular and plural affixes show a different behavior. In the presence of *swa*, they no longer attach to the possessed noun, rather they appear attached

¹¹ It has to be mentioned here that part of the 2nd plural possessive fits this pattern as well (cf. section 4.1)

to *swa* (cf. also Galloway 1993: 180). It is not possible to use *swa* and still attach these endings to the possessed noun:

- (27) a. *iwó:lem te swa pú:s-tset b. *yóyes te swa swáqeth-s
 playing det own cat-1pl.poss *working det own husband-3poss*
 ‘Our own cat is playing.’ ‘Her husband is working.’

Nor is it possible to realize the possessive ending simultaneously on *swa* and on the noun:

- (28) a. *iwó:lem te swa-tset pú:s-tset
 playing det own-1pl.poss cat-1pl.poss
 ‘Our own cat is playing.’
 b. *yóyes te swa-tset swáqeth-s
 working det own-3poss husband-3poss
 ‘Her husband is working.’

2.2. Theoretical consequences

The crucial properties of 1st plural and 3rd singular and plural that any analysis has to account for are summarized below:

- (29) Properties of 1st plural and 3rd singular and plural possessives.
 a. The possessive affixes are suffixed to the noun unless *swa* is present.
 b. If *swa* is present, the possessive affixes are suffixed to *swa*.
 (30) *swa* and 1st and 2nd singular possessives:
 The presence of *swa* does not affect the behavior of 1st and 2nd singular possessive endings.

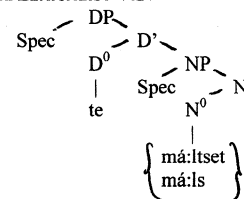
Again, I will compare the two competing approaches to word-formation. I will start with the property in (29)a.

2.2.1. The basic pattern.

The basic property of 1st plural and 3rd possessives is suffixation of the possessive ending to the noun. The question we have to ask again is where and how the suffixation takes place. The two approaches give different answers.

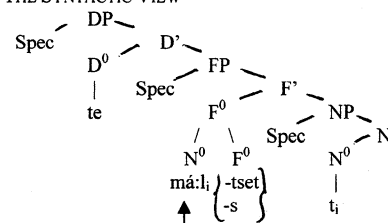
Under the lexicalist view, the affixed noun is inserted as an atomic unit in the syntax as shown in (31):

(31) THE LEXICALIST VIEW



Under the syntactic view, the possessive affix occupies a functional head, which must be structurally higher than NP, which hosts the head noun. Without any further assumption this would mean however, that the noun would follow the possessive ending (i.e. the possessive affix would be a prefix). Thus, in order to derive the observed linear ordering we have to assume that the noun undergoes head-movement and adjoins to F⁰, as indicated in (32).

(32) THE SYNTACTIC VIEW

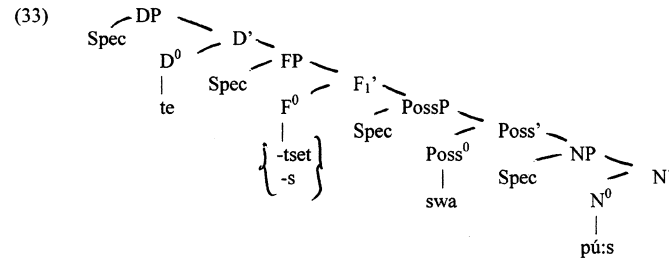


So far the lexicalist view seems simpler than the syntactic view because the latter necessarily involves head-movement. In order to decide between the two approaches there is an obvious question to ask: Is there independent evidence for head movement of N⁰ to F⁰?

2.2.2. The interaction with *swa*: Evidence for head-movement.

Consider the property in (29)b. The presence of *swa* changes the affixation site of the 1st plural and 3rd possessive suffixes. How is this to be analyzed? Under the syntactic view, we can assume that *swa* occupies the head of another functional projection. Given the meaning of *swa* I will tentatively label this projection PossP.¹² Thus, under the syntactic analysis we can assume the following preliminary D-structure for the possessive construction including *swa*:

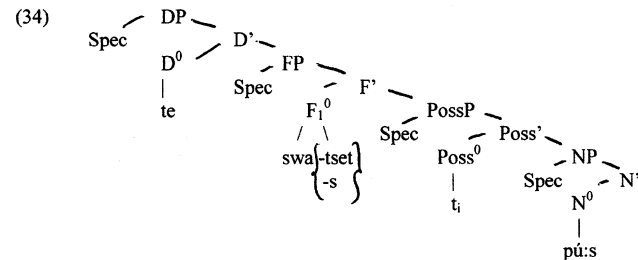
¹² In section 4, I will argue that this head introduces the possessor argument, which occupies its specifier position.



This structure straightforwardly explains the effect the presence of *swa* has on the target of possessive-suffixation in the following way.

In case *swa* is not present, syntactic head movement of the noun can proceed in a successive cyclic fashion: N moves to Poss^0 and then to F^0 . The movement through Poss^0 is a necessary assumption because head-movement must proceed to the next c-commanding head. Now, if *swa* is present, the situation is different. The noun can no longer move through Poss^0 , given that it is already occupied. However, direct movement from N^0 to F_2^0 result in a violation of the head movement constraint (Travis 1984). If affixation is indeed a result of syntactic head movement, affixation of the possessive ending onto the noun is expected to result in ungrammaticality as it is indeed the case (cf. (27)). This means however that we have independent evidence for the assumption that affixation is a result of head-movement by showing that the proposed movement obeys standard constraints on movement.

Of course the fact that in the presence of *swa* the possessive affixes are attached to *swa*, rather than the noun can now be accounted for in a straightforward way. One way to circumvent a violation of the head movement constraint is to move *swa* to F instead of the noun as show below:¹³



¹³ There is obviously a second option available to circumvent the violation of the head movement constraint. The presence of *swa* could simply block head-movement all together. In that case nothing would move to adjoin to F^0 and consequently the possessive ending would appear prefixed to *swa*. According to Henry Davis (p.c.), a pattern of this kind is found in St'át'imcets (Lillooet).

Finally, the fact that the possessive ending can only occur on *swa* and not on both the noun and *swa* follows straightforwardly from the assumption that the possessive affix is associated with a functional head position. Thus it naturally occurs only once in the tree.

In sum, the syntactic view can straightforwardly account for the properties in (29). As for the property in (30), this is also expected under the syntactic view. Given that 1st and 2nd singular possessive endings do not trigger head movement of the noun it is expected that head movement of *swa* does not take place either.¹⁴

Now consider the lexicalist view. The ungrammaticality of the possessive ending suffixed to the noun in the presence of *swa* (27) is completely unexpected. If the noun with the possessive suffix is inserted as an atomic unit as in (31), then the presence or absence of *swa* should not make any difference at all. We cannot simply say that the possessive suffix must be realized at least once (as we did in section 1.2.2. to account for the interaction of 1st and 2nd possessives with adjectives). In that case, we would have an option. Similarly, it would be hard to exclude the possibility of having the possessive ending realized simultaneously on the noun and on *swa*. I see no possible way to explain the properties of 1st plural and 3rd possessive once the interaction with *swa* is taken into consideration.

In this section we have established evidence for the assumption that the 1st plural and 3rd possessive affixes occupy a functional head position. Affixation is consequently a result of head-movement. The properties of these endings is summarized in the following table.

(35) The syntactic analysis vs. the lexicalist analysis

	Syntactic analysis	Lexicalist analysis
Det N-tset	✓	✓
Det swa-tset N	✓	✗
*Det swa N-tset	✓	✗
*Det swa-tset N-tset	✓	✗

It is obvious from the table above that the syntactic analysis fares by far better than the lexicalist view. We have seen crucial evidence for syntactic affixation by means of head-movement.

3. THE POSSESSOR ARGUMENT.

In this section I will discuss empirical observations concerning the position of the possessor argument and its theoretical implications.

3.1. Empirical observations.

In Halq'emýelem the possessor argument strictly follows the possessed noun as shown in (36):

- (36) a. axwí:l te pú:s tɬ' Strang
small det cat-3poss det.obl Strang
 'Strang's cat is small.'

¹⁴ I will return to the issue as to why only some possessive affixes trigger head movement in section 4.2.

- b. *híkw te kopú:-s tɬ' John¹⁵*
big det coat-3poss det.obl John
 'John's coat is big.'

The possessor cannot precede the possessed noun, as shown by the ungrammaticality of the examples in (37):

- (37) a. **axwí:l tɬ' Strang te pú:s*
small det.obl Strang det cat-3poss
 'Strang's cat is small.'
 b. **híkw tɬ' John te kopú-s*
big det.obl John det coat-3poss
 'John's coat is big.'

However, in the presence of *swa* the situation changes. In that case the possessor does precede the possessed noun as shown in the examples in (38):

- (38) a. *axwí:l te swa-s tɬ' Strang pú:s*
small det own-3poss det.obl Strang cat
 'Strang's own cat is small.'
 b. *híkw te swa-s tɬ' John kopú.*
big det own-3poss det.obl John coat
 'John's own coat is big.'

3.2. Theoretical implications: more evidence for head-movement.

In (39) the properties of the possessor argument that the analysis has to capture are summarized:

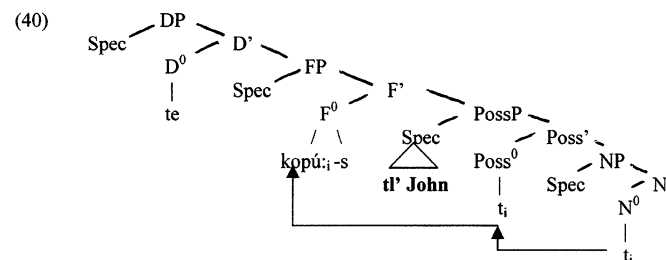
- (39) Properties of the possessor argument.
 a. The possessor arguments follows the possessed noun unless *swa* is present.
 b. If *swa* is present, the possessor precedes the possessed noun.

In any account of this, we have first to determine the position of the possessor argument. I will follow the traditional assumption that the possessor functions as the subject of an NP (e.g. Jackendoff 1977). This means that it cannot be base-generated as a complement of the noun. Rather I will assume that the possessor is base-generated in the specifier position of PossP, which we have introduced in section 2.2.2.¹⁶ Evidence for this claim will be presented in turn.

This assumption, in interaction with the syntactic analysis developed in the last section, straightforwardly derives the properties in (39). First, consider the property in (39)a: the possessor follows the possessed noun. This follows from the assumption that the noun undergoes head-movement to a position preceding SpecPossP as shown in 16:

¹⁵ If the possessor is a name, the determiner preceding it is 'tɬ'. Otherwise the regular determiner series is used.

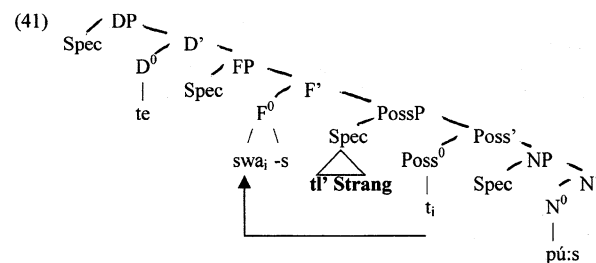
¹⁶ For reasons of space, I cannot do full justification to this claim, nor can I address the question as to the exact nature of this projection.



The fact that the possessor cannot appear in a position preceding the possessed noun (37) indicates that DP-internal possessor scrambling (i.e. DP-internal movement of the possessor to a higher position) is not an option in Halq'eméylem.¹⁷

The assumption that the possessor follows the noun as a result of head movement of the noun rather than from its being a complement of the noun, is supported by property (39)b, which concerns the interaction of the possessor argument with the presence of *swa*.

We have seen that if *swa* is present head movement of the noun is blocked. This immediately predicts property (39)b: in the presence of *swa*, the possessor argument linearly precedes the noun. This is exemplified by the tree-structure in (41):



The word order in (38) thus follows straightforwardly from the present syntactic analysis.

Note also that this order would be completely unexpected under the assumption that the possessor occupies the complement position of the noun. It would have to be derived by means of possessor scrambling. But note that we have already seen that possessor scrambling is not an option in Halq'eméylem. This means that we would have to assume that possessor scrambling is dependent on the presence of *swa*, a rather unmotivated assumption.

Under the present analysis however the change in relative word order follows straightforwardly: the possessor is base-generated in a position, which is higher than the possessed noun and therefore preceding it. Usually the noun undergoes head movement to a position preceding the possessor. However, head-movement of the noun is blocked just in case

¹⁷ cf. Davis & Matthewson (1995) for data from St'át'imcets that show that in this language possessor scrambling is possible.

swa is present. It thus follows that in the presence of *swa* the possessor precedes the possessed noun.

Finally, note that this phenomenon provides striking evidence for the assumption that the noun undergoes head-movement in order to pick up the possessive suffix. Thus, the behavior of Halq'eméylem possessors crucially supports the syntactic analysis.

Under the lexicalist approach, the effect the presence of *swa* has on the relative order between the possessor and the possessed noun would be completely mysterious, whereas it follows straightforwardly from the present analysis. The table below summarizes this result:

(42) The syntactic analysis vs. the lexicalist analysis

		Syntactic analysis	Lexicalist analysis
Det	N-s Poss	✓	✓
Det	<i>swa</i> -s Poss N	✓	✗

4. HALQ'EMÉYLEM POSSESSIVE III: 2ND PLURAL.

This section deals with the last form of the possessive paradigm, the 2nd plural possessive.

4.1. Empirical observations.

The interesting fact about this form is that it combines both positions for possessive affixation in one form (cf. Galloway 1993: 179):

- | | |
|---|---|
| <p>(43) REGULAR DP</p> <p>te má:l - 'the father'</p> <p>te kapú: - 'the coat'</p> <p>te pú:s - 'the cat'</p> | <p>2ND PLURAL POSSESSIVE</p> <p>te' má:lelep - 'your folks' father'</p> <p>te' kapú:elep - 'your folks' coat'</p> <p>te' pú:selep - 'your folks' cat'</p> |
|---|---|

As is obvious from (43), an affix is attached to the preceding element (in this particular case the determiner) and another affix is attached to the possessed noun. For reasons of space I cannot go through additional data involving adjectives or *swa* in interaction with 2nd plural possessives. It should suffice to mention here that the two endings found in 2nd plural behave just like their respective counterparts. The ending on the determiner behaves like the 1st and 2nd singular endings whereas the ending on the noun behaves like the 1st plural and 3rd endings.

4.2. Theoretical consequences.

Let me briefly recapitulate the basic properties of the possessive affixes:

- (44) Basic properties of possessive affixes:
- 1st and 2nd singular as well as part of the 2nd plural possessive affix attaches to an element preceding the possessed noun (a determiner or an adjective)
 - 1st plural and 3rd as well as part of the 2nd plural possessive affix attaches to the possessed noun unless *swa* is present in which case it attaches to *swa*.

Both the lexicalist and the syntactic approach have to somehow address the question of why the different forms of one single paradigm behave so differently.

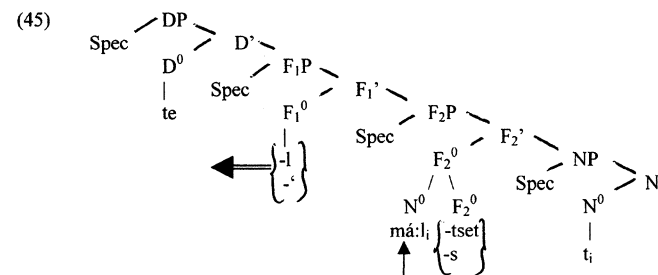
First consider the lexicalist approach. It is hard to see how it can explain the different behavior of the two different endings. This seems especially hard, given that it is virtually impossible to have syntactic structure interact with word-internal structure, given that the latter is syntactically invisible.

Then we might consider a mixed view, i.e. we could assume that the affixes that attach to an element preceding the possessed noun receive a lexicalist analysis, whereas the rest of the paradigm is derived syntactically. Then it would be expected that the different endings have rather different properties. One might even expect some interaction between the two possibilities. If evidence for head-movement as a source of affixation is missing (as is the case for these respective affixes, cf. section 1.2.), the child acquiring the language might in fact reanalyze a syntactic affix as a lexical affix. Given the ambiguous evidence discussed in section 1.2., this might indeed be the case.

Finally, let me turn to a purely syntactic approach. For ease of exposition, let us accept the evidence for the syntactic nature of both types of affixes. The empirical observation that the different endings show different syntactic behavior surfaces again well, however in a different form.

So far I have only argued that all of the possessive endings occupy a functional projection FP. We have not addressed the question as to whether this is the same functional projection for both kinds of endings or whether we are in fact dealing with two different functional projections.

If both forms of the paradigm occupy one and the same head position then it is not a trivial problem as to for example why head movement of N⁰ to F⁰ is restricted to certain forms. This problem could be solved if there were two different head positions between DP and NP. This possibility is shown in the structure below:



Here, 1st and 2nd singular possessive occupy F₁ whereas 1st plural and 3rd singular/plural occupy F₂. The different properties of these heads is summarized below:

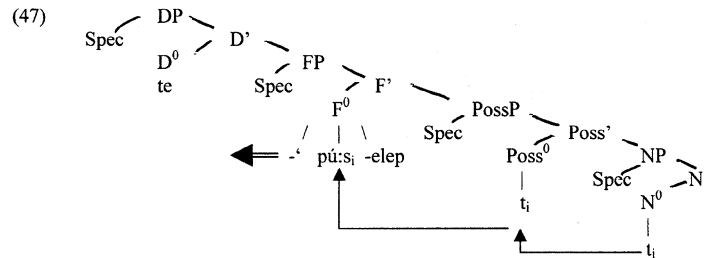
- (46)
- F₁ is occupied by affixes that phonologically cliticize onto the preceding element.
 - F₂ is occupied by affixes that appear suffixed to the noun. This instance of affixation is a result of head-movement of N⁰ to F₂⁰ (via Poss⁰).

Under this view, the problem of non-uniform behavior of one single paradigm reduces to the reasonable assumption that different endings of the paradigm occupy different syntactic heads. So far, this assumption seems to be more promising than either the lexicalist view or the syntactic view with only one FP. In what follows I will provide additional evidence.

4.2.1. Evidence form 2nd plural possessives.

One piece of evidence for the analysis in (45) and (46) comes from the following considerations. Positing two functional projections would lead us to expect to find each one of them occupied by a possessive affix simultaneously. This expectation is indeed fulfilled by the 2nd plural forms of the possessive paradigm as we saw in the last subsection.

There is still one possible objection concerning the relevance of this piece of evidence. One could assume that the two respective affixes (*-'* and *-elep* and their respective other forms of the paradigm) occupy one and the same position. Some phonologically cliticize onto the preceding element and others attach to the head that moves there. In case of the 2nd plural form this would mean that we are dealing with a circumfix. The noun would have to move in between the two parts as shown below:



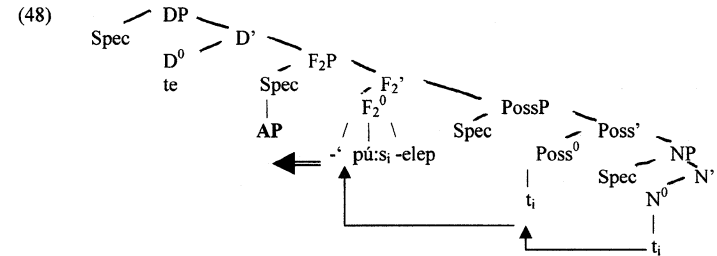
If this were the case then two functional projections to host the possessive endings would not be necessary, and all the cases we have considered so far would follow as well. A major drawback of this approach is that it has to be specified somehow which of the affixes behaves in which way. Under the approach that makes use of two functional projections, this is done by means of categorical specification: affixes are specified as to whether they belong to category F_1 or F_2 .¹⁸

4.2.2. Evidence from Adjectives.

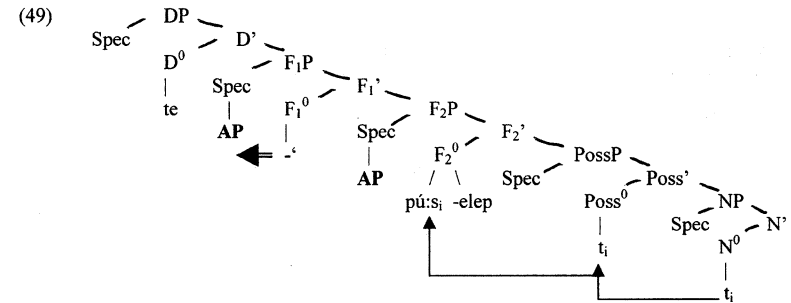
The behavior of adjectives further supports the assumption that there are two functional projections. If there was only one functional projection associated with the possessive paradigm, one would expect only one position for adjectives as shown below.¹⁹

¹⁸ We will see shortly that this is not an arbitrary choice but can to some extent be read off the affix.

¹⁹ Of course this presupposes that adjectives can only appear in the specifier position of a functional projection. For the sake of the argument I will assume this without further justification. Notice however, that the argument would go through even without this assumption.



However, if there are two functional projections hosting the possessive endings, we expect at least two positions for adjectives as shown in 20:



It is obvious from the two trees above that the two approaches make two different predictions. Crucially, if there are two functional projections we predict that the possessive ending that undergoes phonological cliticization does not have to attach to the adjective (as in the examples in section 1.4). If the adjective occupies SpecF₂P, it can still appear as a suffix to the determiner. Under the assumption that there is only one functional projection, the possessive affix that undergoes phonological cliticization necessarily has to attach to the adjective. This is especially clear with the circumfixal *-e' -elep*. Given the tree in 20, there is no way that the adjective can appear in-between the preceding *-e'* and the following noun *-elep*.²⁰

Crucially the data are in favor of the assumption that there are two functional projections. As shown in the data below, even when an adjective is present the determiner can be affixed with the respective possessive endings:

- (50) *te-'* *tsxwíkw'* *pú:s-elep*
det-2pl.poss *grey* *cat-2pl.poss*
 'your folks' grey cat'

²⁰ Note that this shows that even if adjectives did occupy a position different from SpecFP the argument goes through.

Thus, by assuming two functional projections (associated with two specifier position which can host adjective phrases) we can explain the two attachment sites for the possessive endings in case an adjective is present.

As the reader can easily verify, the assumption that there are two functional projections immediately derives the behavior of possessive constructions involving 2 adjectives (cf. section 1.1.2). SpecF₂P simply corresponds to the lower adjective position introduced in section 1.2.2.

At this point, let me briefly summarize the main results of this section. We have seen evidence that the two kinds of possessive endings are associated with two functional projections. This ultimately provides crucial evidence for a syntactic view on affixation, rather than a lexical view. Thus Halq'eméylem provides crucial support for the need to recognize the possibility of syntactic affixation rather than insertion of fully inflected forms as in the lexicalist view.

In the next section I would like to briefly comment on the nature of the two functional projections that host the possessive affixes (F₁P and F₂P)

5. THE NATURE OF THE TWO FUNCTIONAL PROJECTIONS. INTERACTION WITH INDEPENDENT PRONOUNS.

In this section I will discuss the interaction of independent pronouns with the possessive paradigm.

5.1. Empirical observations.

Below is a list of independent (or emphatic) pronouns in Halq'eméylem:

(51) Independent pronouns (Galloway 1993: 403):

	sg	pl
1	te'élthe/te á'elthe	telhímelh
2	teléwe	telhwélep
3	tútl'ò/thútl'ò	tutl'ò:lem/thutl'ò:lem/yutl'ò:lem

Independent pronouns in Halq'eméylem have essentially the same distribution as full lexical DPs (cf. Galloway 1993; Wiltschko 1998). They are used to emphasize the referent or in case of 3rd person to clarify the gender of the referent. In the sentences below, they appear in a position following the verb. (Note that this position could also be occupied by a full DP.)

- (52) a. í:mex **tú-tlò** walking det-3Indep 'He is walking.'
b. í:mex **thútlò** walking det.fem-3Indep 'She is walking.'

Crucially, an independent pronoun can also immediately precede a coreferent noun, i.e. it can function as a determiner (cf. Galloway 1993; Wiltschko 1998). This phenomenon is shown in (53):

- (53) a. í:mex **tú-tlò** **swíyeqe** walking det-3Indep man 'That man is walking.'
b. í:mex **thútlò** **slháli** walking det.fem-3Indep woman 'That woman is walking.'

It is interesting to notice that the construction in (53) cannot be used in possessive constructions, as shown by the ungrammaticality of the examples in (54):

- (54) a. *í:mex **tú-tlò-l** **swíyeqe** walking det-3Indep-1sg.poss man 'My man is walking.'
b. *í:mex **tú-tlò** **swíyeqe-s** walking det-3Indep man-3poss 'His/her man is walking.'

5.2. Theoretical consequences.

So far I have not said anything about what kind of functional projections we are dealing with. In this section I will show that both empirical and theoretical considerations speak in favor of the following categorization:

- (55) F₁P = Pers(on)P
F₂P = Num(ber)P

In what follows I will discuss evidence for this conclusion.

5.2.1. Evidence from the possessive suffixes

Consider again the 2nd possessive forms repeated below for convenience:

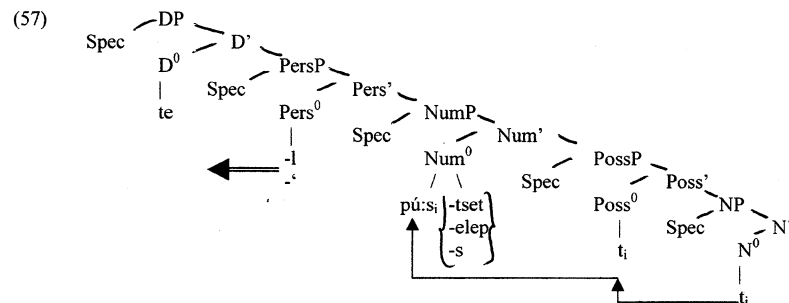
- (56) te-' má:l te-' má:l-elep
'your father' 'your folks' father'

Given that the affix -' is present on the determiner in both 2nd singular and plural possessives, we can tentatively conclude that it encodes 2nd person. Now, since we have concluded above that this affix occupies the upper functional projection (F₁⁰) we can further conclude that this functional head hosts PERSON features. Therefore we can label this projection PERSP.

The same line of reasoning can be applied to the other affix in (56) -elep. Given that it is only present in the 2nd plural, and given that we have concluded that -' encodes person features, we can tentatively conclude that -elep encodes plurality. Again, since we have concluded that -elep occupies the lower functional projection (F₂⁰), we can further conclude that this functional head encodes NUMBER features. Thus, we can label this projection NUMP.²¹

With this we are finally in the position to present the full-fledged, fully labeled phrase-structure of Halq'eméylem (possessive) DPs:

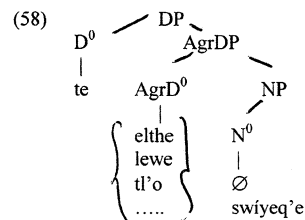
²¹ Unfortunately the rest of the paradigm is not so straightforward, but I think that overall format of the paradigm justifies this decomposition into PersP and NumP (i.e. -s seems to encode 3rd person even though it occupies the lower position, etc).



Further support for the assumption that the functional projections involved are PersP and NumP stems from the fact that exactly these two projections, in the order proposed above, has been proposed by other authors for other languages. In particular, Ritter 1993 assumes a functional projection (NumP) in between DP and NP for Hebrew. Furthermore Shlonsky (1989) proposes a further functional projection (PersP) below DP and above NumP. Thus, the structure in (57) receives independent crosslinguistic support.

5.2.2. Evidence from independent pronouns.

There is another piece of evidence for the proposed categorization of the two functional projections proposed above. It is argued in Wiltschko (to appear) that a determiner (i.e. D^0) takes an agreement projection (AgrDP) as its complement. This analysis is applied to Halq'eméylem in Wiltschko (1998) where it is argued that it can straightforwardly explain the properties of independent pronouns. Wiltschko (1998) assigns the structure in (58) to these "pronouns":



For the present purpose it is interesting that Wiltschko (1998) considers the possibility for decomposing AgrDP into PersP and NumP. Assuming that this decomposition can be carried out we predict that the agreement endings of independent pronouns and the possessive endings (which are instances of agreement endings as well) are in complementary distribution. Thus we predict that even though independent pronouns can act as determiners, they cannot act as determiners within a possessive construction. This is exactly what we found in section 5.1.

Even though independent pronouns can act as determiners the possessive agreement endings cannot attach to them as shown above. Superficially this is quite surprising, given the fact that the possessive agreement endings can attach to any preceding element, notably determiners or adjectives, as we have seen above. However, it follows straightforwardly from the present analysis given that both the possessive agreement ending as well as the independent pronouns occupy the same functional head (Pers⁰ and Num⁰, respectively).

5. CONCLUSION.

In this paper I have presented an analysis of the Halq'eméylem possessive construction, which displays a quite intricate pattern, as summarized below:

- ◆ Some possessive affixes appear attached to the determiner or, if one is present, optionally to an adjective.
- ◆ Some possessive affixes appear attached to the noun or, if it is present, to *swa*, an element most adequately characterized as emphasizing possession.
- ◆ The possessor has to follow the possessed noun unless *swa* is present, in which case the possessor precedes the possessed noun.

In this paper I have presented a simple analysis for this pattern, which is based on the assumption that affixes occupy syntactic head-positions. I have shown that there is evidence for 2 head-positions hosting the different kinds of possessive affixes: PersP and NumP. Affixation then can be instantiated in two ways. First it can be a matter of phonological cliticization onto a preceding element. This is the case for affixes occupying Num⁰, which can occur attached to a determiner or to an adjective. Secondly, affixation can be a matter of syntactic head movement: the noun was shown to undergo head-movement to Pers⁰. The presence of *swa* has the effect of blocking head movement of the noun, as a result of the head-movement constraint. Instead, *swa* itself moves to Num⁰ and therefore the respective affixes appear attached to *swa* rather than the noun. Blocking head movement of the noun has the further effect that the relative word order between possessor and the possessed noun changes. Only if the noun moves past SpecPossP (the position of the possessor argument) does it precede the possessor. If this movement is blocked, i.e. in the presence of *swa*, the possessor precedes the possessed noun.

In the course of this paper I have compared a lexicalist view to affixation with the syntactic view, and we have seen clear evidence that in the case of Halq'eméylem possessive, the syntactic view is clearly preferable. This however means that the Halq'eméylem pattern strongly argues for the necessity to recognize the possibility for affixation as a result of syntactic head movement along with the necessity to recognize that affixes can occupy functional head positions.

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APPENDIX.

KEY TO THE ORTHOGRAPHY:

Orthography	IPA	Orthography	IPA
a	æ or ε	p'	p'
ch	tʃ	q	q ^h
ch'	t'ʃ	q'	q'
e (between palatals)	i	qw	q ^{hw}
e (between labials)	u	qw'	q' ^w
e (elsewhere)	ə	s	s
i	i	sh	ʃ
k	k ^h or k ^j	t	t ^h
k'	k' or k' ^j	t'	t'
kw	k ^{hw}	th	θ
k'w	k' ^w	th'	tθ'
l	l	tl'	tɬ'
lh	ɬ	ts	c
m	m	ts'	c'
o	a	u	u
ō	o	w	w
p	p	x	x or x ^j
xw	x ^w		
ḡ	ḡ	ḡw	x ^w
y	j	'	?
'	high stress	˘	mid stress

See ref. to Galloway for detailed discussion, allophonic variation etc.

LIST OF ABBREVIATIONS (in alphabetical order)

- Adj = Adjective
 det= determiner
 fem. = feminine
 Indep.= independent pronoun
 N = Noun
 obl= oblique
 pl. = plural
 poss. = possessive
 sg. = singular