Reanalysis and the Coast Tsimshian Lexicon

Tonya N. Stebbins
University of Melbourne

1 Introduction

As part of the project of developing a learners' dictionary for Coast Tsimshian it has become clear that attention needs to be given to words relating to 'modern life' as this domain is under-represented in the dictionary at this time. A natural response to this 'problem' is the suggestion that new words be created to fill in the gaps in the Tsimshian lexicon. To a certain extent it is true that the Tsimshian lexicon has fallen behind, in part because code-switching to English has become a wide-spread strategy for referring to new items. However, this strategy, which is associated with the decline of the Tsimshian language in favour of English, is not the only one in evidence.

This paper considers the strategies for lexical expansion which can be observed in the Tsimshian lexicon in the period since contact. In order to examine the strategies available to Tsimshian speakers for expanding their lexicon, I have extracted a list of early borrowings from the current dictionary database.

Two mechanisms for lexical expansion are evident; new forms must be created and then shared among all speakers in the community. In this paper I will focus on the first of these mechanisms; reanalysis. Reanalysis is the process behind the production of neologisms. It is the mechanism which allows words to multiply by changing forms, meanings or grammatical values. This process clearly occurs in borrowing but it is also apparent in semantic shifts, in derivation and compounding.

Like any other language, Tsimshian has the morphological means to adapt its lexicon to demands of a changing environment, as good speakers can readily demonstrate. Learners of Tsimshian have a more limited ability, and a correspondingly limited tendency to use the resources of Tsimshian in order to create new words. Reanalysis requires speakers with both confidence and a deep intuitive sense of the language.

The second mechanism for lexical expansion, which I will not discuss in this paper, is lexicalisation. This is the process by which new or reanalysed forms are institutionalised and enter the lexicon of the language.

In fact both of these processes occur together when a new word is being formed. In a strong language these processes go on remarkably smoothly. Certainly there are remarks from conservative speakers who object to change. However the rate at which new forms appear and are dispersed in a language such as English is quite remarkable, particularly when one recalls that it is only through their use 'on the ground' that words can be reanalysed and lexicalised.

The real difficulty for lexical expansion in Coast Tsimshian lies in the lack of cohesiveness in the speech community. For new words to enter the lexicon of a language they must be accepted and used by the majority of speakers. The real difficulty is not 'making up words' but seeing these words accepted and used by all speakers via

the process of lexicalisation. For a more in depth discussion of the process of lexicalisation see Stebbins (forthcoming).

A general description of reanalysis is given in §2. In §3 processes of reanalysis which involve the creation of new forms (coinage, borrowing and onomatopoeia) are considered, while in §4 processes which build on existing forms (semantic shift, zero deviation, derivation, compounding, and clipping) are described.

2 Reanalysis

Reanalysis has been used to refer to processes of different sorts by a number of authors. Langacker (1977) is often cited as the first article to discuss the concept of syntactic reanalysis. His definition of the term is reasonably narrow:

> change in the structure of an expression or class of expressions that does not involve any immediate or intrinsic modification of its surface manifestation. Reanalysis may lead to changes at the surface level... but these surface changes can be viewed as the natural and expected result of functionally prior modifications in rules and underlying representations (1977:58).

Langacker considers morpheme boundaries to be subject to reanalysis, but explicitly excludes changes involving word boundaries; such as affixation, cliticization and compounding; from his definition. This is because he considers that changes in word boundaries necessarily affect the surface level (1977:62). Although functional shifts are included in Langacker's discussion as an example of syntactic/semantic reformulation, reanalysis as he defines it is largely a phenomena involving grammatical forms rather than lexical words. His discussion contains many examples in which morpheme boundaries move or disappear.

A less restricted use of the term 'reanalysis' is given by Lefebvre (1996) in her model of creolization. She uses 'reanalysis' to refer to the basic building process of creolization in which phonological elements from the socially dominant language are taken by the group creating the creole and assigned all the necessary elements from their grammars in order to function as words in the creoles.

This can include modifications (generally simplifications) to the phonological and semantic patterns of the form (the elements which are transferred from the dominant language) as well as the provision of grammatical and morphological values for the forms by analogy with forms in the creole speakers' mother tongues. The result is a system which has a strong superficial resemblance to the dominant language but whose grammar is both quite distinct from the grammar of the dominant language and drastically reduced because the analyses of speakers with different mother tongues must all be accommodated in the form of the creole.

Clearly in both of these understandings of reanalysis there is a sense that the important change which the term reanalysis refers to regards the grammatical class and values assigned to a form. According to Langacker (1977:58) subsequent changes in the form and semantics may naturally occur, while according to Lefebvre (1996) changes in the form and semantics typically occur as part of reanalysis.

An obvious reason for the differences between the two authors expectations about reanalysis is that Langacker is considering small language internal changes over large periods of time, while Lefebvre seeks to account for the rapid and comprehensive changes over reasonably small periods of time in contact situations.

In my examination of the lexical expansion of Tsimshian I take a middle path. I wish to include in my consideration changes in word boundaries such as compounding. I consider that reanalysis does take place in these processes - if only because there is a change in the relation between the forms; their relation changes from a syntactic to a morphological one. In this way my understanding of reanalysis is broader than the one given in Langacker (1977).

I am also interested in considering the processes associated with borrowing in which phonological strings and at least some of their semantic content are incorporated into the lexicon of the borrowing language (typically referred to as assimilation) as processes of reanalysis. At this point my understanding of reanalysis has some affinity with Lefebvre's although I must stress that the processes of lexical expansion occurring in Tsimshian in no way suggest that creolization is taking place.

In general I use the term reanalysis to refer to situations in which some element of the lexical information associated with a form (including grammatical class, morphological features, and precise meaning) is changed. I do not include all phonological changes in my definition. Phonological changes may or may not be associated with the generation of new words. In the creation of clippings and blends the phonological form of the original word or words is clearly important to the process of reanalysis.

If one imagines that a word (lexeme) is made up of a set of links between some phonological form, a semantic value, and a set of grammatical characteristics, then reanalysis may be characterised as the breaking and rejoining of some or all of these links.

As it is a part of all the major processes of lexical expansion, reanalysis may be seen as the underlying mechanism available to speakers involved in creating neologisms. The following sections describe the types of reanalysis which take place in each of the process of word formation mentioned above, with examples from Tsimshian.

In presenting examples of newly formed words from Tsimshian I have tried to err on the side of caution. At this time I do not feel I have enough information to make unqualified assertions about the history of some forms. An examination of the neologisms included in the database at this time reveals that by far the most productive processes for expanding the Tsimshian lexicon have been compounding and derivation and borrowing.

3 Using new material

The processes described in this section take a phonological form which is i) newly coined, ii) borrowed and adapted from a contact language or iii) adapted from the natural world and incorporate it into the language by forging links between the form and some semantic and grammatical values. In the first case the meaning of the form is generally also novel, in the second case the meaning is usually borrowed along with the form, while in the third case the form is iconic of the meaning. However in every case the grammatical values assigned to the forms will be consistent with the existing system.

3.1 Coinage

The process of coinage is unique in that words created in this way are built from scratch. The term reanalysis thus seems rather inaccurate, as all the material involved is newly assigned to its semantic value, grammatical function and so on. Nevertheless the processes operate here as in all cases of reanalysis - relying on pre-existing patterns in the language to ensure that the new words are phonologically acceptable, and grammatically analogous to other forms.

Due to the limited knowledge we have about Tsimshian in the past it is quite difficult to identify a word as a coinage. To do so would be to assert that the word was unrelated to any other pre-existing word.

The following examples contain the form *aɫoom* which seems to occur only in conjunction with the meaning of cloth. It is also listed in the dictionary as an independent form meaning 'sail'. In fact it is quite likely that *aɫoom* is related to the form *ɫoo* 'go on water', given that its primary meaning is 'sail' and its other uses in words referring to flags and sheets are examples in which the sense has broadened referring to the shape and material of the sail instead of its function.

(1) *aɫoo-m-xso*
     cloth (coinage?)-CN-canoe
     'sailboat'

(2) *aɫoo-m-boot*
     cloth (coinage?)-CN-boat (borrowing)
     'sailboat'

(3) *aɫoo-m-gyemk*
     cloth (coinage?)-CN- bright.thing
     'flag'

(4) *teeh-aɫoom*
     ?-cloth (coinage?)
     'sheets'

3.2 Borrowing

Words which are borrowed generally undergo many modifications on their way to becoming members of the borrowing language's lexicon. They must be accommodated within each system of the language. This generally means phonological assimilation takes places to get the word to 'fit' into the sound system of the language. Phonemes in the donor language and present in the word which are not found in the borrowing language are 'reanalysed' as actually being the nearest analogous forms in the borrowing language. This may be related to the tendency of learners of a second language to transfer the phonology of the first language during learning.

More importantly the borrowed words need to find a place in the semantic and grammatical systems of the borrowing language. As this takes place the grammatical and semantic values of the words are reanalysed - the resultant words are no longer the same as the words in the donor language.

Examples from Tsimshian include the forms *boot* 'boat', *Luusn* 'Russians' *daala* 'dollar, money' which have been borrowed from English, as well as some examples from Chinook and other Northwest coast languages. Many more examples contain a form borrowed from English within a larger complex. These examples are discussed in more detail in the section on compounding. Among the adaptations made as words enter the Tsimshian language are the following:

Phonological
The use of l or Ø instead of r. Tsimshian does not have a phoneme or allophone r. See examples (5-8).

Semantic
Tsimshian derivational morphology is applied to borrowed stems in examples in (5).

The broadening of 'watch' to refer to any time piece in example 9 has required a new form for 'wristwatch'. The shift in meaning of 'socks' to refer to the outermost footwear in example 10.

Grammatical
Pluralisation is accomplished using Tsimshian morphology in examples (5) and (10).

The part of speech of the word 'school' in English now covers the noun *teacher* as well as the verb *teach* in Tsimshian; see example (5). This is analogous to many set of Tsimshian words in which one form is used both to predicate and refer. Other examples of this patter include *aks* 'water, drink, be wet' and *naks* 'marry, be married, spouse'.

(5a) *sk'uu-nsk*
borrowing-derivation
'teacher, teach'

(5b) *ga-sk'uu-nsk*
PL infl-borrowing-derivation
'teachers'

(5c) *sik-sk'uu-nt*
REDUP:PL infl-borrowing-derivation
'teach (pl)'
from English *school*

(6) *daala*
'dollar ; money'
from English *dollar*

(7) *Luusn*
'Russians'
from English *Russian*

(8) *sweda*
'sweater'
from English *sweater*

(9a) *waats*
'clock ; any time piece'

(9b) *waadz-m-'an'on*
clock (borrowing)-CN-hand
'wristwatch'
from English *watch*

(10a) *ts'ooxs*
'shoes, soles'

(10b) *ga-ts'ooxs*
PL.infl-borrowing
'shoes ; soles'
from English *socks* ?

(11) *mismuus*
'cow; cattle'
from Chinook (onomatopoeic)

(12) *umksiwa*
'Caucasian'
from Kwakiutl? (umksiwa = driftwood)

3.3 Onomatopoeia
Onomatopoeia refers to the imitation of natural sounds using the particular resources of a given language. Animal and other noises are represented in English by words such as *woof crackle* and *tweet*. Where these words are used to represent to noises made by animals they are interjections. However when these sounds are conventionalised they may also come to refer to the noise or noise maker with which they are associated.

The longstanding Tsimshian word *gaax*, for example is clearly onomatopoeic. It functions in the language as a noun, the term for a raven, and so has been reanalysed as a typical Tsimshian nominal.

Other words with possibly onomatopoeic origins include *dawe* 'domestic goat'; *mismuus* 'cow ; cattle' (which is said to be a borrowing from Chinook) and the examples in (14) which seem to be related to the sound of hitting something with a hard object (one could even speculate that the stem may be borrowed from the English word *tap*):

(14a) *t'aa'p-ł*
stem (onomapoeic)-derivation
'hammer'

(14b) *t'aa'p-nsk*
stem (onomapoeic)-derivation
'nail'

4 Recombination of existing material
In the following processes the material which is used to form new words already exists in the language. It is possible to change any one of the (phonological, semantic or grammatical) values assigned to an existing word. In cases where the meaning of a word changes slightly or an additional, related use of a word develops, the link between form and meaning is changed. This type of change is generally called semantic shift. The place of a word within the grammatical system can be changed. The form and meaning of the word is still present but the word is used in a new way. The change of grammatical values which occurs without the use of morphology has been called 'zero derivarion'. In some cases semantic shift is associated with a change in grammatical class. The existence of multiple meanings for individual forms which is the result of these processes leads to difficulties in deciding

exactly how many 'words' are really there. Discussions on polysemy versus homonymy attempt to deal with this problem.

Where a word changes class through the use of derivational morphology, the meaning of the new derived word is generally different from that of the original stem. In this case the grammatical values have changed and the form and meaning have been augmented by the derivational morphology. The process of compounding is analogous in so far as that it too results in the existence of a new form and meaning which arises from the combination of the original stems. Finally there are examples in which the grammatical characteristics and semantic values of a word remain consistent but the phonological form is reduced. This process is known as clipping.

4.1 Semantic Shift

In examples of semantic shift a new meaning is associated with an existing form. In these cases there is a clear relation between the original meaning and the new meaning. The example of the word a‰oom being used to refer to other types of cloth artefacts besides the original 'sail' is a case in point.

Many of the following examples of narrowing are cases in which an adverbial, adjectival or lexical prefix has been attached to the stem. This kind of prefixation is highly productive and is not usually associated with derivational processes. As the combinations listed below have become fixed, or lexicalised, their use has become restricted. For example (15) *lagaxalgyax* 'linguist' originally referred things of which it could be said that they had 'language which had two ends'. In Gitksan the cognate form means 'interpreter'. In Tsimshian the reference has narrowed slightly differently.

(15) *lagax-algyax*
      both.ways-speak
      'linguist'

In the next series of examples the prefix *gan* is used to signify long or hard things. This prefix is related to the word *gan* meaning tree.

(16a) *gan-ɬabiisk*
       long-whittle
       'drawaknife ; drawshave ; spokeshave'

(16b) *gan-lu-tgu-baa*
       long-on-around-run
       'block, double block'

(16c) *gan-p'yaan*
       long-smoke
       'chimney, stove pipe'

Sometimes the meanings of these prefixes are more than simply literal. In the following example the prefix *xbi* 'half' is used to refer to a persons mixed ancestry :

(17) *xbi-mooksk*
      half-white
      'half-breed, metis'

Prefixes in the following set do not modify the stem for its shape or physical characteristics, rather the meaning of the prefix simply denotes the location 'on'.

(18a) *lax-gayna*   (18b) *lax-ts'a'adzaks*
       on-trail   on-dirt
       'street'   'field, garden'

The following closely related words take the location prefix *lu-* meaning 'in'.

(19a) *lu-kwɬi-hoy*   (19c) *lu-kwɬi-p'axs*
       in-all.over-wear   in-allover-trousers
       'underclothes'   'underpants'

(19b) *lu-kwɬi-sɬüüsk*
       in-allover-shirt
       'undershirt'

In examples of broadening, such as the following, the word maintains its original meaning as well as referring to other related concepts. In the first example words are extended in meaning to encompass the action of shooting. In (21a) this seems to be related to the behaviour of either the gun or the victim, while in (21b) the meaning of the stem is simply extended to include hitting with bullets.

(20a) *k'os*   (22) *naaxs*
       from 'jump' -> 'shoot'   from 'anal fin, dorsal fin' -> 'plastic'

(20b) *guu*   (23) *ptooɬ*
       from 'hit' (sudden impact) -> 'shoot'   from 'house platform' -> 'basement, foundation,
                                                house platform'

(21) *gwüsgan*
      from 'cedar-bark coat' -> 'any coat which keeps
      off the rain'

Sometimes it is difficult to see what the semantic relationship between the original word and it's new sense could be. The word *ɬioon* refers to bannock bread which was introduced after contact. The same form also refers to 'elk' or 'wapiti'. Although they are both types of food, they are also very different in meaning. It is in situations like this that distinctions between polysemous and homonymous terms become difficult to make. Even if there is a 'story' which explains the new meaning of *ɬioon* (perhaps both types of food were traded), it is unlikely that the words are related by speakers these days, as the distinction between meat and grain based foods seem to be relevant to

speakers now. If this is the case then I would choose to treat these words as homonyms in the dictionary. If speakers do not relate them to each other then I have no reason to do so.

4.2 Zero derivation

In these cases only the grammatical class has been 'reanalysed' while in other respects the word remains the same. There are a great many examples of words which can function as both nouns and verbs in Coast Tsimshian. Because this pattern is so pervasive it can be difficult to decide which part of speech is most basic — or when the reanalysis took place.Uunless it is clear that a functional shift is associated with a new meaning entering the language it is probably unreasonable to assert that functional shift for the sake of word formation has taken place. A possible example is the noun *na'niitk* 'Judgement Day' which could be analysed as originally being a verb: *na* the continuative prefix and *niitk* a stem meaning 'to get up'.

4.3 Derivation

Derivational morphemes vary in the extent to which it is possible to describe their functions in reanalysis. Although it is easy enough to state that a stem, originally in class A has become a member of class B, the semantic changes associated with affixes such as *-ks* in Tsimshian are harder to express succinctly. On the whole derivational prefixes are much easier to analyse than derivational suffixes. The suffixes have been analysed by Dunn (1983). See examples (5, 14, 25 & 26).

A fairly typical example from Tsimshian is the form *halaxsn* 'bathwater'. The stem here is *laxs* 'to bathe', with the causative suffix *-n* and the instrumental prefix *ha-*. The form could be translated as 'the means of or causing bathing'. The causative suffix increases the number of arguments on the verb, while the instrumental prefix changes the whole from a verbal stem to a nominal word.

Examples of Tsimshian derivational morphology are generally morphologically complex, often containing three morphological units. They divide into two general types.

Firstly there are examples in which the affixes contain very little lexical information but still change the meaning and grammatical class of the stem. The prefix *ha-* described above is a typical example of this kind. It forms an instrumental from the stem. Further examples include:

(24a) *ha-'li-hałaals*
INST-on-work
'desk'

(24b) *ha-k'ots-sami*
INST-cut-meat
'table knife'

(24c) *ha-so'ek*
INST-early (be_)
'bell'

(24d) *ha-yaaxk*
INST-eat
'fork'

Other examples of derivational prefixes include:

(25) *na-ksu-niis-k*
continuous-out-see-?
'window, mirror'

(26) *sin-doo-nik*
make-lie.down-?
'garden'

Secondly there are examples in which forms containing a good deal of lexical information that occur as both derivational prefixes and free stems are prefixed to form new words. The following examples begin with *gwüs* 'blanket'.[1] Note that these words do not act like compounds, which take the connective *-m* (see below), nor are they examples of noun incorporation; example (27c) *gwüsligyiyaa* contains a verb *yaa* 'to go' as its root. On the whole it seems best to treat these prefixes as derivational.

(27a) *gwüs-ol*
blanket-bear
'bearskin coat'

(27b) *gwüs-halaayt*
blanket-dance
'cape ; robe ; dancing blanket'

(27c) *gwüs-ligyi-yaa*
blanket-any-go
'travelling clothes'

(27d) *gwüs-mati*
blanket-mountain goat
'mountain goat skin coat'

(27e) *gwüs-nayg-m-gyaamk*
blanket-na'sin?[2]-CN-bright
'Chilkat blanket'

(27f) *gwis-'naba'ala*
blanket-button
'button blanket'

4.4 Compounding

Compounding involves the combination of already existing stems. (ie. no new forms, just a new combination of forms.) This process in highly productive in Tsimshian. Compounds in Tsimshian take the morpheme *-m-* at the juncture between the two stems. This morpheme has the same form as the connective used to mark modifiers in a noun phrase. As the following examples show, compounds generally have the head in first position.

(28) *gwüdats-m-sgyen*
jacket-CN-pitch
'rubber coat'

(29) *ptalt-m-boot*
rib-CN-boat
'ribs'

(30a) *gaayt-m-boosn*
hat-CN-boston(?)/boss(?)
'rimmed hat'

(30b) *gaayt-m-sgyen*
hat-CN-pitch
'rubber hat'

---

[1] Note that these are similar to the examples given in §1.2.1 in which the prefix *gan-* is discussed. However rather than being examples in which the sence of the stem in 'narrowed' in these examples the sense of the stem no longer appears. Instead the prefix carries the basic meaning.

[2] According to Boas this is the Tlingit word for blanket.

(31a) *p'aalt-i-atoo*
  gloves-CN-cotton
  'cotton gloves'

(31b) *p'aalt-i-txah*
  gloves-CN-leather?
  'leather gloves'

(32) *siidz-m-was*
  sheets-CN-blanket
  'flannel blanket, sheet'

(33) *stimboot-m-gyilhawli*
  steamboat-CN-in.the.woods
  'train, steam locomotive'

Clearly related to the previous examples is the word *duusmgyilhawli* 'cougar'. This form contains the stem *duus* which is possibly a borrowing from English 'puss' and occurs in Tsimshian meaning 'domestic cat'. If this is the case then the current form is likely to have displaced an older form for 'cougar'.

(34) *duus-m-gyilhawli*
  cat-CN-in.the.woods
  'bobcat, cougar, lynx, mountain lion'

Where the connective *-m* is present rather than the compounder *-m-* the order of the head and modifier is reversed. Adjectival forms precede the head noun in Tsimshian NPs. The form *suuns-m 'yuuuta* 'blind man' is an example where the head of the phrase *'yuuuta* 'man' comes second. However the form *suusnm'yuuta* appears in the dictionary as a main entry suggesting that both compounds and noun phrases containing modifiers can be lexicalised in Tsimshian. For speakers of Tsimshian the difference between the two patterns does not appear to have any significance. Consider also the following examples where the word which would be head in an English translation is second:

(35) *gaayt-m-ts'aalxs*
  hat-CN-coat
  'hooded coat'

(36) *wüliil-m-tgwah*
  eyes-CN-glass
  'eyeglasses'

4.5 Clipping

Clipping refers to the phonological reduction of a longer word so that its form contains only the main syllable of the original word. A possible example from Tsimshian is the form *ga'nah* meaning 'mast' which is listed in an earlier vocabulary as *ganamatoom*. It may be analysed as follows:

(37) *ganamatoom*
  gan-m-atoom
  long/hard-CN-sail
  'mast'

This appears to have originally been a compound *gan* is the word for tree which can be used as a derivational morpheme for virtually any long hard and or wooden object, the *a* is epenthetic *-m-* is the compounder and *atoom* is the word for sail.

5 Conclusion

In this paper I have attempted to consider all the processes of word formation which are relevant in a discussion of lexical expansion in Coast Tsimshian. The Tsimshian language is not currently generating new words quite as fast as they are required and this has lead to the consideration of strategies for planned lexical expansion. I have argued that the morphological and syntactic machinery for word formation is available to speakers of Tsimshian, and that good speakers can and do introduce neologisms where required.

The processes outlined above are all associated with reanalysis and lexical expansion. They involve forging new links between the form, meaning and grammatical values of words in order to produce new words. In the first set a new form enters the language, while in the second set existing forms are combined or used in new ways.

As I suggested in the introduction the issue is not whether Tsimshian has the morphological resources to form new words. Rather it is after this process, when new words are being spread through the speech community that problems seem to arise. The process of lexicalisation - in which newly forged words are adopted by speakers as a group, by the language as a whole - has been less successful in recent times than in the past.

Bibliography

Bauer, Laurie (1992) 'Lexicalization and level ordering' in *Linguistics* 30(3[319]) p.561-568.

Dorian, Nancy (1994) 'Purism vs. compromise in language revitalization and language revival' in *Language in Society* 23(4) p.479-494.

Langacker, Ronald W. (1977) 'Syntactic reanalysis' in Charles N. Li (ed.) *Mechanisms of syntactic change* Austin: University of Texas Press p.57-139.

Lefbvre, Clair (1996) 'Creolization' a course given in May 1996 at the University of Melbourne.

Pawley, Andrew (1986) 'Lexicalization' in Tannen, Deborah & Alatis, James (eds.) *Languages and linguistics: the interdependence of theory, data and application.* Georgetown University Roundtable on Languages and Linguistics 1985. p.98-120.

Stebbins, Tonya (to appear) 'Lexical expansion and lexicalization in Coast Tsimshian' in *Proceedings of the 2nd Graduate conference of the School of Languages at the University of Melbourne. April 4-5 1997.*