A Grammatical Sketch of Nxa'amxcin (Moses-Columbia Salish)

by

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ABSTRACT

This dissertation is the first grammatical sketch of the Nxa'amxcin (Moses-Columbian) language. Nxa'amxcin is an endangered member of the Southern Interior branch of the Salish language family, a linguistic group indigenous to the Pacific Northwest region of North America. Building on previous work by other Salish linguists, I address to varying degrees all three major aspects of the grammar (phonology, syntax and morphology) from a Lexeme-Morpheme Base Morphology approach to word formation (Beard 1995).

A brief introduction to the phonology of Nxa'amxcin provides a look at the segment inventory, the status of schwa, various segmental processes, and syllable structure. An overview of the syntax focuses on aspects of the noun phrase—determiners, demonstratives, locative prepositions, genitive marking—and the major clause types—simple clauses, relative clauses and fronting.

An extensive discussion of lexical operations (derivational morphology) addresses the categories of valence, voice, secondary aspect, control, category-changing operations, and operations marking locative, augmentative, diminutive and relational. An overview of inflectional operations (inflectional morphology) is presented starting with the marking of person, number and grammatical relation on the predicate. Viewpoint aspect, mood, temporal marking, negation, non-declarative operations—yes/no questions, imperative, prohibitive—and nominalization are also discussed.

A description of the three different types of compounds found in Nxa'amxcin—two involving free stems and the third (known as lexical affixation) comprising a free stem and a bound stem—is provided along with the corresponding word structure rules responsible for these compounds. A number of arguments in support of a compounding analysis of bound stem constructions (lexical affixation), as opposed to a syntactic analysis, are presented. The set of classifiers that has developed from lexical affixation is also addressed.

Examiners:

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Abbreviations

AP	antipassive
APP	applicative
ASP	aspect
AUG	augmentative
CN	connector
COL	collective
CS	causative
CTR	control
DEM	demonstrative
DET	determiner
DIM	dimension
DIR	directional
DM	diminutive
DV	developmental
EM	emphatic
EP	external possession
FUT	future
GN	genitive
GR	grammatical relation
HB	habitual
IM	imperfective
IMP	imperative
IN	inchoative
INS	instrument
IO	indefinite object
IR	irrealis
IT	iterative
LC	limited control
LOC	locative
MD	middle
MOD	mood
NEG	negation
NM	nominalizer
NUM	number
O	object
OBL	oblique
OC	out-of-control
p	plural
PAS	passive
PER	person
PL	plural
POS	positional
pro	pronoun
PS	possessive
PST	past
Q	interrogative
RC	reciprocal
RF	reflexive
RL	relational
s	singular
S	subject
ST	stative
SUB	subordinating particle
TO	topical object
TR	transitive
VAL	valence
VC	voice

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Many things have changed over the years in the University of Victoria Linguistics Department, but one thing has remained a constant: the support network that exists amongst the graduate students. Many graduate students have come and gone during my time here, but that sense of support has remained a constant and for that I am grateful. I dare not list any names here for fear I will inadvertently omit someone. Rather, I will express my thanks to the many graduate students I have crossed paths with during my program. You have made this experience all the better.

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Finally, my family deserves a lifetime of thanks for their never-ending love and support.

Dedication

For Mom, Dad, Cathy Ann, Eddie and the Bear

On the road that we're going
we all need words of
comfort and compassion.

Andersson and Ulvaeus

Chapter One

Introduction

1.0 Purpose of this Study

The focus of this dissertation is to present a synchronic grammatical sketch of the Nxaʔamxcin [n̓xaʔamxəc̓ín] language. In this grammatical sketch, I address to varying degrees the three major areas of grammar: phonology, morphology and syntax. I first provide a brief introduction to the phonology. This is followed by a sketch of the syntax, an area of Nxaʔamxcin grammar that has received relatively little attention in the literature. Finally, I address the morphology, which is by far the major focus of this grammatical sketch. All three major aspects of word formation are dealt with: derivation, inflection and compounding.

Over the past thirty-five years, there has been ongoing research into the phonological and morphological systems of Nxaʔamxcin from both a synchronic and diachronic perspective, primarily by M. Dale Kinkade and Ewa Czaykowska-Higgins. Their observations have been presented both descriptively and theoretically in various articles and papers. While both authors have addressed many phonological and morphological issues in Nxaʔamxcin, their findings have not been compiled in a unified form such as a reference grammar. My goal here is to provide a general description of Nxaʔamxcin grammar by combining my own observations with those of Kinkade and Czaykowska-Higgins. This grammatical sketch is intended to fill a void until a more comprehensive grammar of Nxaʔamxcin is available.

1.1 The Nxaʔamxcin Language

Nxaʔamxcin is generally referred to in the linguistic literature as Columbian, Moses-Columbian, or Moses-Columbia Salish. Speakers refer to the language as Nxaʔamxcin, or simply Moses. Nxaʔamxcin is a member of the

Southern Interior branch of the Salish (or Salishan) family.[1] The family is comprised of 23 languages spoken throughout the Pacific Northwest. Of these 23 languages, 5 subdivisions have been made (Czaykowska-Higgins and Kinkade 1998:3).[2]

I Bella Coola

II Central Salish

Comox	Northern Straits
Pentlatch	Klallam
Sechelt	Nooksack
Squamish	Lushootseed
Halkomelem	Twana

III Tsamosan

Quinault	Upper Chehalis
Lower Chehalis	Cowlitz

IV Tillamook

V Interior Salish

Lillooet	Colville-Okanagan
Thompson	Columbian
Shuswap	Spokane-Kalispel-Flathead
	Coeur d'Alene

Geographically, this family covers an extensive area in the Pacific Northwest: southern British Columbia, Washington State, northern Idaho, western Montana and northwestern Oregon (see Czaykowska-Higgins and Kinkade 1998:2 for a detailed map). Pentlatch, Nooksack, Twana and Tillamook are no longer spoken, and many more of the Salish languages are near extinction.

The Nxaʔamxcin language, along with Colville-Okanagan, Spokane-Kalispel-Flathead and Coeur d'Alene, is part of the southern branch of the Interior Salish subdivision. Nxaʔamxcin is comprised of four dialects: Chelan,

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[1]For a general overview of the Salish family, see Thompson 1973, 1979a; Thompson and Kinkade 1990; Kinkade 1990a, 1992; Czaykowska-Higgins and Kinkade 1998; and Kinkade, Elmendorf, Rigsby and Aoki 1998.

[2]The Bella Coola and Tillamook languages are each considered to be separate subdivisions within the family.

Entiat, Wenatchee (Pesquous) and Moses-Columbia (Czaykowska-Higgins and Kinkade 1998:67). Ruby and Brown (1992) provide geographic information about the tribes of the same names. The Chelans, they state, "lived in north-central Washington east of the Cascade Mountains in the vicinity of the southern end of Lake Chelan" (p.17). "The Entiats, also known variously as the Sintiatqkumuhs and the Intietooks, lived mainly along the Entiat River. One Entiat band, the Sinialkumuhs, lived on the Columbia between the Entiat and Wenatchee rivers" (p.75). The Wenatchees "lived primarily in the Wenatchee River watershed and the area near its mouth and for a short distance up and down the Columbia River" (p.266). The Sinkiuse, or Moses, "lived primarily along the Columbia, [although] its members roamed a 5,000-square-mile area, mostly on the Columbia Plateau south and east of the Columbia River" (p.204). Today, the language is primarily spoken on the Colville Indian Reservation in north-central Washington State by approximately forty speakers who vary in fluency.

1.2 The Data

The Nxaʔamxcin data presented in this dissertation comes from three separate sources: (i) M. Dale Kinkade's files from the 1960's and 1970's which contain numerous dialogues and narratives along with independently elicited examples; (ii) Ewa Czaykowska-Higgins' field notes from the 1980's and 1990's which contain primarily independently elicited examples along with a lengthy narrative; (iii) my own field notes from the 1990's consisting of independently elicited examples. All of Kinkade's and Czaykowska-Higgins' examples cited in the dissertation contain the original record number from the source. The key to the record numbers is given in Appendix One. Examples not marked with a record number are from my own field sessions with Agatha Bart, Matilda Bearcub and Norine Smith.

The data found throughout this work is presented in a four part structure, illustrated below:

(1) line 1: phonological form
line 2: division of lexemes and morphemes
line 3: glossing of lexemes and morphemes
line 4: translation and record number

With respect to line 1, I have chosen to write the Nxa?amxcin examples throughout this dissertation in phonological form. This is necessary in order to maintain consistency, as many of Kinkade's and Czaykowska-Higgins' transcriptions are phonetic while my own are primarily phonological. Some consonant symbols have been changed to match the phonological system presented in section 4.1. It is generally assumed that schwa is not underlying in Nxa?amxcin, but in order to maintain consistency the following are represented in the data: (i) all transcribed root schwas; (ii) all bound stem schwas; (iii) all epenthetic schwas adjacent to glottals; and (iv) schwas resulting from the nasal to schwa shift. Excrescent schwas and most epenthetic schwas have been omitted from the data. I do include such phonological operations as the spreading of retraction and glottalization in the surface forms, even though these are generally not considered to be underlying. I have also taken the liberty in some cases to separate certain constituents in accordance with my analysis. For example, the imperative marker *ta?* is generally written as a suffix; however I analyze it as a clitic and thus write it as a separate element from its host.

In line 2 of the four-part structure, I use the symbol "+" for a clitic boundary; the symbol "•" for an infix boundary; and the symbol "=" for a bound stem (lexical affix) boundary. Translations in line 4 are directly from the source, unless in square brackets indicating some alteration on my part. As gender is not marked in Nxa?amxcin grammar, I have changed instances of "she" and "he" to "s/he" and likewise "her" and "him" to "her/him" in all directly elicited examples (but not in examples from stories and narratives as they are set in a context). While "it" can also be included in many of these cases, in others it may be prohibited on semantic grounds unfamiliar to me, so I therefore exclude it. Translations of ungrammatical examples marked by an asterisk appear in round brackets.

1.3 Outline of the Dissertation

This dissertation is very much a data-oriented as opposed to results-oriented piece of work which basically falls into two parts. The first part, chapters 2 and 3, provide background information to the second part, the grammatical sketch. Nxa?amxcin falls under the traditional label "polysynthetic" as words tend to be long and morphologically complex. As a result, understanding how words are put together in this language is relevant to essentially all aspects of its grammar. Thus, I begin by outlining the theoretical approach to word formation adopted in this work. A lexeme-based approach to word formation (Matthews 1972, 1991; Aronoff 1976, 1994; Anderson 1992; Beard 1995) has proved to have the best explanatory value in the case of Nxa?amxcin. Chapter 2 provides an introduction to Beard's (1995) Lexeme-Morpheme Base Morphology and a brief comparison of this lexeme-based framework with a morpheme-based approach like Lieber (1992). Note that it is not the purpose here to argue for the superiority of any particular theoretical viewpoint. I am incorporating a theoretical framework simply as a tool to facilitate a description of the language.

In chapter 3, I present an analysis of Nxa?amxcin word structure, specifically focusing on the concepts of root and lexeme. I argue for a *lexemic* (as opposed to *root*) stem domain in addition to a derivational and inflectional stem at the level of morphological word structure. I compare my analysis with that of Czaykowska-Higgins (1996, 1998), who proposes a morphological root domain. I then adopt Czaykowska-Higgins' analysis that the root is the primary domain at the level of phonological word structure.

Having established a theoretical framework and an analysis of the internal structure of words, I then turn to the second part of the dissertation, which is the grammatical sketch. In Chapter 4, I provide a brief introduction to Nxa?amxcin phonology. Following works by Czaykowska-Higgins and Kinkade, I discuss the segment inventory of the language, the status of schwa, various segmental processes, syllable structure and stress. In Chapter 5, I present a description of Nxa?amxcin syntax. I first briefly look at the question of whether or not lexical categories should be distinguished in Nxa?amxcin based on an ongoing debate in Salish linguistics. Assuming that verbs, nouns and adjectives are distinct

categories in Nxa?amxcin, I then turn to the syntax of noun phrases, simple clauses, relative clauses and fronting constructions.

The morphology of Nxa?amxcin is an extensive topic, and is divided here into three separate chapters. Chapter 6 is an overview of lexical operations in the language (i.e. derivational morphology). In this chapter, I address the categories of valence, voice, aspect, control, category-changing operations, locative, dimension (i.e. augmentative, diminutive), and relational. Chapter 7 is an overview of inflectional operations (i.e. inflectional morphology). Categories discussed are person, number and grammatical relation, viewpoint aspect, mood, temporal marking, negation, non-declarative speech (i.e. interrogative, imperative, prohibitive), and nominalization.

The focus of Chapter 8 is compounding, for which I distinguish three separate types in Nxa?amxcin. The first two types involve free stems only and are referred to as *aɬ*-compounds and unmarked compounds. I refer to the third type as bound stem compounds. This type of compounding is generally labelled lexical affixation in the literature. I enter into the debate over whether these bound stem constructions are syntactically engaged or formed by compounding, and I provide morphological and syntactic arguments in support of a compound analysis.

Chapter 9 provides a summary of this work.

Chapter Two

Introduction to Lexeme-Morpheme Base Morphology

2.0 Introduction

I have chosen to discuss the data presented throughout this work within a Lexeme-Morpheme Base Morphology (LMBM) framework. This theory, which views morphology from a lexeme-based as opposed to morpheme-based perspective, has been formulated by Beard (1995), and many aspects of his work are in line with other work that has been done on lexeme-based (or word-based) morphology (Matthews 1972, 1991; Aronoff 1976, 1994; Anderson 1992). The lexeme-based approach has recently been used in morphological analyses of two other Southern Interior Salish languages. Black (1996) investigates Spokane phonology and morphology constituent structure primarily within the LMBM framework, and N. Mattina (1996) analyzes aspect and category in Okanagan word formation from a lexeme-based perspective. It is not the purpose of this dissertation to argue for the superiority of LMBM over other theories of morphology. This would distract readers from the focus of the dissertation, which is language-centred as opposed to theory-centred. However, a theoretical framework can be a useful tool in describing a language, and I believe that Nxaʔamxcin's complex morphological system can best be described using the LMBM framework.

The present chapter provides an outline of the major assumptions of the LMBM framework, while also touching on the works of other lexeme-based proponents. Since many of the major works on morphology over the last century (both descriptive and theoretical) have come from a morpheme-based perspective, it would be useful to first address what exactly a morpheme-based approach to morphology is, and what are the major assumptions, theoretically speaking, within such a framework. The chapter is organized as follows: In section 2.1, I outline the major assumptions of a morpheme-based model using Lieber 1992 as an example. I then present an introduction to Lexeme-Morpheme Base Morphology and the major theoretical assumptions of this lexeme-based approach in section

2.2, highlighting where Beard's assumptions (and those of other lexeme-based proponents) diverge from a morpheme-based perspective. Finally, in section 2.3 I review some of the problems that have challenged morpheme-based theories, and discuss why these problems do not arise within the LMBM framework.

2.1 The Morpheme-Based Model

Morpheme-based approaches to morphology have been widely accepted in morphological theories since the early Structuralist views, and it is through this perspective that word-formation is generally taught in introductory linguistics courses, no doubt due to its conceptual simplicity. In this section I outline the major assumptions of a morpheme-based model and illustrate examples of word formation using Lieber's (1992) theory.[1]

It is only since Chomsky's 1970 landmark paper on nominalization that morphology has been recognized as an independent component of generative grammar. Before that time, morphology was generally subsumed under syntax or phonology. Since 1970, various theories of morphology have surfaced, some of which have been labelled "morpheme-based" approaches to morphology. These include works by Lieber 1981, 1992; Selkirk 1982; Scalise 1984; Sproat 1985; DiSciullo and Williams 1987; and Baker 1988, 1996. While these morpheme-based theories differ from each other in a number of ways, there are several underlying assumptions common to all that can be traced back to Bloomfield (1933). The first of these assumptions concerns minimal forms in grammar. From a morpheme-based perspective, there is only one type of minimal element in word formation and that is the morpheme. Using the English noun *bakers* as an example for illustration, there are three minimal elements, {*bake*, *-er*, *-s*}, all of which are necessarily of the same type element: the morpheme. Although *bake* is clearly an independent form in the language and *-er* and *-s* bound affixes, with respect to word formation each of these forms are considered to belong to one group. They are all minimal forms, hence they are all morphemes.

The next major assumption of a morpheme-based approach to word formation is that all morphemes constitute signs, meaning that all features of a

[1]See also Beard 1995 for a comparison of Lieber 1992 with LMBM.

morpheme (phonological, grammatical and semantic) are mutually implied. These features all function together as a unit, and this unit is identified with a particular concept. This is illustrated in the following examples for *bake* and *-er* respectively:

(1) a. { [beɪk] [+V] to cook food in dry heat } *phonological features* *grammatical features* *semantic features*

b. { [ər] N[V[ ]_] someone who does V } *phonological features* *grammatical features* *semantic features*

The phonological, grammatical and semantic features of the morphemes *bake* and *-er* are given in (1a) and (1b) respectively. The brackets show that these features form an indivisible set, and it is this group of features as a whole that constitutes the linguistic sign.

The final major assumption of a morpheme-based approach to word formation is that all morphemes are stored in the lexicon. Since it was stated above that both affixes and free forms are morphemes, it follows that both affixes and free forms are stored in the lexicon. Thus, each of the morphemes *bake* and *-er* would have their own entry in the lexicon.

The main point to be emphasized in this discussion is that free forms like *bake* and affixes like *-er* have essentially the same status in a morpheme-based model. Both are morphemes, both are linguistic signs, and both originate in the lexicon. In word formation there is only one kind of item, the morpheme, which is stored in one place, the lexicon. Thus, whether it is an independent stem like *bake* or a bound affix like *-er*, both are signs and both are stored in the same component.

Before moving on to a discussion of Lexeme-Morpheme Base Morphology, it would be useful for the sake of comparison to give a visual illustration of word formation within a morpheme-based theory. Lieber (1992) provides an excellent example as she clearly adopts all three of the above assumptions. Lieber (p.21) claims that "syntax and morphology are not separate

components of the grammar, either in the sense of being two separate 'places' where words and sentences respectively are derived, or in the sense of being two (at least partially) distinct sets of principles (Sproat 1985; Baker 1988[a])". Instead, she claims that both words and sentences can be formed within a single modular framework with the appropriate principles. The formation of words can be accounted for (with some modifications) within the X-bar framework proposed for the formation of clauses by Jackendoff (1977), Chomsky (1981) and Stowell (1981). The position of a word's head within this X-bar framework depends on the parameter selected by a particular language (see Lieber 1992, chapter 3). X-bar theory provides the modular framework for word formation, but it is not enough as Lieber (p.77) states:

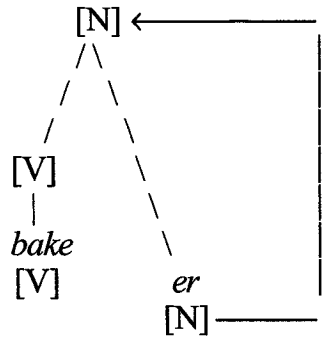
> [...] X-bar theory alone cannot account for everything that is relevant in the construction of complex words. X-bar theory determines the position of the head in words and sentences, but it says nothing about the actual mechanism that effects labeling of nodes within words, that is, the process by which categorial information and other features are projected up from lexical entries to produce fully labeled word structures.

In order for the appropriate features to be passed on from one node to another within the X-bar framework, Lieber proposes two distinct processes. The first, which is the one of most interest in this discussion, is *feature percolation.* This process allows for the morphosytntactic features of the head to "percolate" up to the dominant node. The second process, which I do not address here, is *inheritance,* which ensures that argument structures are passed on from one node to another.

This condensed discussion of Lieber 1992 should provide enough background to explain how a word like *bakers* is formed within this morpheme-based framework. In line with the major assumptions of a morpheme-based theory outlined above, Lieber assumes that the forms *bake, -er* and *-s* are all morphemes and that they all constitute linguistic signs, as indicated in (1). In addition, each of these forms has its own entry in the lexicon. Since all of these are considered to be signs, and signs are comprised of indivisible features, all idiosyncratic phonological, grammatical and semantic features are part of this entry.

First consider the formation of the word *baker*, which is comprised of the verb *bake* and the agentive suffix *-er*. Following Lieber's framework (see 1992, chapter 3), this formation would look (roughly) like the following:

(2)



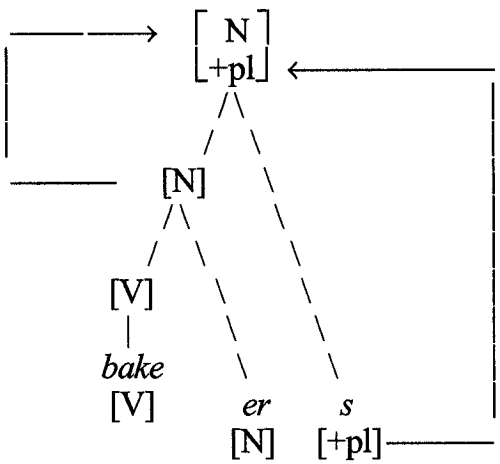
The diagram in (2) illustrates the combining of the morphemes *bake* and *-er*. The morpheme *bake* is of the lexical category V, and *-er* is of the category N. Assignment of heads within a word is parametrically determined; for English it is (generally) the rightmost element. This would indicate that *-er* is the head in (2). The lexical category features of *-er* are passed on to the higher node via the process of feature percolation, hence the dominant node marked is marked N indicating that the combined morphemes *bake* and *-er* are of the category N.

The above example contains an independent stem combined with a derivational affix. Lieber claims that the morphosyntactic features of derivational morphemes can percolate to the next highest node. Inflectional morphemes, however, do not contain full categorial signatures like derivational morphemes. Lieber (p.112) states that:

> Only stem, bound bases, and derivational affixes will have full categorial signatures. Inflectional affixes will be marked only with individual features for which they contain specified values. [...] Features from inflectional morphemes can never override features from their bases, but can only fill in values unspecified in the categorial signatures of their bases. Inflectional word formation is therefore **additive** in a way that derivational word formation and compounding are not. A corollary of this is that while derivational affixes may or may not be heads of their words, inflectional affixes will never be heads.

Now consider an example involving an inflectional affix:

(3)



The diagram in (3) illustrates the formation of *bakers* from the stem *baker*. The diagram indicates that the inflectional suffix *-s* contains the feature [+ plural], and is marked to attach to stems of the category noun. The stem *baker* does not contain the feature [+ plural] and, as a result, this feature is able to percolate to the dominating node. Inflectional morphology is not, by nature, category-changing. Thus, the category of the stem *baker* percolates to the dominant node of *bakers*, and the form remains a noun.

Now that we have seen a brief illustration of word formation using Lieber's (1992) morpheme-based theory of morphology, I turn to a discussion of Lexeme-Morpheme Base Morphology and indicate how the formation of the same word, *bakers*, would take place.

2.2 The Lexeme-Morpheme Base Model

As outlined in the previous section, the general assumptions in a morpheme-based model of word formation are: (i) the morpheme is the minimal element in word formation; (ii) the morpheme constitutes a linguistic sign; and (iii) all morphemes are found in the lexicon. Beard's (1995) theory of Lexeme-Morpheme Base Morphology, and other lexeme-based theories such as Aronoff 1976, 1994, and Anderson 1992, argue against all of these assumptions, as word formation is viewed in terms of two distinct entities: the morpheme and the lexeme. I will take these three assumptions as my focus of comparison between

the morpheme-based approach and LMBM. I then discuss the details of Beard's model referring occasionally to specific points from other lexeme-based theories.

LMBM theory differs from all three general assumptions of a morpheme-based theory, as we will see in section 2.2.1. First, Beard argues that the morpheme is not the minimal element in a grammar, but rather both lexemes and morphemes constitute minimal elements. The distinction between lexemes and morphemes correlates with open-classed and closed-class elements respectively. The lexeme is the minimal element within an open class while the morpheme is the minimal element within a closed class.

With respect to the second assumption, Beard claims that it is the lexeme and not the morpheme that constitutes a linguistic sign, the reason being that only the lexeme is comprised of mutually implied phonological, grammatical and semantic features. The morpheme is not considered to be an indivisible set of features, but is rather the phonological marking of a grammatical or semantic operation on a stem. The morpheme is comprised of phonological features only, not grammatical or semantic features.

Finally, Beard claims that only open-class items, i.e. lexemes, are contained in the lexicon. The operations involving grammatical features are found in the grammar, operations involving semantic features are found in the semantic component, and the morphemes themselves are stored in, or produced by rules of, the Morphological-Spelling Component. There are no morphological items and no morphological spelling rules in the lexicon.

The fact that LMBM differs on all three major assumptions of a morpheme-based theory is a preliminary indication that this theory takes a radically different approach to word formation than theories put forward by Lieber (1981, 1992), Selkirk (1982), Scalise (1984), Sproat (1985), DiSciullo and Williams (1987) and Baker (1988, 1996). In the following sections, I provide a condensed discussion of the mechanics involved with the LMBM framework.

2.2.1 Lexeme vs. Morpheme

At the core of LMBM theory is the fundamental distinction between lexemes and morphemes. Beard (1995:44) defines lexemes as "direct associations

of properly specified sequences of phonemes, grammatical features, and semantic intensions, that is, noun, verb, and adjective stems". In other words, the phonological, grammatical and semantic features of a lexeme are mutually implied and "form an integral unit at every stage of derivation. This prohibits the insertion of derivation material between them by any derivational rule" (Beard:57). All open-class items are lexemes, and a lexeme represents the base form of a word before any lexical or inflectional operations have taken place.

Returning to the example of *bake* in (1a), the lexical entry of this lexeme from an LMBM perspective would coincide with that of a morpheme-based approach as all of the lexeme's features are mutually implied. The example in (1a) is repeated below, as its representation within the LMBM framework is the same:

(4) **bake**

[beɪk]	*phonological features*
[+V]	*grammatical features*
to cook food in dry heat	*semantic features*

All of the features in (4)—phonological, grammatical and semantic—form an indivisible unit and, therefore, constitute a linguistic sign. Only lexemes are linguistic signs and, according to Beard, only lexemes are stored in the lexicon. Thus, we would expect to find only nouns, verbs and adjectives in the lexicon and not affixal material.

The term morpheme in LMBM theory has a completely different interpretation than that discussed for morpheme-based approaches in section 2.1. Beard's (1995, chapter 2) claim that lexemes and morphemes are two completely different types of elements stored in separate components is, in part, driven by the fact that they have such distinct properties. First, lexemes, i.e. open-class lexical items, are always phonologically specified. There are no "zero lexemes".[2] On the other hand, zero morphemes are not uncommon cross-linguistically. This leads into the next point. Bound-morphemes always presuppose lexemes and

[2]This statement is not without controversy. Beard refers to Mel'čuk (1979) and Anceaux (1965) for analyses of zero lexemes in Russian and Nimboran respectively.

never the other way around. Morphemes essentially modify the phonological representations of lexemes and therefore it is both logical and necessary that lexemes always precede any morphology. Third, while lexemes are open classes, affixes are always closed classes and never undergo the same lexical and inflectional operations as lexemes. And finally, lexemes are always listable items. They are never operations or rules like affixes.

Beard argues that morphemes, which are closed-class items such as bound affixes and clitics, are not indivisible units comprised of mutually implied phonological, grammatical and semantic features, as is assumed in morpheme-based theories of morphology. Rather, they are "modifications of the phonological form [...] of lexemes" (Beard:44). These modifications phonologically mark the addition of some grammatical and/or semantic feature to a stem by modifying the phonological form of a stem. Thus, the diagram given for *-er* in example (1b) is incompatible with the LMBM framework. The term morpheme refers only to the phonological features [ər], as shown in (5):

(5) **-ər**

{[ər]}	*phonological features*	(morpheme)
{N[V[ ]_]}	*grammatical features*	
{someone who does V}	*semantic features*	

As the individual curly brackets in (5) indicate, the suffix *-ər* is not comprised of indivisible features, as was the case for the lexeme *bake* in (4). As we will see in the following section, each of these features are associated with a separate component in the grammar and are distinct from each other. With respect to the term *morpheme*, it is indicated in (5) that the morphemic element is associated with the phonological features only. It does not refer to the grammatical or semantic features in (5), but rather signals that these features have been added to a particular stem.

Beard splits morphemes into two types: *bound grammatical morphemes* and *free grammatical morphemes*. The former he defines as the "modifications of the phonological form [...] of lexemes" (p.44). This encompasses prefixation,

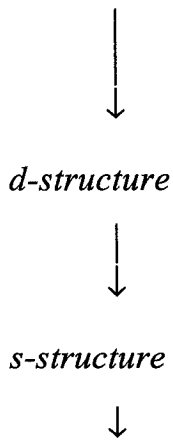
suffixation, infixation, reduplication and other phonological processes performed on a stem. Beard defines free grammatical morphemes as "independent items requiring syntactic positions, which cannot be assigned by the lexicon. [...] [They] must also be stored in an autonomous morphological component but somehow distinguished from bound morphemes" (p.44). These include items such as clitics, prepositions and articles.

2.2.2 Lexical and Inflectional Operations

Many linguists follow the SPLIT MORPHOLOGY HYPOTHESIS (a term coined by Perlmutter (1988)) in assuming that derivational and inflectional morphology take place at different levels in the grammar, respectively the lexicon and syntax (Matthews 1972; Aronoff 1976, 1994; Anderson 1982, 1992). Numerous arguments have been put forward throughout the literature in support of a distinction between derivation and inflection. The major defining points between derivational and inflectional morphology are outlined in section 3.4.2.

Beard (1995) also views derivation and inflection as taking place at different levels in the grammar, but he claims that "bound derivational morphemes do not differ in any significant respect from inflectional ones" (p.46). Beard views derivation and inflection in terms of operations on a stem and labels these "lexical derivation" and "inflectional derivation" respectively. In order to avoid any confusion with the traditional use of the term "derivation", I will use the terms *lexical operation* for Beard's "lexical derivation" and *inflectional operation* for his "inflectional derivation". Grammatical features are realized through lexical and inflectional operations. The component responsible for these operations is either the Lexicon (lexical operations) or the Syntax (inflectional operations). (The Semantics component is responsible for any semantic operations, but I will not address this aspect of word formation in this work.) A partially constructed representation for a LMBM model of grammar is given in (6) (Beard 1995:45 with some modifications and omissions):

(6)



base rules
lexical insertion
lexical operations (but not affixation)

d-structure

inflectional operations (but not affixation)
movement rules

s-structure

If we apply the schema in (6) to the example *bakers*, the lexeme *bake* is selected from the lexicon and first undergoes a lexical operation in which the grammatical feature [+N] is added. There is no phonology added at this point, only the grammatical feature. Once all lexical operations have been completed, the form reaches the level of D-Structure. It then undergoes an inflectional operation in which the feature [+pl] is added. Again, only this grammatical feature is added, and not any phonology. Once all inflectional operations have been completed, the form reaches the level of S-Structure. At this point the list of grammatical features for *bakers* is complete and no further operations on the grammatical features take place. I will illustrate the lexical and inflectional operations on the grammatical features of the lexeme *bake* as follows:

(7)

[beɪk]
[+V]

lexical operations

[beɪk]
[+V] + N[V[ ]]

inflectional operations

[beɪk]
[+V] + N[V[ ]] + [+pl]

While lexical and inflectional operations take place in different components of the grammar (the lexicon and the syntax respectively), Beard argues that the resulting bound morphemes do not differ in any significant way. The phonological marking of grammatical operations are produced by a single component, regardless of whether the operations are lexical or inflectional. Beard refers to this as THE INTEGRATED SPELLING HYPOTHESIS, and he labels the component responsible for phonological operations the *Morphological-Spelling Component.*

2.2.3 Morphological Spelling Component

The actual realization of morphemes in LMBM is termed *morphological spelling.* Beard (1995) makes a very clear distinction between phonological affixation and lexical/inflectional operations. This distinction is referred to as the SEPARATION HYPOTHESIS, which "implies that morphological spelling has no access to the internal workings of [lexical and inflectional operations]; it operates in true modular fashion, solely on the output of [these] rules" (Beard 1995:50). These spelling operations simply signify that a lexical or inflectional operation has taken place. The outcomes of these spelling operations, such as affixes and phonological modifications of stems, are *morphemes.* Morphemes are realized by a distinct morphological component, referred to as the Morphological Spelling Component or MS-component. The MS-component operates on a stem, spelling out operations concatenatively. It must be able to access the grammatical, semantic and phonological representations of the stem. It can operate on the phonological representation at the phonological level; however it cannot operate on the grammatical and semantic representations. It can only read them. If we add on to Beard's model presented in (6), morphological spelling operations occur after all lexical and inflectional operations have taken place (Beard 1995:45 with some modifications and omissions):

(8)

↓	base rules lexical insertion lexical operations (but not affixation)
d-structure	
↓	inflectional operations (but not affixation) movement rules
s-structure	
↓	
morphological spelling *phonology*	(affixation, reduplication, etc.)

Returning to the example *bakers*, in the previous section it was noted that at the S-Structure level, the lexeme *bake* had undergone a lexical operation and an inflectional operation. The next step after S-Structure is morphological spelling, which is realized through the MS-Component. The phonological, grammatical and semantic features of the lexeme are never separated during any stage of word formation since the lexeme *bake* is a linguistic sign. However each of these features can be accessed individually for various types of operations. The lexical and inflectional operations that take place on *bake* operate only on the grammatical features of the lexeme. The morphological forms marking these operations are realized after S-Structure when morphological spelling takes place, as shown in (9):

(9)

[beɪk]
[+V]

↓ lexical operations

[beɪk]
[+V] + N[V[ ]]

↓ inflectional operations

[beɪk]
[+V] + N[V[ ]] + [+pl]

↓ morphological spelling operations

[beɪk] + [ər]

↓

[beɪkər] + [z]

↓

[beɪkərz]

While the MS-Component is able to read the results of the lexical and inflectional operations, this component cannot access the grammatical features of the form. It can determine that a lexical operation with the feature [+N] has taken place, and subsequently modifies the stem of the lexeme *bake* to indicate that such an operation has taken place. In this case, the suffix [ər] is added to the stem. Likewise, the MS-Component determines that an inflectional operation with the feature [+pl] has taken place and the stem [beɪkər] is modified with the addition of the suffix [z], resulting in [beɪkərz].

2.3 Why Lexeme-Morpheme Base Morphology?

In the previous two sections I discussed and compared both morpheme-based and lexeme-based approaches to morphology. The reason for the comparison was, in part, to provide the background for this section where I discuss one major advantage of LMBM over morpheme-based theories.

There are a number of cross-linguistic morphological patterns that are problematic for a morpheme-based approach to morphology. What is often found when examining the morphology of a particular language is that form and function do not always show a one to one correspondence. For example, in both English and Nxa?amxcin we can find forms where more than one morpheme is linked to a single function. The plural form of *child* in English is one example. Two separate processes take place when this form is marked plural. First, there is a vowel change from [aɪ] to [ɪ]; second, there is the addition of the suffix *-ren*, resulting in [čɪl̓jrən]. The following Nxa?amxcin example also illustrates this kind of morphological asymmetry:

(10) łəx^{w}míntn
łəx^{w}-min-tn
sew-INS-INS
thread Kinkade 1981a:20

Both *-min* and *-tn* are glossed as instrumental suffixes. In (10) we have one function, instrumental, linked with two forms, *-min* and *-tn*.

Conversely, it is possible for one morpheme to be linked to a number of different functions. In the Nxa?amxcin example in (11), person, number and grammatical function can be represented by a single form.

(11) ʔəm**cinn**
ʔəm-t-**si-nn**
feed-TR-2SO-1SS
I feed you. 90.N206

The suffix *-si* represents (i) 2nd person, (ii) singular and (iii) object function, while the suffix *-nn* represents (i) 1st person, (ii) singular and (iii) subject function, illustrating that multiple functions can be associated with one form.

Another problem for morpheme-based theories is *zero morphology*: meaning is present but there is no corresponding form. For example, some English resultative nominalizations require affixation while others do not:

(12) *Resultative Nominalization*

Affixed		Unaffixed	
a paint-ing	a state-ment	a slice	
an etch-ing	a declar-ation	a roll	
a carv-ing	a confess-ion	a find	Beard 1995:26

In (12), 'slice', 'roll' and 'find' are nominalized without any overt marking to represent this function. The most common occurrence of zero morphology in Nxaʔamxcin is the 3rd person absolutive. 3rd person intransitive subjects and transitive objects are never overtly marked, as shown in the following examples:

(13) łáqqlx
ła•q•qlx
sit(sg.)•OC•*sit(sg.)*-(3AB)
S/he sat down real fast. 89.64

(14) wiʔás ʔəmn
ʔəm-t-n
just got through doing *feed*-TR-(3AB)-1SS
I already fed her/him. 90.115

Example (13) contains an intransitive predicate with a third person subject. While the grammatical features for third person intransitive subject are interpreted in this construction, there is no overt phonological marking to indicate that the subject is third person. Example (14) contains a transitive predicate with a third person object. Again, the grammatical features are present but there is no phonology present to indicate third person transitive object.

Conversely, it is possible for a form to be present without any associated meaning. Such forms are referred to as *empty morphology*. In the following

English examples the suffix *-al* appears optionally and has no semantic or grammatical relevance:

(15) dram-at-ic(al)
syntact-ic(al)
class-ic(al) Beard 1995:30

histor-ic(al)
analyt-ic(al)
poet-ic(al) Leslie Saxon:p.c.

The same is true for the *-x* of *kicx* found in the Nxa?amxcin examples in (18) and (19):

(16) kícc
ki•c•c
arrive•OC•*arrive*-(3AB)
someone came EP4.61.4

(17) kícłn
kic-łt-n
arrive-APP-(3AB)-1SS
I brought it to him. JM3.125.3

(18) kn kícx
1SS + *arrive*
I got here. I arrived. JM3.4.8

(19) kícxłn
kicx-łt-n
arrive-APP-(3AB)-1SS
I delivered it to him. W.7.263

Numbers (16) and (17) are, respectively, intransitive and applicative examples of the predicate *kic* 'arrive'. Numbers (18) and (19) also contain intransitive and applicative examples of the predicate 'arrive' but this time with an unexplained *-x,* resulting in the form *kicx.* To my knowledge, this *-x* does not contribute any grammatical or semantic features to the form, and I therefore assume it is an instance of empty morphology.

The above examples illustrate a number of possibilites of morphological asymmetry: (i) more than one morpheme corresponding to one meaning; (ii) one

morpheme corresponding to more than one meaning; (iii) a meaning but no corresponding morpheme; (iv) a morpheme but no corresponding meaning. The problem with morpheme-based approaches in these cases is tied in with the general assumption that morphemes are assumed to be linguistic signs. If morphemes are comprised of indivisible units of phonological, grammatical and semantic features, how does one account for the fact that certain features do not show a one-to-one correspondence or that some features are absent altogether? As Beard (1995) points out, it is very difficult to do this without resorting to additional stipulations.

Morphological asymmetry is not a problem for Beard's LMBM theory. In fact, as Beard notes, such lack of one to one correspondence is predictable in his theory given that phonological, grammatical and semantic features are treated separately. Take the example where more than one morpheme is linked to a single meaning, as in (10). In LMBM this is simply a case of the morphological spelling component using two suffixes to mark one lexical/inflectional operation. Conversely, examples like (11), where one morpheme is linked to multiple meanings, involve one spelling operation used to mark more than one derivational/inflectional operation.

Zero morphology and empty morphology can also be accounted for within the LMBM framework. Zero morphemes, like those found in (12), (13) and (14), are instances of lexical/inflectional operations that do not trigger morphological spelling operations. Empty morphemes, on the other hand, are morphological spelling operations that do not mark any lexical/inflectional operations.

Morpological mismatches like those discussed above are found throughout Nxa?amxcin. If one analyzes Nxa?amxcin word formation from a morpheme-based perspective, these mismatches must be accounted for. Because these mismatches fall naturally within LMBM theory, I have chosen to analyze Nxa?amxcin word formation within this framework.

2.4 Summary

The various operations of Nxa?amxcin word formation discussed throughout this work will be analyzed within the Lexeme-Morpheme Base

Morphology framework. In this chapter I presented the major points central to LMBM theory. This includes the fact that LMBM makes a clear distinction between lexemes and morphemes, the former being linguistic signs and the latter being phonological operations on a stem. These phonological operations mark operations of word formation that add grammatical and semantic features to a stem. The fact that LMBM separates phonological, grammatical and semantic features in operations of word formation provides explanatory power with respect to morphological asymmetry. The lack of consistent one-to-one correspondence between individual phonological operations and grammatical/semantic operations is neatly attributed to the fact that each of these levels — phonology, grammar and semantics — can be accessed individually without requiring representation on the other levels.

Chapter Three

Levels of Word Structure

3.0 Introduction

In this chapter, I propose that there are three levels of morphological word structure in Nxa?amxcin: the *lexemic stem*, the *derivational stem*, and the *inflectional stem*. This is in contrast to Czaykowska-Higgins' (1996, 1998) analysis of three separate morphological structures in Nxa?amxcin word formation. In the discussion to follow, I first present Czaykowska-Higgins' three-part phonological and morphological structure followed by my own three-part morphological structure, arguing for a lexemic stem as the primary level of morphological structure as opposed to the root. I then adopt Czaykowska-Higgins' analysis that the root is the primary level of phonological structure based on evidence that certain spelling operations specifically target the root as opposed to the lexemic stem. Finally, I outline the criteria I use to determine which operations take place at the derivational stem level and which at the inflectional stem level.

3.1 Czaykowska-Higgins' Analysis of Nxa?amxcin Word Structure

In her 1996 and 1998 papers, Czaykowska-Higgins investigates the phonology-morphology interface in Nxa?amxcin "by analyzing the morphological constituent structure and its interaction with phonology" (1998:153). She determines that there is a three-part phonological and morphological structure to Nxa?amxcin words, illustrated in (1) and (2) respectively:[1]

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[1]Glosses for Czaykowska-Higgins' abbreviations are as follows:

ASP = aspect	LS = lexical suffix	RED = reduplication
ITR = intransitive	O = object	S = subject
LOC = locative	PA = primary affix	TR = transitive

(1) ***Phonological Structure***

$$[_{PW}\ \text{ASP LOC RED}\ [_{PS}\ [_{PR}\ \sqrt{}\text{ROOT RED}]_{PR}\ \text{PA LS LS}\ \left\lceil \begin{matrix}\text{TR O S}\\ \text{ITR ASP}\end{matrix}\right\rfloor\ ]_{PS}\ ]_{PW}$$

(2) ***Morphological Structure***

$$[_{MW}\ \text{ASP}\ [_{MS}\ \text{LOC RED}\ [_{MR}\ \sqrt{}\text{ROOT}]_{MR}\ \text{RED PA LS}]_{MS}\ \text{LS}\ \left\lceil \begin{matrix}\text{TR O S}\\ \text{ITR ASP}\end{matrix}\right\rfloor\ ]_{MW}$$

Czaykowska-Higgins 1998:154

In the structures in (1) and (2) there are three separate domains: a root domain, a stem domain, and a word domain. With respect to the phonological structure in (1), the root domain includes root and the $-C_2$ and $-C_1VC_2$ reduplicative suffixes.[2] The phonological stem contains the phonological root and all remaining suffixes, and the phonological word contains the phonological stem and all prefixes. The morphological domains in (2) are not isomorphic with the phonological domains in (1). The morphological root is comprised of just the root. The morphological stem domain encompasses locative prefixes, reduplicative affixes, the morphological root, primary affixes[3] and some uses of lexical suffixes. The morphological word includes the morphological stem and the remaining affixes. (Note that the transitive, object and subject suffixes are in complementary distribution with the intransitive and aspectual suffixes.)

I discuss Czaykowska-Higgins' arguments for her divisions in both the phonological and morphological structures below. While it is the latter that is of primary interest in this work, I include a discussion of Czaykowska-Higgins'

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[2]Czaykowska-Higgins refers to the C_2-reduplicative morpheme (i.e. the 'out-of-control' marker) as a suffix, although it is analyzed as an infix operating from the left edge of the root in Willett and Czaykowska-Higgins 1995 and Czaykowska-Higgins and Willett 1997. I make the latter assumption in section 6.4.1.

[3]The term *primary affixes* refers to the morphemes marking the inchoative, stative and autonomous (referred to as middle voice in this work) categories.

phonological constituents as my own analysis of Nxa?amxcin morphological structure supports Czaykowska-Higgins' claim that the phonological and morphological constituents are not isomorphic.

3.1.1 Phonological Structure

Czaykowska-Higgins uses the facts surrounding both retraction and stress assignment to determine the boundaries of phonological structure illustrated in (1), claiming that three distinct constituents can be distinguished. First, she isolates the phonological root domain, stating (1998:175) that the rules governing retraction within the root are different from those governing prefixes and suffixes. Therefore, with respect to retraction, the root should be considered a separate domain from the rest of the word. However, Czaykowska-Higgins does include the reduplicative -C_1VC_2 suffix within the phonological root domain since any retracted segments within this suffix may in fact be a result of copying segments that have already been retracted within the root. In addition, Czaykowska-Higgins (1998:177) notes that when the reduplicative C_1VC_2-suffix is affixed to a root, it "does not alter the stress properties of the Root, and therefore stress is assigned in the word as if the reduplicative suffix were not there".

The phonological stem, which contains the phonological root and all remaining suffixes, is distinguished from the phonological word in that prefixes are excluded. The boundaries of these domains have, like the phonological root, also been established based on the properties of retraction and stress assignment. Czaykowska-Higgins first points out (1998:178–179) that prefixes are subject to optional regressive retraction while suffixes are subject to generally non-optional progressive retraction. This suggests that prefixes and suffixes are each contained within separate domains. Czaykowska-Higgins also points out that stress-assignment takes place within the domain of the phonological root and the following suffixes, and is never assigned to prefixes. This indicates that the phonological root and subsequent suffixes should be considered a single domain distinct from the prefixes. Thus, Czaykowska-Higgins includes all suffixes along with the phonological root as part of the phonological stem, which itself combines with the prefixes to form the phonological word.

3.1.2 Morphological Structure

With respect to the morphological structure in (2), Czaykowska-Higgins presents arguments to support her analysis of a morphological root, stem and word level. She claims that the morphological root can be isolated as an independent level based on the fact that certain affixes target the root only. In addition to the morphological root, Czaykowska-Higgins argues for the existence of two more constituents: the morphological stem and the morphological word. She claims (1998:171) that the morphological stem "consists of all morphology which is not relevant to the syntax and which represents the lexical content of a Columbian word". The morphological stem contains the locative prefixes, reduplicative affixes, primary affixes, and the *nonreferential* uses of lexical suffixes. Czaykowska-Higgins considers all of these morphemes to be lexical, stating (1998:159–160) that "[l]exical morphemes are those which are not in any way directly relevant to the syntax; this class includes some morphology that is often referred to as derivational". The morphological word, on the other hand, contains morphemes that are of syntactic relevance. These include the aspectual affixes, object and subject markers, transitive and intransitive suffixes, and the *referential* uses of lexical suffixes.

The division between the morphological stem and the morphological word marks a contrast between two separate uses of lexical suffixes: nonreferential and referential respectively. For the first type, which appears inside the morphological stem domain, the lexical suffixes "play no role in the syntax but instead serve to specify or extend the lexical meaning of the Root to which they are affixed" (1998:164). The referential lexical suffixes, which appear outside the morphological stem, are considered to "function as morphosyntactic objects" in that they "seem to satisfy an internal argument of the root and to have meanings which are fairly concrete or referential" (1998:164).

Czaykowska-Higgins points out that the two functions of lexical suffixes suggest that a lexical vs. grammatical (or morphosyntactic) distinction may be more relevant in an analysis of the morphological structure of Nxaʔamxcin

words, as opposed to a derivational vs. inflectional distinction.[4] The division between lexical and grammatical/morphosyntactic morphemes in word formation marks the boundary between the morphological stem and the morphological word in the structure in (2). Czaykowska-Higgins defines morphosyntactic and lexical morphemes as follows:

(3) Morphosyntactic morphemes
are relevant to the syntax; that is, they
i. exhibit inflectional (configurational, agreement, inherent, or phrasal) properties
or ii. reflect the syntactic frame or argument structure of a stem

Lexical morphemes
change or extend the lexical meaning of a stem

Czaykowska-Higgins 1998:159

Czaykowska-Higgins makes it clear that her use of the term "morphosyntactic" has much broader scope than that of "inflectional". She writes (1998:159), "[t]he morphosyntactic category as I am defining it includes morphemes that reflect what are traditionally considered to be inflectional properties such as case, number, gender, and aspect, but also includes morphemes that play some part in determining or reflecting the syntactic frame or the argument structure of a Root. In other words any entity that plays a role in the syntax is morphosyntactic, whether that role is inflectional or functional". In effect, Czaykowska-Higgins argues that a derivational-inflectional distinction like that defined in Anderson 1982, 1988 cannot account for the dual behaviour of the lexical suffixes, thus, a lexical-grammatical distinction has more explanatory value in this case.[5]

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[4]Czaykowska-Higgins notes that the order of morphemes also supports a lexical vs. grammatical/morphosyntactic distinction.

[5]Rice (2000) also takes an alternate view in her morphological analysis of Athapaskan verbs. Instead of a derivational vs. inflectional distinction, Rice distinguishes between lexical items and functional items. The former covers items that are usually labelled derivational, while the latter includes some items that have been considered derivational and others that have been viewed as inflectional.

3.1.3 Implications of Czaykowska-Higgins' Analysis

Czaykowska-Higgins highlights two implications of her analysis for a theory of grammar. First, the results of her investigation into morpheme boundaries in Nxa?amxcin suggest that "the salient distinction in Columbian is not between derivation and inflection [...], but is rather a distinction between lexical and grammatical—[...] morphosyntactic—word formation" (1998:154). Second, the fact that the phonological and morphological domains are not isomorphic, as can be seen in (1) and (2), "presents clear evidence that morphology and phonology are not ordered in the same component of grammar" (1998:154).

The remainder of this chapter focuses primarily on the morphological domains found in Nxa?amxcin word formation with a brief look at the phonological status of the root. In the following section I propose an analysis of morphological domains that differs from the one proposed by Czaykowska-Higgins in (2). I adopt, however, Czaykowska-Higgins' claim that the root is the primary level of phonological structure in Nxa?amxcin. My analysis supports Czaykowska-Higgins' claim that the phonological and morphological domains in Nxa?amxcin are not isomorphic.

3.2 An Alternate View of Word Formation in Nxa?amxcin

As just discussed, Czaykowska-Higgins (1996, 1998) claims that three separate domains can be identified in Nxa?amxcin morphological structure. These are the morphological root, the morphological stem (which contains the root and all lexical morphology), and the morphological word (which contains the stem and all morphosyntactic morphology). In this section I suggest that the following three domains be recognized:[6]

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[6]Glosses for the abbreviations are as follows:

ASP = aspect
CTR = control
DIM = dimension
DIR = directional
GR = grammatical relation
NM = nominalization
NUM = number
PER = person
POS = positional
PS = possessive
RL = relational
VAL = valence
VC = voice

(4) ***Lexemic Stem***

$[_{LX}\,(Y)\ \sqrt{}ROOT\ (Z)\ ]_{LX}$

(5) ***Derivational Stem***

$[_{DS}$ NM DIR POS *ASP DIM CTR ASP* $[_{LX}\,(Y)\ \sqrt{}ROOT\ (Z)\ ]_{LX}$ *DIM* ASP CTR VC RL VAL VC NM $]_{DS}$

(6) ***Inflectional Stem***

$$[_{IS}\ PS\ MOD\ ASP\ NM\ [_{DS}\ [_{LX}\,(Y)\ \sqrt{}ROOT\ (Z)\ ]_{LX}\ ]_{DS}\left\{\begin{matrix}\text{GR-PER-NUM}\\ \text{ASP}\\ \text{PS}\end{matrix}\right\}\ ]_{IS}$$

The category labels in (5) and (6) indicate the order in which affixes produced by the morphological spelling component appear. Those in italics represent reduplicative and/or infixal spelling operations. Grammatical relation-person-number, (suffixal) aspect, and (suffixal) possessive marking are each placed on separate levels in (6) as they are mutually exclusive.

If we compare the notationally expanded structure in (4) to (6) with Czaykowska-Higgins' in (2), we see that these analyses do not share an identical domain.[7] In the sections to follow, I adopt Czaykowska-Higgins' claim that the root must be viewed as an independent phonological domain in Nxa?amxcin word formation. With respect to morphological structure, however, I propose an alternate analysis. First, I suggest that a lexemic stem domain be recognized as opposed to a root domain. This lexemic stem contains the phonological representation of a lexeme, in essence the phonological root plus any reanalyzed morphology. I subsequently maintain, following Czaykowska-Higgins, that a root stem must be recognized at the phonological level. I then compare my

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[7]The terminology used for the lexical and inflectional affixes in this dissertation differs somewhat from the terminology used in the work of Czaykowska-Higgins. For explanation of the terms used in this dissertation, see particularly chapters 6 and 7.

derivational and inflectional stem levels with Czaykowska-Higgins' morphological stem and morphological word. In choosing to observe the derivational vs. inflectional distinction as opposed to Czaykowska-Higgins' lexical vs. morphosyntactic distinction, the proposed division between derivational and inflectional categories is strikingly different from that between Czaykowska-Higgins' lexical and morphosyntactic categories. I provide a list of cross-linguistic criteria used to determine if an operation is derivational or inflectional, and I use these criteria to support the derivational and inflectional stem levels proposed in (5) and (6).

3.3 Root vs. Lexemic Stem

I have assumed in (4) that the primary level of morphological word structure is the lexemic stem. Such a stem comprises the phonological features of a lexeme, as defined in section 2.2.1. As indicated in (4), this lexemic stem contains at the very minimum a root, which has traditionally been treated as the primary level of morphological word structure in the Salish family. Before delving into reasons why I choose the lexemic stem over the root as the primary level of structure, it is important to establish clearly the difference between the two.

Aronoff (1994:5–6) claims that the term *root* has had a number of different uses in the linguistic literature in addition to its traditional use. In this work I adopt Aronoff's (1994) definition of root, which appears to be in line with traditional views. According to Aronoff (p.40), "roots are purely sound forms [...] one might say that *root* [...] abstracts away from all morphology. The most important thing about roots [...] is that they be morphologically unanalyzable. A root is what is left when all morphological structure has been wrung out of a form."

The diachronic root shape for the Salish family is CVC (Thompson 1979a) and this is the canonical root shape for Nxa?amxcin. While the vast majority of roots are of the form CVC, other shapes are possible. Czaykowska-Higgins

(1993a) lists the following root types found in the available data on Nxaʔamxcin:[8]

(7) ***Root Types found in Nx***

2 - C Roots		3 - C Roots				4 - C Roots	
CVC	~550	CVCC	92	CVCVC	15	CCVCC	4
CəC	~650	CəCC	87	CəCVC	37	CəCVCC	4
CCV	2	CCVC	19	CVCəC	4	CVCCVC	4
CVCV	10	CCəC	4	CəCəC	4	CəCCVC	3
CəCV	4			CVCCV	1	CəCCəC	3
						CVCCəC	15
						CVCVCVC	5

Czaykowska-Higgins 1993a:219

Looking at these forms, we see that an overwhelming majority are of the shape CVC (schwa inclusive). This consistency in shape no doubt largely contributes to the fact that the root can be easily isolated in a word and has a history of being viewed as the primary morphological element within morpheme-based analyses of Salish languages.

The lexemic stem, on the other hand, is very inconsistent in shape. This stem is the phonological base of a lexeme. It may comprise simply a root, as in (8a), or a root plus any one of a number of reanalyzed morphemes, as in (8b):

(8) ***Lexemic Stems***

a. <u>Simple Root</u>
$[_{LX}\ \sqrt{ROOT}\ ]_{LX}$

b. <u>Root Plus Reanalyzed Morphology</u>
$[_{LX}\ Y\ \sqrt{ROOT}\ Z\ ]_{LX}$

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[8]Czaykowska-Higgins distinguishes between schwa and the full vowels for the purposes of her analysis of stress assignment. Since this distinction is not relevant to my own work, I use the abbreviation CVC generically in this work to include both full vowels and schwa.

The additional segments in (8b) have synchronically become part of the lexeme's phonological representation. These segments can appear at the left or right edge of the root, or within the root itself.

In the following section I outline reasons why the lexemic stem should be viewed as the primary level of morphological structure in Nxa?amxcin as opposed to the root.

3.3.1 The Lexemic Stem

The need for recognizing a lexemic stem has been put forward by a number of Salishanists working in the area of word formation.[9] Hess (1993:113), in his analysis of Lushootseed verb stems, writes:

> The root is easily discernible in the vast majority of Lushootseed verbs; however, it is the stem and not the root that is the basic descriptive unit of that verb. The descriptive primacy of the stem has gone unnoticed for many years due to the salience of the root (almost always CVC) which attracted (or distracted) the researchers' attention and because several stem classes turned out to have identical shapes in most utterances effectively camouflaging significant differences among them.

N. Mattina (1996) follows Hess's approach in her study of word formation in Okanagan, stating (p.15–6):

> Because of the importance of the canonical (C)CVC(C) shape in defining Salish roots, we cannot equate the Salishan *root* with the general term *lexeme*, as we can in many other languages. The most obvious reason for this is that there are many lexemes that do not have the canonical shape of a root. These are forms that are wholly or partially unanalyzable by speakers, but which speakers nevertheless recognize as words.

While the phonological representation for many Nxa?amxcin lexemes is the root itself, for some lexemes this is not the case. There are numerous examples in Nxa?amxcin whereby a root and some additional morphology are reanalyzed. These additional reanalyzed segments were at one time prefixes, suffixes, infixes, or segments resulting from phonological operations such as reduplication, which cooccurred with a particular root. As Black (1996:236) notes in her discussion of

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[9]Michelson's 1990 analysis of Oneida also acknowledges the need to recognize such stems in an analysis of word formation.

Spokane morphology, "[t]he process of reanalysis is limited to the extent that forms are reanalyzed only on analogy with an existing morphological structure".

Bybee (1985:88) claims that "[t]wo absolute determinants of autonomy are semantic and morphophonemic unpredictability. If a word is not derivable by general semantic, morphological and phonological rules from some other word or stem, it must have its own lexical entry and be autonomous." It is these autonomous forms that are found at the lexemic stem level. In the following sections I discuss three reasons why this level should be recognized in Nxa?amxcin word formation. A lexemic stem level would account for (i) the semantic noncompositionality of certain forms; (ii) the consistent cooccurrence of certain morphemes and roots; and (iii) the appearance of morphemes in unusual positions.

3.3.1.1 Noncompositional Semantics

There are a number of Nxa?amxcin stems for which the combined semantics of the root and morphemes do not reflect the interpretation of the form as a whole. In other words, the meaning of the stem cannot be derived from the combination of its parts. From a semantic perspective the stem is noncompositional. Some examples of this type of stem are given in (9) to (11):

(9) kn c-**nak'ərm**
1SS + DIR-*swim*
I swam back across. Y14.166

(10) sac**nk^{w}nám**x
sac-**nk^{w}anam**-mix
IM-*sing*-IM-(3AB)
S/he is singing. EP4.56.12

(11) **nt'əl'ána?**
wolf Kinkade 1981a:95

Each of the above examples contain a lexemic stem within which a prefix, a root and a suffix can be recognized. These roots and affixes are not specific to these stems as they also appear elsewhere. Consider first example (9) which contains the stem *nak'ərm-* 'swim'. In this form we can identify the prefix *na-* 'in', the

root √k'ər 'cut', and the suffix *-m*, ubiquitously glossed as middle voice throughout the Salish literature. This stem is semantically noncompositional as we cannot derive the meaning 'swim' from the individual semantics generally associated with its parts ('in', 'cut' and middle voice). Example (10) presents a similar case. The stem *nkʷnám-* 'sing' appears to be comprised of the prefix *n-* 'in', the root √kʷan which means 'grab', and the suffix *-am* which could be glossed as middle voice.[10] Again, the combined semantics do not reflect the actual meaning of this stem. In example (11), *nt'əl'ána?* 'wolf', we can identify the prefix *n-* 'in', the root √t'əl' 'tear', and the bound stem *=ána?* 'ear'. The meaning 'wolf' cannot be systematically derived in this case. A learner hearing this word for the first time would not be able to determine that the meaning is 'wolf' based solely on the semantic sum of its parts. According to Bybee (1985:88) this unpredictability of meaning is an indication that the form is autonomous and must have its own lexical entry.

As the examples in (9) to (11) have shown, forms that appear to be morphologically compositional are not necessarily semantically compositional. Because stems like *nak'ə́rm-* 'swim', *nkʷnám-* 'sing' and *nt'əl'ána?* 'wolf' contain more than the basic root, but do not involve any synchronic derivational or inflectional operations, the root cannot be the primary level of morphological structure in these words.

3.3.1.2 Cooccurrence of Morphemes and Roots

There are a number of roots in Nxa?amxcin which, at the synchronic level, never appear independently of certain affixal material or bound stems. Because these roots cannot be separated from these additional phonological segments, these segments must be included as part of the lexeme's phonological representation. Some examples are given in (12) with suggested diachronic analyses:

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[10]While Kinkade (1983a:9) analyzes this root as ending in a stressed vowel (√kʷná), I assume that this form involves the root √kʷan followed by the anomalous suffix *-am*, which marks the middle voice category for this root alone as opposed to the usual *-m* suffix. I discuss this further in section 6.2.2.1.

(12) a. txət' 'take care of, keep'
(t- locative, √xət' c.f. Thompson √xə̓ƛ̓' 'care for')[11]

b. k'^{w}u?ɬ 'end'
(-?- inchoative, √k'^{w}uɬ '?')

c. məx^{w}t 'laugh'
(√məx^{w} '?', -t stative)

d. y'aq'lx 'peek'
(√y'aq' '?', -ilx middle)

e. ɬət'p 'bounce, jump'
(√ɬət' from Proto-Salish * ɬat' 'jump, hop, skip', -p inchoative)[12]

f. t'əq'^{w}cín 'holler, shout'
(√t'əq'^{w} '?', =cin 'mouth')

g. k'ɬḥcay' 'try to fool, tease'
(k'ɬ- locative, √ḥc [intermediary vowel unclear] '?', =ay' '?')[13]

None of the roots listed in the above examples (√xət', √k'^{w}uɬ, √məx^{w}, √y'aq', √ɬət', √t'əq'^{w}, √ḥc) ever surfaces without the additional reanalyzed segments found in each form in (12a-g). Thus, the forms given above represent the phonological representations of seven different lexemes (*txət'*, *k'^{w}u?ɬ*, *məx^{w}t*, *y'aq'lx*, *ɬət'p*, *t'əq'^{w}cín*, *k'ɬḥcay'*). The speaker can only be aware that these are phonological representations of the lexemes if these additional segments are included in the lexical entry. Again, a lexemic stem level (as opposed to root stem level) is required in order to account for these forms in Nxa?amxcin word structure.

3.3.1.3 Morphemes in Unusual Positions

While there is some freedom of word order in Nxa?amxcin syntax, there is a rigid order for morphological spelling operations. The speaker does not have

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[11]The Thompson form is taken from Thompson and Thompson 1996:393.

[12]This Proto-Salish form is taken from Kuipers 1981:81.

[13]I have marked *=ay'* as a bound stem because Kinkade (n.d.) includes it in his list of lexical suffixes (which I am labelling bound stems in this work). The semantics of this stem is no longer recoverable.

the option of placing morphemes in varying positions. Scattered throughout the data, however, are forms in which identifiable morphemes surface in unexpected positions. Examples appearing to contain four separate morphemes (*-min* relational, *-xit* applicative, *-tułt* applicative, and *-m* which is generally glossed as middle voice) are given below:

(13) kałx**mən**álṭ k'l sx̣álwiʔs
kałx**min**=alṭ sx̣alwiʔ-s
give=child-(3AB) LOC *husband*-3PS
She gave her child to her husband.

(14) ... kʷaʔ kn tawx**t**álṭ
tawx**it**=alṭ
and + 1SS *buy=child*
... and I bought my children something.

(15) wakʷ**tułn**aʔntwáxʷ
wakʷ**tułt**=anaʔ-nt-waxʷ
hide=all over-TR-RC-(3AB)
They hid from each other. EP4.54.1

(16) kiḥán'aʔ ʔací wakʷmálṭ
wakʷ**m**=alṭ
girl DET *hide=child*-(3AB)
[The girl kept her baby private/out of the public eye.]

All of the above examples are similar in that they are all bound stem compounds and there appears to be a suffix surfacing inside the bound stem, as opposed to the right edge of the bound stem where it would usually surface. Compare the above examples with the following bound stem compounds in which the same suffixes surface to the right of the bound stem, as expected:

(17) kckə́lqʷ**mîn**ct
k-cək=alqʷ-**min**-nt-cut
POS-*hit=tree*-RL-TR-RF-(3AB)
[S/he bumped into a tree.] Y18.141

(18) Agatha táwcn**xc** wa Moyatat t st'úk'ʷm
taw=cin-**xit**-s
Agatha *buy=mouth*-APP-(3AB)-3ER WA *Moyatat* OBL *carrot*
Agatha bought a carrot for Moyatat.

(19) nck^{w}ak**stułn**
n-cək^{w}=akst-**tułt**-n
POS-*pull=hand*-APP-(3AB)-1SS
I pulled it away from her/him. W5.53

(20) c'əx̣^{w}c'əx̣^{w}ált**m** Chuck
c'əx̣^{w}c'əx̣^{w}=alt-**m**
advise=child-m-(3AB) *Chuck*
[Chuck talked to the children (tried to influence them to live a better life).]
91.109

If morphological spelling operations are ordered in Nxa?amxcin, the examples in (13) to (16) pose a problem since the apparent relational and applicative suffixes are not in their usual position. One cannot assume that the suffixes *-min*, *-xit*, *-tułt*, and *-m* have been synchronically fused with the stems *kalx*, *taw* and *wak^{w}* in (13) to (16) as these stems generally occur without these suffixes. In addition, *-min*, *-xit* and *-tułt* are clearly not marking grammatical features in (13) to (15). (As for (16), it is often difficult to determine what function is associated with the suffix *-m*.) The relational marker *-min* always precedes a valence-changing marker creating bivalent stems (e.g. transitive, causative), yet no such marker is present in (13). The applicative suffix *-xit* marks a valence-changing operation creating bivalent stems, yet the predicate in (14) is intransitive. The applicative suffix *-tułt* never cooccurs with the transitive marker *-nt* as *-tułt* itself marks an operation creating bivalent stems, yet both *-tułt* and *-nt* cooccur in (15).

Given that the suffixes *-min*, *-xit*, *-tułt*, and *-m* usually surface to the right of bound stems, and that the first three do not appear to have any active function in (13) to (15), I assume the stems *kalxmin*, *tawxit*, *wak^{w}tułt*, and *wak^{w}m* in (13) to (16) are lexemic stems.[14]

While I have argued for a lexemic stem as opposed to a root stem as the primary level of morphological structure in Nxa?amxcin, the concept of the root

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[14]The idea that for a given lexeme more than one stem may be available for word formation has been proposed by Aronoff (1992, 1994). He illustrates that the Latin future active participle is formed on the stem of the perfect (passive) participle as opposed to the verb root.

cannot be abandoned altogether. In the following section I argue that it is the root that is primary at the level of phonological structure in Nxaʔamxcin.

3.3.2 The Phonological Root

Czaykowska-Higgins (1996, 1998) claims that a root domain is the primary level of both phonological and morphological structure in Nxaʔamxcin word formation. In the previous section, I argued for a lexemic stem as the primary level of morphological structure in Nxaʔamxcin. In this section, I adopt Czaykowska-Higgins' claim that the root is the primary level in Nxaʔamxcin phonological structure.

Given Aronoff's definition of root introduced above, in the study of word formation one would expect to find one root per word (excluding compounds) since it is defined to be "morphologically unanalyzable". Consider the following examples containing the root √cək 'hit (by throwing)':

(21) **cək**ncás t xƛ'út
cək-nt-sa-s
hit-TR-1SO-3ER OBL *rock*
S/he hit me with a rock. 90.227

(22) t John ci **scək**stúms
s-**cək**-stu-m-s
OBL John SUB IM-*hit*-TR-1SO-3ER
It's John who's hitting me. 92.223

(23) slə́pas **nacəkk**núnn
na-**cə•k•k**-nun-n
MOD POS-*hit*•OC•*hit*-LC-(3AB)-1SS
I might hit s.t. accidentally. 90.45

While examples (21) to (23) all have different surface forms, they share the same root √cək 'hit (by throwing)'. [cək] is the phonological form of the lexeme HIT. It contains no phonological representations for lexical or inflectional operations, and cannot be dissected any further for morphological content.

Now consider examples like (24) to (26) which contain the predicate 'swim':

(24) kn c-**nak'ə́rm**
1SS + DIR-*swim*
I swam back across. Y14.166

(25) **nk'ərm**áx̣x̂'cín
nk'ərm-aɬ-x̣x̂'cin
swim-CN-*horse*
[S/he swam a horse across.] Y6.376

(26) s-**n**•k'ər•**kərm**-míx 1x
IM-*swim*•AUG•*swim*-IM-(3AB) + PL
[Several people are swimming.] JM3.2.1

As examples (24) to (26) illustrate, the phonological representation of the lexeme SWIM is [nak'ə́rm]. From a diachronic perspective, this stem appears to be comprised of the prefix *na-/n-*, which marks the positional meaning 'in'; the root √k'ər which, diachronically, is most likely the root √k'ər 'to cut'; and finally the suffix *-m*, generally labelled middle voice. In the above examples we see that the stem *nak'ə́rm* is targeted for prefixation marking the cislocative in (24), and for compounding in (25). In (26), however, it appears that the initial segment of the stem, [n], is bypassed when reduplication takes place. These examples show that with respect to morphological spelling operations, two stems must be isolated within the phonological representation of the lexeme SWIM. The first is the root √k'ər; the second is the lexemic stem *nak'ə́rm.* If the phonological representation of the lexeme SWIM is *nak'ə́rm,* how can the segments [k'ər] be isolated as a base for morphological spelling operations, as appears to be the case with the reduplicated form in (26)?

In cases like this, not just any segments can be isolated and targeted for morphological spelling. It is specifically the root that constitutes the base for word formation within the lexemic stem. This is evidenced in English examples like *understand* vs. *understood* where the root √stand is clearly salient with the past alternate being marked in identical fashion with the verb *stand.* It has been widely observed that roots are distinctive and unique across languages. Beckman (1999:183–184) notes that "[c]ross-linguistically, root morphemes exhibit a more extensive and more marked inventory of segments, and of prosodic

structures, than do affixes and content morphemes. [...] Root morphemes also exhibit privileged behavior in the presence of phonological alternations, triggering or failing to undergo processes which affect affixes".[15]

Czaykowska-Higgins (1996, 1998) claims the root is an independent level in Nxa?amxcin word formation based on the fact that a select number of spelling operations target the root only. The primary evidence in support of an independent root level in word formation can be divided into two types: (i) operations that target the prosodic structure of the root; and (ii) spelling operations that target the left edge of the root. I discuss each of these in turn below.

3.3.2.1 Prosodic Operations

The first type of evidence for a root domain put forward by Czaykowska-Higgins (1996, 1998) concerns operations that target the prosodic structure of the root. These are the reduplicative operations *diminutive* and *out-of-control*. Both of these are reduplicative-type processes in that the features of a segment of the root are spread onto affixed prosodic structure. These operations illustrate that the prosodic structure of the root must be isolatable.[16]

Willett and Czaykowska-Higgins (1995) and Czaykowska-Higgins and Willett (1997) (following Bagemihl's 1991 analysis of Bella Coola) propose that Nxa?amxcin has a maximal syllable shape of CVC. Segments that do not fall within a bimoraic CVC syllable structure are assumed to be licensed moraically

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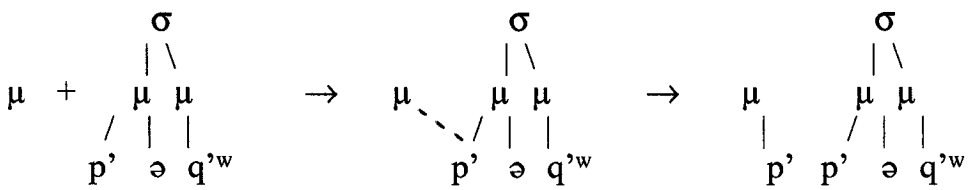
[15]Beckman (1999:184–185) also refers to a number of psycholinguistic studies which affirm the special status of roots.

[16]Lexemic stems marked for either augmentative reduplication or inchoative infixing could potentially provide further evidence that an independent root level must be recognized. Augmentative prefixing targets the left edge of the root (section 6.7.1). Thus, if examples of lexemic stems marked for augmentative prefixing illustrated that reanalyzed prefixes were not recognized for reduplication, this would give further support to the claim that a phonological root must be salient. Such examples would involve roots with full vowels so as to distinguish the augmentative prefix from the augmentative suffix, which is root syllable as opposed to root edge-oriented. Infixation of a glottal stop as an inchoative marker follows a similar pattern to that of the out-of-control marker (section 6.3.2.1).

(section 4.4). Czaykowska-Higgins and Willett claim in these works that the diminutive category is marked by the prefixation of an empty mora to a root with the features of the first consonant of the root subsequently spreading to the empty mora (C_1-reduplication). This is illustrated below for the CVC root √p'əq'^{w} 'spill':

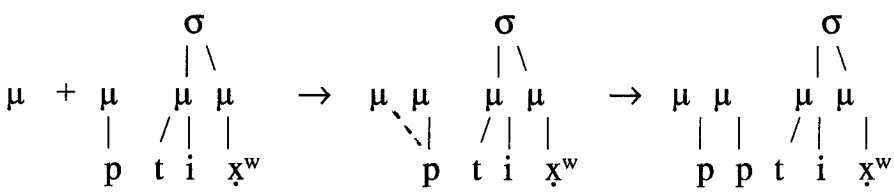
(27)



The diminutive of the root √p'əq'^{w} is formed by affixing an empty mora onto the left edge of the root, as shown in the left-hand structure in (27). The features of the adjacent segment, [p'], are spread onto the empty mora, illustrated in the middle structure, and the resulting form on the right is *p'p'əq'^{w}* 'to spill a little bit'.

One could argue from the above structures that the empty mora attaches to a syllable as opposed to the left edge of the root. However, examples of CCVC roots provide evidence that this spelling operation does in fact take place at the left edge of the root. Consider the diminutive example *pptíx̣^{w}m* 'he spit a little bit' which contains the root √ptix̣^{w} 'spit':

(28)



As the above diagrams illustrate, the empty mora surfaces at the left edge of the root and not the left edge of the syllable. Thus, it is the initial segment of the root, [p], and not the initial segment of the root syllable, [t], that is copied in *pptíx̣^{w}m* 'he spit a little bit'.

Now we must look at forms which contain reanalyzed stems, stems containing affixal material that has, over time, become inseparable from the root. What is of interest here are forms in which prefixes have undergone reanalysis, since C_1-reduplication operates from the left edge of the root. Consider the following lexemic stems:

(29) scpúʔs
heart

(30) snʔúcqaʔtn
toilet

If C_1-reduplication takes place at the left edge of the phonological stem of a lexeme, we would expect to find the following forms: **sscpúʔs* 'little heart' and **ssnʔúcqaʔtən* 'small toilet'. What we find, however, is that the morphological speller is able to locate the left edge of the root within these reanalyzed stems and the first segment of the root is copied, as shown in (31) and (32):

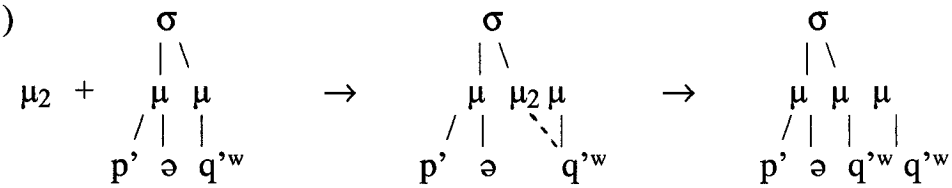
(31) scppuʔs
sc•p•puʔs
heart•DM•*heart*
small heart

(32) snʔaʔúcqaʔtn
sn•ʔ•ʔucqaʔtn
toilet•DM•*toilet*
small toilet

Lexemes marked for the category out-of-control provide further evidence that roots have independent status in Nxaʔamxcin word formation. Consider first how out-of-control (C_2-reduplication) is formed. Willett and Czaykowska-Higgins (1995) and Czaykowska-Higgins and Willett (1997) analyze out-of-control formation as the insertion of an empty mora after the initial mora of the root. They assume that the empty position is filled by feature spreading from the right adjacent consonant. Consider the example *p'əq'^{w}q'^{w}* 'it got spilled', based

on the root √p'əq'^{w} 'spill s.t. dry'. Following their analysis, this form would be represented as follows:

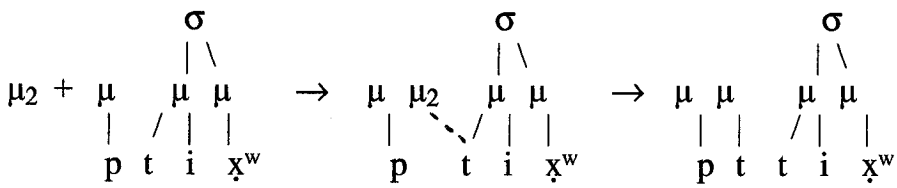
(33)



In the diagram on the left in (33), an empty mora is added to the root √p'əq'^{w} which is itself a bimoraic syllable. In the middle diagram, the empty mora is inserted after the first mora and surfaces in second position. The features from the segment to the right of the empty mora, in this case the obstruent [q'^{w}], spread to the empty mora. As a result, a second obstruent [q'^{w}] surfaces, as shown in the diagram on the right. Note that resyllabification occurs as the previously empty mora is now in the coda position of the bimoraic syllable while the original coda remains unsyllabified.

Consider now an example involving a CCVC root. When a CCVC root is marked out-of-control, it is the onset of the root syllable and not the coda that is reduplicated. The following diagram illustrates C_2-reduplication for the root √ptix̣^{w} 'spit', as found in the form *ksptt*í*x̣*^{w} 'spitting a lot':

(34)



In this example the empty mora is inserted after an unsyllabified mora, as this is the initial mora of the root. Subsequent to insertion, the features from the segment to the right of the empty mora are spread and the obstruent [t] fills the empty position. Thus we see that in both (33) and (34) it is the second consonant of the root that is copied in order to mark out-of-control aspect.

We can provide more concrete evidence that C_2-reduplication targets the left edge of a root if we examine stems in which prefixal morphology has been reanalyzed. Take for example the stem *k'łkə́m'* 'win'. This stem appears to be diachronically composed of the prefix *k'ł-* (positional) and the root √kəm' ('?'). If the lexical operation out-of-control targets the root only, the second consonant of the root, [m'], should be reduplicated and not the second consonant of the reanalyzed form, [ł]. As example (35) illustrates, it is the second consonant of the root that is reduplicated:

(35) k'łkə**m'**m'nús
k'łkə•**m'**•m'-nun-nt-s
win•OC•*win*-LC-TR-(3AB)-3ER
S/he managed to win it.

Another example is the stem *txət'-* 'take care of, look after', which appears to be comprised of the prefix *t-* (positional?) and the root √xət' (which in isolation has no synchronic semantic interpretation). When marked for the category out-of-control, it is the second consonant of the root, not the second consonant of the reanalyzed stem, that is reduplicated:

(36) txə**t'**t'nús
txə•**t'**•t'-nun-nt-s
take care of•OC•*take care of*-LC-TR-(3AB)-3ER
S/he finally began to take care of it.

3.3.2.2 Right-Edge Operations

The second type of evidence for a phonological root domain in Nxaʔamxcin involves operations in which a suffix is realized at the right edge of the root. These suffixes are the inchoative marker *-p* and the stative marker *-t.*[17]

[17]In addition to the inchoative and stative, Czaykowska-Higgins also views the autonomous marker *-ilx* as targeting the root. This morphological spelling operation is no longer productive in Nxaʔamxcin so I do not consider it as synchronic evidence for an independent root level.

Czaykowska-Higgins (1996, 1998) indicates that both of these suffixes surface to the immediate right of the root, as shown in (37) and (38):

(37) sə́n**p**
sən-**p**
gentle-IN-(3AB)
S/he got gentle. W.10.86

(38) kn xə́s**t**
xəs-**t**
1SS + *lose*-ST
I am lost. G6.64

Examples (37) and (38) do not specifically illustrate that these spelling operations target the root only. They simply illustrate that inchoative and stative markers appear close to the root. One way to clearly demonstrate that these suffixes target the root only is to find examples of lexemic stems in which suffixal segments have been reanalyzed. Unfortunately, I have no examples of such reanalyzed stems marked by the inchoative marker *-p* or stative marker *-t*.

Another way to demonstrate that these categories target the root is to look at compound examples marked either inchoative or stative. The compound examples available in the data illustrating this are bound stem compounds. Bound stem compounds are comprised of free stems (usually on the left) and a limited number of bound stems (usually on the right). There are examples in the data which illustrate that when a bound stem compound is marked inchoative or stative, the suffix attaches to the right edge of the root and not the right edge of the compound. Some examples are given in (39) and (40):

(39) kat'əl'**p**cín
kat-t'əl'-**p**=cin
POS-*tear*-IN=*mouth*-(3AB)
[S/he got a split lip (from being hit).] JM4.7.9

(40) ʕ'^{w}ən'ʕ'^{w}án'ps ʔací maʕ'^{w}**t**áɬx^{w}
ʕ'^{w}ən'ʕ'^{w}an'p-s maʕ'^{w}-**t**=aɬx^{w}
magpie-3PS DET *break*-ST=*house*-(3AB)
The magpie's nest broke up.

In example (39), the inchoative suffix *-p* immediately follows the root √t'əl' 'tear', surfacing between the root and the bound stem *=cin* 'mouth'. In example (40), the stative suffix *-t* also appears inside a bound stem compound, surfacing between the root √maʕ'^{w} 'break' and the bound stem *=ałx^{w}* 'house'. The *-p* and *-t* suffixes are not part of the lexemic stem as the following examples illustrate that each of the roots in (39) and (40) can surface without the *-p* or *-t* suffix respectively:

(41) kat'əl'cín
kat-t'əl'=cin
POS-*tear=mouth*
[It ripped open at the mouth/tip. (e.g. an envelope or paper sack)]

(42)

maʕ'^{w}áłx^{w}ntus	wa	smiyáw	ʕ'^{w}ən'ʕ'^{w}án'ps
maʕ'^{w}=ałx^{w}-nt-wa-s			ʕ'^{w}ən'ʕ'^{w}an'p-s
break=house-TR-TO-(3AB)-3ER	WA	*Coyote*	*magpie*-3PS

Coyote broke up the magpie's nest.

Given the fact that the *-p* and *-t* suffixes are not part of a lexemic stem in examples (41) and (42), and that derivational operations should target the compound stem and not a stem internal to the compound, we are left to assume that, like the diminutive and out-of-control markers in (31), (32), (35) and (36), inchoative and stative morphological spelling target the root and only the root. When morphological spelling takes place for the inchoative and stative, the phonological root is isolated and it is only the root stem that is available for suffixation. Hence, in (39) and (40) these morphemes are realized inside the

bound stem compounds.[18]

One could argue that the facts surrounding *-p* and *-t* suffixation indicate the root must be an independent level of morphological structure. The realization of reduplicative and infixal morphemes are prosodic processes unlike suffixation onto the edge of a constituent. However, as both Ewa Czaykowska-Higgins and Su Urbanczyk have pointed out to me, the affixation of morphology onto the edge of a designated phonological constituent can be easily accounted for in McCarthy and Prince's (1993) Generalized Alignment approach to Optimality Theory. In such an approach, a category such as inchoative could be specified to align with the right edge of a phonological root. Such a possibility leaves behind no conclusive evidence that the root constitutes an independent domain at the level of *morphological* structure in Nxaʔamxcin.

Having argued for a lexemic stem as the primary stem in the morphological structure and the root as the primary stem in the phonological structure of Nxaʔamxcin, I now turn to the last two domains of word structure: the derivational and inflectional stems.

3.4 The Derivational and Inflectional Stems

In examples (5) and (6), repeated below as (43) and (44), I outlined which categories I assume are contained within the derivational stem and the inflectional stem:

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[18]Czaykowska-Higgins also discusses an ablauting process which takes place when a root containing a full vowel takes on a stative interpretation. As the following examples illustrate, the full vowel is subsequently reduced to schwa:

(i)

Full-Grade		ə-Grade	
√c'aɬ-	'cool s.t.'	√c'əɬ-t	'be cold'
√ɬak-	'dampen'	√ɬək-	'moist'
√q'^{w}ay-	'blacken'	√q'^{w}iy-	'be black'

Czaykowska-Higgins 1998:158

Since this ablauting process applies to roots only, it provides further evidence that roots constitute an independent domain in word formation.

(43) ***Derivational Stem***

$[_{DS}$ NM DIR POS *ASP DIM CTR ASP*$[_{LX}$ (Y) √ROOT (Z) $]_{LX}$ *DIM* ASP CTR VC RL VAL VC NM $]_{DS}$

(44) ***Inflectional Stem***

$$[_{IS}\ \text{PS MOD ASP NM}\ [_{DS}\ [_{LX}\ \text{(Y)}\ \sqrt{}\text{ROOT (Z)}\ ]_{LX}\ ]_{DS} \left\{ \begin{matrix} \text{GR-PER-NUM} \\ \text{ASP} \\ \text{PS} \end{matrix} \right\}\ ]_{IS}$$

As indicated in (43), nominalization, directional, positional, dimension (augmentative and diminutive), control (out-of-control, limited control), aspect (repetitive, inchoative, stative, iterative, and habitual), relational, valence (transitive, causative, applicative, external possession) and voice (topical object, passive, antipassive, indefinite object, middle, reflexive and reciprocal) are all considered to be derivational categories. In (44), I have indicated that possessive, mood (irrealis), aspect (imperfective), nominalization, grammatical relation (subject and object), person, and number are inflectional categories in that they occur at the level of the inflectional stem. While I leave the indepth discussion of these categories for the following two chapters, in the two sections to follow I attempt to clarify (i) what the difference is between derivation and inflection, and (ii) how to determine which categories are derivational and which are inflectional. (As it is not the purpose of this work to provide an indepth analysis of properties of derivation and inflection in Nxa?amxcin, I keep the following discussions brief.)

3.4.1 Derivation vs. Inflection

Drawing a line between derivation and inflection is by no means an easy task. Bybee (1985:81) has noted:

> One of the most persistent undefinables in morphology is the distinction between derivational and inflectional morphology. While linguists seem to have an intuitive understanding of the distinction, the objective criteria behind this intuition have proved difficult to find.

Various analyses of derivation and inflection have been proposed, many of which can be divided between the *strong lexicalist hypothesis* and the *weak lexicalist*

hypothesis. The strong lexicalist hypothesis claims that both derivation and inflection are found in the lexicon (e.g. Jensen and Stong-Jensen 1984), while the weak lexicalist hypothesis argues that derivation and inflection are located in separate components (e.g. Anderson 1982, 1992). (The separation of derivation and inflection into separate components has been labelled *The Split Morphology Hypothesis* by Perlmutter (1988).) These viewpoints presuppose, in different ways, a fundamental distinction between derivation and inflection which is not shared by other theorists. Researchers such as Sproat (1985), Baker (1988, 1996) and Lieber (1992) argue that both derivational and inflectional morphemes are located in the lexicon and that both are subject to the same set of rules. This leaves little room for differentiation between the two.[19] Aronoff (1976, 1994), Scalise (1988), and Beard (1995) also draw little distinction between derivation and inflection, but from a markedly different perspective. In their view, derivation and inflection are considered to be rules or operations that are stored in a component outside of the lexicon. The only thing really distinguishing derivation from inflection is the level at which these rules operate. Those operating at the lexical level are referred to as derivation, while those operating at the level of syntax are referred to as inflection[20]. Specifically within the realm of the LMBM framework, Beard (1995) states that derivational operations take place in the lexicon, while inflectional operations take place in the syntax component (with the relevant phonological operations taking place in the Morphological Spelling Component). Beard (p.46) argues that "bound derivational morphemes do not differ in any significant respect from inflectional ones [...]. Not only do we find the same morpheme often serving both derivational and inflectional duties, but the most productive affixes in any given language consistently serve such double-level duties". Throughout this work I adopt Beard's views on derivation

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[19]Anderson (1992:77), refuting this position, points out that "some aphasic patients (see Micelli and Caramazza 1988; Badecker and Caramazza 1989) show a loss of control of inflectional morphology (as well as syntax) while retaining control of derivational morphology".

[20]As was pointed out in section 2.2.2, Beard's use of the word "derivation" is non-standard. For Beard "derivation" essentially means 'an operation taking place on a stem'. Beard uses the terms "lexical derivation" and "inflectional derivation" for "derivation" and "inflection" respectively.

and inflection, assuming that these operations differ only in the level at which they take place. Thus, the derivational stem level in (43) and the inflectional stem level in (44) reflect the components (i.e. the lexicon and syntax) in which operations of word formation take place. All categories contained within the derivational stem level in (43) are lexical categories, while the categories within the inflectional stem level in (44) are syntactic categories.

3.4.2 Determining if a Category is Derivational or Inflectional

The literature outlines numerous criteria for distinguishing between derivation and inflection, but in reality it has proven impossible to determine a steadfast set of rules with cross-linguistic application that predict which categories should be considered derivational and which inflectional. Bybee (1985) considers the derivational vs. inflectional distinction to be a gradient one whereby categories most intrinsically tied to the root (i.e. derivational) are at one end of a spectrum while the categories least tied to the root (i.e. inflectional) are at the other. Bybee (p.99) makes certain generalizations regarding the cross-linguistic status of some categories, however acknowledging that a derivational category in one language may be inflectional in another. This is also noted by Anderson (1992:82), who uses diminutive formation in Fula (Niger-Congo) and English as a comparative example; the diminutive category is considered to be inflectional in Fula, while in English diminutive forms are viewed as derivational.

Cases like this where one category can appear at different ends of a spectrum depending on the language, involve more than just a distinction as to where the operation actually takes place (i.e. the lexicon vs. syntax). Bybee states (1985:99) that "in cases where similar conceptual content is expressed in the two different ways, we will find that the inflectional expression requires a fully general meaning, while the derivational does not". Hence, while English and Fula each have a diminutive category, the claim that it is derivational in one

language and inflectional in another indicates that the former is more intrinsically tied to the root than the latter.[21]

Of the numerous criteria found in the literature, I have focused on five while determining which categories belong at the derivational stem level and which at the inflectional stem level in Nxa?amxcin: (i) the Peripheral Affix Test; (ii) semantic relevance; (iii) the ability to change features in lexical representations; (iv) portmanteau morphemes; (v) the Free Analog Test.

(i) *The Peripheral Affix Test.* The first of these criteria is the widely noted observation (appearing as *Universal 28* in Greenberg 1963 and as *The Peripheral Affix Test* in Beard 1995) regarding the cross-linguistic consistency of ordering of derivational and inflectional morphemes with respect to each other. Anderson (1992:77) writes that:

> [...] in forms where both derivational and inflectional morphology are overtly represented, material corresponding to productive inflection comes "outside of" other morphology. That is, where two or more suffixes are involved, inflectional ones come after derivational ones; and where prefixes are involved, inflectional ones come before derivational ones. Even where a prefix and a suffix are involved, an argument can sometimes be constructed for the relative order in which they must have been added to the stem, and in such cases as well the derivational material seems to be added prior to the addition of productive inflection.

Thus, we can expect to find derivational morphemes closer to the root than inflectional morphemes.

There are a number of operations in Nxa?amxcin that are quite clearly tied to the root and can thus be considered derivational based on the Peripheral Affix Test. These categories are marked by either morphemes or reduplicated forms and always appear at the innermost core of the Nxa?amxcin word. The inchoative and out-of-control markers actually appear inside the root as infixes, as shown in (45) and (46) respectively:

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[21]Interestingly enough, I have often had difficulty directly eliciting causative and inchoative constructions in Nxa?amxcin. While causative and inchoative are clearly syntactic categories in English, they are derivational in Nxa?amxcin. Under Bybee's analysis the derivational causative and inchoative categories should have meanings that are of greater relevance to the predicate than the causative and inchoative categories realized as independent syntactic items. This might account for the difficulty in eliciting these constructions.

(45) lút kisq'ʷú?c
lut ?in-kaɬ-s-q'ʷu•?•c
NEG 2SPS-IR-NM-*fat*•IN•*fat*
Don't get fat! W.10.40

(46) kłá**q**qlx
k-ɬa+**q**+qlx
POS-*sit(sg.)*•OC•*sit(sg.)*-(3AB)
[s/he landed] AfIII:2

In (45) the inchoative marker *-ʔ-* appears inside the root √qʷuc, resulting in *qʷuʔc*. The predicate *ɬaqlx* in (46) is marked out-of-control by the reduplication of the second consonant, resulting in *ɬaqqlx*. Both of these categories are represented by forms that not only appear close to the root but actually surface inside the root. If inflectional morphemes appear outside derivational ones, then both inchoative and out-of-control categories must be derivational since their markers surface within the root domain.

The augmentative, diminutive, stative and the alternate inchoative marker all surface at the edge of the root, as in (47) to (50) respectively:

(47) sn**k'ər**kərmíx lx
s-n•**k'ər**•k'ərm-mix
IM-*swim*•AUG•*swim*-IM-(3AB) + PL
several people swimming JM3.2.1

(48) c**p'**p'əq'ʷstúnn
c-**p'**-p'əq'ʷ-stu-nn
IM-DM-*spill(s.t. dry)*-TR-(3AB)-1SS
I'm spilling a little bit. W.1.52

(49) sqʷətn**t**wíl'xəxʷ
s-qʷtun-**t**-wil'x-mix
IM-*big*-ST-DV-IM-(3AB)
[It's getting bigger.]

(50) kastəkʷ**p**ncás
kas-təkʷ-**p**-nt-sa-s
IR-*smother*-IN-TR-1SO-3ER
S/he's going to smother me. W.7.153

Both augmentative and diminutive marking involve reduplication of some segments(s) of the root ($C_1əC_2$- or C_1- respectively), and these reduplicative prefixes appear at the immediate left edge of the root, as in (47) and (48). Likewise, the stative and inchoative suffixes *-t* and *-p* always surface at the immediate right edge of the root, as in (49) and (50). Given that all of the morphemes highlighted in (47) to (50) appear adjacent to the root without any possibility of intervening material, I assume they are markers of derivational operations.

(ii) *Semantic Relevance.* The position of derivational and inflectional morphology with respect to the root directly ties in with the second observation which centres on the semantic contribution of derivational and inflectional rules to the word. Scalise (1988:563) claims that derivational rules "change the conceptual meaning of their base", while inflectional rules "change the grammatical meaning of their base". This is addressed in detail in Bybee 1985, who states (p.99) that:

> [...] inflectional meaning is always very general, indeed, often so general as to be redundant in context, and it is always transparent in the sense that its combination with a stem always produces a predictable meaning. Derivational meaning, on the other hand, has more semantic content and often produces idiosyncratic meanings in combination with different lexical stems.

According to Bybee, the greater the semantic relevance to the root, the closer the morpheme will appear to the root.

The locative, relational, and limited control categories all provide the root with some form of semantic extension, as illustrated in (51) to (53):

(51) a. ɬẹ̓t'
'wet' Kinkade 1981a:20

b. **ka**ɬẹ̓t'
kat-ɬẹ̓t'
POS-*wet*-(3AB)
[flat surface is wet] W.10.129

(52) a. yə́ʕ'^{w}yəʕ'^{w}t
'hard' Kinkade 1981a:49

b. yəʕ'^{w}ákst**mn**
yəʕ'^{w}=akst-**min**-nt-n
strong=hand-RL-TR-(3AB)-1SS
I used force on it (with my hand)

(53) a. yərmís
yərmin-nt-s
push-TR-(3AB)-3ER
[S/he pushed it.] MS1.60

b. yərm**núnt**x^{w}
yərmin-**nun**-nt-x^{w}
push-LC-TR-(3AB)-2SS
You accidentally pushed her/him. EP4.35.5

The examples in (51) illustrate the semantic contribution of a locative prefix to the predicate. The root √łɛ̣t' in isolation means 'wet', as in (51a). When the locative prefix *kat-* is affixed in (51b), the predicate takes on the additional meaning that the location of the wet state is on a flat surface. The relational category also contributes additional semantic properties to the predicate as it indicates some action either moving away from the agent towards another entity, or moving towards the agent. This is illustrated in (52b) where the combination of the root √yəʕ'^{w} 'strong', the bound stem *=akst* 'hand', and the relational suffix *-min* indicate that something is being forced by hand either away from or towards the agent. The limited control category provides the additional meaning that something was done accidentally or with difficulty. As we see in (53b), when the limited control suffix is added to the reanalyzed stem *yərmin* 'push', the interpretation of the predicate becomes 'push accidentally'.

All three of the above categories provide additional features to the predicate beyond that of grammatical features. These three categories extend the meaning of the predicate in such ways that there are fundamental changes to the meaning of the predicate if these are removed. As a result, these categories should be considered derivational. Sentential aspect, however, has the opposite effect on a predicate in that any change in sentential aspect has no effect whatsoever on the semantic interpretation of the predicate of a clause. Consider the following two examples:

(54) a. ʔiɬn
eat-(3AB)
S/he ate.

b. **sac**'iɬnəx^{w}
sac-ʔiɬn-mix
IM-*eat*-IM-(3AB)
[S/he was eating.] JM3.24.9

The example in (54a) appears in the unmarked perfective form, giving one a closed view of the activity that took place (i.e. it is seen from start to finish). The example in (54b) provides an alternate view as it is marked for imperfective aspect. In this case an open-ended view of the activity is presented with no specific start or end-point. If we change the view from closed to open, the semantic integrity of the predicate is not compromised. Whether the predicate is perfective or imperfective, the meaning of the verb, in this case 'to eat', remains constant. This indicates that sentential aspect should be considered inflectional.

(iii) *Ability to Change Features in Lexical Representations*. Regarding the third criterion, there is a fundamental distinction between derivation and inflection with respect to what each of these can do. Scalise (1988) remarks that rules of derivation seem to be more powerful than those of inflection, observing (p.562) that "given a lexical representation, [derivational rules] can change virtually every single bit of information attached to it, while [inflectional rules] can change only a fixed set of linguistic information (gender, number, etc.)". Operations that clearly have an effect on the lexical representation of a lexeme are valence-changing categories. These categories can manipulate how many participants are involved in a situation by changing the subcategorization features of a lexeme. One example of this is the category transitive which creates predicates that subcategorize for two participants from predicates which would normally subcategorize for one participant, as shown in (55):

(55) a. kas-k^{w}áx^{w}-t-əx^{w}
IR-*wake up*-ST-IM-(3AB)
S/he is going to wake up. EP4.58.8

b. cní kʷáxʷnc
kʷaxʷ-**nt**-sa-s
3SEMpro *wake up*-TR-1SO-3ER
S/he woke me up. G9.78

The predicate *kʷaxʷ* 'wake up' in (55a) has not undergone any valence-changing operation and, therefore, subcategorizes for a single argument. In (55b) the same predicate is marked for the operation transitive resulting in two direct arguments. Because valence-changing categories can make changes to the lexical representation of a lexeme, I include them in the derivational stem level.

The voice categories are another example of operations that can alter the lexical representations of lexemes. This category can alter which argument in a lexical representation will assume the role of subject of the predicate. Example (56a) illustrates the unmarked active voice. In this example the agent is the subject of the predicate *c'əlx̣* 'scratch' while the theme serves as the direct object. If we compare this with example (56b) marked for passive voice, the theme, in this case *ʔací xəxál'aʔ* 'baby', is now the subject of the clause while the agent, *pus* 'cat', appears as an oblique object.

(56) a. c'álx̣ncás
c'əlx̣-nt-sa-s
scratch-TR-1SO-3ER
S/he is scratching me. Y31.77

b. c'álx̣nt**m** ʔací xxál'aʔ t púS
c'əlx̣-nt-**m**
scratch-TR-PAS-(3AB) DET *baby* OBL *cat*
The baby was scratched by the cat.

While it is clear that the category voice can alter the lexical representation of a lexeme, and this property is widely regarded as a diagnostic for determining whether an operation is derivational or inflectional, the status of voice as derivational remains controversial (as does the status of valence changing operations), in part because of the high degree of productivity of certain operations such as passive. Scalise (1988:573–4) considers productivity to be a diagnostic for distinguishing between derivation and inflection, while Anderson

(1982:585, 1992:78) considers it to be insufficient. Productivity is notoriously difficult to define, and I will therefore exclude it as a diagnostic. I will contain all operations that involve changes to the lexical representation of a lexeme within the derivational stem.

(iv) *Portmanteau Morphemes.* A fourth noticeable distinction between derivation and inflection is the fact that *portmanteau morphemes* are generally restricted to the level of inflection. A portmanteau morpheme is a single formative that marks more than one operation on a stem. In Nxa?amxcin, the subject and object markers are all portmanteau morphemes. Consider the following example:

(57) tər'qn**cás**
tər'q-nt-**sa-s**
kick-TR-1SO-3ER
S/he kicked me. Y16.221

In (57) the predicate is marked by the suffix *-sa*, which marks three different categories: (i) object; (ii) first person; and (iii) singular. The suffix *-s* marks two different categories: (i) subject and (ii) third person. (Number is marked separately for third person, as shown below in example (59)). Anderson (1992:76) remarks that "it seems to be the case that portmanteaux are much rarer in derivation (if indeed such elements exist at all) [...] there do not ever seem to be elements which combine inflectional and derivational categories in the same portmanteau".

(v) *The Free Analog Test.* As for the fifth and final criterion, Beard (1995) points out that free morphemes, such as prepositions, postpositions, auxiliaries and case markers, are assigned to specific structural positions in the syntax. Because derivational operations take place before the level of syntax, we would expect markers of derivational operations to never be realized as free morphemes. Free morphemes must be restricted to inflection since it is only at the level of inflection that structural positions are available for these morphemes. The fact that "any category marked by a free morpheme must be a syntactic hence inflectional category" is referred to by Beard (1995:102) as the *Free Analog Test.*

In Nxa?amxcin intransitive subjects, third person plural, and mood (with the exception of irrealis) are all marked by free morphemes, as shown in (58) to (60) respectively:

(58) **kn** núx̣ʷt
1ss + *go*
I went. 92.1

(59) cncníl **lx** kxáps wa púS
kxap-nt-s
3pEMpro + PL *chase*-TR-(3AB)-3ER WA *cat*
They chased the cat. 92.13

(60) **t'il'** **sá?k** kt tə́x̣ʷp
təx̣ʷ-p
MOD MOD + 1pS *stop*-IN
We'd better quit now! W.6.4.66

Example (58) indicates that the argument of an intransitive verb is marked by a clitic. In (58) the clitic *kn* marks three separate categories: (i) subject; (ii) first person; and (iii) singular. Example (59) illustrates that for third person, plural is marked by the clitic *lx*. Example (60) contains two examples of the category mood: the particles *t'il'* and *sa?k*. Since grammatical relation, person, number, and mood can all be marked by free morphemes, I assume, following Beard (1995), that these categories must be considered inflectional.

3.5 Summary

In this chapter I suggested that three independent levels be recognized in Nxa?amxcin morphological structure: the lexemic stem, the derivational stem and the inflectional stem. Support for a lexemic stem level came from three separate arguments: (i) certain complex stems are semantically noncompositional; (ii) certain morphemes and roots consistently cooccur; and (iii) identifiable morphemes sometimes surface in highly marked positions. I also adopted Czaykowska-Higgins' (1996, 1998) analysis that the root is the primary level in Nxa?amxcin phonological structure, which Czaykowska-Higgins claims is supported by the fact that certain operations specifically target the root. While

my breakdown of the morphological structure of Nxa?amxcin words contrasts with that of Czaykowska-Higgins (1996, 1998), my analysis supports her claim that the morphological structure is not isomorphic with the phonological structure. Finally, I outlined the five major criteria I used in determining which categories belong at the derivational stem level and which at the inflectional stem level: (i) Beard's (1995) Peripheral Affix Test; (ii) semantic relevance; (iii) the ability to change features in lexical representations; (iv) portmanteau morphemes; and (v) Beard's (1995) Free Analog Test.

In chapters six and seven I provide a more indepth discussion of derivational and inflectional operations in Nxa?amxcin.

Chapter Four

Phonology

4.0 Introduction

This chapter is intended to be a brief introduction to the phonology of Nxaʔamxcin. The major aspects of phonology are addressed here following work by Czaykowska-Higgins and Kinkade. I first introduce the phonological inventory of segments, which is followed by a discussion of the status of schwa. I then look at various segmental processes affecting surface forms: retraction, vowel deletion, consonant deletion, degemination, vocalization, and affrication. Finally, I briefly address syllable structure and stress assignment.

4.1 Segment Inventory

The consonantal inventory of Nxaʔamxcin is relatively extensive, as shown in (1):[1]

(1) ***Consonant Inventory***

	labial	coronal			velar		uvular		pharyngeal		glottal
stops	p	t	c		k	k^w	q	q^w			ʔ
affricates	p'	t'	c'	ƛ'	k'	k'^w	q'	q'^w			
fricatives		s		ɬ	x	x^w	x̣	$x̣^w$			h
resonants									ḥ	$ḥ^w$	
	m	n r	y	l		w			ʕ	$ʕ^w$	
	m'	n' r'	y'	l'		w'			ʕ'	$ʕ'^w$	

Czaykowska-Higgins 1993a:200

[1]I have omitted the retracted segments ç, s̱, l̨, l̨' and n̨ from Czaykowska-Higgins' inventory. These, along with the retracted vowels, are discussed in section 4.3.1.

Forty-one consonants make up the above inventory, which contains an unusually large number of postvelar segments. Most notably absent are voiced counterparts of the stops and fricatives. Glottalized counterparts of the stops and resonants and rounded counterparts of the velar, uvular and pharyngeal segments are present. Czaykowska-Higgins (1990:82) notes that the "fricative s and affricate c [...] are pronounced with tongue blade articulation and resemble [š] and [č], respectively". Note that c' does not resemble [č'], however.

The vowel inventory is very basic with a high front vowel, a low central vowel and a high back vowel, as shown in (2):

(2) ***Vowel Inventory***

i u

a

Czaykowska-Higgins 1993a:200

Given the extensive range available between each of the three vowels in (2), it is not surprising to find some variation among speakers. The high vowel /i/ is often transcribed as [e], /u/ as [o], and /a/ as [æ]. The status of schwa is unclear and is addressed in the following section.

4.2 Schwa

Schwa vowels appear regularly in Nxa?amxcin surface forms, which raises the question of whether schwa should be considered part of the phonological vowel inventory in (2). This question has surfaced for other Salishanists working on languages throughout the Salish family. Czaykowska-Higgins and Kinkade (1998:10) claim that "[t]he phonemic status of schwa is questionable for most, if not all, Salish languages" (see also Kinkade 1993, 1998a).[2] Czaykowska-Higgins (1993a) and Willett and Czaykowska-Higgins (1995) specifically argue that schwa is not present underlyingly in Nxa?amxcin. Kinkade (1993) suggests that

[2]For further reading on analyses of schwa within the Salish family see Collard 1959; Snyder 1968; Carlson 1972a,b; Jimmie 1994; Matthewson 1994; Nater 1994; Black 1996; and Blake 2000.

there are four sources of schwa in Salish languages and that the schwas derived from these four sources are not underlying. Willett and Czaykowska-Higgins (1995) show that the Nxa?amxcin facts support this four-way division, claiming that two of the four schwa types are inserted, while the other two are derived from some phonological process.

In Nxa?amxcin, the most important source of schwa, as far as syllable structure is concerned, is the *epenthetic* schwa, one of the two inserted schwas. Czaykowska-Higgins (1993a) and Willett and Czaykowska-Higgins (1995) argue that epenthetic schwa is not present underlyingly because its position throughout the language is predictable. It surfaces only when "it is required to prosodically license unsyllabified resonants and to bear stress" (Willett and Czaykowska-Higgins:114). Epenthesis for the purpose of bearing stress occurs when stress is assigned to a vowelless root, as in (3). In such cases the epenthetic schwa appears between C_1 and C_2 of the root.

(3) ɬəpx̣^{w}
ɬpx̣^{w}
burn, scorch — Willett and Czaykowska-Higgins 1995:115

In order for the root √ɬpx̣^{w} 'burn, scorch' to bear stress, an epenthetic schwa must be inserted. As we see in (3), the schwa surfaces between the first and second consonant of the root, [ɬ] and [p] respectively. Epenthesis involving unsyllabified resonants is addressed in section 4.4.

A second source of schwa is *excrescent* schwa. Like the epenthetic schwa, excrescent schwa is inserted; unlike the epenthetic schwa, excrescent schwa is not obligatory. Willett and Czaykowska-Higgins (1995:114) argue that all inserted schwas not present for purposes of prosodic licensing are excrescent and optional. Their function is to "[serve] as a release for obstruents, and as a transitional element between syllables". They are inserted at the phonetic level only, as they serve no phonological purpose. These schwas surface outside of syllable boundaries, as shown in the following examples:

(4)	a.	ʔac.xʷáy.ə̲qən	pile of dirt
	b.	ʔáy.ə̲mín	sister of Mattie Grunlose
	c.	ʔáy.ə̲x̣ʷ.t	tired, worn out
	d.	(s).c.xə̲.ʔ̓it	first, in front
	e.	c'.ə̲p'.q'ə.mə.náws	to stick together
	f.	k.ɬ.k'ən'.ə̲k'ən'.p'.əc'.nák.sən	cuffs

Willett and Czaykowska-Higgins 1995:124

The last two sources of schwa are derived through some phonological process. The first of these phonological processes is *vowel reduction.* During this process, unstressed full vowels are reduced to schwa, as in the following example:

(5) kʷənksntwáxʷ
kʷan=akst-nt-waxʷ
grab=hand-TR-RC-(3AB)
[They got married.] Willett and Czaykowska-Higgins 1995:115

In example (5) the unstressed vowel [a], from the root √kʷan 'grab', is reduced to schwa. (Note that the unstressed [a] of the bound stem *akst* 'hand' is deleted. Vowel deletion is discussed in section 4.3.2.)

The last source of schwa is derived from the *nasal to vowel shift.* This phonological process has been described for Nxaʔamxcin in an unpublished paper by Kinkade (1991).[3] In Nxaʔamxcin, the nasal to vowel shift involves the shift of the phoneme /m/ to schwa in certain morphemes. Two examples are the suffix marking imperfective aspect and the bound stem for 'people', both of which appear as /mix/, although 'people' can also take the form /mixʷ/. When this form is unstressed, the vowel is deleted and the /m/ shifts to a schwa vowel. The labial place features of /m/ are then transferred to the following segment, /x/, which surfaces as [xʷ]. This is illustrated in the following examples:

---

[3]For further reading on nasal to vowel shifts in other Interior Salish languages see Carlson 1976, 1997; Kinkade 1982a; Kuipers 1989; and Thompson and Thompson 1992.

(6) a. kascəx̣p**mîx**
kas-cəx̣p-mix
IR-*burn*-IM-(3AB)
It's going to burn. Kinkade 1991

b. kask'îʕʷ**əxʷ**
kas-k'iʕʷ-mix
IR-*pray*-IM-(3AB)
S/he's going to pray. Kinkade 1991

(7) a. sq'iy'**mîx**
school children Kinkade 1991

b. sx̣áptn**əxʷ**
Nez Perce Indians Kinkade 1991

In both (6a) and (7a) these forms are stressed and surface as [mix]. In (6b) and (7b) these forms are not stressed, and the vowel [i] is deleted. The [m] is subsequently reduced to schwa and its [+ labial] feature is then carried over to the following [x], resulting in [əxʷ].

I do not take any particular stand in this work as to whether or not schwa is an underlying vowel in Nxa?amxcin. A guide to which schwas are transcribed in the examples throughout this work is given in section 1.2.

4.3 Segmental Processes

There are a number of processes that take place within Nxa?amxcin words that have an effect on the surface form of segments. These processes usually take place at the outer boundaries of word formation.[4] Both root segments and segments marking word operations that take place close to the root seem to be exempt from most of these processes. In the following sections, I discuss six different segmental processes: (i) retraction; (ii) vowel deletion; (iii) consonant deletion; (iv) degemination; (v) vocalization; and (vi) affrication.

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[4]See discussion of examples with transitive object markers in section 7.1.3.

4.3.1 Retraction

The first segmental process to be addressed here is retraction, which has been a focus of work by Czaykowska-Higgins (1990, 1993b). In an unpublished paper, Czaykowska-Higgins (1993b:1) writes that "[a]ll languages of the Interior branch of the Salish family exhibit to a greater or lesser degree some type of long-distance harmony processes involving spreading of pharyngeal constriction". This type of spreading varies from language to language and has been referred to as *retraction* in Nxa?amxcin.

A retracted version of all vowels including schwa (i̱, a̱, u̱, ə̱) and five consonants (c̱, s̱, ḻ̓, l̓', ṉ̓) surfaces in the data. Czaykowska-Higgins (1993b:2) notes that "the unretracted fricative [s] and affricate [c] are pronounced with tongue blade articulation [... while] retracted [s̱] and [c̱] are tongue tip articulations [.....]. Unretracted [l, l', n] sound just like their English counterparts, while the corresponding retracted [ḻ̓, l̓', ṉ̓] are "darkened"." Czaykowska-Higgins' phonetic values for the retracted vowels are as follows: [i̱] = [e˘~ ɛˆ], [a̱] = [ɑ], [u̱] = [ɔ], and [ə̱] = [ʌ].

Czaykowska-Higgins argues that for some roots there is a floating [RTR] ([RETRACTED TONGUE ROOT]) feature in the underlying representation. There are a small number of minimal pairs which indicate that the feature [RTR] must be lexically marked and is, therefore, unpredictable. Compare the following forms:

(8)

a.	l̓i̱y	'come loose'
	líy	'stab'
b.	tə̱ḻ̓	'hard'
	təl-n	'pull apart'
c.	tə̱ṉ̓	'tight'
	tə́n	'slow'
d.	ɬi̱t'	'?' (in sna̱ɬi̱t' 'salmon stew')
	ɬít'	'ragged'

Czaykowska-Higgins 1990:84

Only roots are marked for the feature [RTR]. Since this is a floating feature, however, it can spread to adjacent morphemes, as in the following examples:

(9) ləmłc̣ạ́ṣ
ləm-łt-sa-s
steal-EP-1SO-3ER
S/he stole it from me. Czaykowska-Higgins 1993b:18

(10) kp'ť'ụ́ṣn'
k-p'ət'=us-nt-n
POS-*dump s.t.(liquid)=fire*-TR-(3AB)-1SS
[I put it on the fire.] Czaykowska-Higgins 1990:90

In (9) the [RTR] feature spreads rightward to the object and subject person markers. In (10) the root vowel [ə] is deleted in the surface form but the [RTR] feature still spreads to the following bound stem =*us* 'face'.

Czaykowska-Higgins (1993b:1) notes that "[r]etracted vowels and consonants appear in about 170 forms in the corpus of data available [...] Whether a particular form surfaces as retracted seems to vary occasionally from speaker to speaker, and the harmony process itself is clearly not (any longer) a pervasive process [...]".

4.3.2 Vowel Deletion

The process of vowel deletion has been addressed in Czaykowska-Higgins' 1993a analysis of Nxaʔamxcin stress. Czaykowska-Higgins (p.203) states that "vowel deletion deletes all unstressed vowels situated to the right of surface stress [...] and many but not all unstressed vowels situated to the left of surface stress". Consider the following examples:

(11) xʷírkstm
xʷir=akst-m
reach=hand-MD
reach out Czaykowska-Higgins 1993a:230

(12) naqsqnwíl
naqs=qin=wil
one=top=container
load Czaykowska-Higgins 1993a:206

In example (11) stress falls on the root vowel [i]. The vowel [a] of the bound stem *=akst* 'hand', which appears to the right of the stressed root vowel, is subsequently deleted. In (12), stress falls on the leftmost vowel. Of the two remaining vowels, the first, [a] of *naqs* 'one', surfaces, but the second, [i] of *=qin* 'top', is deleted.

4.3.3 Consonant Deletion

The details of consonant deletion in Nxa?amxcin are complex and are too numerous for this brief introduction to phonology. The environments triggering consonant deletion have been carefully discussed in Kinkade 1982b, and all occurrences of deletion in Czaykowska-Higgins 1993a are indicated underneath the examples. I will give an example of one of the more common processes of consonant deletion, which is schematized in (13) with an example in (14):

(13) n → ø / _ s

(14) sc'əx^{w}c'əx^{w}mísn
s-c'əx^{w}-c'əx^{w}-min-stu-n
IM-AUG-*spill*-RL-TR-(3AB)-1SS
I am spilling water. W.7.197

In the above example, the suffix *-min* is followed by the suffix *-stu.* When the [n] precedes [s] it is deleted and the resulting combination is [mis].

4.3.4 Degemination

Degemination is another example of segment deletion. Degemination occurs when one of two adjacent identical segments is deleted, as in example (15):

(15) nptiẋʷátkʷn
n-ptiẋʷ=atkʷ-nt-n
POS-*spit=water*-TR-(3AB)-1SS
I spit in the water. Czaykowska-Higgins 1993a:207

In the above example two processes of deletion have taken place. First, the [t] of the transitive marker *-nt* is deleted before [n], which in this case is the 1st sg. subject marker *-n*. This suffix is subsequently adjacent to the remaining [n] of the transitive marker. A process of degemination deletes one of these segments, and only a single [n] surfaces.[5]

4.3.5 Vocalization

Another rule of note is vocalization, which is tied in with the language's rules of syllabification. As will be discussed in section 4.4, all unsyllabified resonants in the language either induce epenthesis or become themselves syllabic. The glides /w, w', y, y'/ are included among the resonants. When a glide induces epenthesis, there is a possibility of the place of articulation of the glide being passed on to the epenthetic schwa, and the glide being subsequently deleted, as in the following examples:

(16) scḥáw'**i**
sc-ḥaw'y
IM-*make*
make, do

(17) tawxít**us**
taw-xit-wa-s
buy-APP-TO-(3AB)-3ER
[S/he bought it for him/her.] Willett and Czaykowska-Higgins 1995:17

In (16), the unsyllabified /y/ of the root √ḥaw'y 'make' undergoes this process of vocalization and surfaces as [i]. The same process takes place in (17) where the

[5]An exception to the degemination rule is the 1st sg. subject suffix *-nn*, which surfaces only following a stressed vowel (Kinkade 1982b).

topical object marker *-wa* is reduced to *-w* when the unstressed vowel /a/ is deleted, and the unsyllabified /w/ subsequently becomes [u].

When glottalized glides undergo this process of vocalization, the glottal feature is retained as a full glottal stop following the vowel. This is illustrated in the following examples:

(18) nap'ə́x̣^{w}**i?**
na-p'x̣^{w}y'
POS-*cough*
choke, cough up

(19) tá?**u?**
ta•?•w'
rain•IN•*rain*
rain

In example (18), the glide /y'/ has been vocalized and appears as [i]. Since the glottal feature cannot become part of the vowel's feature inventory, it surfaces as a full glottal stop following the vowel. Thus, the glide is replaced by [i?] as opposed to [i]. The same pattern appears in (19) where the glide /w'/ is replaced by [u?].

4.3.6 Affrication

A final rule of note is the following affrication rule:

(20) t + s → c

The rule in (20) indicates that the segment [t] combines with the segment [s] to form the affricate [c]. This is illustrated in the following example:

(21) ?ack^{w}ánsc
?ac-k^{w}an-stu-s
IM-*grab*-TR-(3AB)-3ER
S/he's holding it. Czaykowska-Higgins 1993a:230

In (21), the unstressed vowel of the suffix *-stu* is deleted. As a result, the preceding [t] is adjacent to the third person subject suffix [s], and they combine to form [c].

4.4 Syllable Structure

Syllable structure is an important area of research in Salish languages because of the family's characteristic tendency towards lengthy consonant clusters. In fact, Bagemihl (1991:589) points out that the Salish language Bella Coola has many words that contain no vowels, such as *χscc'* 'I'm now fat' and *łχʷtɬcxʷ* 'you spat on me'. While Bella Coola may be an extreme case within the family, cases of lengthy consonant clusters are frequently found in word-initial, medial and final position in Nxaʔamxcin (Willett and Czaykowska-Higgins 1995, Czaykowska-Higgins and Willett 1997), as indicated in bold in the following examples (bold mine):

(22) a. **snkłxʷpáw'stən**
clothesline

b. tk'ə́mə**l̓qṣ**txən
shin

c. sć**ilksq't**
Friday

Czaykowska-Higgins and Willett 1997:388

Such complex clusters have been a challenge for theories of prosody.

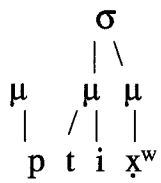
Previous analyses of Salish syllable structure have focused primarily on Bella Coola and include Newman's (1947) argument for no syllable structure and Hoard's (1978) analysis that all segments are syllabic. In a landmark paper, Bagemihl (1991) was able to provide an elegant account of Bella Coola syllable structure within a Prosodic Morphology framework (McCarthy and Prince 1986). Based largely on reduplication data, Bagemihl claimed that Bella Coola has simple syllables with a maximal shape of CRVVC. In addition, Bagemihl argued that syllabic affiliation is not a necessary requirement for prosodic licensing in Bella Coola; moraic affiliation is sufficient. Hence, any segments that do not fall within the CRVVC maximal template can be licensed as a result of being linked to an

unsyllabified mora. Bagemihl's paper inspired other analyses of Salish syllable structure such as Bates and Carlson 1992, 1998 (Spokane); Kirkham 1992 (Lushootseed); Jimmie 1994 (Thompson); Matthewson 1994 (Lillooet); Bianco 1996 (Cowichan dialect of Halkomelem); Urbanczyk 2001 (Lushootseed); and Shaw 2002. Work on Nxa?amxcin syllable structure has appeared in Czaykowska-Higgins 1993c; Kinkade 1994; Willett and Czaykowska-Higgins 1995; and Czaykowska-Higgins and Willett 1997.

Willett and Czaykowska-Higgins (1995) and Czaykowska-Higgins and Willett (1997) claim that the maximal syllable in Nxa?amxcin is of the form CVC. Arguments in support of this claim come from reduplication facts and phonotactic constraints. I refer the reader to both of the above for the full details. Segments that do not fall within a CVC maximal syllable are licensed by several different means, depending on the properties of the segments.

Following Bagemihl 1991, Willett and Czaykowska-Higgins argue that moraic affiliation is sufficient for prosodic licensing of stops (and possibly also fricatives). Thus, the prosodic structure of a root like √ptix̣^{w} 'spit' is analyzed as follows:

(23)

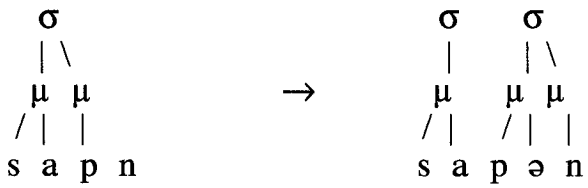


In (23), the segments [tix̣^{w}] are assigned to the CVC maximal syllable shape, while the stop [p] remains unsyllabified. It is not, however, erased as it is affiliated with an unsyllabified mora meeting licensing requirements for stops in Nxa?amxcin.

The prosodic facts surrounding resonants are quite different from those for stops. Willett and Czaykowska-Higgins (p.120) claim that "[u]nsyllabified resonants obligatorily induce epenthesis in order to be syllabified". This means that a nucleus is inserted, generally to the left of the unsyllabified resonant unless an onset is required in which case insertion takes place to the right. According to Willett and Czaykowska-Higgins, there are two possible scenarios once insertion

takes place. For the first, "schwa is inserted to fill the nucleus node and the resonant is subsequently syllabified as a coda". This is illustrated below for the form *sápən* 'daughter-in-law':

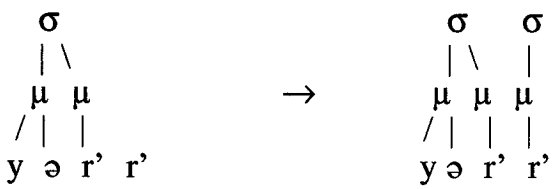
(24)



The prosodic structure on the left illustrates the mapping of the initial segments [sap] onto a maximal CVC syllable with the remaining [n] left unsyllabified. Moraic affiliation is not sufficient for the prosodic licensing of resonants, therefore a nucleus is inserted to the left of the resonant. The resulting prosodic structure on the right illustrates that the coda of the initial syllable is subsequently resyllabified as the onset of the inserted nucleus.

Willett and Czaykowska-Higgins claim (p.121) that a second possible outcome "is for the resonant to spread onto the [inserted] nucleus and surface as syllabic". This is illustrated in (25) for the form *yə́r'ṛ'* 'tangled up'.

(25)



Like example (24), the unsyllabified resonant [r'] in the left hand structure in (25) triggers the insertion of a nucleus. Unlike example (24), instead of an epenthetic schwa being inserted, the unsyllabified resonant itself is linked to the nucleus and surfaces as syllabic.

Willett and Czaykowska-Higgins list nasals, liquids, pharyngeal resonants and glides as belonging to the set of resonants in Nxa?amxcin. Interestingly, Willett and Czaykowska-Higgins claim (p.122) that "[g]lottal stop patterns with the resonants in Nxa?amxcín in that it never surfaces as unsyllabified. Instead,

like the nasals, liquids, pharyngeal resonants and the glides it always induces epenthesis to its left. Unlike the other resonants, however, epenthesis always results in a surface V and never in a "syllabic" glottal". As shown in the following examples, the inserted vowel is the unmarked full vowel [a]:

(26) a. məlx̣a̲ʔ
tell a lie

b. =ana̲ʔ
ear

c. sna̲ʔa̲ʔq'míx
It's rotting. Willett and Czaykowska-Higgins 1995:122–3

The underlined vowels in (26) are vowels inserted for the purpose of licensing unsyllabified glottal stops.

We can summarize the facts surrounding Nxa?amxcin syllable structure as follows:

(27)		
	Maximal Syllable:	CVC
	Unsyllabified Stops (and possibly Fricatives):	moraic licensing sufficient
	Unsyllabified Resonants:	require insertion of a nucleus: - resonant surfaces as coda (or more rarely onset) of inserted schwa; or - resonant is itself syllabic
	Unsyllabified Glottal Stop:	requires insertion of a nucleus, surfaces as coda of inserted [a] vowel

4.5 Stress

The highly complex stress system in Nxa?amxcin is elaborately discussed in Czaykowska-Higgins (1993a) within the metrical framework of Halle and Vergnaud (1987a,b). I provide a brief overview of the basics here and refer the reader to Czaykowska-Higgins (1993a) for the full details.

Coming from a morpheme-based perspective on word formation, Czaykowska-Higgins (p.198) states that "[i]n all the Interior Salish languages the position of primary stress is affected by idiosyncratic morphological stress

properties". Czaykowska-Higgins recognizes two major classes of roots and suffixes which play a crucial role in the placement of stress. The two classes of roots are labelled *strong* and *weak*, the former containing a full vowel ([i], [a] or [u]) and the latter a schwa. The two classes of suffixes are referred to as *dominant* and *recessive*. Dominant suffixes trigger stress shift to the right, while recessive suffixes may or may not, depending on the class of the root.

Czaykowska-Higgins points out that the basic stress pattern in Nxa?amxcin involves stress assignment to the rightmost syllable containing a full vowel, as shown in (28) and (29):

(28) hananík
jackrabbit — Czaykowska-Higgins 1993a:205

(29) macq'^{w}úl'
pelican — Czaykowska-Higgins 1993a:205

Dominant suffixes trigger stress shift to the right, as shown in (30) and (31):

(30) nptix̣^{w}átk^{w}n
n-ptix̣^{w}=atk^{w}-nt-n
POS-*spit*=*water*-TR-(3AB)-1SS
I spit in the water. — Czaykowska-Higgins 1993a:207

(31) c̣haw'yíknəx^{w}
c-ḥaw'y=ikn-mix
IM-*make*=*back*-IM-(3AB)
S/he's making a bow. — Czaykowska-Higgins 1993a:215

Example (30) contains a strong root (√ptix̣^{w} 'spit') affixed with the dominant suffix =atk^{w} 'water'. Stress shifts from the full vowel of the root to the dominant suffix on the right. Example (31) contains a weak root (√ḥaw'y 'make') and again we see stress shifted to the dominant suffix =ikn 'back'.[6]

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[6]Note that Czaykowska-Higgins considers the forms =atk^{w} 'water' and =ikn 'back' to be affixes, the general pan-Salish view, while such forms are viewed in this work as bound stems (chapter 8).

Recessive suffixes do not trigger stress shift in the case of strong roots, as shown in the following example:

(32) sac'ím'xəx^{w}
sac-ʔim'x-mix
IM-*move*-IM-(3AB)
S/he's moving. Czaykowska-Higgins 1993a:208

In (32), the strong root √ʔim'x 'move' is affixed with the recessive imperfective suffix *-mix* and stress remains on the full vowel of the root. With respect to weak roots, however, stress shifts to the recessive suffix, as shown in (33):

(33) cəkncás
cək-nt-sa-s
hit-TR-1SO-3ER
S/he hit me. Czaykowska-Higgins 1993a:216

The full vowel of the recessive suffix *-sa* in (33) is the only full vowel in this form and therefore triggers stress shift to the right.

In addition to the interaction of the two classes of roots and suffixes, features of cyclicity, extrametricality and accent all play a role in the Nxaʔamxcin stress system. At this point I will refer the reader to Czaykowska-Higgins 1993a for the full details as they are long and complex, and beyond the scope of this work.

4.6 Summary

In addition to the various aspects of phonology briefly addressed in this chapter, there are other aspects of Nxaʔamxcin phonology that have been addressed in the literature. Post-velar segments are discussed in Kinkade 1967a; Bessell 1992, 1993; and Bessell and Czaykowska-Higgins 1992, 1993. Various reduplication processes have been analyzed in Czaykowska-Higgins 1993c and Czaykowska-Higgins and Urbanczyk 2001. An analysis of the phonological domains in Nxaʔamxcin word structure can be found in Czaykowska-Higgins 1996, 1998.

Having provided a brief introduction to the phonology of Nxa?amxcin, I turn to a discussion of the syntax in the following chapter.

Chapter Five

Syntax

5.0 Introduction

In this chapter I provide a brief introduction to the syntax of Nxa?amxcin. Discussion of Nxa?amxcin syntax in the Salish literature is limited. The only papers I am aware of are Czaykowska-Higgins 1993d, an unpublished paper which looks at the various types of extraction discussed in the following sections; Willett 1996, an analysis of absolutive case-assignment; Czaykowska-Higgins, Willett and Bart 1996, a discussion of lexical suffix (bound stem) constructions which touches indirectly on syntax; and N. Mattina 2002, a discussion of the determiner system. Czaykowska-Higgins spent several years conducting field word on Nxa?amxcin syntax and a large portion of the examples in this chapter comes from those sessions.[1]

As this introduction is meant to be descriptive, I do not adopt any particular theoretical approach to clause formation in Nxa?amxcin. For theoretical approaches on the syntax of other Salish languages, I refer the reader to Gerdts 1988 (Halkomelem); Gardiner 1993 (Shushwap); Jelinek and Demers 1994 (Straits Salish); Roberts 1994 (Lillooet); Beck 1995 (Bella Coola and Lushootseed); Currie 1997 (Squamish); Doak 1997 (Coeur d'Alene); Matthewson 1998 (Lillooet); H. Davis 1999, 2000a (Lillooet); and to the numerous syntax papers that have appeared over the past decade in the proceedings of the International Conference on Salish and Neighbouring Languages. Kroeber (1991, 1999) provides a theory-neutral overview of syntax across the Salish family.

In this chapter, I first address the controversial issue of lexical categories, and then move on to a description of the noun phrase, simple clauses, relative

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[1]The description of Nxa?amxcin syntax in this chapter has benefited greatly from Czaykowska-Higgins' field work and research, especially her work on extraction which was presented at the First University of Victoria Salish Morphosyntax Workshop.

clauses, and fronting constructions. Finally, I look at the distribution and properties of the particle *wa*.[2]

5.1 Lexical Categories

In this section I briefly address the question of lexical categories in Nxa?amxcin. Before beginning any discussion of Nxa?amxcin lexical categories, however, it is important to address the ongoing controversy in the Salish literature over the status of nouns and verbs as independent lexical categories. Czaykowska-Higgins and Kinkade (1998:35) remark that "[o]ne of the important controversies in the study of Salish languages concerns the question of whether or not these languages exhibit a distinction between the categories 'noun' and 'verb' ". This is an issue that has long been debated in the field of Salish studies. Researchers such as Kuipers (1968), Hukari (1977), Demers and Jelinek (1982, 1984), Kinkade (1983b), Jelinek (1993, 1995, 1998) and Jelinek and Demers (1994) have argued, based on morphological and/or syntactic evidence in various Salish languages, that Salish does not distinguish between nouns and verbs. In essence, there is no lexical category [+V, -N] indicating *verb*, and no lexical category [-V, +N] indicating *noun*.

Van Eijk and Hess (1986), Beck (1995, 2002), Demirdache and Matthewson (1996), N. Mattina (1996), Haag (1998), and Davis and Matthewson (1999) have all argued for a noun-verb distinction using morphological and/or syntactic arguments for a wide array of Salish languages. Kroeber (1999:33–36) also adopts this approach. The general claim is that at the lexical level there are two distinct categories [+V, -N] and [-V, +N], even though these categories may have fewer properties distinguishing them from each other than in other language families.

While the general debate has focused on nouns vs. verbs, the status of adjectives in the grammar is also questionable.[3] Consider the following Nxa?amxcin examples:

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[2]I do not address subordinate clauses in this chapter. See sections 7.3.1 and 7.7 for relevant data.

[3]The status of adverbs is unclear and will not be addressed here.

(1) **kas**ʔámtn
kas-ʔəm-t-n
IR-*feed*-TR-(3AB)-1SS
I'm going to feed him. W.11.106

(2) cmistúnn ʔaní **kałyəlmíxʷm**
c-miy-stu-nn **kał**-yəlmixʷm
IM-*know*-TR-(3AB)-1SS DET **IR**-*chief*
I know the soon-to-be chief.

(3) **kał**wəsxnálqʷ
kał-wisxn=alqʷ
IR-*long=pole*-(3AB)
He's going to be tall. W.11.118

In examples (1) to (3) we see, respectively, a verb, noun and adjective marked for the operation irrealis, an operation typically associated with verbs. The following examples also illustrate that nouns can be marked causative, reflexive, imperative and past. (Information on adjectives is, unfortunately, limited.):

(4) yəlmxʷ**scut** **taʔ**
yəlmixʷm-**stu-cut**
chief-**CS-RF**-(2SS) + **IMP**
Be the chief!

(5) cmistúnn ʔaní **ay'** yəlmíxʷm
c-miy-stu-nn
IM-*know*-TR-(3AB)-1SS DET + **PST** *chief*
I knew the former chief.

Both of the above examples contain nouns marked for operations traditionally associated with verbs. In (4), the noun *yəlmíxʷ* 'chief' is marked causative, reflexive, and imperative by the suffixes *-stu*, *-cut*, and the clitic *taʔ*, respectively. In example (4), the noun phrase *ʔaní yəlmíxʷm* 'the chief' is marked past by the temporal clitic *ay'*.

While the examples in (1) to (5) show that verbs, nouns and adjectives are treated similarly with respect to certain properties, there are a number of reasons to consider at least verbs and nouns separate lexical categories. (Unfortunately, the picture is unclear for adjectives as the necessary data for comparison is unavailable.) First, possessive marking (section 7.1.4) is specific to the category

noun. Verbs are never marked for possession without having undergone some nominalizing operation first. Also, morphological marking of irrealis mood is sensitive to the lexical category of the stem; verbs are marked by the prefix *kas-* while nouns are marked by the prefix *kał-*.[4]

It is not the purpose of this work to enter into the verb-noun-adjective debate. In this work I will assume that Nxa?amxcin makes a lexical distinction between verbs, nouns and adjectives. In addition I will assume, based on examples like (1), (4) and (3), that verbs, nouns and adjectives can all have a predicative function at the syntactic level in Nxa?amxcin.

5.2 Noun Phrases

As discussed in the previous section, I am operating under the assumption that there is a lexical distinction between nouns and verbs in Nxa?amxcin. In the following sections, I address a number of aspects relating to the noun phrase. I first look at the determiner and demonstrative systems present in the language and then discuss oblique and locative marking. Finally, I look at the syntax of genitive constructions.

5.2.1 Determiners and Demonstratives

The Nxa?amxcin determiner and demonstrative systems are addressed in N. Mattina 2002 (see also Kinkade 1967b). According to N. Mattina (p.263), there are four determiners, listed in (5):[5]

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[4]Note that example (3) contains an adjective stem marked irrealis by the prefix *kał-*. This suggests that adjectives pattern with nouns with respect to irrealis marking. I do not, however, have enough adjective examples to confirm this.

[5]It is very difficult to understand the underlying semantics of Nxa?amxcin determiners by examining isolated texts. Both Matthewson (1998) and Kroeber (1999) maintain that contrasts in Salish determiner systems are reflective of a referential vs. non-referential contrast, as opposed to the definite vs. indefinite-type contrast found in languages like English. N. Mattina (2002) claims, however, that the Nxa?amxcin determiner system is not reflective of this referential/non-referential distinction, stating (p.283) that "[t]he marking of definiteness and specificity is left to other interacting systems in the grammar".

(5) ***Articles***

ʔaní	general article
ʔaxáʔ	'close to the speaker'
ʔací	'away from the speaker'
ʔałúʔ	'further away from the speaker'

N. Mattina (2002:263) states that the last three determiners in (5) "are formed on roots √xaʔ, √ci, and √łuʔ, respectively, which are found in dozens of lexical items [...]. Non-demonstrative *ʔani* is formed on a root that is less productive, but which has cognates in other Interior Salishan languages. The increment *ʔa-* found in each article is a formal determinant of the Moses-Columbia article set." Some examples of the general article are given in (6) to (9):

(6) Mary lut wa wíkłc **ʔaní** kiʕ'án'aʔ
wik-łt-s
Mary NEG WA *see*-TR-(3AB)-3ER **DET** *girl*
Mary didn't see the girl.

(7) **ʔaní** tx̣ác' ci cnúx̣^{w}t
c-nux̣^{w}t
DET *elk* SUB DIR-*go*
That elk came. CD.71

(8) lut sac'kámx wa **ʔaní** ʔislúsmn
ʔin-słusmn
NEG *why* WA **DET** 1SPS-*face*
Nothing is the matter with my face. CD.58

(9) k^{w}aʔ cús **ʔaní** ssín'aʔs
cut-nt-s s-sin'aʔ-s
and *say*-TR-(3AB)-3ER **DET** DM-*woman's younger brother*-3PS
and she told her little brother CD.9

Note that while the general article *ʔaní* is usually translated as 'the', speakers sometimes use either 'that' or 'this' in translations, as in (7).

Examples of the other three articles, which seem to convey a deictic sense, are given in (10) to (15):

(10) cíḥn **ʔaxáʔ** q'iy'míntn
ciḥ-nt-n
rip up-TR-(3AB)-1SS **DET** *paper*
I ripped up this paper.

(11) kʷaʔ naʔsuʔ maxʷ lut wa wə́l'aʔ **ʔaxá** ʔistə́ɬm
ʔin-stə́ɬm
and FUT MOD NEG WA *rock*-(3AB) **DET** 1SPS-*boat*
and then maybe my boat won't rock
CD.33

(12) t'úcc **ʔací** waχtált
t'u•c•c
fall•OC•*fall*-(3AB) **DET** *child*
The child fell down.

(13) yapkc'ə́lxʷxntəxʷ **ʔací** xxál'aʔ
yap=k-c'əlxʷ=xn-nt-xʷ
on the way=POS-*grab*=*leg*-TR-(3AB)-2SS **DET** *child*
You grabbed that child by the leg.

(14) kʷaʔ q'ʷumáɬ naw'lx kxáps
kxap-nt-s
and *begin* *run(sg.)*-(3AB) *chase*-TR-(3AB)-3ER
wa **ʔałú** sccəm'ált
WA **DET** *children*
[and she began to go to chase those children] CD.15

(15) nalə́ʕ'ʷs **ʔału** kɬwənwə́ntlqstxns
na-ləʕ'ʷ-nt-s kɬwənwə́ntlqstxn-s
POS-*put over*-TR-(3AB)-3ER **DET** *undergarment*-3PS
She put it on, her undergarment. CD.13–14

As examples (11) and (15) indicate, Nxaʔamxcin articles can precede nouns that have been marked for possession. In addition, more than one article can precede the same noun, as illustrated in (16):

(16) nxʷaʕaɬníwt **ʔałú** **ʔaní** stə́ɬm
n-χʷaʕ-aɬniwt
POS-*hole*-?-(3AB) **DET** **DET** *boat*
there's a hole in the side of the boat

N. Mattina (p.265) also points out that, with the exception of *ʔaní*, all three determiners can have a predicative function, as shown in (17) and (18):

(17) **ʔaxáʔ** ʔaní Mary 1 stxʷúls
stxʷul-s
DET-(3AB) DET *Mary* GN *house*-3PS
Mary's house is this one. (i.e. This is Mary's house.) N. Mattina 2002:264

(18) **ʔałú** wa p'ísƛ'aʔt kʷaʔ cníl niʔkʷáns
niʔ-kʷan-nt-s
DET-(3AB) WA *big* *and* 3EMpro POS-*take*-TR-(3AB)-3ER
kasc'íłns
kas-c-ʔiłn-nt-s
IR-ʔ-*eat*-TR-(3AB)-3ER
the big ones she picked out for herself to eat CD.38

Turning now to the demonstrative pronoun system, N. Mattina (2002:264) lists the following for Nxaʔamxcin:

(19) ***Demonstrative Pronouns***
ʔixaʔ 'this one (here)'
ʔica 'this one (there)'
ʔiła 'that one'

N. Mattina points out that these demonstratives contain the same roots as the last three articles listed in (5). She indicates (p.263) that "[t]he demonstrative particles have the increment *ʔi-* (and concomitant regulatization of the root vowel to *a*) where the articles have *ʔa-*; the same roots are used for both."

There is little information available on demonstrative pronouns in Nxaʔamxcin, and I am unable to discuss in any detail the particulars of their distribution. N. Mattina does point out that demonstratives can have a predicative function in Nxaʔamxcin, as shown in the following examples:

(20) **ʔica** sp̓ǫ́łaʔ
DEM-(3AB) *owl*
there is the Owl CD.37

(21) **ʔiłaʔ** wa sx̣ápaʔt l stx^{w}úls
sx̣apaʔ-t stx^{w}ul-s
DEM WA *grandfather*-1pPS GN *house*-3PS
There's our grandfather's house. CD.26

As we will see in section 5.6, the position of the particle *wa* in (21) suggests that 'grandfather's house' is an absolutive argument, i.e. subject of an intransitive predicate.

I now turn to a discussion of oblique noun phrases in the following section.

5.2.2 Obliques

Oblique marking appears with noun phrases that do not have any direct argument status in the clause. Such noun phrases are described by N. Mattina (2002:276) as

> non-locative, adjunct determiner phrases. These adjuncts are syntactically oblique in that, unlike core arguments, they are never cross-referenced on the clause head. They are also semantically oblique in the sense that they consistently show the partiality of reference similar to English *some* and the partitive use of plural and mass nouns, the hallmarks of non-specific phrases cross-linguistically (Ultan 1978). Likely related to this specificity is the fact that oblique phrases cannot encode possessors or occur within the scope of a strong quantifier. They are also thematically limited to a small number of semantic roles: instrument [ ], theme [ ], and factitive [ ].

Oblique nouns in Nxaʔamxcin are preceded by the oblique marker *t*, as in (22) to (25):

(22) ʔayk^{w}ą́st ci kn nx̣acúsm **t** k'^{w}k'^{w}át'naʔ
n-x̣ac=us-m
tomorrow SUB + 1sS POS-*tie=foot*-AP-(3AB) **OBL** *mouse*
Tomorrow, I will trap mice. CD.47

(23) kn táwm **t** q^{w}íy stx^{w}úl
taw-m
1sS + *buy*-AP **OBL** *blue* *house*
I bought a blue house.

(24) kɬʔəmtxíc t swánax
kɬ-ʔəmt-xit-s
POS-*feed*-APP-(3AB)-3ER **OBL** *huckleberry*
She sent huckleberries to someone. 95.155

(25) cə́kɬtm x̣x̣x̌'cíns t atmupíl
cək-ɬt-m x̣xx̌'cin-s
hit-EP-AP-(3AB) *dog*-3PS **OBL** *car*
Her dog was hit by a car.

Examples (22) and (23) each contain predicates marked for antipassive voice by the suffix *-m*. Theme arguments in antipassive constructions surface as obliques and are thus marked by *t* in (22) and (23). In Nxaʔamxcin applicative constructions, a goal/benefactive/malefactive typically surfaces in direct case while a theme argument is marked oblique. This is the case in (24) where the predicate is suffixed with the applicative marker *-xit* and the theme argument *swánax* 'huckleberry' is preceded by the oblique marker *t*. Finally, (25) contains a passivized predicate and, as expected with passives, the agent *atmupíl* 'car' is realized as an oblique argument.

Ergative arguments, i.e. 3rd person transitive subjects, are sometimes marked oblique in Nxaʔamxcin. Some examples are given in (26) to (29):

(26) Mary ɬuʔ wa táwxtus t John
taw-xit-wa-s
Mary SUB WA *buy*-APP-TO-(3AB)-3ER **OBL** *John*
[It was Mary John bought something for.] 92.315

(27) t ʔincá ci kxápn wa Mary
kxap-nt-n
OBL 1SEMpro SUB *chase*-TR-(3AB)-1SS WA *Mary*
It's me that chased Mary. 92.226

(28) t swát ci káɬtus
kaɬ-nt-wa-s
OBL *who* SUB *give*-TR-TO-(3AB)-3ER
Who gave that to him? 2.88a

(29) t sx̌'aʔcínm ɬuʔ cʔaw'tápstus tw'ít
c-ʔaw'tap-stu-s
OBL *deer* SUB IM-*follow*-TR-(3AB)-3ER *boy*
It is the deer that's following the boy.

The oblique marking on the ergative arguments in the above clauses is no doubt some type of quirky case-marking as ergatives of applicative (26) and transitive ((27) to (29)) clauses in Nxaʔamxcin do not have oblique status. This type of ergative marking is a pattern common to the Southern Interior Salish languages, as addressed in Kroeber 1988, 1999:52–3.

There is evidence that the oblique marker *t* is in the process of disappearing in the language as sometimes the oblique marker is omitted altogether by speakers. This phenomenon has been taking place in other Salish languages as well to varying degrees.[6]

5.2.3 Locative Prepositions

Nxaʔamxcin makes use of a set of locative prepositions to mark adjunct arguments of location. These locative prepositions have been previously discussed in Kinkade 1974 and N. Mattina 2002, and are listed in (30).

(30) ***Locative Prepositions***

k'l	'to, into'
l	'in, at, on'
tl'	'from,'
tu	'from'

Examples of the locative preposition *k'l* 'to, into' are given in (31) to (33):

(31) huy t'lci ʔalnáw'lx spə̓ɬaʔ **k'l** stx^{w}úls
ʔal-naw'lx stx^{w}ul-s
then from there DIR-*run(sg.)*-(3AB) *owl* **LOC** *house*-3PS
And then from there Owl ran back to her house.
CD.19

(32) ʔinwí taʔ k'lɬuʔ ci k^{w} kałáqlx
kat-łaqlx
2SEMpro + IMP *over there* SUB + 2SS POS-*sit(sg.)*

---

[6]Kroeber (1999:47–52) lists Halkomelem (Chilliwack dialect), Squamish, Tillamook, Lillooet, and the other Southern Interior languages – Kalispel, Okanagan and Coeur d'Alene – as languages that exhibit unmarked obliques.

k'l k'əmlqswíl
k'əm=əlqs=wil
LOC *surface of=nose=vehicle*
You go over there and sit at the head of the boat. CD.34

(33) kn núx̣ʷt **kl'** ni?wənt
1SS + *go*-(3AB) LOC *woods*
I went into the woods

The preposition *l* 'in, at, on' is illustrated in the following examples:

(34) wíy' ?ací tx̣tx̣áy'łp **l** c'əkcín
grow-(3AB) DET *cottonwood tree* LOC *river*
The cottonwood tree grew by the river.

(35) John sqʷəsqʷəsa?s wa kat'úcc **l** sx̣əllúp
sqʷəsqʷəsa?-s kat-t'u•c•c
John baby-3PS WA POS-*fall*•OC•*fall*-(3AB) LOC *floor*
John's baby fell down on the floor.

(36) kʷa? kʷ cnasíxʷm t xƛ'út **l** ?inyámx̣ʷa?
c-na-sixʷ-m ?in-yamx̣ʷa?
and + 2SS DIR-POS-*?*-AP OBL *rock* LOC 2SPS-*basket*
and [you] pour rocks into your basket CD.33

(37) ?ica ckatpa?xánm **l** stółm
c-kat-pa?xan-m
so DIR-POS-*step back*-m LOC *boat*
Then she stepped back in the boat CD.34

Examples of *tl'* 'from' are given below:

(38) **tl'** Nespelem łu kn ckícx
c-kicx
LOC *Nespelem* SUB + 1SS DIR-*arrive*
It's from Nespelem that I came.

(39) cmistúnn pan'ká? ci núx̣ʷt **tl'** stxʷúl
c-miy-stu-nn
IM-*know*-TR-(3AB)-1SS *when* SUB *leave*-(3AB) LOC *house*
I know when he left the house.

(40) hémp xƛ'út **tl'** kat'íłntn
fall-(3AB) *rock* LOC *table*
A rock fell off the table.

Kinkade (1974) indicates that a fifth possible locative preposition is *tu* 'from'. At the time of that paper, Kinkade had found only one instance of *tu* which is given below:

(41) stq'x̣álq^{w} **tu** snak'ámqən wa? k'l scqəmáp
line on a tree **LOC** *top of tree* WA *to* *bottom of tree*
tree marked from top to bottom
Kinkade 1974, ex.12

I have found one example of what appears to be *tu* combined with the root √ci to form *tu?ci* 'from there' (although note that the form used here in *tu?-* as opposed to *tu-*):

(42) ʔi kałáqlx ṣpə́ɬaʔ **tuʔci** kanúx̣^{w}t
kat-ɬaqlx kat-nux̣^{w}t
and so POS-*sit(sg.)*-(3AB) *owl* ***from there*** POS-*go*-(3AB)
Owl sat down, from there she walked about.
CD.34

This preposition is clearly the rarest of the five.[7]

N. Mattina (2002:272–273) notes that, though infrequent, locatives and determiners can cooccur. As shown in the following examples, the determiner surfaces to the left of the locative preposition *l* 'in, at, on':

(43) ʔica k^{w}a nx̣əkx̣ikmúsmnc
n-x̣əq'-x̣iq'm=us-min-nt-sa-s
right there *and* POS-AUG-*rub=face*-RL-TR-1SO-3ER
ʔanî l snciyátk^{w}ptns
snciyatk^{w}ptn-s
DET LOC *fireplace*-3PS
and then ... she rubbed my face in her fireplace CD.59

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[7]Both Kinkade (1974) and N. Mattina (2002) suggest that Salish locative prepositions are not fully comparable with prepositions in European languages. Kinkade points out that there are grammatical relationships involved with the Salish prepositions that are not found with the European languages, and that Salish prepositions are not as specific, making fewer positional distinctions.

(44) ʔacwáx lx k'əm' **ʔanî** **l** sttx^{w}úls
ʔac-wax s•t•tx^{w}ul-s
ʔac-*live*-(3AB) + PL *still* **DET** **LOC** *house*•DM•*house*-3PS

l ʔana spəpásaʔsaʔ
GN ? *grandfather*

They are still living there in that grandfather's little house. CD.72

(45) k'íwlx taʔ **ʔacî** **l** ʔaċ'p'ą̓x̌'
climb-(2SS) + IMP **DET** **LOC** *tree*
Climb up that pole!

In the following section I address genitive marking which is marked by *l*, the same free morpheme used to mark locative 'in, at, on'.

5.2.4 Genitives

Nouns with overt nominal possessors are marked for possession by the genitive marker *l*, although N. Mattina (2002:266–67) indicates that genitive marking in Nxaʔamxcin is optional. There is some variation of word order possible with the genitive marker, when present, "attaching either to the right or left of the possessor within the scope of the article" (N. Mattina 2002:267). The following combinations are possible:

(46)

Possessor	**GN**	Possessum
Possessum	Possessor	**GN**
GN	Possessor	Possessum
Possessum	**GN**	Possessor

Each of these patterns is represented in the following examples.

(47) táwłn John **l** stx^{w}úls
taw-łt-n stx^{w}ul-s
buy-APP-(3AB)-1SS *John* **GN** *house*-3PS
I bought John's house.

(48) táwłn stx^{w}úls John **l**
taw-łt-n stx^{w}ul-s
buy-APP-(3AB)-1SS *house*-3PS *John* **GN**
I bought John's house.

(49) ʔaní **l** Mary stxʷúls
stxʷul-s
DET **GN** *Mary* *house*-3PS
Mary's house N. Mattina 2002:267

(50) ʔaní stxʷúls **l** Mary
stxʷul-s
DET *house*-3PS **GN** *Mary*
Mary's house N. Mattina 2002:267

Note that even when the possessor is overtly realized as a noun, possessive marking still appears on the possessum.

The following example illustrates that the possessor itself can also bear possessive marking:

(51) **ʔin**núx̣ʷnux̣ʷ l st'əmt'úmms
ʔin-nux̣ʷnux̣ʷ s•t'əm•t'umm-s
1SPS-*wife* GN *breast*•AUG•*breast*-3PS
[my wife's breasts] CD.7

Having briefly introduced several grammatical points in relation to the noun phrase (determiners, demonstratives, oblique, locative and genitive-marking), I now turn to the structure of Nxaʔamxcin clauses, starting first with simple clauses in the following section.

5.3 Simple Clauses

Nxaʔamxcin falls under the traditional classification of 'polysynthetic'. Words in polysynthetic languages are typically long and morphologically complex, with a single word being able to express the full semantic content of a complete sentence in a non-polysynthetic language. As seems to be the case with polysynthetic languages in general, Nxaʔamxcin has obligatory pro-drop for both subject and object position. Thus, no subject or object pronouns are overtly expressed, as shown in the following examples:[8]

---

[8]Views on clause structure in Salish languages are mainly divided into two camps. The first supports the *Pronominal Argument Hypothesis* (e.g. Jelinek 1984, Jelinek and Demers 1994) according to which subject and object arguments

(52) ʔəmcínn
ʔəm-t-si-nn
feed-TR-2SO-1SS
I feed you. 90.N206

(53) c'əlút kn
stand + 1ss
I stood up. W.4.9.167

In the transitive construction in (52), the 2nd person sg. object is marked by the suffix *-si* and the 1st sg. subject by the suffix *-nn*. No overt pronouns are present to indicate these grammatical categories. In example (53), the 1st person sg. subject is marked by the intransitive clitic *kn*. Again, there is no overt intransitive subject pronoun.

When overt noun phrases are expressed, the basic transitive word order is VOS, although there is some flexibility of word order as shown in the following examples:

VOS

(54) t'əq^{w}s wa ttw'ít ʔaní kiy'ána?
t'əq^{w}-nt-s
slap-TR-(3AB)-3ER WA *boy* DET *girl*
The girl slapped the boy. 91.121

VSO

(55) t'əq^{w}s ʔaní kiy'ána? wa ttw'ít
t'əq^{w}-nt-s
slap-TR-(3AB)-3ER DET *girl* WA *boy*
The girl slapped the boy.

---

are realized as pronominal elements on the predicate. Overt noun phrases are syntactic adjuncts coindexed with these pronominal elements. As adjuncts, these noun phrases are able to maintain some freedom of word order. In the other camp are researchers who support a configurational approach in which noun phrases are themselves arguments coindexed with agreement morphology on the predicate (e.g. Gardiner 1993, H. Davis 1999). I assume the latter analysis in this work, although neither theoretical approach is crucial to the descriptive goals pursued here.

Both examples (54) and (55) have the same translation, but the ordering of the NPs is reversed. In (54) the direct object *ttw'it* 'boy' appears immediately following the predicate and the subject *kiy'ána?* 'girl' is in final position. This represents the unmarked word order VOS. In (55) the same subject appears adjacent to the predicate and the direct object is in final position. This VSO ordering is not as frequent as VOS, but is possible nonetheless.

One might think that such variations on word order would lead to ambiguity, but this is not the case. The particle *wa*, which surfaces in both (54) and (55), serves as a disambiguating device. Czaykowska-Higgins (1996, 1998:160) and Willett (1996) analyze this particle as a third person absolutive marker which surfaces with 3rd person transitive objects and 3rd person intransitive subjects. In both (54) and (55) it precedes *ttw'ít* 'boy' making it clear that *ttw'ít* is the object in these constructions. I address the particle *wa* in detail in section 5.6.

Unmarked intransitive word order is VS, as shown in (56) to (57):

(56) łəṭ' ʔaxáʔ ʔápsn
wet-(3AB) DET *towel*
This towel is wet.

(57) xʷáy'm wa ʔinx̣x̣ƛ'cín
ʔin-x̣x̣ƛ'cin
run away-(3AB) WA 1SPS-*dog*
My dog ran away.

In both of the above examples, the predicate appears before the subject argument in the clause.

In the following section, I discuss how relative clauses are formed in Nxaʔamxcin and survey the types of arguments that can be relativized.

5.4 Relative Clauses

A relative clause has a special modificational function. It is quite common for relative clauses in Salish languages to carry morphological operations distinct from those found in main clauses; however Kroeber (1999:272) points out that

Southern Interior languages "tend to distinguish fewer inflectional types of relative clause than do other branches of Salish and also to assign relative clauses inflection that is not distinct from that of other clause types".

Nxa?amxcin relative clauses do not require any specific relative clause morphology on the predicate. Subject and object agreement follow the same paradigms as that of main clauses. The relative clause construction consists of a relativized nominal optionally followed by the oblique marker *t*.[9] Both of these are followed by the clausal modifier (i.e. the relative clause). I assume this clause contains a gap which would otherwise be filled by the relativized element. The Nxa?amxcin relative clause is schematized in (58):

(58) $\begin{matrix} NP_i \\ PP_i \end{matrix}$ (t) IP[$\__i$]

The NP/PP in (58) is coreferenced with a gap within the IP, indicating that it (or some operator coreferenced with it) originated within the IP. Because the oblique marker is becoming optional, I have enclosed it in brackets. There is no relative pronoun in the above schema as relative clauses across the Salish family do not contain relative pronouns (Kroeber 1999:270).

A wide range of grammatical relations can be relativized in Nxa?amxcin. Examples of transitive subjects targeted for relativization are given below. (The relativized element is in boldface; the relative clause is marked with square brackets.):

(59) wíkłn **ʔanî** **ttw̓it** t [cə́ks wa Mary]
wik-łt-n cək-nt-s
see-TR-(3AB)-1SS DET *boy* OBL *hit*-TR-(3AB)-3ER WA *Mary*
I saw the boy who hit Mary (by tossing something).
92.389

---

[9]Whether or not the *t* actually functions as an oblique marker in relative clause constructions is unclear, but I will adopt the label *oblique* here for descriptive purposes. Kroeber (1999) employs the label *attributive* for *t* in the context of relative clauses.

(60) ʔacsúxʷɬn **ʔanî** **x̣ə́st** **ttw'it** t [kɬc'ə̓mú̓s̓nc̓]
ʔac-suxʷ-ɬt-n **t-tw'it** kɬc'ə̓mus-nt-si-s
IM-*know*-TR-(3AB)-1SS **DET** ***good*** **DM-*boy*** OBL *kiss*-TR-2SO-3ER
I know the good boy who kissed you. 92.210

(61) John ʔacsúxʷɬc wa **ʔanî** **kiʕ'ána?** **l** **s̓l'áx̣ts**
ʔac-suxʷ-ɬt-s **s̓l'ax̣t-s**
John IM-*know*-TR-(3AB)-3ER WA **DET** ***girl*** **GN** ***friend*-3PS**
t [c'aníxtls t c'əx̣ʷl'úsaʔ]
c-ʔani-xt-al-s
OBL DIR-*bring*-APP-1PO-3ER OBL *camas*
John knows the girl's friend who brought us camas. 92.277

In (59) to (61), the subject of the bracketed clause appears as the head of the relative clause, followed by the oblique marker *t* and the relative clause.

The direct object of a transitive clause can also be relativized, as shown in (62) to (64):

(62) núx̣ʷt **ʔacî** **sqəl'tmîxʷ** t' [cmistúnn]
c-miy-stu-nn
go-(3AB) **DET** ***man*** OBL IM-*know*-TR-(3AB)-1SS
[The man that I knew left.] 91.203

(63) cmistúnn **ʔanî** **ttw'it** wa t [kɬc'ə̓mú̓s̓c̓ kiʕ'ánaʔ]
c-miy-stu-nn kɬc'ə̓mus-nt-s
IM-*know*-TR-(3AB)-1SS **DET** ***boy*** WA OBL *kiss*-TR-(3AB)-3ER *girl*
I know the boy that the girl kissed. 92.372

(64) súxʷɬn **ʔanî** **kiʕ'ánaʔ**
suxʷ-ɬt-n
know-TR-(3AB)-1SS **DET** ***girl***
t [táwxtus wa John t yámx̣ʷaʔ]
taw-xit-wa-s
OBL *buy*-APP-TO-(3AB)-3ER WA *John* OBL *basket*
I recognize the girl that John bought the basket for. 92.436

In all of the above examples, a transitive object has been relativized.

The following examples illustrate relativized intransitive subjects:

(65) John tumístxc t yámx̣ʷaʔ
tumistu-xit-s
John *buy*-APP-(3AB)-3ER OBL *basket*
wa **ʔanî** **kiʕ'ánaʔ** t [ckícx pláql]
c-kicx
WA **DET** ***girl*** OBL DIR-*arrive*-(3AB) *yesterday*
John bought a basket for that girl who arrived yesterday. 92.317

(66) **ʔanî** **ay'** **sqəl'tmîxʷ** t [cwáwlx]
c-wawlx
DET + PST ***man*** OBL c-*speak*-(3AB)
təx̣ʷx̣ʷ pl'áql
tə•x̣ʷ•x̣ʷ
die•OC•*die*-(3AB) *yesterday*
The man who spoke died yesterday. 92.166

(67) ʔacsúxʷłn **ʔanî** **kiʕ'ánaʔ**
ʔac-suxʷ-łt-n
IM-*know*-TR-(3AB)-1SS **DET** ***girl***
t [kłc'ə́mú̓sntm t ttw'it]
kłc'ə́mus-nt-m t-tw'it
OBL *kiss*-TR-PAS-(3AB) OBL DM-*boy*
I know the girl who was kissed by the boy. 92.220

Oblique arguments can also be targetted for relativization in Nxaʔamxcin. Kroeber (1999:309) states that "[i]n most of Salish, oblique-centered relative clauses are given nominalized or conjunctive inflection". The following example indicates that this is not the case in Nxaʔamxcin:

(68) súxʷłn **ʔacî** **yámx̣ʷaʔ**
suxʷ-łt-n
know-TR-(3AB)-1SS **DET** ***basket***
t [táwxc wa kiʕ'ánaʔ ʔaní John]
taw-xit-s
OBL *buy*-APP-(3AB)-3ER WA *girl* DET *John*
I recognize the basket that John bought for the girl. 92.435

The relative clause construction in example (68) contains an applicative predicate for which the theme argument, *ʔací yámx̣ʷaʔ* 'the basket', has oblique status.

The relativized noun is not, however, marked oblique in this example as it also serves as direct object of the main clause predicate *sux*^{w} 'know'.

Instruments are also open to relativization in Nxaʔamxcin. In the following example, *ʔaní n'n'íkm'n* 'the knife' assumes the role of instrument in the relative clause from which it is extracted:

(69) wákʷn **ʔaní n'n'íkm'n** t [t'əm'mís John]
wakʷ-nt-n t'əm'-min-nt-s
hide-TR-(3AB)-1SS **DET** ***knife*** OBL *cut*-RL-TR-(3AB)-3ER *John*
I hid the knife that John cut it with. 92.269

Instruments are typically marked oblique in Nxaʔamxcin. Like the oblique example in (68), the relativized instrument is the direct object of the main clause and is therefore not marked oblique. The relative clause predicate in (69) does not contain any morphological marking outside what would be expected for a main clause predicate.

Finally, locative arguments can be relativized, but from the minimal data I have seen the pattern is somewhat different from the relative clauses given above. Consider the following examples:

(70) nə̓ṣt **ʔaxá ʔaní pən'pən'áqs** ʔaní lci
nə̓ṣ-t
heavy-ST-(3AB) **DET DET** ***pən'pən'aqs*** DET *in there*
t [nalíxn ʔintəm'təm'útn]
na-lix-nt-n ʔin-təm'təm'utn
OBL POS-*put down(s.t.pl.)*-TR-(3AB)-1SS 1SPS-*clothing*
The pən'pən'aqs where I put my clothes is heavy.[10] 92.257

(71) qʷtúnt **ʔaní xɬ'út** ʔaní lci
qʷtun-t
big-ST-(3AB) DET *rock* DET *in there*

---

[10]In Czaykowska-Higgins' field notes (92.06.08), a *pən'pən'áqs* is defined as "rawhide folded over, laced, carried on horseback, to put things into in the old days".

t	[k'łt'úcn	ʔinn'n'íkm'n]
	k'ł-t'uc-nt-n	ʔin-n'n'ikm'n
OBL	POS-*put down*-TR-(3AB)-1sS	1sPS-*knife*

The rock under which I laid the knife is big. 92.267

In both of the above examples, the locative argument in bold is followed by a determiner and an indicator of location, *lci* 'in there', which is formed by the locative prefix *l* 'in, at, on' and the root √ci. These are then followed by the remainder of the relative clause in brackets.

Kroeber (1999:257) points out that "[i]n the Coast Salish languages (except for Lushootseed, apparently) and in Lillooet, moreover, a transitive relative clause may precede its head, provided that the relative clause contains no overt DP or PP arguments". This also appears to be possible for Nxaʔamxcin, but one example suggests that (at least) the overt PP restriction within the relative clause does not hold for Nxaʔamxcin. In addition, intransitive relative clauses can precede their heads. Consider the following examples:

(72)

ʔacsúxʷłn	**ʔanî**	[kłc'ə́múṣnç]	**ttw'it**	
ʔac-suxʷ-łt-n		kłc'ə́mus-nt-si-s		
IM-*know*-TR-(3AB)-1sS	**DET**	*kiss*-TR-2sO-3ER	***boy***	

I know the boy who kissed you. 92.182

(73)

ʔacsúxʷłn				
ʔac-suxʷ-łt-n				
IM-*know*-TR-(3AB)-1sS				
ʔanî **x̣əsalpták**	t	[kłc'ə́múṣnç]	**ttw'it**	
		kłc'ə́mus-nt-s		
DET ***good***	OBL	*kiss*-TR-(3AB)-3ER	***boy***	

I know the good boy who kissed you. 92.214

(74)

wíkłn	**ʔanî**	t	[ʔacmúxʷt]	**smʔámm**
wik-łt-n			ʔac-muxʷt	
see-TR-(3AB)-1sS	**DET**	OBL	ʔac-*laugh*-(3AB)	***woman***

I saw the woman who laughed. 92.184

(75)

cmistúnn	
c-miy-stu-nn	
IM-*know*-TR-(3AB)-1sS	

ʔanî	t	[kłc'ə́mṵ́ṣntm kłc'ə́mus-nt-m	t	ttw'ít]	**kiʕ'ána?**
DET	OBL	*kiss*-TR-PAS-(3AB)	OBL	*boy*	***girl***

I know the girl who was kissed by the boy. 92.236

In all of the above examples, the relative clause is preceded by either the article *ʔanî* alone ((72), (74), and (75)) or an article phrase plus adjective (73). The head noun of the relativized argument appears at the end of the relative clause. Examples (74) and (75) illustrate that an intransitive relative clause can also precede its head. Example (75) suggests that the head of a Nxa?amxcin relative clause can follow the relative clause predicate, even when the relative clause contains an overt PP.

Headless relative clauses are also possible in Nxa?amxcin, a construction which Kroeber 1999:258 notes is common to all Salish languages. Kroeber explains that these relative clauses are "ones in which neither target nor head position is filled by a DP [...]. These constructions consist simply of a relative clause preceded by an article". Some examples are given below:

(76)	cmistúnn c-miy-stu-nn	**ʔanî**	t	[cəkncás] cək-nt-sa-s	
	IM-*know*-TR-(3AB)-1SS	**DET**	OBL	*hit*-TR-1SO-3ER	
	I know the one who hit me.				92.173
(77)	ʔacsúxʷsn ʔac-suxʷ-stu-n	**ʔanî**	t	[kłc'ə́mṵ́ṣntxʷ] kłc'ə́mus-nt-xʷ	
	IM-*know*-TR-(3AB)-1SS	**DET**	OBL	*kiss*-TR-(3AB)-2SS	
	I know the one that you kissed.				92.170
(78)	ʔacsúxʷsn ʔac-suxʷ-stu-n	**ʔanî**	t	[nkʷnám]	
	IM-*know*-TR-(3AB)-1SS	**DET**	OBL	*sing*-(3AB)	
	I know the one who sang.				92.171

Each of the above constructions contain a headless relative clause in that there is no nominal present to represent the relativized argument; only the article *ʔanî* precedes the relative clause.

5.5 Fronting Constructions

I borrow the term "fronting" from Kroeber (1991, 1999) to refer to constructions in which an NP or PP appears in prepredicate position.[11] Following Kroeber, I refer to the argument in prepredicate position as the "fronted constituent" and the remainder of the construction as the "residue". I look at three types of fronting in this section: unmarked fronting, quasi-clefting, and clefting.

5.5.1 Unmarked Fronting

The *unmarked fronting* construction is labelled "unmarked" because the fronting of the NP/PP does not trigger any specific morphology. The data indicates that a full range of arguments can be targeted for unmarked fronting in Nxaʔamxcin. The following examples illustrate that the subject of a transitive clause can be fronted. (Fronted NPs are in boldface.):

(79) **smʔáməm** máʕ'ʷs wa nlxʷátkʷtn
maʕ'ʷ-nt-s
woman *break*-TR-(3AB)-3ER WA *pot*
The woman broke the pot.

(80) k'úp taʔ táx̣ʷ taʔ **spə́łaʔ** naʔ kʷánc
k'up taʔ taxʷ taʔ kʷan-nt-si-s
? + IMP *still* +IMP ***Owl*** FUT *grab*-TR-2SO-3ER
Be quiet, be still! Owl will get you. PfI:13

(81) **laʔáws** tawxítus kʷaʔ káłtus
taw-xit-wa-s kał-nt-wa-s
father *buy*-APP-TO-(3AB)-3ER *and* *give*-TR-TO-(3AB)-3ER
His father bought it for him and gave it to him (his son).
W.8.1.8

(82) sá ay' **ʔinwî** kʷántxʷ
kʷan-nt-xʷ
Q + PST **2SEMpro** *take*-TR-(3AB)-2SS
Did you take it? W.4.74

---

[11] I will use the terms NP and PP here, although it is not clear whether the fronted argument functions syntactically as a noun/prepositional phrase or as a predicate.

(83) **John** t'ə́m's ḥacmíntn t n'n'ík'mns
t'əm'-nt-s n'n'ik'mn-s
John *cut*-TR-(3AB)-3ER *rope* OBL *knife*-3PS
John$_i$ cut the rope with his$_{i/j}$ knife. 92.38

(84) húy **ʔału** **x̌'əx̌'ə́xp** kacə́qs
kat-cəq-nt-s
DET ***old man*** POS-*stand upright*-TR-(3AB)-3ER

ʔału stə́łms
stəłm-s
DET *canoe*-3PS

[and then that old man launched his canoe] AfIII:8

(85) t'iʔ kn nacút **ʔací** **tw'it** c'aw'tápsc
c-ʔaw'tap-stu-s
MOD + 1SS *think* **DET** ***boy*** IM-*follow*-TR-(3AB)-3ER

wa ʔací kiʕána?
WA DET *girl*

I think the boy followed that girl.

In all of the above constructions, the transitive subject NP surfaces in front of the transitive predicate, as opposed to its usual post-predicate position. Examples (79) and (80) illustrate fronted nouns, (81) a fronted noun marked for possession, (82) an emphatic pronoun, (83) a personal noun, and (84) and (85) determiner phrases.

Wh-questions are always in the form of some kind of fronting. Some examples of the unmarked fronting of transitive wh-subjects are given below:

(86) **swát** p'ə́q'^{w}s
p'əq'^{w}-nt-s
who *spill(s.t. dry)*-TR-(3AB)-3ER
Who spilled it? W.1.2.30

(87) **swát** ay' wíkłtms
wik-łt-m-s
who + PST *see*-TR-2SO-3ER
Who saw you? 2.2

(88) **swát** wíkłc Paul
wik-łt-s
who *see*-TR-(3AB)-3ER *Paul*
Who saw Paul? 2.10

(89) **swát** wa t'q^{w}ntwás
t'əq^{w}-nt-wa-s
who WA *slap*-TR-TO-(3AB)-3ER
Who slapped her/him? 91.131

In the following transitive examples, the fronted argument is the direct object:

(90) **kiy'ána?** wa t'áq^{w}s ttw'ít
t'əq^{w}-nt-s
girl WA *slap*-TR-(3AB)-3ER *boy*
The boy slapped the girl.
(*The girl slapped the boy.)

(91) **nlx^{w}átk^{w}tns** máʕ'^{w}s smʔámm
nlx^{w}atk^{w}tn-s maʕ'^{w}-nt-s
***pot*-3PS** *break*-TR-(3AB)-3ER *woman*
The woman broke her pot.

(92) **John** ʔəmtwás wa Mary t kkíw'aʔ
ʔəm-t-wa-s
John *feed*-TR-TO-(3AB)-3ER WA *Mary* OBL *fish*
Mary gave John the fish. 91.nr

(93) **ʔincá** ay' wa kxápnc pláql Mary
kxap-nt-s
1SEMpro + PST WA *chase*-TR-(3AB)-3ER *yesterday* *Mary*
It was me Mary chased yesterday. 92.245

(94) **ʔanî t'ák'^{w}t** nq^{w}ən'n'mín
nq^{w}ən'n'-min-nt-n
DET ***lake*** *pity*-RL-TR-(3AB)-1SS
[I felt sorry for that lake] SfIII:6

(95) **cnîl** l **mʔástms** x̣mánks Mary
mʔastm-s x̣mank-s
3SPSpro GN ***father*-3PS** *like*-3PS *Mary*
Mary$_i$ likes her$_{i/j}$ father. 91.170b

(96) **swát** ay' x̣əlq'ntx^{w}
x̣əlq'-nt-x^{w}
who + PST *kill*-TR-(3AB)-2SS
Who did you kill? W.9.9.152

(97) **suswát** 1x wíkłtx^{w}
səw-swat wik-łt-x^{w}
AUG-***who*** + PL *see*-TR-(3AB)-2SS
Who (pl) did you see? 2.17

(98) **stám** wa ʔacx̣uysc
ʔac-x̣uy-stu-s
what WA IM-*do*-TR-(3AB)-3ER
What is he doing?

(99) **swáll** **wa** **kálxs** t'ə́sc ʔaní Mary
kalx-s t'əs-nt-s
whose **WA** ***hand*-3PS** *slap*-TR-(3AB)-3ER DET *Mary*
Whose hand did Mary slap? 91.158

The following examples contain fronted intransitive subjects:

(100) **tw'it** ʔaw'tápm t sƛ'aʔcínm
ʔaw'tap-m
boy *follow*-AP-(3AB) OBL *deer*
The boy followed the deer.

(101) **John** q'aq'ítm ay' pláql
q'aq'it-m
John *fish*-m-(3AB) + PST *yesterday*
John was fishing yesterday. 91.89

(102) naʔsuʔ **ʔincá** kn núx̣^{w}t
FUT **1SEMpro** + 1SS *go*
It's going to be me that will go. W.11.83

(103) **ʔałúʔ** **x̣x̣ƛ'cin** sac'íłnəx^{w}
sac-ʔiłn-mix
DET ***dog*** IM-*eat*-IM-(3AB)
That dog is eating. 90.14

(104) k^{w}aʔ **ʔaní** **sqəpmíns** kat'úc l katqáltk
sqəpmin-s kat-t'uc
and **DET** ***horn*-3PS** POS-*put down*-(3AB) LOC *on top of*
[and its horns were laid on top] JMtII:2

(105) **swát** sc'asnúx̣^{w}tux^{w}
sc-ʔ-nux̣^{w}t-mix
who IM-ʔ-*go*-IM-(3AB)
Who's coming? W.9.9.153

(106) **swát** wa t'ə́m'm' t n'n'ík'mn's
t'ə•m'•m' n'n'ik'mn'-s
who WA *cut*•OC•*cut*-(3AB) OBL *knife*-3PS
Who was cut by her/his knife?

Oblique arguments can also be fronted, as shown in the following examples:

(107) **t** **kłaql'xáw'sn** ʔacḥáw'iym stətílaʔs
ʔac-ḥaw'y-m stətilaʔ-s
OBL ***chair*** ʔac-*make*-AP-(3AB) *grandfather*-3PS
His grandfather is making a chair.

(108) **t** **swát** t'əqʷntm ʔací kiy'ánaʔ
t'əqʷ-nt-m
OBL ***who*** *slap*-TR-PAS-(3AB) DET *girl*
Who was the girl slapped by? 91.133

(109) **t** **swát** ay' cə́kntm ʔací sqəl'tmíxʷ
cək-nt-m
OBL ***who*** + PST *hit*-TR-PAS-(3AB) DET *man*
Who was that man hit by?

In (107), the oblique nominal of the antipassive predicate *ḥáw'iym* 'make' appears in pre-predicate position without triggering any additional morphology in the clause. Examples (108) and (109) contain the oblique wh-arguments of the passive predicates *t'əqʷntm* 'slap' and *cə́kntm* 'hit', which are also fronted without additional morphology.

Finally, locative arguments can be fronted to pre-predicate position, as in (110) to (112):

(110) **k'l** **ʔál'sqa** ʔim'xsn
ʔim'x-stu-n
LOC ***outside*** *move*-CS-(3AB)-1SS
I threw him out. W.7.283

(111) kʷaʔ lx nxət'saw'sc
n-xət'=us=aw's-stu-s
and + PL POS-*cut=fire=middle*-CS-(3AB)-3ER

kʷaʔ	**k'l**	**ʔmʔumtúl'uxʷ**	kłkícm
		ʔəm-ʔumtul'əxʷ	kł-kic-m
and	LOC	AUG-***ground***	POS-*arrive*-m-(3AB)

[and they spliced it together until it reached the ground]

SfX:1

(112)	**k'l**	**laʔkáʔ**	kʷ	kasʔím'xəxʷ
				kas-ʔim'x-mix
	LOC	***where***	+ 2SS	IR-*move*-IM

Where are you going to move? W.7.286

All three of the above locative arguments are marked by the locative preposition *k'l.* Both preposition and argument are fronted to the left of the predicate.

I do not have any examples of unmarked fronting targetting instrumental arguments. I suspect this reflects a gap in the data.

5.5.2 Quasi-Clefting

Kroeber (1999:365) describes *quasi-clefting* in Salish languages as "fronting constructions in which the residue takes the form of some type of subordinate clause other than a headless relative clause; the difference from relative clauses may be in the inflection or in the initial particle or both".

In Nxaʔamxcin, quasi-cleft constructions are formed with a clefted element appearing in initial position, followed by one of the subordinating particles, *łuʔ* or *ci,* followed by a relative clause which is optionally marked by the oblique marker *t.* This is schematized in (113):

(113) NP_i / PP_i SUB (t) IP[$\__i$]

Some examples of quasi-clefted transitive subjects are given below. (Clefted elements are in boldface; relative clauses are marked by square brackets.):

(114) **John** łu? [cə́ks wa Mary]
cək-nt-s
John SUB *hit*-TR-(3AB)-3ER WA *Mary*
It was John who hit Mary. 92.240

(115) **John** ci t [kłc'əmú̓sn̓ç]
kłc'ə̓mus-nt-sa-s
John SUB OBL *kiss*-TR-1SO-3ER
It was John who kissed me. 92.210

(116) **t** **ʔincá** ci [kxápn wa Mary]
kxap-nt-n
OBL **1SEMpro** SUB *chase*-TR-(3AB)-1SS WA *Mary*
It's me that chased Mary. 92.226

(117) **swát** łu [kxáps wa ʔásqʷəsaʔs]
kxap-nt-s ʔasqʷəsaʔ-s
who SUB *chase*-TR-(3AB)-3ER WA *son*-3PS
Who$_i$ was it that chased his$_{j/*i}$ son?

(118) kʷaʔ lut cmistúxʷ **swát** łu? [q'íy's]
c-miy-stu-xʷ q'iy'-nt-s
and NEG IM-*know*-TR-(3AB)-2SS ***who*** SUB *write*-TR-(3AB)-3ER
[And do you not know who wrote it?]
A-FdII:13

In (114), the subject argument *John* appears in initial position, followed by the subordinating particle *łuʔ*, which is followed by a relative clause. In example (115), the subject *John* is also clefted, but in this example it is followed by the subordinating particle *ci*. With the exception of example (115), none of the above examples contain an oblique marker preceding the residue of the quasi-cleft. Omission of the oblique marker is the more common pattern in the data. (Recall that transitive subjects are sometimes marked oblique in Nxaʔamxcin, hence the oblique marker in (116).)

Transitive objects can also be quasi-clefted, as shown in the following examples:

(119) **John** łu? [kłc'ə̓mu̓sn]
kłc'ə̓mus-nt-n
John SUB *kiss*-TR-(3AB)-1SS
John is the one I kissed. 92.196

(120) **sx̌'aʔcînəm** łuʔ wa [ʔaw'táps tw'ít]
ʔaw'tap-nt-s
deer SUB WA *follow*-TR-(3AB)-3ER *boy*
It was the deer that the boy followed.

(121) **ʔincá** łuʔ wa [kxápnc John] lut wa ʔinwî
kxap-nt-sa-s
1SEMpro SUB WA *chase*-TR-1SO-3ER *John* NEG WA 2SEMpro
It's me that John chased not you.

92.225

(122) **Mary** łuʔ wa [káłxc t yámx̣ʷaʔ John]
kał-xit-s
Mary SUB WA *give*-APP-(3AB)-3ER OBL *basket* *John*
lut wa Isabel
NEG WA *Isabel*
It was Mary that John gave a basket to, not Isabel. 92.305

(123) **swát** łu wa [kxáps ʔaní ʔásqʷəsaʔs]
kxap-nt-s ʔasqʷəsaʔ-s
who SUB WA *chase*-TR-(3AB)-3ER DET *son*-3PS
Who$_i$ was it that her/his$_{i/j}$ son chased?

(124) **stam** łuʔ wa [c̣haw'istús]
c-c̣haw'y-stu-s
what SUB WA IM-*make*-TR-(3AB)-3ER
What is he making?

Intransitive subjects can also be targetted for quasi-clefting, as in the following examples:

(125) **ʔacî** **smʔámm** łuʔ t [múxʷt]
DET ***woman*** SUB OBL *laugh*-(3AB)
It was that woman who laughed. 92.194

(126) l c'əkcín **ʔásqʷsaʔs** ci wa [t'úcc]
ʔasqʷsaʔ-s t'u•c•c
LOC *shore* ***son*-3PS** SUB WA *fall*•OC•*fall*-(3AB)
At the river shore her/his son fell down.

(127) **Sam** ci [lkʷnám tl' smaʔámm tl' Desmet]
l-kʷan-am LOC *woman* LOC *Desmet*
Sam SUB DIR-*take*-m-(3AB)
Sam got another woman from Desmet AnI:10

(128) **stám** ci [káłxtm t Mary]
kał-xt-m
what SUB *give*-APP-PAS-(3AB) OBL *Mary*
[What was given by Mary?] 91.88

Oblique arguments targetted for quasi-clefting are illustrated in the following examples:

(129) **t** **kłaql'xáw'sn** łu? [ḥaw'ixits stətíla?s]
ḥaw'y-xit-s stətila?-s
OBL ***chair*** SUB *make*-APP-(3AB)-3ER *grandfather*-3PS
It was a chair that he made for his grandfather.

(130) **t** **sx̂'a?cînm** łu? [?aw'tápm tw'ít]
?aw'tap-m
OBL ***deer*** SUB *follow*-AP-(3AB) *boy*
It was the deer that the boy followed.

(131) **t** **q'^{w}áylqs** ci [x^{w}əlx^{w}əlstum]
x^{w}əl-x^{w}əl-stu-m
OBL ***priest*** SUB AUG-*save*-CS-PAS-(3AB)
It's the priest who saved him.

(132) **t** **Mary** ci [cə́kntm]
cək-nt-m
OBL ***Mary*** SUB *hit*-TR-PAS-(3AB)
Mary is the one that he was hit by.

(133) **t** **stam** ci [ḥaw'ixíts stətíla?s]
ḥaw'y-xit-s stətila?-s
OBL ***what*** SUB *make*-APP-(3AB)-3ER *grandfather*-3PS
What did he make for his grandfather?

(134) **t** **swat** łu? [cə́kntm ʔací sqəl'tmíx^{w}]
cək-nt-m
OBL ***who*** SUB *hit*-TR-PAS-(3AB) DET *man*
Who was that man hit by?

Examples of quasi-clefted locatives are provided below:

(135) **l** **púks** ci [nalíxs təmtəmútns]
na-lix-nt-s təmtəmutn-s
LOC ***box*** SUB POS-*put down(s.t.pl.)*-TR-(3AB)-3ER *clothing*-3PS
It was the box that she put her clothes in.

(136) **l** **xƛ̓'út** ci [cə́kn ʔinyámx̣ʷaʔ]
cək-nt-n ʔin-yamx̣ʷaʔ
LOC ***rock*** SUB *hit*-TR-(3AB)-1SS 1SPS-*basket*
I set my basket near a rock.

(137) **l** **c'əkcín** ci [wíkɬtus]
wik-ɬt-wa-s
LOC ***shore*** SUB *see*-TR-TO-(3AB)-3ER
He saw her at the river shore.

(138) **l** **nawə́nt** ci [t'úcc]
t'u•c•c
LOC ***inside*** SUB *fall*•OC•*fall*-(3AB)
He fell down inside.

And finally, instruments can also be targetted for quasi-clefting in Nxaʔamxcin.

(139) **t** **ʔinwill** **ʔinn'n'ik'mn** ci [t'ə́m'n
ʔin-n'n'ik'mn t'əm'-nt-n
OBL **2SPSpro** **2SPS-*knife*** SUB *cut*-TR-(3AB)-1SS
ʔací ḥacmíntn]
DET *rope*
It was your knife that I cut the rope with. 92.300

(140) **t** **stám** ci ay' [xʷə́ƛ̓'s wa ʔaní sláp']
xʷəƛ̓'-nt-s
OBL ***what*** SUB + PST *peel*-TR-(3AB)-3ER WA DET *wood*
What did s/he carve the wood with?

(141) **t** **stám** ci [cəkntwás]
cək-nt-wa-s
OBL ***what*** SUB *hit*-TR-TO-(3AB)-3ER
[With what did s/he hit her/him?] 91.156b

5.5.3 Clefting

Kroeber (1999:365) describes *clefting* in Salish languages as "constructions in which the residue has the form of a headless relative clause: it is introduced by an article (like an ordinary DP), and it has the inflectional form suited to a relative clause whose target has the grammatical relations that the fronted consistuent is understood to fill". This is schematized in (142):

(142) NP_i DET (t) [IP __ i]

Recall that inflectional marking of relative clauses in Nxa?amxcin is identical to that of main clauses, thus the IP in (142) is inflected as if it were a main clause.

Fewer examples of clefting are available in the data than those of quasi-clefting. In fact, without further investigation, I can only confirm that NPs are clefted in Nxa?amxcin. Although given the wide range of possibilities for quasi-clefting, as outlined in the previous section, I would expect it is possible to target PP's for clefting as well in Nxa?amxcin.

Some examples of clefted transitive subjects are given in (143) and (144). (The residue is in square brackets.):

(143) **sccəm'ált** lx ʔací [kxáps túm's]
kxap-nt-s tum'-s
children + PL DET *chase*-TR-(3AB)-3ER *mother*-3PS
Those children chased their mother.

(144) **kiḥánaʔ** ʔací [cíx̣^{w}s
cix̣^{w}-nt-s
girl DET *scratch*-TR-(3AB)-3ER
smʔámm t ḥipmíntus]
ḥip-min-nt-wa-s
woman OBL *scold*-RL-TR-TO-(3AB)-3ER
The little girl scratched the woman who scolded her.

Examples of clefted transitive objects are given in (145) to (148):

(145) **swát** wa ʔaní [ckxápstus púsc]
c-kxap-stu-s pus-s
who WA DET IM-*chase*-TR-(3AB)-3ER *cat*-3PS
Who is being chased by his (own) cat? 91.201

(146) **swát** ʔaní [kasḥipmíntəx^{w}]
[kas-ḥip-min-nt-x^{w}]
who DET [IR-*scold*-RL-TR-(3AB)-2SS]
Who are you going to scold?

(147) **stx^{w}úl** ʔaní [ʔisctáw]
ʔin-s-c-taw
house DET 1SPS-NM-c-*buy*
It's a house that I bought.

(148) **stám'** ʔaní [ʔiscyák']
ʔin-s-c-yak'
what DET 2SS-NM-c-*burn*
What did you burn?

Note that examples (147) and (148) contain nominalized predicates.

Some examples of intransitive subject clefting are provided below:

(149) **ʔąçp'ą̓x̌'** ʔaní [wə́ck]
tree DET *fall down*-(AB)
The tree fell down.

(150) **smʔámm** ʔací [t'əm'ncút]
t'əm'-nt-cut
woman DET *cut*-TR-RF-(3AB)
The woman cut herself.

(151) **smʔámm** ʔací [k'łḥcay'n'ált]
k'łḥcay'n'=alt
woman DET *tease=child*-(3AB)
That woman was teasing her child.

(152) **swát** ʔaní [t'əq^{w}ntm]
t'əq^{w}-nt-m
who DET *slap*-TR-PAS-(3AB)
Who was slapped? 2.139

(153) **swát** ʔałú t [ʔacnúx̣^{w}t]
ʔac-nux̣^{w}t
who DET OBL ʔac-*go*-(3AB)
Who is that coming? W.10.128

Example (153) contains the oblique marker *t*, illustrating that the residue of the cleft has the appearance of a relative clause.

Finally, the following example illustrates the clefting of the wh-element 'when':

(154) **pan'kána** ʔací [tk ʔim'x]
when DET + 1PS *move*
When should we move? W.7.288

The wh-element *pan'kána?* represents a temporal locative, and note that the predicate of the cleft residue is, like all of the above clefted examples, marked for agreement as if it were a main clause predicate.

In the following section I turn to a discussion of the particle *wa* and its distribution in both simple clauses and fronting constructions.

5.6 The Particle *wa*

The particle *wa* has previously been referred to as an absolutive marker by Czaykowska-Higgins (1996, 1998) and Willett (1996). Willett has specifically argued that *wa* optionally surfaces when a maximal projection has an absolutive case feature. In this section I provide a descriptive account of the particle *wa*.

In simple clauses, NP's surface in post-predicate position and if the particle *wa* does surface, it appears to the left of the absolutive NP (i.e. transitive object/intransitive subject), as illustrated in the following examples:

(155) xʷáy'm wa ʔinx̣x̣ƛ'cín
xʷay'-m ʔin-x̣x̣ƛ'cin
run away-(3AB) WA 1SPS-*dog*
My dog ran away.

(156) núrnurt wa n'n'ík'mn's
n'n'ik'mn'-s
dull-(3AB) WA *knife*-3PS
Her/his knife is dull. Y25.23

(157) máʕ'ʷs wa nlxʷátkʷtn smʔámm
maʕ'ʷ-nt-s
break-TR-(3AB)-3ER WA *pot* *woman*
The woman broke the pot.

(158) t'ə́m's wa John l hacmíntns
t'əm'-nt-s hacmintn-s
cut-TR-(3AB)-3ER WA *John* GN *rope*-3PS
'S/he cut John's rope.' 92.78

Both (155) and (156) are intransitive constructions and we see the *wa* particle surfacing to the left of the subject NP. (157) and (158) contain transitive predicates and the *wa* particle surfaces to the left of the object NP.

Topical object constructions are interesting in that the reverse is true. Topical object voice, discussed in section 6.2.1.1, is marked on bivalent stems by the suffix *-wa* (reduced to *-u* when unstressed). What is so interesting about these constructions is that when the particle *wa* appears, it surfaces to the left of the subject, as opposed to the object. Consider the following examples:

(159) ʔaw'tápntus ttw'ít wa sχ'aʔcínm
ʔaw'tap-nt-wa-s t-tw'it
follow-TR-TO-(3AB)-3ER DM-*boy* WA *deer*
The deer followed the boy.

(160) c'əx̣^{w}c'əx̣^{w}stwás wa Chuck
c'əx̣^{w}c'əx̣^{w}-stu-wa-s
?-CS-TO-(3AB)-3ER WA *Chuck*
Chuck talks to people. 91.106

If we compare examples (157) and (158) with (159) and (160), the difference is obvious; the particle *wa* is linked to the transitive object in active voice and the transitive subject in topical object voice.

With respect to fronting constructions, we find the particle *wa* does not surface to the left of fronted absolutives, but rather to the left of the residue. Consider first unmarked fronting constructions:

(161) smʔámm máɬ'^{w}s wa nlx^{w}átk^{w}tn
maɬ'^{w}-nt-s
woman *break*-TR-(3AB)-3ER WA *pot*
The woman broke the pot.

(162) kiɬána? wa t'áq^{w}s ttw'ít
t'əq^{w}-nt-s t-tw'it
girl WA *slap*-TR-(3AB)-3ER DM-*boy*
The boy slapped the girl.

(163) ʔasqʷsaʔs wa t'úcc l c'əkcín
ʔasqʷsaʔ-s t'u•c•c
son-3PS WA *fall down*•OC•*fall down*-(3AB) LOC *river shore*
Her/his son fell down at the river shore.

(161) illustrates an example of a fronted ergative with the absolutive argument in post-predicate position. As expected, *wa* surfaces to the left of the absolutive NP. In (162), it is the absolutive NP that is fronted, and this time the *wa* particle follows the absolutive, surfacing to the left of the predicate. The intransitive example in (163) illustrates the same pattern; the subject (i.e. absolutive) NP is fronted and *wa* surfaces again to the left of the predicate.

Like simple clauses, the *wa* particle is linked to the transitive subject in topical object unmarked fronting constructions, as shown in (164):

(164) x̣x̣ƛ'cín wa k'ʷaʔntwás tw'ít
k'ʷaʔ-nt-wa-s
dog WA *bite*-TR-TO-(3AB)-3ER *boy*
A dog bit the boy.

Example (164) is comparable with (162) in that both involve a fronted argument followed by the particle *wa* and the clause predicate. (164), however, is a topical object construction and, as expected, it is the transitive subject that is linked to the particle *wa* and not the transitive object as in the active example in (162). As with fronted arguments, *wa* surfaces to the left of the predicate as opposed to the left of the fronted argument.

The following ungrammatical examples illustrate that *wa cannot* surface to the left of fronted arguments:

(165) * wa x̣x̣ƛ'cín kxáps pús
kxap-nt-s
WA *dog* *chase*-TR-(3AB)-3ER *cat*
(The cat chased the dog.) 92.21

(166) * wa pús kxápntus x̣x̣ƛ'cín
kxap-nt-wa-s
WA *cat* *chase*-TR-TO-(3AB)-3ER *dog*
(The cat chased the dog.) 92.24

In the active example in (165), *wa* cannot precede the fronted absolutive, and in the topical object example in (166), *wa* cannot precede the fronted transitive subject.

With respect to quasi-clefted examples, *wa* again surfaces to the left of the clause predicate when an absolutive argument is quasi-clefted. Consider the following examples:

(167) John łuʔ cə́ks wa Mary
cək-nt-s
John SUB *hit(by throwing)*-TR-(3AB)-3ER WA *Mary*
It was John who hit Mary. 92.240

(168) sƛ'aʔcínm łuʔ wa t ʔaw'táps ttw'ít
ʔaw'tap-nt-s t-tw'it
deer SUB WA OBL *follow*-TR-(3AB)-3ER DM-*boy*
It was the deer that the boy followed.

In (167), the ergative argument is quasi-clefted and it is the absolutive in post-predicate position that is marked by *wa*. In (168), the absolutive is quasi-clefted and the *wa* particle surfaces between the subordinating particle and the oblique *t* which marks the residue.

The following example illustrates that, like unmarked fronting constructions, a quasi-clefted absolutive cannot be preceded by the particle *wa*:

(169) * wa Chuck łuʔ q'iy'xíc
q'iy'-xit-s
WA *Chuck* SUB *write*-APP-(3AB)-3ER
(It was Chuck that someone wrote to.) 91.52

Unfortunately, I do not have the relevant data to illustrate *wa*-marking in quasi-clefted topical object constructions.

5.7 Summary

In this chapter I presented a brief introduction to the syntax of Nxa?amxcin. I first outlined the parts of speech, touching briefly on the controversy surrounding lexical categories in Salish languages where some scholars recognize a noun-verb distinction while others do not. Adopting the views of the former, I then moved on to a discussion of the noun phrase. I introduced the four determiners and three demonstratives that have been identified for Nxa?amxcin, and then looked at oblique and locative prepositions. In the final section on noun phrases, I reviewed the syntax of genitive phrases.

I then turned to the syntax of various types of clauses. I illustrated that simple clauses have VS word order for intransitive, and the unmarked VOS for transitive clauses, noting that there is some freedom of word order as VSO constructions are also possible. Relative clauses were examined with the data illustrating that the relative clause head could either precede or follow the relative clause. In addition, relative clauses can be headless in Nxa?amxcin. I then looked at fronting constructions which involve the fronting of a NP/PP to pre-predicate position. There are three types of fronting: (i) unmarked; (ii) quasi-clefting (the fronted argument is followed by a subordinating particle and the residue has the surface form of a relative clause as it is preceded by an oblique marker); and (iii) clefting (identical in structure to quasi-clefting except there is a deteminer in lieu of a subordinating particle).

Finally, I looked at the properties and distribution of the particle *wa*, which is prevalent throughout the Nxa?amxcin data. On the surface it appears to mark (optionally) absolutive arguments; however it is linked with the transitive subject in topical object constructions. Its position in fronting constructions is curious in that when absolutive arguments (or subjects of topical object constructions) are fronted, *wa* appears to mark the residue as opposed to the fronted NP.

Having looked at how Nxa?amxcin clause constructions are formed, in the next three chapters I examine numerous processes involved in forming Nxa?amxcin words. I start in the following chapter by discussing operations that take place at the derivational stem level.

Chapter Six

Lexical Operations

6.0 Introduction

This chapter presents a descriptive synchronic discussion of lexical operations in Nxa?amxcin. Lexical operations take place at the derivational stem level, shown in (1):

(1) ***Derivational Stem***

$[_{DS}$ NM DIR POS *ASP DIM CTR ASP*$[_{LX}$ (Y) √ROOT (Z) $]_{LX}$ *DIM* ASP CTR VC RL VAL VC NM $]_{DS}$

As the schema in (1) illustrates, the derivational stem contains the lexemic stem along with numerous categories of lexical operations, each of which is addressed in this chapter. I begin with the larger categories, starting with *valence*. Contained within this category are intransitive, transitive, causative, applicative and external possession operations. I then look at the category *voice* for which Nxa?amxcin has a very elaborate system represented here in two divisions: pragmatic voice and semantic voice. The former contains the topical object, passive, antipassive and indefinite object operations, and the latter middle, reflexive and reciprocal operations. *Aspect* is an important category at the derivational stem level. Nxa?amxcin stems can undergo operations for inchoative, stative, habitual, developmental or iterative aspect. Following aspect is the category *control*, another very important category in Nxa?amxcin (and the Salish family) which indicates whether an agent has no control (out-of-control) or limited control over an action. I then look at category-changing operations that create nouns and adjectives. This is followed by the numerous operations encompassed under the category *locative*. I then turn to the category *dimension*, which comprises the augmentative and diminutive operations. And finally, I look at the somewhat miscellaneous category of *relational*.

6.1 Valence

This section presents a discussion of *valence* categories in Nxa?amxcin. The term valence is used in relation to the number of direct arguments required by a predicate. In English, a verb can subcategorize for one to three direct arguments depending on the lexical properties of the verb. Consider the following examples:

(2) Susie slept.
(3) Susie beat the rug.
(4) Susie gave Christopher an ice cream.

In the above examples there is variation in valence from one verb to the next. In example (2) *sleep* subcategorizes for one single argument, *Susie*; in example (3) *beat* subcategorizes for two arguments, *Susie*, and the direct object *rug*; in (4) the verb *give* subcategorizes for three arguments, *Susie* and the objects *Christopher* and *ice cream*. We can say that the verb *sleep* in (2) is low in valence as it subcategorizes for one argument only. The verb *give* in example (4), on the other hand, is high in valence, subcategorizing for three arguments.

Operations that change the valence of a predicate are referred to as *valence-changing* operations. Bybee (1985:20) states that "[*v*]*alence-changing* categories such as transitive, intransitive and causative are highly relevant to the situation described in the verb stem, since the situation expressed by the verb stem changes according to the number and role of the participants in the situation". Czaykowska-Higgins (1996, 1998) includes valence-changing categories as part of her morphosyntactic grouping of morphemes. While valence-changing operations are clearly relevant to the syntax in that they have a direct effect on the number of argument positions to be projected, I adopt the view that valence operations are contained within the derivational stem since I am assuming that operations altering properties contained within the lexical entry of a lexeme are, in fact, lexical.

In the following sections, I discuss the operations subsumed under the category valence in Nxa?amxcin. First, I discuss the predicates that are the lowest in valence: monovalent intransitives. I then turn to the various valence-

changing operations that are available in the language: transitive, causative, applicative and external possession. No two of these valence-changing operations ever cooccurr. In fact, they are each marked in the same slot within the derivational stem, as indicated in (5):

(5) ***Derivational Stem***

[$_{DS}$ NM DIR POS *ASP DIM CTR ASP*[$_{LX}$ (Y) √ROOT (Z)]$_{LX}$ *DIM* ASP CTR VC RL **VAL** VC NM]$_{DS}$

⇑

6.1.1 Intransitive

Intransitive verbs have the lowest degree of valency, with just one single direct argument. Intransitive verbs are easily identifiable in Nxa?amxcin as subject agreement is realized by a clitic for 1st and 2nd person, or the predicate is unmarked for 3rd person, as shown in (6) and (7):

(6) t'i kn nacút
MOD + 1SS *think*
I think so. Y29.49

(7) hɘ́mp
fall-(3AB)
He fell off. EP2.150.10

Nxa?amxcin intransitive predicates can be bare or morphologically complex. Bare intransitives, like the ones in (6) and (7), are simply lexemic stems, which can be solely the phonological root, or the phonological root plus some reanalyzed morphology. Only a subset of Nxa?amxcin verbs can surface as bare intransitives. Other intransitive predicates must undergo some kind of morphological spelling operation.

A common morpheme surfacing on intransitive predicates is the suffix *-m*. This suffix, ubiquitously glossed as 'middle' throughout the Salish literature, has an extensive usage in the Salish family (see Czaykowska-Higgins and Kinkade 1998 and Kroeber 1999) and is an excellent example of the lack of one-to-one

correspondence between form and function in word formation. In Nxa?amxcin, this suffix marks 1st pl. subjects and 1st/2nd sg. second paradigm objects (section 7.1). The suffix *-m* is also the pan-Salish marker for passive, antipassive and middle voice. This multi-functional usage of the suffix *-m* is addressed for other Salish languages by Salishanists such as Gerdts and Hukari (1998) and Beck (2000a) who take a unificational approach towards the various usages of this suffix in Bella Coola and Halkomelem respectively, following the work of Kemmer (1993).

There is an additional function associated with the suffix *-m* which is difficult to pin down in terms of grammatical and semantic features. Its distribution appears to be connected with a split between unergative and unaccusative-type verbs, which has been previously noted by H. Davis (1997a) for Lillooet. These verb-types, which are differentiated under the Unaccusative Hypothesis (Perlmutter 1978; Burzio 1986), are schematized in (8) following Levin and Rappaport Hovav (1995:3):

(8) a. Unergative verb: NP $[_{VP}$ V]

b. Unaccusative verb: __ $[_{VP}$ V NP/CP]

As (8) indicates, each of these verb-types subcategorize for a single direct argument, the difference between the two being that unergative verbs subcategorize for an external argument, while unaccusative verbs subcategorize for an internal argument. At the surface level, the single direct argument assumes the role of external argument.

In this work I assume that both unergatives and unaccusatives are primitive in Nxa?amxcin, following cross-linguistic claims made by Grimshaw (1987), Rosen (1989a), Van Valin (1990), Zaenen (1993), Levin and Rappaport Hovav (1995), among others.[1] Gerdts (1991) isolates two tests which distinguish

[1]There is no general agreement on this point in Salish. Gerdts (1991) claims there is evidence for an unaccusative-unergative split in Halkomelem, as does Howett (1993) for Thompson. However H. Davis (1997a) argues, based on evidence from Lillooet, that only unaccusatives are primitive.

unergative and unaccusative predicates in Halkomelem Salish: unergatives can be marked for both the causative and desiderative operations while neither apply to unaccusatives.[2] Such a diagnostic would be of great value to an analysis of Nxa?amxcin verbs; however I have no such diagnostic at this time. Thus, for the purposes of this discussion, I rely on the semantic properties of verbs.

Perlmutter (1978:162–163) provided the first semantic characterization of unergatives and unaccusatives, stating that unergatives are "[p]redicates describing willed or volitional acts" in addition to "[c]ertain involuntary bodily processes". Unaccusatives are defined, in part, as "[p]redicates whose initial nuclear term is semantically a Patient". Using these semantic characterizations as a guide, a pattern emerges among Nxa?amxcin intransitives in which some predicates patterning semantically with Perlmutter's unergatives are marked by the suffix *-m*, whereas those patterning with Perlmutter's unaccusatives have no *m*-marking.

Turning first to unergative verbs, we find that intransitive predicates falling under the semantics of this category are usually marked by the suffix *-m*, as shown in (9) to (17):

(9) q'ʷaɬ nx̣a?aycínm
nx̣ə?ay'cin-**m**
begin *holler*-m-(3AB)
S/he started hollering.[3] 90.53

(10) t'əq'ʷcínm
t'əq'ʷcin-**m**
holler-m-(3AB)
[S/he hollered.] EP2.11.10

(11) síyq'**m**
siq'-**m**
split-m-(3AB)
[S/he chopped wood.] 90.133

---

[2]Of course, it is not a clean split as Gerdts illustrates that some unaccusatives pattern with unergatives in that they can be either causativized or marked for desiderative.

[3]I am unclear on the status of *q'ʷaɬ* as a lexical verb or a particle. I will treat it as a particle here.

(12) pptíx̣^{w}**m**
p-ptix̣^{w}-**m**
DM-*spit*-m-(3AB)
S/he spit a little bit.

(13) cḥcḥápm
cəḥ-caḥap-**m**
AUG-*scream*-m-(3AB)
[S/he cried hard.]

(14) k'ɨ́ʕ^{w}**m**
k'iʕ^{w}-**m**
pray-m-(3AB)
[S/he prayed.] EP

(15) q'áw'**m**
q'aw'-**m**
belch-m-(3AB)
S/he burped.

(16) kn təkáy'**m**
takay-**m**
1ss + *urinate*-m
[I peed.] 90.189

(17) wə́lq'^{w}**m**
wəlq'^{w}-**m**
swallow-m-(3AB)
[S/he swallowed.] Y6.371

All of the predicates in (9) to (14) involve "willed or volitional acts" ('holler', 'chop wood', 'spit', 'cry', 'pray'), while the predicates in (15) to (17) involve "involuntary bodily functions" ('burp', 'pee', 'swallow'). What each of the above predicates have in common, beside the fact that they match Perlmutter's semantic features for ergatives, is that they are all marked with the suffix *-m*.[4]

Examples (18) to (21) fall under the semantic scope of Perlmutter's unaccusatives:

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[4]The potential unergative forms *łwám* 'go (pl.)' and *lilám* 'run (pl.)' appear to be reanalyzed stems consisting of a root and the suffix *-am*. Such stems are, to my knowledge, never marked with the *-m* suffix. The *-am* is most likely a variant of the suffix *-m*. Further discussion of this variant is given in section 6.2.2.1. It may turn out that the form *łwám* 'go (pl.)' is best analyzed as a middle predicate.

(18) tə́x̣ʷx̣ʷ ʔaní sqəl'tmíxʷ
tux̣ʷx̣ʷ
die-(3AB) DET *man*
That man died. 92.164

(19) ʔaçp'áƛ' ʔaní wə́ck
tree(sg.) DET *fall over*-(3AB)
The tree fell down.

(20) kʷaʔ lx yəríx
and + PL *sit down(pl.)*-(3AB)
and they sat down

(21) ckícx
c-kicx
DIR-*arrive*-(3AB)
s/he arrived 92.317

All of the above predicates have one argument which is of the thematic role patient. The suffix *-m*, which was seen on the semantically unergative predicates in (9) to (17), is not present on any of the predicates in (18) to (21).

Given the data in (9) to (21), it would appear that Nxaʔamxcin makes a morphological distinction between unergative and unaccusative-type verbs. This is not entirely true, however, as a number of predicates that are semantically unergative are not marked with the *-m* suffix, as shown in (22) to (25):

(22) t'íl ʔúcqaʔ
MOD *go out*-(3AB)
S/he went out already. Y29.147

(23) kn núx̣ʷt
1ss + *go*
I went. 92.1

(24) múx̣ʷt
məxʷt
laugh-(3AB)
S/he laughed. 92.7

(25) ʔítx lx
sleep-(3AB) +PL
they went to sleep

Examples (22) to (24) are representative of "willed or volitional acts", and (25) is an "involuntary bodily process". While they pattern with the predicates in (9) to (17) from a semantic perspective, they are not marked by the suffix *-m*.[5]

A third type of intransitive that I will address here is what Levin (1993) labels the "Object of Transitive = Subject of Intransitive Alternation"-type intransitive. These are intransitive predicates in which the external argument might otherwise be found as the object of the transitive alternative. This is an area that requires much more research in Nxa?amxcin. I can provide only the following observation at this point: these intransitive predicates usually surface with some kind of aspectual or control marking. These include predicates with meanings like 'cook', 'burn', 'break', 'tear', 'rip', 'cut', 'shake', 'scrape', and 'bounce'. Some examples of out-of-control forms are given in (26) to (29):

(26) kn tə́**m**m
tə•**m**•m
1ss + *burn*•OC•*burn*
I got burnt. 90.N141

(27) kn t'ə**m**'m'
t'ə•**m**'•m'
1ss + *cut*•OC•*cut*
I was cut.

(28) yú**m**'m' ʔaxáʔ stx^{w}úl
yu•**m**'•m'
shake•OC•*shake*-(3AB) DET *house*
This house shook.

(29) ʔi**q**'q'
ʔi•**q**'•q'
scrape•OC•*scrape*
get scraped Y30.77

---

[5]In fact, the predicates in (23) and (24), *nuẋ^{w}t* 'go' and *muẋ^{w}t* 'laugh' respectively, appear to be reanalyzed stems comprised of a root plus the suffix *-t*. This suffix generally marks predicates stative, but these are clearly not stative forms in (23) and (24).

In each of the above examples, the second consonant of the root is reduplicated marking the operation out-of-control.[6] This indicates that the participant has no control over the situation, or that the situation took place by accident.

Many of the "Object of Transitive=Subject of Intransitive Alternation"-type predicates undergo some aspectual operation, such as inchoative. The inchoative is marked as follows: strong roots (roots containing a full vowel) are infixed with a glottal stop; weak roots (roots containing a schwa vowel) are suffixed with *-p* (section 6.3.2.1). Examples of inchoative forms are given in (30) to (33):

(30) p'iʔq
p'i•ʔ•q
cook•IN•*cook*-(3AB)
it's cooked 89.09.21.23

(31) kn ṣłaʔaṭmíx
s-łə•ʔ•t'-mix
1ss + IM-*wet*•IN•*wet*-IM
I'm getting wet. 90.87

(32) t'ə́l'**p** ʔaxáʔ q'iy'míntn
t'əl'-**p**
tear-IN-(3AB) DET *paper*
This paper tore.

(33) kʷaʔ tə́mp
təm-p
and *burn*-IN-(3AB)
and she burned PfI:13

Examples (30) and (31) illustrate this third type of intransitive marked with the glottal infix-*ʔ*-. This infix marks the inchoative operation indicating a change of state is taking place. Examples (32) and (33) illustrate the same operation, but with the alternate inchoative marker *-p*.

Stative aspect is also frequently found with this third type of intransitive. The stative operation is marked by the suffix *-t*, as in (34) to (36):

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[6]The out-of-control morpheme is analyzed as an infix in section 6.4.1, hence the repetition of the lexeme gloss in the out-of-control examples.

(34) kn xə́st
xəs-**t**
1SS + *lose*-ST
I am lost. G6.64

(35) cíḥ**t** ʔaxáʔ q'iy'mîntn
ciḥ-**t**
ʔ-ST-(3AB) DET *paper*
This paper is ripped.

(36) k^{w}áx^{w}**t**
k^{w}ax^{w}-**t**
wake-ST-(3AB)
S/he is awake. EP2.5.1

There has been no work published on verb classes in Nxaʔamxcin and, to my knowledge, no extensive research has been done in this area. My discussion of intransitive predicates should therefore be considered preliminary. The observations presented here no doubt barely scratch the surface of the properties of Nxaʔamxcin intransitives. A much more indepth investigation of intransitive properties needs to be addressed in the future.

6.1.2 Transitive

Nxaʔamxcin predicates with more than one direct argument must undergo a valence-changing operation, the most widespread of which is the transitive operation. Kroeber (1999:28) indicates that "[v]irtually every transitive predicate in every Salish language contains a transitive marker". Nxaʔamxcin contains two separate markers of transitivity, *-nt* and *-stu*. The former surfaces with perfective predicates, the latter with imperfective predicates.[7]

Perfective aspect is not overtly marked on predicates in Nxaʔamxcin, while imperfective aspect is marked by one of the prefixal variants *ʔac-/c-* for bivalent stems (see section 7.2). As shown in the following examples, perfectives are marked transitive by the transitive suffix *-nt* :

[7]See Hébert 1982a,b and N. Mattina 1996 for similar analyses in Okanagan.

(37) ʔác'x̣**n**cn
ʔac'x̣-**nt**-si-n
look at-TR-2SO-1SS
I'm looking at you. W5.60

(38) ʔáyks**n**c
ʔayks-**nt**-sa-s
revenge-TR-1SO-3ER
He gets even with me. Y30.107

(39) kckʷána?**nt**xʷ 1x
k-cəkʷ=ana?-**nt**-xʷ
POS-*pull=all over*-TR-(3AB)-2SS + PL
You uncovered them. JM3.152.9

(40) cqána?mə**nt**m
cqana?-min-**nt**-m
hear-RL-TR-(3AB)-1PS
We heard about it. W.8.220

(41) cúw'**n**cáxʷ
cuw'-**nt**-sa-xʷ
punch-TR-1SO-2SS
You hit me. Y29.175

(42) yák'**nt**xʷ ʔací ʔạçp'ą̓ƛ'
yak'-**nt**-xʷ
burn-TR-(3AB)-2SS DET *tree(sg.)*
You burned the tree.

(43) na?sú? tumístm**nt**m ʔaní yámx̣ʷa?
tumist-min-**nt**-m
FUT *sell*-RL-TR-(3AB)-1PS DET *basket*
We are going to sell those baskets. 90.243

The above examples are unmarked for viewpoint aspect indicating they are perfective forms. In each of these examples, a stem undergoes the transitive operation signalled by the suffix *-nt*. This is a valence-changing operation and the above predicates now have two direct arguments. These arguments are null in (37) to (41), with overt direct objects in (42) and (43). Predicates marked transitive by the suffix *-nt* take object suffixes from the first paradigm (section 7.1.3.). This is evidenced in examples (38) and (41) where 1st sg. object agreement is marked by the suffix *-sa* and example (37) where 2nd sg. object agreement is marked by the suffix *-si*, both from the first paradigm.

Traditionally, the perfective *-nt* transitivizer has been analyzed as two morphemes for Nxaʔamxcin: a control marker *-n* and a transitive suffix *-t* (e.g. Kinkade 1982b; Czaykowska-Higgins 1996, 1998).[8] I do not analyze *-n* and *-t* as separate morphemes here as there is no morphological evidence to suggest the two segments are separate morphemes; perfective transitives are consistently marked by the [n+t] complex.[9] One could possibly argue that a control marker *-n* is restricted to transitives and hence cooccurs with the transitive suffix *-t*, but that does not explain why it consistently cooccurs with *-t* even when the predicate is marked out-of-control. Consider the following examples:

(44) łáʔaʔt'**n**cáx^{w}
łạ•ʔ•ʔt'-**nt**-sa-x^{w}
wet•OC•*wet*-TR-1SO-2SS
You got me wet. W.10.15

(45) t'ə́**ɬ**ɬncáx^{w}
t'ə•**ɬ**•ɬ-**nt**-sa-x^{w}
dirty•OC•*dirty*-TR-1SO-2SS
You got me dirty. W.9.106

---

[8]See also Thompson and Thompson 1992 for the same analysis in the Thompson language.

[9]A very small number of predicates are marked transitive by the suffix *-t* according to Kinkade (1982b). Kinkade refers to these as 'control roots' (p.52) following Thompson and Thompson (1981). I do not know the exact number of roots that follow this pattern, and Kinkade lists only two examples: *ʔəm* 'feed' and *kaɬ* 'give'.

(i) naʔsúʔ ʔə́mtən x̣ƛ'cín
ʔəm-**t**-n
FUT *feed*-TR-(3AB)-1SS *horse*
I will feed the horse.

(ii) káɬcən
kaɬ-**t**-si-n
give-TR-2SO-1SS
I gave it to you. W2.13

Note that both of these examples contain environments where an [n] segment might undergo deletion, i.e. m _ t and ɬ _ t.

The above predicates are marked with both the out-of-control reduplicative infix and the *-n-* segment. From a semantic perspective one would expect the two to be mutually exclusive as the former indicates lack of control on the part of an agent while the latter supposedly indicates an agent has control over a situation. The data in (44) to (45) indicates, however, that they are not mutually exclusive.[10] Throughout this work I will consider *-nt* to be a single morpheme marking the transitive operation on perfective predicates.[11] I do not address the notion of control with respect to transitive marking, and refer the reader to Kroeber 1999:28–30 for a pan-Salish view.

If a predicate is imperfective, the transitive marker is *-stu*, the same suffix used to mark predicates causative. This was noted by Kinkade (1982b:50) who writes that "[i]mperfective aspect forms have generalized the use of 'causative' so that all transitive non-perfective forms include -stu- (although not all causatives are non-perfective)". Some examples of imperfective transitive predicates are given below:

(46) ʔacʔac'x̣**stu**mn
ʔac-ʔac'x̣-**stu**-m-n
IM-*watch*-TR-2SO-1SS
I am watching you. W5.44

(47) ckɬʔámsn
c-kɬ-ʔam-**stu**-n
IM-POS-*wait*-TR-(3AB)-1SS
I am lying in wait for him. JM3.191.3

(48) c'əm**stú**nn
c-ʔəm-**stu**-nn
IM-*feed*-TR-(3AB)-1SS
I am feeding him. W11.104

(49) ck'^{w}aʔk'^{w}a**ʔstú**nn
c-k'^{w}əʔ-k'^{w}aʔ-**stu**-nn
IM-AUG-*bite*-TR-(3AB)-1SS
I am chewing it. W4.133

---

[10]Hébert (1982b:210–211), arguing against a control analysis of *-n* in Okanagan, provides this same argument along with several others.

[11]N. Mattina (1996) also represents *-nt* as a single formative in her work on Okanagan.

The transitive marker in all of the above examples is *-stu.* These examples differ from those in (37) to (43) in that they are marked imperfective by the prefix *ʔac-/c-*. Note that the *-m* marking for 2nd sg. object agreement in (46) indicates that *stu*-marked transitive predicates take object suffixes from the second paradigm.

A third transitive marker is also present in the language which applies to at least two stative transitive-type predicates. Consider the following examples:

(50) kaswíkɬtms
kas-wik-ɬt-m-s
IR-*see*-TR-1SO-3ER
He is going to see me. EP4.53.2

(51) ʔacsúxʷɬtls
ʔac-suxʷ-ɬt-l-s
IM-*know*-TR-1PO-3ER
He knows us.

The stative-transitive predicate *wik* 'see' is marked transitive by the suffix *-ɬt* in (50), as opposed to the expected transitive marker *-nt.* This is the same suffix used to mark applicative and external possession operations. The 1st sg. object marker *-m* in (50) indicates that stems marked by *-ɬt* take object suffixes from the second paradigm. Example (51) contains another stative transitive-type predicate, *suxʷ* 'know', which is also marked transitive by the suffix *-ɬt.* Note that the predicate in (52) is marked imperfective by the prefix *ʔac-*. Imperfectives are generally marked transitive by the suffix *-stu*, but example (51) suggests that *-ɬt* is the transitive marker for both perfectives and imperfectives in these cases.[12]

---

[12]I do have a counter example to this where the predicate *suxʷ* 'know' is marked transitive by the suffix *-stu*, suggesting that both options (*-ɬt* and *-stu*) are possible.

(i) ʔacsúxʷstms
ʔac-suxʷ-stu-m-s
IM-*know*-TR-1SO-3ER
He knows me.

While the predicates in (50) and (51) are no doubt lexically marked to select the *-łt* suffix as the transitive marker, the distribution of the suffixes *-nt* and *-stu* as transitive markers at the lexical level is determined by aspectual features assigned at the level of syntax. Because of examples like these in the cross-linguistic literature Beard (1995:55–69), in his LMBM framework, claims that the spelling mechanism located in the Morphological Spelling Component (i.e. the mechanism responsible for the realization of morphemes on phonological stems) must contain a memory. He writes (p.61–62), "[b]ecause an MS-operation is often conditioned by two or three features [...] the spelling mechanism must have a memory that accumulates such features until the appropriate combination triggers some stem modification such as suffixation". With respect to Nxaʔamxcin, it appears that no spelling operations marking transitive take place until the reader in the morphological speller has determined which feature of viewpoint aspect, perfective or imperfective, is present.

6.1.3 Causative

Causative is another valence-changing operation in Nxaʔamxcin, marked by the suffix *-stu.* This suffix is also used as a transitive marker on imperfective predicates, as just discussed. Like transitive constructions, predicates marked causative have two direct arguments, although note that Kinkade (1982b:52) points out that causative and transitive marking never cooccur. Payne (1997:176) provides the following definition of causative:

> a causative is a linguistic expression that contains in semantic/logical structure a predicate of cause, one argument of which is a predicate expressing an effect.
> A causative construction can be symbolized as:
> CAUSE (x, P) = x causes P

This causative meaning is evident when comparing the following intransitive (a) examples with their causative counterparts in (b):

(52) a. sac'ím'xəx^{w}
sac-ʔim'x-mix
IM-*move*-IM-(3AB)
S/he is moving. MDK

b. k'l ʔál'sqa ʔim'xsn
ʔim'x-**stu**-n
LOC *outside* *move*-CS-(3AB)-1SS
I moved her/him outside. / I threw her/him out. MDK

(53) a. kasʔúcqaʔəxʷ
kas-ʔucqaʔ-mix
IR-*go out*-IM-(3AB)
S/he is going to go out. TG4.62.7

b. ʔúcqaʔsn
ʔucqaʔ-**stu**-n
go out-CS-(3AB)-1SS
I took it out. EP2.68.6

(54) a. cnəqínm
c-nəqinm
c-*go in*-(3AB)
S/he came in. JM3.5.1

b. nəqínmsn
nəqinm-**stu**-n
go in-CS-(3AB)-1SS
I took her/him in. W.4.125

(55) a. qʷə́n'qʷən't
q'ʷən'-qʷən'-t
poor-ADJ-ADJ-(3AB)
S/he is poor. MDK

b. qʷən'qʷən'**stú**ms
qʷən'-qʷən'-**stu**-m-s
poor-ADJ-CS-1SO-3ER
S/he made me poor.[13] MDK

(56) a. kasqʷəʕʷpmíx
kas-qʷəʕʷ-p-mix
IR-*slide*-IN-IM-(3AB)
S/he is going to slip or slide. MDK

b. qʷəʕ'ʷ**stú**nn
qʷəʕʷ-**stu**-nn
slide-CS-(3AB)-1SS
I slid it on the ground. MDK

---

[13]It is impossible to determine if the adjectivizing suffix *-t*, which cooccurs with the reduplicative suffix -CVC, is actually present here since the n' _ s environment would result in deletion of a [t] segment.

When the intransitive predicates in (a) are marked causative, a new argument is introduced as subject and fills the role of causer. The argument that would ordinarily serve as subject of the intransitive predicate, is now direct object filling the role of causee. For example, in (54a) the subject 's/he' is moving of her/his own volition, while in (54b) the subject 'I' is causing the direct object 'her/him' to move. Predicates marked causative with *-stu* take object suffixes from the second paradigm (section 7.1.3). This is evidenced in (55b) where the 1st sg. object is marked by the second paradigm suffix *-m*.

6.1.4 Applicative

The *applicative*, which is also referred to as the "redirective" or "indirective" in the Salish literature, is an important valence operation in Nxaʔamxcin. Typically in Nxaʔamxcin (active) clauses, the agent surfaces as the subject and the theme as object. Applicative constructions allow for an additional argument, i.e. a goal, benefactive or malefactive, to be realized along with an agent and theme. The goal, benefactive or malefactive argument is subsequently realized as the direct object, while the theme is demoted to indirect object.

Nxaʔamxcin applicatives were first described in detail by Kinkade (1980) under the labels indirective and redirective. Applicative constructions are marked by one of three separate suffixes: *-xit*, *-ɬt* or *-tuɬt*.[14] In his 1980 paper, Kinkade originally wrote these forms without the final [t], which he considered to be a separate transitive marker. In his 1982b paper, however, he included the [t] as part of the applicative suffix. I will follow Kinkade 1982b here in assuming that the applicative markers include the final [t] as part of the morpheme, as I see no reason to consider it a separate element.

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[14]For discussion of cognates of these applicative suffixes in other Interior Salish languages see Carlson 1980 (Spokane); Shapard 1980; Thompson and Thompson 1980 (Thompson); A. Mattina 1982, 1994 (Okanagan); Kuipers 1992 (Shuswap); N. Mattina 1993 (Okanagan); and van Eijk 1997, section 18 (Lillooet). See also Kiyosawa 1999, 2002 for a pan-Salish perspective.

The suffix *-xit* marks predicates applicative, resulting in a goal or benefactive being realized as direct object. I have no examples of *xit*-marked predicates involving malefactives, but that may be an accidental gap in the data. Example (57) illustrates an applicative construction with a goal direct object ('me'), while example (58) illustrates a benefactive direct object ('her/him'):

(57) may'**xît**ms
maya?-**xit**-m-s
tell-APP-1SO-3ER
s/he gave me the news

(58) k^{w}łnwílxtn
k^{w}ułn=wil-**xit**-n
borrow=vehicle-APP-(3AB)-1SS
I borrowed a vehicle for her/him. W8.250

Kinkade (1982b:55–56) indicates that the object of an applicative *xit*-predicate is marked by suffixes from the "causative" paradigm, referred to here as the second paradigm (section 7.1.3). This is illustrated in (57) where 1st sg. object is marked by the second paradigm suffix *-m*.

The suffix *-łt* also marks predicates applicative, resulting in a goal, benefactive or malefactive being realized as direct object. This is the same suffix used to mark at least two stative transitive-type predicates transitive and to mark external possession. Examples (59) and (60) illustrate applicative constructions with a goal direct object ('her/him'); examples (61) and (62) illustrate applicative constructions with a benefactive direct object ('you'); and examples (63) and (64) illustrate applicative constructions with a malefactive direct object ('her/him'):

(59) kícłn
kic-**łt**-n
arrive-APP-(3AB)-1SS
I brought it to her/him. [I brought her/him it.] JM3.125.3

(60) ʔaníɬn
ʔani-**ɬt**-n
take along-APP-(3AB)-1SS
I took it to her/him. [I took her/him it.] EP2.178.4

(61) ḥaw'iɬcás
ḥaw'y-**ɬt**-sa-s
fix-APP-1SO-3ER
Someone fixed it for me. 89.89

(62) k'^{w}uʔɬnúɬcn
k'^{w}uʔɬ-nun-**ɬt**-si-n
end-LC-APP-2SO-1SS
I used it up for you. 89.82

(63) kask^{w}áɬn
kas-k^{w}an-**ɬt**-n
IR-*grab*-APP-(3AB)-1SS
I am going to take it away from her/him. EP4.53.5

(64) ḷə́mɬn
ḷəm-**ɬt**-n
steal-APP-(3AB)-1SS
I stole it from her/him. Kinkade 1980:33

Predicates marked applicative by the suffix *-ɬt* are subsequently marked with object suffixes from the first paradigm. This is illustrated in (61) where the 1st sg. object is marked by the first paradigm suffix *-sa*, and in (62) where the 2nd sg. object is marked by the first paradigm suffix *-si*.

The somewhat less common applicative marker is the suffix *-tuɬt*, which is found in constructions involving goal ((65) and (66)) and malefactive ((67) and (68)) arguments:

(65) k^{w}ɬn**túɬn**
k^{w}uɬn-**tuɬt**-n
lend-APP-(3AB)-1SS
I loaned it to her/him. EP2.177.10

(66) yərmən**túɬn**
yərmin-**tuɬt**-n
push-APP-(3AB)-1SS
I pushed it to her/him. JM3.178.1

(67) wak^{w}**túłcx**^{w}
wak^{w}-**tułt**-sa-x^{w}
hide-APP-1SO-2SS
[You hid it from me.] Kinkade 1982b:57

(68) nk^{w}nák**stúłn**
n-k^{w}an=akst-**tułt**-n
POS-*grab*=*hand*-APP-(3AB)-1SS
I took it away from her/him. JM2.134.1

The fact that there are no examples with benefactive arguments is, again, probably an accidental gap in the data.[15] Applicatives marked by *-tułt* are also marked by object suffixes from the first paradigm (Kinkade 1982b:57–58), as illustrated in example (67) where the 1st sg. object is marked by the first paradigm suffix *-sa*.

In applicative constructions, the goal/benefactive/malefactive argument is realized as a direct object and the theme argument as an indirect object. When overt arguments surface, the goal/benefactive/malefactive is either marked by the absolutive marker *wa* or has no overt marking, while the theme argument is marked oblique. Consider the following examples:

(69) táw**xc** wa Mary
taw-**xit**-s
buy-APP-(3AB)-3ER WA Mary
S/he bought it for Mary. 92.310

(70) kł?əmt**xic** t swánax
kł-?əmt-**xit**-s
POS-*feed*-APP-(3AB)-3ER OBL *huckleberry*
S/he sent huckleberries to someone. 95.155

(71) ḥac**xît**ux^{w}ta? t q'q'a?ík
ḥac-**xit**-m-x^{w} ta?
tie-APP-1SO-2SS + IMP OBL *colt*
Tie me up a colt! Kinkade 1980:34

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[15]Note, however, that example (65) could be interpreted as having a benefactive argument.

(72) ʔací w'aχtált kʷúlsn kaswət'k**xît**ms t sáwłkʷ
kʷul-stu-n kas-wətk'-**xit**-m-s
DET *child* *send*-CS-(3AB)-1SS IR-*dip*-APP-1SO-3ER OBL *water*
I sent that child to dip me some water.

(73) kłləʕ'ʷ**xît**mn ʔinwí t sqáltk
kł-ləʕ'ʷ-**xit**-m-n
POS-ʔ-APP-2SS-1SS 2SEMpro OBL *meat*
I roasted the meat for you. 92.133

(74) xək'**xîc** st'ámkaʔs t syáyaʔ
xək'-**xit**-s st'amkaʔ-s
pick-APP-(3AB)-3ER *daughter*-3PS OBL *serviceberry*
S/he picked some serviceberries for her/his daughter. 95.58

(75) cəkmîxc wa ʔací ttw'ít t xƛ'út
cəkmin-**xit**-s
hit by throwing-APP-(3AB)-3ER WA DET *boy* OBL *rock*
S/he threw the rock to the boy.
95.33

(76) t stám' łuʔ ḥaw'i**xît**s stətíl'aʔs
ḥaw'y-**xit**-s stətil'aʔ-s
OBL *what* SUB *make*-APP-(3AB)-3ER *grandfather*-3PS
What did s/he make for her/his grandfather?

Examples (69), (73), (74), (75) and (76) all contain overt direct objects. In each of these applicative constructions the direct object is the goal/benefactive/ malefactive argument, which appears as either a bare NP (ex. (73) *ʔinwí* (2nd sg. emphatic pronoun), ex. (74) *st'ámkaʔs* 'her daughter', and ex. (76) *stətíl'aʔs* 'his grandfather') or as a NP marked by the absolutive particle *wa* (ex. (69) *wa Mary*, and ex. (75) *wa ʔací ttw'ít* 'the boy'). The theme arguments in (70) to (76) all surface as indirect objects marked by the oblique marker *t* (ex. (70) *t swánax* 'huckleberry', ex. (71) *t q'q'aʔík* 'colt', ex. (72) *t sáwłkʷ* 'water', ex. (73) *t sqáltk* 'meat', ex. (74) *t syáyaʔ* 'serviceberry', ex. (75) *t xƛ'út* 'rock', and ex. (76) *t stam'* 'what').

Kinkade (1980) presents a number of applicative-marked examples in which the theme argument is not marked oblique, shown in (77) to (80):

(77) ʔanítxtn Mary sttám'tam'
ʔani-**xit**-n
bring-APP-(3AB)-1SS *Mary* *bag*
I brought Mary a bag. Kinkade 1980:34

(78) ʔacyáyxtn Mary sttám'tam'
ʔac-yay-**xit**-n
IM-*weave*-APP-(3AB)-1SS *Mary* *bag*
I made a bag for Mary. Kinkade 1980:34

(79) ʔackáɬxtn sttám'tam' Mary
ʔac-kaɬ-**xit**-n
IM-*give*-APP-(3AB)-1SS *bag* *Mary*
I gave Mary a bag. Kinkade 1980:34

(80) kʷiyxítn sx̌'aʔcínm Mary
kʷiy-**xit**-n
hunt-APP-(3AB)-1SS *deer* *Mary*
I hunted for a deer for Mary. Kinkade 1980:34

In the above examples there appear to be two overt direct objects: *Mary* and *sttám'tam'* 'bag' in (77) to (79), and *Mary* and *sx̌'aʔcínəm* 'deer' in (80).

I suspect that the theme arguments in (77) to (80) are in fact indirect objects, but the speaker has opted to omit the oblique marker *t*. As noted in section 5.2.2, oblique marking realized by the free morpheme *t* is sometimes omitted in Nxaʔamxcin and indirect objects can surface unmarked. I checked the examples in (77) to (80) with a native speaker, and she preferred these constructions with the oblique marker present in front of *sttám'tam'* 'bag'[16] and *sx̌'aʔcínəm* 'deer'.

It is unclear to me why one applicative form appears sometimes and then at other times another form. In fact, the same base can be marked by more than one form, as shown in the following examples:

(81) xə́sɬn
xəs-**ɬt**-n
lose-APP-(3AB)-1SS
I lost it for her/him. EP2.177.1

[16]My consultant used the form *snttám'tam'* for 'bag'.

(82) xəs**xît**n
xəs-**xit**-n
lose-APP-(3AB)-1SS
I lost it for her/him. EP2.177.2

Kinkade, in his 1980 article on the *-xit*, *-łt* and *-tułt* suffixes, notes that "[t]he Columbian data do not help particularly to explain the use of these suffixes" (p.33). It is likely that diachronically these suffixes each marked distinctive operations. Within a synchronic context of the Nxaʔamxcin data, these functions appear to be no longer recoverable.

6.1.5 External Possession

External possession is another valence-changing operation in Nxaʔamxcin. External possession is defined by Payne and Barshi (1999:3) as "constructions in which a semantic possessor-possessum relation is expressed by coding the possessor [...] as a core grammatical relation of the verb and in a constituent separate from that which contains the possessum". This type of construction is often referred to in the literature as *possessor raising*.[17]

In Nxaʔamxcin, external possession is only marked on predicates for which the direct object is marked for possession. External possession contructions exhibit two identifying features: (i) the predicate is marked by the external possession suffix *-łt*; (ii) object marking on the predicate reflects the possessor of the theme argument. There is no agreement with the possessum (i.e. theme) reflected on the predicate, as shown in (83) to (85):

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[17]The external possession operation has not been widely addressed in the Salish literature. In fact, examples that clearly involve external possession are often included in discussions of applicatives, no doubt because markers of external possession are often identical to applicative markers in some Salish languages (see Kiyosawa 1999, 2002). N. Mattina (1996:130–132) describes external possession (labelled "possessional") in Okanagan where the facts are similar to Nxaʔamxcin. Gerdts (1999a), in a cross-linguistic analysis of external possession within a Mapping Theory framework, includes Halkomelem Salish as part of her discussion.

(83) kƛ'əm'**ɬ**cás wa? ʔistxʷúl
k-ƛ'əm'-**ɬt**-sa-s ʔin-stxʷul
POS-*pass*-EP-1SO-3ER WA 1SPS-*house*
S/he went past my house. W9.55

(84) Mary ɬəc'**ɬ**cás ʔinkálx
ɬəc'-**ɬt**-sa-s ʔin-kalx
Mary hit with a stick-EP-1SO-3ER 1SPS-*hand*
Mary hit my hand (with a stick).

(85) miyáp**ɬ**ts ʔaní wa sq'ílts
miyap-**ɬt**-s s-q'ilt-s
?-EP-(3AB)-3ER DET WA NM-*sick*-3PS
S/he diagnosed her/his illness. Kinkade 1980:34

Each of the above constructions is marked for external possession by the suffix *-ɬt*. In addition, object agreement on the predicate reflects the possessor of the theme argument and not the theme itself. Thus, object marking in examples (83) and (84) is the 1st sg. suffix *-sa* as opposed to no suffix marking for 3rd person objects. Inflectional possessive marking surfaces on the possessed noun as usual.

Note that the subject and possessor of the theme argument must be disjoint in an external possession contruction. If they are coreferenced the predicate is not marked for external possession, as shown in (86) to (88):

(86) xə́sn ʔisqəláw
xəs-nt-n ʔin-sqəláw
lose-TR-(3AB)-1SS 1SPS-*money*
I lost my money. W.9.11

(87) pəl'áql kícn ʔisl'áx̣t
kic-nt-n ʔin-sl'ax̣t
yesterday *arrive*-TR-(3AB)-1SS 1SPS-*friend*
yesterday I visited my friend

(88) máʕ'ʷs nlxʷátkʷtns smʔámm
maʕ'ʷ-nt-s nlxʷatkʷtn-s
break-TR-(3AB)-3ER *pot*-3PS *woman*
The woman$_i$ broke her$_i$ pot.

Even though all of the above objects are marked for possession, none of the predicates are marked for external possession. In addition, object marking on the predicate reflects the possessed noun and not the possessor.

External possession is restricted to constructions in which the direct object is marked for possession, and not cases where the subject argument of an intransitive or transitive construction is marked for possession, as in (89) to (92):

(89) ʔinx̣ƛ̓'cín scxəstmíx
ʔin-x̣ƛ̓'cin sc-xəs-t-mix
1SPS-*horse* IM-*lose*-ST-IM-(3AB)
My horse is lost. W.9.26

(90) t'iʔ túx̣^{w}x̣^{w} ʔaní ʔinpápaʔ
tux̣^{w}x̣^{w} ʔin-papaʔ
MOD *die*-(3AB) DET 2SPS-*papa*
[your papa is already dead] AfI:15

(91) ʔinmaʔástm ʔacq'it'sc wa ntitiyáx
ʔin-maʔastm ʔac-q'it'-stu-s
1SPS-*father* IM-*hook*-CS-(3AB)-3ER WA *salmon*
My father catches the salmon.

(92) lúps ʔintúm' wa ʔaní ntitiyáx
lup-nt-s ʔin-tum'
dry-TR-(3AB)-3ER 1SPS-*mother* WA DET *salmon*
My mother dried the salmon.

Examples (89) and (90) both contain NPs marked for possession functioning as the subject argument of an intransitive predicate. As expected, the predicates are not marked for external possession. In (89) and (90) it is clear that subject marking does not reflect the 1st and 2nd sg. possessor of the subject arguments respectively. Both examples (91) and (92) are bivalent in that they each contain two direct arguments. In these examples it is the subject that is marked for possession. Neither predicate is marked for external possession, and subject agreement reflects the possessed noun and not the possessor.

As we have seen in the preceding sections, Nxaʔamxcin has an extensive group of valence-changing operations. In the following sections, we will see that the same can be said for the category voice.

6.1.6 Summary of Valence Operations

In the preceding sections I addressed four types of valence operations—transitive, causative, applicative and external possession—which are summarized below:

Valence Operations

Operation	*Morphological Marker*	*Object Paradigm*
Transitive	*-nt* (perfective predicates)	First
	-stu (imperfective predicates)	Second
	-łt (stative-transitive predicates *wik* 'see' and *sux*^{w} 'know')	Second
Causative	*-stu*	Second
Applicative	*-xit*	Second
	-łt	First
	-tułt	First
External Possession	*-łt*	First

6.2 Voice

In this section I address the category *voice*, which contains a number of operations whose morphological realizations surface within one of two positions in the derivational stem, as shown below:

(93) ***Derivational Stem***

[$_{DS}$ NM DIR POS *ASP DIM CTR ASP*[$_{LX}$ (Y) √ROOT (Z)]$_{LX}$ *DIM* ASP CTR **VC** RL VAL **VC** NM]$_{DS}$

⇑ ⇑

In (93) the category voice is realized in two separate positions. The first, located between the control and relational suffixes, is where indefinite object voice is marked. The other position is further right following the category valence. All other voice markers surface in this position. Note that both positions are located close to the right hand boundary between the derivational stem and the

inflectional stem. These are logical positions since voice is a category that teeters between derivational and inflectional status (see Bybee 1985:20–21;32). Analyses for both can be found in the Salish literature. For example, Jelinek (1994, 1995) argues that voice is a syntactic category in Lummi, while N. Mattina (1996) and Gerdts (1998a) consider voice to be derivational in Okanagan and Halkomelem respectively. For Nxa?amxcin, Czaykowska-Higgins (1996, 1998) considers voice to fall within the morphosyntactic domain of her lexical/morphosyntactic split. Her view is primarily motivated by her analysis of the dual behaviour of lexical suffixes, in that voice marking appears outside "referential" lexical suffixation, which is considered morphosyntactic. In chapter seven, I adopt a compound analysis of these lexical suffixes (referred to in this work as bound stems) which, for my analysis of Nxa?amxcin word formation, effectively reopens the question of which operations are relevant to the syntax and which are not. As discussed in section 3.4.2, in this work I am including operations that can alter the lexical representations of lexemes under the derivational umbrella. Since voice operations clearly have an effect on the lexical representation of lexemes in Nxa?amxcin, I consider them to take place at the derivational stem level.

Givón (1994, 2001) defines two separate sub-domains within the category voice, one being primarily *pragmatic* and the other primarily *semantic*. He notes (2001:92) that "[e]ach of these in turn contrasts with the *active-transitive* voice, the neutral unmarked clause type". I organize the sections below in accordance with Givón's (1994, 2001) voice sub-types. I first discuss the operations that can be subsumed under the heading pragmatic voice: topical object, passive, antipassive and indefinite object. I then look at those operations relevant to semantic voice: middle, reflexive and reciprocal.

6.2.1 Pragmatic Voice

Givón (2001:93) describes *pragmatic voice* as follows:

> [P]ragmatic voice constructions [...] render the same semantically-transitive event from different pragmatic *perspectives*. These perspectives turn out to involve, primarily although not exclusively, the *relative topicality* of the agent and patient.

Givón (pp.253–254) later defines *topicality* as follows:

> Topicality pertains to nominal participants ('referents'; most commonly subjects or objects) of clauses. The propositional information coded in state/event clauses is typically *about* some topical participant(s) in the state/event. Such topical participants are most commonly the subject, direct-object or indirect-object of the clause, and thus most commonly noun phrases ('entities') rather than verbs ('events') or adjectives ('states') [...] In spite of being grammatically manifest at the clause level, topicality is *not* a clause-level property of referents, but rather a discourse-dependent one. This is often masked by the fact that one can examine a well-coded clause out of context, and observe all the grammatical devices that mark participants as referring, topical definite etc. But such isolated clauses are only artifacts. What makes their participants topical is *not* the fact that they are grammatically coded as topical (subject, object) in the self-contained clause. Rather, they are so coded grammatically because they are topical across a certain span of *multi-propositional discourse*. Their topicality is thus due to their being recurrent referents in some larger discourse.

Givón (1994, 2001) identifies the major pragmatic voice operations as inverse, passive and antipassive, and he defines these in relation to the unmarked active voice in which "both the agent and the patient are topical, but the agent is more topical than the patient" (2001:94). Givón schematizes the relative topicality of the agent and patient roles for active, inverse, passive and antipassive voice as follows:

(94) **Relative topicality of the agent and patient in the four main voices:**

Voice	Relative topicality
active/direct	AGT > PAT
inverse	AGT < PAT
passive	AGT << PAT
antipassive	AGT >> PAT

Givón 1994:8

As (94) indicates, the agent in inverse constructions is less topical than the patient, the exact reverse of the active voice. In passive constructions, the patient

is topical while the agent is non-topical. The antipassive is the reverse of the passive in that the agent is topical while the patient is non-topical.

In the following subsections I describe four different voice operations in Nxa?amxcin that can be subsumed under the heading *pragmatic voice*. The first is the topical object construction, which shares properties with the inverse in the schema in (94). The second and third are the passive and antipassive, both cross-linguistically common voice operations. The fourth, indefinite object voice, appears to be less cross-linguistically common.

6.2.1.1 Topical Object

Topical object constructions in Salish were first labelled and defined by Kinkade (1989a, 1990b), who provides a pan-Salish discussion of this operation.[18] He defines (1990b:343) the topical object construction as follows:

> The main function of the topical object as contrasted with the plain (often zero) third-person object is to keep track of a topic in a section of discourse when there is more than one third-person referent present and the one that is topic has been shifted into a patient role and designated by a pronominal object marker. In order to maintain its topicality, it is specially marked.

Topical object voice constructions resemble *inverse voice* constructions with respect to relative topicality. Givón (2001:155) writes that "inverse voice constructions are used in discourse contexts when the patient outranks the agent in topicality, thus contrasting with the agent-topicalizing active-direct; but the agent-of-inverse remains topical, thus contrasting with the radically suppressed agent-of-passive". In line with inverse constructions, the specific function of topical object voice appears to be signalling that the patient is topic. Unlike passive voice, the agent still holds some degree of topicality. Following Givón's schema in (94), we can represent the relative topicality of agent and patient in topical object voice as follows:

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[18]Kinkade identifies Nxa?amxcin, Upper Chehalis, Cowlitz, Quinault, Tillamook and Lushootseed as having topical object constructions. See H. Davis (1994) for analysis of a cognate in Lillooet.

(95) **Relative Topicality of Agent and Patient in Nx Topical Object Voice**

Agent < Patient

Kinkade considers the topical object marker to be inflectional object marking which surfaces between transitive and subject marking, as schematized for Nxa?amxcin in (96):

(96) **Transitive + Topical Object + 3rd Person Subject**
e.g. **-nt-** + **-wa-** + **-s**

Kinkade (1989a:9) notes that "[s]ince the only thing that ever occurs between a transitivizing suffix and a subject suffix is an object suffix, the topical object suffixes must also be object markers". It is difficult to determine morphologically if this is the case in Nxa?amxcin since topical object constructions are restricted to 3rd person, and 3rd person objects are otherwise always unmarked. It could instead be posited that topical object constructions are comprised of a voice marker followed by 3rd subject marking, as schematized in (97):

(97) **Transitive + Voice + 3rd Person Object + 3rd Person Subject**
e.g. **-nt-** + **-wa-** + (no marking) + **-s**

Throughout this work, I will assume that topical object operations are in fact voice operations as the relative topicality of arguments is affected. More specifically, I will assume that the *-wa* suffix marks topical object voice only, as schematized in (97), and is not reflective of object agreement on the predicate. Assuming this analysis allows one to preserve the generalization that 3rd person object agreement is always null.

Topical object voice is marked on bivalent stems by the suffix *-wa* when stressed and the suffix *-u* when unstressed. The latter is phonologically predictable given that unstressed vowels are often deleted and glides become vocalized within a consonant cluster. As noted above, this operation is restricted

to constructions involving a 3rd person subject and 3rd person object. The following examples illustrate that this operation can take place on stems marked transitive, causative or applicative:

(98) nəqsál'k katpúxʷntus ʔałú sx̣ápaʔs
naqs=alk' kat-puxʷ-nt-**wa**-s sx̣apaʔ-s
one=time POS-*blow*-TR-TO-(3AB)-3ER DET *grandfather*-3PS
Once her grandfather blew over her
CD.38

(99) huy kʷaʔ n'yaʔaʔx'ʷst**wá**s wa ʔaná spəpásaʔsaʔ
n-ya•ʔ•ʔ•xʷ-st-**wa**-s
and POS-*?*•OC•IN•*?*-CS-TO-(3AB)-3ER WA DET *grandfather*
And so he brought her across, that grandfather[19]
CD.32

(100) laʔáws tawxít**us**
laʔaw-s taw-xit-**wa**-s
father-3PS *buy*-APP-TO-(3AB)-3ER
his father bought it for him W.8.8

(98) contains a transitive predicate, (99) a causative predicate and (100) an applicative predicate, all marked for topical object voice. In (99) the topical object suffix is stressed and surfaces as *-wa*, while in (98) and (100) it is unstressed and reduced to *-u*.

Whether or not external possession stems (section 6.1.5) can be marked for topical object voice remains to be determined. If it is grammatically possible, it is most likely limited to external possession stems involving 3rd person possessors. Since topical object constructions are restricted to 3rd person, and direct objects marked for 1st/2nd person possessor trigger 1st/2nd person object agreement on the predicate, one would not expect topical object voice to surface in this environment.

The primary pragmatic function of topical object voice is keeping track of third person arguments (Kinkade 1989a, 1990b), thus avoiding any ambiguity that might arise when more than one third person is being referred to in discourse. Consider the following set of examples:

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[19]The root here is probably √yak'ʷ 'cross'.

(101) Mary paxás wa χχλ̓'cín kʷaʔ k'ʷáʔs
paʔxan-nt-s k'ʷaʔ-nt-s
Mary *step*-TR-(3AB)-3ER WA *dog* *and* *bite*-TR-(3AB)-3ER
Mary stepped on the dog and she bit it.

(102) Mary paxás wa χχλ̓'cín kʷaʔ k'ʷaʔntwás
paʔxan-nt-s k'ʷaʔ-nt-**wa**-s
Mary *step*-TR-(3AB)-3ER WA *dog* *and* *bite*-TR-TO-(3AB)-3ER
Mary stepped on the dog and it bit her.

The biclausal example in (101) appears in the active voice. *Mary* is topic, and because the topic fills the agentive role in both clauses, the unmarked active voice is maintained and *Mary* is coindexed with the third person subject suffix *-s*. In example (102), *Mary* is again topic; however *Mary* is assigned the agent role in the initial clause and the patient role in the second clause. In order to clarify that it is *Mary* and not the dog that has been bitten, topical object voice is employed in the second clause signalling that the topic (*Mary*) has been assigned the role of patient. Thus, when the topic maintains an agent role, as in (101), the neutral (unmarked) active voice is used. When the original agent topic is assigned a patient role, as in (102), the predicate is marked for topical object voice. Some more examples are given below:

(103) sac'ʔiɬnəxʷ Mary kʷaʔ t'əq'ʷntwás wa John
sac-ʔiɬn-mix t'əqʷ-nt-**wa**-s
IM-*eat*-IM-(3AB) *Mary* *and* *slap*-TR-TO-(3AB)-3ER WA *John*
Mary was eating and John slapped her.
91.151

(104) χλ̓'cín ʔací lut χmánks wa swát kacʔəmstwás
χmank-s kas-c-ʔəm-stu-**wa**-s
horse DET NEG *like*-3PS WA *who* IR-IM-*feed*-TR-TO-(3AB)-3ER
That horse$_i$ doesn't like anyone to feed him$_{i/*j}$.[20]

[20]It is unclear why the [s] segment of the irrealis prefix *kas-* does not surface in this example.

(105) nkxà·píkns
n-kxap=ikn-nt-s
POS-*chase=back*-TR-(3AB)-3ER

nkəckíkns
n-kickikn-nt-s
POS-?-TR-(3AB)-3ER

kʷa? x̣əlq'nt**wás**
x̣əlq'-nt-**wa**-s
and *kill*-TR-TO-(3AB)-3ER

He chased it and then it killed him.[21] W8.1

We see in all of the above examples that the topic is agent (i.e. subject) in the initial clause, and functions as patient (i.e. object) in the second clause. For each of these examples the initial clause appears in the unmarked active voice while the second clause is marked for topical object voice.

As Kinkade (1989a:9, 1990b) points out, topical object constructions are readily found in narratives. A number of examples are given in Kinkade (1989a, 1990b) and some additional examples are presented below from the narrative *Crow's Daughter*. In the first excerpt, the topic of discussion is Marten in an agent role. When Marten later surfaces as direct object in a non-agent role (line c.), the topical object construction is used:

(106) a. kʷa? lut wa ?ału cuwáwəlx ttw'it
c-wwawlx
and NEG WA DET c-*talk*-(3AB) *boy*
And he would not talk, that boy.

b. ci kʷa? ?aci k'l łu? k'l łu? k'l łu?
and DET LOC *that* LOC *that* LOC *that*
All he said was: over there, over there, over there.

c. ?ica kʷa? p'i?qcíntus ?əłu
p'i•?•q=cin-nt-**wa**-s
that *and* *cook*•IN•*cook=food*-TR-TO-(3AB)-3ER DET
And so she cooked for him, that one. CD.53

---

[21]I suspect the second root in this example is either √kkic 'find' or √kic 'arrive' followed by the bound stem =ikn 'back'. Either way, I am not sure of the status of the second [k] in *nkəckíkəns*.

Later in the story, Emily, who is the current topic, goes down by the river and sees something floating in the water. When Emily is realized as direct object, topical object voice is employed (lines b. and e.):

(107) a. kałáqəlx
kat-łaqəlx
POS-*sit*-(3AB)
She sat on it.

b. nk'^{w}inx̣ál'q m'ətət c'anínt**us**
c-ʔani-nt-**wa**-s
several times ?? DIR-*take along*-TR-TO-(3AB)-3ER
Several times it brought her back.

c. k^{w}aʔ lhəmpncút
l-həmp-ncut
and DIR-*fall*-MD-(3AB)
and then she would get off

d. k^{w}aʔ kałáqlx tn'ci
kat-łaqlx
and POS-*sit*-(3AB) *from there*
and then she sat on it again

e. k^{w}aʔ lʔanínt**us**
l-ʔani-nt-wa-s
and DIR-*take along*-TR-TO-(3AB)-3ER
huy ci (wa) nʔúsəlx
n-ʔuslx
WA POS-*dive*-(3AB)
and then it took her and dove into the water CD.70–71

Kinkade (1989a:8–9) also observes that topical object constructions can be used "to allow a referent higher on an agent hierarchy (i.e. a human) to be used as object with a lower referent (i.e. non-human) as subject". Kinkade notes that this is not an obligatory hierarchy in Nxaʔamxcin. The following examples illustrate that a non-human agent subject can cooccur with a human patient object without triggering any change from the unmarked active voice:

(108) smiyáw k'ʷá?s wa ttw'ít
k'ʷa?-nt-s
coyote *bite*-TR-(3AB)-3ER WA *boy*
The coyote bit the boy.

(109) míx̣aɬ wíkɬc wa skínt
wik-ɬt-s
bear *see*-TR-(3AB)-3ER WA *indian*
The bear saw the Indian.

It is of interest to note, however, that when eliciting Nxa?amxcin examples involving a non-human agent and a human patient, the following pattern is prominent:

(110) kiʕ'ána? l n'n'ík'mn's t'əm'nt**wá**s
n'n'ik'mn'-s t'əm'-nt-**wa**-s
girl GN *knife*-3PS *cut*-TR-TO-(3AB)-3ER
The girl's knife cut her/him.

(111) x̣əlq'nt**wá**s
x̣əlq'-nt-**wa**-s
kill-TR-TO-(3AB)-3ER
it killed her/him W8.1

Both of the examples in (110) and (111) involve non-human agents ('the girl's knife' and 'it') and human patients ('her/him'). When both agent and patient are non-human, the unmarked active voice is used in direct elicitations, as shown in (112):

(112) kiʕ'ána? l n'n'ík'mn's t'ə́m's
n'n'ik'mn'-s t'əm'-nt-s
girl GN *knife*-3PS *cut*-TR-(3AB)-3ER
The girl's knife cut it.

The question of the grammatical status of the agent and patient in topical object constructions is an interesting one. On the surface it appears that the agent maintains subject status while the patient maintains object status, as is the case with active clauses. One must note, however, the positioning of the particle

wa (section 5.6) in active constructions compared with topical object constructions. In direct active clauses, this particle marks the object of transitives and the subject (with some possible restrictions) of intransitives. For this reason it has been referred to by Czaykowska-Higgins (1996, 1998) and Willett (1996) as an absolutive marker. If we compare bivalent active clauses with the bivalent topical object construction we find that the distribution of the particle *wa* is the exact reverse. Compare the active voice example in (a) with the topical object voice example in (b):

(113) a. t'əq^{w}s **wa** **ttw'ít** ʔani kiy'ána?
t'əq^{w}-nt-s
slap-TR-(3AB)-3ER WA *boy* DET *girl*
The girl slapped the boy. 91.121

b. ʔaw'tapntus ttw'ít **wa** **sx̂'aʔcînm**
ʔaw'tap-nt-**wa**-s
follow-TR-TO-(3AB)-3ER *boy* WA *deer*
The deer followed the boy.

As the active example in (113a) illustrates, it is the patient of the clause (i.e. the direct object *ttw'it* 'boy') that is marked by *wa*. In the topical object example in (113b), however, it is the agent of the clause (*sx̂'aʔcînəm* 'deer') that is marked by *wa* and not the patient. If *wa* is in fact linked to absolutive case, then the agent of topical object constructions appears to be patterning with absolutives. However, with respect to quirky case marking in which the ergative argument (i.e. transitive subject) is marked oblique (section 5.3), the following example suggests that it is the agent argument in topical object constructions that is in fact the grammatical subject:

(114) **t** **sx̂'aʔcînm** łuʔ **wa** ʔaw'tápntus ttw'ít
ʔaw'tap-nt-**wa**-s
OBL *deer* SUB WA *follow*-TR-TO-(3AB)-3ER *boy*
It was the deer who followed the boy.

The topical object example in (114) is a quasi-cleft construction; the agent argument *sƛ'aʔcínəm* 'deer' has been clefted, surfacing to the left of the predicate *ʔaw'táp* 'follow' and followed by the subordinating particle *łuʔ*. Like active voice constructions, the ergative argument (transitive subject) of a topical object construction can be optionally marked by quirky case, hence the appearance of an oblique marker preceeding *sƛ'aʔcínəm* 'deer'. However, unlike active voice constructions, the predicate of the clefted ergative argument is preceded by the particle *wa*. In active voice constructions this is only the case when an absolutive argument is clefted.

What examples (113b) and (114) show is that the agent (or non-topic argument) in topical object constructions shows properties of both active voice ergative and absolutive arguments. First, the topical object agent can be marked for quirky case, a noted property of ergative arguments. Second, the topical object agent can trigger the appearance of the particle *wa*, a noted property of absolutive arguments in active voice constructions.

The properties of topical object voice are summarized below:

(115) **Properties of Nxaʔamxcin Topical Object Voice**

function	(i) marks patient as more topical than agent (ii) optionally marks predicates with non-human subject and human object
morphological marker	*-wa* (*-u* when unstressed)
stem types	• appears on bivalent stems only: transitive, causative, applicative (no data on external possession) • resulting stem is bivalent
syntactic status	• both agent and patient in direct case • grammatical functions unclear: agent role exhibits (at least morphologically) properties of both absolutives and ergatives
restrictions	both agent and patient must be 3rd person

6.2.1.2 Passive

According to Givón (1994, 2001), in passive voice constructions the patient is the most topical argument while the agent is non-topical. Kroeber (1999:25) writes that "[a]ll Salish languages have some sort of construction that is used to mark reduced topicality of the agent of a transitive clause, and/or increased topicality of the patient (object) of the clause. The discourse functions of these constructions are analogous to those of passives of European languages [...]". Following Givón's schema in (194), we can illustrate this as follows:

(116) **Relative Topicality of Agent and Patient in Nx Passive Voice**

Agent << Patient

Cross-linguistically, one generally finds that in passive voice constructions the patient argument is the clause subject and the agent is either oblique or suppressed altogether. Nxaʔamxcin passives are stereotypical in that (i) the predicate is overtly marked for passive voice; (ii) the patient is realized as subject; and (iii) the agent is either marked oblique or is omitted.

With respect to the first property, passive predicates are marked by the suffix *-m*, the same suffix used to mark antipassive and middle voice, along with several other functions. Some examples of predicates marked for passive voice are given below:

(117) c'əlx̣nt**m**
c'əlx̣-nt-**m**
scratch-TR-PAS-(3AB)
[s/he got scratched] Y26.45

(118) nckʷátkʷunt**m**
n-cəkʷ=atkʷ-nt-**m**
POS-*pull*=*water*-TR-PAS-(3AB)
[s/he got pulled into the water] JM4.12.7

(119) kłc'əm'úsnt**m**
kłc'əm'us-nt-**m**
kiss-TR-PAS-(3AB)
s/he got kissed on the cheek JM3.119.4

(120) kptx̣^{w}ánaʔnt**m**
k-ptix̣^{w}=anaʔ-nt-**m**
POS-*spit=all over*-TR-PAS-(3AB)
it got spit on 90.105

(121) lək'nt**m**
lək'-nt-**m**
tie up-TR-PAS-(3AB)
S/he was jailed.

With respect to the second property of Nxaʔamxcin passives, the patient argument is the only direct argument in the passive clause. There seems to be a morphological split across the Salish family in that patient agreement for passives in some languages is in the form of subject agreement (as is the case with Nxaʔamxcin), while for others it is in the form of object agreement. The latter has been noted by J. Davis (1980), Hukari (1980), Gerdts (1988, 1989a), Gerdts and Hukari (2001) and Wiltschko (2001), among others. Gerdts and Hukari (2001) make the tentative claim that the patient argument in Halkomelem passives is the surface subject, while Wiltschko (2001) maintains it remains a surface object. It is beyond the scope of this work to enter into this debate. I will assume that the patient of Nxaʔamxcin passive constructions is in fact the surface subject, in line with stereotypical properties of cross-linguistic passive constructions, as I have no language-specific motivation to suspect otherwise.

3rd person intransitive subjects do not trigger any overt agreement in Nxaʔamxcin, as we see in the following examples:

(122) cəkákstnt**m** Mary
cək=akst-nt-**m**
hit=hand-TR-PAS-(3AB) *Mary*
Mary got hit on the hand. 90.269

(123) swát ʔaní t'ə́q'^{w}nt**m**
t'əq'^{w}-nt-**m**
who DET *slap*-TR-PAS-(3AB)
Who was slapped? 91.139

(124) c'əq'c'əq'ál'ntm lx wəl ʕ'ʷən'ʕ'ʷán'ps
c'əq'-c'aq'al'-nt-**m**
AUG-*shoot*-TR-PAS-(3AB) + PL COL *magpie*
The magpies were shot at.

The examples in (122) to (124) allow for only one direct argument (*Mary*, *swat* 'who', and *ʕ'ʷən'ʕ'ʷán'ps* 'magpie' respectively) which assumes the patient role in the clause. (For example, in (122) the direct argument *Mary* is not the one doing the hitting, but is rather the one getting hit.)

And finally, as noted above in the third property of passives, the agent role can be suppressed, as illustrated by (117) to (124). This is quite common in passive voice and reflects the non-topical status of the agent. When an overt agent NP is present it must be marked oblique by the oblique marker *t*, as shown in (125) to (129):

(125) wíkłtm **t** **Paul**
wikł-t-**m**
see-TR-PAS-(3AB) OBL *Paul*
S/he was seen by Paul. 91.38

(126) pus kxápntm **t** **waxtált**
kxap-nt-**m**
cat *chase*-TR-PAS-(3AB) OBL *baby*
The cat was chased by the baby. 92.73

(127) **t** **John** ci cəkntm Mary
cək-nt-**m**
OBL *John* SUB *hit*-TR-PAS-(3AB) *Mary*
It's John who hit Mary. 92.224

(128) **t** **swát** łuʔ cəkntm ʔací sqəl'tmíxʷ
cək-nt-**m**
OBL *who* SUB *hit*-TR-PAS-(3AB) DET *man*
Who was that man hit by?

(129) c'əlxntm ʔací xəxál'aʔ **t** **pús**
c'əlx-nt-**m**
scratch-TR-PAS-(3AB) DET *baby* OBL *cat*
The baby was scratched by the cat.

Nxa?amxcin passive voice constructions are formed on bivalent stems. Examples (117) to (129) illustrate the formation of passive voice on transitive stems. Examples (130) and (131) below illustrate causative and applicative stems marked for passive voice:

(130) kʷa? cnəqínmst**m** ... Father Green
c-nqínm-stu-**m**
and DIR-*go in*-CS-PAS-(3AB) *Father Green*
[and Father Green was brought in] IAnII:2

(131) náqs wa? x̣ƛ̓'cíns kʷa? ləmɬt**m**
x̣ƛ̓'cin-s ləm-ɬt-**m**
one WA *horse*-3PS *and* *steal*-APP-PAS-(3AB)
He had one horse and somebody stole it. W.8.30

I also have one example indicating that passive voice constructions can be formed on external possession stems when the patient is marked for 3rd person possessor, shown in (132):

(132) John l qácks x̣ə́lq'ɬt**m** t sʕʷáʔʕʷaʔ
qack-s x̣əlq'-ɬt-**m**
John GN *older brother*-3PS *kill*-APP-PAS-(3AB) OBL *cougar*
John's brother was killed by a cougar.

The above example suggests that when the external possession operation took place, the patient was the direct object, since only direct objects trigger external possession marking. Passive constructions with patients marked for 1st/2nd person possessors are not marked for external possession, as shown in (133) and (134):

(133) ʔinqáck x̣əlq'nt**m** t sʕʷáʔʕʷaʔ
ʔin-qack x̣əlq'-nt-**m**
1SPS-*older brother* *kill*-TR-PAS-(3AB) OBL *cougar*
My brother was killed by a cougar.

(134) ʔinkə́x qʷánx̣ntm t stqʼʷáyxnəxʷ
ʔin-kəx qʷanx̣n-nt-**m**
1sPS-*older sister* *capture*-TR-PAS-(3AB) OBL *Blackfeet*
My sister was captured by the Blackfeet.

Passive voice is a detransitivizing operation which renders a bivalent stem monovalent. As a result, the passive predicate surfaces as an intransitive predicate. This is evidenced by the fact that (i) there can be only one direct argument in the clause (the patient), and (ii) ergative agreement (3rd person subject) is never marked on passive predicates.

Passive patients cannot be 1st person sg., as shown in (135) below. (1st pl. and 2nd person need to be verified.) The passive agent cannot be 1st or 2nd person sg., as shown in (136). (The 1st and 2nd person pl. also need to be verified.)

(135) * **kn** c'aw'nt**m** t John
c'aw'-nt-**m**
1sS + *wash*-TR-PAS OBL *John*
(I was washed by John.) 92.82

(136) * nckʷátkʷunt**m** t **ʔincá / ʔinwî**
n-cəkʷ=atkʷ-nt-**m**
POS-*pull=water*-TR-PAS-(3AB) OBL 1sEMpro / 2sEMpro
(S/he got pulled into the water by me/you.)

Example (135) may explain why we do not find passive voice constructions formed on external possession stems when the patient is marked for 1st sg. possessor, as in (133) and (134). This would entail that subject agreement reflect the possessor, and example (135) indicates that 1st sg. subject marking is not possible for passive voice constructions.

According to Kinkade (1989a, 1990b), Nxaʔamxcin uses passive voice, in addition to topical object voice, as a device for keeping track of third person topics in discourse. Kinkade (1989a:2) writes "[s]ince the topic is commonly the syntactic subject of a clause, an object can be made topic by moving it into the subject position through passivization, while leaving thematic roles unchanged

from whatever the discourse situation requires". An example of this usage is taken from the folktale *Race Between Turtle and Eagle*:

(137) a. kʷaʔ ʔárásíkʷ qəcpmstús sc'úʔc'uʔxns
qəcp-min-stu-s sc'uʔ•c'uʔ•xn-s
and turtle *shrivel*-RL-CS-(3AB)-3ER *leg*•AUG•*leg*-3PS
[And Turtle pulled in his legs]

b. kʷás kʷaʔ hámp
kʷan-nt-s
grab-TR-(3AB)-3ER *and* *fall*-(3AB)
[he held on to them and he fell.]

c. ʔá· kxə́pnt**m** t məlqənúps
kxap-nt-**m**
oh *chase*-TR-PAS-(3AB) OBL *golden eagle*
[Oh, he was chased by Golden Eagle] SfVI:2

In the above excerpt, the discourse topic is Turtle. The topic maintains an agent role in lines a. and b. and, therefore, we find both lines are in the neutral active voice. When Turtle assumes a patient role in line c., a passive voice construction is used indicating the patient is the discourse topic.

The following excerpt from *Crow's Daughter* illustrates the use of both passive and topical object voice as a means of topic tracking. Throughout this piece of the narrative, Emily remains discourse topic:[22]

(138) a. ʔica kʷaʔ cx̣əlís wa sxíp
c-x̣əli-nt-s
that *and* ST-*call*-TR-(3AB)-3ER WA *wind*
And she was calling to the wind

b. kʷaʔ nxʷnałqʷálm
nkʷnam-ał-qʷalm
and *sing*-CN-*song*-(3AB)
and then she sang a song

.....

[22]I have omitted two lines of the original text between lines b. and c. as they are not pertinent here.

c. kʷaʔ cqánaʔmntus wa sx̣x̣íp
cqanaʔ-min-nt-**wa**-s sxip
and *hear*-RL-TR-TO-(3AB)-3ER WA *wind*
The wind heard her <song>

d. kʷaʔ wa q'ʷumaɬ x̣aíp
x̣aʕp
and WA *begin* *blow*-(3AB)
and then began to blow

e. ʔíca kʷaʔ píyntm
piy-nt-**m**
that *and* *blow*-TR-PAS-(3AB)
and then she was blown CD.43–44

In lines a. and b. of (138), Emily is the sole argument of an intransitive clause and no specific topic tracking device needs to be employed. In line c., however, the topic is no longer agent and a topic tracking device is required to signal that Emily is the patient. In this case topical object voice is marked on the predicate indicating that the discourse topic is the direct object of the predicate. In line e. we have the same situation where Emily continues to be topic but is not the agent. Instead of topical object voice, the predicate is marked for passive voice. Thus, Emily surfaces in a patient role while maintaining discourse topic status. With respect to the use of both topical object and passive voice to keep track of discourse topics, Kinkade (1989a:9) notes that "as far as I can tell the distinction is primarily stylistic".

The properties of passive voice are summarized below:

(139) **Properties of Nxa?amxcin Passive Voice**

function	marks patient as highly topical and agent as non-topical
morphological marker	the suffix *-m*
stem types	• appears on bivalent stems only: transitive, causative, applicative and external possession (3rd possessors) • resulting stem is monovalent
syntactic status of arguments	• patient is in direct case (assumed to be subject) • agent is either suppressed or is marked oblique
restrictions	possibly both patient and agent limited to 3rd person

6.2.1.3 Antipassive

Antipassive voice is, in a sense, the reverse of passive voice in that it is the agent that has a very high degree of topicality while the patient is non-topical. This definition applies to Nxa?amxcin antipassives for which the topicality properties are schematized in (140) following Givón (1994, 2001):

(140) **Relative Topicality of Agent and Patient in Nx Antipassive Voice**
Agent >> Patient

Structurally, the agent argument retains the prototypical characteristics of the syntactic subject while the patient is demoted to oblique object status or is suppressed altogether.

With respect to the patient argument, all of the antipassive examples I have found in the data involve non-human patients. In these constructions the predicate is marked for antipassive voice by the suffix *-m*, the same suffix marking passive and middle voice as well as several other operations. The patient is marked by the oblique marker *t*, as shown in (141) to (147):

(141) Paul wíkm t pús
wik-**m**
Paul *see*-AP-(3AB) OBL *cat*
Paul saw a cat. 91.26

(142) tw'ít ʔaw'tápm t sx̌'aʔcínm
ʔaw'tap-**m**
boy *follow*-AP-(3AB) OBL *deer*
The boy followed the deer.

(143) lckʷnám t q'iymíntn
l-c-kʷan-**m**
DIR-DIR-*grab*-AP-(3AB) OBL *paper*
S/he brought back a paper.

(144) táwm t stxʷúl
taw-**m**
buy-AP-(3AB) OBL *house*
s/he bought a house

(145) kn p'iqm t ntitiyáx
p'iq-**m**
1SS + *cook*-AP OBL *salmon*
I cooked some salmon. 92.119

(146) kłłəʕ'ʷm kn t sqáltk
kłləʕ'ʷ-**m**
roast-AP + 1SS OBL *meat*
[I roasted some meat.] 92.131

(147) kn p'iʔsámxʷm t qʷísp
p'iʔsamxʷ-**m**
1SS + *milk*-AP OBL *cow*
I milked a cow.

In each of the above examples the agent functions as the subject of the clause. This is evidenced by the fact that it is the overt agent NP in (141) and (142) that is in direct case, as opposed to the patient which is oblique. The agent in (145) to (147) is also marked by the 1st person sg. subject clitic *kn*, indicating that the agent ('I') is the subject argument. The use of clitics to mark subjects also indicates that these antipassive constructions are intransitive. While the suffix *-m* is used to mark both antipassive and passive voice, note that unlike the passive, antipassive voice is formed on intransitive stems only and never stems that have been transitivized, as is the case with passive voice.

As discussed in section 5.2.2, the oblique marker *t* appears to be optional in the language. Nxa?amxcin antipassive patients can surface without the overt oblique marker, as shown in (148):

(148)	kn	səm'	ck'^{w}a?k'^{w}a?**m**	**sqáltk**
			c-k'^{w}ə?-k'^{w}a?-**m**	
	1SS +	?	IM-AUG-*bite*-AP	*meat*
	I could chew on meat[23]			AfII:3

It appears that the patient argument in antipassive voice constructions must be 3rd person. In eliciting these constructions, I have had 1st and 2nd person rejected as patients, as shown in (149) and (150):

(149)	* Paul	wík**m**	t	?incá / ?inwí
		wik-**m**		
	Paul	*see*-AP-(3AB)	OBL	1SEMpro / 2SEMpro
	(Paul saw me/you.)			
(150)	* tw'ít	?aw'táp**m**	t	nəmníml / ləplápst
		?aw'tap-**m**		
	boy	*follow*-AP-(3AB)	OBL	1PEMpro / 2PEMpro
	(The boy followed us/you(pl.).)			

Gerdts (1988:157) makes the same observation for Halkomelem antipassives. This restriction is probably due to the fact that generally 1st and 2nd person are inherently more topical than 3rd person (Givón 2001:156)

With respect to the patient NPs in antipassive constructions, all of the examples collected involve bare nouns marked by an oblique marker only. Most of the antipassive patients I have tested with determiners have been rejected.

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[23]Note that the speaker has marked the predicate *k'^{w}a?k'^{w}a?m* imperfective with the prefix *c-*, however imperfective is generally marked on intransitives by either *sac-/sc-* or *s-* (section 7.2.2.1).

Further investigation is required to determine exactly what can appear within the oblique-marked noun phrases in antipassive clauses.[24]

The patient argument can be omitted in antipassive constructions, illustrating the non-topical status of the patient role. Consider the following example:

(151) ʔi ɬuʔ sx̌'aʔcínm yaʕpqín
yaʕ'-p=qin
that deer *gather*-IN=*head*-(3AB)

húy niʔk'ʷan**m** x̣ə́lq'**m** lx
niʔ-k'ʷan-**m** x̣əlq'-**m**
POS-*take*-AP-(3AB) *kill*-AP-(3AB) + PL

[There were a lot of deer. They picked some out and killed them.] AfII:8

Example (151) contains two separate antipassive constructions which refer back to the same patient, *sx̌'aʔcínm* 'deer'. The patient appears in a preceding clause, and does not resurface as an oblique argument with the two following antipassive predicates (*niʔk'ʷanm* 'pick out' and *x̣əlq'm* 'kill') even though *sx̌'aʔcínm* is clearly the semantic patient argument of these predicates

The properties of antipassive voice are summarized below:

(152) **Properties of Nxaʔamxcin Antipassive Voice**

function	marks agent as highly topical and patient as non-topical
morphological marker	the suffix *-m*
stem types	monovalent stems only
syntactic status of arguments	• agent is in direct case and is the subject • patient is either oblique or suppressed
restrictions	patient must be 3rd person

[24]Gerdts and Hukari (2000:96) note that "the oblique-marked object in Halkomelem antipassives is usually third person and inanimate. It can be definite or indefinite, though often it has a non-individualized or non-specific meaning".

6.2.1.4 Indefinite Object

There has been very little discussion in the literature regarding *indefinite object voice* in Nxa?amxcin and, to my knowledge, it has not been considered as part of the voice category in previous work on Nxa?amxcin. The most detailed discussion of the indefinite object construction is by Kinkade (1980), who states that the indefinite object implies "an object (or objects) that is not specified" (p.35). In these constructions, the role of a goal, benefactive or malefactive argument is clearly downplayed, which leads me to believe that the indefinite object construction should be subsumed under the category voice. Based on the few examples scattered throughout the data, I propose that the indefinite object construction be described as follows:[25]

(153) **Relative Topicality of Agent, Patient and Goal in Nx Indefinite Object Voice**

Agent > (Patient) >> Goal

The schema in (153) indicates that the agent argument is more topical than the patient argument (if present), while the goal argument, which is totally supressed, is non-topical.

Indefinite object voice is marked by one of two suffixes: *-xax* or *-xix*. Any synchronic difference between the two is unclear. When there is no reference to a patient argument, indefinite object voice constructions surface as intransitive, as shown in the following examples:

(154) c'ək**xáx**əx^{w}
c'ək-**xax**-mix
count-IO-IM-(3AB)
S/he is counting for someone. W8.199

[25]In the schema in (153) I use *goal* as a global term representing *goal*, *benefactive* and *malefactive* arguments.

(155) kn sk'ɬʔam**xáx**əx^{w}
s-k'ɬʔam-**xax**-mix
1ss + IM-*wait for*-IO-IM
[I am waiting for someone] JM3.104.10

(156) kic**xáx**
kic-**xax**
arrive-IO-(3AB)
S/he visited someone. Kinkade 1980:35

(157) k'ɬc̓áy'n**xáx**
k'ɬc̓áy'-n-**xax**
try to fool-?-IO-(3AB)
[S/he tried to fool someone.] Y41.31

(158) k'ɬwan**xáx** taʔ
k'ɬ-ɬwam-n-**xax**
POS-*go(pl.)*-?-IO-(2ss) + IMP
You get out of her/his way. W.8.204

(159) saw**xáx** taʔ
saw-**xax**
ask-IO-(2ss) + IM
You ask! W.7.58

(160) kaɬ**xix̂**
kaɬ-**xix**
give-IO-(3AB)
S/he distributed/gave away things. W.2.34

When there is reference to a patient argument, indefinite object voice forms are bivalent, with the patient assuming direct object status. The indefinite object voice marker surfaces to the left of both the valence and relational marker, as the following examples illustrate:

(161) xəlt**xix̂**mn
x̣əli-t-**xix**-min-nt-n
ask-?-IO-RL-TR-(3AB)-1ss
I asked for something. W.7.131

(162) k^{w}ɬən**xáx**mn
k^{w}uɬn-**xax**-min-nt-n
loan-IO-RL-TR-(3AB)-1ss
I loaned someone else's property to someone. EP2.177.11

(163) kʷan**xix**mn
kʷan-**xix**-min-nt-n
grab-IO-RL-TR-(3AB)-1SS
I took it away from someone. Kinkade 1980:35

(164) xəs**xix**mn
xəs-**xix**-min-nt-n
lose-IO-RL-TR-(3AB)-1SS
I lost it for them (not deliberately). Kinkade 1980:35

(165) xəlt**xix**mn
x̣əli-t-**xix**-min-nt-n
ask-?-IO-RL-TR-(3AB)-1SS
I asked people for it (not mentioning who). Kinkade 1980:35

(166) k'ʷən's**xax**ms
k'ʷən's-**xax**-min-nt-s
?-IO-RL-TR-(3AB)-3ER
S/he showed it to them. W.5.59

(167) kasmaʕ'ʷ**xix**ms
kas-maʕ'ʷ-**xix**-min-nt-s
IR-*break*-IO-RL-TR-(3AB)-3ER
S/he's going to end up breaking it for someone. W.11.119

(168) kʷa nasúʔx tuʔq**xix**əms
kʷaʔ nasuʔ + lx tu•ʔ•q-**xix**-min-nt-s
and FUT + PL *throw*•OC•*throw*-IO-RL-TR-(3AB)-3ER

wa ʔani sk'ʷən'k'ʷən'
WA DET *bones*
[and they will throw them the bones.] AMtI:2

(169) kʷ**łnxax**mn ʔisic'm k'l w'ax̣tál't
kʷułn-**xax**-min-nt-n ʔin-sic'm
loan-IO-RL-TR-(3AB)-1SS 1SPS-*blanket* LOC *child*
I loaned my blanket to the child.
Kinkade 1980:35

It is of interest to note that all of the transitive indefinite object stems I have found are also marked relational.

In this type of voice construction, the indirect object represented by *-xax/ -xix* appears to be demoted in the same sense that a patient is demoted in the antipassive. Example (169) is a clear indication of this. We would normally expect *w'ax̣tál't* 'child' to be the direct object in this construction and for *ʔisic'əm* 'my blanket' to appear as an oblique object. The goal *w'ax̣tál't* 'child',

however, has been demoted to an adjunct and is marked by the locative preposition *k'l* 'to'. The patient *ʔisic'əm* 'my blanket' surfaces as the direct object.

These observations are preliminary and more data is required to gain further insight into indefinite object voice constructions. Clearly, however, they play a role in the elaborate voice system found in Nxaʔamxcin.

The properties of indefinite object voice are summarized below:

(170) **Properties of Nxaʔamxcin Indefinite Object Voice**

function	marks goal as non-topical
morphological marker	one of the two suffixes *-xax* or *-xix*
stem types	appears on bivalent stems, but unlike other voice operations, indefinite object marking realized before any transitivizing morphology
syntactic status of arguments	• agent is subject and in direct case • patient (if present) is object and in direct case • goal is suppressed or realized as an adjunct
restrictions	goal is 3rd person

6.2.2 Semantic Voice

Coming under a different sub-domain within the category voice is *semantic voice*. While examining instances of pragmatic voice in the previous four sections, it was necessary to look beyond the single clause construction in order to understand the essential functions of the various types of pragmatic voice. This is not the case with semantic voice operations since their primary functions are not dependent on discourse factors.

According to Givón (2001:93), semantic voice operations tamper with the three central properties of a prototypical transitive construction: (i) While prototypical transitive constructions contain a "volitional, controlling, active, intiating agent responsible for the event", operations of semantic voice result in "decreased agentivity of the agent/subject". (ii) The patient in a prototypical transitive construction "involves a non-volitional, inactive, non-controlling

patient that registers the event's changes-of-state"; semantic voice operations signal a decrease in the "affectedness of the patient/object". (iii) Prototypical transitive clauses contain a verb that is both *telic* and *perfective*; semantic voice operations effectively decrease "telicity or perfectivity of the verb".

Within the sub-category of semantic voice, three different operations are addressed in the following subsections: *middle*, *reflexive*, and *reciprocal*.

6.2.2.1 Middle

Middle voice is the first of three voice constructions to be discussed here that fall under Givón's heading of semantic voice. Givón (2001:116) defines middle voice as follows:

> Middle-voice constructions are a cluster of variants on semantically-transitive verbs, most commonly involving a shift of the semantic focus away from the agent. As a result, a verb that can be used to depict agent-initiated actions is now used to construe either:
> - the patient's *change* during an event
> - the patient's *potential state* for such change
> - the patient's *resulting state* following an event

Because of the semantic de-focusing of agent, there is often no overt expression of an agent in various middle constructions, unlike passive constructions where the agent is only pragmatically de-focused and can optionally surface (Givón 2001:116–7).

Two different suffixes are synchronically used to mark middle voice in Nxaʔamxcin. As we will see in the examples to follow, both of these middle markers are found across the various situation types relevant to middle voice. The first of these morphemes, viewed as the pan-Salish "middle" suffix, is the suffix *-m*, the same suffix used to mark passive and antipassive voice, along with several other operations. This particular middle suffix has received the most attention in the literature.[26] A second middle marker is the suffix *-ncut*, which is homophonous with the transitive-reflexive combination (*-nt* + *-cut* ⇒ *-ncut*). To my knowledge, this suffix has not previously been analyzed as a middle marker for Nxaʔamxcin. A number of middle predicates show diachronic evidence of

[26]See, for example, H. Davis (1997a) on Lillooet, Gerdts and Hukari (1998) on Halkomelem, and Beck (2000a) on Bella Coola.

the suffix *-ilx*, which has been labelled *autonomous* in the Salish literature and appears to be no longer productive in Nxaʔamxcin.[27] There are also constructions in the data which clearly have middle voice semantics, but there is no overt morphological marker for middle voice.

Kemmer's (1993) cross-linguistic study of middle voice reveals a number of different situation types which are usually associated with middles. The first is *grooming actions or body care* which Kemmer (p.54) notes "typically include actions like dressing or arming oneself, bathing, shaving, and other such cultural activities [...] Certain actions which are performed on body parts such as trimming or combing hair, clipping nails, and so forth are marked similarly to the other grooming verbs involving whole-body actions in some languages". Some Nxaʔamxcin examples relevant to this situation type are given below:

(171) kn ʔaq'^{w}s**m**
ʔaq'^{w}=us-**m**
1ss + *scrape=face*-MD
I shaved. JM3.95.2

(172) c'aw's**m** kn
c'aw'=us-**m**
wash=face-MD + 1ss
I washed my face. EP2.164.5

(173) kn ɬik^{w}yaʔqn**m**
ɬik^{w}yaʔqn-**m**
1ss + *comb*-MD
I'm combing my hair. 92.109

(174) kask'^{w}iƛ'**nct**əx^{w}
kas-k'^{w}iƛ'-**ncut**-mix
IR-*take off*-MD-IM-(3AB)
s/he is going to undress TG4.66.8

(175) kn cíʕ'^{w}**lx**
1ss + *bathe*
I took a bath. 89.40

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[27]References to this label can be found in Kinkade 1982b:53 and Czaykowska-Higgins 1998:156 for Nxaʔamxcin, and Thompson 1985:401 and Thompson and Thompson 1992:101–102 for the Thompson language, among others.

In all of the above examples, an argument is performing some type of grooming activity upon her/himself. The predicates in (171) to (174) are suffixed with an overt middle marker: the suffix *-m* in (171) to (173), and the suffix *-ncut* in (174). The predicate in (175), *ciʕ'ʷlx* 'bathe', shows diachronic evidence of the suffix *-ilx* and, as is usual with *-ilx* middle predicates, there is no synchronic affixation marking middle voice.

The second situation type noted in Kemmer is that of *change in body posture*. These include actions such as 'sit down', 'stand up' and 'lie down'. Kemmer (1993:55) notes the similarities between this situation type and grooming verbs, pointing out that change in body posture verbs "are reflexive-like insofar as they denote actions in which a volitional entity acts on its own body". Some Nxaʔamxcin examples are as follows:

(176) q'ʷiyxán**m**
q'ʷiy'xan-**m**
kneel-MD-(3AB)
[S/he knelt on one knee.] ECH

(177) tal'**ám'** (*or* ttal'ám')
lie on back Kinkade 1981a:38

(178) líx**mnct**
lix-**m-ncut**
lay s.t. (pl.) down-MD-MD
lie down (pl.) Kinkade 1981a:19

(179) t'úc**mnct**
t'uc-**m-ncut**
fall-MD-MD
lie down (sg.) Kinkade 1981a:43

(180) cík**mnct**
stop, stand up (pl.)[28] Kinkade 1981a:5

(181) łq'**íl'x**
lie down (sg.) Kinkade 1981a:21

(182) łáq**lx**
sit (sg.) Kinkade 1981a:86

[28]I am not certain if this is a lexicalized stem or not.

(183) yərix
sit, get up (pl.) Kinkade 1981:49

(184) c'əlix
stop, stand up (sg.) Kinkade 1981a:7

Example (176) contains a *change in body posture* predicate marked by the suffix *-m*. Example (177), *t'al'ám'* 'lie on back', most likely involves, from a diachronic perspective, a root (√t'al') followed by the suffix *-ám* which, as opposed to *-m*, is the middle marker for the root √k^{w}an in Nxa?amxcin. The predicates in (178) to (180) appear to be marked by both the *-m* and *-ncut* suffixes, although it is difficult to determine with any degree of certainty whether or not it is the suffix *-m* that precedes *-ncut* in these examples. The relational suffix *-min* followed by the suffix *-ncut* would yield the same surface form: *-mnct.* If these forms do contain the *-m* middle marker, then (178) to (180) are examples of predicates being marked more than once for the same operation (not in the least unusual within a Lexeme Morpheme-Base Morphology framework). Examples (181) and (182) show diachronic evidence of the suffix *-ilx.* (183) and (184) have no overt middle marking, but it is of interest to note that both end in [ix].

A third situation type found in Kemmer (1993:56) is *non-translational motion.* Verbs of this situation type "denote actions of motor manipulation of the body or a body part, without any particular change of location of the body". These include verbs like 'bend', 'nod', 'turn' and 'twist'. Some Nxa?amxcin examples are as follows:

(185) ṣaḥqínm
saḥ=qin-**m**
shake=head-MD
shake head back and forth (to shake off water or weeds) MDK

(186) kt x^{w}ir̃kstu**m**
x^{w}ir=akst-**m**
1ps + *reach out=hand*-MD
We're reaching out. 89.09.26.16

(187) łt'p**ncút**
łət'p-**ncut**
jump-MD
jump, hop Kinkade 1981a:21

(188) y'əx**mn'cút**
move (slightly) Kinkade 1981a:50

We find above predicates of *non-translational motion* marked with the suffix *-m* ((185) and (186)) and the suffix *-ncut* (107). In addition, the reanalyzed example in (188) shows evidence of the *-ncut* suffix and possibly *-m*.

Another situation type Kemmer (1993:56) claims is relevant to middles is *translational motion*. Such verbs include "actions involving motion of an animate entity under its own power through space". Some examples of these are 'fly', 'go away', 'climb' and 'arrive'. The following examples contain predicates of translational motion:

(189) x^{w}áy'**m** wa x̣x̣ƛ'cíns
x^{w}ay'-**m** x̣x̣ƛ'cin-s
run away-MD-(3AB) WA *dog*-3PS
Her/his dog ran away.

(190) lcp'əlk'ús**m**
l-c-p'əlk'=us-**m**
DIR-DIR-*turn around=face*-MD
return (from) Kinkade 1981a:18

(191) kn cnàk'ə́r**m**
c-nak'ər**m**
1SS + DIR-*swim*
I swam back across. Y14.166

(192) cnəqín**m** ʔaní w'axtál't
c-nəqin**m**
DIR-*go in*-(3AB) DET *child*
The child came in.

(193) x^{w}áy'**m**
escape, run away[29] Kinkade 1981a:45

[29]I am not certain if the *-m* in this example is lexicalized.

(194) sɬwám 1x
s-ɬwam
IM-*go(pl.)*-(3AB) + PL
they're going 90.187

(195) yəlám
run (pl.) Kinkade 1981a:49

(196) xʷət'pncút
xʷət'p-ncut
?-MD-(3AB)
s/he ran away

(197) tk'íwlx l ʔacp'aƛ'
t-k'iwlx
POS-*climb* LOC *tree*
[S/he climbed the tree.] 89.09.26.23

(198) kƛ'ílx
climb a hill Kinkade 1981a:12

(199) cnanə́pt
come in (pl.)

Examples (189) and (190) are *m*-marked, while (191) to (193) are reanalyzed forms containing *-m* as part of the lexicalized stem. (194) and (195) show diachronic evidence of the middle suffix *-ám*. (196) is marked by *-ncut*, while (197) and (198) show diachronic evidence of the suffix *-ilx*. The predicate *cnanə́pt* 'come in (pl.)' in (199) contains no overt middle marker but does fall under the semantic domain of *translational motion*.

Finally, Kemmer distinguishes the *indirect middle*, which she says (1993:78) "has a relational structure similar to that of the indirect reflexive [...] in that it too involves an action in which the effect of the action accrues back to the Initiator. However, in contrast to the indirect reflexive, the indirect middle situation type comprises actions that one *normally* or *necessarily* performs for one's own benefit". These include verbs such as 'choose', 'acquire', 'pray', 'ask' and 'obtain'. Some Nxaʔamxcin examples are given below:

(200) yə́ʕ'^{w}yəʕ'^{w}t kn k'íʕ'^{w}**m**
k'iʕ^{w}-**m**
hard + 1SS *pray*-MD
I prayed real hard. 89.148

(201) niʔk'^{w}án'**m**
niʔ-k'^{w}an'-**m**
POS-*try*-MD
choose, select Kinkade 1981a:27

(202) kn k'łk^{w}n**á**m
k'łk^{w}an-**am**
1SS + ?-MD
I took a prize (as in a contest).

(203) kə́m'ntx^{w} ʔaní sʔiłn ʔaní sqəl'tmíx^{w} l sc'əltq**ncut**s
kəm'-nt-x^{w} s-ʔiłn sc'əltq-**ncut**-s
take(pl.)-TR-(3AB)-2SS DET NM-*eat* DET *man* LOC NM-?-MD-3PS
You took the food that the man gathered.

(204) may'**n'cút**
maya?-**ncut**
tell-MD
confess Kinkade 1981a:22

(205) məlx̣a?**ncút**
məlx̣a?-**ncut**
tell a lie-MD
tell a lie Kinkade 1981a:23

(206) nmiyapmî**nct**
confess (to a priest)[30] Kinkade 1981a:29

The predicates in (200) to (206) are all indirect middles in that these are actions executed for personal benefit. Both predicates in (200) and (201) are marked with the *-m* suffix, while the root √k^{w}an in (202) takes *-ám* as the middle marker. The predicates in (203) to (205) are marked with *-ncut*, and this suffix is part of the reanalyzed stem in (206).

All of the above examples indicate that the category middle is marked in several ways: the suffix *-m*, the suffix *-ncut* or, possibly, a combination of the suffixes *-m* plus *-ncut*. In addition many middles show diachronic evidence of the suffix *-ám* (most likely a variant of *-m*) or the suffix *-ilx*. Some predicates,

[30]I am not certain if this stem is lexicalized.

which can be semantically subsumed under the label middle voice, show no sign of overt marking. At this point I assume that there must be lexical specification to indicate which form of middle marking is used for each predicate, until evidence to the contrary proves otherwise.

6.2.2.2 Reflexive

Reflexive voice is another operation that comes under the label semantic voice. Givón (2001:95) defines reflexive voice as follows:

> The subject and object of the event or state, regardless of their semantic roles, are *co-referent*. That is, the subject acts upon (or relates to) *itself*.

Kemmer (1993:46) states that this relation of coreference is "between an Agent or Experiencer participant on the one hand, and a Patient on the other". Neutral active voice thus differs from reflexive voice in that the agent and patient are distinct entities in the former, as in (207), while in the latter the agent and patient are the same entity, as in (208):

(207) *Active:* He scratched her.
(208) *Reflexive:* He_i scratched $himself_i$.

In Nxaʔamxcin, reflexive operations take place on bivalent stems and are marked by the suffix *-cut*. Kinkade (1982b:59) considers this form to have derived from the combination **-t-sut*, involving a transitive suffix followed by the proto-Salish reflexive marker **-sut* (see Kroeber 1999:32). It is impossible to determine if the suffix *-sut* has become *-cut* since the reflexive marker always follows bivalent stem markers, all of which end in [t] with the exception of *-stu* which is reduced to *-st* when followed by the reflexive marker (Czaykowska-Higgins 1993a). Because [t] + [s] is always realized as [c], it is impossible to tell if the reflexive marker is *-sut* or *-cut* underlyingly. I will follow Kinkade (1982b) here and assume it is *-cut*.

Almost all of the reflexive examples I have found in the data involve transitive stems. As the following examples illustrate, the reflexive marker follows the transitive suffix and the resulting predicate is intransitive:

(209) lipn**cút**
lip-nt-**cut**
wound-TR-RF-(3AB)
S/he wounded her/himself. 92.143

(210) k'^{w}a?k'^{w}a?n**cút**
k'^{w}ə?-k'^{w}a?-nt-**cut**
AUG-*bite*-TR-RF-(3AB)
[S/he chewed her/himself up.] 89.98

(211) kn cuw'n**cút**
cuw'-nt-**cut**
1SS + *punch*-TR-RF
I hit myself with my fist. Y25.112

(212) tə́r'qn**cút**
tər'q-nt-**cut**
kick-TR-RF-(3AB)
S/he kicked her/himself. Y25.115

(213) t'əm'n**cút**
t'əm'-nt-**cut**
cut-TR-RF-(3AB)
S/he cut her/himself. W4.135

Examples (209) to (213) involve stems marked transitive by the suffix *-nt* followed by the reflexive marker *-cut.*

I have two examples illustrating that the reflexive operation can take place on causative stems:

(214) paẋpaẋs**cút**
paẋ-paẋ-stu-**cut**
smart-AUG-CS-RF-(3AB)
S/he's acting/playing smart. W.10.167

(215) qan'wáła? ?ałi wa? scyilmx^{w}s**cút**əx^{w} cníl
sc-yəlmix^{w}m-stu-**cut**-mix
pretender DET WA IM-*chief*-CS-RF-IM-(3AB) 3SEMpro
[That pretender was acting like a great chief.] AfII:5

Finally, I have one example of an applicative stem marked reflexive:

(216) scmay'x**cút**əx^{w}
sc-maya?-xit-**cut**-mix
IM-*tell*-APP-RF-IM
talking to oneself W.10.173

This example illustrates that Nxa?amxcin reflexives can involve coreferencing between an agent and a goal argument (as opposed to patient).

There are two morphological features in the above examples that indicate reflexive predicates are surface intransitives. First, in example (211), 1st person sg. subject agreement is realized as the clitic *kn.* Subject marking in the form of clitics is restricted to intransitive clauses. Second, the predicates in (215) and (216) are marked imperfective by the affixes *sc-* and *-mix.* These affixes are restricted to intransitive predicates.

There appears to be a semantic restriction on Nxa?amxcin reflexive constructions in that the coreferenced agent and patient must be human. The following example indicates that non-human NPs cannot form reflexive constructions:

(217) * t'əm'n**cút** ?ací míx̣ał
t'əm'-nt-**cut**
cut-TR-RF-(3AB) DET *bear*
(The bear cut itself.)

Speakers will translate an English example like 'the bear cut itself' as follows:

(218) t'ə́m'm' ?ací míx̣ał
t'ə•m'•m'
cut•OC•*cut*-(3AB) DET *bear*
The bear got cut.

The above predicate is marked out-of-control by C_2-reduplication, indicating that the bear was cut without intention.

6.2.2.3 Reciprocal

The semantic function of *reciprocal voice* is closely linked to that of reflexive voice. Givón (2001:96) defines reciprocal voice as follows:

> Two (or more) like events, coded by the very same verb, are represented jointly in a single clause, with the subject of the first being the object of the second, and vice versa. The two participants are thus *reciprocally co-referent.* They act upon (or relate to) *each other.*

Bivalent active voice constructions contain agent arguments that function only as agents, and patient arguments that function only as patients. Hence, agents and patients represent distinct identities. Reflexive voice constructions discussed in the previous section differ from active voice in that the agent and patient arguments *are* the same entity. This differs again from reciprocal voice in that while agent and patient arguments are also the same entities, they are never coreferential. This is illustrated in the following examples:

(219) *Active:* She cut him.

(220) *Reflexive:* She$_i$ cut herself$_i$.

(221) *Reciprocal:* [They] cut [each other].
[she$_i$ and he$_j$] cut [her$_j$ and him$_i$]

In Nxa?amxcin, reciprocal operations take place on bivalent stems and are marked by the suffix *-wax^w*, as shown in (222) to (225):

(222) ḥaḥimnt**wáx^w** lx
ḥaḥim-nt-**wax^w**
dislike-TR-RC-(3AB) + PL
They disliked each other. 92.137

(223) lipnt**wáx^w** lx
lip-nt-**wax^w**
wound-TR-RC-(3AB) + PL
They wounded each other. 92.144

(224) k^{w}nksnt**wáx^w** lx
k^{w}an=akst-nt-**wax^w**
grab=hand-TR-RC-(3AB) + PL
They held each other's hand.

(225) scxʷay'ʕstwáxʷəxʷ 1x
sc-xʷay'ʕ-stu-**wax**ʷ-mix
IM-*get after*-CS-RC-IM-(3AB) + PL
They're getting after each other. W.7.269

All of the above reciprocal constructions are formed on transitive stems. Examples (222) to (224) are marked transitive by the suffix *-nt*, while (225) is marked transitive by the suffix *-stu*, the transitive marker when the predicate is marked for imperfective aspect.

Sometimes the reciprocal suffix attaches to stems ending in *-na*, as in the examples below:

(226) k'ʷaʔk'ʷaʔnawáxʷ 1x
k'ʷəʔ-k'ʷaʔ-nt-**wax**ʷ
AUG-*bite*-TR-RC-(3AB) + PL
They chewed each other up. 89.97

(227) kt tər'tər'qnawáxʷ
tər'-tər'q-nt-**wax**ʷ
1PS + AUG-*kick*-TR-RC
We kicked each other. 92.136

(228) ləplapst kp cuʔcuʔnawáxʷ
cəw'-cuw'-nt-**wax**ʷ
2PEMpro + 2PS AUG-*punch*-TR-RC
You (pl.) punched each other. 92.138

The status of [na] is unclear at this point.

I have one example which suggests that reciprocal voice can be formed on causative stems (229), and two examples of reciprocals based on applicative stems ((230) and (231)):

(229) yələmstwáxʷ
yəlam-stu-**wax**ʷ
run(pl.)-CS-RC
two people running off together W.3.23

(230) kt kałxtwáxʷ t syúpm
kał-xit-**wax**ʷ
1PS + *give*-APP-RC OBL *necklace*
We gave each other necklaces. 92.139

(231) scmay'xt**wáx^{w}**əx^{w}
sc-maya?-xit-**wax^{w}**-mix
IM-*tell*-APP-RC-IM
telling stories (to each other) A-FdII:32

As with the reflexives in the preceding section, two morphological properties found in the reciprocal examples indicate that reciprocal predicates are surface intransitives. First, in examples (227) and (230), 1st person pl. subject is marked by the clitic *kt*, while 2nd person pl. subject is marked by the clitic *kp* in (228). Clitics are only used to mark subjects in intransitive constructions. Second, the predicates in (225) and (231) are marked imperfective by the affixes *sc-* and *-mix*. These affixes are restricted to intransitive predicates.

Kinkade (1982b:59) notes a second suffix used to mark reciprocal constructions, as shown below:

(232) tər'qnant**wáp** lx
tər'q-na-nt-**wap**
kick-na-TR-RC-(3AB) + PL
they kicked each other Kinkade 1982b:59

(233) ckəlpsnt**wáp** lx
cək=alps-nt-**wap**
hit by throwing=back part of neck-TR-RC-(3AB) + PL
they hit each other (with rocks) Kinkade 1982b:59

(234) cuwcuwna**wáp** lx
cuw'-cuw'-na-nt-**wap**
AUG-*punch*-na-TR-RC-(3AB) + PL
they hit each other with their fists Kinkade 1982b:59

(235) ckckna**wáp** lx
cək-cək-na-nt-**wap**
AUG-*hit*-na-TR-RC-(3AB) + PL
they hit each other (by throwing rocks) Kinkade 1982b:59

The translations for examples (232) to (235) indicate that they are all reciprocal constructions. Instead of the suffix *-wax^{w}*, however, these reciprocal predicates are marked by the suffix *-wap*. This formative is rare and Kinkade states that he has only four examples, which are cited in (232) to (235).

6.2.3 Summary of Voice Operations

In the previous sections I discussed four different operations of pragmatic voice—topical object, passive, antipassive and indefinite object—which are summarized below:

Pragmatic Voice Operations

Operation	*Morphological Marker*	*Relative Topicality*
Topical Object	*-wa* (*-u* when unstressed)	AGT < PAT
Passive	*-m*	AGT << PAT
Antipassive	*-m*	AGT >> PAT
Indefinite Object	*-xax*, *-xix*	AGT > (PAT) >> GOAL

Three operations of semantic voice were also addressed in the previous sections—middle, reflexive and reciprocal. These are summarized below:

Semantic Voice Operations

Operation	*Morphological Marker*	*Function*
Middle	*-m* (with rare variant *-ám*), *-ncut*, diachronic evidence of *-ilx*	semantic de-focusing of agent
Reflexive	*-cut*	subject and object coreferential
Reciprocal	*-wax*^{w}, *-wap* (rare)	subject and object reciprocally coreferential

6.3 Secondary Aspect

Aspectual operations that have no direct effect on the viewpoint of a clause (in the spirit of Smith 1997) are grouped here together under the label *secondary aspect*. Six types of secondary aspect are examined here: stative, inchoative, developmental, habitual, repetitive and iterative. These aspectual operations are marked as follows in the derivational stem:

(236) ***Derivational Stem***

$[_{DS}$ NM DIR POS ***ASP*** *DIM CTR* ***ASP***$[_{LX}$ (Y) √ROOT (Z) $]_{LX}$ *DIM* **ASP** CTR VC RL VAL VC NM $]_{DS}$
⇑ ⇑ ⇑

Of the three indicated aspectual positions in (236), two of these are in italics indicating they represent either reduplicative or infixal operations. The leftmost aspectual position is that of the repetitive which, as we will see in section 6.3.4, involves either infixation or prefixation plus reduplication. The middle aspectual position, also in italics, is that of the inchoative infix. All other secondary aspect is suffixal and is realized in the rightmost aspectual position.

6.3.1 Stative

Stative is an aspectual category that has been well-noted cross-linguistically for its non-dynamic, atelic properties. Smith (1997:32) describes states as follows:

> States are stable situations which hold for a moment or an interval. They have the temporal features [Static], [Durative]. [...] States consist of an undifferentiated period without internal structure. They have no dynamics, and require external agency for change.

Smith (1997:32) also points out that "[t]he initial and final endpoints of a state are not part of the state: they are distinct situations, constituting changes of state". Thus, for stative forms, no initial startpoint or final endpoint is ever brought into focus.

Nxaʔamxcin stative forms are marked by the suffix *-t*, which is realized at the right edge of the root.[31] This is illustrated by the following bound stem compound in which the suffix *-t* surfaces between the root √maʕ'^{w} 'break' and the bound stem =ałx^{w} 'house' (see section 3.3.2.2):

(237) ʕ'^{w}ən'ʕ'^{w}án'ps ʔací maʕ'^{w}**t**áłx^{w}
ʕ'^{w}ən'ʕ'^{w}an'p-s maʕ'^{w}-**t**-ałx^{w}
magpie-3PS DET *break*-ST-*house*-(3AB)
The magpie's nest broke up.

The semantics of Nxaʔamxcin stative forms are clear when comparing the following pairs in which the predicate appears first as a transitive construction and then as a monovalent stative:

(238) a. cni k^{w}áx^{w}nc
k^{w}ax^{w}-nt-sa-s
3SEMpro *wake up*-TR-1SO-3ER
he woke me up G9.78

b. k^{w}áx^{w}**t**
k^{w}ax^{w}-**t**
wake up-ST-(3AB)
s/he is awake EP2.5.1

(239) a. máʕ'^{w}s nlx^{w}átk^{w}tns sməʔámm
maʕ'^{w}-nt-s nlx^{w}atk^{w}nt-s
break-TR-(3AB)-3ER *pot*-3PS *woman*
The woman broke her pot.

b. yaʕ'yaʕ'tú stám' máʕ'^{w}**t**
maʕ'^{w}-**t**
all *what* *break*-ST-(3AB)
Everything was broken.

---

[31]Kinkade (1996a:193) notes that all of the Interior languages (Lillooet, Thompson, Shuswap, Coeur d'Alene, Spokane-Kalispel, Okanagan and Nxaʔamxcin) have cognates for this aspectual marker, as well as the Central Salish language Saanich (Montler 1986).

(240) a. nasúk'^{w}n ʔací stə́ɬm
na-suk'^{w}-nt-n
POS-*float*-TR-(3AB)-3ER DET *boat*
I drifted/floated the boat.

b. nasúk'^{w}**t** stə́ɬm
na-suk'^{w}-**t**
POS-*float*-**ST**-(3AB) *boat*
The boat floated.

(241) a. xə́sn
xəs-nt-n
lost-TR-(3AB)-1SS
I lost it. EP2.182.3

b. t'íl' máx^{w} kt xə́s**t**
xəs-**t**
MOD MOD 1PS + *lost*-**ST**-(3AB)
Maybe we're lost. W.9.23

The (a) examples shown above all involve dynamic events in that there is an agentive factor. These examples have also been expressed as telic events (i.e. there is a definitive final endpoint). With respect to the (b) examples, neither of these properties (dynamism nor telicity) are present. For example, in (238b) *k^{w}áx^{w}t* 's/he is awake', there is no agentive involvement and the event is ongoing without any sense of start or endpoint.

Other examples of stative aspect are as follows:

(242) ʔúx^{w}**t**
ʔux^{w}-**t**
frostbite-**ST**-(3AB)
[it's frozen] Y30.110

(243) q'ílt ay' ʔinqənúx^{w}
q'il-**t** ʔin-qənux^{w}
sick-**ST**-(3AB) + PST 1SPS-*throat*
My throat was sore.

(244) ʔinwí k^{w} t'ə́ɬ**t**
t'əɬ-**t**
2SEM + 2SS *dirty*-**ST**
your face is dirty G6.88a

(245) lút kn q'ʷúct
q'ʷuc-t
NEG + 1SS *fat*-ST
I'm not fat. W.10.39

(246) təɬ láʕʷt
laʕʷ-t
right *thin*-ST-(3AB)
He's real thin. W.10.46

(247) ƛ'áx̣t ʔacnáw'lx
ƛ'əx̣-t ʔac-naw'lx
fast-ST ST-*run(sg.)*-(3AB)
He runs fast. W.10.68

(248) cíḥt ʔaxáʔ q'iy'míntn
ciḥ-t
rip?-ST-(3AB) DET *paper*
This paper is ripped.

(249) swát may'xítms kʷaʔ kʷ ḥímt
maya?-xit-m-s ḥim-t
who *tell*-APP-2SO-3ER *and* + 2SS *angry*-ST
Who told you the news that made you angry?

Thompson and Thompson (1992) label the Thompson language cognate 'immediate' and provide the following characteristics of this operation in Thompson:

- refers to states and actions which have just gone into effect. The point of reference may be some time in the past, so that an immediate form can indicate some state of affairs in the past. The emphasis is on the state of affairs, rather than on the change implied. (p.92)
- [s]ome immediates carry the force of 'in the act of ..., just now doing...' (p.93)
- In more arbitrary fashion, immediate forms sometimes refer to more general characteristics of things. (p.93)

I have discussed Thompson and Thompson's interpretation of Thompson language forms marked by the suffix *-t* with a native Nxaʔamxcin speaker who felt that the immediate category described by Thompson and Thompson did not reflect cognate forms in Nxaʔamxcin. This supports Kinkade's (1996a) claim that the *-t* suffix marks *stative* aspect in Nxaʔamxcin.

6.3.2 Inchoative Aspects

Inchoative aspect indicates a change in state. The focus is not on a resulting state, but rather the process of change. In English, inchoative aspect is marked by the inchoative verbs 'get' and 'become', as in (250b) and (c).

(250) a. I was tired.
b. I got tired.
c. I became tired.

In (250a) the aspectual focus is on the state of being tired, while in (250b) and (c) it is on the change from one state ('not being tired') to another ('being tired').

Kinkade (1989b) provides the most thorough discussion of Nxa?amxcin inchoatives available. Based on the data he presents, it appears that there are two types of inchoatives in Nxa?amxcin. The first is labelled *inchoative* and is marked by either an infixed glottal stop, *-ʔ-*, or the suffix *-p*. The second is labelled *developmental* and is marked by the suffix *-wil'x*. I will continue to use the terms 'inchoative' and 'developmental' as per Kinkade.

6.3.2.1 Inchoative

Inchoative aspect is marked by one of two different affixes: the infix *-ʔ-* and the suffix *-p*. The choice between the infix or the suffix is predictable as the two are in complementary distribution in accordance with the strength of the root (Kinkade 1989b:115). With respect to stress assignment (section 4.5), Nxa?amxcin roots can be divided into two groups (Czaykowska-Higgins 1993a): strong roots containing a full vowel (*i*, *a*, *u*), and weak roots containing schwa. For the sake of simplicity, strong and weak roots are differentiated here as follows: strong roots retain primary stress in the environment of certain suffixes (labelled "recessive" in Czaykowska-Higgins 1993a) such as *-min* relational, *-stu* causative, *-mix* imperfective and *-xit* applicative, among others; weak roots lose primary stress to these suffixes. The distribution of inchoative *-ʔ-* and *-p* coincides with these two types of roots: *-ʔ-* appears with strong roots and *-p* with

weak roots.[31] Weak roots suffixed with *-p* remain weak while strong roots infixed with *-ʔ-* become weak with respect to stress properties.[32]

The following example from Kinkade illustrates the shift from strong to weak root when glottal stop infixation is used to mark inchoative aspect:

(251) a. kʷə́ls
kʷəl=us
red=face
'ruddy complexion'

b. kʷaʔlús
kʷə•ʔ•l=us
red•IN•*red=face*
'face turns red, embarrassed' Kinkade 1989b:115

In example (251a) the root vowel remains stressed, even with a full vowel in the adjacent bound stem. In (251b), the same root is infixed with the inchoative marker *-ʔ-*, and the root vowel loses primary stress to the vowel in the adjacent bound root. Note that schwa vowels preceding glottal stop are generally realized as [a], as is the case in (251b).

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[31]Kinkade (1996a:191–192) indicates that both of these variants are found as inchoative markers in all of the interior languages, following the same pattern of distribution. See Thompson and Thompson (1992), Carlson (1993) and van Eijk (1997) for discussion of these forms in Thompson, Spokane and Lillooet, respectively.

[32]Kinkade (1989b:115) notes that there may be exceptions to the rule as "the infix appears to occur as well with a few weak roots. The status of these last is not entirely clear; there are instances of these roots acting sometimes strong, sometimes weak in terms of stress". In addition, Kinkade suggests the following examples might also be exceptional, as an apparent inchoative *-p* marker surfaces on strong roots:

(i) na-k'ám'm'-**p**
got left behind

(ii) kɬ-c'ík'-**p**=c'aʔ-n
I lit the firewood, I set the fire to it

(iii) ƛ'íc'-**p**
strong, stout Kinkade 1989b:116

As example (251b) indicates, the inchoative infix *-ʔ-* appears as the second consonant of the root. This example contains a CVC root with the glottal infix immediately following the root vowel, as in (252):

(252) $C_1VC_2 \rightarrow C_1VʔC_2$

As (252) illustrates, for CVC roots the glottal stop infix surfaces between the root vowel and the second consonant of the root. We find the following pattern, however, for CCVC roots:

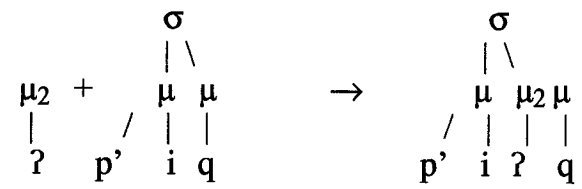
(253) $C_1C_2VC_3 \rightarrow C_1ʔC_2VC_3$

Instead of surfacing to the immediate right of the root vowel, as was the case with the CVC root in (252), the glottal stop infix appears between the first two consonants of the CCVC root in (253).

Willett and Czaykowska-Higgins (1995) and Czaykowska-Higgins and Willett (1997) have argued that this pattern can be accounted for within a theory of Prosodic Morphology (McCarthy and Prince 1986) following Bagemihl's (1991) analysis of syllable structure in Bella Coola (see section 4.4). Assuming a maximal CVC syllable with moraic licensing of unsyllabified segments, Willett and Czaykowska-Higgins and Czaykowska-Higgins and Willett argue that the glottal stop infix is positioned by insertion after the initial mora of the root.

Consider first the case of CVC roots. The following diagram illustrates how the positioning of the glottal stop infix is determined for the CVC root √p'iq 'ripen' (following Willett and Czaykowska-Higgins 1995 and Czaykowska-Higgins and Willett 1997):

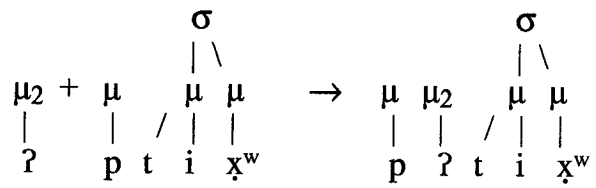
(254)



As the left-hand diagram in (254) indicates, the glottal inchoative marker is linked to a moraic unit marked for second position. Thus, the mora is inserted after the initial root mora and the glottal stop appears immediately following the root vowel (as the root vowel is linked to the initial mora of the root). As shown in the right-hand diagram in (254), the final root segment [q] is left unsyllabified. Willett and Czaykowska-Higgins, and Czaykowska-Higgins and Willett argue that this is not a problem for Nxaʔamxcin prosodic structure since, in the spirit of Bagemihl 1991, moraic linking is sufficient for a segment to be prosodically licensed.

Now consider the same process with a CCVC root. Since the moraic structure of this root shape differs from that of a CVC root, we might expect to find a different pattern with respect to glottal stop infixing. The diagram in (255) indicates that this is the case:

(255)



(255) illustrates glottal stop infixation for the root √ptix̣ʷ 'spit'. Again, the glottal stop is linked with a moraic unit that is marked to surface as the second mora of the root, as shown in the above diagram on the left. Because Nxaʔamxcin has a maximal syllable shape of CVC, the initial segment of a CCVC root is moraically licensed but remains unsyllabified. It is the mora linked to this segment that constitutes the initial mora of a CCVC root. Hence, the glottal stop is inserted immediately following the initial root consonant, surfacing between the first and second consonant of the root.

Note that in an example like (255), the surface form contains an epenthetic vowel preceding the glottal infix. With CCVC roots, the glottal stop is inserted in an unsyllabified position before the syllable onset. As noted in section 4.4, glottal stop patterns with resonants in Nxa?amxcin in that it must be syllabified. Unlike the resonants, however, glottal stop is never itself syllabic. Instead, an epenthetic vowel is inserted to allow for syllabification of the glottal. Thus, in examples like (255), an epenthetic vowel (usually realized as [a]) is inserted to the left of the glottal stop and the glottal stop is syllabified as the coda of the inserted nucleus, resulting in *pa?tiẋʷ*.

Infixing is clearly sensitive to the phonological structure of the root. The same can be said for the inchoative marker *-p*, which attaches only to the right edge of a root, as argued in section 3.3.2.2.[33] This is shown in the following example where the inchoative suffix surfaces between a root and a bound stem:

(256) kat'əl'**p**cín
kat-t'əl'-**p**=cin
POS-*tear*-IN=*mouth*
get a split lip (from being hit) JM4.7.9

The above example is a bound stem compound comprised of a root √t'əl' 'tear' and a bound stem =cin 'mouth'. Instead of surfacing to the right of the bound stem compound, the inchoative suffix is realized at the right edge of the root, indicating that this morphological spelling operation specifically targets the right edge of roots.

Inchoative constructions can be both monovalent and bivalent, as noted by Kinkade (1989b:118). The following examples illustrate intransitive predicates marked for inchoative aspect:

[33]Kinkade (1989b:117) points out that "with very few exceptions the only root types that occur (or have been found to occur) with 'inchoative' inflection are CVC. To be sure, this is the dominant (surface) root type in Columbian, although that alone is no reason for this limitation".

(257) st'aʔxmíx
s-t'ə•ʔ•x-mix
IM-*sweet*•IN•*sweet*-IM-(3AB)
It's getting sweet. W.10.183

(258) scləq'ʷpmíx ʔací nkʷkʷə́m' (sx̣ʷə́ƛ'm)
sc-ləq'ʷ-p-mix
IM-*break*-IN-IM-(3AB) DET *bowl* *plate*
The bowl is cracking.

It is clear that the above predicates are intransitive because both are marked imperfective by the prefix *s-/sc-* and the suffix *-mix*. These affixes are restricted to intransitive predicates only.

Inchoative stems can also be transitive, as shown in the following examples:

(259) łą̓ʔą̓t'núntlmn
łə̓•ʔ•t'-nun-nt-ulm-n
wet•IN•*wet*-LC-TR-2pO-1sS
I soaked you guys. 90.89

(260) swáll wa ʔaní scmaʔmíʔs t nq'ət'pnúnc
scmaʔmiʔ-s nq'ət'-p-nun-nt-si-s
whose WA DET *story*-3PS OBL *ʔ*-IN-LC-TR-2SO-3ER
Whose story was it that made you angry?

(261) cp'iʔqstús wa ʔałú ntitiyáx
c-p'i•ʔ•q-stu-s
IM-*cook*•IN•*cook*-TR-(3AB)-3ER WA DET *salmon*
He's making the salmon cook. 92.150

(262) ʔacsəlpstúxʷ
ʔac-səl-p-stu-xʷ
IM-*spin*-IN-TR-(3AB)-2sS
you've been spinning them Afl:7

The examples in (259) to (262) illustrate that Nxaʔamxcin predicates can be marked both inchoative and transitive.

There is evidence that inchoative marking can also cooccur with causative and applicative, as shown in (263) and (264):

(263) nya?ak'^{w}stúmx^{w} ta?
n-ya•?•k'^{w}-stu-m-x^{w}
POS-*cross*•IN•*cross*-CS-1SO-2SS + IMPS
take me across!

(264) stu?qxítms x̣əc'y'álq^{w}
s-tu•?•q-xit-min-s
IM-*throw to*•IN•APP-RL-(3AB)-3ER *sticks*
[throw some sticks over to them][34] AMtI:2

Example (263) contains a stem marked both inchoative and causative, while the predicate in (264) is marked both inchoative and applicative. I have no examples involving external possession. This is most likely a gap in the data.[35]

Nxa?amxcin makes use of inchoative aspect to indicate a change in state. This aspectual property is usually transparent in the English translations by the phrase 'get V-ed' or 'go A', as shown in the following examples:

(265) lút kisq'^{w}ú?c
kas-?in-s-q'^{w}u•?•c
NEG IR-2SPS-NM-*fat*•IN•*fat*
Don't get fat! W.10.40

(266) k^{w}a? t'íl' kk'í?t k'l stx^{w}úls
k-k'i•?•t stx^{w}ul-s
and MOD POS-*near*•IN•*near*-(3AB) LOC *house*-3PS
he's getting close to his house Jfl:4

(267) kn t'i?m
t'i•?•m
1SS + *lazy*•IN•*lazy*
I got lazy. 90.142

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[34]This example appears to be marked imperfective by the prefix *s-*, which is typically restricted to intransitives. One would expect the prefix *c-* to surface here instead.

[35]Kinkade (1989b:118) states that "(t)here are generally few restrictions on what can co-occur with 'inchoative', and it is found with a large variety of lexical, derivational, and inflectional affixes". One exception, he notes, is stative *-t* which appears only with inchoatives marked augmentative or plural. Inchoatives not marked augmentative or plural cannot cooccur with *-t*.

(268) kask'^{w}a?c'mix
kas-k'^{w}a•?•c'-mix
IR-*strong*•IN•*strong*-IM-(3AB)
he is going to get better SM4.76.8

(269) ?aní t kcqcəqúsntm
k-cəq•cəq=us-nt-m
DET OBL POS-AUG•*set upright=fire*-TR-(3AB)-1pS

l sciyátk^{w}p naluʔp
na-lu•?•p
LOC *fire* POS-*dry*•IN•*dry*-(3AB)

The pot that we put on the fire went dry. 92.250

(270) sn̓p
sn̓-p
gentle-IN-(3AB)
S/he got gentle. W.10.86

(271) q'^{w}aʔák katt'əlpcín
kat-t'əl'-p-cin
squawfish POS-*tear*-IN=*mouth*-(3AB)
Squawfish got his lip torn SfX:5

(272) t'íl' cyáʕ'p lx
c-yaʕ'-p
MOD POS-*gather*-IN-(3AB) + PL
they already got here Y32.60

Often, however, the speaker does not give any formal indication of the inchoative meaning when translating Nxa?amxcin examples into English. This is evidenced by the following constructions:

(273) k^{w}aʔ kkícs waʔ syáyaʔ
kkic-nt-s
and *find*-TR-(3AB)-3ER WA *serviceberry*

t'il' waʔ p'íʔq
p'i•?•q
MOD WA *ripen*•IN•*ripen*-(3AB)

and he found them serviceberries already ripe Pfl:1

(274) Sam nacút qíʔx^{w} wa ʔací tw'ít
qi•?•x^{w}
Sam *think*-(3AB) *stink*•IN•*stink*-(3AB) WA DET *boy*
Sam thinks the boy smells bad.

(275) wíkłc wa ʔaxá nasuʔk'ʷt ʔałú
wik-łt-s nasu•ʔ•k'ʷt
see-TR-(3AB)-3ER WA DET *float*•IN•*float*-(3AB) DET
she saw something floating CD.69

(276) kłk'ə́t'**p** ʔisnk'əmapúsxn
kł-k'ət'-**p** ʔin-snk'əmapusxn
POS-*cut*-IN-(3AB) 1SPS-*arm*
I lost an arm. (lit. My arm got cut off.) W.9.188

(277) ʔi kʷaʔ ḥáw'w'i t xχλ̓'cín waḥwaḥílx
ḥa•w'•w'y waḥ-waḥilx
and *make*•OC•*make*-(3AB) OBL *dog* AUG-*roar*-(3AB)
kʷaʔ k'úw**p**
k'əw-**p**
and *silent*-IN-(3AB)
and then [he] made like [a] dog roaring and then he was quiet SflX:5

(278) súk'ʷ**p**
səkʷ-**p**
swell-IN-(3AB)
It's swollen. 90.104

(279) łn̓**p**ákst
łn̓-**p**-akst
break-IN=*hand*
broken arm 89.09.21.65

(280) λ̓'éxʷ**p** lx
λ̓'əxʷ-**p**
dead(pl.)-IN-(3AB) + PL
[they're dead] JfI:8

(281) sct'əl'**p**míx ʔaxáʔ q'iy'míntn
sc-t'əl'-**p**-mix
IM-*tear*-IN-IM-(3AB) DET *paper*
This paper is tearing.

(282) t'ə́kʷ**p** ʔałuʔ snałúsmns xʷúʔiʔ... spə́łaʔ
t'əkʷ-**p** snałusmn-s xʷuw'iʔ
burst-IN-(3AB) DET *face*-3PS *fly*-(3AB) *Owl*
[her eyes popped out (and) Owl flew] PfI:13

(283) kastə́kʷ**p**ncás
kas-təkʷ-**p**-nt-sa-s
IR-*smother*-IN-TR-1SO-3ER
He's going to smother me. W.7.153

(284) sn̓**p**stúnn
sn̓-**p**-stu-nn
gentle-IN-CS-(3AB)-1SS
I tamed her/him. W.10.170

(285) sak^{w} lút k^{w} ḥáw'iym k^{w}a? tí? sak téx̣^{w}**p**stumn
sak ḥaw'y-m təx̣^{w}-**p**-stu-m-n
MOD NEG +2SS *work*-m *and* MOD MOD *stop*-IN-CS-2SO-1SS
If you're not working, I might just as well stop you. J.1.29

(286) k'^{w}ux^{w}**p**ntwás
k'^{w}ux^{w}-**p**-nt-wa-s
crawl-IN-TR-TO-(3AB)-3ER
Something crawled on him.

(287) ntər'q**p**ncút smiyáw
n-tər'q-**p**-ncut
POS-*kick*-IN-MD-(3AB) *coyote*
[Coyote really took off running] SflX:2

While cross-linguistic definitions of inchoative describe a change from one state to another (e.g. Bybee 1985, Smith 1997), it is clear from the following data that the Nxa?amxcin inchoative is not as restrictive:

(288) kn kasnpa?tx̣^{w}átk^{w}əx^{w}
kas-n-p•**?**•tix̣^{w}=atk^{w}-mix
1SS + IR-POS-*spit*•IN•*spit*=*water*-IM
I'm going to spit in the water. 95.135

(289) stu?qxítms x̣əc'y'álq^{w}
s-tu•**?**•q-xit-m-s
IM-*throw*•IN•*throw*-APP-1/2SO-3ER *sticks*
[They threw some sticks over to me/you.][36] AMtI:2

Both of the above examples involve non-stative predicates marked inchoative, indicating that a broader definition of inchoative is required here, one that includes the focusing on a change from one *event* to another. For example, in

[36]This form was glossed as 'throw over to them some sticks', but given the second paradigm object suffix *-m*, the goal argument should be interpreted as 1st/2nd person sg.

(289) the focus is probably on the change from 'not throwing sticks' to 'throwing sticks'.

The glottal infix, used to mark inchoative aspect on strong roots, raises an interesting question regarding the prosodic structure of roots. Kinkade (1989b:117) points out that reduplication processes on bases containing the infix *-ʔ-* show that *-ʔ-* is recognized as part of the root. Thus, in all cases where the word formation rules for C_2-out-of-control and CVC-augmentative take place on an inchoative base with the infix *-ʔ-*, the glottal stop is recognized as C_2.[37] This is illustrated in the following examples:

(290) scnaʔaʔq'míx
sc-nə•ʔ•ʔ•q'-mix
CT-*rotten*•OC•IN•*rotten*-IM-(3AB)
It's getting rotten. W.10.109

(291) kʷaʔ ʔałú qʷtúnt łu snk'íʕʷmn łuʔ syaʔaʔk'míx
s-ya•ʔ•ʔ•k'-mix
and DEM *big* SUB *church* SUB CT-*burn*•OC•IN•*burn*-IM-(3AB)
that big(gest) part of the church was burning
AnII:4

(292) łạʔłą́ʔt'xn
łẹʔ-łẹ•ʔ•t'=xn
AUG-*wet*•IN•*wet=foot*
wet feet Kinkade 1989b:117

(293) nx̣ʷuʔx̣ʷuʔscín
n-x̣ʷuʔ-x̣ʷu•ʔ•s=cin
LOC-AUG-*foam*•IN•*foam=mouth*
animal with foam around its mouth Kinkade 1989b:117

In all of the above examples, the roots have an inchoative infix inserted in C_2-position. In the C_2-reduplication forms in (290) and (291), the second consonant of the root is copied (section 3.3.2.1). It is clear that the inchoative infix *-ʔ-* is recognized as C_2 in these forms as the glottal stop is targeted for reduplication.

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[37]Since C_2-reduplication targets the same position as the inchoative marker *-ʔ-* without the same weakening effect on the root, I presume that it is some property of the glottal stop segment that has a weakening effect on the root vowel.

(292) and (293) are examples of CVC-reduplication in which the first syllable of a root is copied and suffixed onto the first root syllable (section 6.7.1). These examples also illustrate that the infix *-ʔ-* is recognized as part of the root.

Relevant data is not available to determine whether the inchoative marker *-p*, which is suffixed onto the right edge of the root, is also recognized as part of the root for the purposes of reduplication. An example of a CV or CCV root with inchoative *-p* undergoing C_2- or CVC-reduplication would have to be found. Roots of the shape CV and CCV are rare in Nxaʔamxcin, and thus the absence of relevant data is not unusual.

6.3.2.2 Developmental

The second inchoative type that appears in Nxaʔamxcin is the developmental. Kinkade 1989b is the only paper to date that discusses Nxaʔamxcin developmental aspect in any detail. The developmental is marked by the suffix *-wil'x*. Most of the examples I have containing the developmental marker involve intransitive predicates, as in (294) to (300):

(294) t'əɬ**wîl'x**
t'əɬ-**wil'x**
dirty-**DV**-(3AB)
something used until it got too dirty — EP2.22.3

(295) tam-**wîl'x**
ʔ-**DV**-(3AB)
something disappears — Kinkade 1989b:115

(296) wəsxn=alqʷ-**wil'x**
wisxn=alqʷ-**wil'x**
long=pole-**DV**-(3AB)
he's getting tall — Kinkade 1989b:115

(297) pəx̣ʷx̣ʷ-**wîl'x**
puꞏx̣ʷꞏx̣ʷ-**wil'x**
*leave*ꞏOCꞏ*leave*-**DV**-(3AB)
they're scattering — Kinkade 1989b:115

(298) k'ʷac'k'ac't**wîlx**
k'ʷac'-k'ʷac'-t-**wil'x**
strong-ADJ-ADJ-**DV**-(3AB)
[s/he got stronger after a sickness] — JM3.73.3

(299) kn kasq^{w}ayq^{w}aytwîl'xux^{w}
kas-q^{w}ay-q^{w}ay-t-**wil'x**-mix
1sS + IR-*rich*-ADJ-ADJ-**DV**-IM
I am going to get rich MDK

(300) sq^{w}ən'q^{w}ən'twîl'xux^{w}
s-q^{w}ən'-q^{w}ən'-t-**wil'x**-mix
IM-*poor*-ADJ-ADJ-**DV**-IM-(3AB)
[s/he is getting poor] MDK

The example in (299) is clearly intransitive as the subject is marked by a clitic as opposed to a suffix. Both (299) and (300) are marked for continuative and imperfective aspect by the prefix *s-* and the suffix *-mix*, respectively, which are restricted to intransitive predicates.

I have found two examples in the data which indicate that stems marked for developmental aspect can be bivalent. Both examples, given below, involve causative-marked predicates:

(301) k'stwîl'xsn
k'əs-t-**wil'x**-stu-n
bad-ST-**DV**-CS-(3AB)-1sS
[I ruined something] Y15.153

(302) x̣stwîl'xstms
x̣əs-t-**wil'x**-stu-m-s
good-ST-**DV**-CS-1sO-3ER
he healed me Y.15.76

Both of the above forms are clearly bivalent in that the subjects are marked by suffixes as opposed to clitics. Example (302) also contains overt object marking.

At this point I am unable to give a definitive description that distinguishes the developmental from the inchoative; however, a number of observations can be made. First, Kinkade (1989b:114) indicates that "[a]vailable data do not yield a clear picture of the exact difference between 'inchoative' and developmental', although the latter seems to emphasize the ongoing nature of the activity more than the former". The translations given for the following examples reflect Kinkade's observation:

(303) t'íl' q^{w}ətntwîl'x ʔací x̣ɬ'cín
q^{w}tun-t-**wil'x**
MOD *big*-ST-**DV**-(3AB) DET *horse*
that horse is getting big MDK

(304) sck'əstwîl'xəx^{w}
sc-k'əs-t-**wil'x**-mix
IM-*bad*-ST-**DV**-IM-(3AB)
it is spoiling Y29.123

(305) kasx̣əstwîl'xəx^{w}
kas-x̣əs-t-**wil'x**-mix
IR-*good*-ST-**DV**-IM-(3AB)
s/he is going to get better TG.4.74.3

(306) sc'əɬtwîlxəx^{w}
s-c'əɬ-t-**wil'x**-mix
IM-*cold*-ST-**DV**-IM-(3AB)
it's turning cold

The above translations suggest that a [+ durative] feature is associated with developmental aspect. Such a feature seems incompatible with some inchoative forms in Nxaʔamxcin, such as (307) and (308) repeated below:

(307) ntər'q**p**ncút smiyáw
n-tər'q-**p**-ncut
LOC-*kick*-**IN**-MD-(3AB) *coyote*
[Coyote really took off running] SflX:2

(308) kn kasnpaʔtx̣^{w}átk^{w}əx^{w}
kaɬ-s-n-p•ʔ•tix̣^{w}=atk^{w}-mix
1sS + IR-CT-LOC-*spit*•**IN**•*spit=water*-IM
I'm going to spit in the water. 95.135

Another interesting distinction between the developmental and the inchoative is that the developmental often cooccurs with predicates marked for stative aspect, as in (309) to (311):

(309) s̓ən-s̓ən-t-**wîl'x**
tame-AUG-ST-**DV**-(3AB)
he got gentle Kinkade 1989b:114

(310) p-paw'-t-**wîl'x**
DM-*light(weight)*-ST-**DV**-(3AB)
it's getting lighter Kinkade 1989b:115

(311) t'-t'aym-t-**wîl'x**
DM-*?*-ST-**DV**-(3AB)
it's getting weak[38] Kinkade 1989b:115

As Kinkade (1989b:118) points out, the inchoative (at least for singular predicates) never cooccurs with the stative marker.

Finally, one example given in Kinkade 1989b suggests that both developmental and inchoative categories can cooccur:

(312) t'ə̓ṣ-**p-wîl'x**
hard-**IN-DV**-(3AB)
it's getting hard Kinkade 1989b:114

Kinkade (p.114) states that the developmental marker can "both contrast with and co-occur with the other marker [*-p* suffix]"[39]. The above example is the only case I have seen where both cooccur, however my data set is limited.

6.3.3 Habitual

In her cross-linguistic study of aspect, Smith (1997:33) writes that "[h]abitual predicates present a pattern of events, rather than a specific situation, and denote a state that holds consistently over an interval". Comrie (1976:27–28) describes habitual aspect as follows:

> The feature that is common to all habituals [...] is that they describe a situation which is characteristic of an extended period of time, so extended in fact that the situation referred to is viewed not as an incidental property of the moment but, precisely, as a characteristic feature of a whole period.

What has been labelled habitual in the Salish literature is somewhat of a misnomer when applied to Nxaʔamxcin given the above description of habitual

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[38]The unglossed stem in this example might be *t'ayəm'*, which is glossed 'easy' in Czaykowska-Higgins' root files.

[39]I assume from the context that the "other marker" Kinkade is referring to here is the *-p* suffix.

aspect. This operation, marked by the suffix *-ul*, indicates that a particular action or state is common to, or typical of, a certain individual. This operation might best be labelled 'characteristic', however this label has been traditionally used in another context in the Salish literature (see Czaykowska-Higgins 1993c). I will preserve the label habitual here, noting that its function does not necessarily coincide with the term as applied cross-linguistically. Some examples are as follows:

(313) puʔkʷanmúl
pu?=kʷnam-**ul**
spouse=grab-**HB**-(3AB)
He took off with s.o. else's wife. W.4.71

(314) ptptx̣ʷmúl
pt-ptix̣ʷm-**ul**
AUG-*spit*-**HB**-(3AB)
[s/he is constantly spitting] 90.106

(315) ḥimḥimtúl ʔací xəxál'aʔ
ḥim-ḥim-t-**ul**
angry-ADJ-ADJ-**HB**-(3AB) DET *baby*
That baby is always getting angry.

The above examples involve monovalent stems marked for habitual aspect. The only bivalent stem I have seen in the data is actually a surface intransitive, shown in (316):

(316) wəkʷwakʷmnctúl
wəkʷ-wakʷm-nt-cut-**ul**
AUG-*hide*-TR-RF-**HB**-(3AB)
S/he's always hiding. W.7.323

The predicate is marked transitive in (316), but the subsequent reflexive marking results in an intransitive predicate.

The habitual forms in (313) to (316) clearly have a predicative function. Many habitual forms, however, have a nominal interpretation as evidenced from the translations provided by the speakers. Some examples are given below:

(317) q'ilq'ilt**úl**
q'il-q'il-t-**ul**
sick-ADJ-ADJ-**HB**
s.o. who is constantly ill 89.132

(318) ḷəmḷəmm**úl**
ləm-ləmm-**ul**
AUG-*steal*-**HB**
thief 90.N137

(319) tkay'm**úl**
tkay'm-**ul**
urinate-**HB**
pisser 90.190

(320) pəlpúltm**úl**
pəlpultm-**ul**
dream-**HB**
s.o. who dreams a lot 90.(N)205

(321) suwsawm**úl**
səw-sawm-**ul**
AUG-*ask*-**HB**
s.o. always asking questions W.7.65

(322) ləx^{w}ləx^{w}cnm**úl**
ləx^{w}-lax^{w}cinm-**ul**
AUG-*cry*-**HB**
cry-baby W.7.246

(323) ʔiɬʔiɬn**úl**
ʔiɬ•ʔiɬ•n-**ul**
eat•AUG•*eat*-**HB**
s.o. who likes to eat 95.186

(324) ʔitʔitx**úl**
ʔit•ʔit•x-**ul**
sleep•AUG•*sleep*-**HB**
sleepy-head W.2.83

(325) ʔiyʔayʔcn'**úl**
ʔəy'-ʔay'=cin-**ul**
AUG-*?=mouth*-**HB**
someone always answering back W.7.260

(326) xəƛ'xəƛ'p**úl**
xəƛ'-xəƛ'p-**ul**
AUG-*lose*-**HB**
loser W.9.190

(327) kɬƛ'aʔƛ'aʔanm**úl**
kɬ•ƛ'aʔ•ƛ'aʔanm-**ul**
jealous•AUG•*jealous*-**HB**
jealous-hearted person W.7.271

When presented with habitual examples, one speaker provided dual translations, one nominal and one predicative.

(328) a. t'iyt'iym**úl**
t'iy-t'iym-**ul**
AUG-*don't want to*-**HB**-(3AB)
someone who is lazy

b. t'iyt'iym**úl** ʔacî sqəl'tmíx^{w}
t'iy-t'iym-**ul**
AUG-*don't want to*-**HB**-(3AB) DET *man*
That man is lazy.

(329) x̣^{w}əq'^{w}x̣^{w}əq'^{w}m**úl**
x̣^{w}əq'^{w}-x̣əq'^{w}m-**ul**
AUG-*snore*-**HB**-(3AB)
someone who snores a lot
He snores a lot.

(330) məx^{w}məx^{w}t**úl**
məx^{w}-məx^{w}t-**ul**
AUG-*laugh*-**HB**-(3AB)
someone who laughs a lot
He laughs a lot.

Note that most of the above habitual forms are also marked augmentative.[40] Predicates involving some kind of repetition are generally marked augmentative in Nxaʔamxcin (section 6.7.1). In addition, many of the above habitual forms are based on *m*-stems, as discussed in section 3.5.5, indicating that habitual aspect marking often selects the *m*-stem form of a lexeme.

[40]This is also noted by Thompson and Thompson (1992:97) for habitual forms in the Thompson language.

6.3.4 Repetitive

Repetitive aspect involves multiple occurrences of the same event and is marked in two ways in Nxa?amxcin, depending on the shape of the root. For CVC roots, the vowel [a] is prefixed to the root, preceded by a copy of the initial root consonant. This is schematized in (331):

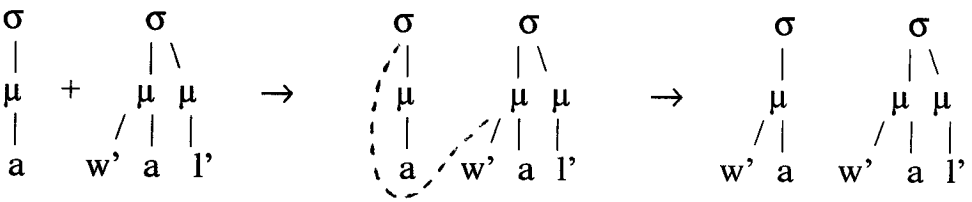
(331) $C_1VC_2 \quad \rightarrow \quad C_1aC_1VC_2$

For CCVC root shapes, an [a] vowel is inserted between the first and second consonant of the root, as schematized in (332):

(332) $C_1C_2VC_3 \quad \rightarrow \quad C_1aC_2VC_3$

Willett and Czaykowska-Higgins (1995) and Czaykowska-Higgins and Willett (1997) analyze the above facts following Bates and Carlson's (1992) analysis of repetitive marking in Spokane.[41] The repetitive morpheme is analyzed as a monomoraic syllable with the vowel [a] linked to the syllable nucleus. This syllable is attached to the left edge of the root's prosodic structure, resulting in one of two separate outcomes. The diagrams in (333) illustrate the CVC root √w'al' 'tilt' being marked for repetitive aspect, resulting in *w'aw'ál'* 'rock':

(333)



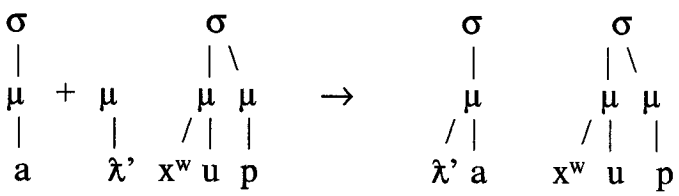
The leftmost diagram in (333) indicates that repetitive aspect is formed by the addition of a monomoraic syllable, with nuclear [a] vowel, to the left edge of the root's prosodic structure. As this added syllable has no predesignated onset, the features of the root-initial consonant spread to the onset position of the

[41] See also Bates and Carlson 1998.

monomoraic syllable, as shown in the middle diagram in (333). This results in a copy of the root-initial consonant surfacing in the empty coda position, illustrated in the rightmost diagram in (333).

A second possibility is given in (334) for the CCVC root √ƛ'x^{w}up 'win', resulting in the repetitive *ƛ'ax^{w}up* 'keep winning':

(334)



The lefthand diagram in (334) illustrates that a monomoraic syllable, with nuclear [a] vowel, is attached to the left edge of the CCVC root's prosodic structure. Again, the added syllable has no predesignated onset. In this case, however, there is an unsyllablified consonant at the left edge of the root available to fill this position. Thus, the root-initial consonant [ƛ'] surfaces as the onset of the monomoraic syllable followed by the [a] vowel, as shown in the righthand diagram.

Repetitive aspect marking can surface on both monovalent and bivalent stems. The following examples contain intransitive stems:

(335) s**y'ay**'ə́r'k'^{w}
s-**ya**-yərk'^{w}
IM-**RP**-*bend*
zig-zag[42] Y41.29

(336) sc**'a**ʔuk^{w}əx^{w} t sláp'
sc-**ʔa**-ʔuk^{w}-mix
IM-**RP**-*haul*-IM-(3AB) OBL *wood*
s/he is bringing in some wood Y33.26

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[42]I am assuming that this is a predicative form here; however the *s-* prefix could also be a nominalizer. I do not have the original source to check the context.

Both of the above examples are marked for repetitive aspect, and both involve intransitive (monovalent) predicates. Both (335) and (336) are marked continuative by the prefix *s-/sc-*, an operation that is restricted to intransitive predicates. Likewise, example (336) is marked imperfective by the suffix *-mix*, another suffix limited to intransitive stems.

Bivalent forms marked repetitive are available; however they are limited to transitive forms only. Consider the following examples:

(337) cúntx^{w} Mary la?ká ci **wa**wák^{w}n ?isqláw'
cut-nt-x^{w} **wa**-wak^{w}-nt-n ?in-sqlaw'
say-TR-(3AB)-2SS *Mary where* SUB **RP**-*hide*-TR-(3AB)-1SS 1SPS-*money*
You told Mary where I hid my money.

(338) c**?a**?ác'ẋsn
c-**?a**-?ac'ẋ-stu-n
IM-**RP**-*look at*-TR-(3AB)-1SS
I am watching her/him. MDK

Both examples (337) and (338) contain a transitive predicate marked for repetitive aspect. The predicate in (337) contains the transitivizer *-nt*, while the predicate in (338) contains the transitivizer *-stu* as required by the imperfective prefix. Whether or not causatives, applicatives or external possessor forms can be marked for repetitive aspect is not clear from the available data.

All of the repetitive examples in the data represent events that generally involve very fixed start and endpoints. There are no stative predicates marked for repetitive aspect.

(339) **ka**kícstms
ka-kic-stu-m-s
RP-*arrive*-TR-1SO-3ER
they came here [to see me] several times[43] EP4.55.5

[43]Since there is no imperfective marker in this example, one would expect the *-nt* transitive suffix to surface on this predicate. This does not appear to be a causative example; therefore it is unclear why the speaker chose the suffix *-stu*.

(340) **ła**ɬə́t'pn ʔací p'ə́k^{w}laʔ
ła-ɬət'p-nt-n
RP-*bounce*-TR-(3AB)-1SS DET *ball*
I bounced the ball.

(341) ƛ'**a**x^{w}úp
ƛ'•**a**•x^{w}up
win•**RP**•*win*-(3AB)
he kept on winning

(342) w'a-w'á•l'•l'
RP-*tilt*•OC•*tilt*
boat rocking in the wind Kinkade 1996a:192

(343) kat-waʔ-waẋ-m'-s
kat-waʔ-waẋ-min-nt-s
POS-**RP**-*step?*-RL-TR-(3AB)-3ER
he stepped back and forth over him[44] Kinkade 1996a:192

The examples above all suggest that Nxaʔamxcin repetitive aspect marks the successive repetition of a telic event. In the English translations, one finds that phrases such as 'back and forth' and 'several times' are used, which is indicative of successive repetition.

6.3.5 Iterative

Iterative aspect is marked by the suffix *-alwís* in Nxaʔamxcin. The interative should be distinguished from repetitive aspect in that both involve recurrences of the same event. We have suggested that repetitive aspect in Nxaʔamxcin signals the successive recurrence of a *telic* event. What has been labeled iterative aspect in Nxaʔamxcin (e.g. Kinkade and Mattina 1981) signals the successive recurrence of an *atelic* event in Nxaʔamxcin.

Iterative aspect, as defined by Payne (1997:241), "is where a punctual event takes place several times in succession". Bybee (1985:150) points out that iterative aspect "is only applicable to active verbs, and then only to certain types

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[44]I am not clear on why there is a glottal stop in this form. Kinkade (1996a:192) notes that "in at least two instances the added vowel is accompanied by a glottal stop". Kinkade provides only one example of this in his paper (shown in (343)).

of active verbs, i.e., those which describe telic events, events that have identifiable endings". Bybee's and Payne's definition of iterative, which one can assume to be widely applicable cross-linguistically, does not capture the facts for the category that has been glossed iterative for Nxa?amxcin (although I will again preserve the traditional Salish label). Such forms, as the following examples show, do not necessarily involve telic events. In fact, translations suggest that there is a very atelic sense involved:

(344) k'^{w}a?m**alwîs**
k'^{w}a?-m-**alwis**
bite-m-IT
[He's chewing. (lit: He's biting around.)]

(345) ləx^{w}cnm**alwîs**
lax^{w}cinm-**alwis**
cry-IT-(3AB)
S/he cried around.

(346) nk'ərm**alwîs** ʔací w'axtált
nak'ərm-**alwis**
swim-IT-(3AB) DET *child*
That child was swimming around.

(347) ƛ'u'sm**alwîs**
ƛ'a?=aw's-m-**alwis**
look for=middle-m-IT-(3AB)
s/he began to look around CD.27

(348) k^{w}a? c'c'al't**al'wîs**
c'-c'al'-t-**alwis**
and ?-*?*-ST-IT-(3AB)
then she began to wander around CD.37

(349) huy k^{w}a? xʷélp k^{w}a? c'əlt**alwîs** kiʕ'ána?
xʷəl-p c'əl-t-**alwis**
and *daylight*-IN-(3AB) *and* *stand*-ST-IT-(3AB) *girl*
and so it became daylight and the girl stood around CD.47

The tendency for various speakers to include the word 'around' in the above translations is suggestive of an undefined endpoint. Thus, while the aspectual operation labelled *iterative* in Nxa?amxcin clearly involves the successive repetition of an event, it appears that the event has an atelic interpretation. This

may be a major point of differentiation between repetitive aspect and iterative aspect in Nxaʔamxcin: the repetitive involving successive repetition of a telic event and the iterative involving the successive repetition of an atelic event.

Iterative aspect appears on both monovalent and bivalent stems. Consider the following intransitive stems:

(350) ʔascúst'm'n lut cxaʔánm kʷaʔ ʔackʷiym**al'wis**əxʷ
ʔac-cut-stu-m-n ʔac-kʷiym-**alwis**-mix
IM-*say*-TR-2SO-1SS NEG *?* *and* ʔac-*hunt*-**IT**-IM-(3AB)
I told you not to go in there to hunt around.[45]
CD.58

(351) kʷaʔ kn lxá cnuχ̣ʷ**talwis**
c-nuχ̣ʷt-**alwis**
and + 1SS *here* DIR-*walk*-**IT**
[and I am here walking around] AfII:4–5

The iterative form in (350) is clearly intransitive as the stem is marked imperfective by the suffix *-mix*, which appears only on intransitive predicates. In (351), the first person singular subject is marked by a clitic as opposed to a suffix, another indication of intransitivity.

The bivalent examples that I have involve transitives only, as shown in (352) and (353):

(352) t'ə**salwis**c
t'əs-**alwis**-nt-s
slap-**IT**-TR-(3AB)-3ER
S/he slapped her/him around.

(353) kx**palwis**n
kxap-**alwis**-nt-n
chase-**IT**-TR-(3AB)-1SS
I chased him around.

[45]The source of the first [s] segment in *ʔascúst'm'n* is unclear.

Both of the above interative-marked predicates are also marked transitive by the transitivizer *-nt* and contain suffixal subject marking, another indication of transitivity.

6.4 Control

While not the most common cross-linguistic term, the label *control* is pervasive in the Salish literature. Thompson (1979a, 1979b, 1985) was the first to identify and label the control vs. non-control distinction in Salish. From a morpheme-based perspective on word formation, Thompson claims (1979a:736) that "[a] category of control is fundamental to the entire predicative system of Salishan languages. Forms are obligatorily marked to indicate whether some agent is in control of the situation or not". Thompson (1985:398) maintains that roots are lexically marked either [+control] or [-control] in Salish languages, the majority of these being [-control]. In addition, a minority of affixes are marked [+control] and these, when combined with either [-control] or [+control] roots, result in forms where the agent is in control. There are also several affixes that Thompson considers to have the feature *limited control*, which subsume both notions of "doing something accidentally and accomplishing it with difficulty" (1985:393). These affixes create [-control] forms, regardless of the lexical "control" status of the root.

In this work, I adopt Thompson's claims in part. Thompson's notion that all roots and some operations are lexically marked for [+/-control] in Salish will not be addressed here, even though this analysis has clearly had an impact on Salish research, as seen in Saunders and Davis (1982), Davis and Saunders (1986), Howett (1993), among many others. Recent research has shed light on the possibility that many of the properties Thompson attributes to a category control can be accounted for through the interaction of a number of different factors, including argument structure and aspect (see, for example, Carlson 1996, Demirdache 1996 and H. Davis 1997b). However, Thompson's astute observation that certain morphemes (or in my terms, operations) should be analyzed in terms of limited control is essential to any analysis of Nxaʔamxcin word formation. It is this aspect of Thompson's (1979a, 1979b, 1985) work on

control that I address in this section. I discuss two operations that can be subsumed under the label control in the following subsections. The first of these is the reduplicative infixal operation *out-of-control*, and the second is the suffix *limited control*. The position of each of these in the derivational stem is indicated in below:

(355) ***Derivational Stem***

[DS NM DIR POS *ASP DIM* ***CTR*** *ASP*[LX (Y) √ROOT (Z)]LX *DIM* ASP **CTR** VC RL VAL VC NM]DS
⇑ ⇑

The leftmost control position represents the reduplicative infix often labelled C_2-reduplication in the literature. This is the out-of-control marker which operates from the left edge of the root and results in an infixed copy of the second consonant of the root. The rightmost control position represents the limited control suffix. Both of these operations indicate that an agent does not have full control over a situation.

6.4.1 Out-of-Control

Carlson and Thompson (1982) were the first to label this operation for Spokane and Thompson, and subsequent studies have shown that many other Salish languages, particularly in the interior, make use of this operation. The attention that has been paid to this operation in the Salish literature can generally be divided along descriptive and theoretical lines. Kinkade (1982c: Nxa?amxcin), van Eijk (1990a: various), and A. Mattina (1993: Colville-Okanagan) provide descriptive accounts of the out-of-control operation in one or more languages, while Carlson and Bates (1990: Spokane), Carlson (1996: Spokane), Demirdache (1996: Lillooet) and H. Davis (1997b: Lillooet) address out-of-control within some theoretical context (phonological for the first, semantic for the latter three). Kinkade's 1982c article is the first and only work devoted specifically to the out-of-control operation in Nxa?amxcin. In this section I elaborate on Kinkade's article by outlining previous prosodic work on

the formation of the out-of-control marker, and including further illustrative examples of the semantics involved in this operation, as outlined in Carlson and Thompson (1982) and Kinkade (1982c).

It has been widely noted in the literature on out-of-control that it is marked by some form of reduplication (Carslon and Thompson 1982, van Eijk 1990a). While the phonological specifics vary from language to language, out-of-control appears to be marked by the reduplication of a non-initial root consonant in languages employing this derivational operation. This is indeed the case for Nxa?amxcin as Kinkade (1982c) points out that Nxa?amxcin out-of-control forms are marked by reduplication of the second consonant of the root.

Roots marked for out-of-control reduplication are schematized in (356):

(356)

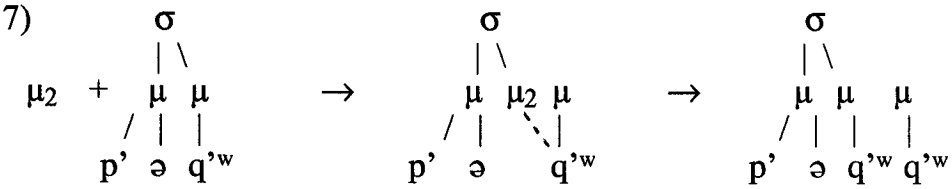
CVC Root	*CCVC Root*
$C_1VC_2 \rightarrow C_1VC_2C_2$	$C_1C_2VC_3 \rightarrow C_1C_2C_2VC_3$

The above diagram on the left illustrates that when a CVC root is marked out-of-control, the second consonant, which immediately follows the root vowel, is reduplicated. The diagram on the right in (356) shows a CCVC root marked out-of-control. This time it is not the consonant immediately following the root vowel that gets copied, but rather the consonant immediately preceding the root vowel, as it is also the second consonantal segment of the root. Kinkade (1982c:71) indicates that C_2-reduplication, or out-of-control reduplication, "is among the most productive morphological processes in Columbian".

In an unpublished paper, Czaykowska-Higgins (1992) outlined the first prosodic account of Nxa?amxcin C_2-reduplication, which was later followed by Willett and Czaykowska-Higgins (1995) and Czaykowska-Higgins and Willett (1997) within the framework of McCarthy and Prince's (1986) theory of prosodic morphology. Following Bagemihl (1991), who uses processes of reduplication as diagnostic tests for syllable structure in Bella Coola, Willett and Czaykowska-Higgins and Czaykowska-Higgins and Willett claim that (i) Nxa?amxcin has a maximal syllable shape of CVC and (ii) unsyllabified segments are licensed moraically, as outlined in section 4.4. Nxa?amxcin out-of-control forms,

previously discussed in section 3.3.2.1, are analyzed as follows. First, an empty mora is inserted after the initial mora of the root. This mora is featureless, thus features from the right adjacent segment spread to the empty mora resulting in identical adjacent segments. This is illustrated in (357) for the out-of-control form of the CVC root √p'əq'^{w} 'spill':

(357)



As the diagram on the left in (357) indicates, out-of-control marking is formed by the addition of an empty mora to the root's prosodic structure. This empty mora is inserted after the initial mora of the root (illustrated by the middle diagram in (357)), thus surfacing as the second mora from the right edge of the root. Features from the right adjacent consonant [q'^{w}] spread to the empty mora and, subsequently, a copy of the right adjacent segment [q'^{w}] is linked to the inserted mora, as shown in the right-hand diagram in (357).

The same process applies when a CCVC root is marked out-of-control. However, because the initial consonant of this root shape is moraically licensed and is therefore not subsumed under the root syllable's onset, the surface form looks remarkably different from that found in (357) as the reduplicated consonant appears left of the root vowel. This is illustrated in (358) for the out-of-control form of the root √ptix̣^{w} 'spit':

(358)

Again, as in (357), an empty mora is added to the prosodic structure of the root in (358) and is inserted after the initial mora of the root. Unlike (357), however, the

initial root mora in (358) is not part of the root syllable but is instead linked to an unsyllabified consonant for licensing purposes. The features of the right adjacent segment are again spread to the empty mora. This time, however, the adjacent segment is the onset of the root syllable. Thus, as shown in the diagram on the right in (358), the out-of-control reduplicative marker now surfaces to the left of the root syllable vowel.

Kinkade (1982c:66) points out that the out-of-control infix "usually does not [...] occur with a vowel, although in careful or slow pronunciation ə̲ often appears before the reduplicated consonant, and this may then take on coloring from surrounding consonants".[46] Schwas that surface between identical non-resonant and non-pharyngeal consonants are considered to be excresent schwas, as discussed in section 4.2. Some examples are given below:

(359) kcəkəká?st
k-cə•k•k=a?st
POS-*hit*•OC•*hit=rock*-(3AB)
[Somebody hit a rock (by throwing something).]

(360) la?ká? ci t'úcəc tw'ít
t'u•c•c
where SUB *fall*•OC•*fall*-(3AB) *boy*
Where did the boy fall down?

(361) cíɬu wəl lx st'əɬəɬálts
s-t'ə•ɬ•ɬ=alt-s
always COL +PL NM-*dirty*•OC•*dirty=child*-3PS
Their children are always getting dirty.

(362) sack'ásəsəxʷ lx ʔací wəl sccəmált
sac-k'a•s•s-mix
IM-*argue*•OC•*argue*-IM-(3AB) + PL DET COL *children*
Those children are angry with one another.

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[46]Kinkade (1982c) considers the reduplicated consonant to be the rightmost of the two. In the prosodic analysis presented here, the leftmost consonant of the two is analyzed as the out-of-control marker. Thus, any inserted vowel is viewed as *following* the reduplicated consonant as opposed to Kinkade's statement that it *precedes* the reduplicated consonant.

When the reduplicated consonant is a resonant, the resulting form often contains an unsyllabified resonant. As mentioned in section 1.3.5, resonants must be syllabified in Nxa?amxcin. In such cases either an epenthetic schwa is inserted, as in (363), or the resonant becomes syllabic, as in (364).

(363) cyərərix lx
c-yə•r•rix
c-*sit(pl.)*•OC•*sit(pl.)*-(3AB) + PL
They sat up.

(364) ʔacpə́n'n̩'
ʔac-pə•n'•n'
ʔac-*bend*•OC•*bend*-(3AB)
it bends W.9.181

These inserted schwas, whether excrescent or epenthetic, often take on features of the surrounding consonants, as shown in (365) and (366):

(365) wákʷukʷ
wa•kʷ•kʷ
hide•OC•*hide*-(3AB)
It's hidden. (e.g. sun going behind a cloud)

(366) sklíyiyəlqstxn
s-k-li•y•y=əlqs=xn
NM-POS-*stab*•OC•*stab=shin=foot*
sliver in shin 95.152

In the case of unsyllabified semi-vowels, the semi-vowel becomes vocalized and any glottal feature is realized as a full glottal stop, as shown in (367):

(367) kyə́w'uʔ
k-yə•w'•w'
POS-*untie*•OC•*untie*-(3AB)
it's unwinding off a reel Kinkade 1982c:66

Kinkade (1982c:66) notes that "[o]nly with a laryngeal consonant does a vowel regularly occur, and then it is a copy of the root vowel", as illustrated by the following example:

(368) ʔacwíʔiʔ
ʔac-wi•ʔ•ʔ
ʔac-*finish*•OC•*finish*
something you've finished Kinkade 1982c:66

Kinkade (1982c:66) indicates that "[r]eduplication of the second consonant of a root in Columbian Salish can be applied to both intransitive and transitive forms, and to forms with a great variety of other derivational and inflectional affixes". Examples (369) and (370) contain intransitive predicates marked out-of-control:

(369) kn kłwák^{w}uk^{w} tl' cníl
kł-wa•**k**^{w}•k^{w}
1sS + POS-*hide*•OC•*hide* LOC 3sEMpro
I'm out of sight from him now. W.8.112

(370) sp'ə**q**'^{w}q'^{w}míx
s-p'ə•**q**'^{w}•q'^{w}-mix
IM-*spill s.t. dry*•OC•*spill s.t. dry*-IM-(3AB)
it's spilling W.1.41

The root in (369), √wak^{w} 'hide', is marked out-of-control by the reduplication of the second root consonant [k^{w}]. It is clear that the predicate in (369) is intransitive because subject agreement is realized as the 1st sg. clitic *kn*, which is restricted to intransitive clauses. The root √p'əq'^{w} 'spill (s.t. dry)' in (370) is marked out-of-control by reduplication of the second root consonant [q'^{w}]. This is also an intransitive construction as the imperfective markers *s-* and *-mix* appear only on intransitive predicates.

The out-of-control marker also appears on stems that are subsequently marked transitive or causative, as shown in the following examples:

(371) t'əɬɬncáx^{w}
t'ə•ɬ•ɬ-nt-sa-x^{w}
dirty•OC•*dirty*-TR-1SO-2SS
You got me dirty. W.9.106

(372) wáy'way't ʔaci xƛ'út ɬuʔ kasyu**m**'m'stm
kas-yu•**m**'•m'-stu-m
up against DET *rock* SUB IR-*shake*•OC•*shake*-CS-PAS-(3AB)
The rock is very difficult to move. 92.396

Example (371) contains an out-of-control predicate marked transitive by the transitive suffix *-nt*, while example (372) contains an out-of-control predicate marked causative by the causative suffix *-stu* (and subsequently marked for passive voice). I do not have any examples of applicative or external possession predicates marked out-of-control which is most likely an accidental gap in the data.

The actual semantics involved with the out-of-control operation in Salish had remained relatively elusive until Carlson and Thompson's (1982) connection with the notion of control. They note (p.51) that "[s]imple translations often fail to give any indication of this important meaning, but inquiry into the situations in which the forms are appropriate yields a wide variety of circumstances generalizable as limitation or lack of control". Kinkade (1982c:71) states that for Nxaʔamxcin "[t]ranslations of forms with C_2-reduplication suggest a number of functions for the process, yet nearly all can be subsumed under the label "out-of-control" suggested by Carlson and Thompson". Carlson and Thompson report that out-of-control forms occur in a number of circumstances, outlined as follows.

First, many out-of-control forms in Spokane and Thompson indicate that an event took place by *accident*. In Nxaʔamxcin, speakers often make this clear in their English translations, although sometimes this meaning is clear just from the context or the nature of the predicate semantics. Some Nxaʔamxcin examples are given below:

(373) t'ə**q**^{w}q^{w}núntus
t'ə•**q**^{w}•q^{w}-nun-nt-wa-s
slap•OC•*slap*-LC-TR-TO-(3AB)-3ER
He slapped someone by accident. 91.155

(374) kn łá?a?t'
łą?•?•t'
1SS + *wet*•OC•*wet*-(3AB)
I got wet. W.10.14

(375) p'á**q**'^{w}q'^{w}
p'ə•**q**'^{w}•q'^{w}
spill s.t. dry•OC•*spill s.t. dry*-(3AB)
it got spilled, it spilled (accidentally) W.1.7

(376) lí**y**yxn
li•**y**•y=xn
stab•OC•*stab=foot*-(3AB)
He got a sliver in his foot. W.5.13

(377) kt**ə**qqna?núnn
k-tə•**q**•q=ana?-nun-nt-n
POS-*touch*•OC•*touch=all over*-LC-TR-(3AB)-1SS
[I accidentally put my hand on it and smeared it.] W.9.214

(378) wak^{w}n k^{w}a? səllmín
wak^{w}-nt-n sə•**l**•l-min-nt-n
hide-TR-(3AB)-1SS *and* *forget*•OC•*forget*-RL-TR-(3AB)-1SS
I hid it and I misplaced it. 89.09.27.102

(379) slə́pas nac**ə**kknúnn
na-cə•**k**•k-nun-nt-n
might POS-*hit by throwing*•OC•*hit by throwing*-LC-TR-(3AB)-1SS
I might hit something accidentally. 90.45

(380) wí**k**kənʔan
wi•**k**•k=anaʔ-nt-n
see•OC•*see=all over*-TR-(3AB)-1SS
I saw it by accident. JM3.163.4

(381) w'axtálţ ʔací niʔt'úcc l sciyátk^{w}p k^{w}aʔ cə́x̣p
niʔ-t'u•**c**•c
child DET POS-*fall*•OC•*fall*-(3AB) LOC *fire* *and burn*-(3AB)
That child fell/tripped into a fire and burned.

Spontaneous occurrences make up another subset of out-of-control forms in Spokane and Thompson. These are events that tend to happen suddenly

without any planning or foresight. Comparable examples are given below for Nxa?amxcin:

(382) ?ica kłwákʷkʷ wa skínt
kł-wa•**k**ʷ•kʷ
POS-*hide*•OC•*hide*-(3AB) WA *indian*
they all went out of sight those Indians CfI:3

(383) wi**k**knúnc
wi•**k**•k-nun-nt-sa-s
see•OC•*see*-LC-TR-1SO-3ER
Someone saw me - it just so happened. 91.14

(384) ?acyáʕ'ʕ'
?ac-ya•ʕ'•ʕ'
?ac-*gather*•OC•*gather*
gather WnI:1

(385) nłə**k'**ʷk'ʷmíncn
n-łə•**k'**ʷ•k'ʷ-min-nt-si-n
POS-*think of*•OC•*think of*-RL-TR-2SO-1SS
I thought of you. J.1.277

(386) scna?a?q'míx
sc-nə•**?**•?•q'-mix
IM-*rotten*•OC•IN•*rotten*-IM-(3AB)
it's rotting, it's getting rotten W.10.109

(387) kə́łəłm
kə•**ł**•ł-m
change•OC•*change*-MD-(3AB)
It changed (in appearance). W.8.97

(388) nt'ə**c**cátkʷ
n-t'ə•**c**•c=atkʷ
POS-*lie down*•OC•*lie down=water*-(3AB)
it settled in the water[47] 89.09.27.68

(389) c'á**l**'l'
c'a•**l**'•l'
shade•OC•*shade*
[get shaded] (e.g. sun goes down and valley is in shade) Y.30.81

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[47]I am not sure if the stress marking here is correct, cf. nat'úcəckʷ 'he fell in the water' 89.09.27.66.

(390) kalíxxk^{w}
kat-li•**x**•x=atk^{w}
POS-*lay down (pl.obj.)*•OC•*lay down(pl.obj.)*-(3AB)
they float (larger objects) JM3.189.10

(391) kícc
ki•**c**•c
arrive•OC•*arrive*-(3AB)
someone came EP4.61.4

(392) k'łc'músn Mary k^{w}a? naxáł
k'łc'əmus-nt-n
kiss-TR-(3AB)-1SS *Mary and afraid*-(3AB)
k^{w}a? tə**r**rq'^{w}
tə•**r**•rq'^{w}
and run away•OC•*run away*-(3AB)
I kissed Mary and she got scared and ran away.

(393) ?inłkáp xʷaʕxʷáʕʕ
?in-łkap xʷaʕ-xʷa•ʕ•ʕ
1SPS-*bucket* AUG-*hole*•OC•*hole*-(3AB)
My bucket has holes in it. W.7.14

Other events in which predicates are marked out-of-control in Spokane and Thompson involve *natural phenomena.* These often include weather- or nature-related events. Comparable examples are available in Nxa?amxcin, such as the following:

(394) ktaw'w'ána?
k-ta•**w'**•w'=ana?
POS-*rain*•OC•*rain=all over*-(3AB)
S/he got rained on. W.10.8

(395) t csyanmúsm kn cə**k**k
c-syanmusm cə•**k**•k
OBL c-*lightening* + 1SS *hit*•OC•*hit*
I was hit by lightning. 91.141

(396) kc'ə**x**^{w}x^{w}ána?
k-c'ə•**x**^{w}•x^{w}=ana?
POS-*spill*•OC•*spill=all over*
water falls from above and covers something

A fourth example of events that generally involve out-of-control marking is referred to by Carlson and Thompson (1982) as *lack of control*. They state (p.53) that out-of-control marking in Spokane and Thompson "emphasizes the lack of control an entity has in a situation". This pattern is illustrated in Nxa?amxcin by the following examples.

(397) ntiyyátk^{w}
n-ti•**y**•y=atk^{w}
POS-*roll*•OC•*roll=water*
rolled into the water SflX:2

(398) kspttíx̣^{w}əx^{w}
kas-p•**t**•tix̣^{w}-mix
IR-*spit*•OC•*spit*-IM
spitting a lot MDK

(399) łáqqlx
ła•**q**•qlx
sit(sg.)•OC•*sit(sg.)*-(3AB)
He sat down real fast. 89.09.26.64

(400) kasc'əx^{w}x^{w}míx
kas-c'ə•x^{w}•x^{w}-mix
IR-*spill*•OC•*spill*-IM-(3AB)
It is going to spill. TG4.64.2

(401) nap'ə́x̣^{w}x̣^{w}i?
nap'ə•x̣^{w}•x̣^{w}i?
cough up•OC•*cough up*
choke, cough up 95.198

A fifth example of possible situations in which a predicate could be marked out-of-control involves the *acts of others*. For Spokane and Thompson, Carlson and Thompson (1982:54) note that "[i]n a number of interesting cases speakers give explanations indicating that while a protagonist is not in control, the situation results from the action of some other person or entity". Some Nxa?amxcin examples are as follows:

(402) t'əɬt'əɬɬáksn
t'əɬ-t'ə•**ɬ**•ɬ=akst-nt-n
AUG-*dirty*•OC•*dirty=hand*-TR-(3AB)-1SS
I made his hands dirty. 90.75

(403) łáʔaʔt'ncáx^{w}
łạ•**ʔ**•ʔt'-nt-sa-x^{w}
wet•OC•*wet*-TR-1SO-2SS
You got me wet. W.10.15

(404) txƛ'ásq't ʔacx̣á**q'**q'
ʔac-x̣a•**q'**•q'
every day ʔac-*pay*•OC•*pay*-(3AB)
He gets paid every day. W.4.119

(405) tk'^{w}ínk'^{w}inx lx (ʔaní) ʔiskícc
t•k'^{w}in•k'^{w}inx ʔin-s-ki•**c**•c
how many•AUG•*howmany* + PL DET 1SPS-NM-*arrive*•OC•*arrive*
How many people visited you? 90.281

(406) np'ə**t'**t'álq^{w}pms
n-p'ə•**t'**•t'=alq^{w}p-min-nt-s
POS-*dump s.t. liquid/wet*•OC•*dump s.t. liquid/wet=throat*-RL-TR-(3AB)-3ER
it went into her mouth CfI:1

Finally, situations involving *effort and patience* are also marked out-of-control in Spokane and Thompson. Carlson and Thompson (1982:54) state that in such examples "the protagonist finally succeeded in accomplishing something, but only after much effort, fuss and bother, or a long wait". Nxaʔamxcin examples illustrative of this use of out-of-control include:

(407) t'əssnúntm
t'ə•**s**•s-nun-nt-m
slap•OC•*slap*-LC-TR-PAS-(3AB)
It finally got slapped. (e.g. a mosquito) 91.140

(408) wáy'way't ʔaci xƛ'út łuʔ kasyu**m'**m'stm
kas-yu•**m'**•m'-stu-m
up against DET *rock* SUB IR-*shake*•OC•*shake*-CS-PAS-(3AB)
The rock is very difficult to move. 92.396

(409) cəmál' ʔisx̣á**q'**q'
cmal' ʔin-s-x̣a•**q'**•q'
just now 1sPS-NM-*pay*•OC•*pay*
I just (now, finally) got paid. W.4.31

(410) n**ɬ**ə**k'**^{w}k'^{w}mínn
n-**ɬ**ə•**k'**^{w}•k'^{w}-min-nt-n
POS-*think of*•OC•*think of*-RL-TR-(3AB)-1SS
I'll think of it after a while. W.8.50

(411) t'ə**ɬɬ**núntlmn
t'ə•**ɬ**•ɬ-nun-nt-ulm-n
dirty•OC•*dirty*-LC-TR-2PO-1SS
I got you folks extra dirty. 90.79

(412) təx̣^{w}u**t**tnúnc
tx̣^{w}u•**t**•t-nun-nt-sa-s
leave•OC•*leave*-LC-TR-1SO-3ER
He finally got rid of me. 91.65

(413) q'aʔaʔmínn
q'a•**ʔ**•ʔ-min-nt-n
wedge into•OC•*wedge into*-RL-TR-(3AB)-1SS
it's too small for me (e.g. clothes) JM3.126.9

Kinkade (1982c) notes that out-of-control forms in Nxaʔamxcin are often glossed as "got X-ed", as many speakers sometimes provide this form in the English translation. This is not to be confused with inchoative forms which can also be glossed as "got X-ed".

Many of the above out-of-control examples are also marked for limited control. In the following section I address this dual marking.

6.4.2 Limited Control

The *limited control* operation is referred to as "success" by Kinkade (1982b:54) for Nxaʔamxcin and "emphatic noncontrol" by Carlson and Thompson (1982:56) for Spokane and Thompson. Kinkade (1982b:54) writes that limited control marking in Nxaʔamxcin signifies "'successful completion of an action' (often after much effort) or 'finally manage to do something' (sometimes accidentally)". Kinkade (1982b,c) indicates that limited control is marked by the suffix *-nun* in Nxaʔamxcin. I do not know if it can be absolutely

determined that the final [n] of the suffix *-nun* is present underlyingly. Given the phonological environments in which this suffix surfaces, the final [n] is almost always assured to be deleted as a result of regular phonological rules. However, I will follow Kinkade here in assuming that the underlying form is *-nun.*

This suffix is always followed by a valence-changing morpheme that marks bivalent stems, as shown in the following examples:

(414) xəs**núnt**m
xəs-**nun**-nt-m
lose-LC-TR-(3AB)-1PS
we lost him W9.14

(415) cxəs**nú**stms
c-xəs-**nun**-stu-m-s
IM-*lose*-LC-TR-1SO-3ER
they are missing me EP4.51.7

(416) k'^{w}u?ł**nú**łcn
k'^{w}u?ł-**nun**-łt-n
end-LC-APP-(3AB)-1SS
I used it up for you. 89.82

Examples (414) and (415) both contain predicates that are marked for valence by a transitive suffix. Example (416) contains a predicate marked for valence by the applicative suffix *-łt.* I do not have any examples of causative- or external possession-marked predicates that are also marked limited control. This is probably an accidental gap in the data.

Note that these bivalent stems can appear as surface intransitives, as shown in the following passive construction:

(417) ləx^{w}**pnún**tm ʔací smʔámm t sccəm'álts
ləx^{w}p-**nun**-nt-m sccəm'ált-s
get hurt-LC-TR-PAS-(3AB) DET *woman* OBL *children*-3PS
The woman was hurt by her children. (physically)

Translations indicate that limited control forms can be divided into several semantic groups. The first, as noted by Kinkade (1982c:54), involves "'successful completion of an action' (often after much effort)". Translations

tend to contain words like "finally" or "manage to". Some examples are given below:

(418) k'^{w}a?k'^{w}a?**núnn**
k'^{w}ə?-k'^{w}a?-**nun**-nt-n
AUG-*bite*-LC-TR-(3AB)-1SS
I finally chewed it. 89.99

(419) təx̣^{w}uttnúnc
tx̣^{w}u•t•t-**nun**-nt-sa-s
leave•OC•*leave*-LC-TR-1SO-3ER
He finally got rid of me. 91.65

(420) t'əssnúntm
t'ə•s•s-**nun**-nt-m
slap•OC•*slap*-LC-TR-PAS-(3AB)
It finally got slapped. (e.g. a mosquito) 91.140

(421) k'kəm'm'nús
k'łkə•m'•m'-**nun**-nt-s
win•OC•*win*-LC-TR-(3AB)-3ER
[He managed to win it.][48]

Translations in all of the above examples suggest that an event was accomplished with difficulty.

Other translations indicate that an event was unintentional and often contain words like "accidentally", as in the following examples:

(422) khəmhəmpákstmnúnn
k-həm-həmp=akst-min-**nun**-nt-n
POS-AUG-*fall=hand*-RL-LC-TR-(3AB)-1SS
I accidentally dropped it. EP4.41.1

(423) yərmnúntx^{w}
yərmin-**nun**-nt-x^{w}
push-LC-TR-(3AB)-2SS
You accidentally pushed him. EP4.35.5

---

[48]I am not sure of the morpheme divisions and glossing in this example. Instead of an out-of-control form, it could also be a predicate on which limited control is formed on the unergative stem *k'łkəm'əm* 'win' with the glottal feature of the [m'] segment spreading to the following [m].

(424) sləpas nacəkk**nún**
na-cə•k•k-**nun**-nt-n
might POS-*hit by throwing*•OC•*hit by throwing*-LC-TR-(3AB)-1SS
I might hit something accidentally. 90.45

(425) t'əq^{w}q^{w}**nún**tus
t'ə•q^{w}•q^{w}-**nun**-nt-wa-s
slap•OC•*slap*-LC-TR-TO-(3AB)-3ER
He slapped someone by accident. 91.155

(426) ktəqqna?**núnn**
k-tə•q•q=ana?-**nun**-nt-n
POS-*touch*•OC•*touch=all over*-LC-TR-(3AB)-1SS
[I accidentally put my hand on it and smeared it.] W.9.214

Limited control marking also surfaces when situations arise suddenly or by chance. Consider the following examples:

(427) mi**núnn** ?ací cə́np
min-**nun**-nt-n c'ən-p
rub-LC-TR-(3AB)-1SO DET *tremble*-IN
I felt something shake. / I felt a tremor.

(428) xəs**núnn**
xəs-**nun**-nt-n
lose-LC-TR-(3AB)-1SS
I discovered my loss. EP2.182.4

(429) wik**knúnc**
wi•k•k-**nun**-nt-sa-s
see•OC•*see*-LC-TR-1SO-3ER
Someone saw me - it just so happened. 91.14

The events in (427) to (429) all involve unplanned or unexpected situations.

The semantic features of the limited control operation are not always transparent in the English translations. Some examples from the data in which the semantic contribution of limited control to the clause is not overtly expressed are given below:

(430) swáll wa ʔaní scmaʔmíʔs t nq'ət'p**núnc**
nq'ət'-p-**nun**-nt-si-s
whose WA DET *story* OBL *?*-IN-LC-TR-2SO-3ER
Whose story was it that made you angry?

(431) nk'^{w}uł**núnn** ʔaní sáw'łk^{w}
n-k'^{w}uʔł-**nun**-nt-n
POS-*end*-LC-TR-(3AB)-1SS DET *water*
I used all the water. 92.331

(432) kasḥaw'iy**núnc** 1x kałyilmíx^{w}ms
kas-ḥaw'y-**nun**-nt-sa-s kał-yəlmix^{w}m-s
IR-*make*-LC-TR-1SO-3ER + PL IR-*chief*-3PS
they are going to make me their chief W7.87

As examples (419), (420), (424), (425), (426) and (429) indicate, the limited control operation often cooccurs with out-of-control. Carlson (1996:62) makes the same observation for limited control forms in Spokane (marked by the cognate *-nu*), illustrating the semantic distinctions with the following sets of examples from Spokane (using my own gloss abbreviations):

Spokane

(433) a. łuʔntén
łuʔ-nt-en
stab-TR-(3O)-1SS
I stabbed it/him/her.

b. łuʔnún
łuʔ-nu-nt-en
stab-LC-TR-(3O)-1SS
I managed to stab it/him/her.

c. łuʔʔnún
łuʔ•VC-nu-nt-en
stab•OC-LC-TR-(3O)-1SS
I managed to stab it/him/her by accident.

(434) a. łíqn
łiq-nt-en
wear out-TR-(3O)-1SS
I wore it out.

b. łqnún
łiq-nu-nt-en
wear out-LC-TR-(3O)-1SS
I kept wearing it and wore it out.

c. łqqnún
łiq•VC-nu-nt-en
wear out•OC-LC-TR-(3O)-1SS
I managed to wear out some fabric material by accident.

Carlson 1996:62

The limited control forms in the (b) and (c) examples above indicate that an event was accomplished with difficulty. The out-of-control operation in the (c) examples indicate that the event was accidental or unexpected. While translations for the Nxa?amxcin data involving both the limited control and out-of-control operations are not as revealing as those provided by Carlson, I expect further inquiry would reveal that the facts are parallel with those for Spokane, given the range of similarities described earlier.

Kinkade (1982c:54) mentions an intransitive limited control suffix, *-nwałn* which he notes does not appear very frequently in the data. He gives the following examples:[49]

(435) kn xəƛ'**pnwáłn**
xəƛ'-p-**nwałn**
1SS + *pile(?)*-IN-LC
I'm finished filling them.

(436) kn scmip**nwáłn**əx^{w}
sc-miyp-**nwałn**-mix
1SS + IM-*learn*-LC-IM
I'm learning about it.

[49]Kinkade provides semantically transitive glosses for the examples in (435) to (437); however note that the presence of the 1st sg. subject clitic *kn* in (435) and (436), and the imperfective markers *sc-* and *-mix* in (436) indicates that these forms are intransitive.

(437) wəlq'^{w}**nwáłn**
wəlq'^{w}-**nwałn**
swallow-LC-(3AB)
He accidentally swallowed it. Kinkade 1982c:54

These are the only three examples of this suffix that I have seen. Carlson (1996) provides examples of the cognate *-nwełn* for Spokane:

Spokane

(438) čnnč'č'**nwéłn**
čn-nič'•VC-**nwełn**
1sS-*cut*•OC-LC
(Even though the knife was dull) I was finally able to cut (with it).
Carlson 1996:66

(439) čn?eɬɬ**nwéłn**
čn-?iɬn•VC-**nwełn**
1sS-*eat*•OC-LC
I finally ate (although there were many people in line ahead of me and they didn't expect me to).
Carlson 1996:67

Carlson refers to this morpheme as a success "middle", but its use in Spokane ((438) and (439)) and Nxa?amxcin ((435) to (437)) seems more akin to an antipassive marker in that the forms, while surface intransitives, seem to be semantically transitive.[50] Carlson also discusses an intransitive success marker (*-el'*), but I know of no comparable operation in Nxa?amxcin.

Carlson's 1996 paper on Spokane is the most in-depth discussion of limited control in a Salish language to date. In his paper, Carlson focuses on the aspectual contribution of the limited control morpheme to a clause. Like Demirdache's (1996) and H. Davis's (1997b) work on out-of-control in Lillooet, Carlson also determines that there is a clear connection between control and aspect. He maintains for Spokane that limited control is a [+durative] operation

[50]The term "middle" is often used generically in the Salish literature, sometimes subsuming antipassive constructions.

"emphasizing the drawn-out process which leads to the outcome" (p.61). Further investigation is required to determine exactly what aspectual interactions are involved with Nxa?axmcin limited control forms.

6.5 Category-Changing

In section 5.1, I briefly discussed an ongoing question in Salish linguistics regarding lexical categories: Do Salish languages distinguish between the categories noun and verb? Discussion in the literature has generally centred on a noun-verb distinction, but of course the status of adjectives is equally relevant. As noted in section 5.1, I am assuming in this work that the categories noun, verb and adjective are distinguished at the lexical level in Nxa?amxcin, even though any of these three can serve a predicative function at the level of syntax. Having made this assumption, I now turn to the various category-changing operations in Nxa?amxcin that create nouns and adjectives, which are marked on the following derivational stem:

(440) ***Derivational Stem***

$$[_{DS}\ \mathbf{NM}\ \text{DIR POS}\ \textit{ASP}\ \textit{DIM}\ \textit{CTR}\ \textit{ASP}[_{LX}\ (Y)\ \sqrt{}\text{ROOT}\ (Z)\ ]_{LX}\ \textbf{\textit{DIM}}\ \textbf{ASP}\ \text{CTR VC RL VAL VC}\ \mathbf{NM}\ ]_{DS}$$

Both general and agentive nominalization are marked in the left most nominalizer position. Adjectival operations are marked by a combination of two morphological spelling operations. The first is suffixal CVC-reduplication, indicated by the rightmost DIM category in (440). This reduplicative process is also used to mark predicates augmentative, hence the label "dimension" in (440). The second involves suffixation to the right edge of the root, indicated by the right most ASP category in (440) as this is the same operation used to mark predicates stative. The right most nominalizer position indicates where instrumental nominalization is marked on the stem.

6.5.1 Nominalization

I discuss three types of nominalization here: (i) general nominalization, (ii) instrumental nominalization, and (iii) agentive nominalization. I also briefly consider whether locative prefixing plays a role in nominalization based on data containing the positional prefix *na-*.

6.5.1.1 General

Nxaʔamxcin lexemes of the verbal category can be turned into nominals by a process of *nominalization*. This category-changing operation is schematized in the following rule:

(441) ***Nominalization***

[+V] → [+N]

General nominalization is marked by the prefix *s-*, as shown in the following examples:[51]

(442) sʔiɬn
s-ʔiɬn
NM-*eat*
food, a meal — Kinkade 1981a:3

(443) sʔəḥʷaʔ
s-ʔəḥʷaʔ
NM-*cough*
a cold — Y9.176

(444) sptíx̣ʷ
s-ptix̣ʷ
NM-*spit*
spit — MDK

[51]Kinkade (1999) notes that *s-* is the nominalizing prefix in all Salish languages with the exception of Comox-Sliammon.

(445) ʔisq'ílt
ʔin-s-q'ilt
1sPS-NM-*sick*
my illness 92.63

(446) sləmaχ̣χ̂'cín
s-l̓ə̓m-aɬ-χ̣χ̂'cin
NM-*steal*-CN-*horse*
a stolen horse Y8.112

(447) słənpáḳsts
s-ɬə̓np=akst-s
NM-*break*=*hand*-3PS
her/his broken hand 90.280

All of the above examples in (442) to (445) contain a verb that has been prefixed with the nominalizer marker *s-*. Example (446) contains the predicate compound *l̓ə̓maχ̣χ̂'cin* 'steal a horse' which is subsequently nominalized to 'a stolen horse'. The bound stem predicate compound in (447), *l̓ə̓npákst* 'break a hand' is subsequently marked for nominalization then possession, resulting in 'her/his broken hand'. All of the above forms are surface nouns in the syntax. This is evidenced by the possessive marking in (445) and (447).

Many nominal constructions in Nxaʔamxcin have been lexicalized. Even though an [s] appears in initial position, these forms are not morphologically divisible from a synchronic perspective. Some examples are given in (448) to (451):

(448) sʕʷáʔʕʷaʔ
cougar 89.09.21.20

(449) sq'únɬq
vegetable 89.25

(450) st'kákst
a cane 90.12

(451) stxʷúl
house 90.64

While the *s-* prefix marks a general nominalizing operation, it is of interest to note that this prefix often cooccurs with other, more specific, markers of nominalization, as noted in the following subsections.

6.5.1.2 Instrumental

The difference between the general nominalizing operation and the *instrumental nominalizing* operation is that the latter results in some type of instrument based on the semantics of the predicate, as schematized in (452):

(452) ***Instrumental Nominalization***

$$[+V] \rightarrow [+N]_{Instr}$$

Instrumental nominalization is marked by the suffixes *-min* and *-tn*, which appear either separately or together, with *-min* always immediately preceding *-tn* if the two cooccur.[52] Based on the examples I have collected from the data, it appears that the most frequent of these combinations is the suffix *-tn* alone, as shown in the following examples:

(453) snaʔiɬn**tn**
s-na-ʔiɬn-**tn**
NM-POS-*eat*-INS
dishes EP2.80.8

(454) snacíʕʷlx**tn**
s-na-ciʕʷlx-**tn**
NM-POS-*bathe*-INS
bathtub Y6.233

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[52]Following Kuipers (1976) and Kinkade (1998b), both of these suffixes appear to have originated as lexical suffixes and subsequently developed into derivational markers. Both Kuipers and Kinkade indicate the Proto-Salish form of *-min* is *=min 'implement', while Kuipers gives the Proto-Salish form of *-tn* as *=ti/an and Kinkade as *=tn, *=tən 'implement, place'.

(455) sntk'íwlx**tn**
s-n-t-k'iwlx-**tn**
NM-POS-POS-*climb*-INS
stairway Y8.76
ladder Y14.241

(456) snwwáwlx**tn**
s-n-wwawlx-**tn**
NM-POS-*speak*-INS
a language EP2.40.8

(457) snamán'x^{w}**tn**
s-na-man'x^{w}-**tn**
NM-POS-*smoke*-INS
pipe JM3.87.7

(458) ʔac'ɻ̣ncú**tn**
ʔac'ɻ̣-nt-cut-**tn**
look at-TR-RF-INS
mirror, looking glass MDK

(459) nqə́skn'cú**tn**
n-qəs=ikn-nt-cut-**tn**
POS-*scratch=back*-TR-RF-INS
back-scratcher W4.123

(460) sləɻ̣^{w}átk^{w}**tn**
s-ləɻ̣^{w}=atk^{w}-**tn**
NM-*boil=water*-INS
something to boil food in; a pot Y11.45

(461) katx^{w}k'^{w}lú**ptn**
kat-x^{w}uk'^{w}=lup-**tn**
POS-*clean=floor*-INS
a broom Y11.169

(462) kac'aw'lú**ptn**
kat-c'aw'=lup-**tn**
POS-*wash=floor*-INS
a mop Y29.21

(463) ʔaq'^{w}**sn**
ʔaq'^{w}=us-**tn**
scrape=face-INS
razor; shaving tools Y9.140

(464) snac'áw'**sn**
s-na-c'aw'=us-**tn**
NM-POS-*wash=face*-INS
basin Y8.150

(465) yaʕ'm'ást'íyaʔ**tn**
yaʕ'm-ał-st'iyaʔ-**tn**
gather-CN-*hay*-**INS**
hay-rake JM3.172.1

All of the above examples contain verbs marked for instrumental nominalization by the suffix *-tn*, including some bound stem compounds in (459) to (464), and the free stem compound in (465). Verbs marked by *-tn* surface as instrumental nominals. Note that half of the above nominals are also marked by the prefix *s-*, a general marker of nominalization.

Instrumental nominalization can also be marked by the suffix *-min*, although less commonly according to the available data. Some examples are given below:

(466) snpatíx̣ʷ**mn**
s-n-p•a•tix̣ʷ-**min**
NM-POS-*spit*•RP•*spit*-**INS**
spittoon 90.41

(467) múl**mn**
mul-min
dip-**INS**
dipnet Kinkade 1981a:23

Both of the above examples involve verbs marked as instrumental nominals by the suffix *-min*. Note that (466) also contains the prefix *s-*, the general marker of nominalization.

The suffixes *-min* and *-tn* often surface together to mark instrumental nominals, as in the following examples:

(468) t'əm**mintn**
t'əm'-**min-tn**
cut-**INS-INS**
a saw 92.207

(469) ḥac**mîntn**
ḥac-**min-tn**
tie-INS-INS
rope 92.38

(470) snw'alq'^{w}**mîntn**
s-n-wəlq'^{w}-**min-tn**
NM-POS-*swallow*-INS-INS
windpipe Y5.45

(471) ḥaw'iy**mîntn**
ḥaw'y-**min-tn**
make-INS-INS
tool Kinkade 1981a:9

The above examples all contain verbs that have been marked for instrument nominalization by both suffixes *-min* and *-tn*. As shown in the above examples, the suffix *-min* always precedes *-tn*.

Several examples of instrumental nominals are recorded in the data marked obligatorily by *-min* and optionally by *-tn*.

(472) naʔaʔúk^{w}**mn(tn)**
na-ʔa-ʔuk^{w}-**min-(tn)**
POS-RP-*haul*-INS-(INS)
truck; freight wagon Y30.112

(473) łəx^{w}**mîn(tn)**
łəx^{w}-**min-(tn)**
sew-INS-(INS)
thread Kinkade 1981a:20

Examples (472) and (473) allow for an optional *-tn* suffix, while the instrumental nominalizer *-min* is obligatory.

6.5.1.3 Agentive

Another type of nominalization in Nxaʔamxcin is *agentive nominalization*. This operation involves the nominalization of a predicate with an agentive interpretation of the resulting nominal, as schematized in (474):

(474) ***Agentive Nominalization***

$$[+V] \rightarrow [+N]_{Ag}$$

Agentive nominalization is marked by the prefix *sx^{w}s-*. Diachronically, this form probably contains a lexical prefix (bound stem) *sx^{w}=*. A. Mattina (1987) provides lexical prefix cognates in other Southern Interior and Central Salish languages, noting similarities in form with the Colville predicate *sux^{w}-m* 'know, recognize a person'. Assuming *sx^{w}=* was a lexical prefix in Nxa?amxcin, it is clear from the examples in the data that it now marks a grammatical function only. The form *sx^{w}-* is followed by the nominalizer marker *s-*, and I analyze these as a single prefix here since agentive nominalization is consistently marked by both. Some examples of agentive nominalization are given below:

(475) **sx^{w}əs**məryámm
sx^{w}əs-məryam-m
AG-*medicine*-m
doctor[53]

(476) **sx^{w}s**ƛ'x^{w}úp
sx^{w}əs-ƛ'x^{w}up
AG-*win*
winner 90.49

(477) **sx^{w}əs**m'am'áy'am'
sx^{w}əs-m'am'ay'am'
AG-*teach*
teacher[54]

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[53]This form is recorded as *sx^{w}məryáməm* in Kinkade 1981a:64 but is always transcribed with *sx^{w}s-* in my own field notes.

[54]The verb in this example is most likely lexicalized, although I am not certain. It appears to be comprised of the stem *máya?* 'to tell' with the second vowel and glottal deleted while the glottalization feature is transfered to [y]. The stem contains repetitive prefixing, *ma-*, and the suffix *-m*. The glottal feature is subsequently spread to the remaining consonants.

(478) **sx^{w}**sḥaw'iyáłx^{w}m
sx^{w}əs-ḥaw'y=ałx^{w}-m
AG-*build=house*-m
carpenter Y10.139,140

In each of the above examples, a verb has been marked for agentive nominalization by the prefix *sx^{w}s-*. The resulting nominal is an agent of the activity expressed by the verb.

6.5.1.4 Locative Prefixing

It is unclear at this point if locative prefixing (section 6.6) plays a role in marking category-changing operations in Nxa?amxcin. It does appear, at the very least, that the positional prefix *na-/n-* marks a semantic contribution to nominalized stems that goes beyond its general usage. Consider the following examples:

(479) s**n**k'íʕ^{w}mn
s-**n**-k'iʕ^{w}-min
NM-**POS**-*pray*-INS
church J3.47

(480) s**n**miyapmínctn
s-**n**-miyapminct-tn
NM-**POS**-*confess*-INS
confessional (in church), place to confess EP2.148.1

(481) s**n**q'iy'míntn
s-**n**-q'iy'-min-tn
NM-**POS**-*write*-INS-INS
school Kinkade 1981a:29

(483) s**n**ʔəłnmáx̣ƛ'cíntn
s-**n**-ʔiłn-m-ał-x̣ƛ'cin-tn
NM-**POS**-*eat*-AP-CN-*horse*-INS
barn; manger Y40.232

(484) s**n**wəlq'^{w}tk^{w}max̣ƛ'cíntn (púks)
s-**n**-wəlq'^{w}=atk^{w}-m-ał-x̣ƛ'cin-tn
NM-**POS**-*swallow=water*-m-CN-*horse*-INS *box*
water-box; water trough Y40.226

(485) snx̣əl'x̣əl'q'áɬqʷísptn
s-**n**-x̣əl-x̣əlq'-aɬ-qʷisp-tn
NM-**POS**-AUG-*kill*-CN-*cow*-INS
slaughter-house Y17.114

All of the above examples contain nominalized predicates marked with the positional prefix *na-/n-*. The usual semantic notion associated with this prefix, 'into, onto', appears to be substituted by the notion of 'place where', e.g. 'church' = 'place where people pray' (example (479)). Note that all of the examples in (479) to (485) contain the nominalizer marker *s-* along with an instrumental marker *-min* or *-tn*.

6.5.2 Adjectival

There are numerous examples in the Nxaʔamxcin data of verbs that have undergone category-changing operations resulting in adjectives.[55] This is schematized as follows:

(486) ***Adjective Formation***

[+V] → [+A]

There are two separate phonological processes involved in this operation. First, the initial syllable of the root is copied, and the copied syllable is suffixed

[55]While I am assuming here that adjectives are a distinct lexical category in Nxaʔamxcin, note that Beck (2002) argues Salish languages do not distinguish adjectives as a separate class.

onto the initial root syllable.[56] This is the same operation used to mark a subset of augmentatives. The prosodic features of this operation are discussed in detail in section 6.7.1. The second phonological process takes place at the right edge of the phonological root where the suffix *-t* is realized. This is the same suffix that marks stative aspect on predicates (section 6.3.1). Consider the following examples:

(487) c'ál'**c'al't**
c'al'-**c'al'-t**
shade-**ADJ-ADJ**
shady EP2.60.1

(488) k'^{w}ác'**k'^{w}àc't**
k'^{w}ac'-**k'^{w}ac'-t**
get well-**ADJ-ADJ**
strong 64.65

(489) q^{w}áy**q^{w}ayt**
q^{w}ay-**q^{w}ay-t**
rich-**ADJ-ADJ**
rich 89.09.21.59

(490) x^{w}áƛ'**x^{w}aƛ't**
x^{w}áƛ'-**x^{w}aƛ'-t**
alive-**ADJ-ADJ**
lively 89.137

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[56]This reduplicative process, which is labelled 'characteristic' in the literature (e.g. Czaykowska-Higgins 1993c), is also found in numerous noun stems usually involving animals:

ƛ'ə́kƛ'ək	Brewer's blackbird	sx̣átx̣at	duck
sʕ^{w}á?ʕ^{w}a?	cougar	ƛ'ə́k^{w}ƛ'ək^{w}	spotted fawn
sx̣əʕ^{w}x̣^{w}ʕ^{w}	fox	c'íx^{w}c'ix^{w}	fish-hawk, osprey
c'ə́n'c'ən'	grasshopper	ppə́m'pəm'	hummingbird

Kinkade 1981a

Examples like those above, however, are lexicalized in that the semantics of the roots are generally no longer recoverable. As there is no indication that this is a productive means to form nouns in Nxa?amxcin, I do not consider the reduplicative process illustrated above to be a type of nominalization.

(491) k'ín'**k'in't**
k'ín-**k'in-t**
fearful of-**ADJ-ADJ**
dangerous, not trustworthy Y18.137

(492) q'á?**q'a?t**
q'a?-**q'a?-t**
wedge-**ADJ-ADJ**
crowded JM2.100.10

(493) típ**tipt**
tip-**tip-t**
excited-**ADJ-ADJ**
nervous, easily excited JM3.151.10

(494) sə́n**sən̓t**
sən̓-**sən̓-t**
tame-**ADJ-ADJ**
tame, gentle W.10.85

Adjectives created by this operation can modify both nouns, as in (495), and predicates, as in (496):

(495) yə́ʕ'^{w}**yəʕ'^{w}t** sx̣íyp
yəʕ'^{w}-**yəʕ'^{w}-t**
strong-**ADJ-ADJ** *wind*
hard wind 89.09.21.19

(496) yə́ʕ'^{w}**yəʕ'^{w}t** tqənúx̣^{w} Ewa
yəʕ'^{w}-**yəʕ'^{w}-t**
strong-**ADJ-ADJ** *hungry*-(3AB) *Ewa*
Ewa's really hungry. 91.106

In example (495) the verb 'strong' has undergone both operations involved in forming adjectival stems. This particular adjective modifies the noun *sx̣iyp* 'wind'. The same adjective takes on an adverbial role in (496) where it modifies the predicate *tqənúx̣^{w}* 'hungry'.

In chapter five it was noted that not just verbal stems can function as predicates in Nxa?amxcin. Both nouns and adjectives can also take on a predicative role in the syntax. The following examples illustrate that adjectives created from verbal stems can themselves function as predicates:

(497) kn ḥúyḥuyt
ḥuy-**ḥuy-t**
1ss + *bother*-**ADJ-ADJ**
I'm bothersome. 89.09.28.69b

(498) xʷúk'ʷ**xʷuk'ʷt**
xʷuk'ʷ-**xʷuk'ʷ-t**
clean-**ADJ-ADJ**-(3AB)
S/he is clean. G6.102

(499) núr**nurt** n'n'ík'mn'
nur-**nur-t**
dull-**ADJ-ADJ**-(3AB) *knife*
The knife is dull.

All three of the above examples contain verb stems that have undergone both operations for forming adjectives. The resulting adjectives function as clausal predicates.

6.6 Locative

Locative operations are an important part of word formation in Nxaʔamxcin. Locative is the traditional Salish term used for what Kinkade (1999) refers to as *positional* and *directional* prefixes. These surface to the left of the root with directional marking in the outermost locative position, as shown in (500):

(500) ***Derivational Stem***

[DS NM **DIR POS** *ASP DIM CTR ASP*[LX (Y) √ROOT (Z)]LX *DIM* ASP CTR VC RL VAL VC NM]DS
⇑ ⇑

In this section I discuss the positional and directional operations separately.

6.6.1 Positional

The *positional* prefixes are outlined in Kinkade (1999), who defines them as "a set of seven prefixes that indicate position in relation to something" (p.96). They consist of the following prefixes:

(501) ***Positional Prefixes (Kinkade 1999)***

k- 'on or against something vertical'
kat- 'on a flat surface, over'
kɬ- 'on the lower side of, on the surface'
k'ɬ 'away from, to or at a distance'
n(a)- 'into, onto'
niʔ- 'among'
t- 'attached to, cover'

Kinkade (p.97) notes that "[a]ll of these are productive and it is possible to use them to make up forms to which speakers seem to have no trouble assigning meanings". Each of these prefixes is discussed below in the following subsections.

6.6.1.1 *k-*

Kinkade provides the gloss 'on or against something vertical' for the positional prefix *k-*. All of the following examples involve a theme argument that is typically associated with a vertical position:

(502) **k**cəx̣pálq^{w}
k-cəx̣p=alq^{w}
POS-*catch fire=pole*
standing tree that caught fire W.7.315

(503) **k**míƛ'c'as wa stx^{w}úl
k-miƛ'=ic'aʔ-nt-s
POS-*paint=outside coating*-TR-(3AB)-3ER WA *house*
He painted the house.

(504) píyntm ʔaç̣p'áƛ'
piy-nt-m
blow (wind)-TR-PS-(3AB) *tree*
k^{w}aʔ **k**wəckánas wa stx^{w}úl
k-wəck=anaʔ-nt-s
and **POS**-*fall over=all over*-TR-(3AB)-3ER WA *house*
The wind blew a tree over on a house.

The following examples suggest that humans are considered to be vertically positioned objects, as we find the following predicates marked with this particular positional prefix:

(505) **k**yəmłcás
k-yəm-łt-sa-s
POS-*pin*-APP-1SO-3ER
He pinned it on me. W.9.202

(506) **k**taw'w'ána?
k-ta•w'•w'=ana?
POS-*rain*•OC•*rain=all over*-(3AB)
He got rained on. W.10.8

(507) **k**p't'ána?n
k-p'ət'=ana?-nt-n
POS-*dump (liquid)=all over*-TR-(3AB)-1SS
I dumped it on him. W.7.25

(508) **k**ckmníkn'c
k-cəkmin=ikn-nt-sa-s
POS-*throw out=back*-TR-1SO-3ER
She threw me out. W.7.284

(509) **k**c'áw'c'a?n xəxál'a?
k-c'aw'=ic'a?-nt-n
POS-*wash=outside coating*-TR-(3AB)-1SS *baby*
I washed/bathed the baby.

(510) k'^{w}ə́ƛ'nt ta? ?ásq^{w}sa? łu ?intəmtəmútn
k'^{w}əƛ'-nt+ta? ?in-təmtəmutn
take off-TR-(3AB)-(2SS) + IMP *son* SUB 2SPS-*clothes*
nasú? k'^{w}ən'áy'm **k**líqt
k'^{w}ənáy'm **k**-liq-t
FUT *might happen*-(3AB) **POS**-*break (string)*-ST-(3AB)
[take your clothes off son, they're liable to get torn off] Afl:3

Another type of object that apears to be interpreted as vertical is fire. In the following examples, fire serves as a theme argument or an argument of location. Again, the predicates are prefixed with *k*-:

(511) **k**púx^{w}sc
k-pux^{w}-st-s
POS-*blow*-CS-(3AB)-3ER
He blew it out. [must be a flame] W.8.65

(512) ʔaní t **k**cqcəqúsntm
k-cəq-cəq=us-nt-m
DET OBL **POS**-AUG-*set upright=fire*-TR-(3AB)-1pS

l sciyátk^{w}p nalu?p
na-lu•ʔ•p
LOC *fire* POS-*dry*•IN•*dry*-(3AB)

the pot that we put on the fire went dry

(513) **k**p'ənúsnt ta?
k-p'ən=us-nt+ta?
POS-*lie(long objects pl.)=fire*-TR-(3AB)-2S + IMP
Put wood in the stove! W.7.208

Objects that one might not perceive as being vertical, such as a rock or a flat-lying log, might be conceptualized as vertical for Nxa?amxcin speakers, as the *k-* positional marker can be used in these cases:

(514) **k**cəqáʔstn l xƛ'út ʔinyámx̣^{w}aʔ
k-cəq=aʔst-nt-n ʔin-yamx̣^{w}aʔ
POS-*set down=rock*-TR-(3AB)-1sS LOC *rock* 1sPS-*basket*
I put my basket on the rock. 95.86

(515) kn **k**łqlxáʔst
k-łaqəlx=aʔst
1sS + **POS**-*sit(sg.)=rock*
I sat on a rock. 90.229

(516) **k**cəkkáʔst
k-cə•k•k=aʔst
POS-*hit (by throwing)*•OC•*hit (by throwing)=rock*-(3AB)
Somebody threw something and it hit the rock.

(517) kʷánn ʔaní xƛ'út t **k**həmpánaʔɬc
k-wan-nt-n **k**-həmp=anaʔ-ɬt-sa-s
grab-TR-(3AB)-1sS DET *rock* OBL **POS**-*fall=all over*-EP-1sO-3ER
wa ʔisc'úʔxn
ʔin-sc'uʔxn
WA 1sPS-*foot*
I took the rock that fell on my foot.

(518) **k**tər'qálqʷn
k-tər'q-alqʷ-nt-n
POS-*kick=pole*-TR-(3AB)-1sS
I kicked a log.[57] W.5.57

For many examples, such as the ones below, one is left to presume a vertical object is involved as it is not overtly evident from the translations:

(519) kn **k**cə́kk
k-cə•k•k
1sS + **POS**-*hit*•OC•*hit*
I bumped into something. 91.142

(520) c**k**t'áɬsn
c-**k**-t'aɬ-stu-n
IM-**POS**-*smear*-TR-(3AB)-1sS
I'm smearing it on. W.9.212

Kinkade (1999:98) considers the positional prefix *k-* to have the second most "imprecise meaning" of all the positionals. This may be because there appears to be a second use involved, as it sometimes surfaces on predicates involving some kind of communicative event. Consider the following examples:

(521) kn **k**wawlxmncút
k-wawlx-min-nt-cut
1sS + **POS**-*speak*-RL-TR-RF
I spoke on my own behalf. 92.59

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[57]One speaker felt that the log could be interpreted as upright or flat on the ground in this example.

(522) **k**láxʷcnmnc   ʔací   sqəl'tmíxʷ
k-laxʷcinm-nt-sa-s
POS-*cry*-TR-1SO-3ER   DET   *man*
That man cried for me.

(523) **k**məxʷtmínc
k-məxʷt-min-nt-sa-s
POS-*laugh*-RL-TR-1SO-3ER
He laughed at me.

All of the above examples involve communicative predicates that take a goal argument. It is not clear if the *vertical* meaning represented by *k-* can be stretched to account for these examples.

6.6.1.2 *kat-*

Kinkade (1999) glosses the positional prefix *kat-* as 'on a flat surface, over'. Examples marked by this prefix are fairly straightforward. If the object of location is a floor, table, or any other flat surface, the predicate is marked with the *kat-* prefix, as in the following examples:

(524) **ka·**ɬə̣t'   ʔani   sx̣əllúp
kat-ɬə̣t'
POS-*wet*-(3AB)   DET   *floor*
The floor is wet.   W.10.129

(525) **kat**kʷáɬc   tl'   sx̣əllúp
kat-kʷan-ɬt-sa-s
POS-*grab*-EP-1SO-3ER   LOC   *floor*
[He took my X from the floor.]

(526) John   sqʷəsqʷə́saʔs   wa   **kat**'úcc   1   sx̣əllúp
sqʷəsqʷəsaʔ-s   **kat**-t'u•c•c
John   *baby*-3PS   WA   POS-*fall*•OC•*fall*-(3AB)   LOC   *floor*
John's baby fell down on the floor.

(527) **kat**kʷáɬc   wa   ʔací   ʔischạ́w'i
kat-kʷan-ɬt-sa-s   ʔin-schạw'y
POS-*grab*-EP-1SO-3ER   WA   DET   1SPS-*work*
He took away my work. (right off the table)

(528) l stám' k^{w} nacút ci **kat**ʔitx
kat-ʔitx
LOC *what* + 2SS *think* SUB **POS**-*sleep*-(3AB)
What do you think he slept on?

(529) **kat**p'əq'^{w}n
kat-p'əq'^{w}-nt-n
POS-*spill(s.t. dry)*-TR-(3AB)-1SS
I spilled powder on a flat surface. W.2.5

The above examples involve horizontally flat locations. Predicates marked by *kat-* can be found with other objects that are relatively flat as well:

(530) **kat**'úcn (ʔani) n'n'ikm'n l xƛ'ut
kat-t'uc-nt-n
POS-*put down*-TR-(3AB)-1SS DET *knife* LOC *rock*
I laid the knife on the rock. 92.264

(531) ʔaçp'aƛ' **kat**'uccnas wa stx^{w}úl
kat-t'u•c•c-nt-s
tree **POS**-*fall*•OC•*fall*-TR-(3AB)-3ER WA *house*
The tree fell on the house.

(532) **ka**cqátk^{w}ntm stə́ɬm
kat-cəq=atk^{w}-nt-m
POS-*set upright=water*-TR-(3AB)-1PS *boat*
We set the boat on the water.

(533) **kat**k'iwlx taʔ l ʔatmupíl
kat-k'iwəlx
POS-*climb*-(2SS) + IMPS LOC *car*
Crawl on top of the car!

The above examples illustrate that *kat-* cooccurs with such locative objects as a rock, house, water and car, where the focus is on the horizontal (relatively speaking) surface.[58]

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[58]Compare example (530), where the positional refers to the flat surface of the rock, with (535) and (536), where the positional refers to the vertical status of the rock.

6.6.1.3 *kɬ-*

The positional prefix *kɬ-* is glossed as 'on the lower side of, on the surface' by Kinkade (1999). Given the following examples, it appears that the first part of the gloss, 'on the lower side of' can be interpreted as 'underneath':

(534) **kɬ**p'ə́q'^{w}n
kɬ-p'əq'^{w}-nt-n
POS-*spill(s.t. dry)*-TR-(3AB)-1SS
I threw powder under (the bush, plant, bed). W.2.4

(535) kas**kɬ**cíy'n ʔaní xƛ'út
kas-**kɬ**-ciy-nt-n
IR-POS-*fire*-TR-(3AB)-1SS DET *rock*
I'm going to build a fire under a rock. 90.235

(536) c**kɬ**x̣^{w}áʕ ʔaní xƛ'út
c-**kɬ**-x̣^{w}aʕ
c-POS-*hole*-(3AB) DET *rock*
There's a hole under the rock. 90.232

(537) **kɬ**t'úcn l ʔincá
kɬ-t'uc-nt-n
POS-*put down*-TR-(3AB)-1SS LOC 1SEMpro
I laid it under myself. 92.80

(538) **kɬ**k^{w}ántx^{w} tl' kɬwə́nt
kɬ-k^{w}an-nt-x^{w}
POS-*grab*-TR-(3AB)-2SS LOC *underneath*
You took it from underneath.

(539) **kɬ**cíyn
kɬ-ciy-nt-n
POS-*catch fire*-TR-(3AB)-1SS
I built a fire under something.

The gloss 'on the surface' reflects the wide possibilities that can surface with this particular positional prefix, such as in the following examples:

(540) kas**kɬ**yəməlwásn
kas-**kɬ**-yəm=ələwas-nt-n
R-POS-*pin=chest*-TR-(3AB)-1SS
I'm pinning it on his chest. W.9.64

(541) **kɬtə́r'qn**
kɬ-tər'q-nt-n
POS-*kick*-TR-(3AB)-1SS
I kicked it off something. W.5.55

6.6.1.4 *k'ɬ-*

Kinkade (1999) glosses the positional prefix *k'ɬ-* as 'away from, to or at a distance'. This gloss is reflected in the following examples:

(542) **k'ɬkícm**
k'ɬ-kic-m
POS-*arrive*-MD-(3AB)
He got there (after travelling a long distance). W.7.102

(543) **k'ɬwákʷkʷ**
k'ɬ-wa•kʷ•kʷ
POS-*hide*•OC•*hide*-(3AB)
It disappeared. W.8.265

(544) **k'ɬ**ʔámn 1x scəm'ált
k'ɬ-ʔam-nt-n
POS-*wait*-TR-(3AB)-1SS + PL *children*
I waited for the children.

In place of the prefix *k'ɬ-*, speakers often use the prefix *kɬ-* (glossed in the above section as 'on the lower side of, on the surface') to mark the locative operation 'away from, to or at a distance'. Kinkade (1999:110) states that *k'ɬ-* "may, in fact, be losing separate status; one speaker nearly always used *k'ɬ-* where other speakers used *kɬ-*, and I have recorded instances of other speakers mixing up the two prefixes". Take, for example, the predicate in (543) *k'ɬwákʷukʷ* 'it disappeared'. This predicate also surfaces in the data as *kɬwákʷukʷ* with exactly the same meaning. Some other examples are as follows:

(545) **ckɬ**ʔámsn nasuʔ ckícx
c-**kɬ**-ʔam-stu-n c-kicx
IM-**POS**-*wait*-TR-(3AB)-1SS FUT DIR-*arrive*-(3AB)
I'm waiting for him to come. 90.113

(546) y'ay'áwt ci **kłk^{w}ánn** q'iymíntn
kł-k^{w}an-nt-n
today SUB **POS**-*grab*-TR-(3AB)-1SO *letter*
Today I received a letter.

(547) núm'as **kłkáłxc** q'iy'míntn wa Chuck
kł-kał-xit-s
also **POS**-*give*-APP-(3AB)-3ER *letter* WA *Chuck*
She also sent a letter to Chuck. 91.49

(548) **kł**ʔəmtált (k'l sccəmálts) t swánax
kł-ʔəmt=alt sccəmalt-s
POS-*feed*=*child*-(3AB) LOC *children*-3PS OBL *huckleberries*
She sent her children huckleberries.

Compare example (545) with (544). They both contain the predicate 'to wait for', but the speaker in (544) uses the prefix *k'ɬ-* while the speaker in (545) uses the prefix *kɬ-*. Examples (546) to (548) also illustrate the positional meaning associated with *k'ɬ-*, but the speaker has chosen to use *kɬ-* instead.

Like the positional prefix *k-*, the prefix *k'ɬ-* can surface on predicates involving some kind of communicative event, the following example:

(549) **k'ɬk^{w}áncntx^{w}**
k'ɬ-k^{w}an=cin-nt-x^{w}
POS-*grab*=*language*-TR-(3AB)-2SS
You repeated what he said. / You answered him.

6.6.1.5 *n-/na-*

This positional prefix, which Kinkade (1999) glosses as 'into, onto', is the first in this list of locatives to involve two variants: *na-* and *n-*. It is not clear which of these is underlying, but their distribution is predictable.

Examples (550) to (552) below illustrate both forms of the *n(a)-* positional prefix:

(550) kn **naq'ílłc'a?**
na-q'il=ałc'a?
1SS + **POS**-*ache*=*inside*
My abdomen/stomach hurts.

(551) **n**wəntúl'əx^{w}
n-wənt=ul'əx^{w}
POS-*below=ground*
deep in the ground

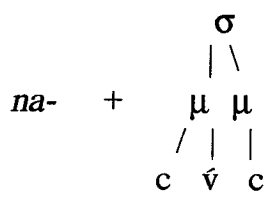
(552) kn **n**ptx̣^{w}átk^{w}m
n-ptix̣^{w}=atk^{w}-m
1ss + **POS**-*spit=water*-m
I spit in the water. 95.132

In (550), the prefix attaches to a base with the initial form cv́. In examples (551) and (552) however, the prefix attaches to a base with an initial form of cv̌ and ccv respectively, and the alternate form of the prefix, *n-*, appears. The forms of this prefix can be illustrated as follows:

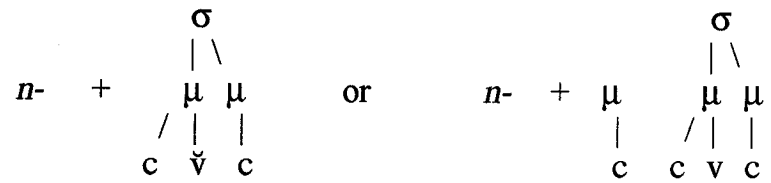
(553) ***na-*** / _ cv́
n- / _ cv̌
ccv

The *na-/n-* pattern can be explained in prosodic terms based on Willett and Czaykowska-Higgins' (1995) and Czaykowska-Higgins and Willett's (1997) analysis of Nxa?amxcin syllable structure. The above argue that the maximal syllable in Nxa?amxcin is a bimoraic CVC syllable, and that unsyllabified consonants are licensed moraically by association with an individual mora (following Bagemihl 1991). Given these assumptions, the *na-/n-* pattern can be illustrated as follows:

(554)



(555)



Two factors need to be taken into consideration here: (i) which mora bears stress, and (ii) where the positional prefix is located with respect to the stressed mora. The above diagrams illustrate that *na-* appears when adjacent to a stressed mora, while *n-* appears when adjacent to an unstressed mora, as schematized in (556):

(556) *na-* / _ μ́ *n-* / _ μ̆

Thus, the distribution of these two forms of one single positional prefix can be predicted by the prosodic features of the word.[59]

Kinkade (1999:98) notes that *n(a)-* is the most common of all the positional prefixes, and the data I have examined reflects this. Its meaning of 'into or onto' is transparent in the following examples:

(557) **na**líxnt ta?
na-lix-nt
POS-*put down*-TR-(3AB)-(2SS) + IMP
Put them in it![60] W.7.119

(558) **n**q'a?kstúłcn
n-q'a?=akst-tułt-si-n
POS-*wedge into=hand*-EP-2SO-1SS
I put it in your hand.

(559) **n**cək^{w}akstúłn wa ḥacmíntn
n-cək^{w}=akst-tułt-n
POS-*pull=hand*-EP-(3AB)-1SS WA *rope*
I pulled the rope out of his hand.

(560) **n**k^{w}nakstúłn wa sq^{w}əsq^{w}ə́sa?s
n-k^{w}an=akst-tułt-n sq^{w}əsq^{w}ə́sa?-s
POS-*grab=hand*-EP-(3AB)-1SS WA *baby*-3PS
I took his baby away from him.

---

[59]In an unpublished paper, Czaykowska-Higgins (2002) presents a different analysis for the *n-/na-* alternation, claiming that prefixal alternations such as these play a role in delimiting the root in Nxa?amxcin. Noting that vowel deletion of such alternating prefixes occurs when the root is unstressed, Czaykowska-Higgins claims that, in such instances, "if the vowel was retained [...] the prefix would be mistakenly perceived to be the real Root".

[60]One speaker prefers the translation "Put them in!" for this example.

(561) l púks ci **na**líxs təmtəmútns
na-lix-nt-s təmtəmutn-s
LOC *box* SUB **POS**-*put down (pl. object)*-TR-(3AB)-3ER *clothes*-3PS
It was the box that she put her clothes in.

(562) **n**ckʷátkʷnc
n-cəkʷ=atkʷ-nt-sa-s
POS-*pull=water*-TR-1SO-3ER
He pulled me in the water.

For examples like the following, Kinkade's gloss of 'into, onto' is less transparent:

(563) **na**púllkʷ ʔací stxʷúl
na-pəl'•l'•kʷ
POS-*break in two*•OC•*break in two*-(3AB) DET *house*
The house tipped over.

(564) **n**k'íʕʷmən
n-k'iʕʷ-min
POS-*pray*-INS
prayer W.11.78

(565) **n**ckʷápmsn
n-cəkʷ=ap-min-stu-n
POS-*pull=base*-RL-CS-(3AB)-1SS
I'm dragging it. J.1.223

To my knowledge, the above examples are not lexicalized, yet the exact semantic function of *na-/n-* is unclear.

6.6.1.6 *ni?-*

The positional prefix *ni?-* is glossed as 'among' by Kinkade (1999), or more specifically 'among (bushy, hairy, stringy area)'. The specification of 'bushy, hairy and stringy' reflects the fact that this prefix generally surfaces on a predicate when there is a theme object or an object of location involving brush, woods, or hair, as in the following examples:

(566) **ni?**nəqínm ʔací w'aχtál't k'l ʔacɬə́k
ni?-nəqinm
POS-*go in*-(3AB) DET *child* LOC *brush*
That child went into the brush.

(567) John **ni?**nuχ^{w}talwís l ʔasc'ə́lc'əl
ni?-nuχ^{w}t-alwis
John **POS**-*walk*-IT-(3AB) LOC *tree(pl.)*
John was walking in the woods. 91.08.6

(568) **ni?**p'ə́q'^{w}n
ni?-p'əq'^{w}-nt-n
POS-*spill s.t. dry*-TR-(3AB)-1SS
I spilled it into a bush/weeds. W.1.65

(569) **ni?**k'ə́rp ʔací l ʔisk'iyáw'qn
ni?-k'ərp ʔin-sk'iyaw'qn
POS-*crawl*-(3AB) DET LOC 1SPS-*hair*
That insect is crawling through your hair.

(570) **ni?**cəkkuw'sús
ni?-cə•k•k=aw's=us
POS-*hit*•OC•*hit=middle=face*-(3AB)
He got hit on the forehead. AB.62.25

In addition to hairy, bushy and stringy places, *ni?-* also surfaces on predicates when the theme object or object of location is situated among a number of other things, i.e. located in a bunch. This can involve count nouns, as in (571) and (572), or mass nouns, as in (573):

(571) **ni?**k^{w}áɬc wa ʔací ʔincúll
ni?-k^{w}an-ɬt-sa-s
POS-*take*-EP-1SO-3ER WA DET 1SEM.PSpro
He took that which belongs to me.
(out of a bunch of things that belong to other people)

(572) ʔasqʷə́saʔs ɬu wa t **niʔ**k'ʷán'c
ʔasqʷəsaʔ-s **niʔ**-kʷan-nt-s
son-3PS SUB WA OBL **POS**-*take*?-TR-(3AB)-3ER

ʔaní sqʷaʔyáɬp t k'ət'áps
k'ət'=ap-nt-s
DET *tree* OBL *cut=base*-TR-(3AB)-3ER

It was his son who picked out the green tree that he chopped down.[61]

(573) luts puts naʔ kʷ tə́r'qm l **niʔ**smák'ʷt
tər'q-m **niʔ**-smak'ʷt
? ? FUT + 2SS *dance*-m-(3AB) LOC **POS**-*snow*

naʔsú ɬu c'əɬtás
c'əɬtas
FUT SUB *cold?*-(3AB)

It's not proper/right to dance in the snow when it's cold.

The prefix *niʔ-* also appears on predicates when the object of location is fire, as in (574):

(574) w'axtált ʔací **niʔ**t'ucc l sciyátkʷp kʷaʔ cə́x̣p
niʔ-t'u•c•c
child DET **POS**-*fall*•OC•*fall*-(3AB) LOC *fire* *and* *burn*-(3AB)
That child fell/tripped into a fire and burned.

Thus, both the *k-* and *niʔ-* positional prefixes can be used (separately) when the focus of location is a fire.

6.6.1.7 *t-*

Of all the positional prefixes, Kinkade (1999:98) indicates that *t-* has the most imprecise meaning. It is glossed as 'attached to, cover', and this is relatively evident in the following examples:

---

[61]I am not sure of the gloss for the predicate *k'ʷan'* in this example. This exact form means 'try or test'. It is alternately possible that the predicate is *kʷan* 'take', with subsequent spreading of the glottal feature from the positional prefix *niʔ-*.

(575) **t**ḥə́cn
t-ḥac-nt-n
POS-*tie*-TR-(3AB)-1SS
I tied it on.

(576) **tk**^{w}ánpla?n ?inx̣ƛ̓'cín
t-k^{w}an=apla?-nt-n ?in-x̣ƛ̓'cin
POS-*take*=*handle*-TR-(3AB)-1SS 1SPS-*horse*
I led my horse with a rope. W.4.82

(577) **tk**^{w}námn
t-k^{w}nam-nt-n
POS-*grab*-TR-(3AB)-1SS
[I held on to him/her. (crossing an icy driveway)]

(578) sc'əlút k^{w}a? **tk**^{w}nám
s-c'əlut **t**-k^{w}nam
IM-*stand*-(3AB) *and* **POS**-*grab*-(3AB)
He stood and held on. (like a rail or a table)

In other examples, like the following, the exact nature of the positional is not as obvious:

(579) **tk'**^{w}a?upsntus
t-k'^{w}a?=ups-nt-wa-s
POS-*bite*=*tail*-TR-TO-(3AB)-3ER
I bit him on the tail.

(580) kn **t**xə́pm t x̣əl'x̣əl'áx^{w}
t-xəp-m
1SS + **POS**-*chew*-AP OBL *corn*
I chewed on some corn.

(581) **tq'**íy'n
t-q'iy'-nt-n
POS-*write*-TR-(3AB)-1SS
I wrote on it. / I signed it.

The positional marker *t-* in (579) and (580) most likely reflects the fact that someone's teeth are attached to something, but (581) is less clear.

6.6.2 Directional

The directional prefixes consist of a *cislocative* **c-** 'this way' and *translocative* **(ʔa)l-** 'that way', and are labelled directionals by Kinkade (1999) following Reichard (1938) and Mattina (1973).[62] These directional prefixes occur both independently and together. I discuss each possibility in the following subsections.

6.6.2.1 *l-/ʔal-*

The *(ʔa)l-* prefix is labelled a translocative meaning 'that way' by Kinkade (1999). The prefix exhibits two forms, *ʔal-* and *l-*, whose distribution is identical to that of *na-* and *n-* in section 6.6.1.5. This distribution is captured by the following rules:

(582) ***ʔal-*** / _ μ́ ***l-*** / _ μ̆

(582) indicates that the form *ʔal-* surfaces when adjacent to a stressed mora while *l-* surfaces when adjacent to an unstressed mora.

Three separate meanings marked by the *(ʔa)l-* prefix can be distinguished from the data. The first reflects Kinkade's translocative analysis glossed as 'that way'. This use is clear in the following examples:

(583) **ʔal**núx̣^{w}t ta? k'l ʔistx^{w}úl
ʔal-nux̣^{w}t ʔin-stx^{w}ul
DIR-*go*-(2SS) + IMP LOC 2SPS-*house*
Go back to your home! W.4.61

(584) **ʔal**kícx
ʔal-kicx
DIR-*arrive*-(3AB)
He got back (to his place). W.7.106

---

[62]Kinkade also considers *yap-* 'on the way' to be a directional prefix. I analyze this form as a bound stem in section 8.3.2.

(585) **ʔal**ʔác'x̣
ʔal-ʔac'x̣
DIR-*look at*
looked back AfI:4

(586)

lʔaníncxʷ	taʔ	k'l	ʔistxʷúl
l-ʔani-nt-sa-xʷ			ʔin-stxʷul
DIR-*take along*-TR-1SO-2SS + IM		LOC	1/2SPS-*house*

Take me home! [to my/your house] W.4.60

(587)

t'íl'	lx	**l**ɬwám
		l-ɬwam
already + PL		**DIR**-*go(pl.)*-(3AB)

They already went home. W.7.279

(588)

ksqəm'qínm	Mary	kʷaʔ	wa	**ʔal**ʔúkʷs
kas-qəm'qin-m				**ʔal**-ʔukʷ-nt-s
IR-*?*-m-(3AB)	*Mary*	*and*	WA	**DIR**-*haul*-TR-(3AB)-3ER

John	sacqʷáʕʷʕʷəxʷ
	sac-qʷa•ʕʷ•ʕʷ-mix
John	IM-*drunk*•OC•*drunk*-IM-(3AB)

Mary drove and brought John home drunk.

There is also a reversative meaning marked by the *(ʔa)l-* prefix, as indicated by the following examples:

(589)

ʔalkáɬn	ʔací	yúp'aʔtns
ʔal-kaɬ-ɬt-n		yup'aʔtn-s
DIR-*give*-EP-(3AB)-1SS	DET	*toy*-3PS

I returned her toy.

(590) **ʔal**kʷántxʷ
ʔal-kʷan-nt-xʷ
DIR-*take*-TR-(3AB)-2SS
You took it back.

(591) **ʔal**k'ʷáʔn
ʔal-k'ʷaʔ-nt-n
DIR-*bite*-TR-(3AB)-1SS
I bit him back. W.4.104

And finally, there appears to be an iterative sense marked by this prefix, as illustrated in (592) and (593):

(592) kn **ʔalk^{w}ánm** t náqs
ʔal-k^{w}an-m
1SS **DIR**-*take*-AP-(3AB) OBL *one*
(And then) I took another one.

(593) k^{w}aʔ ciy'úst **ʔalƛ'úw'n**
ʔal-ƛ'uw'-nt-n
and again **DIR**-*put out*-TR-(3AB)-1SS
I put it out again. [e.g. a light or a fire] W.7.210

Both of the above examples are iterative in the traditional sense, in that there is a repetition of the event (as marked in the English translations by the words 'another' and 'again').[63]

6.6.2.2 *c-*

Kinkade (1999) considers the prefix *c-* to be a cislocative meaning 'this way'. This prefix is also one of the variants used to mark imperfective aspect on bivalent stems. Some examples of a cislocative usage are given below:

(594) **c**nəqínm
c-nəqinm
DIR-*go in*-(3AB)
[he came in] W.10.10

(595) **c**káɬtl ta?
c-kaɬ-xt-al ta?
DIR-*give*-APP-1PO-(2SS) + IMP
Give it to us![64] W.3.24

(596) **c**'aníɬc
c-ʔani-ɬt-sa-s
DIR-*take along*-APP-1SO-3ER
He brought it to me. W.4.43

---

[63]Including the prefix *ʔal-/l-* with the directional markers *c-* and *lc-* is questionable, as Leslie Saxon (p.c.) points out that the usage of this marker seems more akin to that of 're-' or 'back' in English (e.g. 'redo', 'hit back'). Paul Kroeber (p.c.) also considers a reversative gloss to be appropriate.

[64]I am not sure why the applicative marker *-xit* does not surface in this example. It would seem necessary in order for the goal argument to have direct object status.

(597) luta ʔací x̣x̣ƛ'cín **c**kícnc
c-kic-nt-sa-s
strange DET *dog* **DIR**-*arrive*-TR-1SO-3ER
A strange dog came to me.

(598) kas**c**núx̣^{w}təx^{w} k'l ʔinca
kas-**c**-nux̣^{w}t-mix
IR-**DIR**-*go*-IM-(3AB) LOC 1SEMpro
He is coming to me. 92.15

(599) x^{w}ír̓xnm k^{w}aʔ **c**k^{w}ásts líx̣sxns
x^{w}ir=xn-m **c**-k^{w}an-stu-s lix̣sxn-s
reach=foot-MD-(3AB) *and* **DIR**-*take*-CS-(3AB)-3ER *toe*-3PS
He reached with his foot and picked it up with his toes.
AB.11.75

(600) tl'łu wa **c**k^{w}áłc ʔinləkapú
c-k^{w}an-łt-s ʔin-ləkapu
from there WA **DIR**-*take*-APP-(3AB)-3ER 1SS-*coat*
He got my coat (for me) from over there. (and brought it towards me)
AB.60.34

(601) **c**'acnúx̣^{w}t
c-ʔac-nux̣^{w}t
DIR-ʔac-*go*-(3AB)
He's coming this way. AB.61.21

Unlike the *(ʔa)l-* prefix, *c-* appears to have a purely deictic usage in that it marks a cislocative function only.

6.6.2.3 *lc-*

Both the translocative and the cislocative can cooccur as *lc-* to form a complex deictic marker which could be glossed as 'that way then this way'. Some examples are as follows:

(602) **lc**núx̣^{w}t
l-**c**-nux̣^{w}t
DIR-DIR-*go*-(3AB)
He came back. Kinkade 1999:96

(603) t'íl' kn **lc**kícx
l-c-kicx
MOD + 1SS **DIR-DIR-***arrive*
I just got back. W.7.104

(604) pan'kána ci k^{w}p **lc**'ím'x
l-c-ʔim'x
when SUB + 2PS **DIR-DIR-***move*
When are you guys going to move back? W.7.289

(605) **lc**k^{w}ánn
l-c-k^{w}an-nt-n
DIR-DIR-*take*-TR-(3AB)-1SS
I took it back.

(606) **lc**k^{w}nám t q'iymíntn
l-c-k^{w}an-m
DIR-DIR-*take*-AP-(3AB) OBL *paper*
S/he brought back a paper.

Note that only the *l-* form of *(ʔa)l-* is used in this combination as the following *c-* always serves as an unstressed mora.

6.7 Dimension

In this section I group two operations under the heading "dimension": *augmentative* and *diminutive*. This is not to suggest that both categories naturally fall together as a class. In fact, one could argue that the augmentative should be addressed in the section above on aspect, while the diminutive is a less likely candidate as an aspectual operation. I have included both of these here in a single section because they can both be construed as reflective of dimension in that one, the augmentative, evokes (broadly speaking) a sense of "increase" while the other, the diminutive, evokes a sense of "decrease".

Both augmentative and diminutive are marked by reduplicative operations, as discussed in the following sections. The augmentative marker is realized as either a reduplicative prefix, indicated by the lefthand arrow in (607), or by a reduplicative suffix, indicated by the righthand arrow in (607):

(607) ***Derivational Stem***

$[_{DS}$ NM DIR POS *ASP* ***DIM*** *CTR ASP*$[_{LX}$ (Y) √ROOT (Z) $]_{LX}$ ***DIM*** ASP CTR VC RL VAL VC NM $]_{DS}$
⇑ ⇑

The diminutive is marked by reduplicative prefixing only, and its position in the derivational stem is indicated by the above lefthand arrow.

6.7.1 Augmentative

The Salish *augmentative* has received indepth discussion in three places: Czaykowska-Higgins (1993c) for Nxa?amxcin; van Eijk (1993) for Lillooet; and van Eijk (1998) for Salish in general. Salish augmentatives are marked by CVC-reduplication, which van Eijk (1998:454) claims is "one of the most productive operations in Salish".

There are two ways to mark the augmentative in Nxa?amxcin. The majority of augmentative stems are created by prefixing of a copy of C_1 and C_2 of the root with an intervening schwa vowel, as shown in (608) for a CVC root:

(608) $\sqrt{C_1VC_2} \quad \rightarrow \quad C_1əC_2 + \sqrt{C_1VC_2}$

Example (608) indicates that both consonants of a CVC root are copied and prefixed to the root with an intervening schwa. The same operation is schematized in (609) for a CCVC root:

(609) $\sqrt{C_1C_2VC_3} \quad \rightarrow \quad C_1əC_2 + \sqrt{C_1C_2VC_3}$

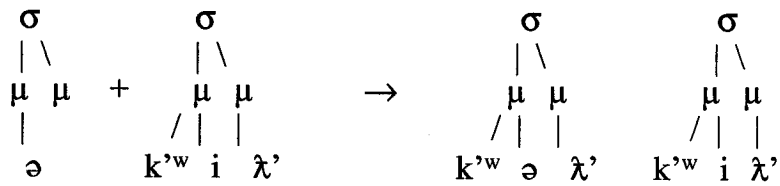
The above schema shows that the first and second consonant of the root are again copied and prefixed to the root with an intervening schwa.

The reduplicative processes shown in (608) and (609) can be unified in prosodic terms following Willett and Czaykowska-Higgins' (1995) and Czaykowska-Higgins and Willett's (1997) analysis of Nxa?amxcin syllable structure. The above argue that Nxa?amxcin has a maximal syllable shape of

CVC and that the language allows for moraic licensing of unsyllabified segments. This follows work on Bella Coola by Bagemihl (1991) within the framework of Prosodic Morphology (McCarthy and Prince 1986).

Czaykowska-Higgins (1993c) claims that CəC-prefixation is formed by the prefixation of an empty bimoraic syllable to the right edge of the root. Since the prefixed form surfaces with a schwa vowel as opposed to a full vowel, I will tentatively assume that the nucleus of the prefixed syllable contains a schwa vowel and, hence, is not an entirely empty syllable at the time of prefixation. This is shown in (610) for the augmentative example *k'ʷəƛ'k'ʷiƛ'xənəm* 'take off shoes' from the root √k'ʷiƛ' 'take off':

(610)



The first two consonants of the root are copied onto the empty onset and coda positions of the prefixed syllable respectively. Some examples of this first type of augmentative marking are given in (611) and (612):

(611) **kəłkáłxms**
kəł-kałx-min-nt-s
AUG-*give*-RL-TR-(3AB)-3ER
he distributed it W.2.28

(612) **xƛ'xƛ'út**
xƛ'-xƛ'ut
AUG-*rock*
rocks MDK

Example (611) contains a CVCC root (√kałx) marked augmentative. The first two consonants of the root are copied and are prefixed to the root with an intervening schwa vowel. Example (612) contains a CCVC root with the augmentative prefix. Again the first two consonants of the root are copied and

affixed to the left edge of the root. Note that in this particular example the schwa vowel does not surface.[65]

A second, and less frequent, type of augmentative marking also involves reduplication. This reduplicative process has traditionally been labelled characteristic for Nxa?amxcin and is discussed in Czaykowska-Higgins (1993c).[66] The first syllable of the root is copied and that copy is suffixed onto the initial root syllable. Unlike the prefixal augmentative marker discussed above, the root vowel in the suffixal augmentative marker, whether full or schwa, is copied. This is schematized in (613) for a CVC root:

(613) $\sqrt{C_1VC_2} \rightarrow \sqrt{C_1VC_2} + C_1VC_2$

As (613) illustrates, the entire form of the CVC root is copied and suffixed onto the root. Since the maximal syllable in Nxa?amxcin is of the shape CVC (Willett and Czaykowska-Higgins 1995, Czaykowska-Higgins and Willett 1997), we would expect the CVC root to be copied in its entirety. When a CCVC root is marked with this particular augmentative operation; however, as schematized in (614), the intitial consonant of the root is not copied:

(614) $\sqrt{C_1C_2VC_3} \rightarrow \sqrt{C_1C_2VC_3} + C_2VC_3$

With a maximal syllable shape of CVC, the initial consonant of a CCVC root is not part of the root syllable. Hence it is not copied as part of the reduplicative morpheme.

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[65]Czaykowska-Higgins (2002) provides an account of augmentative marking within Optimality Theory, and indicates that augmentative prefixes without the intervening schwa are predictable based on certain clustering properties.

[66]I do not recognize "characteristic" as a grammatical category in Nxa?amxcin, at least not synchronically, as words undergoing this reduplicative process generally fall into one of three categories: (i) they are the result of adjectival formation (section (6.5.2); (ii) they are augmentatives, or (iii) they are lexicalized forms.

Augmentative suffixation of CVCC roots provides evidence that the copied syllable is in fact suffixed onto the initial syllable of the root. This is schematized in (615):

(615) $\sqrt{C_1VC_2C_3} \rightarrow \sqrt{C_1VC_2 \bullet C_1VC_2 \bullet C_3}$

We again see that the first syllable of the root (in this case C_1VC_2) is copied to form the reduplicative augmentative suffix. The augmentative form on the right in (615) indicates that this suffix is not affixed to the right edge of the root, but rather to the right edge of the initial root syllable, the same syllable that was copied. For CVCC roots as shown in (615), this involves infixation (marked by dots) as the final segment of a CVCC root cannot be included in a maximal CVC syllable.

Some examples of this second type of augmentative marking are given below:

(616) t'úc**t'uc**mnct
t'uc-**t'uc**-mnct
lie down-AUG-MD-(3AB)
several lying down (scattered or together) EP2.41.8

(617) kál**kal**x
kal•**kal**•x
hand•AUG•*hand*
hands (van Eijk 1998:455)[67]

An example of a CVC root marked augmentative by reduplicative suffixation is found in (616). In this case, a full copy of the CVC root (√t'uc 'lie down') is suffixed to the root. Example (617) contains a CVCC root (√kalx 'hand') marked for augmentative suffixation. In this example it is clear that it is the first syllable of the root that is being copied, not the root as a whole. This is illustrated in the following diagrams:

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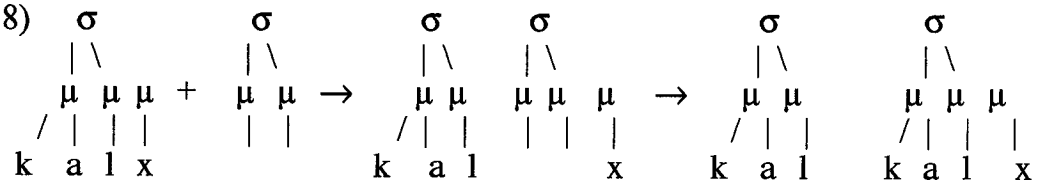
[67]Van Eijk cites his source for this form as a personal communication from M. Dale Kinade.

(618)



The middle diagram in (618) indicates that an empty bimoraic syllable is suffixed onto the first syllable of the root and not the root itself. The righthand diagram illustrates that it is the first syllable of the root that is copied and not the root as a whole.[68]

Augmentatives are a tricky category to define conceptually as the translations of forms marked augmentative vary. At least four different meanings can be associated with the augmentative category in Nxa?amxcin: (i) plural, (ii) repetition, (iii) distribution, and (iv) intensity. The first applies to nouns, the last three apply to predicates (see van Eijk 1998).

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[68]Czaykowska-Higgins (1993c) analyzes stress patterns in both CVC-reduplicative patterns, illustrating that one major factor surrounding stress assignment is the status of roots as accented (traditionally labelled "strong") or unaccented (traditionally labelled "weak"). She explains that while accented roots generally contain a full vowel, there are some cases where a schwa is the root vowel. Likewise, vowels of unaccented roots are usually schwas, although there are examples of unaccented roots containing full vowels. The stress patterns oulined by Czaykowska-Higgins are as follows:

Root	***CəC- prefixation***	***-CVC suffixation***
Acc. Full V √	cəc-√cv́c	√cv́c-cvc
Unacc. Full V √	cəc-√cv́c	√cvc-cv́c
Acc. Schwa √	cəc-√cə́c	√cə́c-cəc
Unacc. Schwa √	cəc-√cə́c	√cə́c-cəc

Note that none of the prefixed reduplicative forms in the left hand column bear stress as stress is never assigned to prefixes in Nxa?amxcin (Czaykowska-Higgins 1993a, 1996, 1998). Stress generally falls on the root in the right hand column, except in the case of unaccented full vowel roots.

Of course, various suffixes attract stress away from the root and reduplicative affix in Nxa?amxcin, resulting in additional stress patterns. See Czaykowska-Higgins 1993c for full details.

For nouns marked augmentative the meaning is "more than one". Some examples are given in (619) to (623). (Recall that repeated lexeme glosses in the gloss line are indicative of infixation within the lexemic stem.):

(619) a. **sləx̣lix̣sxn**
s•ləx̣•lix̣sxn
toe•**AUG**•*toe*
all toes; more than one toe 89.121

b. slíx̣sxn
one toe 89.120

(620) a. **yəlyəlmíx^{w}m**
yəl-yəlmix^{w}m
AUG-*chief*
chiefs 92.335

b. yəlmíx^{w}m
chief Kinkade 1981a:49

(621) a. **tuʔtw'ít**
təw'-tw'it
AUG-*boy*
boys 92.341

b. tw'ít
boy Kinkade 1981a:41

(622) a. **łq^{w}łq^{w}út**
łq^{w}-łq^{w}ut
AUG-*willow*
more than one willow 90.63

b. łq^{w}út
willow 90.62

(623) a. **stx^{w}tx^{w}úl**
s•tx^{w}•tx^{w}ul
house•**AUG**•*house*
houses 90.65

b. stx^{w}úl
house 90.64

Examples (619a), (620a) and (621a) illustrate a prefixed copy of C_1 and C_2 of the root with an intervening schwa, while examples (622a) and (623a) illustrate the same without an intervening schwa. All of the (b) examples in (619) to (623) are

nouns in their unmarked singular form, while in the (a) examples marked augmentative the nouns are interpreted as plurals. Note that the translation in (619a) suggests a "collective" interpretation whereby a number of things are referred to collectively or as a group.

With respect to verbs, three interpretations are possible for the augmentative. The first, and probably most common interpretation, is that of repetition, which can be expressed in a number of ways. For example, an action repeated by an agent more than once is marked augmentative.[69] Some examples are given in (624) to (633):

(624) **nt'q^{w}**t'q^{w}úpsn
n-t'əq^{w}-t'əq^{w}-ups-nt-n
POS-**AUG**-*slap=rump*-TR-(3AB)-1SS
[I spanked him.] EP2.65.4

(625) **ncək**cəkqínn
n•cək•cəkqin-nt-n
hammer•**AUG**•*hammer*-TR-(3AB)-1SS
I hammered it (repeatedly). EP2.32.2

(626) c**k'^{w}a?**k'^{w}a?stúnn
c-**k'^{w}ə?**-k'^{w}a?-stu-nn
IM-**AUG**-*bite*-TR-(3AB)-1SS
I am chewing it. W4.133

(627) **suw'**sáw's
səw'-saw'-nt-s
AUG-*ask*-TR-(3AB)-3ER
He asked her over and over.

(628) n**x̣a?**x̣a?aycínm
n•**x̣ə?•**x̣a?ay'cinm
holler•**AUG**•*holler*
cowboy hollering (holler more than once) 90.52

---

[69]This interpretation is strikingly similar to the repetitive aspectual operation discussed in section 6.3.4. It is unclear at this point what the differences are between the two, if any. The repetitive aspectual use of augmentative is very productive in Nxa?amxcin, while the repetitive aspectual operation is much less so.

(629) **t'əs**t'ə́sn
t'əs-t'əs-nt-n
AUG-*slap*-TR-(3AB)-1SS
[I slapped him more than once.] 91.146

(630) n**x̣əɬx̣**áɬn niʕ'áp
n•**x̣əɬ**•x̣aɬ-nt-n
scare•AUG•*scare*-TR-(3AB)-1SS *always*
I kept scaring him. W.3.13

(631) ʔə**ḥ**^{w}ʔə**ḥ**^{w}ílx
ʔə**ḥ**^{w}•ʔə**ḥ**^{w}ilx
AUG•*cough*
keep coughing 92.200

(632) **ləx**^{w}láx^{w}cnm
ləx^{w}•lax^{w}cinm
AUG•*cry*-(3AB)
she cried and cried CD:68

(633) cíʔɬù s**q'**^{w}**iy**q'^{w}iyxánmt
s-**q'**^{w}**əy'**-q'^{w}iy'xan-m-t
always NM-AUG-*kneel*-MD-2PPS
We kept kneeling (repeatedly). 90.56

As each of the above examples illustrate, the augmentative marking indicates that an agent (or agents as in (633)) is performing some activity with repetition.

Another repetitive interpretation is present when more than one agent/theme is performing/undergoing the same action. Hence, the action is repeated, but not by or on the same entity. Some examples are given below:

(634) ʔ**əm'**ʔím'x 1x
ʔ**əm'**-ʔim'x
AUG-*move*-(3AB) + PL
They all moved away. MDK

(635) kt **tər'**tər'qnawáx^{w}
tər'-tər'q-nt-wax^{w}
1p + AUG-*kick*-TR-RC
We kicked each other. 92.136

(636) **cəx̣**cə́x̣p
cəx̣-cəx̣p
AUG-*burn*-(3AB)
several things burning W.7.219

The examples in (634) and (635) both involve multiple agents performing the same activity. Example (636) involves multiple themes undergoing the same activity. The augmentative marks the multiple occurrences of a particular activity, even if not repeated by the same agent or theme.

Finally, a repetitive interpretation is present when the same agent is performing the same activity on more than one theme. Some examples are given below:

(637) **q'^{w}iyq'^{w}**iyxánm
q'^{w}əy'-q'^{w}iyxan-m
AUG-*kneel*-MD
kneel on both knees 90.54

(638) **t'q^{w}**t'q^{w}áksc wa ʔaní ttw'it Ewa
t'əq^{w}-t'əq^{w}=akst-nt-s
AUG-*slap-hand*-TR-(3AB)-3ER WA DET *boy* Ewa
Ewa slapped the little boy's hands. 90.274

(639) wíkłn ʔaní ttw'ít t **cək**cəkntáls
wik-łt-n **cək**-cək-nt-al-s
see-TR-(3AB)-1sS DET *boy* OBL AUG-*hit (by throwing)*-TR-1pO-3ER
I saw the boy who was hitting us. 92.386

(640) ʔisc**ḥaw'**ḥáw'i
ʔin-s-c-**ḥəw'**-ḥaw'y
1sPS-NM-C-AUG-*make*
I made them. JM3.6.7

(641) **k'ər**kírn
k'ər-k'ir-nt-n
AUG-*cut*-TR-(3AB)-1sS
[I cut a lot of it. (cloth, paper, skin)] Y30.128

(642) **t'əm'**t'ə́m'n
t'əm'-t'əm'-nt-n
AUG-*cut*-TR-(3AB)-1sS
I cut them. JM3.5.10

(643) nac'ip'**c'ip'**sm
na-c'ip'-**c'ip'**=us-m
POS-*pinch*-AUG=*eye*-(3AB)
He closed his eyes. EP2.79.1

All of the above examples involve actions repeated a number of times by the same agent on different objects. If we compare examples (637) and (638) with (633) and (624), we can see the different interpretations available for a repetitive reading.

The augmentative can also express a meaning of distribution. This gives a sense of the action being spread out over space and the translations often involve phrases such as "all over", "all up" and "around". Some examples are given below:

(644) **c'əl**c'ə́lx̣n
c'əl-c'əlx̣-nt-n
AUG-*scratch*-TR-(3AB)-1SS
I scratched it (with several/all fingers) JM3.18.4

(645) **c'əl**c'əlx̣ncás
c'əl-c'əlx̣-nt-sa-s
AUG-*scratch*-TR-1SO-3ER
He scratched me all up. W4.101

(646) **t'əm'**t'ə́m'n
t'əm'-t'əm'-nt-n
AUG-*cut*-TR-(3AB)-1SS
I cut him up. W4.140

(647) **k'^{w}əʔ**k'^{w}aʔn'únc
k'^{w}əʔ-k'^{w}aʔ-nun-nt-sa-s
AUG-*bite*-LC-TR-1SO-3ER
He chewed me up. 89.96

(648) **p'əq'^{w}**p'əq'^{w}míntx^{w}
p'əq'^{w}-p'əq'^{w}-min-nt-x^{w}
AUG-*spill*-RL-TR-(3AB)-2SS
You spilled it all over/around (accidentally). W.1.21

(649) **nuw'**náw'lx
nəw'-naw'lx
AUG-*run(sg.)*
run around W.2.96

Compare examples (646) and (647) with (642) and (626). (646) and (647) show that the action indicated by this verb can be distributed over space while (642)

and (626), containing the same respective predicates, indicate that the action was performed repeatedly by one person over and over (example (626)), or that the same action was performed by more than one person (example (642)). I am assuming that each interpretation in these cases is context driven since the forms are identical.

Finally, augmentatives can express an increase in intensity of a state or activity, as shown in (650) to (652):

(650) təɬs **cq**cqána?
cəq-cqana?
really AUG-*hear*-(3AB)
He hears well. W.8.219

(651) n**k'ʷƛ'**k'ʷƛ'pús
n-**k'ʷəƛ'**-k'ʷəƛ'-p=us
LOC-AUG-*take out*-IN=*eye*-(3AB)
Both eyes bulged clear out. Y22.39

(652) **t'əq'ʷ**təq'ʷcímn
t'əq'ʷ-t'əq'ʷcin-min-n
AUG-*holler*-RL-(3AB)-1SS
shout to a person hard of hearing Y35.29
shout at a person at a distance Y35.28

I have fewer examples of this interpretation which, like the examples above, nevertheless involve some sense of augmentation.

6.7.2 Diminutive

The diminutive prefix generally marks the meaning "small" or "little". Diminutives are formed by reduplicating the first consonant of a root, as schematized in (653) for a CVC root:

(653) $\sqrt{C_1VC_2} \rightarrow C_1+\sqrt{C_1VC_2}$

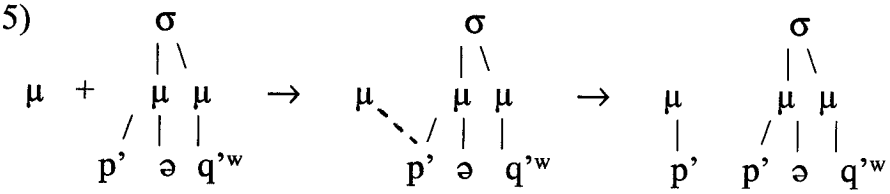
(653) illustrates that when a CVC root is marked diminutive, the first consonant of the root is copied. The same is true for all root shapes. A CCVC root marked diminutive is schematized in (654):

(654) $\sqrt{C_1C_2VC_3} \rightarrow C_1+\sqrt{C_1C_2VC_3}$

The diminutive form of a CCVC root again involves a copy of the initial consonant of the root.

Willett and Czaykowska-Higgins (1995) and Czaykowska-Higgins and Willett (1997) argue, within the framework of Prosodic Morphology (McCarthy and Prince 1986), that diminutive marking is formed by the prefixation of an empty mora to a root. Following Bagemihl (1991), the above authors claim that moraic affiliation is sufficient for prosodic licensing in Nxa?amxcin. After prefixation of the empty mora, the features of the initial root consonant are subsequently spread to the empty mora and a copy of the initial root consonant surfaces. This is illustrated in (655) for the form *p'p'əq'*^{w} 'spill a little', based on the CVC root √p'əq'^{w} 'spill s.t. dry':

(655)



In the lefthand diagram in (655), an empty mora is prefixed onto the root. In the middle diagram we see that the features of the root-initial consonant are spread to the empty mora. The result, on the right, is a copy of the first root consonant in the empty mora position.

Both nouns and predicates can be marked diminutive. In the case of nouns, the diminutive marking indicates that the noun is small in size. Some examples are given below:

(656) ʔaʔálk'^{w}mn
ʔ-ʔalk'^{w}mn
DM-*slave*
little slave[70] SfVIII:1

(657) **y**'y'ám'x̣^{w}aʔ
y'-y'am'x̣^{w}aʔ
DM-*basket*
little basket PfI:2

(658) **t**tw'ít
t-tw'it
DM-*boy*
little boy W.7.45

(659) n̩**t**'t'əʕ'^{w}mátk^{w}
n•**t**'•t'əʕ'^{w}matk^{w}
river•**DM**•*river*
small river Y.37.12

(660) s**q**'q'áʔxn
s•**q**'•q'aʔxn
shoe•**DM**•*shoe*
little shoe W.2.102

(661) s**t**tx^{w}úl
s•**t**•tx^{w}ul
house•**DM**•*house*
little house 90.66

(662) kn kassuk'^{w}pcín
kat-**s**-suk^{w}-p=cin
1SS + POS-**DM**-*swell up*-IN=*mouth*
I have a little bump on my lip. 90.103

In all of the above examples, the core meaning of the form is preserved, but the diminutive operation adds an additional perspective in reference to size.

Diminutive marking on a predicate can be indicative of partial completion (broadly speaking). The following examples illustrate an activity (663), accomplishment (664) and achievement (665).

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[70]The intervening [a] vowel between the diminutive glottal prefix and the root glottal is obligatorily required for prosodic purposes in this example. Willett and Czaykowska-Higgins (1995) and Czaykowska-Higgins and Willett (1997) argue that glottal stop patterns with resonants in Nxaʔamxcin in that it must be syllabified, hence the epenthetic vowel.

(663) ɬɬút'ət'
ɬ-ɬu•t'•t'
DM-*sob*•OC•*sob*
half-crying W.5.68

(664) p'p'áq'ʷəntxʷ
p'•p'əq'ʷ-nt-xʷ
DM•*spill (s.t. dry)*-TR-(3AB)-2SS
You spilled a little bit (purposely). W.1.26

(665) ƛ'ƛ'xʷúp
ƛ'-ƛ'xʷup
DM•*win*
win a small bit 90.46

The diminutive also appears on predicates whose inherent meaning reflects diminution, as in the following examples:

(666) kn y'y'əxn'ál'qʷ
y'-y'əxn'al'qʷ
1SS + DM-*short*
I'm short. W.10.66

(667) nt't'əʕʷma?áłc'a?
n-t'-t'aʕʷum=ałc'a?
POS-DM-*small(sg.)=inside*
house small inside W.10.160

(668) nccəma?áłc'a?
n-c-cəm'=ałc'a?
POS-DM-*small(pl.)=inside*
small rooms W.10.161

(669) ppàw'msn
p-paw'm-stu-n
DM-*lightweight*-CS-(3AB)-1SS
I lightened it. W.10.180

A stem can be marked with both diminutive and augmentative prefixing, resulting in two reduplicative operations taking place on a single root. Consider the following examples:

(670) **sq'q'a?**q'á?xn's
s•q'•q'ə?•q'a?xn-s
shoe•**DM•AUG•***shoe*-3PS
[her little shoes] PfI:4

(671) **y'y'əx**y'áxn
y'-y'əx-y'əxn
DM-AUG-*short*
short pieces AfI:6

As examples (670) and (671) illustrate, the diminutive prefix appears to the left of the augmentative prefix. Given that both the diminutive and augmentative operations target the left edge of the root, the order of these reduplicative prefixes in (670) and (671) indicate that diminutive prefixing takes place prior to augmentative prefixing. If augmentative prefixing took place prior to diminutive prefixing, we would expect the reverse ordering, e.g. **sq'a?q'q'a?xn's* and **y'əxy'y'əxn*. Forms such as these are not present in the data.

6.8 Relational

The relational category, discussed briefly in Kinkade 1982b, is marked by the suffix *-min*, the same suffix used to mark instrumental nominalization.[71] In the derivational stem, relational marking surfaces immediately preceding the valence marker, as indicated by the arrow in (672).

(672) ***Derivational Stem***

$[_{DS}$ NM DIR POS *ASP DIM CTR ASP*$[_{LX}$ (Y) √ROOT (Z) $]_{LX}$ *DIM* ASP CTR VC **RL** VAL VC NM $]_{DS}$
⇑

[71]In section 6.5.1.2 (ft.46), it was noted that both markers of instrumental nominalization, *-min* and *-tn*, appear to have originated as lexical suffixes (bound stems). Gerdts and Hinkson (1996) speculate that the relational (in their terms "applicative') cognate in Halkomelem, *-me?*, along with two other applicative markers are "grammaticized forms of lexical suffixes" (p.175).

In her pan-Salish study of applicatives, Kiyosawa (1999, 2002) considers relational suffixes to be part of an applicative set. I have not included the relational with the other Nxaʔamxcin applicatives in section 6.1.4 and represent it here separately for one major reason: stems that are marked relational (like those marked limited control in section 6.4.2) must be subsequently marked by a valence-changing operation creating bivalent stems, while the applicative operation *is* a valence-changing operation that creates bivalent stems. Grouping relational and applicative together under one category seems problematic given their grammatical differences.

Note that the transitive, causative, applicative and external possession markers are mutually exclusive. The relational marker, however, cooccurs with transitive, causative, applicative and external possession markers, as shown in the following examples:

(673) húymntx^{w}
huy-min-nt-x^{w}
visit-RL-TR-(3AB)-2SS
you visited her/him EP4.37.10

(674) nck^{w}ápmsn
n-cək^{w}=ap-**min**-stu-n
POS-*pull*=*base*-**RL**-CS-(3AB)-1SS
I am dragging it. Y17.78

(675) tumístmɬcn
tumist-**min**-ɬt-si-n
sell-**RL**-APP-2SO-1SS
I sold it for you. 89.91

(676) k'^{w}uʔɬmíxtn
k'^{w}uʔɬ-**min**-xit-n
end-**RL**-EP-(3AB)-1SS
[I used up his X.] EP2.183.6

Kiyosawa (1999:145), observes that the relational marker "attaches to motion verbs, psychological events, speech act verbs, and also marks the verb for transfer source and location" in Salish. For the Northern and Southern Interior languages, however, she claims it is limited to "motion verbs, psychological

events, and speech act verbs" (p.146). The data suggest that (at least) transfer source verbs should also be included in this list for Nxaʔamxcin.

The following examples illustrate that the relational marker surfaces on verbs of motion:

(677) kcə́kk**mîn**c
k-cə•k•k-**min**-nt-sa-s
POS-*hit*•OC•*hit*-**RL**-TR-1SO-3ER
Someone bumped into me. Y18.140

(678) ʔachúy**m**stms nyʕ'áp
ʔac-huy-**min**-stu-m-s
IM-*visit*-**RL**-TR-1SO-3ER *all the time*
he visits me every day EP4.44.5

(679) k'ʼil'x**m**n
k'il'x-**min**-nt-n
close-**RL**-TR-(3AB)-1SS
[I got close to s.o.] EP2.16.6

Some psychological events marked with the relational suffix are given below:

(680) c'aʔx**mîn**n
c'aʔx-**min**-nt-n
ashamed-**RL**-TR-(3AB)-1SS
I got ashamed of him. W.7.169

(681) ḥáymtmnc 1x
ḥimt-min-nt-sa-s
angry-RL-TR-1SO-3ER + PL
they are mad at me Y14.89

(682) naχ̣a**ł**mncn
naχ̣a**ł**-**min**-nt-si-n
afraid-**RL**-TR-2SO-1SS
I was afraid of you. W.6.6

(683) swát ʔaní cqánaʔ**mn**tx^{w} cnəqínm k'l stx^{w}úl
cqanaʔ-**min**-nt-x^{w} c-nəqinm
who DET *hear*-**RL**-TR-(3AB)-2SS DIR-*go in*-(3AB) LOC *house*
Who did you hear come into the house?

Speech act verbs are also marked by the relational suffix, as shown in (684) to (686):

(684) kast'əq^{w}cín**mn**
kas-t'əq^{w}cin-**min**-nt-n
IR-*holler*-**RL**-TR-(3AB)-1SS
I am going to holler at him. / I am going to shout at him. TG4.72.7

(685) kláx^{w}cn**mn**tus
k-lax^{w}cin-**min**-nt-wa-s
POS-*cry*-**RL**-TR-TO-(3AB)-3ER
Somebody cried for someone.

(686) kmux^{w}t**mi**s wa kiḥána? John
k-mux^{w}t-**min**-nt-s
POS-*laugh*-**RL**-TR-(3AB)-3ER WA *girl* *John*
John laughed at the girl

Finally, verbs of transfer are also marked by the relational suffix:

(687) nk'^{w}ƛ'álq^{w}p**mn**
n-k'^{w}əƛ'=alq^{w}p-**min**-nt-n
POS-*take out=mouth*-**RL**-TR-(3AB)-1SS
I took it out of my mouth. 89.146

(688) ka·c'x^{w}**mi**nn
kat-c'əx^{w}-**min**-nt-n
POS-*spill*-**RL**-TR-(3AB)-1SS
I spilled it on the floor. W7.302

(689) kálx**mn**tx^{w}
kałx-**min**-nt-x^{w}
give-**RL**-TR-(3AB)-2SO
You gave it away. W2.30

(690) khəmhəmpákst**mn**únn
k-həm-həmp=akst-**min**-nun-nt-n
POS-AUG-*drop=hand*-RL-LC-TR-(3AB)-1SS
I accidentally dropped it. EP4.41.1

(691) k^{w}úłn**mn**
k^{w}ułn-**min**-nt-n
borrow-**RL**-TR-(3AB)-1SS
I am borrowing it. Y13.33

(692) np'ət'**mîs**
n-p'ət'-**min**-nt-s
POS-*dump s.t. liquid or wet*-**RL**-TR-(3AB)-3ER
he put it in W7.22

Note that all of the examples in this section are marked by some valence-changing operation creating bivalent stems. The relational suffix never surfaces on stems without being followed by a transitive, causative, applicative or external possession marker.

6.9 Summary

In this chapter, I presented an overview of the derivational operations used in the formation of Nxa?amxcin words. I began in section 6.1 with the category valence for which there is an extensive number of operations in Nxa?amxcin. I first looked at intransitive predicates and how they are distinguished morphologically. I then addressed the operations that create bivalent stems: transitive, causative, applicative and external possession. The category voice also contains numerous operations, which were divided in section 6.2 into pragmatic (topical object, passive, antipassive and indefinite object) and semantic (middle, reflexive and reciprocal) voice. Secondary aspect is also a large category in Nxa?amxcin. In section 6.3 I discussed the stative, inchoative, habitual, repetitive and iterative operations, with the inchoative aspects split into two: the inchoative and the developmental. The category control was then addressed in section 6.4 with a discussion of the out-of-control and limited control operations.

In section 6.5 on category-changing operations, I outlined four separate operations for nominalization: general nominalization, instrumental, agentive and a potential nominalizer: positional prefixing. Adjective formation was also addressed in this section. In section 6.6 on locatives, I discussed all seven positional operations and the three directional operations found in Nxa?amxcin. The category dimension in section 6.7 contained both of the operations augmentative and dimension. Finally, in section 6.8 I addressed the operation relational, which has often been analyzed as an applicative in the Salish literature, but is considered separately here for grammatical reasons.

Chapter Seven

Inflectional Operations

7.0 Introduction

The previous chapter presented a discussion of word operations that take place at the lexical level. This chapter provides an overview of inflectional operations, i.e. operations that take place at the level of syntax. A proposed inflectional stem for Nxa?amxcin is schematized in (1):

(1) ***Inflectional Stem***

$$[_{IS}\ PS\ MOD\ ASP\ NM\ [_{DS}\ [_{LX}\ (Y)\ \sqrt{}ROOT\ (Z)\ ]_{LX}\ ]_{DS}\ \left\{\begin{matrix}\text{GR-PER-NUM}\\ \text{ASP}\\ \text{PS}\end{matrix}\right\}\ ]_{IS}$$

In this chapter I address four categories of inflectional operations. The first outlines the facts surrounding subject/object agreement and possessive marking in terms of *person*, *number*, and *grammatical relation*. The second, *viewpoint aspect*, addresses a major aspectual distinction in Nxa?amxcin: perfective vs. imperfective. The third investigates various operations that can be subsumed under the category *mood*. And finally, *nominalization* is examined from a clausal perspective.

7.1 Person, Number and Grammatical Relation

The *person*, *number* and *grammatical relation* of direct arguments (i.e. subjects and objects) are generally either marked on the predicate or reflected in the form of a clitic.[1] When marked on the predicate, these agreement morphemes surface in the form of a suffix, as indicated in the inflectional stem below by the arrow:

---

[1]The clitic/affix marking of direct arguments has received fairly extensive diachronic investigation in the literature. I refer the reader to Hoard (1971), Newman (1979a,b, 1980), Kroeber (1991, 1999) and H. Davis (2000b).

(2) ***Inflectional Stem***

$$[_{IS}\ PS\ MOD\ ASP\ NM\ [_{DS}\ [_{LX}\ (Y)\ \sqrt{}ROOT\ (Z)\ ]_{LX}\ ]_{DS}\ \{\textbf{GR-PER-NUM}\ \}\ ]_{IS}$$
$$\Uparrow$$

(2) indicates that the suffixes marking agreement are realized at the far right edge of the inflectional stem.

Agreement patterns in Nxa?amxcin reveal a split system morphologically in that person, number and grammatical relation are marked by one morpheme for 1st and 2nd person, while person and grammatical relation is marked separately from number in the 3rd person. Thus, in the diagrams throughout this chapter, I represent 1st and 2nd person separately from 3rd person.

Whether agreement marking takes the form of a clitic or affix depends on the valency of the predicate. In the following sections, I discuss how the person, number and grammatical relation of direct arguments are marked for four different types of constructions: (i) the subject paradigm for monovalent predicates; (ii) the subject paradigm for bivalent predicates; (iii) the object paradigm for bivalent predicates; and (iv) the possessive paradigm.

7.1.1 Intransitive Subjects

Intransitive subjects in Nxa?amxcin trigger overt agreement in the form of a clitic. This agreement reflects person, number and grammatical relation for 1st and 2nd person, and number only for 3rd person plural. 3rd person singular is unmarked. The intransitive subject agreement paradigm is given in (3):

(3) ***Intransitive Subject Agreement***

	Person+Number+Grammatical Relation	
1s	kn	
2s	k^w	
1p	kt / tk	
2p	kp	
	Person+Grammatical Relation	*Number*
3s	-----	-----
3p	-----	lx

The above diagram indicates a split system where person, number and grammatical relation (in this case, "intransitive subject") are jointly represented by a single morpheme for 1st and 2nd person, while 3rd person is overtly marked solely for number, and this only for the plural. Kinkade (1982b:49) points out that the 1st and 2nd person clitics in (3) can be compared with the transitive subject suffixes in the following section in that these clitics "consist basically of k- plus the transitive subject suffixes except in the third person".[2]

There is some variation as to the syntactic positioning of the 1st and 2nd person clitics, but they generally appear in first or second position, as in the following examples:

(4) **kn** núx̣^{w}t
1ss + *go*
I go/went. 92.1

(5) ʔiɬn **k^w**
eat + **2ss**
You ate. 92.2

---

[2]In his pan-Salish discussion of subject person marking, Kroeber (1999:15) states that "[t]wo types of clitic that code subject person and number (among other things) clearly are (or can be reconstructed as having been) composed of an initial element plus a Subject Suffix [...] In the most important such clitic series, found in virtually all the languages of the family, the initial element is **k*".

(6) **kt** t'əsákstm
t'əs-akst-m
1ps + *slap-hand*-MD
We clapped. 91.149

(7) **kp** múxʷmuxʷt
məxʷ•məxʷ•t
2ps + *laugh*•AUG•*laugh*
You (pl.) laughed. 92.5

The 1st pl. intransitive subject marking, shown in (6) as the clitic *kt*, is sometimes realized as *tk*.

3rd person intransitive subject agreement is not overtly marked for person and grammatical relation, as shown in the following examples:

(8) súk'ʷp
sək'ʷ-p
swell-IN-(**3AB**)
It's swollen. 90.104

(9) múxʷmuxʷt **lx**
məxʷ•məxʷ•t
laugh•AUG•*laugh*-(**3AB**) + **PL**
They laughed. 92.6

There is no overt morphological marker to indicate that the subject in (8) and (9) is in fact 3rd person. This is determined by the absence of any overt agreement for person and grammatical relation. Number, however, is overtly marked for 3rd person pl. in the form of the clitic *lx*, which almost consistently appears in second position. This clitic never marks 1st or 2nd pl. as number is always co-represented with person and grammatical function by a single morpheme in these cases.

7.1.2 Transitive Subjects

Transitive subject agreement is marked by suffixes (as opposed to the clitics found in the intransitive subject agreement paradigm).[3] The transitive subject paradigm is as follows:

(10) ***Transitive Subject Agreement***

	Person+Number+Grammatical Relation
1s	-n / -nn
2s	-x^w, -t
1p	-t, -m
2p	-p

	Person+Grammatical Relation	*Number*
3s	-s	-----
3p	-s	lx

The above diagram represents a split system, as was seen for intransitive subject agreement in the preceding section. Both 1st and 2nd person are jointly marked for person, number and grammatical relation by a single morpheme. Two forms are given for 1st person singular: -n and -nn. Kinkade (1982b:50) states that -nn surfaces immediately following a stressed vowel.[4] Compare (11) and (12) below:

(11) tə́q**n**
təq-nt-**n**
touch-TR-(3AB)-**1ss**
I touched it. 89.09.21.53

[3]Kroeber (1999:16–17) notes that the use of clitics with intransitive predicates and suffixes with transitive predicates for subject marking is unique to the Interior languages. Newman (1979a, 1980) claims that this pattern goes back to Proto-Salish.

[4]Kinkade (p.49–50) notes that "this can occur only when -cí- '2 sg. object' or -stú- 'causative' (with a zero 3 sg. object) occurs".

(12) yaʕmstú**nn**
yaʕm-stu-**nn**
gather-CS-(3AB)-**1ss**
I gathered it up. 89.09.21.12

In (11), 1st sg. subject agreement follows the transitive suffix *-nt.* Since there is no preceding stressed vowel the suffix *-n* appears. In (12), the subject marking follows the stressed vowel of the causative suffix *-stú*, and is thus realized as *-nn.*

Other examples of subject agreement for 1st and 2nd person are given below:

(13) p'íqntx^{w} sqáltk
p'iq-nt-**x**^{w}
cook-TR-(3AB)-**2ss** *meat*
You cooked the meat. 92.9

(14) l̓ə̓mɬcít
l̓ə̓m-ɬt-si-**t**
steal-APP-2SO-**1ps**
[We stole it from you.] Kinkade 1982b:56

(15) ləplápst kxápnt**p** pús
kxap-nt-**p**
2PEMpro *chase*-TR-(3AB)-**2ps** *cat*
You (pl.) chased the cat. 92.11

Note that 1st pl. transitive subject agreement has an irregular form, given in (10). Kinkade (1982b:52) indicates that *-m* surfaces in lieu of *-t* as the 1st pl. suffix when the object is 3rd person (no overt marking). Some examples are given in (16) and (17):

(16) kastumístmnt**m**
kas-tumist-min-nt-**m**
IR-*sell*-RL-TR-(3AB)-**1ps**
We are going to sell them. 90.217

(17) cəkstú**m**
cək-stu-**m**
hit-CS-(3AB)-**1ps**
[We hit him/her.] Kinkade 1982b:51

The examples in (16) and (17) contain, respectively, transitive and causative marked predicates. As no overt agreement is realized for 3rd person objects, 1st pl. subject agreement immediately follows the transitive *-nt* marker in (16) and the causative *stú* marker in (17). In both cases, 1st person pl. subject agreement is realized as *-m* instead of *-t*. This is clearly not phonologically motivated, as the suffix follows a [t] segment in (16) and a stressed vowel in (17).

Kinkade (1982b:52) also notes that 2nd sg. subject agreement takes the form of *-t* as opposed to *-x*^{w} when preceded by the 1st pl. object agreement suffix *-al*. This is illustrated in the following example:

(18) ʔəmtált
ʔəm-t-al-**t**
feed-TR-1PO-**2SS**
[You (sg.) fed us.] Kinkade 1982:52

Person and grammatical relation is jointly marked by one suffix, *-s*, for 3rd person subject agreement, as indicated in the diagram in (10). Number is marked for plural only in the form of a clitic. Both 3rd sg. and pl. transitive subject agreement is shown in the following examples:

(19) cə́ks
cək-nt-**s**
hit-TR-(3AB)-**3ER**
S/he hit her/him/it.

(20) cncníl **lx** kxáps wa púS
kxap-nt-**s**
3PEMpro + **PL** *chase*-TR-(3AB)-**3ER** WA *cat*
They chased the cat. 92.13

Example (19) contains a predicate marked for agreement with a 3rd person sg. subject by the suffix *-s*. In example (20), 3rd person pl. subject agreement is also marked by the suffix *-s*, indicating that the subject is 3rd person, however it does not provide any indication as to number. (Note that the 3rd person emphatic pronoun is lexically marked for plurality.) In (19) the 3rd person subject does not

trigger any overt morphology to mark number. The absence of number marking indicates that the subject is singular. Plural 3rd person subjects, on the other hand, trigger overt number agreement, realized as the second place clitic *lx* in (20). Examples like the following suggest that plural marking may be (to some degree) optional:

(21) xəpncás
xəp-nt-sa-s
chew-TR-1SO-3ER
They ate me up. 90.82

The clause in (21) contains 3rd person subject marking, but no overt marking for number. Despite this, the speaker clearly has a plural subject in mind. Omission of the 3rd pl. clitic *lx* is most likely subject to context availability.

7.1.3 Transitive Objects

Transitive object agreement is slightly more complicated than subject agreement, as there are several splits involved in the system. The transitive object agreement morphemes are as follows:

(22) ***Transitive Object Agreement***

	Person+Number+Grammatical Relation	
	First Paradigm	Second Paradigm
1s	-sa(l)	-m
2s	-si	-m
1p	-al	
2p	-ulm	

	Person+Grammatical Relation	*Number*
3s	-----	-----
3p	-----	lx

In (22), 1st and 2nd person object agreement shows a split between singular and plural in that there are two paradigms available for the singular. Kroeber (1999:24) notes that "[m]ost Salish languages have (at least remnants of) two series of Object person-number suffixes". The choice between these depends on which valence-changing operation takes place on the predicate. In Nxa?amxcin, suffixes from the first paradigm surface when the predicate is marked by one of the suffixes *-nt, -łt* or *-tułt.* This is illustrated in the following examples:

(23) kasckícnc
kas-c-kic-nt-**sa**-s
IR-DIR-*arrive*-TR-**1SO**-3ER
He's coming to see me. 92.14

(24) tumístmłcn
tumist-min-łt-**si**-n
sell-RL-APP-**2SO**-1SS
I sold it for you. 89.91

(25) tumistmtúłc
tumist-min-tułt-**sa**-s
sell-RL-APP-**1SO**-3ER
he sold it to me W5.39

(26) Mary łəc'łcás ?inkálx
łəc'-łt-**sa**-s ?in-kalx
Mary hit-APP-**1SO**-3ER 1SPS-*hand*
Mary hit my hand (i.e. with a stick)

Example (23) contains a predicate marked transitive by the suffix *-nt.* The 1st sg. object agreement suffix *-sa* comes from the first paradigm in (22). The same is true for the applicative marked *-łt* and *-tułt*-predicates in (24) and (25). The 2nd sg. object agreement suffix *-si* on the external possession predicate in (26), marked by *-łt,* also comes from the first paradigm in (22).

With respect to the 1st sg. object agreement suffix *-sa* in the first paradigm, the [a] appears only when stressed, and [l] appears only preceding 2nd pl. subject agreement marking (Kinkade 1982b:50), as shown below:

(27) xəpn**cás**
xəp-nt-**sa**-s
chase-TR-**2sO**-3ER
They ate me up. 90.82

(28) ʔác'x̣n**clp**
ʔac'x̣-nt-**sal**-p
look at-TR-**1sO**-2pS
[You people looked at me.] Kinkade 1982b:51

With 2nd sg. object forms from the first paradigm, [i] only appears when stressed, as illustrated by the following example:

(29) ʔicá ḥaw'iɬ**cî**n
ḥaw'y-ɬt-**si**-n
DEM *make*-APP-**2sO**-1sS
There, I made it for you. 89.87

When a predicate is marked by the suffix *-stu* or *-xit*, 1st and 2nd sg. object agreement comes from the second paradigm in (22). As the righthand column in (22) indicates, both 1st and 2nd sg. object agreement are marked by *-m*. Some examples are given below:

(30) q^{w}ən'q^{w}ən'stú**ms**
q^{w}ən'q^{w}ən't-stu-**m**-s
poor-CS-**1sO**-3ER
he made me poor MDK

(31) ʔacʔac'x̣st**mn**
ʔac-ʔac'x̣-stu-**m**-n
IM-*watch*-TR-**2sO**-1sS
I am watching you. W5.44

(32) c'əkxít**ms**
c'ək-xit-**m**-s
count-APP-**1sO**-3ER
he counted for me W8.196

Example (30) contains a predicate marked causative by the suffix *-stu*. The 1st sg. object agreement marker is the suffix *-m* from the second paradigm in (22).

The following predicate in (31) is marked transitive by the alternate transitive suffix *-stu*, which surfaces when a transitive predicate is marked for imperfective aspect by the prefix *ʔac-*. The 2nd sg. object agreement marker *-m* in this case is also from the second paradigm in (22). Finally, the applicative predicate marked by *-xit* in (32) is marked for 1st sg. object agreement from the second paradigm.

1st and 2nd pl., and both 3rd sg. and pl. object agreement is marked based on a single paradigm, as shown in (22). 1st pl. appears as *-ál* when stressed and *-l* when unstressed, as shown in (33) and (34):

(33) kƛ'əm'nt**ál**p
k-ƛ'əm'-nt-**al**-p
LOC-*pass*-TR-**1po**-2ps
[You people went past us.] Kinkade 1982b:51

(34) ʔác'ẋnt**l**p
ʔac'ẋ-nt-**al**-p
watch-TR-**1po**-2ps
[You people looked at us.] Kinkade 1982b:51

The same 1st pl. forms are present when the predicate is marked with *-stu*, as shown in (35) and (36):

(35) cəkst**ál**t
cək-stu-**al**-t
hit-TR-**1po**-2ss
[You hit us.] Kinkade 1982b:51

(36) cḥaḥím'aʔst**l**p
ʔac-ḥaḥim'aʔ-stu-**al**-p
IM-*dislike*-TR-**1po**-2ps
[You people dislike us.] Kinkade 1982b:51

2nd pl. object agreement appears as *-úlm* when stressed and *-lm* when unstressed, as shown below:

(37) kƛ'əm'nt**úlm**t
k-ƛ'əm'-nt-**ulm**-t
POS-*pass*-TR-**2PO**-1PS
[We went past you people.] Kinkade 1982b:51

(38) t'əɬɬnúnt**lmn**
t'ə•ɬ•ɬ-nun-nt-**ulm**-n
dirty•OC•*dirty*-LC-TR-**2PO**-1SS
I got you folks extra dirty. 90.79

Both of the above forms also appear on predicates marked by *-stu*, as in (39) and (40), although it is difficult to tell if the stressed *-ú* in (39) is from the *-stu* suffix or the 2nd pl. object agreement marker (Kinkade 1982b:52):[5]

(39) cəkst**úlm**s
cək-stu-**ulm**-s
hit-TR-**2PO**-3ER
[He hit you people.] Kinkade 1982b:51

(40) cḥaḥím'aʔst**lm**s
ʔac-ḥaḥim'aʔ-stu-**ulm**-s
IM-*dislike*-TR-**2PO**-3ER
[He dislikes you people.] Kinkade 1982b:51

Person and grammatical relation are not overtly marked for 3rd person objects in Nxaʔamxcin. This is the case for both 3rd person sg. and pl. objects, as shown below:

(41) tə́qn
təq-nt-n
touch-TR-(**3AB**)-1SS
I touched it. 89.09.21.53

(42) sá ʔac'ə́mstux^{w}
ʔac-ʔəm-stu-x^{w}
Q IM-*feed*-TR-(**3AB**)-2SS
Did you feed him? W.11.109

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[5]Ewa Czaykowska-Higgins (p.c.) points out that since the vowel of *-stu* is deleted before [a], as seen in example (35), presumably the *-stu* vowel is also deleted before the [u] in *-ulm*.

(43) kckʷánaʔntxʷ **lx**
kcəkʷanaʔ-nt-xʷ
uncover-TR-(**3AB**)-2SS + **PL**
you uncovered them JM3.152.9

(44) t'q'ʷcínmn **lx**
t'əq'ʷcin-min-nt-n
holler-RL-TR-(**3AB**)-1SS + **PL**
I called them. JM3.4.1

Agreement marking for 3rd person sg. objects does not overtly reflect number, unlike 3rd pl. objects which trigger plural number marking in the form of the clitic *lx* in (43) and (44). Note that in cases where there is a 3rd plural clitic and both subject and object are 3rd person, the object is interpreted as plural unless the context indicates otherwise.

The surface forms of the transitive object suffixes often reflect a number of different segmental processes discussed in section 4.3. For example, the combination of the transitive marker *-nt*, the 1st sg. object suffix *-sa*, and the 3rd person ergative suffix *-s* results in the surface form *-nc*. In the underlying form -nt-sa-s, the unstressed vowel [a] is deleted followed by subsequent degemination of one of the [s] segments (nt-s-s → nt-s). A process of affrication then takes place resulting in nts → nc. (The same pattern minus degemination can be seen with the 2nd sg. object suffix *-si* in (24).)

In example (26), the vowel of the 1st sg. object suffix is stressed and, as a result, is present in the surface form. There is no degemination in this example as the resulting form is łt-sa-s. The [t] segment of the external possession marker *-łt* and the [s] segment of *-sa* then undergo affrication resulting in łtsas → łcas.

7.1.4 Possessive

Possessive marking is restricted to nouns or nominalized predicates. Possessive markers reflect both person and number of the possessor, except in the

3rd person where number is not morphologically indicated.[6] The possessive paradigm is given in (45):

(45) ***Possessive Agreement***

	Person+ Number
1s	ʔin-
2s	ʔin-
1p	-t
2p	-p
	Person
3	-s

As shown in the above paradigm, the possessive markers form a split system whereby 1st and 2nd sg. possessive is marked by a prefix while 1st and 2nd pl. and 3rd person possessive are marked by suffixes.

Both 1st and 2nd person singular are marked by the prefix *ʔin-*, as in the examples in (46) and (47):[7]

(46) **ʔin**x̣x̂̓'cín
ʔin-x̣x̂̓'cin
1SPS-*horse*
[my horse] 92.297

(47) **ʔin**kálkalx
ʔin-kal•kal•x
1SPS-*hand*•AUG•*hand*
[your hands] 90.262

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[6]See Newman (1979a) for a reconstruction of the Proto-Salish possessive paradigm.

[7]Although I use the term *prefix* throughout this work, I remain non-commital regarding the status of *ʔin-*. It is generally both written as and discussed as a prefix in the literature on Nxaʔamxcin, even though Kinkade (1999) intimates that it may be a clitic. Native speakers sometimes write *ʔin-* as a separate word, which suggests they view it as an independent phonological entity.

The *-n* in this prefix is deleted when followed by [s], as in (48):

(48) **ʔi**sccəm'ált
ʔin-sccəm'alt
1sPS-*child*
my children

It is of interest to note that 1st and 2nd sg. not only share the same marker in the possessive paradigm, but also in the second paradigm for object agreement (see (22)) where both are realized as *-m*.

Examples of 1st and 2nd pl. possessive marking are as follows:

(49) q'^{w}áyl'əqst**t**
q'^{w}ayl'əqst-**t**
priest-**1pPS**
our priest AnII:8

(50) yámx̣^{w}a?**p**
yamx̣^{w}a?-**p**
basket-**2pPS**
your (pl.) baskets 90.216

3rd person, which is also represented by a suffix, is not marked for number, as was the case with 3rd person subject and object agreement suffixes. Some examples are given in (51) and (52):

(51) st'ámka?**s**
st'amka?-**s**
daughter-**3PS**
her daughter 91.116

(52) qácks
qack-**s**
older brother-**3PS**
their older brother (male speaking) Czaykowski 1983:41

If we compare the possessive paradigm in (45) with the transitive subject agreement paradigm in (10), we find a number of similarities between the two. The most striking is the fact that 1st and 2nd person pl. and 3rd person are

marked by the same suffixes in both paradigms, *-t*, *-p* and *-s* respectively. Another point of interest is the common [n] segment between the 1st (and 2nd) sg. possessive prefix and the 1st sg. transitive subject agreement suffix.

Having looked at the subject, object and possessive paradigms in Nxa?amxcin, in the following section I turn to another major inflectional category in Nxa?amxcin: viewpoint aspect.

7.2 Viewpoint Aspect

The importance of *aspect* in Salish languages has been frequently acknowledged by linguists. Czaykowska-Higgins and Kinkade (1998:28) write that "[a]spect is clearly a central category in the morphology and syntax of Salish languages, but neither its forms nor its functions have been much studied to date". Etymological work on Salish aspectual affixes has appeared in Newman (1976) and Kinkade (1996a), and in an unpublished paper by Kinkade and A. Mattina (1981).

This section will briefly touch on two different kinds of *viewpoint aspect* in Nxa?amxcin: *perfective* and *imperfective*. Previous work on viewpoint aspect in Nxa?amxcin is found in Kinkade 1983a and 1996a where it is indicated that the imperfective is marked by a number of prefixes and one suffix while the perfective is unmarked.[8] The position of imperfective markers in the word is given in bold in the following schema:

(53) ***Inflectional Stem***

$$[_{IS}\ PS\ MOD\ \mathbf{ASP}\ NM\ [_{DS}\ [_{LX}\ (Y)\ \sqrt{}ROOT\ (Z)\ ]_{LX}\ ]_{DS}\ \mathbf{ASP}\ ]_{IS}$$
$$\Uparrow \qquad\qquad\qquad\qquad \Uparrow$$

The inflectional stem in (53) indicates that markers of viewpoint aspect appear prefixed to the derivational stem or, in the case of intransitive predicates, suffixed to the derivational stem.

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[8]This is apparently a pan-Salish pattern (Kinkade 1996a).

My discussion of viewpoint aspect is brief for the following reasons: (i) I did not delve into aspect as part of my fieldwork; (ii) it is extremely difficult to determine from texts what the semantic nuances are between different prefixes; and (iii) there was some disagreement amongst the speakers I worked with over which aspectual prefix was appropriate in a particular construction. For these reasons the discussion is limited to broad generalizations on the semantics involved in each category.

7.2.1 Perfective

Perfective viewpoint has been analyzed by Smith (1997) who writes, "[s]entences with a perfective viewpoint present a situation as a whole. The span of the perfective includes the initial and final endpoints of the situation" (p.66). Perfective viewpoint is not overtly marked in Nxaʔamxcin, as shown in the following examples:

(54) hápiy' lx tl' xƛ'út
hapy'
drop-(3AB) + PL LOC *rock*
They fell off the rock.

(55) cəkntáls
cək-nt-al-s
hit-TR-1SO-3ER
He hit us.

Both the intransitive (54) and transitive (55) clauses above are in the perfective viewpoint. There is no overt phonological marker to indicate that this is the case, however the absence of viewpoint aspect marking signals the perfective viewpoint.

The following excerpt from Kinkade's (1978) published transcription of the story *Coyote and Rock* provides an example of a series of events in sequence, each from a perfective viewpoint.

(56) a. wíkłc wa? yəx̣ʷyx̣ʷútxn stxʷúls
wik-łt-s stxʷul-s
see-TR-(3AB)-3ER WA *badger* *house*-3PS
[he] saw Badger's house,

b. lcí nqənmúl'əxʷ
n-qənm=ul'əxʷ
there POS-*go down into=ground*-(3AB)
and right there he dived into the ground.

c. nakíckn'tus wa? xƛ'út
na-kic=ikn-nt-wa-s
POS-*arrive=back*-TR-TO-(3AB)-3ER WA *rock*
Then Rock caught up to him,

d. kłntpápntm
kł-n-təp=ap-nt-m
POS-POS-*cover=door*-TR-PAS-(3AB)
and blocked the entrance.

Kinkade 1978:16

The above examples involve four different events, each of which is viewed in its entirety from beginning to end. As a result, each predicate in (56) has no overt morphological marking for viewpoint aspect, indicating the storyteller has chosen a perfective viewpoint.

The morphological distinction between perfective and imperfective viewpoint is that of no overt marking vs. overt marking. Overt marking of the imperfective is outlined in the following section.

7.2.2 Imperfective

Unlike the perfective, *imperfective* viewpoint aspect is overtly marked on the predicate in Nxaʔamxcin. Smith (1997:73) indicates that "[i]mperfective viewpoints present part of a situation, with no information about its endpoints [...] The unmarked imperfective spans an interval that is internal to the situation". This is in contrast with the perfective in which a situation is viewed in its entirety.

Two major semantic types of imperfectives are evident in the data, each of which are marked by the same affixes. The first involves events which are in progress, i.e. neither the startpoint nor endpoint are brought into focus. Some examples are given in (57) to (59):

(57) **ʔacḥuykstmstxʷ** lx
ʔac-ḥuy=akst-min-stu-xʷ
IM-*annoy=hand*-RL-TR-(3AB)-2SS + PL
You're bothering them. J.1.205

(58) qan'wáłaʔ ʔałi waʔ **sc**yiləmxʷscút**əxʷ** cnil
sc-yəlmixʷm-stu-cut-**mix**ʷ
Pretender because WA IM-*chief*-TR-RF-IM-(3AB) 3SEMpro
That Pretender is acting like a great chief.
AfII:5

(59) kn kasmərát**əxʷ** t sláp
kas-s-mərat-**mix**
1SS + IR-IM-*gather*-IM OBL *wood*
I'm going to gather wood. 90.58

Each of the above examples present events either in progress ((57) and (58)) or to be in progress (59). Example (57) focuses on the fact that someone is in the *process* of bothering people. No attention is paid to the beginning or end of this event, only the period between start and finish. Example (58) indicates that the imperfective viewpoint can also be applied to nouns with a predicative function, e.g. *yəlmíxʷm* 'chief'. And finally, example (59) indicates that imperfective viewpoint is not restricted to present time. Unrealized events can also be viewed as imperfective.

The second type of imperfective found in the data involves an open-ended view of repeated events. Thus, the event itself is not necessarily in progress, but the repetition of the event is. Consider the following examples:

(60) niʕ'áp **sc**ptíx̣ʷ**uxʷ**
sc-ptix̣ʷ-**mix**
all the time IM-*spit*-IM-(3AB)
He spits all the time. W.7.20

(61) k'laʔká kn núx̣t kʷaʔ niʕ'áp **ʔac**wíkłn
ʔac-wik-łt-n
wherever + 1SS *go and all the time* IM-*see*-TR-(3AB)-1SS
Wherever I go I see him.
W.9.165

(62) ʔaccíʕʷlxstms ay'
ʔac-ciʕʷlx-stu-m-s
IM-*bathe*-TR-1SO-3ER + PST
She used to bathe me. W.8.85

Examples (60) and (61) are indicative of ongoing repetitive events which are not necessarily in progress at present time, but the time period during which this event repeats itself is in progress. Example (62), situated in the past by the temporal marker *ay'*, is also indicative of a time period in which a repetitive event takes place, even though the focus is not on the event itself being in progress.

Morphological indicators of imperfective aspect illustrate a split system based on valence. Intransitive predicates follow one pattern while transitive predicates follow another. I discuss each of these in turn below.

7.2.2.1 Intransitive

There are three separate affixes involved in marking imperfective aspect on intransitive predicates. The first of these is the prefix *sac-* which alternates with the form *sc-*. The distribution of these alternate forms is similar to that of the positional marker *na-* vs. *n-* in section 6.6.1.5. Prosodically speaking, the form *sac-* surfaces when preceding a stressed mora, and *sc-* surfaces when preceding an unstressed mora, as schematized in (63):

(63) ***sac-*** / _ μ́ ***sc-*** / _ μ̆

Intransitive imperfectives marked with *sac-/sc-* are always marked with the intransitive suffix *-mix*. This is illustrated in (64) to (71):

(64) k'laká? kʷ **sac'**ím'xəx**ʷ**
sac-ʔim'x-**mix**
where + 2SS **IM-***move***-IM**
Where are you moving to? W.7.185

(65) kən **sac**wák^{w}mnct**əx^{w}**
sac-wak^{w}-min-nt-cut-**mix**
1SS + IM-*hide*-RL-TR-RF-IM
I'm hiding. W.7.319

(66) **sac**cíʕ^{w}lx**əx^{w}**
sac-ciʕ^{w}lx-**mix**
IM-*bathe*-IM-(3AB)
He's bathing now. W.8.80

(67) ʔałú x̣x̣ƛ'cín **sac**'íɬn**əx^{w}**
sac-ʔiɬn-**mix**
DET *dog* IM-*eat*-IM-(3AB)
That dog is eating. 90.14

(68) **sc**naʔaʔq'**mîx**
sc-nə•ʔ•ʔ•q'-**mix**
IM-*rotten*•IN•OC•*rotten*-IM-(3AB)
it's rotting
it's getting rotten W.10.109

(69) **sc**ƛ'əx̣p**mîx**
sc-ƛ'əx̣p-**mix**
IM-*grow up*-IM-(3AB)
He's growing up. W.8.134

(70) **sc**k^{w}iy**mîx**
sc-k^{w}iy-**mix**
IM-*hunt*-IM-(3AB)
He's hunting. W.8.151

(71) **sc**ḥaw'iyál**tux^{w}**
sc-ḥaw'y=alt-**mix**
IM-*make=child*-IM-(3AB)
She's giving birth. W.7.42

Examples (64) to (67) illustrate imperfective intransitive predicates marked with the prefix *sac-*, while the imperfective forms in (68) to (71) are marked with the variant *sc-*. Note that the suffix *-mix* takes on two different surface forms in the above examples. Kinkade (1983a, 1996a) indicates that this suffix has three variants: the stressed variant *-mix*; the unstressed variant *-əx^{w}* (see section 4.2); and the variant *-mx* which surfaces immediately following a stressed vowel. Examples of the stressed variant are given in (68) to (71), and the unstressed variant in (64) to (67). Examples containing the *-mx* variant are given below:

(72) ʔací snkʷancímx
s-nkʷancinm-**mix**
DET IM-*sing*-IM-(3AB)
That person is singing. 90.28

(73) stəm'qímx
s-təm'qin-**mix**
IM-*deaf*-IM-(3AB)
He's getting deaf. Kinkade 1983a:9

In both of the above examples, the suffix *-mix* immediately follows a stressed vowel due to deletion of an [n] segment preceding [m]. The *-mx* variant of the imperfective marker surfaces in these cases.[9]

Many intransitive imperfectives are marked with the prefix *s-* as opposed to the prefix *sac-/sc-*. It is not entirely clear if there is any aspectual difference between the two. Some examples are given in (74) to (79):

(74) Mary sƛ̓'xʷúpəxʷ
s-ƛ̓'xʷup-**mix**
Mary IM-*win*-IM-(3AB)
Mary is winning. 90.42

(75) słc'áltuxʷ
s-łəc'=alt-**mix**
IM-*whip=child*-IM-(3AB)
[He's whipping his kids.] W.8.187

---

[9]Kinkade (1983a:9) provides an exception to this rule with the following example:

sacláxʷcnmx
sac-laxʷcinm-**mix**
IM-*cry*-IM-(3AB)
he's crying

In the above example the suffix *-mix* surfaces as [mx] even though it is not immediately preceded by a stressed vowel, as in (72) and (73).

(76) max^{w} **snəpánkux^{w}**
s-nəpank-mix
MOD **IM-*pregnant*-IM**
Maybe she's pregnant. W.7.38

(77) **sxəstmîx**
s-xəs-t-mix
IM-*lose*-ST-IM-(3AB)
He's lost. W.9.19

(78) kn **stək^{w}pmîx**
s-tək^{w}-p-mix
1SS + **IM-*smother*-IN-IM**
I'm smothering. W.7.152

(79) ʔinca łuʔ kn **smux^{w}tmîx**
s-məx^{w}t-mix
1SEMpro SUB + 1SS IM-*laugh*-IM
I'm the one who's laughing. 92.348

All of the above examples contain intransitive predicates marked imperfective by the combination of the prefix *s-* and the suffix *-mix*.

There are some examples in the data of imperfect intransitive predicates marked by *s-* only, as in (80):

(80) **słwám** lx
s-łwam
IM-*go(pl.)*-(3AB) + PL
they're going 90.187

As far as I can determine, the prefix *sac-/sc-* always cooccurs with *-mix*. The suffix *-mix* can sometimes appear alone on imperfective stems, however, without either *sac-/sc-* or *s-* prefixes, as in (81).

(81) **ḥaw'w'imîx**
ḥa•w'•w'y-mix
work•OC•*work*-IM-(3AB)
he's working

As will be seen in the following section, imperfective marking on transitive predicates follows a different pattern from that of intransitives.

7.2.2.2 Transitive

In transitive constructions, imperfective viewpoint is marked by one of the variants *ʔac-/c-*. The distribution of these, like the *sac-/sc-* prefix, also follows that of the positional prefix *na-* vs. *n-* in section 6.6.1.5. As indicated in (82), the variant *ʔac-* surfaces when preceding a stressed mora, while the variant *c-* surfaces when preceding an unstressed mora:

(82) ***ʔac-*** / _ μ́ ***c-*** / _ μ̆

The marking of imperfectivity on transitive predicates is prefixal only. The suffix *-mix* never appears on transitive predicates. Some examples of transitives marked for imperfective aspect are given below:

(83) **ʔac**t'áɬsn
ʔac-t'aɬ-stu-n
IM-*smear*-TR-(3AB)-1SS
I'm smearing it on. W.9.96

(84) **ʔac**púx^{w}sc
ʔac-pux^{w}-stu-s
IM-*blow*-TR-(3AB)-3ER
He's blowing on it. W.8.63

(85) sá pan'ká? **ʔac**sáwstms
ʔac-saw-stu-m-s
Q *ever* IM-*ask*-TR-2SO-3ER
Did he ever ask you? W.7.132

(86) niʕ'áp **ʔac**wák^{w}sn
ʔac-wak^{w}-stu-n
all the time IM-*hide*-TR-(3AB)-1SS
I keep it hidden. W.7.230

(87) kłaql'xáw'sn łuʔ wa **c**ḥaw'istús
c-ḥaw'y-stu-s
chair SUB WA IM-*work*-TR-(3AB)-3ER
He is making a chair.

(88) **c**yəmstúnn
c-yəm-stu-nn
IM-*pin*-TR-(3AB)-1SS
I'm pinning it. W.9.63

(89) **c**xəsmísc
c-xəs-min-stu-s
IM-*lose*-RL-TR-(3AB)-3ER
He's losing it. W.9.6

(90) **c**pən'stúnn
c-pən'-stu-nn
IM-*bend*-TR-(3AB)-1SS
I'm bending it. W.9.184

The above examples all contain transitive predicates marked for imperfective aspect by the prefix *ʔac-/c-*. In (83) to (86), the variant *ʔac-* surfaces because, prosodically, the prefix is adjacent to a stressed mora, i.e. the stressed vowel of the root. In (87) to (90) the *c-* variant appears as the prefix is adjacent to an unstressed mora. As (83) to (90) indicate, imperfectives are marked transitive by the transitive suffix *-stu* (section 6.1.2).[10]

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[10]While most transitives are marked imperfective by the prefix *ʔac-/c-*, there are a few examples in the data which are marked by *sc-* or *s-*.

(i) **sc**x^{w}iy'áltəmsc
sac-x^{w}iy'=alt-min-stu-sa-s
IM-*hold=child*-RL-TR-1SO-3ER
he is holding my baby W7.136

(ii) **s**t'əl'stús
s-t'əl'-stu-s
IM-*tear*-TR-(3AB)-3ER
he is tearing it Y16.276

(iii) **s**c'əkstús
s-c'ək-stu-s
IM-*count*-TR-(3AB)-3ER
He's counting them right now. W.8.109

Example (i) contains a transitive predicate marked imperfective by the prefix *sc-* while examples (ii) and (iii) are marked by the prefix *s-*. Note that, like the *ʔac-/c-* marked examples in (83) to (90), the predicates in (i) to (iii) are also marked transitive by the suffix *-stu* indicating that *-stu* as a transitive marker is not necessarily restricted to cooccurrences with *ʔac-/c-*.

An interesting example of an imperfective transitive in Kinkade's data is

7.3 Mood

According to Bybee (1985:28), *mood* "refers to the way the speaker presents the truth of the proposition in the discourse and real-world context". The operations that actually fall under this definition can vary from one author to another. This section presents a somewhat sketchy look at mood in Nxa?amxcin, as the picture is not entirely clear. I limit this discussion to the operations of irrealis, potential, deontic and probability. I have grouped these together here for the sake of unification, but note that only the irrealis represents an inflectional operation. The others — potential, deontic, and probability — are marked by particles, small (mono or bisyllabic) words which Kinkade (1981b:32) notes "may not be inflected and, in Salishan languages, may not be predicative".

7.3.1 Irrealis

Irrealis is a highly productive category in Nxa?amxcin and any thorough analysis of its distribution spills over into the syntax of the language. In his discussion of realis/irrealis mode, Payne (1997:244) gives the following definition:

> A prototypical realis mode strongly asserts that a specific event or state of affairs has actually happened, or actually holds true. A prototypical irrealis mode makes no such assertion whatsoever. Irrealis mode does not necessarily assert that an event did not take place or will not take place. It simply makes no claims with respect to the actuality of the event or situation described.

Irrealis examples are often glossed in the Salish literature as 'unrealized' (e.g. Kinkade and Mattina 1981, Kinkade 1996a) or as 'future' (e.g. N. Mattina 1999a).

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given below:

(iv) **?as**t'aq^{w}kstəms
?as-t'aq^{w}=akst-stu-m-s
?as-*lick=hand*-TR-1SO-3ER
It's licking my hand. W.8.254

This example is unusual in that it appears to be marked imperfective by both the *?ac-* and *s-* prefixes. This is not a common pattern in the data.

Kinkade (2001:196) indicates that irrealis mood is marked in two ways in Nxa?amxcin: by *kas-* on verbs and by *kał-* on nouns.[11] Compare the following examples:

(91) **kas**?ámtn
kas-?əm-t-n
IR-*feed*-TR-(3AB)-1SS
I'm going to feed him. W.11.106

(92) kn **kał**yilmíx^{w}m
kał-yilmix^{w}m
1SS + **IR**-*chief*
I'm going to be chief. W.7.84

The verb *?əm* 'feed' in example (91) is marked irrealis by the prefix *kas-* while the noun *yəlmix^{w}m* 'chief' in (92) is marked irrealis by the prefix *kał-*. The following example also suggests that adjectives are prefixed with *kał-* when marked irrealis:

(93) **kał**wəsxnálq^{w}
kał-wisxən=alq^{w}
IR-*long=pole*-(3AB)
He'll be tall.
He's going to be tall. W.11.118

In (98) the adjective *wísxən* 'long' is marked irrealis by the prefix *kał-*.

When the 1st/2nd person possessive marker *?in-* and the irrealis prefix cooccur, instead of the expected combination *?inkas-* or *?inkał-*, we find the combined form *kis-* or *kił-*, as indicated in Kinkade 1996a, 2001. Examples are given in (94) and (95):

(94) lút **kis**?iłn
?in-kas-?iłn
NEG **2SPS-IR**-*eat*
Don't you eat! W.2.95

---

[11]The same variation has been noted for Colville-Okanagan by A. Mattina (1993) and N. Mattina (1996). In section 5.1 it is suggested that the *kas-/kał-* contrast is indicative of a noun-verb distinction in Nxa?amxcin.

(95) **kiłnúx̣ʷnux̣ʷ**
ʔin-kał-núx̣ʷnux̣ʷ
2sPS-IR-*wife*
[your future wife] AnI:7

Kinkade refers to the irrealis category in Nxaʔamxcin in his pan-Salish discussion of aspect (1996a) and in his historical comparison of irrealis cognates in the Salish family (2001). There is, however, no indepth discussion available in the literature on the semantics surrounding irrealis mood in Nxaʔamxcin.[12]

From the data available it is clear that one major usage of irrealis mood is to indicate that an event has not yet taken place. Some examples are as follows:

(96) kn **kas**ʔiłnəxʷ
kas-ʔiłn-mix
1sS + **IR**-*eat*-IM
I'm going to eat.

(97) kn **kas**mərátəxʷ t sláp
kas-mərat-mix
1sS + **IR**-*gather*-IM OBL *wood*
I'm going to gather wood. 90.58

(98) **kas**lúpn ʔaní sw'an'áx
kas-lup-nt-n
IR-*dry*-TR-(3AB)-1sS DET *huckleberries*
I am going to dry the huckleberries. 90.212

(99) **kas**tumîstmntm
kas-tumist-min-nt-m
IR-*sell*-RL-TR-(3AB)-1sS
We are going to sell them. 90.217

(100) kn **kas**nptx̣ʷátkʷəxʷ
kas-n-ptix̣ʷ=atkʷ-mix
1sS + **IR**-POS-*spit=water*-IM
I'm going to spit in the water.

(101) **kas**ckmînn
kas-cəkmin-nt-n
IR-*throw*-TR-(3AB)-1sS
I'm going to throw it away. W.4.27

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[12]N. Mattina (1999a) provides a semantic account for neighbouring Colville-Okanagan and her findings are similar to the facts in Nxaʔamxcin.

(102) **kas**x̣alíɬn yaʕ'tú waʔ sqəláw's
kas-x̣ali-ɬt-n sqəlaw'-s
IR-*ask for*-APP-(3AB)-1SS *all* WA *money*-3PS
I'm going to ask for all of his money. W.8.19

(103) ʔá kn **kas**kɬḥacáy'n ʔací spóɬaʔ
kas-kɬḥacay'-nt-n
yes + 1SS **IR**-*tease*-TR-(3AB)-1SS DET *owl*
Oh, I'm going to tease that Owl. PfI:4

(104) swát ʔaní **kas**ḥiy'pmíntəx^{w}
kas-ḥiy'pmin-nt-x^{w}
who DET **IR**-*scold*-TR-(3AB)-2SS
Who are you going to scold?

(105) lút **kas**táw'n
kas-taw-nt-n
NEG **IR**-*buy*-TR-(3AB)-1SS
I'm not going to buy it. W.3.3.54

(106) k'l laʔká? k^{w} **kas**ʔím'xəx^{w}
k'l laʔkaʔ **kas**-ʔim'x-mix
LOC *where* + 2SS **IR**-*move*-IM
Where are you going to move? W.7.286

(107) **kis**nk'^{w}yúp'aʔ
ʔin-**kał-s**-nk'^{w}=yup'aʔ
1SPS-**IR**-NM-*fellow=play*
He's going to be my playmate. W.6.4

(108) k^{w}aʔ ʔica yay'áwt ʔani **kas**yaʕ'tú ɬuʔ **kas**tamwíl'xəx^{w}
kas-yaʕ'tu **kas**-tamwil'x-mix
and DEM *today* DET **IR**-*all* SUB **IR**-*lose it all*-IM-(3AB)
[And so today, they will all lose it.]
NMFn I:12

This same usage can also apply to past events not realized, as in the following example marked by the temporal past clitic *ay'*:

(109) **kas**łáqlxəx^{w} ay'
kas-łaqlx-mix
IR-*sit down*-IM-(3AB) + PST
He was going to sit down. W.11.20

Nouns that have not yet come into existence can also be marked for irrealis, as shown in (110) to (113):

(110) nmənímməl kt sƛ̓'q'^{w}úmx **kał**yámx̣^{w}aʔt
s-ƛ̓'q^{w}umx **kał**-yamx̣^{w}aʔ-t
1pEMpro + 1pS IM-*make a basket* IR-*basket*-1pPS
We are making cedar baskets for ourselves. 90.215

(111) **kał**ʔinwíll **ki**stx^{w}ul
kał-ʔinwill ʔin-**kał**-stx^{w}ul
IR-2sPSpro 2sPS-IR-*house*
This is going to be your house. W.11.63

(112) **kas**ḥaw'iynúnc lx **kał**yilmíx^{w}ms
kas-ḥaw'y-nun-nt-sa-s **kał**-yilmix^{w}m-s
IR-*make*-LC-TR-2sO-3ER + PL IR-*chief*-3PS
They're going to make me their chief. W.7.87

(113) **kas**ḥàw'iyncín **ka**ssx^{w}iyál'q^{w} **kał**múl'aʔ **ka**sx^{w}iyál'q^{w}
kas-ḥaw'y-nt-si-n **kał**-sx^{w}iyal'q^{w} **kał**-mul'aʔ **kał**-sx^{w}iyál'q^{w}
IR-*make*-TR-2sO-1sS IR-*worm* IR-*tapeworm* IR-*worm*
[I will make you a worm, a tapeworm (maggots), a worm.]
AfIII:5

Irrealis mood also surfaces in many subordinate constructions. For example, purpose-type subordinate clauses are marked irrealis, as shown in (114) to (117):

(114) sqəl'tmíx^{w} k^{w}aʔ smʔámm łwám lx k'l Omak
man *and* *woman* *go(pl.)*-(3AB) + PL LOC *Omak*
kasƛ̓'aʔúsəx^{w} lx t stx^{w}úl
kas-ƛ̓'aʔus-mix
IR-*look for*-IM-(3AB) + PL OBL *house*
A man and woman went to Omak to look for a house.

(115) k^{w}ənnáma?st t n'n'ík'mən' **kas**líys məʔástms
k^{w}nam=aʔst **kas**-liy-nt-s məʔástm-s
take=weapon-(3AB) OBL *knife* IR-*stab*-TR-(3AB)-3ER *father*-3PS
she took a knife to stab her father

(116) sqəl'tmíx^{w} núx̣^{w}t **kask^{w}**iymíx t míx̣ał
kas-k^{w}iy-mix
man *go*-(3AB) IR-*hunt*-IM-(3AB) OBL *bear*
The man went out to hunt for bear.

(117) ƛ̓'aʔáɬtlmn kasc'íɬnp
ƛ̓'aʔan-ɬt-ulm-n **kas**-s-ʔiɬn-p
look for-APP-2PO-1SS **IR**-NM-*eat*-2PPS
I'll go get them for you to eat AflII:4

Irrealis marking also appears on subordinate clauses of desiderative-type predicates.

(118) x̣mánkncn **kastx̣^{w}əxtx^{w}**
x̣mank-nt-si-n **kas**-tx̣^{w}ux-t-sa-x^{w}
want-TR-2SO-1SS **IR**-*help*-TR-1SO-2SS
I want you to help me. 91.181

(119) yə́ʕ'^{w}yəʕ'^{w}t wa x̣mánks ʔací sqəl'tmíx^{w}
x̣mank-nt-s
hard WA *want*-TR-(3AB)-3ER DET *man*

kask^{w}ántus **kałnux̣^{w}nux̣^{w}s**
kas-k^{w}an-nt-wa-s **kał**-nux̣^{w}nux̣^{w}-s
IR-*take*-TR-TO-(3AB)-3ER **IR**-*wife*-3PS
She really wanted the man to take her for his wife.

(120) k'uʔk'iʕ'^{w}m ʔaní smʔámm **kaskkícntm**
k'əʕ^{w}-k'iʕ^{w}-m **kas**-kkic-nt-m
AUG-*pray*-m-(3AB) DET *woman* **IR**-*find*-TR-PAS-(3AB)
The woman prayed to be found.

(121) lút x̣mánks **kasʔiɬns**
x̣mank-s **kas**-ʔiɬn-s
NEG *like*-3PS **IR**-*eat*-3PS
He doesn't feel like eating. W.3.18

Subordinate clauses of asking, telling or ordering-type predicates are also found in the irrealis mode.

(122) ḥəmcímnc ʔaɬú **kastx̣^{w}úxtn**
ḥamcin-nt-sa-s **kas**-tx̣^{w}uxt-nt-n
hire-TR-1SO-3ER DET **IR**-*help*-TR-(3AB)-1SS
He asked me to help him. 92.91

(123) cúnt ta? **kascnqímx**
cut-nt **kas**-c-nqinm-mix
say-TR-(3AB)-(2SS) + IMP **IR**-DIR-*go in*-(AB)
Ask him to come in! W.7.129

(124) n?iw'qn **kas**p'iqs wa ntitiyáx
n?iwqin-nt-n **kas**-p'iq-nt-s
say-TR-(3AB)-1SS **IR**-*cook*-TR-(3AB)-3ER WA *salmon*
I told her to cook the salmon. 92.147

(125) swát lx ?aní t cúntm
cut-nt-m
who + PL DET OBL *say*-TR-PAS-(3AB)
kastumístms lx ?aní stám's
kas-tumistu-min-nt-s
IR-*sell*-RL-TR-(3AB)-3ER + PL DET *thing*-3PS
Who were they who were told that they must sell their things?

(126) kúlsn Linda **kas**nac'áw'əx^{w}
kul-stu-n **kas**-na-c'aw'-mix
?-CS-(3AB)-1SS *Linda* **IR**-POS-*wash*-IM-(3AB)
I made Linda wash up the dishes. 92.151

The irrealis contexts discussed here are by no means exhaustive. This is a preliminary description to which more discussion will no doubt be added upon further investigation. Section 7.6.3, which provides a description of prohibitive constructions, indicates another context requiring irrealis mood.

7.3.2 Potential

Potential mood expresses the potentiality of an event taking place. The speaker indicates that something *might* happen or, at the very least, *is capable* of happening. Potential mood is marked by several different particles in Nxa?amxcin. Two of these are *mət* and *max*^{w}, which Kinkade (1981b:332) glosses as 'maybe'.[13] Some examples are given below:

(127) **mət** lx naxáł
MOD + PL *afraid*-(3AB)
Maybe they're all scared. W.2.4.49

[13]Kinkade (p.332) lists the Okanagan cognate *mt* 'maybe' for *mət*, but there is no obvious cognate for *max*^{w} in the Interior Salish languages.

(128) **mə́t** lx cncní p'ə́q'^{w}s
p'əq'^{w}-nt-s
MOD + PL 3pEMpro *spill*-TR-(3AB)-3ER
It could have been them that spilled it. W.1.40

(129) **mə́t** ay' náw'lx
MOD + PST *run(sg.)*-(3AB)
Maybe he did run. W.2.94

(130) **max^{w}** Emily lciʔáɬ
MOD *Emily there*-(3AB)
Maybe Emily's there. A-FdI:2

(131) **máx^{w}** lút ʔac'ítx
ʔac-ʔitx
MOD NEG ʔac-*sleep*-(3AB)
Maybe he doesn't sleep. W.11.114

(132) k^{w}aʔ naʔsúʔ **max^{w}** ʔítx
and FUT **MOD** *sleep*-(3AB)
and then maybe he'll sleep [14] CD.64

(133) nasúʔ **max^{w}** x̣alíxtn
x̣ali-xt-n
FUT **MOD** *ask*-APP-(3AB)-1SS
I might ask him for something. W.8.16

Another particle marking potential mood is *slə́pas*, which Kinkade (1981b:332) glosses as 'might'.

(134) **slə́pas** naʔ náltmn
nalt-min-nt-n
MOD TM *forget*-RL-TR-(3AB)-1SS
I might forget it. 92.141

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[14]Compare the following example from Kinkade's files with example (132) from *Crow's Daughter* in Czaykowska-Higgins' files:

máx^{w} naʔsúʔ ʔitx
MOD TM sleep-(3AB)
Maybe he'll go to sleep. W.11.8.117

These examples are almost identical, but there is a reverse order of the mood and temporal particles. This is the case for other mood particles as well, as variations in ordering can be found throughout the data.

(135) **sləpas** na? p'əq'^{w}n
p'əq'^{w}-nt-n
MOD TM *spill(s.t. dry)*-TR-(3AB)-1SS
I might spill it. W.1.4.67

According to Kinkade's list, there is no obvious cognate for *sləpas* in the other Interior Salish languages.

7.3.3 Deontic

A speaker's expression of obligation or duty is often referred to as *deontic* mood. Deontic mood is marked by the particle *sa?k* in Nxa?amxcin, as illustrated in the following examples:

(136) **sa?k** kn cíʕ^{w}lx
MOD + 1SS *bathe*-(3AB)
I should take a bath. 91.119

(137) t'íl' **sá?k** kt ?im'x
MOD **MOD** + 1PS *move*-(3AB)
I guess we'd better move. W.7.186

(138) **sák** k^{w} cx?it łáqlx k^{w}a? k^{w} cəm'ál wwáwlx
MOD + 2SS *first* *sit(sg.)*-(3AB) *and* + 2SS *just now* *talk*-(3AB)
You'd better sit down just before you talk.
W.11.1.1

The particle *sa?k* generally surfaces with a post-vocalic glottal; however, as example (138) indicates, the glottal is omitted in some cases.

7.3.4 Probability

Probability is generally subsumed under the label *epistemic modality* which Bybee, Perkins and Pagliuca (1994:179) describe as follows:

> Epistemic modality applies to assertions and indicates the extent to which the speaker is committed to the truth of the proposition. The unmarked case in this domain is total commitment to the truth of the proposition, and markers of epistemic modality indicate something less than a total commitment by the speaker to the truth of the proposition.

Bybee, Perkins and Pagliuca (p.180) describe probability as indicating "a greater likelihood that the proposition is true than possibility", yet a lesser likelihood of truth than with the notion of inferred certainty. Probability is marked by a variety of different particles in Nxa?amxcin, as shown in (139) to (141):

(139) **mət** lút núx̣ʷnux̣ʷs
nux̣ʷnux̣ʷ-s
MOD NEG *wife*-3PS-(3AB)
It must not be his wife. W.6.3.43

(140) **máxʷ** lx x̣áq's
x̣aq'-nt-s
MOD + PL *pay*-TR-(3AB)-3ER
[They must have paid him.] SfX

(141) huy **mət** ?isx̣ápa? **kʷn'** tx̣ʷústms
?in-sx̣x̣apa? tx̣ʷu-stu-m-s
MOD 1SPS-*grandfather (female's father)* **MOD** *leave*-CS-1SO-3ER
Oh, my grandfather must have sent me away.
CD.43

In the above examples, probability is expressed by the particle *mət* ((139) and (141)), *maxʷ* (140), and *kʷn'* (141). Note that *mət* and *maxʷ* are also used as indicators of potential mood, as discussed in section 7.3.2.

Having provided a brief outline of mood in Nxa?amxcin, I now turn to a discussion of the temporal markers.

7.4 Temporal

Indications of past and future in Nxa?amxcin come from temporal markers. It is generally assumed that there is no category *tense* in Salish. This assumption is largely based on the fact that unmarked clauses can have a past or present interpretation. Kinkade (1981b:332) indicates that there are two temporal markers for Nxa?amxcin: *ay'* 'past' and *na?(sú?)* 'future'. The former is probably a clitic and can surface in any one of a number of positions in a clause,

although it generally tends to appear in second position. I will treat *ay'* as a clitic in this work.[15] Some examples are given below:

(142) swát **ay'** wíkłtp
wik-łt-p
who + **PST** *see*-TR-(3AB)-2pS
Who did you (pl.) see? 91.6

(143) wíkłn **ay'** Paul
wik-łt-n
see-TR-(3AB)-1sS + **PST** *Paul*
I saw Paul. 91.12

(144) ʔa lut **ay'** lx cilám
c-yəlam
NEG + **PST** + PL DIR-*run(pl.)*-(3AB)
They hadn't started to run. CD.9

(145) sa **ay'** x̣əlq'ax̣ƛ'cín
x̣əlq'-ał-x̣ƛ'cin
Q + **PST** *kill*-CN-*horse*-(3AB)
Did he kill/slaughter an animal?

(146) kxápn **ay** pus łuʔ kn **ay'** t'təʕ'úmaʔ
kxap-nt-n
chase-TR-(3AB)-1sS + **PST** *cat* SUB + 1sS + **PST** *small*
I chased the cat when I was small. 92.74

(147) John scq'aq'ít'əx^{w} **ay'** páql
sc-q'aq'it'-mix
John IM-*fish*-IM-(3AB) + **PST** *yesterday*
John went fishing yesterday. 91.42

It is unclear if the future markers *naʔ* or *naʔsúʔ* have clitic status, so I will represent them as particles. They generally appear at the beginning of a clause surfacing alone or in a cluster with other particles. Some examples are given below:

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[15]Kinkade actually gives the form *ʔay'*, but the past marker is often transcribed without the initial glottal stop.

(148) **na?sú?** xʷáy'ʕsn ʔací tw'ít
xʷay'ʕ-stu-n
FUT *scold*-CS-(3AB)-1SS DET *boy*
I will scold the boy.

(149) **na?sú?** tumístmntm ʔaní yámx̣ʷaʔ
tumist-min-nt-m
FUT *sell*-RL-TR-(3AB)-1PS DET *basket*
We are going to sell those baskets. 90.2243

(150) **na?sú?** laʔká? ci kʷ q'íy'm
q'iy'-m
FUT *where* SUB + 2SS *write*-m
Where are you going to go to school? W.11.102

(151) ʔica **na?sú?** nkʷancínm
DEM FUT *sing*-(3AB)
That person is going to sing. 90.29

(152) **na?sú?** ckt'əm't'əm'ntxʷ ʔałú kʷaʔ **na?sú?** kt hapi
c-k-t'əm'-t'əm'-nt-xʷ
FUT DIR-POS-AUG-*cut*-TR-(3AB)-2SS DET *and* FUT + 1SS *drop*
After you cut it then we will fall.
CD.25

(153) xʷús taʔ kt kantər'qmíx kʷaʔ **na?su?** kasʔáyʷtəxʷ
kat-n-tər'q-mix kał-s-ʔayx̣ʷt-mix
hurry + IMP + 1PS POS-POS-*kick*-IM *and* FUT IR-IM-*tired*-IM-(3AB)
Let's hurry, let's bounce up and down inside and then she'll get tired.
CD.20

(154) c'əx̣ʷxítn **na** ʔalwíkłn
c'əx̣ʷ-xit-n ʔal-wik-łt-n
promise-APP-(3AB)-1SS FUT DIR-*see*-TR-(3AB)-1SS

l náqs k'ʷúsm'
LOC *one* *month*

I promised I'd see him in one month. W.11.57

(155) máxʷ **na?** ḥáʔi yay'áwt
MOD FUT *hot*-(3AB) *today*
Maybe it will be hot today. W.10.31

(156) scútəxʷ kasłáqlxəxʷ kʷaʔ cəm'áł **na?** wwáwlx
s-cut-mix kas-łaqəlx-mix
IM-*say*-IM-(3AB) IR-*sit(sg.)*-IM-(3AB) *and* *later* FUT *talk*-(3AB)
He said he's going to sit down and then he'll talk later.
W.11.12

While both *na?* and *na?sú?* function as indicators of future, Kinkade's (1981b:332) glosses of *na?* as 'future, inceptive, intend, if, then' and *na?sú?* as 'future, when', indicate some differentiation. Further investigation is required to determine which future particles are restricted to which contexts.

7.5 Negation

Payne (1997:282) describes a *negative* clause as "one which asserts that some event, situation, or state of affairs does *not* hold". A pan-Salish analysis of clausal negation has appeared in H. Davis 2001 where three major patterns of negation are identified in the family. As H. Davis indicates, Nxa?amxcin exemplifies two patterns. Pattern A consists of a negative particle followed by a nominalized clause, as shown in the following examples:

(157) **lút** ʔisʔiɬn
ʔin-s-ʔiɬn
NEG 1SPS-NM-*eat*
I didn't eat. W.2.69

(158) **lút** ʔisnáw'lx
ʔin-s-naw'lx
NEG 2SPS-NM-*run(sg.)*
You didn't run. W.2.86

(159) **lút** núm'as slə́mms
s-lə̓m-m-s
NEG *anymore* NM-*steal*-m-3PS
He doesn't steal anymore. W.4.92

All three of the above clauses contain the negation particle *lut* followed by a nominalized predicate. In addition, each of the three predicates in (157) to (159) is marked by the nominalizer *s-* with subject marking expectedly appearing in the form of possessive prefixes.

H. Davis's pattern C involves the negation particle *lut* followed by an unmarked indicative clause. Some examples are given below:

(160) **lút** kn qʷáyqʷayt
NEG + 1SS *rich*
I'm not rich. W.10.5.84

(161) **lút** lci ʔacwáx
ʔac-wax
NEG *there* ʔac-*live*-(3AB)
He doesn't live here.[16] 91.21

(162) **lut** wa ʔací stxʷúls
stxʷul-s
NEG WA DET *house*-3PS-(3AB)
That is not his house. 91.19

(163) **lut** x̣əst wa ʔaní yəlmíxʷms Linda
yəlmix̣ʷm-s
NEG *good*-(3AB) WA DET *chief*-3PS *Linda*
Linda's boss is not very good. 91.101

(164) ʔací ƛ'əx̣ƛ'əx̣p **lút** ta? st'ámka?
DET *old man* NEG *have*-(3AB) *daughter*
That old man doesn't have a(ny) daughter(s). W.6.15

(165) máxʷ **lút** ʔac'ítx
ʔac-ʔitx
MOD NEG ʔac-*sleep*-(3AB)
Maybe he doesn't sleep. W.11.114

(166) **lut** kasʔamcís
kas-ʔəm-t-si-s
NEG IR-*feed*-TR-2SO-3ER
She's not going to feed you. W.11.6.88

(167) **lut** cmistúnən tl laʔká? sckícxuxʷ
c-miy-stu-nn sc-kicx-mix
NEG IM-*know*-TR-(AB)-1SS LOC *where* IM-*arrive*-IM-(3AB)
I don't know where he came from. W.7.134

(168) sák kʷ t'íl' lkʷíl'x ʔaɬi **lút** cx̣mánkstmn
c-x̣mank-stu-m-n
MOD + 2SS MOD *leave* *because* NEG IM-*like*-TR-2SO-1SS
You'd better leave/go, because I don't like you. W.11.51

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[16]This translation should probably read 'He doesn't live there'.

The exact difference between pattern A and C negation in Nxa?amxcin remains to be determined.

7.6 Non-Declarative

In this section, I discuss three types of constructions that can be subsumed together under the label *non-declarative*. As Payne (1997:294) points out, *declarative* clauses "simply assert information". This is typically the unmarked clause in a language. There are many other clause types that do not involve such an assertion. I discuss three of these below for Nxa?amxcin: interrogatives (yes/no questions), imperatives and prohibitives.

7.6.1 Yes/No Questions

Yes/No questions in Nxa?amxcin are marked by *sa?*, which I represent here as a particle, but its status remains unclear. Some examples of *sa?*, which is often recorded without the final glottal stop, are given below:

(169) **sá** kʷ ta? t'káksn
Q + 2SS *have cane*
Do you have a cane? 90.10

(170) **sá** ac'amstuxʷ
?ac-?əm-stu-xʷ
Q IM-*feed*-TR-(3AB)-2SS
Do you feed him? W.11.109

(171) **sa** kʷ n?iłnánk swətn ... swətn t qəláłc'a?
n-?iłn=ank
Q + 2SS POS-*eat=want* *uh* .... *uh* .... OBL *fresh meat*
[Do you want to eat fresh meat?]
AfII:7

(172) **sá** ?incá p'áq'ʷn
p'əq'ʷ-nt-n
Q 1SEMpro *spill(s.t. dry)*-TR-(3AB)-1SS
Did I spill it? W.1.2.31

(173) **sá?** ay? ?inwí kʷántxʷ
kʷan-nt-xʷ
Q PST 2SEMpro *take*-TR-(3AB)-2SS
Did you take it? W.4.78

(174) xə̓ƛ̓'p kʷ ay' **á**
lose + 2ss + PST **Q**
Did you lose? W.9.5.85

(175) ʔarasík̓ʷ **á**
ʔarasikʷ
turtle-(3AB) **Q**
Is it a turtle?

The particle *sa?* usually appears in initial position in front of any mood particles, but can also surface at the end of a clause as shown in (174) and (175). When it surfaces in clause-final position, the [s] is dropped, resulting simply in [a].

7.6.2 Imperative

The *imperative*, as defined by Bybee, Perkins and Pagliuca (1994:179), is "the form used to issue a direct command to a second person". Nxaʔamxcin imperatives have been addressed in detail by N. Mattina (1999b), and the facts are outlined here.

Nxaʔamxcin imperative constructions are marked by a second position clitic. This clitic takes the form *ta?* in the singular and *wənta?* in the plural. These imperative marking clitics (unlike the intransitive subject clitics discussed in section 7.1.1 and the past clitic in 7.4) maintain a fixed position in the clause: both are strictly second position. The following examples contain clause-initial particles illustrating that the imperative clitic surfaces immediately following the particle:[17]

(176) t'il' **ta?** ʔitx
MOD + **IMPS** *sleep*-(2ss)
You'd better go to sleep! W.25.78

(177) t'iʔ **ta?** kasɬwaməxʷ
kas-ɬwam-mix
MOD + **IMPS** IR-*go(pl.)*-IM-(2ss)
Let's go! (urging someone to hurry up)

---

[17]For apparently semantic reasons I was unable to elicit an imperative construction containing two clause-initial particles.

(178) slə́pas **ta?** huy nac'aw'm
nac'aw'-m
MOD + **IMPs** *go* *wash*-m-(2ss)
Make a mistake and go do the dishes!

The imperative clitics also surface after other clause-initial elements, indicating that *ta?* and *wənta?* are clearly clitics as opposed to suffixes. Some examples are give below:

(179) wənáx^{w} **ta?** cuncx^{w}
cut-nt-sa-x^{w}
true + **IMPs** *say*-TR-1sO-2ss
Tell me the truth!

(180) ʔinwi **ta?** ʔanintx^{w}
ʔani-nt-x^{w}
2sEMpro + **IMPs** *bring*-TR-(3AB)-2ss
Take him over! MDK

(181) ʔíca **ta?** ḥáw'iyntx^{w}
ḥaw'y-nt-x^{w}
DEM + **IMPs** *make*-TR-(3AB)-2ss
Do it right now! JM2.199.7

(182) yaʕtú **ta?** káɬcx^{w}
kaɬ-xt-sa-x^{w}
all + **IMPs** *give*-APP-(1sO)-2ss
Give it all to me! W2.40

(183) yəʕ'yaʕ'tú **wənta?** cnanə́pt
yəʕ'-yaʕ'tu cnanəpt
AUG-*all* + **IMPp** *come in(pl.)*-(2ss)
All of you come in! JM2.185.7

There is some variation in form between imperative predicates and non-imperative predicates. In intransitive imperative constructions there is no overt subject marking, as shown in the following examples:

(184) ʔucqaʔ **ta?**
go out-(2ss) + **IMPs**
Get out! Y23.86

(185) c'əlíx **ta?**
stand-(2SS) + **IMPs**
Stop! / Stand still! G4.94

(186) k'^{w}iƛ'nct **ta?**
k'^{w}iƛ'ncut
undress-(2SS) + **IMPs**
Undress! Y16.85

(187) ʔitx **ta?** t'il'
sleep-(2SS) + **IMPs** MOD
You'd better go to sleep! W.25.79

(188) ʔúccqa **wənta?**
ʔu•c•cqa?
go out•OC•*go out*-(2PS) + **IMPp**
You all get out of here! W.8.274

(189) ʔim'x **wənta?**
ʔim'x
move-(2PS) + **IMPp**
You guys move! MDK

(190) lk^{w}íylx **wənta?**
get out-(2PS) + **IMPp**
You all get out of here! MDK

(191) cnanə́pt **wənta?**
come in(pl.)-(2PS) + **IMPp**
Come in! JM2.185.6

All of the above imperative examples involve intransitive predicates. Generally 2nd person intransitive subjects are marked by the clitic *k^{w}* for the singular and *kp* for the plural. Examples (184) to (191) illustrate that these subject clitics are omitted in imperative constructions.

For transitive imperative constructions, both subject and object are marked on the predicate when the object is 1st person. Some examples are given below:

(192) ʔəmcáx^{w} **ta?**
ʔəm-t-sa-x^{w}
feed-TR-1SO-2SS + **IMPs**
Feed me! Y23.80,81

(193) c'q'úɬcx^{w} **ta?**
c'q'un-ɬt-sa-x^{w}
read-APP-1SO-2SS + **IMPS**
Read it to me. / Name it to me. W9.73

(194) k'íʕ^{w}pla?ntlt **ta?**
k'iʕ^{w}apla?-nt-al-t
bless-TR-1PO-2s + **IMPS**
Bless it for us! (e.g. a meal) EP2.170.9

(195) ckáɬtlt **ta?**
c-kaɬ-t-l-t
DIR-*give*-TR-1PO-2SS + **IMPS**
give it to us! W3.24

(196) ?ác'ẋ-nt-sl-p **wənta?**
look at-TR-1SO-2PS + **IMPp**
Look at me! N. Mattina 1999b:10

(197) ?úcqa?-st-m-p **wənta?**
go out-CS-1SO-2PS + **IMPp**
Take me outside! N. Mattina 1999b:11

(198) tumistm-túɬt-l-p **wənta?**
sell-APP-1PO-2PS + **IMPp**
Sell something to us! N. Mattina 1999b:11

(199) xxák'na?mn-nt-l-p **wənta?**
listen-TR-1PO-2PS + **IMPp**
Listen to us! N. Mattina 1999b:10

The above singular ((192) to (195)) and plural ((196) to (199)) transitive imperatives all involve 1st person objects. Both object and subject are overtly marked on the predicate in these cases.

The situation is somewhat different when the object is 3rd person, for which there is no overt marking. Two patterns emerge: First, overt marking of 2nd singular subjects is optional, as shown in (200) to (202):

(200) ?aníɬt **ta?**
?ani-ɬt
bring-APP-(3AB)-(2SS) + **IMPS**
Take it to him! W4.44

(201) nəqínmst **ta?**
nqinm-stu
go in-CS-(3AB)-(2SS) + **IMPs**
You take him in! W4.126

(202) q'íy'-łt-x^{w} **ta?**
write-APP-(3AB)-2SS + **IMPs**
Write it for him/them! N. Mattina 1999b:4

(200) and (201) provide examples in which 2nd sg. subject marking is omitted while (202) provides an example with the 2nd sg. subject suffix.

This optionality is not available for 2nd person pl., as overt subject marking is always required.

(203) ḥáw'iy-nt-p **wənta?**
fix-TR-(3AB)-2PS + **IMPp**
Fix/prepare it! N. Mattina 1999b:10

(204) cíx-łt-p **wənta?**
warm-APP-(3AB)-2PS + **IMPp**
Warm it up for him! N. Mattina 1999b:10

(205) ʔúcqaʔ-st-p **wənta?**
go out-TR-(3AB)-2PS + **IMPp**
Take him outside! N. Mattina 1999b:10

All three of the above plural imperative predicates are obligatorily marked for 2nd pl. subject with a 3rd person object, unlike the singular examples in (200) and (201).

7.6.3 Prohibitive

Bybee, Perkins and Pagliuca (1994:179) describe the *prohibitive* as "a negative command". Given this definition one might expect to find simply imperative and negation marking as the morphological realization of prohibitives in Nxaʔamxcin. This is not the case, however. Prohibitive clauses do contain the negative particle *lut*, but there is no imperative marking. Instead, predicates are marked for irrealis mood. Consider the following examples:

(206) **lút** **kisptíx̣^{w}m**
?in-**kas**-ptix̣^{w}-m
NEG 2SPS-IR-*spit*-m
Don't you spit! W.7.18

(207) **lút** **kis**náw'lx
?in-**kas**-naw'lx
NEG 2SPS-IR-*run*
Don't you run! W.2.87

(208) **lút** núm'as **kis**ləmm
?in-**kas**-ləm-m
NEG *anymore* 2SPS-IR-*steal*-m
Quit stealing!
Don't you steal anymore! W.4.90

The above examples illustrate prohibitives that follow the A pattern for negation marking as described in H. Davis 2001. The negation particle *lut* appears at the beginning of the clause followed by a nominalized predicate. The nominalized predicates in (206) to (208) are marked irrealis as required for prohibitive clauses.

The following examples illustrate prohibitives that follow H. Davis's C pattern of negation:

(209) **lút** **kas**x̣áq'ncx^{w}
kas-x̣aq'-nt-sa-x^{w}
NEG IR-*pay*-TR-1SO-2SS
do not pay me! W4.37

(210) **lút** **kas**xəsntx^{w} ?ink'^{w}k'^{w}úsm
kas-xəs-nt-x^{w} ?in-k'^{w}k'^{w}usm
NEG IR-*lose*-TR-(3AB)-2SS 2SS-*watch*
Don't lose your watch! W.9.16

(211) **lut** **kas**p'əq'^{w}ntp
kas-p'əq'^{w}-nt-p
NEG IR-*spill*-TR-(3AB)-2PS
Don't [you people] spill it! W.1.37

Like (206) to (208), the above clauses contain both the negation particle *lut* and a predicate marked for irrealis mode. In (209) to (211), however, the predicate is not nominalized.

7.7 Nominalized Constructions

In section 6.5.1.1 I discussed the derivational operation of nominalization which was marked by the prefix *s-*. This operation can also take place at the level of syntax and appears to be triggered by certain syntactic contexts.

As pointed out in section 7.5, negation can trigger nominalization of the negated predicate. This is a feature distinguishing the two patterns of negation in Nxa?amxcin. In H. Davis's 2001 analysis, Pattern A negation is comprised of the negation element followed by a nominalized clause. Some examples are given below:

(212) lut ?ismúx^{w}t
?in-s-mux^{w}t
NEG 1SPS-NM-*laugh*
I didn't laugh. 92.349

(213) lut s?iłns
s-?iłn-s
NEG NM-*eat*-3PS
he isn't eating W3.17

(214) lút ay? swát ?iscwík
?in-s-c-wik
NEG +TM *who* 1SPS-NM-C-*see*
I didn't see anybody. W9.156

Quasi-clefting (section 5.5.2) often triggers nominalization as well, as shown in the following examples:

(215) John łu? wa skłc'ə́múṣç
s-kłc'əmus-s
John SUB WA NM-*kiss*-3PS
John was the one s/he kissed. 92.200

(216) k'l ?inwi ci ?isckúlst
?in-s-c-?
LOC 2SEMpro SUB 1SPS-NM-C-*?*
It was to you that I sent him. 92.230

(217) t n'n'íkm'n ci ʔisct'ə́m
ʔin-s-c-t'əm'
OBL *knife* SUB 1SPS-NM-c-*cut*
It is with the knife that I cut it. 92.232

(218) John l wa x̣ƛ'cíns łuʔ ʔiṣc̓l̓əm lut wa Mary l
x̣ƛ'cin-s ʔin-s-c-ləm
John GN WA *horse*-3PS SUB 1SPS-NM-c-*steal* NEG WA *Mary* GN
It was John's horse that I stole not Mary's. 92.294

(219) kməx saw'łkʷ łuʔ ʔiscwəlq'ʷátkʷ lut kupi
ʔin-s-c-wəlq'ʷatkʷ
only water SUB 1SPS-NM-c-*drink* NEG *coffee*
It was just water that I drank not coffee. 92.333

(220) yaʕ'yaʕ'tú c'q'áłp łu ʔisciyák'łp
ʔin-s-c-yak'=ałp
all *fir tree* SUB 1SPS-NM-c-*burn=tree*
It was all fir trees that I burned.

(221) wəl smiyáw łuʔ lx ʔiscwík
ʔin-s-c-wik
COL *coyote* SUB + PL 1SPS-NM-c-*see*
It is the coyotes that I saw.

Nominalized predicates also appear in cleft constructions (section 5.5.3), as shown below:

(222) stxʷúl ʔaní ʔisctáw
ʔin-s-c-taw
house DET 1SPS-NM-c-*buy*
It's a house that I bought.

(223) naqs ʔaní ʔisx̣aʔnúmt ay' wa ʔinkálx
ʔin-s-x̣aʔnumt ʔin-kalx
one DET 1SPS-NM-*hurt* + PST WA 1SPS-*hand*
One of the things that I hurt was my hand.

(224) ʔałú ʔaní ʔiskʷənnáʔst
ʔin-s-kʷa•n•n=aʔst
DET DET 1SPS-NM-*grab*•OC•*grab=weapon*
ncəkmnátkʷmn
n-cəkmin=atkʷ-min-n
POS-*throw=water*-RL-(3AB)-1SS
The thing that I picked up to use as a weapon, I threw into the water.

Like the quasi-cleft constructions in (215) to (221), the above clefted examples all contain nominalized subordinate predicates.

Wh-constructions, both with and without some form of clefting, often contain nominalized predicates.

(225) stám' ay' ʔisctáw
ʔin-s-c-taw
what + PST 2SPS-NM-C-*buy*
What did you buy?

(226) nkanáw's ʔisctáw
ʔin-s-c-taw
which 2SPS-NM-C-*buy*
Which one did you buy?

(227) stám' ʔaní ʔiscyák'
ʔin-s-c-yak'
what DET 1SPS-NM-C-*burn*
What did you burn?

(228) nkanáw's ʔaní ʔisctáw stxʷúl
ʔin-s-c-taw
which DET 1SPS-NM-C-*buy* *house*
Which house did you buy?

The wh-questions in (225) and (226), and the wh-clefts in (227) and (228), all contain nominalized predicates.

In addition to the types of constructions found above, nominalized predicates also appear in relative clauses (section 5.4), as in the following examples:

(229) ʔinx̣mánk ʔaní n'n'ík'mn' t ʔisctáw
ʔin-x̣mank ʔin-s-c-taw
1SPS-*like* DET *knife* OBL 2SPS-NM-c-*buy*
I like the knife that you bought.

(230) knáqs ʔaní t ʔiscʔə́mt wa Mary 1 sqʷəsqʷə́saʔs
ʔin-s-c-ʔəmt sqʷəsqʷəsaʔ-s
one DET OBL 1SPS-NM-c-*feed* WA *Mary* GN *baby*-3PS
One of those that I fed was Mary's baby.

(231) naqs ʔaní ʔisck'ət'áp ay' c'q'áλp
ʔin-s-c-k'ət'ap
one DET 1SPS-NM-c-*cut down* + PST *fir tree*
One of those that I cut down was a fir tree.

The relative clause predicates in all three of the above constructions are nominalized.

The adverbial element *cíʔλu* 'always' frequently cooccurs with nominalized predicates. Some examples are given below:

(232) cíλu stqənúxʷs ʔací xəxál'aʔ
s-tqənuxʷ-s
always NM-*hungry*-3PS DET *child*
That child is always hungry.

(233) cíλu slupálqʷps ʔací w'ax̣tált
s-lupalqʷp-s
always NM-*thirsty*-3PS DET *child*
That child is always thirsty.

(234) cíʔλu sq'ʷiyq'ʷiyxánmt
s-q'ʷiy-q'ʷiyxan-m-t
always NM-AUG-*kneel*-MD-1PPS
We kept kneeling (repeatedly). 90.56

(235) ʔací sqəl'tmíxʷ cíλu st'ucálts
s-t'uc=alt-s
DET *baby* *always* NM-*put down=child*-3PS
That man always lays/puts his baby down.

(236) ʔací smʔámm cíλu sxʷay'málts
s-xʷay'm=alt-s
DET *woman* *always* NM-*run away=child*-3PS
That woman's child always runs away.

Further exploration into the aspectual properties of predicate nominalization may provide an indication as to why the adverb *ci?łu* 'always' tends to trigger nominalization.

7.8 Summary

In this chapter, I discussed various operations that place at the level of the inflectional stem. In section 7.1 I outlined how person, number and grammatical relation features are marked for intransitive subjects, transitive subjects and objects, and possessive. In section 7.2 I looked at two aspectual operations that are relevant to viewpoint aspect: perfective and imperfective aspect. Section 7.3 briefly addressed the category mood, more specifically the operation marking irrealis along with various particles used to mark potential, deontic and probability. Temporal markers indicating past and future were discussed in section 7.4 followed by negation in 7.5. Three operations subsumed under the label non-declarative—interrogative (yes/no questions), imperative and prohibitive—are the focus of section 7.6. Finally nominalization, previously discussed as a derivational operation in chapter 6, is considered as an inflectional operation in section 7.7.

The following chapter addresses compound formation in Nxa?amxcin, a process that takes place before any derivational or inflectional operations are realized.

Chapter Eight

Compounding

8.0 Introduction

This chapter examines three different types of compounding found in Nxaʔamxcin. The first two involve the combination of two free stems: one type marked by the connector *-aɬ-*, the other unmarked. The third compound type is formed from a free stem and a bound stem and is generally referred to in the literature as lexical affixation. Below I provide a description of each of the three types of compounding and provide word structure rules to account for the range of combinations found in the available data. I then turn to the ongoing discussion in the Salish literature on the status of bound stem compounds in the grammar. I provide support for my assumption that bound stem constructions are in fact compounds by showing that they pattern more with the properties of compounds than with the properties of syntactic noun incorporation.

8.1 What is a Compound?

Anderson (1992:292) defines a compound as "the combination of (two or more) existing words into a new word". Such a process, he claims, contrasts with derivation and inflection which involve "the application of a Word Formation Rule to a single existing word". A word formation rule, Anderson states, "operates on a single word (or stem) to manipulate its phonological form (typically, but not exclusively, by affixation) as well as its other properties. Compounding, in contrast, involves the combining of stems from the lexicon into a quasi-syntactic structure."

While compound structures have been widely noted throughout the cross-linguistic literature, the theoretical literature on compounds is relatively limited. Fabb (1998:82), in his general overview of compounding, indicates that "[t]his is because compounds tend to be less phonologically or morphologically active than derived words, and less syntactically active than phrases: compounds are relatively inert". The major theoretical work on compounds can be attributed to

Roeper and Siegel (1978), Williams (1981), Selkirk (1982), Lieber (1983, 1992), DiSciullo and Williams (1987) and Anderson (1992), among others. For the purposes of this work, I adopt Anderson's (1992) analysis which is in line with Selkirk's (1982) work on compounds.[1]

Selkirk recognizes an "apparent need for particular rule statements; a general X' schema for compounding does not adequately characterize the compounding possibilities found in English" (p.13). Anderson claims that compounds are created by a set of *word structure rules* which "have much the same form as phrase-structure rules, but apply only to lexical categories. Word Structure Rules operate to specify the internal constituency of lexical categories and (optionally) their heads" (p.299). Both Anderson and Selkirk agree that these rules must be specific enough so as to rule out any gaps present in the compounds of a language. Possible stem combinations as well as the feature of "headedness" are very much language-specific, therefore what is available in the grammar of a particular language should be encoded in its word structure rules. For example, a compound of the lexical category verb comprising a verb stem and a noun stem would be realized by the following Word Structure Rule:

(1) $V \rightarrow \underline{V}\ N$

The word structure rule in (1) indicates that a verb stem and a noun stem can combine to form a single lexical item of the category verb. The head of the compound is underlined.

The semantic interpretation of a compound is closely tied with the concept of head. As Selkirk (p.22) points out, "the nonhead constituent of the compound in some way further defines the head; [...] the head is, intuitively speaking, the nucleus of the compound". For example, a nonhead can fill a role in the argument structure of a head, but not the other way around. Selkirk (p.22) notes,

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[1]I should clarify that while Anderson's view of compounding finds root in Selkirk's work on word structure, their views on derivation and inflection are radically different in that Selkirk takes a morpheme-based approach to word formation while Anderson adopts a lexeme-based view.

however, that "[t]he semantic relation obtaining between the head constituent and its sister nonhead constituent can vary considerably [...] and a general characterization of the relation is probably impossible". Thus, various semantic relationships between compound constituents can be found within a language as is evident in the following description on compounding in Nxa?amxcin.

8.2 Free Stem Compounds

This section examines compounding involving free stems only. I use the term *free stem* to refer to any stem that can serve as the sole base for word formation operations. In other words, free stems are independent in that they are not required to cooccur with another stem. I have located approximately 90 examples of free stem compounds in Nxa?amxcin and have excluded almost half of these in my discussion because they appear to be lexicalized or they contain a stem that I do not recognize. This leaves me with a sample of 53 compounds and possibly some gaps in the data.

There are two types of free stem compound formation in Nxa?amxcin. The first I refer to as *ał-compounding*; two free stems are joined together by the connector *-ał-* to form a complex stem. The second I refer to as *unmarked compounding*; two free stems are joined without any connecting morphology to form a complex stem. I discuss each type separately below.

8.2.1 *ał*-Compounds

Kinkade (1996b:272) indicates that there are a number of Salish languages across the various branches that make use of a compound connector, which he reconstructs as Proto-Salish **-ał-*. Such compounds in Nxa?amxcin are much more frequent in the data than unmarked compounds. I have 46 clear examples of *ał*-compounds as opposed to 7 clear examples of unmarked compounds. I am excluding what appear to be lexicalized examples, such as the following:

(2) q^{w}tnascpú?s
q^{w}tun-**ał**-scpu?s
big-CN-*heart*
brave JM3.119.1

(3) sək'^{w}tmasqáltk
sək'^{w}tm-**ał**-sqaltk
half-CN-*flesh*
half-breed A62

For both of the above examples, the meaning of the compound cannot be determined from the sum of its parts. Such lexicalized forms tell us little about the semantic relationship between compound parts and are thus excluded here.

Turning to the structure of *ał*-compounds, we see that a morphological connector can surface between two free stems resulting in a type of free stem compounding. This connector is of the form [ał] or [a], depending on the following segment; the [ł] is deleted when the initial segment of the second stem is [s] or [x̣].[2] Compare example (4) with examples (5) and (6):

(4) yáʕm'**ałq^{w}**ísp
yaʕ'm-**ał**-q^{w}isp
gather-CN-*cow*
round up cattle Y16.205

(5) x̣əlq'**a**x̣**ƛ̂**'cín
x̣əlq'-**ał**-x̣ƛ̂'cin
kill-CN-*horse*
butcher a horse Y17.112

(6) kn ḥáw'iyasn̓ccw'áxaʔ
ḥaw'y-**ał**-snccw'axaʔ
1ss + *make*-CN-*creek*
I made a ditch JM2.199.10

Example (4) illustrates that when followed by the uvular stop [q^{w}], the connector *-ał-* appears with both segments. When followed by the uvular fricative [x̣] or the alveolar fricative [s], as in (5) and (6) respectively, [ł] is deleted and the segment [a] surfaces. The word structure rules responsible for *ał*-compounds in Nxaʔamxcin are outlined below.

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[2]I do not know if other segments not found in the data also trigger deletion of [ł].

8.2.1.1 V → V N

The most productive type of *aɬ*-compounding is formed by the word structure rule given in (7) (following Selkirk 1982 and Anderson 1992):

(7) V → V N

The above rule indicates that a verb stem and a noun stem can combine to form a complex stem that is of the category verb. The compounded verb stem is the head of the compound, and one of the verb's argument roles is saturated by the noun. For nearly all of the corpus examples formed by the word structure rule in (7), the noun stem saturates the argument role of theme. Examples are given below in addition to those in (4) to (6):

(8) scḥàw'iyastàqiʔəxʷ
sc-ḥaw'y-**aɬ**-staqiʔ-mix
IM-*make*-CN-*blanket(of mountain-goat hair)*-IM-(3AB)
S/he made a blanket. JM3.106.8

(9) q'ə́x̣**aɬ**xəwál
qəx̣-**aɬ**-xəwal
make a trail-CN-*trail*
make a trail[3] Y30.149

(10) yax̣áx̣ƛ'cín
yəx̣-**aɬ**-x̣ƛ'cin
herd-CN-*horse*
herd horses Y8.105

(11) kʷɬnáx̣ƛ'cíxtn
kʷuɬn-**aɬ**-x̣ƛ'cin-xit-n
borrow-CN-*horse*-APP-(3AB)-1SS
I borrowed a horse for her/him W8.249

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[3]Note that in example (5) the [ɬ] segment in *-aɬ-* is deleted before the uvular fricative [x̣] of *x̣ƛ'cín* 'horse', while here it is present before the velar fricative [x] of *xwal* 'trail'. This difference is not very well-motivated phonologically. Ewa Czaykowska-Higgins (p.c.) suggests that the stem *x̣ƛ'cín* may be changing status from a free stem to a bound stem, many of which have retained simply the [a] segment of the *-aɬ-* connector (section 8.4.1).

(12) cəkk**ałq**'aʔqín'xn
cə•k•k-**ał**-q'aʔqin'xn
hit•OC•*hit*-CN-*kneecap*
s/he got hit on the knee JM3.109.9

(13) yaʕ'm**á**x̣x̌'címəx
yaʕ'm-**ał**-x̣x̌'cin-mix
gather-CN-*horse*-IM
[S/he gathered horses.] Y11.132

(14) sc**h**̣àw'iy**a**síc'məx^{w}
sc-ḥaw'y-**ał**-sic'm-mix
IM-*make*-CN-*blanket*-IM-(3AB)
S/he made a blanket. JM3.106.8

(15) kt l̓ə́m**a**x̣x̌'cín
lə̓m-**ał**-x̣x̌'cin
2SS + *steal*-CN-*horse*
[You stole a horse.]

(16) kn scyáʕ'm**a**st'íy'aʔəx^{w}
sc-yaʕ'm-**ał**-st'iyaʔ-mix
1SS + IM-*gather*-CN-*hay*-IM
I am gathering hay.

(17) kn st'əq**á**st'íy'aʔəx^{w}
s-t'əq-**ał**-st'iyaʔ-mix
1SS + IM-*stack*-CN-*hay*-IM
I'm stacking hay.

(18) kn ḥác**a**x̣x̌'cín
ḥac-**ał**-x̣x̌'cin
1SS + *tie*-CN-*horse*
I tied a horse.

(19) q'^{w}ł**t**m**a**x̣x̌'cín
q'^{w}a**ł**tm-**ał**-x̣x̌'cin
pack-CN-*horse*-(3AB)
S/he loaded/packed up a horse.

(20) lik'lik'xn**a**x̣x̌'címəx kn
lək'-lək'=xn-**ał**-x̣x̌'cin-mix
AUG-*tie up=foot*-CN-*horse*-IM + 1SS
I am hobbling a horse. JM3.114.8

(21) ḥaw'iy**a**stxʷúl
ḥaw'y-**aɬ**-stxʷul
make-CN-*house*-(3AB)
S/he built a house. 95.57

(22) ʔaxá ʔani nʔiɬn**a**skíntn cougar
n-ʔiɬn-**aɬ**-skint-tn
DET DET POS-*eat*-CN-*people*-INS *cougar*
[these people-eating cougars] A-FdII:26

(23) q'áʔxnm**a**x̣ƛ'cín
q'aʔxnm-**aɬ**-x̣ƛ'cin
shoe-CN-*horse*-(3AB)
S/he shoed a horse.

(24) snx̣əl'x̣əl'q'**áɬ**qʷísptn
s-n-x̣əl-x̣əlq'-**aɬ**-qʷisp-tn
NM-POS-AUG-*kill*-CN-*cow*-INS
slaughterhouse Y17.114

In all of the above examples, the verb stem subcategorizes for a theme argument and the compounded noun stem satisfies this role.

The noun stem in (7) can also saturate the causee argument role of an adjacent causative verb, as shown in the following examples:

(25) n̩k'ərm**a**x̣ƛ'cín
nak'ərm-**aɬ**-x̣ƛ'cin
swim-CN-*horse*
swim a horse across Y6.376

(26) yəlm**a**x̣ƛ'cín
yəlam-**aɬ**-x̣ƛ'cin
run(pl.)-CN-*horse*
run horses (several riders) Y8.103

(27) ƛ'əksxn'm**a**x̣ƛ'cín
ƛ'əkʷsxnm-**aɬ**-x̣ƛ'cin
trot-CN-*horse*
trot a horse Y8.104

(28) nw'lx**a**x̣ƛ'cin
naw'əlx-**aɬ**-x̣ƛ'cin
run(sg.)-CN-*horse*
run a horse Y13.47

(29) ck**a**x̣ƛ'cín lx
cik-**aɬ**-x̣ƛ'cin
stand(pl.)-CN-*horse*-(3AB) + PL
They stopped/halted their horses.

The verb stems in the above compounds all subcategorize for a causor and causee argument. The noun stem in the compound satisfies the causee role.

The noun stem in (7) can also saturate the goal argument role of the verb with which it combines. Some examples are given below:

(30) siʔsiʔt**á**x̣x̣ƛ'cínʔ
siʔsiʔat-**aɬ**-x̣x̣ƛ'cin
coax-CN-*dog*
coax a dog Y14.74

(31) ƛ'an'**á**x̣ƛ'cín
ƛ'aʔan-**aɬ**-x̣ƛ'cin
look for-CN-*horse*
look for horses Y8.107

(32) ƛ'an'**a**skínt
ƛ'aʔan-**aɬ**-skint
look for-CN-*indian*
go after a person Y27.113

(33) ʔací c'qʷən**a**skínt
c'q'ʷun-**aɬ**-skint
DET *name*-CN-*indian*-(3AB)
s/he pronounced a name; s/he named her/him EP2.171.2

(34) scq'íy**a**x̣ƛ'címx
sc-q'iy'-**aɬ**-x̣ƛ'cin-mix
IM-*write*-CN-*horse*-IM-(3AB)
S/he's branding a horse.

(35) ʔəɬnáx̣x̌'cín
ʔiɬn-**aɬ**-x̣x̌'cin
eat-CN-*horse*-(3AB)
S/he fed the horses.

All of the above examples contain goal-oriented verbs, and the compounded noun satisfies the goal argument role.

I have one example in which the noun stem saturates the experiencer role of the adjacent verb:

(36) q'ə́lascpúʔs
q'il-**aɬ**-scpuʔs
ache-CN-*heart*
[someone's heart is aching] Y15.64

And finally, there are two examples indicating that a compounded noun stem can saturate the agent argument role of the adjoining predicate:

(37) snwəlq'^{w}tk^{w}max̣x̌'cíntn (púks)
s-n-wəlq'^{w}atk^{w}m-**aɬ**-x̣x̌'cin-tn
NM-POS-*drink*-CN-*horse*-INS *box*
water-box; water trough Y40.226

(38) scq'ə́l'naskínt
s-c'aq'al'-n-**aɬ**-skint
IM-*shoot*-ʔ-CN-*indian*-(3AB)
s/he is firing a gun[4]

Example (37) contains a nominalized compound comprised of a verb (wəlq'^{w}átk^{w}m 'drink') and noun (x̣x̌'cín 'horse'). The agent role of the verb's argument structure is satisfied by the noun. In example (38), the agent role of the

[4]A similar form in Kinkade's files (JM3.70.4) appears without [c]. My consultant felt that [c] should be included although, given the root form, we would expect [c'] as opposed to [c].

verb *c'aq'al'* 'shoot' is satisfied by the compounded noun *skint* 'indian'. Note that the form does not mean 'fire at a person'.

8.2.1.2 N → X N

Another word structure rule which generates compounds in Nxa?amxcin is given in (39):

(39) N → X N where X ∈ { A, N, V }

The above rule indicates that a simple adjective, noun or verb stem can combine with a simple noun stem to form a complex noun stem. The initial stem functions as a modifier of the following noun stem. Some examples containing adjective stems are given below:

(40) wəswísxnasc'ólc'əl
wəs-wisxn-**ał**-ʔasc'əlc'əl
AUG-*long*-CN-*trees*
tall trees JM3.21.4

(41) xǐʔtmaskínt
xʔitm-**ał**-skint
first-CN-*indian*
the first human EP2.3.3

(42) k'saspəlpúlt
k'əs-**ał**-spəlpult
bad-CN-*dream*
bad dream G7.24

(43) ƛ'óx̣ax̣ƛ'cín
ƛ'əx̣-**ał**-x̣ƛ'cin
fast-CN-*horse*
fast horse

(44) syəmmax̣ƛ'cín
s-yəmm-**ał**-x̣ƛ'cin
NM-*old*-CN-*horse*
an old horse JM3.174.10

(45) syəmm**ałyámx̣ʷ**a?
s-yəmm-**ał**-yamx̣ʷa?
NM-*old*-CN-*basket*
old basket JM3.51.7

(46) sq'əsp**ałyámx̣ʷ**a?
s-q'əsp-**ał**-yamx̣ʷa?
NM-*old*-CN-*basket*
old basket JM3.51.8

(47) syəmm**a**skínt
s-yəmm-**ał**-skint
NM-*old*-CN-*indian*
an old person JM3.174.11

(48) k's**ałqíxʷ**
k'əs-**ał**-qixʷ
bad-CN-*smell*
bad smell Y26.181, 185

All of the above examples contain an adjectival stem and a noun stem combining to form a compound noun.

I have two examples where the initial stem is a noun:

(49) skint**aṣ**c'ą́m'
skint-**ał**-ṣc'ą́m'
indian-CN-*bone*
skeleton Y37.48
skull JM2.131.7

(50) sqəl'tmxʷ**ax̣**ƛ'cin
sqəl'tmixʷ-**ał**-x̣ƛ'cin
man-CN-*horse*
'man-horse' G2.100
gelding Y3.11

Both the lefthand noun stems in the above compounds function as modifiers of the righthand noun stem.

Finally, I have one example suggesting a verb stem can surface as the lefthand stem in the word structure rule in (39):

(51) sq'**áɬ**x^{w}əl'ána?xn'
səq'-**aɬ**-x^{w}əl'an'a?xn
split-CN-*hoof*
split hoof Y33.4

8.2.1.3 The Connector *-aɬ-*

The connector *-aɬ-* appears to be devoid of semantic features. This is not cross-linguistically unusual as Fabb (1998:81) points out that "[i]n some languages, a morpheme (with no independent meaning) may be inserted between two words. This morpheme may bear a historical relation to some affix, but is synchronically found only in compounds".

Czaykowska-Higgins (to appear) presents evidence indicating that the connector *-aɬ-* is part of the first compound stem from a phonological perspective. She claims that Nxa?amxcin compounds contain two separate prosodic word domains and that one principal stress is assigned to each member of the compound as far to the right as possible. Stress in the righthand stem surfaces according to regular stress rules (see Czaykowska-Higgins 1993a), while stress in the lefthand stem usually falls on *-aɬ-*, suggesting that *-aɬ-* is the rightmost morpheme and full vowel in the lefthand stem.[5]

In addition, Czaykowska-Higgins points out that the following example (given in (49) above) illustrates retraction does not spread from one domain to another:

---

[5]In a footnote, Czaykowska-Higgins indicates that "this secondary stress pattern is not marked consistently; sometimes we find *-aɬ* unstressed, sometimes unstressed but lengthened, and sometimes marked with primary stress [...]. However there are two reasons for thinking that *-aɬ-* really is always assigned secondary stress, in spite of what the transcriptions sometimes show: the pattern in which it surfaces with secondary stress is by far the strongest pattern in the data **and** the vowel of *-aɬ* never reduces even though, if *-aɬ* were in fact unstressed, it would be post-tonic and should consequently always reduce."

(52) [skint-a]-[ṣc'ạm']
people-CN-*bone*
'skeleton, skull'[6] Czaykowska-Higgins to appear

The retracted feature on the righthand stem in (52) does not spread to the lefthand stem. This includes the vowel [a] of the connector *-ał-*, suggesting the connector is part of the lefthand domain. I have no morphological evidence indicating which domain encompasses the connector, but I will for now assume it is also the lefthand domain.

Following Anderson (1992), I assume the appearance of the connector *-ał-* is a result of a word formation rule that takes place after the compound is formed. Following Anderson's (p.297) analysis of German compound connectors, I expect the word formation rule that applies here would look like the following:

(53) $[_V [_V X] [_N Y]] \rightarrow [_V [_V X \text{-ał-}] [_N Y]]$

The above word formation rule, which is applied to a verbal compound in (53) but could equally be applied to the other compounds in this section, indicates that the segments [ał] are realized at the right edge of the first stem of a compound, thus surfacing as a connector between the two stems.

8.2.2 Unmarked Compounds

There is a much smaller number of unmarked compounds in the corpus compared with *ał*-compounds but, given the limited overall sample, it is difficult to determine if this is significant. I have again excluded what appear to be lexicalized examples, such as the following:

---

[6]Czaykowksa-Higgins separates the roots from the nominalizing prefix *s-* in both stems. I have omitted this division here as it is most likely a diachronic one.

(54) q'iyq'íymac'p
q'iyq'iy-mə̓c'p
black-honey
black hornet Y9.76

(55) c'ə́pqniʔswə́pt
c'əpq-niʔswəpt
underbrush-s.t. growing out straight
thick underbrush Y14.130

8.2.2.1 V → <u>V</u> N

Of the 7 unmarked compound examples on my list, 4 of them follow the word structure rule in (7), repeated below as (56):

(56) V → <u>V</u> N

Each of the following compounds contains a verb stem combined with a noun stem that satisfies either a theme (57 to 59) or goal (60) role in the verb's argument structure:

(57) ck'^{w}aʔk'^{w}aʔsmán'x^{w}əx^{w}
c-k'^{w}aʔ-k'^{w}aʔ-sman'x^{w}-mix
IM-AUG-*bite-tobacco*-IM-(3AB)
S/he is chewing tobacco.[7]

(58) sq'aʔsʔiɬən
s-q'aʔ-sʔiɬn
NM-*put away-food*
stored food Y11.55

(59) yaʕ'ʔə̓c'páƛ'
yaʕ'-ʔə̓c'paƛ'
gather-tree(pl.)
all together in a bunch (trees) EP2.168.4

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[7]For reasons that are unclear, the speaker has marked this intransitive predicate imperfective with the prefix *c-*, which is generally restricted to transitive imperfectives, as opposed to one of the intransitive imperfective markers: *sac-/sc-* or *s-*.

(60) wəksumáxəx^{w}
wik-sumax-mix
see-spirit power-IM-(3AB)
s.o. is out finding their power IA4.83.11

8.2.2.2 N → X N

Three of the unmarked compounds follow the word structure rule in (39), repeated below as (61), with the exception of the noun stem in the set of X for which I have not found any examples:

(61) N → X N where X ∈ {A, N, V}

Example (62) below contains an adjective stem modifying the noun stem, while (63) and (64) contain verb stems functioning as modifiers of the adjacent noun stems:

(62) páyqsqəláw
payq-sqəlaw
white-money
silver money Y6.73

(63) sk'iʕ^{w}sáwłk^{w}
s-k'iʕ^{w}-sawłk^{w}
NM-*pray-water*
holy-water JM3.129.7

(64) ʔacx^{w}úʔyk'p'k'ip'múl
ʔac-x^{w}uw'iʔ-k'p'k'ip'mul
ʔac-*fly-ant*
flying ant Y3.24

The data is very limited, and the fact that I have not found an example of the form N → N N may simply reflect a gap in the data.

Having established the word structure rules responsible for the free stem compounds in the available data, I turn to the facts surrounding bound stem compounds in the following section.

8.3 Bound Stem Compounds (Lexical Affixation)

What I refer to as *bound stems* have been dubbed *lexical suffixes* by Kinkade (1963), and more broadly *lexical affixes* in the Salish literature. The term *affix* may be misleading here for those unfamiliar with the properties of lexical affixation. An affix is generally associated with grammatical features reflecting transitivity, voice, aspect, person, number, etc. On the contrary, lexical affixes do not represent grammatical features, but rather lexical features usually, though not exclusively, of the category N. With respect to word formation, the difference between a lexical affix and an independent stem is that the independent stem can serve as the sole base for word operations while a lexical affix cannot. The lexical affix must combine with an independent stem. Hence in this work, following Black 1996, lexical affixes are referred to as *bound stems* while independent stems are referred to as *free stems*.

Bound stems are an important part of word formation in Nxa?amxcin. Kinkade (n.d.) lists approximately 100 bound stems (lexical suffixes) for Nxa?amxcin to which 3 more bound stems (lexical prefixes) can be added based on the comparative work presented in an unpublished paper by A. Mattina (1987). Kinkade's list is diachronic as some of the bound stems listed have become so lexicalized the semantics are no longer recoverable. The discussion to follow takes a synchronic perspective, and many of the forms listed by Kinkade have been excluded from the set of synchronic bound stems.

8.3.1 Right-Edge Bound Stems (Lexical Suffixes)

Right-edge bound stems are generally referred to as *lexical suffixes*, indicating they attach to the right edge of a free stem. Some examples are given in (65) to (67). (Bound stems are marked by =.):

(65) ʔux^{w}tált
ʔux^{w}t=alt
freeze=child-(3AB)
Somebody's child froze.

(66) kn t'əɬt'ə́ɬkst
t'əɬ-t'əɬ=akst
1ss + AUG-*dirty=hand*
My hands are dirty. G6.87

(67) xən'úl'əx^{w}n
xən'=ul'əx^{w}-nt-n
lay flat=ground-TR-(3AB)-1ss
[I laid it flat on the ground.] Y.36.51

The bound stems *=alt* 'child', *=akst* 'hand', and *=úləx^{w}* 'ground' in the above examples surface to the right of the free stems *ʔux^{w}t* 'freeze', *t'əɬ* 'dirty' and *xən'* 'lay flat'.

A tentative synchronic list of right-edge bound stems in Nxaʔamxcin is given in (68):

(68) ***Right-Edge Bound Stems***

=a?st	'rock, weapon (not necessarily round)'
=akst	'hand, arm, finger'
=alps	'back part of the neck, nape'
=alqs	'clothes, dress'
=alq^{w}	'tree, pole, log'
=alq^{w}p	'throat'
=alt	'child (human or animal)'
=alx^{w}	'skin, hide, outer layer'
=áɬc'a?	'body, side, inside'
=aɬníwt	'side'
=aɬp	'tree, plant'
=aɬq	'fruit, food'
=aɬq^{w}	'wind'
=aɬq'áyt	'shoulder'
=aɬx^{w}	'house, structure'
=ána?	'ear, all over'
=ank	'stomach, flat surface, want'
=ap	'foot, lower end, rope, egg'
=apás, =aps	'tooth'
=ápla?	'handle'
=asq't	'day'
=atk^{w}	'water'
=atk^{w}p	'fire'
=aw's	'middle'
=aχn	'upper arm'
=áya?	'pretend'
=cin	'mouth, language, food, creek, shore'
=ələwás	'chest'
=əlqs	'nose, point'
=íc'a?	'blanket, skin, hide, outer layer'
=ikn	'back'
=lup	'foundation, floor, bed'
=qin	'head, top'
=spantk	'year'
=sqáχa?	'horse, domesticated animal'
=(t)samx^{w}	'breast'
=úl'əx^{w}	'soil, earth, ground'
=ups	'tail, rump'
=us	'eye, face, fire, road'
=wil	'canoe, vehicle, container'
=xn	'foot'

Examples of all 41 of the bound stems listed in (68) are provided in Appendix Two.

The following forms are also present in Kinkade's list, but are not considered to be synchronically active here for two reasons: (i) they do not appear to be productive; and/or (ii) their semantic features are no longer salient. The examples below are taken from Kinkade n.d.:

(69) ***Unproductive Right-Edge Bound Stems***

=a?cín '?'	?am'a?cín'm 'wait for a deer' (√?am 'wait')
=as '?'	txpásm 'eat corn off a cob' (√xəp 'chew, gnaw')
=alk' '(s.t. to do with string or rope)'	ni?ck^{w}álk' 'stretching (rawhide rope)' (√cək^{w} 'pull')
=alus '? (sometimes plural sense)'	kłálusn 'I shared/divided among (√kał 'give') several people'
=al's 'forehead'	kat?əmk'^{w}ál's 'skinned forehead' (√?əmk'^{w} 'skin')
=al'st '?'	səspál'st 'beebe shot'
=ałptək '?'	x̣sałptək 'friendly, good-natured, kind- (√x̣əs 'good') hearted'
=amx 'people'	sxə?ámxəx^{w} 'I'm local' (√xa? 'here')
=am'ín'a? '?'	x̣əl'pa?m'ín'a? 'morning star' (√x̣əl 'daylight')
=anx^{w} '?'	skƛ'əm'ánx^{w} 'beginning of pregnancy'
=ask'áyt, =ásk'it 'breath'	lək^{w}tásk'it 'long-winded' (? √lk^{w}ut 'far, long way')
=awt 'distant, remote'	tc'x̣^{w}áwt 'barely see s.t. (in the distance)'
=áwya?, =wya? '?'	mal'q^{w}áwya?m 'guess one another for the kick-stick (in stick-game)'

=aw'as '?'	n?ay'sáw'as 'trading with s.o. else' (√?ays 'trade')
=ay' '?'	c'áway 'long bone beads'
=əl'úy'a? '?'	k'^{w}k'^{w}uc'əl'úy'a? 'garter snake'
=əm' 'each'	kaka?łásm' 'three each' (√ka?łás 'three')
=ink 'weapon'	swəlwəlmínk 'gun' (√wəlwəlím 'iron, metal')
=ísa? '?'	np'ar'q'ísa? 'guess bones both toward the outside (in stick-game)'
=it '?'	k^{w}r'ít 'gold' (√k^{w}ar 'make yellow')
=íwa? '?'	t'əlíwa? 'a wild onion'
=íw'iy'a? '?'	(s)ləsíw'iy'a? 'mist'
=kan '?'	spəqkán 'tin'
=k^{w}l' '?'	pək^{w}k^{w}l' 'come to the top; surface'
=łk^{w}p '?'	stúmłk^{w}p 'rotten log' (√tum 'rotten')
=maw's 'layer'	n?aw'tmáw's 'the second time'
=mix 'people, person'	sq'iy'míx 'school children' (√q'iy' 'write')
=mix^{w} 'person, man'[8]	yəlmíx^{w}m 'chief'
=nw'aln '?'	łkłknw'áln 'poison oak'
=qnil '?'	tk'əmqníl 'pelvis'
=qs '?'	sk'ám'qsn 'a piece, leavings, cuttings'
=tk '?'	sqáltk 'meat'
=tk^{w} '?'	s?ístk^{w} 'winter'
=úsa? 'egg, small sphere'	c'əx̣^{w}l'úsa? 'white camas'
=útiy'a?, =w'ítiy'a? '?'	kałqlxútiy'a? 'travel on horseback' (√łaqlx 'sit (sg.)')

[8]Kinkade (n.d.) lists the bound stems *=mix* 'people, person' and *=mix^{w}* 'person, man' separately.

For some of the above bound stems, the semantics are still salient. Further data may indicate that they should be included with the other synchronic bound stems in (68), but for now they will be considered of diachronic relevance only.

There are several bound stems that generally only surface when combined with other bound stems. The bound stem *=aya?*, in addition to the meaning 'pretend' in (68), also has the meaning 'head' but combines with another bound stem, *=qin* 'head', for this particular meaning. The bound stem *=əlqst* 'shin' always cooccurs with the bound stem *=xn* 'foot'. And, from the few examples I have seen, the bound stem *=atkʷúp* 'fire' (as opposed to *=átkʷp* 'fire') cooccurs with *=us* 'fire. Such complex forms are discussed in section 8.3.3.

Many of the bound stems in (68) are given multiple glosses. As Kinkade (1998b:266) indicates, "the first lexeme in the gloss [...] is the basic meaning; all the others extend some part of the basic concept. The extensions are not always obvious, although they often have explanations from within the culture". Hinkson (1999) claims that these extensions "can be seen as forming a radial category around a core, or central meaning" (p.32) and that they "are based on perceived or imputed similarity to the central core of a category. The links connecting meaning extensions to each other and to the center of the category are the standard paths of lexical change, i.e. metaphor, metonymy, spatial contiguity, and analogy" (p.41). The relationships between the various meanings associated with a bound stem are not the focus of this work, thus I refer the reader to Saunders and Davis (1975a: Bella Coola), Czaykowski (1982: Nxa?amxcin), and especially Hinkson (1998, 1999, 2000, 2001: pan-Salish) as these relationships are the central focus of her work.

I make the preliminary assumption here that right-edge bound stem constructions are a type of compounding, and provide evidence for this later in section 8.4.3. I assume that bound stem constructions are created by the same word structure rules responsible for the *aɬ-* and unmarked compounds in section 8.2. I discuss these rules below.

8.3.1.1 V → V N

The word structure rule in (7), repeated below as (70), is extremely productive in the formation of right-edge bound stem compounds:

(70) V → V N

The above rule, which applies to both types of free stem compounding, indicates that a verb and noun stem combine to form a complex verb. The bound noun stem satisfies a role in the argument structure of the adjacent verb. The most common examples contain a noun stem satisfying the role of theme. Such constructions may involve one, two or three arguments, as shown in (71), (72) and (73):

(71) wəckáɬxʷ
wəck=aɬxʷ
fall over=house-(3AB)
The tipi blew over.

(72) k'ət'áɬp kn
k'ət'=aɬp
cut=tree + 1ss
I cut down a tree.

(73) kaɬxmnált k'l sx̣álwiʔs
kaɬxmin=alt sx̣alwiʔ-s
give away=child LOC *husband*-3PS
She gave her child to her husband.

In (71) 'tipi' is the only thematic role in this unaccusative construction and surfaces as the bound stem *=aɬxʷ* 'house'. In (72) there is an agent role 'I' and a theme role "tree'. The theme role is saturated by the bound stem *=aɬp* on the predicate. Example (73) contains an agent 'she', theme 'child' and goal 'husband' role, and the theme role is represented by the bound stem *=alt* 'child'.

Agent roles can clearly be satisfied by bound stems in Nxa?amxcin.[9] Bound stems that saturate an agentive role appear to be restricted to unergative predicates.[10] Hence, predicates that subcategorize for two or more arguments cannot surface with a bound stem that satisfies the role of agent. So far all of the bound stems that have been found to satisfy agent roles in the data are in the form of the bound stem *=alt* 'child'.[11]

(74) p'it'k'əlqsm ʔací ʔaʔusaʔ kʷaʔ ʔucqaʔált
p'it'k'əlqs-m ʔucqaʔ=alt
hatch-m-(3AB) DET *egg* *and* *go out=child*-(3AB)
Those chicks are hatching and then come out of the egg.

(75) ʔací smʔámm snkʷnamáltəxʷ
s-nkʷnam=alt-mix
DET *woman* IM-*sing=child*-IM-(3AB)
That woman's child is singing.

(76) k'ʷuxʷk'ʷuxʷpált ʔací sxʷiyúps
k'ʷuxʷ-k'ʷuxʷ-p=alt sxʷiyup-s
AUG-*crawl*-IN=*child*-(3AB) DET *bull snake*-3PS
That bull snakes's litter is crawling around.

(77) ləxʷcnmált
laxʷcinm=alt
cry=child-(3AB)
Someone's baby cried.

---

[9]Cases of agents morphologically combining with predicates are rare cross-linguistically, but have been noted for Nxa?amxcin by Czaykowska-Higgins, Willett and Bart (1996) and for Athapaskan languages by Axelrod (1990), Rice (2000), Rice and Saxon (in press), among others.

[10]I label these predicates *unergative* based on cross-linguistic semantic properties of unergative verbs (Perlmutter 1978). I have not yet found a syntactic test that separates unergatives from unaccusatives in Nxa?amxcin.

[11]This is no doubt for semantic reasons since unergatives generally imply that some volition is involved on the part of the agent, limiting possible subjects to animate beings. There are only two animate lexical suffixes that surface with predicates in Nxa?amxcin: *=alt* 'child' and *=sqaxa?* 'domestic animal'. The latter is not as frequent in the data as the former.

(78) ciʔáp lx ʔací skínt tl' ləkʷút
arrive-(3AB) + PL DET *indian* LOC *long way*

kʷaʔ lx ʔixʷəl l łwamált
łwam=alt
and + PL *siblings?* LOC *go(pl.)=child*-(3AB)

Those people arrived from far away and some of their children went back.

(79) cíłu səmxʷtálts ʔací smʔámm
s-muxʷt=alt-s
always NM-*laugh=child*-3PS DET *woman*
That woman's child is always laughing.

(80) naw'lxált
naw'lx=alt
run(sg.)=child-(3AB)
Someone's child runs.

(81) pəlpultált lx
pəlpult=alt
dream=child + PL
Their children dreamed.

(82) xʷay'málť ʔací Linda
xʷay'm=alt
run away=child-(3AB) DET *Linda*
Linda's child ran away.

(83) ʔací sqəl'tmíxʷ cíłu sxʷət'pálts
s-xʷət'p=alt-s
DET *man* *always* NM-*rush=child*-3PS
That man's child is always racing/dashing ahead.

Bound stems can also satisfy the role of goal in a verb's argument structure, as shown in (84) and (85):

(84) kn kałxált t yúp'aʔtn
kałx=alt yup'aʔ-tn
1SS + *give=child* OBL *play*-INS
I gave the/my child a toy.

(85) scʔəmtsqáẋaʔəxʷ
sc-ʔəmt=sqaẋaʔ-mix
IM-*feed=domestic animal*-IM-(3AB)
S/he is feeding the deer.

Instrument roles can also be satisfied by bound stems. All of the examples I have involve bound stems denoting body parts, however this may be a gap in the data.

(86) yərmnákstmn
yərmin=akst-min-nt-n
push=hand-RL-TR-(3AB)-1SS
I pushed it aside with my hand.

(87) xʷirxnm ...
xʷir=xn-m
reach out=foot-m-(3AB)
He reached with his foot ...

Finally, locative argument roles can be satisfied by a compounded bound stem, as in (88) and (89):

(88) kn kłqlxá?st
k-łaqlx=a?st
1SS + POS-*sit(sg.)=rock*
I sat on a rock. 90.229

(89) kn tkayákstm
tkay=akst-m
1SS + *pee=hand*-m
I peed on my hand.

8.3.1.2 N → X N

The word structure rule in (39), repeated below as (90), also creates right-edge bound stem compounds:

(90) $N \rightarrow X\ \underline{N}$ where $X \in \{A, N, V\}$

The above rule indicates that an adjective, noun or verb stem can combine with a noun stem to form a complex noun stem. Some examples involving adjectives are given below:

(91) qʷtnánk
qʷtun=ank
big=stomach
big stomach (fat or pregnant)

(92) nqʷtn'átkʷ
n-qʷtun=atkʷ
POS-*big=river*
big river MDK

(93) wəsxnapas
wisxn=apas
long=tooth
long tooth

Nouns can also serve as the initial stem in this word structure rule, as evidenced by the following examples:

(94) skint=wíl
Indian=canoe
canoe Kinkade 1998b:270

(95) sip'iy=álqs
hide=dress
dress made of hide Kinkade 1998b:270

(96) wawaki?=áɬp
acorn=plant
oak tree Kinkade 1998b:270

It is possible for a verb stem to surface as the initial stem in this word structure rule, but it is difficult to find examples that have not been lexicalized. One clear example is found in Kinkade 1998b:

(97) n-ḥac=áp=xn
LOC-*tie=rope=foot*
knot at the end of a rope Kinkade 1998b:270

8.3.1.3 Other Examples

There are three right-edge bound stems that are not accounted for by the above word structure rules. The first of these is *=ana?* 'all over', an extension of

the core meaning 'ear'. This is the only right-edge bound stem in Nxa?amxcin that conveys an adverbial meaning. Consider the following examples:

(98) kn tḥal'ḥal'x^{w}ána?
t-ḥal'-ḥal'x^{w}=ana?
1SS + POS-AUG-*freeze=ear*
My ears froze. W8.189

(99) kc'x^{w}ána?ant ta?
k-c'əx^{w}=ana?-nt
POS-*spill=all over*-TR-(3AB)-(2SS) + IMP
You spill water on it! W7.192

In (98), the bound stem *=ana?* has the nominal interpretation of 'ear', while in (99) it has the adverbial meaning 'all over'. Examples like (99) suggest that the following word structure rule is operative in Nxa?amxcin:

(100) V → V Adv

Two right-edge bound stems appear to have extended their core nominal meaning to a verbal meaning. The bound stem *=ank* has the core meaning 'stomach' but is also glossed as 'want'. Compare the following examples:

(101) q^{w}tn**ánk**
q^{w}tun=**ank**
*big=**stomach***
big stomach (fat or pregnant)

(102) lut kn n?iłn**ánk**
n-?iłn=**ank**
NEG 1SS + POS-*eat=**want***
I do not want to eat. Y29.116

Likewise the right-edge bound stem *=aya?* has the core meaning 'head' which has been extended the verbal meaning 'pretend', as shown in (103) and (104):

(103) kn q^{w}tn**áya?**qn
q^{w}tun=**aya?**=qin
1ss + *big=**head**=head*
My head is big.

(104) məx^{w}məx^{w}**táya?**
məx^{w}-məx^{w}t=**aya?**
AUG-*laugh=**pretend***
pretend to laugh

Examples (103) and (104) suggest that the following word structure rule is present in the language:

(105) V → V V

The rule in (105) indicates that two verb stems can combine to form a complex verb stem.

In the previous section we saw consistency between word structure rules used to form *aɬ-*, unmarked and right-edge bound stem compounds. The word structure rules in (100) and (105) are inconsistent with the pattern and apply to only one or two bound stems respectively. I can only speculate at this point but I suspect that examples (99), (102) and (104) are not instances of bound stem compounds, but rather the forms *=ana?*, *=ank* and *=aya?* are functioning as grammatical morphemes in these examples.

Hinkson (1999:118) has already indicated that "[t]he suffix **an'/nak* is attested with desiderative force and acquires grammatical meaning in the Southern Interior Salish languages Columbian and Okanagan". It is possible that *=aya?* 'pretend' could also be subsumed under the category mood. With respect to *=aya?* 'all over', we have already seen the prefix *ni?-* 'among a bunch of things' analyzed as a grammatical marker, and it would therefore not be a stretch to consider *=aya?* 'all over' as a grammatical morpheme.

It is very difficult to prove the status of these bound stems as lexical or grammatical, and I will leave this question open for future research.

8.3.2 Left-Edge Bound Stems (Lexical Prefixes)

From a pan-Salish perspective left-edge bound stems, generally referred to in the literature as *lexical prefixes*, are notably much rarer than right-edge bound stems. In an unpublished paper Kinkade (1996b) writes, "[i]n some Salishan languages, a few prefixes are found with similar roles [to lexical suffixes], although I assume that these are of relatively recent origin since little cognacy exists among them". In another unpublished paper, A. Mattina (1987) takes a comparative look at lexical affixes (i.e. bound stems) across Salish, listing 15 different lexical prefixes.[12] From A. Mattina's list, three have been identified for Nxa?amxcin:

(106) ***Left-Edge Bound Stems***

nk'^{w}=	'co-, fellow'
pu?=	'spouse'
yap=	'on the way'

The first bound stem listed in (106) is *nk'^{w}=* which is cognate with Colville *nk'^{w}=* 'one' and Kalispel *nk^{w}ɬ=* 'with, together' (A. Mattina 1987). When affixed to a free stem *nk'^{w}=* has the meaning 'co-' or 'fellow-', as shown in (107) to (109):

(107) **snk^{w}**skínts
s-**nk'^{w}**=skint-s
NM-***fellow***=*indian*-3PS
his/her people Y23.64

(108) **snk'^{w}**yúp'a?
s-**nk'^{w}**=yup'a?
IM-***fellow***=*play*
play together all the time W.5.19

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[12]One of these lexical prefixes, which is cognate with Colville *sux^{w}-m* 'know, recognize a person', now serves as a grammatical morpheme (the agentive marker *sx^{w}-*) in some Salish languages including Nxa?amxcin (see section 6.5.1.3).

(109) s**nk'**^{w}acwáx
s-**nk'**^{w}=ʔacwax
IM-***fellow=live***
live together in the same house Y27.28

Example (107) indicates that *nk'*^{w}= can combine with a free noun stem to form a complex noun stem, as illustrated in the following rule:

(110) N → A N

In examples (108) and (109), *nk'*^{w}= combines with a free verb stem to form a complex verb, as in (111):

(111) V → A V

Another left edge bound stem is *puʔ*=, which is cognate with Colville and Kalispel *puʔ*= and Coeur d'Alene *pän'*= meaning 'spouse' (Mattina 1987).

(112) **puʔ**k^{w}anmúl
puʔ=k^{w}nam-ul
spouse=take-HB-(3AB)
He took off with someone else's wife W4.71

The above example is illustrative of the following rule:

(113) V → N V

Finally, the bound stem *yap*= is cognate with Colville *ʔip*= and Coeur d'Alene *täp*= meaning 'on the way' (Mattina 1987).

(114) **yap**k^{w}ánksn
yap=k^{w}an=akst-nt-n
on the way=take=hand-TR-(3AB)-1SS
I grab her/him by the hand/arm (as s/he goes by). Y26.59

The above example indicates that the following word structure rule is operative in the language:

(115) V → Adv V

The form *yap=* has been labelled a locative prefix in the literature on Nxa?amxcin (e.g. Kinkade 1999), and the possibility of it being a synchronic grammatical marker as opposed to a lexical prefix should be considered.

Examples of left-edge bound stems are provided in Appendix Three.

8.3.3 Multiple Bound Stems

The occurrence of multiple bound stems in a word has been addressed in the Salish literature by Kinkade 1973, Saunders and Davis 1975a,b, Czaykowski 1982, and Czaykowska-Higgins 1996, 1998, to appear. There are two types of examples in which multiple bound stems appear in Nxa?amxcin, as discussed in Czaykowski 1982 and Czaykowska-Higgins 1996, 1998, to appear. In the first, two or more bound stems combine together to form one complex bound stem. In the second, two bound stems can appear in a bound stem compound without forming a complex bound stem, each one semantically independent of the other.

With respect to the first type, many bound stem compounds containing more than one bound stem can be found in Nxa?amxcin. These bound stem combinations are generally glossed separately in the literature, as they are here, but they clearly function together as a unit. Consider the following example:

(116) nməq'^{w}**apána?**
n-məq'^{w}=**ap=ana?**
POS-*bulge=**base=ear***
bulge on side of face — Czaykowska-Higgins 1993a:249

While each of the bound stems *=ap* 'base' and *=ana?* 'ear' are individually salient, it is the combination that creates the complex nominal bound stem 'side of face'. More examples of complex bound stems are given in Appendix Four.

The second type of compound containing multiple bound stems involves two bound stems, each of which is a semantic argument of the adjacent predicate. The only clear examples like this that I have found contain the bound stem *=akst* 'hand', which satisfies an instrument role, and *=atk*^{w} 'water', which satisfies a locative role.

(117) x^{w}ərk**státk^{w}**m
x^{w}ir=**akst=atk^{w}**-m
*reach=**hand=water***-m
reach into water 89.09.26.14

(118) nk'^{w}ƛ'p**akstátk^{w}**n
n-k'^{w}əƛ'-p=**akst=atk^{w}**-nt-ən
POS-*come off*-IN=***hand=water***-TR-(3AB)-1SS
[I dropped something into the water.] Y26.151

In both of these examples, unlike the previous complex bound stems, each lexical suffix is a separate bound stem satisfying a separate semantic argument of the predicate.

8.3.4 Locative Prefix and Bound Stem Combinations

Kinkade (1998b:268) indicates that "[s]et combinations of lexical suffixes, often with specific prefixes, are frequently used for certain concepts". The semantics of a number of bound stems are narrowed considerably when appearing in a bound stem compound marked by a particular locative prefix. The semantics are still closely related to the isolated meaning of the bound stem; however the presence of the locative prefix narrows the focus of the bound stem's meaning.

For example, when the bound stem *=alq^{w}p* 'throat' appears in a bound stem compound containing the prefix n(a)- 'into, onto', *=alq^{w}p* is glossed as 'mouth' instead of 'throat'.

(119) **nkʷƛ'alqʷ**ptúɬn
n-k'ʷəƛ'=**alqʷp**-tuɬ-n
POS-*take out*=***throat***-APP-(3AB)-1SS
I took it out of his mouth. 89.143

The bound stem =*cin* is generally glossed as 'mouth', however when a bound stem compound containing =*cin* is marked with the locative prefix *kat-*, =*cin* gets translated as 'lip'.

(120) kn **kat**páw**cn**
kat-paw=**cin**
1SS + POS-*blister*=***mouth***
My lip is swollen. 90.102

(121) **kàt**p'íq**cîn**
kat-p'iq=**cin**
POS-*scorch*=***mouth***-(3AB)
He burned his lips. Y29.135

The bound stem =*us*, generally glossed as 'face', is interpreted as 'eye' when the bound stem compound contains the locative prefix *na-* 'into, onto'.

(122) **n**cəkk**ús**
n-cə•k•k=**us**
POS-*hit*•OC•*hit*=***face***-(3AB)
He got hit on the eye. JM3.108.10

(123) **n**cù?cu?**ús**ntm
n-cuw'-cuw'=**us**-nt-m
POS-AUG-*punch*=***face***-TR-PAS-(3AB)
hit on the eyes Y6.237

These are only a few examples suggesting that locative prefixes can have an effect on the interpretation of a bound stem.

8.3.5 Classifiers

It has been widely noted in the Salish literature that sets of numeral classifiers have developed from bound stems in the Salish family (see, for example,

Galloway 1977, Gerdts and Hinkson 1996, Kinkade 1998b, Hinkson 1999 and the grammars of Leslie 1979, Thompson and Thompson 1992, Galloway 1993 and van Eijk 1997, among others). While the compounding usage of bound stems has been given almost exclusive attention in the literature, two recent papers (Gerdts, Hinkson and Hukari 2002 and Shaw, Blake and Campbell 2002) have focused specifically on the classificatory use of bound stems in dialects of Halkomelem.

In her pan-Salish discussion of lexical suffixes, Hinkson (1999:20) indicates that "[a] subset of lexical suffixes in Salish languages functions as numeral classifiers. These classifier constructions are used for counting and the lexical suffixes carry the semantic weight of nouns, but do not behave syntactically like nouns". As with other Salish languages, a system of numeral classifiers has developed from a subset of bound stems in Nxa?amxcin. While generally labelled *numeral classifiers*, Nxa?amxcin classifiers also appear with adjectival and quantificational stems. This has also been noted for Halkomelem by Gerdts, Hinkson and Hukari (2002). The existence of classifiers in Nxa?amxcin has been acknowledged by Czaykowski (1982), Czaykowska-Higgins (1996, 1998), Czaykowska-Higgins, Willett and Bart (1996) and Kinkade (1998b), but a detailed treatment of Nx?amxcin classifiers is not yet available. This section is a preliminary attempt at describing these classifiers.

Cross-linguistically speaking, Aikhenvald (2000:98) indicates that "[n]umeral classifiers are perhaps the most commonly recognized type of classifier system". Such classifiers "appear contiguous to numerals in numeral noun phrases and expressions of quantity". Selection of these classifiers is, for the most part, semantically motivated. As Hinkson (1999:21) points out for Salish, the function of these classifiers is "to cross-reference a salient property of the external noun on the verb complex". Aikhenvald, following Lyons 1977, distinguishes between two general types of numeral classifiers: sortal and mensural. I organize my discussion here along this division.

The *sortal classifier* "individuates whatever it refers to in terms of the kind of entity that it is" (Lyons 1977:463). Thus, as Aikhenvald (2000:115) points out, they "categorize nouns in terms of their inherent properties such as animacy, shape, consistency". Most of the numeral classifier examples in the

Nxa?amxcin data are of the sortal classifier type. Some of these sortal classifiers are reflective of SHAPE/DIMENSION. Examples are given in (124) to (133):

=a?st 'round'

(124) knqsá**?st**
knaqs=**a?st**
*one=**round***
one round thing (berry, rock, apple) 91.92

(125) tq'aw's**a?st**
tq'aw's=**a?st**
*two=**round***
two objects, eggs, potatoes

=alq^{w} 'long and thin'

(126) q'aw'sá**l̓q^{w}**
q'aw's=**alq^{w}**
*two=**long and thin***
two poles, two sticks

(127) q^{w}tn**álq^{w}** kiḥána? l t't'əʕ'^{w}úm'a? púsc
q^{w}tun=**alq^{w}** pus-s
*big=**long and thin*** *girl* LOC *little* *cat*-3PS
The big girl's little cat. 92.36

=ap 'round'

(128) q'aw's**ap**
q'aw's=**ap**
*two=**round***
two doors, trees, butts (bums), eggs, ropes, bushes

(129) nk'^{w}ənx**áp** ?isc'íɬn ta?úsa?
nk'^{w}inx=**ap** ?in-s-c-?iɬn
*how many=**round*** 2SPS-NM-?-*eat* *egg*
How many eggs did you eat? 90.303

(130) qaqaʔáp (ḥacəmíntn)
q-qaʔ=ap
DM-*small*=***round*** *rope*
small rope (around) Y12.29

=aw's 'flat'

(131) tq'aw's**áw's**
tq'aw's=**aw's**
two=***flat***
two layers (material, paper, books, something that lies flat)

=útiy'aʔ 'flat'

(132) nəqs**útiyaʔ**
naqs=**utiy'aʔ**
one=***flat***
one of something flat (e.g. blanket, lumber)

(133) q'aws**útiyaʔ** ʔisíc'm kasʔanínn
q'aw's=**utiy'aʔ** ʔin-sic'm kas-ʔani-nt-n
two=***flat*** 1SPS-*blanket* IR-*bring*-TR-(3AB)-1SS

kiłkʷál'mntn
ʔin-kał-kʷal'mntn
1SPS-IR-??

Two kinds of blankets I'm taking to warm me up.

All of the examples in (124) to (133) are reflective of SHAPE/DIMENSION. The classifiers *=aʔst* and *=ap* surface when a number/adjective/quantifier modifies a noun that is round in shape. (Further investigation is warranted to determine the exact semantic nuances between *=aʔst* and *=ap*.) Items that are perceived to be long and thin trigger the classifier *=alqʷ*, while nouns perceived as flat trigger the classifier *=aw's* or *=útiy'aʔ*. (Again, further investigation is required to determine the semantic differences between *=aw's* and *=útiy'aʔ*.)

Other sortal classifiers in Nxaʔamxcin are reflective of FUNCTION. Aikhenvald (2000:291) notes that "[f]unctional properties are not as frequent in

numeral classifier systems as shape and dimensionality" and "are often highly culture-specific". Some examples are given in (134) to (141):

=alqs 'clothing'

(134) k'ʷinx**álqs** ʔintəmtəmútn
k'ʷinx=**alqs** ʔin-təmtəmutn
*how many=**clothing*** 2sPS-*clothing*
How many clothes do you have? 90.301

(135) x̣ənt**alqs** ʔani kisc'anín
x̣ənt=**alqs** ʔin-kaɬ-s-c-ʔanin
*nine=**clothing*** DET 1sPS-IR-NM-DIR-*bring*
I'm bringing nine dresses. 90.300

=ałp 'plant'

(136) k'ʷənx**áłp** ʔaní ʔisc'áɬəxʷ
k'ʷinx=**ałp** ʔin-s-c'aɬ-mix
*how many=**plant*** DET 1sPS-NM-*cool*?-IM
How many shade trees do you have? 90.292

=ałxʷ 'house'

(137) ka?ɬas**áłxʷ** wa stxʷúl
ka?ɬas=**ałxʷ**
*three=**house***-(3AB) WA *house*
There are three houses.

(138) wíkɬn cicxn**áłxʷ** (ʔaní stxʷúl)
wik-ɬt-n cicxn=**ałxʷ**
see-TR-(3AB)-1sS *new=**house*** DET *house*
I saw a new house.

(139) k'ʷinx**áłxʷ** stxʷtxʷúl wəl sqəl'tmíxʷ
k'ʷinx=**ałxʷ** s•txʷ•txʷul
*how many=**house*** *house*•AUG•*house* COL *man*

ḥaw'iyáłxʷ lx
ḥaw'y=ałxʷ
build=house-(3AB) + PL
How many houses are those men building?

=wil ‘vehicle’

(140)

k’ʷinx̣**wîl**	
k’ʷinx̣=**wil**	
*how many=**vehicle**-*(3AB)	
[How many cars are there?]	90.290

(141)

kaʔɬ**wîl**	scḥaw’ìs	kastə́ɬms	t’əxiy’awt
kaʔɬas=**wil**	sc-ḥaw’is	kaɬ-stəɬm-s	
*three=**vehicle***	IM-*build*-(3AB)	IR-*boat*-3PS	*last year*

He built three boats last year.

All four of the classifiers represented in (134) to (141) are representative of functional items in the lives of the Nxaʔamxcin people. The classifier *=alqs* surfaces in contexts referring to clothing, while *=aɬp* cooccurs with plants. The classifier *=aɬx*ʷ surfaces with houses, which could be a tipi or modern-day structure. Finally, the classifier *=wil* appears with vehicles, which could be a traditional vehicle such as a canoe or a modern vehicle such as a boat or car.

Another type of numeral classifier in Nxaʔamxcin is the *mensural classifier* which “individuates in terms of quantity” (Lyons 1977:463). Aikhenvald (2000:115) indicates that such classifiers are “used for measuring units of countable and mass nouns”. Some examples of mensural classifiers are given in (142) to (145):

=kan ‘container’

(142)

nəqs**kán**	ʔacî	sáwɬkʷ
naqs=**kan**		
*one=**container***	DET	*water*

a bucket full of water

(143)

tq’aw’s**kán**	taʔ	nac’ə́xʷm	t	kúpi
tq’aw’s=**kan**		na-c’əxʷ-m		
*two=**container*** +	IMP	POS-*pour*-AP-(2SS)	OBL	*coffee*

Pour two cups of coffee!

=qinwîl 'load'

(144) ka?ɬ**qnwîl** ʔací cyáʕ'p
ka?ɬas=**qinwil**
*three=**load*** DET *arrive*-(3AB)
Three loads just arrived.

=wil 'container'

(145) q'aw's**wîl**
q'aw's=**wil**
*two=**container***
two containers of something

Two of the above classifiers, =*kan* and =*wil*, are indicative of measure in terms of a container, while the classifier =*qinwil* indicates measure in terms of a load.[13] Further data is required to determine what type of nouns are compatible with these mensural classifiers. Note that =*wil* is also used as a FUNCTION sortal classifier in (140) and (141).

There are two other potential classifiers in the data, but the examples are insufficient to determine their semantic scope:

=ups '?'

(146) nəqs**úps**
naqs=**ups**
one=?
one kind/type

(147) nəqs**úps** ʔací spáƛ'm scwiʔmíx
naqs=**ups** sc-wiʔ-mix
one=? DET *bitterroot* IM-*grow*-IM-(3AB)
One bitterroot is growing.

---

[13]The classifier =*qinwil* is a complex form diachronically comprising the bound stems =*qin* 'head' and =*wil* 'vehicle'.

-us '?'

(148) nəqsúsm
naqs=**us**-m
one=*?*-m
different brand, different type

Both bound stems =*ups* and =*us* appear to have a classificatory use in (146) and (148) in that they cooccur with numerals to indicate a "type" of something. Example (147) leaves us with a broad scope as we do not know if =*ups* is reflective of the SHAPE/DIMENSION or FUNCTION of 'bitterroot'.

The number of bound stems functioning as numeral classifiers is much smaller than those functioning as compounded stems. Only a subset of these bound stems have emerged with a classifier usage, which seems to be the case for other Salish languages as well. While numeral classifiers are homophonous with their compound counterparts, they differ from the compound bound stems in three important ways: (i) they combine primarily with numerals and quantifiers; (ii) they can cooccur with a coreferenced direct noun; and (iii) their semantic interpretations are much broader.

With respect to the first property, we see in examples (124) to (148) that Nxaʔamxcin classifiers combine primarily with numerals (e.g. (124) and (141)) and quantifiers such as *k'ʷinx* 'how many' (e.g. (129) and (139)). However, a handful of examples indicate that the use of these classifiers is spreading to adjective stems (e.g. (130) and (138)).

Turning to the second property, a number of examples provide clear evidence that classifiers can cooccur with a coindexed direct noun phrase (e.g. (127), (130), (134) and (137-139)). As will be addressed in section 8.4.4.2.1, this property is specific to the classifier usage of these bound stems and is prohibited with the compound usage.

Many classifiers also differ from compound bound stems in their semantic interpretation. The following table provides a comparison:

(149) ***Semantic Comparison of Lexical Suffixes and Classifiers***

	Lexical Suffix	**Classifier**
=a?st	rock; weapon (not necessarily round)	round
=alqs	clothing	clothing
=alq^{w}	tree, pole, log	long and thin
=ałp	plant	plant
=ałx^{w}	house	house
=ap	foot, lower end; rope; egg	round
=aw's	middle	flat
=kan	--------	container
=qinwíl	--------	load
=ups	tail, rump	?
=us	face; fire	?
=útiy'a?	--------	flat
=wil	vehicle; container	vehicle; container

A number of the classifiers in (149) are given an identical gloss with their lexical suffix counterpart. Other classifiers, however, take on much broader semantics. Take for example =*a?st* 'round', =*alq*^{w} 'long and thin', and =*ap* 'round'. Unlike the lexical suffix counterparts, these classifiers do not refer to specific items, but rather categorize the SHAPE/DIMENSION of a corresponding noun. This distinction is in line with Gerdts, Hinkson and Hukari's (2002:150) observation for Halkomelem that such bound stems become "acategorial and semantically bleached when used as a classifier".

From the data examined, it appears that three of the classifiers in (149), =*kan* 'container', =*qinwíl* 'load' and =*útiy'a?* 'something flat', are no longer used productively to form bound stem compounds, but have maintained a classifier usage.

8.4 The Status of Bound Stem Constructions in the Grammar

Up to this point I have made the assumption that constructions involving bound stems are a type of compounding in Nxa?amxcin. Bound stem constructions are found throughout the Salish family, but there has not been any general agreement as to where in the grammar these constructions are formed. Some Salishanists have argued that these constructions, referred to as lexical affixation, are a syntactic phenomenon (at least for some instances of lexical affixation). Some have concluded that this phenomenon developed from free stem compounding, which could suggest that lexical affixation is an alternate type of compounding and hence a lexical phenomenon. In this section I provide support for the latter view.

I first provide a review of the literature on lexical affixation, including a discussion of previous analyses of lexical affixation. I then look at the nature of lexical affixes in the grammar addressing the question of whether they are stems or affixes realized by the Morphological Spelling Component. I then discuss properties of lexical affixation that support a compounding analysis. Finally, I pursue the syntactic noun incorporation angle, providing an initial review of the literature on noun incorporation and then comparing data in Nxa?amxcin with that of Mohawk to illustrate the syntactic differences between lexical affixation in Nxa?amxcin and noun incorporation in Mohawk.

8.4.1 Review of the Literature on Lexical Affixation

Lexical affixes (bound stems) have been a mysterious component of Salish grammar from the very beginning. Both A. Kroeber (1909) and Sapir (1911) recognized these affixes as being noun-like; however neither of them chose to class lexical affix constructions together with other constructions that had been considered instances of noun incorporation.

> The "substantivals" of Selish and Wakashan, elements of substantival significance but used only in combination with other stems or elements of words and usually unrelated in form to the independent words of the same significance, furnish apparent instances of incorporation, in that they are sometimes used as objects of verb stems with which they are combined. They are however also employed subjectively and adverbially, and are therefore more than incorporated nouns. The essential nature and function of these elements is still obscure, and until they become better understood they also can furnish no proof of objective noun-incorporation.
>
> A. Kroeber 1909:572–3

> ... it is clear that verbal affixes that refer to nouns, in other words, convey a substantival idea, are not instances of noun incorporation if they are etymologically unrelated to the independent nouns or noun stems with which they seem logically connected. Such affixes are generally either instrumental (Siouan, Shoshonean) or local (Kwakiutl, Salish) in character, but may also be employed to represent the logical object or even, in the case of intransitive verbs, subject (this use is characteristic of Kwakiutl, Chemakum, and Salish). As long, however, as they are lexically distinct from noun stems proper, they must be looked upon as grammatical elements pure and simple, however concrete their signification may seem. They are logically related to independent nouns of the same or allied meaning as are tense affixes to independent adverbs of time.
>
> Sapir 1911:251–2

The main reason lexical affixes have not fit neatly into any specific cross-linguistic category is due to their dual or 'split' behaviour. As Egesdal (1981) points out, lexical information is generally associated with stems and grammatical information with affixes. In Salish, he claims, we have an affix that carries lexical information. Egesdal also notes the lack of etymological relationship between the lexical affixes and their independent forms; bound stems generally bear no resemblance whatsoever to their overt NP counterpart(s). The following forms illustrate that this is clearly the case for Nxa?amxcin:

(150)	*Bound Stem*	*Independent Noun*
a. 'hand'	=akst	kálx
b. 'rock'	=a?st	xƛ'út
c. 'tree'	=ałp	?ąçp'áƛ'
d. 'house'	=ałx^{w}	stx^{w}úl

The bound stem nouns in the middle column in (150) bear no phonological resemblance to their corresponding independent forms in the righthand column. In fact, the bound stems in (150) cannot even be interpreted as reduced forms of the independent nouns. This is an observation that has been noted consistently throughout the Salish literature. Egesdal surmises that the fact that these affixes are seemingly archaic morphemes within the family has deterred many Salishanists from making any speculative claims as to their origin.

Following A. Kroeber's and Sapir's reference to Salish "substantival" suffixes, there was relatively little work published on these affixes—outside of Reichard 1938 and Vogt 1940—until the sixties and seventies when research on a variety of different Salish languages surfaced. Most of this work was largely descriptive, resulting in a larger amount of data made available for future research. This includes works such as Pidgeon's (1970) description of lexical suffixes in Saanich, Haeberlin's (1974) previous description of pan-Salish lexical suffixes edited by M.T. Thompson, and Saunders and Davis' (1975a) discussion of Bella Coola. Newman (1968) and Kinkade (1973) both presented papers at the *International Conference on Salish Languages*[14], Newman's work a comparative look at lexical suffixes across the Salish family and Kinkade's devoted to lexical suffixes in Nxa?amxcin. Discussion of lexical suffixes also appeared in various grammars during this time period, such as Harris 1963; Kuipers 1967, 1974; and Leslie 1979; among others. In 1987, A. Mattina presented a paper at the *26th Conference on American Indian Languages* which was a comparative study of lexical suffixes and lexical prefixes across the Salish family.

Works by Gerdts and Hinkson (1996) and Mithun (1997) have focused on the diachronic development of lexical affixes. Gerdts and Hinkson (p.164) propose that "lexical suffixes are the final stage of a process whereby a free noun becomes increasingly fused to an element with which it is compounded until it emerges as a bound form. Other functionally similar processes—noun stripping (Miner 1986) and noun incorporation (Mithun 1984)—can be considered stages

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[14]This annual conference is now titled the *International Conference on Salish and Neighbouring Languages*.

in this process". While the diachronic history of bound stems is not the focus of the present work, it is important to note that there are many stages involved in the process of an independent noun becoming a bound element. For example, several diachronic lexical suffixes in Nxa?amxcin (i.e. the agentive nominalizer *sx^{w}s-* and the instrumental nominalizers *-min* and *-tn*) are now strictly markers of grammatical operations. The classifier system discussed in section 8.3.5 is also representative of a stage in the diachronic history of bound stems in Nxa?amxcin and Salish in general. In my discussion of bound stems here, I am strictly focusing on one stage. At this stage these bound stems appear to have maintained lexemic status in that they represent elements of various lexical categories; their semantics, though extended, remains much narrower than those of the classifiers; and they do not mark grammatical operations (unlike the agentive and instrumental nominalizers). The lexical suffixes that I address here reflect what Czaykowska-Higgins (1996, 1998) refers to as *referential* and *nonreferential* lexical suffixes, what Czaykowska-Higgins, Willett and Bart (1996) refer to as *Root+Lexical Suffix Compounds* and *Root+Lexical Suffix Predicates*, and what Gerdts and Hinkson (1996) refer to as *compounding noun incorporation.*

Basically, two different views have emerged as to the nature of these lexical affix constructions: (i) they are a syntactic phenomenon involving the combination of stems at the level of syntax; (ii) they are a process of compounding (which I assume here to be a lexical phenomenon). The main proponents of view (i) are Davis and Saunders (1973) and Saunders and Davis (1975a,b,c). In their works throughout the seventies, Saunders and Davis support a syntactic approach to lexical suffixation in Bella Coola. They claim that "the affixation of "lexical suffixes" [...] occurs in the syntactic component of the grammar via a copying rule [...] called LEXICAL SUFFIX COPY" (1975b:356). They note that "not all lexical items [...] have a corresponding lexical suffix, and there appears to be no semantic criterion or feature of these lexical items which differentiates them from those having an associated lexical suffix" (p.356). In order to account for this, Saunders and Davis propose a syntactic feature [± Referential] which is arbitrarily assigned to lexical items. Those lexical items marked [+ Referential] have a corresponding lexical suffix, while those marked [-

Referential] do not. Saunders and Davis (p.357) claim that "[+ Referential] lexical items are subject to the optional application of LEXICAL SUFFIX COPY". Under this rule, a copy of a lexical item is made. This lexical item may occupy the agent, patient or adjunct position in a clause. The copy is in the form of a phonologically distinct lexical suffix. Once the copy is made, the lexical item is deleted by the rule REFERENT DELETION.

Czaykowska-Higgins (1996, 1998) also claims that at least a subset of lexical suffixes in Nxa?amxcin combine with stems at the level of syntax. She refers to these suffixes as "referential lexical suffixes" and states that they "take on the role of Theme or Patient of the Root" and "they seem to satisfy an internal argument of the root and to have meanings which are fairly concrete or referential" (1998:164). Her description of the referential lexical suffixes suggests that these should be analyzed as incorporated nouns in the syntactic sense of Baker (1988, 1996). She writes that "referential Lexical Suffixes are units of the syntactic structure, in addition to being units of the morphology. In this sense they function similarly to the subject and object markers which indicate the person and number of the subject or object of a sentence" (1998:169).

A second view on the nature of lexical affixes is a compounding analysis. I assume here such an analysis would entail that the combination of lexical affixes with stems is a lexical process, since compounds are generally assumed to be formed in the lexicon (e.g. Lieber 1983, 1992). An important point in favour of the compounding analysis is the growing evidence in the literature that bound stems are derived from free stem compounding in Salish. Egesdal (1981) was the first to provide clear arguments for a compounding analysis of lexical suffixation using data from a wide variety of Salish languages. His major arguments are as follows: First, the predicate+lexical suffix combination is intransitive. Second, lexical suffixes cannot be pluralized and they cannot be modified by adjectives or determiners. Third, lexical suffixes have non-referential interpretations. Fourth, this non-referentiality explains why so many lexical suffix constructions become lexicalized, as is often the case with compounds. I return to Egesdal's arguments in section 8.4.3.

Carlson (1990), building on Egesdal's (1981) and A. Mattina's (1987) comparative work, also claims that lexical affixation evolved from compounding. Carlson illustrates that compounding in Spokane is of the form VN or MN, and he demonstrates that lexical affix constructions follow the same patterns. He states (p.81):

> Regular use within words made roots lose their independence and influenced a change in shape. Once formally separated, meanings of related roots and affixes developed independently. Eventually the distance was so great that the connection was not recoverable. Viewed this way, lexical affixation is just the inevitable end point of the compounding process.

Black (1996), also working on Spokane, draws parallels between the phonological and morphological structures of free stem and bound stem compounds.

Finally, Kinkade (1996b, 1998b) takes a diachronic look at possible links between lexical suffixes and compounding. While a number of problems are raised in the paper, Kinkade concludes that lexical suffixes most likely did originate from compounds.

A further piece of evidence that lexical suffix constructions evolved from compounding can be put forward here based on data from Nxa?amxcin. As discussed in section 8.2, one type of free stem compounding in Nxa?amxcin is marked by the connector *-aɬ-*. This connector surfaces between two free stems and loses the [ɬ] segment in certain environments. A compelling indication that lexical suffix constructions developed from *aɬ*-compounds comes from examples involving two relatively new lexical suffixes: *=sqáx̣a?* 'domestic animal' and *=spantk* 'year'. It is reasonable to conclude that both of these lexical suffixes are diachronically new to the language since they are the only two lexical suffixes that still contain the s- nominalizer and neither of them have the phonologically reduced form of other lexical suffixes.[15]

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[15]Barry Carlson (p.c.).

Consider first the lexical suffix *=sqáẋa?* 'domestic animal'. It appears that an optional [a] segment can surface between a free stem and this particular lexical suffix. Compare the following two examples:

(151) s?əmtsqáẋa?əx^{w}
s-?əmt=sqaẋa?-mix
IM-*feed=domestic animal*-IM-(3AB)
[S/he's feeding the deer.]

(152) s?əmt**a**sqáẋa?əx^{w} t sq^{w}a?úl'əx^{w}
s-?əmt-**a**=sqaẋa?-mix
IM-*feed*-**a**=*domestic animal*-IM-(3AB) OBL *grass*
[S/he's feeding an animal grass.]

In example (151), the lexical suffix *=sqaẋa?* appears at the immediate left edge of the free stem *?əmt* 'feed'. In example (152), however, an [a] is inserted between the same free stem and lexical suffix. This segment marks no semantic or grammatical features in this form and appears to be optional in this case.

Now consider the lexical suffix *=spantk* 'year'. This is a suffix that generally surfaces with numerals or the quantifier predicate *k'^{w}inẋ* 'how many'. With certain free stems, the lexical suffix consistently surfaces adjacent to the free stem with no intervening morphology. Some examples are given in (153) to (155):[16]

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[16]Note that the recorded form for 'one year' contains the bound stem *nk'^{w}-*, labelled a lexical prefix in section 8.3.2 and glossed as 'co-, fellow'.

nək'^{w}spántk
nk'^{w}-spantk
one-year
'one year'

This is an unusual example in that it is comprised only of a lexical prefix and a lexical suffix, i.e. two bound stems. It is a general requirement that Nxa?amxcin words contain at least one free stem.

(153) salspántk
sal=spantk
two=year
two years

(154) musspántk
mus=spantk
four=year
four years

(155) cəlakspántk
cilkst=spantk
five=year
five years

With other free stems, however, an [a] is obligatorily inserted before the lexical suffix, as shown in the following examples:

(156) k'^{w}nx̣aspántk kʷ
k'^{w}inx̣-**a**=spantk
how many-**a**=*year* + 2ss
How old are you? 90.253

(157) sispəl'kaspántk
sispəl'k-**a**=spantk
seven-**a**=*year*
seven years

(158) tun'aspántk
twin'-**a**=spantk
eight-**a**=*year*
eight years

(159) x̣əntaspantk
x̣x̣ən'ut-**a**=spantk
nine-**a**=*year*
nine years

(160) xəƛ'xəƛ'aspántk
xəƛ'xəƛ't-**a**=spantk
ten-**a**=*year*
ten years

In examples (156) to (160), an [a] segment surfaces between the free stem and the lexical suffix =*spantk* 'year'. It is obligatory in these cases, unlike with the =*sqaẋa?* examples in (151) and (152).

The question that remains is what is the nature of this [a] segment? If [a] were an epenthetic vowel, it would not have optional status in (152). One could argue that it is an excrescent vowel, which would explain the optionality; however it consistently surfaces as [a] no matter what the preceding segment is, and excrescent vowels tend to be environmentally conditioned. I will argue here that this [a] segment is the compound connector *-aɬ-* for two reasons. First, when it appears it consistently surfaces between a free stem and a bound stem, the exact position where we would expect it to surface if it were a free stem compound (i.e. immediately following the lefthand compounded stem). The fact that [ɬ] does not appear can be accounted for on phonetic grounds: ɬ → ø / _ s.

Second, the fact that [a] only surfaces before *-sqaẋa?* and *-spantk* is significant. These bound stems are clearly new in the language as they still retain the shape of an independent noun. The examples in (152) and (156) to (160) are most likely indicative of an intermediary stage between *aɬ*-compound formation and the emergence of new bound stems in the language.

Further support for this idea can be found in the phonological forms of the lexical suffixes themselves. Consider the following synchronic list of lexical suffixes:

(161) ***Synchronic Lexical Suffix List***

Beginning with [aɬ]	Beginning with [a]	Neither [aɬ] nor [a]
=aɬc'a?	=a?st	=cin
=aɬniwt	=akst	=əlәwas
=aɬp	=alps	=әlqs
=aɬq	=alqs	=ic'a?
=aɬq^{w}	=alq^{w}	=ikn
=aɬq'ayt	=alq^{w}p	=lup
=aɬx^{w}	=alt	=qin
	=alx^{w}	=sqaχa?
	=ana?	=ul'әx^{w}
	=ank	=ups
	=ap	=us
	=ap(a)s	=wil
	=apla?	=xn
	=asq't	
	=atk^{w}	
	=atk^{w}p	
	=aw's	
	=aχn	
	=aya?	

Out of 39 lexical suffixes that are synchronically productive, 26 of them have [a] as the initial segment and 7 of these have [aɬ] as the first two segments. Recall that one type of compounding in Nxa?amxcin involved the combination of two stems with an intervening connector *-aɬ-*. The prevalence of [a] and [aɬ] at the left edge of the lexical suffixes in (161) suggests that these forms developed from righthand stems in *aɬ*-compounds.[17]

The question to be addressed here is as follows: Are complex words involving lexical affixation formed by compounding, which I assume to be a lexical process, or by some word formation process at the level of syntax?

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[17]Paul Kroeber (p.c.) suggests that "the fact that stress tends to fall on -a(ɬ)- in compounds might help explain why initial a(ɬ) is retained in lexical suffixes".

8.4.2 The Lexical Affix in Word Formation: Affix or Stem?

Before delving into the issue of where in the grammar lexical affix constructions are formed, another issue needs to be addressed: morphologically speaking, what is the actual status of lexical affixes in the grammar? Are these bound forms the phonological realization of morphological spelling operations or are they actually bound stems, or more precisely, lexemes, with an individual entry in the lexicon as with free stems? The properties of these lexical affixes suggest that the latter is true.

There is pan-Salish evidence indicating that lexical affixes have lexeme-like properties. The most widely noted point is semantics: the meanings attached to these lexical affixes are of a lexical, rather than grammatical, nature. Lexical affixes are representative of the lexical classes noun, verb and adjective. These semantic properties are specific to lexemes only and are not marked by morphological spelling operations. Thus, one can conclude from a semantic point of view that lexical affixes are in fact lexemes and not (grammatical) morphemes.

Some phonological evidence has also been put forward in the Salish literature indicating that lexical suffixes are more root-like than affix-like. For example, in an unpublished Optimality Theory paper, Blake (1998:24) maintains that lexical suffixes in St'át'imcets (Lillooet) "are analyzed phonologically as belonging to the prosodic Root Domain, and as such [are] subject to Root faithfulness constraints". In another unpublished paper, Blake (2000b) illustrates that lexical suffixes in both Lillooet and Sliammon have root-like properties based on the behaviour of certain adjacent segments. For example, Blake shows that in Lillooet a process of deletion takes place when two non-glottalized coronal obstruents are adjacent, as in the following examples. (Glosses are taken from Blake 2000b.):

(162) čùɬxitúmuɬ
cuɬ-xit-tumuɬ
√point-ind-1plo
point it out to us! Blake 2000b, ex. (10b)

(163) čúɬxič
cuɬ-xit-c
√point-ind-1sgO
point it out to me! Blake 2000b, ex. (10f)

As shown in (162), only one [t] segment surfaces when the indirective suffix *-xit* and the 1st plural object suffix *-túmuɬ* are realized adjacent to one another. This process of deletion also takes place in (163) when the 1st singular object suffix *-č* follows the indirective suffix *-xit*, another non-glottalized coronal obstruent. [t] is deleted and only [č] surfaces.

Blake then illustrates that non-glottalized coronal obstruents *can* surface as heteromorphemic geminates in the environment between (i) a root and an adjacent lexical suffix, or (ii) between two adjacent lexical suffixes. Examples involving a root and a lexical suffix are given in (164) and (165):

(164) nqʷal'út.tən
n-qʷal'ut-tən
loc-√speak-LS'instr'
telephone Blake 2000b, ex. (30b)

(165) npət.čán'
n-pət-c-an'
loc-√cover-LS'mouth'-tr
to cover an opening Blake 2000b, ex. (30e)

In (164) two adjacent [t] segments surface as a result of an adjacent [t]-final root and a [t]-initial lexical suffix. In (165) both a [t] and [č] segment surface together in the same environment. The fact that no deletion takes place in these examples, unlike examples (162) and (163), suggests that roots and lexical suffixes belong to a separate domain distinct from grammatical suffixes.

Examples involving adjacent lexical suffixes are given in (166) and (167):

(166) ʔéq'ʷčtən
ʔiq'ʷ-c-tən
√scrape-LS'mouth'-LS'instr'
any shaving instrument Blake 2000b, ex. (30i)

(167) nq'^{w}óλ'**č**t**ə**n
n-q'^{w}uλ'-**c**-t**ə**n
loc-√get stuck-LS'mouth'-LS'instr'
cork, stopper Blake 2000b, ex. (30j)

In both (166) and (167), the segments [č] and [t] surface together without triggering deletion, again illustrating that lexical suffixes in Lillooet behave like roots and not grammatical affixes with respect to certain deletion rules.

Further indications that lexical suffixes are root-like as opposed to affix-like comes from Czaykowska-Higgins (to appear) work on Nxa?amxcin. In her comparison of Nxa?amxcin lexical suffixes with both roots and grammatical suffixes, Czaykowska-Higgins examines the consonant inventories of all three. She states that "[r]oots contain the full range of consonants from [the] underlying inventory" while grammatical suffixes "use a very restricted set of segments". Both inventories are given in (168):

(168) a.	*Range of Root C's*	b.	*Range of Gram. Suffix C's*
LAB	p p' m m'		p m
COR	t t' s ṣ c ç c' l ḷ l' ḷ' ɬ λ' n n' r r' y y'		t n l ɬ c s
VEL	k k' k^{w} k'^{w} x x^{w} w w'		x x^{w} w
UV	q q' q^{w} q'^{w} χ χ^{w}		
PH	ʕ ʕ' ʕ^{w} ʕ'^{w} ḥ ḥ^{w}		
GL	ʔ h		ʔ

Czaykowska-Higgins to appear

As Czaykowska-Higgins' segment inventories illustrate, there is quite a significant difference between the number of segments utilized in root forms and the number of segments utilized in grammatical suffixes.

Now consider the segment inventory for lexical suffixes, given in (169):

(169) *Range of Lexical Suffix C's*

LAB	p m
COR	t s c ç c' l l' ɬ ƛ' n n' y y'
VEL	k k' k^w x^w w w'
UV	q q^w χ
PH	
GL	ʔ h

Czaykowska-Higgins to appear

While not as extensive as the root inventory, the range of consonants found in lexical suffixes is nowhere near as restrictive as that for grammatical suffixes in (168b). Thus, both roots and lexical suffixes make use of a large set of consonants, while grammatical suffixes are limited to a mere quarter of the consonantal segments available in the language.[18]

Czaykowska-Higgins also indicates that shape constraints on lexical suffixes more closely resemble those of roots rather than grammatical suffixes. Czaykowska-Higgins' comparison of the possible shapes for roots, grammatical suffixes and lexical suffixes is given below:

(170) ***Root Shapes***

2C-Roots		3C-Roots		4C-Roots			
CVC	~550	CVCC /		CVCVC	15	CCVCC	8
C(ə)C	~650	C(ə)CC	216	CCVC	37	CCVCC	4
CCV	6	CCVC	19	CVCC /		CVCCVC	4
CVCV	10	C(ə)C(ə)C	93	CVCCV	1	C(ə)CC(ə)C	3
						CVCCC	15
						CCCVC	3

[18]Note that Czaykowska-Higgins considers the above inventories to show that "lexical suffixes are neither fully root-like, nor truly suffix-like in their segmentism".

(171) ***Grammatical Suffixes***

-C	11	-CC	1
-CVC	9	-VC	2
-CV	2	-VCC	2
-CCV	1		

(172) ***Lexical Suffixes***

-VCCC	11	-CVC	7
-VCC	18	-CCVC	1
-VC	5	-CVCC	2
-VCCCC	1	-CCVCCC	1
-VCCVC	5	-CC	6
-VCCVCC	3	-CCC	1
-VCVC	9	-CCVCVC	1
-VCV	1		
-VCCCVC	1		
-VCVCVC	5		

Czaykowska-Higgins to appear

Comparing the above shapes, Czaykowska-Higgins determines that the similarity between the shapes of lexical suffixes and roots is greater than that between lexical suffixes and grammatical suffixes. She states that "those lexical suffixes which start with consonants resemble roots rather than non-lexical suffixes in their complexity and size. For instance, the two most common consonant-initial lexical suffix shapes are CVC and CC, which are also the two most common root shapes." As for the vowel initial lexical suffixes, if the initial vowel is truncated lexical suffix shapes resemble root shapes even further. Thus, Czaykowska-Higgins determines that "although synchronic shapes of lexical suffixes are not identical to those of roots, they are more similar to roots than they are to non-lexical suffixes in terms of their complexity and patterning".

Assuming that lexical suffixes are stems as opposed to morphological spelling operations, I now turn to the status of these bound stems in Nxaʔamxcin word formation.

8.4.3 Compound-Like Properties

In this section I outline two properties of bound stem constructions that suggest they should be viewed as a type of compounding. The first involves the type of word structure rules used to form bound stem constructions. The second concerns the semantic interpretation of nominal bound stems.

8.4.3.1 Word Structure Rules

Carlson (1990), Kinkade (1998b) and Czaykowska-Higgins (to appear) have all observed that the stem combinations found in lexical suffix constructions parallel those found in compounds.[19] If we put aside the examples of *=ana?* 'all over', *=ank* 'want', and *=aya?* 'pretend' (discussed in section 8.3.1.3), which are semantic extensions of their core meanings and may in fact be grammatical markers, the word structure rules used to form lexical suffix constructions in Nxa?amxcin match *exactly* those used to form free stem compounds. This is illustrated by the following examples:

ał-Compound	***Unmarked Compound***	***Lexical Suffix***
	V → <u>V</u> N	
yaẋáẋƛ'cín	k'^{w}a?k'^{w}a?smán'x^{w}	k'ət'áłp
yəẋ-ał-ẋƛ'cin	k'^{w}a?-k'^{w}a?-sman'x^{w}	k'ət'=ałp
herd-CN-*horse*	AUG-*bite-tobacco*	*cut=tree*
herd horses	chew tobacco	cut down a tree
	N → A <u>N</u>	
ƛ'əẋaẋƛ'cín	páyqsqláw	wəsxnapas
ƛ'əẋ-ał-ẋƛ'cin	payq-sqlaw	wisxn=apas
fast-CN-*horse*	*white-money*	*long=tooth*
fast horse	silver money	long tooth

[19]This is of course not true for lexical prefixes, as seen in section 8.3.2. I will assume, however, following Kinkade 1996b, that lexical prefixes are a relatively new innovation in Salish and exclude them from this discussion.

N → N N

skintaṣc'ą́m'	unavailable	skintwîl
skint-ał-ṣc'ą́m'		skint=wil
Indian-CN-*bone*		*Indian=canoe*
skeleton, skull		canoe

N → V N

sq'áɬxʷəl'ánaʔxn'	ʔacxʷúʔyk'p'k'ip'múl	nḥacápxn
səq'-ał-xʷəl'an'aʔxn	ʔac-xʷuw'iʔ-k'p'k'ip'mul	n-ḥac=ap=xn
split-CN-*hoof*	ʔac-*fly-ant*	POS-*tie=rope=foot*
split hoof	flying ant	knot on the end of a rope

A comparison of the above *ał*-compounds, unmarked compounds and lexical suffix constructions illustrate that they are subject to the exact same word structure rules. This suggests that lexical suffix constructions are grammatically equivalent to free stem compounds in Nxaʔamxcin.

8.4.3.2 Generic Interpretation of Nominal Lexical Suffixes

The generic interpretation of nominal bound stems also suggests that lexical affix constructions are compounds. A well-noted property of compounded nouns is that they "have a generic rather than a referential function" (Fabb 1998:66). The generic nature of compounded noun stems in Nxaʔamxcin is evident in the following examples:

(173) snx̣əl'x̣əl'q'áɬqʷísptn
s-n-x̣əl-x̣əlq'-ał-qʷisp-tn
NM-POS-AUG-*kill*-CN-*cow*-INS
slaughterhouse Y17.114

(174) snwəlq'ʷtkʷmax̣x̂'cíntn (púks)
s-n-wəlq'ʷatkʷm-ał-x̣x̂'cin-tn
NM-POS-*drink*-CN-*horse*-INS *box*
water-box; water trough Y40.226

In (173) and (174) the nouns *qʷísp* 'cow' and *x̣x̂'cín* 'horse' do not refer to any animal in particular. The reading is clearly generic.

While nominal lexical suffixes can saturate a role in the argument structure of a predicate, Mithun (1997:361) maintains that they "do not refer to grammatical arguments". English translations can be misleading here as nominal lexical suffixes generally get translated as independent arguments of predicates (not surprising given the absence of parallel counterparts in English). Consider the following examples:

(175) t'əsáksn Mary
t'əs=akst-nt-n
slap=hand-TR-(3AB)-1SS *Mary*
I slapped Mary's hand.

(176) tər'qxnmínn
tər'q=xn-min-nt-n
kick=foot-RL-TR-(3AB)-1SS
I scattered it with my foot. JM4.5.3

While the translations in (175) and (176) suggest that 'hand' and 'foot' are grammatical arguments of the verb, Mithun (p.361) claims that in such forms the lexical suffixes "simply qualify the meaning of the stem in a general way". According to Mithun's analysis of similar examples in Bella Coola, (175) and (176) should be interpreted respectively as 'I hand-slapped Mary' and 'I foot-scattered it'. Thus, while =akst 'hand' and =xn 'foot' might be interpreted as grammatical arguments of the predicates in the English translations in (175) and (176), they do not actually fill an argument role in Nxa?amxcin, but rather saturate an argument role in the way *q^{w}isp* 'cow' and *x̣ƛ'cín* 'horse' saturate argument roles in the compound examples in (173) and (174).

The semantic interpretations of nominal lexical suffixes are also indicative of their generic nature. Independent referential nominals are much narrower in sense than corresponding lexical suffix nominals. Consider for example the lexical suffix =wil. The semantic interpretation of this bound stem has diachronically extended from that of 'canoe' to 'vehicle', the latter generally referring to any mode of transportation, i.e. car, boat, etc. One of the newer bound stems, =sqax̣a?, has a semantic interpretation that has extended from

'horse' to 'domesticated animal'. Such extensions of semantics are part of the diachronic process of these nouns losing their independent status in the grammar and moving towards grammaticization (Gerdts and Hinkson 1996, Mithun 1997, Hinkson 1999). Semantic broadening, loss of referential status, and a forced generic interpretation are part of this process.

Czaykowska-Higgins, Willett and Bart (1996) attempted to test the status of bound stems as referential or non-referential and found that coreferential judgements suggested bound stems can introduce new participants into discourse, an indication of referentiality. Consider the following examples from Czaykowska-Higgins, Willett and Bart (p.36):

(177) kn q'íləlqʷp kʷaʔ ʔacmínsn
q'il=əlqʷp ʔac-min-stu-n
1ss + *hurt=throat and* IM-*rub*-TR-(3AB)-1ss
My throat$_i$ hurts and I am rubbing it$_i$.

(178) yas ḥiy'pálṯ kʷaʔ t'əsalwísc
ḥiy'p=alṯ t'əs-alwis-nt-s
after *scold=child*-(3AB) *and* *slap*-IT-TR-(3AB)-3ER
After she scolded the child$_i$, she slapped it$_i$ around.

(179) kn ʔəmtálṯ t st'úk'ʷm yas ʔiłs
ʔəmt=alṯ ʔiłn-nt-s
1ss + *feed=child* OBL *carrot* *after* *eat*-TR-(3AB)-3ER
kʷaʔ q'áw'm
q'aw'-m
and *burp*-m-(3AB)
I fed the child$_i$ some wild carrots. After she$_i$ ate them she$_i$ burped.

Each of the examples in (177) to (179) apparently involve a lexical suffix introducing a participant. That participant is later referred to by a null pronoun. For example, in (179) the noun 'child' is initially introduced as the lexical suffix =alṯ but is subsequently twice referred to by a null pronoun (i.e. as the subject of 'eat' and 'burp').

The second set of examples presented in Czaykowska-Higgins, Willett and Bart 1996 (pp.36–37) contain bound stems that were interpreted by speakers as being coreferential with a full NP in a previous clause:

(180) q'ílt ʔinqənúxʷ kʷaʔ kn mínəlqʷpm
ʔin-qənuxʷ min=əlqʷp-m
hurt-(3AB) 1SPS-*throat* *and* +1SS *rub=throat*-MD
My throat$_i$ hurts and I am rubbing it$_i$.

(181) John k'ət'áɬps wa ʔact'úqʷ
k'ət'=aɬp-nt-s
John *cut=plant*-TR-(3AB)-3ER WA *tree*
kʷaʔ kn ʔincá yák'ɬpm
yak'=aɬp-m
and +1SS 1SEMpro *burn=tree*-m
John cut down the tree$_i$ and I burned it$_i$.

(182) ʔitxsc sqʷəsqʷə́saʔs kʷaʔ t'ucálṯ
ʔitx-stu-s sqʷəsqʷə́saʔ-s t'uc=alṯ
sleep-CS-(3AB)-3ER *baby*-3PS *and* *lay down=child*-(3AB)
He put the baby$_i$ to sleep and then he laid it$_i$ down.

Examples (180) to (182) illustrate the introduction of a participant via an independent nominal which, according to coreferencing judgements, is subsequently referred to by a lexical suffix.

Czaykowska-Higgins, Willett and Bart note, however, that the results of these tests are not conclusive. These examples were elicited in isolation and the coreferential interpretation may have been forced by pragmatics. Such interpretations can easily be forced with English compounds. Consider the following examples:

(183) I went moose$_i$-hunting on Sunday, and let me tell you, they$_i$ were pretty scarce.

(184) I went berry$_i$-picking yesterday, and Mary ate them$_i$. C,W&B 1996:37

(185) The strawberries$_i$ are ripe now, so I went berry$_i$-picking. C,W&B 1996:37

English speakers were consulted for judgments on coreferentiality in examples (183) to (185). The coreferencing marked in these examples was agreed upon by all speakers. Thus, speakers felt that the compounded noun 'moose' in (183) was coreferential with the pronoun 'they', the compounded noun 'berry' in (184) was coreferential with the pronoun 'them', and the independent noun

'strawberries' in (185) was coreferential with the compounded noun 'berry'. These results are clearly problematic and Czaykowska-Higgins, Willett and Bart raised questions as to the grammatical accuracy of the judgements in (177) to (182) in light of results like those in (183) to (185).

With bound stem constructions resembling compounding with respect to word structure rules and the generic interpretation of nominals, I now present additional support for a compound analysis of lexical affixation based on syntactic properties.

8.4.4 Against a Syntactic Analysis of Bound Stem Constructions

In this section I provide arguments against a syntactic analysis of bound stem constructions. I base these arguments primarily on Baker's 1996 work on Mohawk in which he claims that complex N+V predicates are derived syntactically. In the following subsections I provide first a review of the literature on noun incorporation and address the ongoing disagreement as to what kinds of constructions fall under the label noun incorporation. I then compare the Mohawk noun incorporation data in Baker 1996 with Nxa?amxcin bound stem constructions to determine if there are any similarities between the two, which would suggest that bound stem constructions are syntactically derived as opposed to lexically derived (i.e. compounded).

8.4.4.1 Review of the Literature on Noun Incorporation

Descriptively speaking, the term *noun incorporation* (NI) refers to a complex verb stem comprising a verb stem and a noun stem. This label can be traced back to Kroeber (1909) and Sapir's (1911) exchange on noun incorporation in Native American languages. Since that time many papers addressing language-specific and language family instances of noun incorporation have surfaced, including Haas (1941), Wolfart (1971), Sugita (1973), Woodbury (1975), Merlan (1976), Sadock (1980, 1985, 1986), Booker (1981), Miner (1982, 1983, 1986), Allen, Gardiner and Frantz (1984), de Reuse (1994), Evans (1997), and Johns (2003), among others. This wide discussion has generated a relatively broad use of the term noun incorporation.

A definition of noun incorporation is very much author-specific. The data that has been subsumed under the label noun incorporation in the literature is diverse and exhibits varying properties. There has also been much debate on how complex V+N predicates are formed, the debate essentially boiling down to whether or not NI is a lexical or syntactic phenomenon. There have been a number of exchanges in the literature over the past two decades, beginning with Mithun's (1984) lexical analysis of NI followed by Sadock's (1985) syntactic account within an autolexical framework. Baker (1988) gave further support to the syntactic view suggesting a movement analysis from a Government and Binding (Chomsky 1981, 1986) perspective. This was followed by Rosen's (1989b) work in which she specifically argued against both the autolexical and movement accounts. Baker's (1996) work within a Principles and Parameters (Minimalist) framework (Chomsky 1993) advances his 1988 views to include a syntactic explanation for why languages like Mohawk have syntactic NI, while languages like English do not.

To best illustrate the varied use of the term noun incorporation, I provide a brief overview below of Mithun 1984 and Baker 1996.

8.4.4.1.1 Mithun's Analysis of Noun Incorporation

The broad use of the term noun incorporation is best illustrated in Mithun 1984, who writes that "NI apparently arises as part of a general tendency in language for V's to coalesce with their non-referential objects" (p.891). She distinguishes four separate types of noun incorporation each with a different function. She claims (p.891) that in Type I noun incorporation, "the NI reflects a reduction of [the object's] individual salience within predicates". Type II NI is used to "background arguments within clauses". Type III NI is used "as a device for backgrounding old or incidental information within discourse". And finally, Type IV NI has become a classificatory system in which "generic N's are

systematically used to narrow the scope of V's with and without external NP's which identify the arguments so implied".[20]

Mithun's first noun incorporation type is labelled *lexical compounding*. She writes (p.848):

> If a language exhibits any NI at all, it will contain basic lexical compounds. Structurally, compounding consists of the derivation of a complex lexical item from a combination of two or more stems. The constituent stems may be of almost any grammatical class (nouns, verbs, adjectives etc.), as may the resulting compound. [...] The term 'incorporation' is generally used to refer to a particular type of compounding in which a V and N combine to form a new V. The N bears a specific semantic relationship to its host V - as patient, location, or instrument.

Mithun comments on the inefficiency of allowing for identical expressions in a language, and argues that languages incorporate nouns for a reason. With respect to *lexical compounding*, Mithun (p.848–9) claims that "[s]ome entity, quality, or activity is recognized sufficiently to be considered name-worthy in its own right [...] The activity or quality designated by the NV compound is viewed as a recognizable, unitary concept, rather than the chance co-occurrence of some action or state and some entity". The noun in such a compound is non-specific (i.e. non-referential) and, as a result, is not marked for the categories of definiteness and number. Mithun notes that the NV compound may be written as separate words, as in the following examples from Kanjobal (Mayan) and Lahu (Tibeto-Burman):[21]

Kanjobal

(186) a. š-Ø-a-lo-t-oq in-pan.
PAST-ABS.3-ERG.2-eat-go-OPT [sic] ERG.1-bread
'You ate my bread.'

b. š-at-lo-w-i pan
PAST-ABS.2-eat-AFF-AFF bread
'You ate bread." Mithun 1984:852

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[20]Rosen (1989b) makes a division between *Compounding NI* and *Classificatory NI*, the former encompassing Mithun's types I-III and the latter being the same as Mithun's type IV.

[21]Mithun cites Robertson (1980) for the Kanjobal data, and Matisoff (1981:307) for the Lahu data.

Lahu

(187) a. jɨ̀ thà' dɔ̀
liquor ACC drink
'to drink (the) liquor'

b. jɨ̀ dɔ̀
liquor drink
'to drink liquor' Mithun 1984:853

In the Kanjobal example in (186b), we see that the predicate 'eat' and the noun 'bread' appear as independent words, as in (186a). Mithun (p.852) notes, however, that "[a]lthough they remain separate words, the V and the incorporated noun (IN) form a syntactic unit equivalent to an intransitive V; this is evident from the pronominal affixes within the V. Agents of transitive V's appear in the ergative case [...] Agents of intransitives appear in the absolutive". The predicate 'eat' in (186b) is marked for a subject in absolutive case indicating that the noun 'bread' is not an independent object. The Lahu example in (187b) contains the predicate 'drink' preceded by the noun 'liquor'. The noun is not marked accusative, as in (187a), and Mithun (p.853) notes that "[i]t qualifies the type of drinking discussed".

In other languages the noun and verb stem of lexical compounds combine morphologically to form a single complex word. Some examples are given below for Walmatjari (Australian) and Comanche (Uto-Aztecan):[22]

Walmatjari

(188) pina-karri
ear-stand
'to listen, hear' Mithun 1984:855

Comanche

(189) narʌnoo'-rʌki-
saddle-put.away
'to saddle up' Mithun 1984:855

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[22]Mithun cites Hudson (1978) as the source for the Walmatjari examples and Canonge (1958) as the source for the Comanche examples.

Both of the above examples illustrate lexical compounds in which a verb stem and a noun stem combine to form a complex predicate.

For all of the examples given in (186) to (189), Mithun claims (p.856) that "a V stem and a N stem are combined to form an intransitive predicate denoting a unitary concept. The compound is more than a description; it is the name of an institutionalized activity or state. The IN loses its individual salience both semantically and syntactically. It no longer refers to a specific entity; instead, it simply narrows the scope of the V".

Mithun refers to her Type II NI as *the manipulation of case*. This type of noun incorporation is like *lexical compounding* in that the incorporated noun is not marked for definiteness, number or case. The noun is no longer a syntactic argument in the clause, but instead qualifies the verb with which it combines. The difference between *the manipulation of case* and *lexical compounding* is that the former allows for an oblique argument to appear in the case position that would normally be occupied by the incorporated noun. Thus, while *lexical compounding* results in intransitive predicates, *the manipulation of case* results in transitive predicates even though the incorporated noun does not serve as the syntactic direct object. Mithun gives the following examples from Yucatec Mayan:[23]

Yucatec Mayan

(190) a. k-in-č'ak-Ø-k če' ičil in-kool.
IMCOMP-I-chop-it-IMPF tree in my-cornfield
'I chop the tree in my cornfield.'

b. k-in-č'ak-če'-t-ik in-kool.
INCOMP-I-chop-tree-TR-IMPF my-cornfield
'I clear my cornfield.'

Mithun 1984:858

In (190a) the direct object *če'* 'tree' is an independent constituent followed by the oblique locative *kool* 'cornfield'. In (190b), 'tree' no longer has direct object status as it has been incorporated. Instead the locative is case-marked as the direct object.

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[23]Mithun cites Bricker (1978) as the source for the Yucatec Mayan data.

While there are similarities between Type I and Type II noun incorporation, Mithun (p.859) states that "Type II goes further than Type I [...] in having an effect beyond the V itself. Instead of simply reducing the valence of the V by one, it permits another argument of the clause to occupy the case role vacated by the IN. The result is a lexical device for manipulating case relations within clauses."

Mithun's Type III noun incorporation is referred to as *the manipulation of discourse structure* and is "used to background known or incidental information within portions of discourse"(p.859). Mithun states that languages exhibiting Type III noun incorporation are usually polysynthetic with subjects and objects being obligatorily marked by pronominal affixes on predicates. Mithun writes (p.859):

> In such languages, V's - which carry most of the information - may of course be qualified by N's indicating the type of patient, instrument, or location involved in the action or state. However, the qualifying N's often represent known or incidental information, rather than significant new entities. A separate nominal constituent would sidetrack the attention of the listener; the solution is NI. IN's are not salient constituents in themselves, whose presence might obstruct the flow of information. They simply ride along with their host V's.

Mithun provides the following examples from Huahtla Nahuatl (Uto-Aztecan) and Koryak (Chukotko-Kamchatkan):[24]

Huahtla Nahuatl

(191) a. kanke eltok kočillo? Na' ni-'-neki amanci
where is knife I I-it-want now
'Where is the knife? I want it now.'

b. ya' ki-kočillo-tete'ki panci
he (he)it-knife-cut bread
'He cut the bread with it (the knife).' Mithun 1984:861

[24]Mithun cites Merlan (1976) as the source of the Huahtla Nahuatl data, and Bogoras (1917) as the source of the Koryak data.

Koryak

(192) a. wűtču iñínñin yúñɪ qulaívun.
this.time.only such whale it.comes
'This is the first time that such a whale has come near us.'

b. mal-yúñɪ.
good-whale
'It is a good one (whale).'

c. ga-yuñy-upényɪl̥enau.
they-whale-attacked
'They attacked it (the whale).' Mithun 1984:862

In (191a) we see the independent nominal for 'knife', *kočillo*, being used when the noun is first introduced into discourse. Once it is old information, as in (191b), it is incorporated into the verb. The same can be said for the Koryak examples in (192). The noun *yúñɪ* 'whale' is introduced into discourse in (192a) as an independent nominal. In subsequent discourse in (192b) and (192c) it is considered old information and appears as an incorporated noun.

Mithun's Type IV noun incorporation is labelled *classificatory noun incorporation* since a system of classification often develops from this type of noun incorporation. Mithun (p.863) writes:

> A relatively general N stem is incorporated to narrow the scope of the V [...] but the compound stem can be accompanied by a more specific external NP which identifies the argument implied by the IN. Once the argument has been identified, the general, incorporable N stem is sufficient to qualify V's involving this argument in subsequent discourse. Since only general N's are incorporated for this purpose, a classificatory system often results.

Mithun gives the following examples from Caddo (Caddoan):[25]

[25]Mithun cites Chafe 1977 as the source of the Caddo data.

Caddo

(193) a. "... kišwah dah-kú-n-dân-na-'na'."
parched.corn 2.AG-1.BEN-DAT-gran.subs.-PL-make
' "You should make me some parched corn."'

b. nát-cí-n-dân-na-'nih-áh
after-1.AG.REAL-DAT-gran.subs.-PL-make-PERF
'After I have made him some (granular substance),'

c. dâm-bíhn-u'-náh náhiyah.
gran.subs.-on.back.SEMIREFL-PERF he.left
'he put it (the granular substance) on his back and he left.'

Mithun 1984:865

In example (193a), the independent noun *kišwah* 'parched corn' cooccurs with the IN *-dân* 'granular substance'. When reference is made to 'parched corn' later in the discourse, only the IN 'granular substance' is used and not the independent nominal.

Mithun's discussion on noun incorporation encompasses a wide range of data. As we will see in the following section, only a subset of this data is considered by Baker (1996) to be representative of noun incorporation.

8.4.4.1.2 Baker's Syntactic Analysis of Noun Incorporation

Baker (1996, chapter 7) takes a much narrower view of noun incorporation than Mithun, using the term noun incorporation specifically in reference to a syntactic process whereby a N+V stem is formed via movement. He provides a number of syntactic and semantic tests as a guideline for distinguishing between N+V combinations that are formed in the syntax and those that are formed in the lexicon.

Baker claims that true noun incorporation is found in polysynthetic languages—languages that are subject to the Morphological Visibility Condition (MVC) (1996:286):

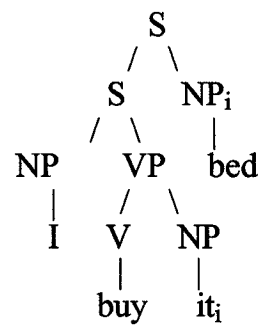
(194) Morphological Visibility Condition

Every θ-role associated with a head Y must be coindexed with a distinct morpheme in the word containing Y.

A direct result of the MVC is that only *pro* can be generated in case-marked positions, hence the fact that all polysynthetic languages show *pro*-drop for both subject and direct object. Any overt NPs must surface as adjuncts coindexed with the appropriate *pro* in either subject or object position. This is illustrated in (196) for the Mohawk example in (195):

(195) wa'-k-hnínu-' ne ka-nákt-a'
FACT-1SS-buy-PUNC NE NSS-bed-NSP
I bought the/a bed. Baker 1996:279

(196)

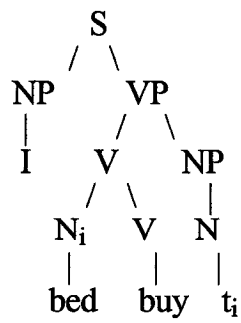


Baker 1996:282

An alternate form for example (195) is possible in Mohawk. This is given in (197) with the relevant structure in (198):

(197) wa'-ke-nakt-a-hnínu-'
FACT-1SS-bed-ø-buy-PUNC
I bought the/a bed. Baker 1996:282

(198)



Baker 1996:282

While example (197) may appear to be an optional alternative, Baker claims that noun incorporation in (197) is obligatory. It is required in this example because,

unlike example (195), the head *nakt* 'bed' is generated under N in the V complement position. If object morphology is present on the verb it will absorb the case-feature for that position and, as a result, *nakt* 'bed' cannot be licensed. If object morphology is absent from the verb, as Baker argues it is in (197), then *nakt* is not coindexed with any morpheme in the verb and therefore violates the MVC. However, if the head *nakt* incorporates into the verb via head movement (Travis 1984), then the trace of *nakt* in the direct object position is coindexed with a morpheme in the verb and passes the MVC.

Thus, while Mithun (1984) (as well as Mithun and Corbett (1999)) claims that the N+V form in an example like (197) is functionally motivated, Baker (1996) claims such forms are syntactically required. In more specific terms, noun incorporation is a direct result of the *Polysynthesis Parameter* (or *Morphological Visibility Condition*) which Baker claims is operative in true polysynthetic languages like Nahuatl (Uto-Aztecan), Rembarrnga (Gunwinyguan), Nunggubuyu (Australian, non-Pama-Nyungan), Mayali (Australian), Chukchi (Chukchi-Kamchatkan), Wichita (Caddoan), and languages of the Iroquoian and Tanoan families.

Baker presents a very clear analysis of the syntactic operation involved in NI formation. He also gives a detailed discussion of the properties one would expect to find in such constructions and the relevent tests to determine whether or not a syntactic process has taken place. As a result, I will focus specifically on Baker's work here and use his findings and examples as tools for comparison with the Nxaʔamxcin data. Use of the term noun incorporation is henceforth strictly in the spirit of Baker.

8.4.4.2 Bound Stem Constructions vs. Syntactic Noun Incorporation

Nxaʔamxcin is certainly a possible candidate as a noun incorporating language within Baker's (1996) model since it has both features Baker claims are common to all noun incorporating languages. First, Nxaʔamxcin is a head-marking language as all direct arguments have morphological representation on the verb. This property is evident in the following examples where both the person and number features of the subject and direct object are marked on the

predicate in the transitive construction in (199), and the person and number features of the subject are realized as a clitic in the intransitive construction in (200):

(199) ʔác'x̣**nclp**
ʔac'x̣-nt-**sal**-p
look at-TR-**1so**-2pS
[You people looked at me.] Kinkade 1982b:51

(200) ʔíɬn **kʷ**
eat + **2ss**
You ate. 92.2

Baker also claims that noun incorporating languages are nonconfigurational[26] in that NPs representing direct arguments are not constrained to one position in a clause since they surface as adjuncts. Hence, they should exhibit some freedom of word order. This is certainly true of Nxaʔamxcin which can have the following combinations, even though VOS appears to be the unmarked order in the language:

(199) t'ə́qʷs wa ttw'ít ʔaní kiy'ánaʔ
t'əqʷ-nt-s
slap-TR-(3O)-3S WA *boy* DET *girl*
The girl slapped the boy. 91.121

(200) t'ə́qʷs ʔaní kiy'ánaʔ wa ttw'ít
t'əqʷ-nt-s
slap-TR-(3O)-3S DET *girl* WA *boy*
The girl slapped the boy.

Given the fact that Nxaʔamxcin has these two properties in common with noun incorporating languages (under Baker's analysis), it is worth investigating whether or not Nxaʔamxcin bound stem constructions share the same properties with incorporated noun constructions in languages like Mohawk.

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[26]The term *nonconfigurational* can be misleading since it has also been used in the literature in reference to flat (non-binary) structures. However, it is evident from the tree Baker gives in (196) for Mohawk that this is not his use here.

8.4.4.2.1 Doubling

Doubling is a well-noted property of incorporating languages although, as Baker notes, it is not found in all incorporating languages. Mohawk does exhibit doubling of an incorporated noun, and Baker gives the following as an example:

(201) Uwári [[$_{VP}$ A-ye-nakt$_i$-a-núhwe'-ne' t_i] [$_{NPi}$ ne Sak rao-nákt-a']]
Mary FUT-FSS-bed-ø-like-PUNC ne Sak MSP-bed-NSF
Mary likes Sak's bed.
Baker 1996:311

In (201) the incorporated noun *nakt* 'bed' is doubled with a phonologically identical independent NP. Baker (1996) argues that this NP is not in any argument position but rather surfaces in an adjunct position coindexed with the trace of the incorporated noun.

Czaykowska-Higgins, Willett and Bart (1996) claim that direct doubling is not possible in lexical suffix constructions in Nxa?amxcin. This is illustrated by the following example:

(202) * c-k^{w}an=a?st-nt-n xƛ'ut
DIR-*grab*=*rock*-TR-(3AB)-1SS *rock*
(I took the rock.)
CW&B 1996:33

The example in (202), which contains both the bound stem *=a?st* 'rock' and the independent noun *xƛ'ut* 'rock' in the role of theme, was rejected on grounds of ungrammaticality.

In order for a NP to cooccur with a bound stem satisfying the same argument role, the NP must be marked oblique, as shown in the following examples:

(203) Mary tumistáɬx^w t stəx^{w}təx^{w}úl
tumist=aɬx^w s•tx^w•tx^{w}ul
Mary sell=house-(3AB) OBL *house*-AUG-*house*
Mary sells houses.
CW&B 1996:11

(204) k'ət'á łpn John t c'əq'á łqs
k'ət'=a łp-nt-n
cut=tree-TR-(3AB)-1SS *John* OBL *fir tree*
I cut down John's fir tree. CW&B 1996:12

In (203) both the lexical suffix *=a łx*^{w} 'house' and the independent noun *stəx*^{w}*təx*^{w}*úl* 'houses' appear in the same clause filling the same argument role. However, *stəx*^{w}*təx*^{w}*úl* must be marked oblique by the particle *t*. Otherwise the construction in ungrammatical. The same is true for example (204) which contains the lexical suffix *=a łp* 'tree' and the noun *c'əq'á łps* 'his fir tree'. In order for *c'əq'á łps* to appear in this construction it must be marked oblique.

The contrast in doubling facts between Nxa?amxcin bound stems and Mohawk incorporated nouns suggests that the syntactic structures of the clauses in these two languages are different.

8.4.4.2.2 Stranding

Baker (1996:308) states that incorporated nouns "can be modified by elements that appear outside of the verb". Modifiers include such elements as adjectives, quantifiers and relative clauses. Baker gives the following Mohawk examples:

(205) Aséhtsi ʌ-ye-nakt-a-núhwe'-ne'
new FUT-FSS-bed-ø-like-PUNC
She will like the new bed.

(206) Akwéku ʌ-ye-nakt-a-núhwe'-ne'
all FUT-FSS-bed-ø-like-PUNC
She will like all the beds.

(207) ʌ-ye-nakt-a-núhwe'-ne' ne thet ʌ́re' wa'-k-hnínu-'
FUT-FSS-bed-ø-like-PUNC NE yesterday FACT-1SS-buy-PUNC
She will like the bed that I bought yesterday.

Baker 1996:308

This particular kind of construction has been referred to as *modifier stranding* in the literature and is a well-noted property of incorporating languages. Under

Baker's analysis, examples like (205) to (207) are possible since it is only the head of an NP that incorporates. The rest of the NP remains in situ.

Nxa?amxcin bound stem constructions do not exhibit stranding effects. Any modifiers linked to a bound stem must be marked oblique, as in (208):

(208) ḥaw'iwílm t wísxn
ḥaw'y=wil-m
make=vehicle-AP-(3AB) OBL *long*
He's building a long vehicle.

In addition it is not possible for a lexical suffix to function as the head of a relative clause. This is illustrated in the following examples:

(209) * kn sacyak'łpux^{w} t t'əm'apn
sac-yak'=ałp-mix t'əm'=ap-nt-n
1sS + IM-*burn=tree*-IM OBL *cut=base*-TR-(3AB)-1sS
(I am burning the tree that I cut down.)

(210) * k'ət'ałp kn t wiy' l c'əkcin
k'ət'=ałp
cut=tree + 1sS OBL *grow*-(3AB) LOC *shore*
(I cut down the tree that grew by the river.)

(211) * kn k^{w}ənna?st t khəmpana?łc
k^{w}an-n=a?st k-həmp=ana?-łt-sa-s
1sS + *grab*-?=*rock* OBL POS-*fall=all over*-EP-2SO-3ER

wa ?isc'u?xn
?in-sc'u?xn
WA 1SPS-*foot*

(I took the rock that fell on my foot.)

If the bound stems in (209) to (211) were incorporated nouns, there should be a trace remaining in the V-complement position that heads the relative clause. The fact that modifier stranding is not possible in Nxa?amxcin bound stem constructions but is in NI constructions suggests that the structures of these examples are quite different.

Wh-questions show further evidence of stranding effects in Mohawk. Baker argues that since incorporated nouns originate in direct object position,

they cannot be the target for wh-questions since the wh-element would have to originate in the direct object position as well. He gives the Mohawk example in (212) to illustrate this point:

(212) ?* úhka t-ʌ-hse-wír-a-hkw-e'?
who DUP-FUT-2sS-baby-ø-pick.up-PUNC
(Who are you going to pick up (a baby)?) Baker 1996:323

The example in (212) is ungrammatical since, under Baker's analysis, the wh-element 'who' and the incorporated noun 'baby' originate in the same syntactic position which in unacceptable in X'-theory. However, a similar construction using the wh-element *ka nikáyʌ* 'which' is possible, as in (213):

(213) Ka nikáyʌ t-ʌ-hse-wír-a-hkw-e'?
which DUP-FUT-2sS-baby-ø-pick.up-PUNC
Which baby are you going to pick up? Baker 1996:323

Baker claims that the grammatical difference between (212) and (213) lies in the fact that the wh-element in (212) originates within an NP whereas the wh-element in (213) adjoins to an NP. In (213) *ka nikáyʌ* 'which' is outside of the NP and therefore has no link to the head position within NP. In summary, 'who/what'-type questions should not be possible if an incorporated noun is the question target, while 'which' type questions should be possible.

The bound stem data indicates that neither of these are possible in Nxaʔamxcin. Bound stems cannot be questioned using any wh-element. Some examples are given in (215) and (217):

(214) swát łu cíʕʷlxstxʷ
ciʕʷlx-st-xʷ
who SUB *bathe*-CS-(3AB)-2sS
Who did you bathe?

(215) * swát łu ciʕʷlxalt kʷ
ciʕʷlx=alt
who SUB *bathe=child* + 2SS
(Who did you bathe?)

(216) nkanáw's ʔaní kasḥiy'pmíntxʷ tw'ít
kas-ḥiy'p-min-nt-xʷ
which DET IR-*scold*-RL-TR-(3AB)-2SS *boy*
Which boy are you going to scold?

(217) * nkanaw's ʔaní kasḥiy'paltmintxʷ
kas-ḥiy'p=alt-min-nt-xʷ
which DET IR-*scold=child*-RL-TR-(3AB)-2SS
(Which child are you going to scold?)

Examples (214) and (216) show that it is possible to form wh-questions without the bound stem; however, when bound stems relating to the wh-element surface on the predicate, the examples are rejected, as in (215) and (217). If Nxaʔamxcin bound stem constructions were formed under the same syntactic conditions as noun incorporation, we would expect (217) to be grammatical under Baker's analysis. The fact that this is not the case further suggests that the structures of incorporated noun clauses and bound stem clauses are quite different.

8.4.4.2.3 Productivity

Carlson (1990) suggests that compounding was a very productive process in Spokane. While I have only a limited number of examples in the database, the recurrence of two stems in particular suggests this is also true for Nxaʔamxcin. Out of the approximately 90 free stem compound examples, 24 have *x̣x̌'cín* 'horse' and 6 have *skínt* 'indian, person' as the second stem. This suggests that particular stems were used quite frequently in producing compounds. The same is true for bound stems. Given a particular bound stem, speakers can provide numerous examples with various free stems.

Given Baker's analysis that noun incorporation is syntactically motivated, we would expect noun incorporation to be fully productive. Baker intimates that this is the case for Mohawk. This, however, is not true of Nxaʔamxcin bound stem constructions. In my attempts to elicit such constructions, it was evident

that some predicates will not take certain bound stems for reasons that are not clear from either a syntactic or semantic perspective. For example, the predicate *wəck* 'fall over' can cooccur with the lexical suffix *=aɫx^w^* 'house' as shown in (218):

(218) wəckáɫxʷ
wəck=aɫxʷ
fall over=house-(3AB)
The tipi blew over.

However, when I tried to elicit an example with wəck and the lexical suffix *=aɫp* 'tree', the sentence was rejected.

(219) * wəck=aɫp
fall over=tree-(3AB)
(The tree fell over.)

This unacceptablity does not appear to be the result of some incompatibility between the verb 'fall over' and the concept of a tree, as the independent form for 'tree' can surface with *wəck*, as in (220):

(220) ʔạc̣p'ə́ƛ̣' ʔaní wə́ck
tree DET *fall over*-(3AB)
The tree fell down.

It is difficult to systematically account for such gaps in productivity, which suggests that bound stem constructions are best viewed as being lexical formations.

The results of this comparative look at properties of Mohawk noun incorporation and Nxa'amxcin lexical suffixation indicate that, from a syntactic perspective, these are very different types of constructions. Mohawk noun incorporation shows evidence of a trace in the syntax (indicative of movement), while no such evidence is present for Nxa'amxcin bound stem constructions. In addition, the general productivity one would expect from a syntactic process is

not present for Nxa'amxcin bound stem constructions. Speakers clearly have a sense for which combinations are or are not possible. This is highly suggestive of a lexical process like compounding.

8.5 Summary

In this chapter, I presented a description of three different types of compounding in Nxa?amxcin. The first two types, discussed in section 8.2, involved the combination of free stems only. I illustrated the word structure rules involved in the formation of both *aɬ-* and unmarked compounds. In section 8.3, I addressed the third type of compounding involving the combination of a free stem and a bound stem, also known as lexical affixation. I discussed the word structure rules involved in the formation of both right-edge bound stem constructions (lexical suffixation) and left-edge bound stem constructions (lexical prefixation). The system of classifiers that has emerged from the set of bound stems was also introduced.

Having made the initial assumption that bound stem constructions are in fact a type of compounding, in the second half of this chapter I investigated the status of bound stem constructions in the grammar of Nxa?amxcin. The fact that the word structure rules involved in the formation of bound stem constructions exactly parallels those of free stem compounds indicated, I argued, that bound stem constructions are a type of compounding. The fact that bound stem nominals have the same generic interpretation of compounded nouns bolsters this argument. I then compared syntactic properties of bound stem constructions with those of noun incorporation in Mohawk. Under Baker's (1998, 1996) view that noun incorporation is syntactically derived in Mohawk, I determined that Nxa?amxcin bound stem constructions do not show evidence of having been syntactically formed as the facts surrounding traces of movement and productivity do not match the facts in Mohawk.

Chapter Nine

Conclusion

This dissertation has been a synchronic investigation of the grammar of Nxa?amxcin. This investigation took place within the context of Beard's (1995) theory of Lexeme-Morpheme Base Morphology (LMBM), a lexeme-based approach to word formation. This theory was outlined in Chapter 2, and although this has not been a theory-centred work, the LMBM approach has been a useful tool in my attempts to understand and explain how Nxa?amxcin words, known for their complexity, are put together. In Chapter 3 I presented an analysis of levels of word structure in Nxa?amxcin, arguing that it is the lexeme that constitutes the primary level of word structure from a morphological perspective while the root is the primary level from a phonological perspective.

The grammatical sketch itself began with Chapter 4, where I presented an introduction to the phonology of Nxa?amxcin. I outlined Nxa?amxcin's segmental inventory and the various sources of schwa, discussed various segmental processes—retraction, vowel deletion, consonant deletion, degemination, vocalization and affrication—and presented the major points regarding Nxa?amxcin syllable structure and stress.

Chapter 5 provided an overview of Nxa?amxcin syntax. I first addressed the controversial issue of lexical categories in Salish and adopted the analysis that verbs, nouns and adjectives are distinct lexical categories in Nxa?amxcin but any one of these three can serve a predicative function at the level of syntax. I then looked at various aspects of the Nxa?amxcin noun phrase: determiners and demonstratives, oblique and locative prepositions, and genitive marking. I began my discussion of Nxa?amxcin clause structure with simple clauses and then moved on to the more complex structures of relative clauses, unmarked fronting, quasi-clefting and clefting. I also presented details on the distribution of the particle *wa* which is linked to absolutive arguments in active constructions and to the transitive subject in topical object constructions.

Chapter 6 on lexical operations (i.e. derivational morphology) constituted the largest part of this grammatical sketch. In this chapter I first looked at the category valence examining various types of intransitives as well as four different valence-changing operations: transitive, causative, applicative and external possession. The following section on voice was divided into two parts: pragmatic voice and semantic voice. The former comprises topical object, passive, antipassive and indefinite object operations, and the latter middle, reflexive and reciprocal operations. Secondary aspect was addressed in the following section focusing on stative, inchoative, habitual, repetitive and iterative aspect. Two operations which indicate an agent's lack of control over a situation were then addressed. These operations, referred to in the literature as out-of-control and limited control, are subsumed under the label control. Five different category-changing operations were looked at in the following section, four of which involve nominalization—general, instrumental, agentive, and potentially locative prefixing—and one creating adjectival stems. The category locative was the focus of the next section for which there are seven positional and three directional operations. The category dimension comprises two reduplicative operations: augmentative and diminutive. And finally, the operation relational was viewed independently as it did not seem to belong with any of the other larger categories.

Chapter 7 presented an overview of inflectional operations in Nxaʔamxcin. The marking of person, number and grammatical relational was first reviewed, followed by a discussion of viewpoint aspect, specifically perfective and imperfective operations. I then took a brief look at mood, an area requiring more attention in Salish languages. I examined the irrealis operation and briefly touched on potential, deontic and probability mood. The temporal marking of past and future was addressed, followed by the two patterns of negation that are found in the language. The following section contained non-declarative operations: yes/no questions, the imperative, and the prohibitive. Finally, I looked at nominalized constructions.

In Chapter 8 I investigated the three types of compounds that are present in Nxaʔamxcin: *aɬ*-compounds, unmarked compounds and bound stem

compounds. I then turned to the status of bound stem compounds in the grammar, arguing that these constructions should be viewed as a type of compounding as opposed to syntactic noun incorporation.

The goal of this dissertation has been the creation of the first grammatical sketch of the Nxaʔamxcin language. It is hoped that this sketch will fill a void until a more comprehensive grammar of Nxaʔamxcin is available.

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Appendix One

Key to Data Sources

Ewa Czaykowska-Higgins' Files

#'s 89–92	Field notes from 1989 to 1992 with Agatha Bart, Elizabeth Davis, and Mary Marchand. Numbers marked with "N" were elicited with Nicola Bessell.
CD	*Crow's Daughter* Story told by Elizabeth Davis and transcribed by Ewa Czaykowska-Higgins and Agatha Bart.

M. Dale Kinkade's Files

A	?
AfI	*Coyote and his Son's Wives* (Arcasa folktale I) 1966 Story told by Isabel Arcasa and transcribed by M. Dale Kinkade and Mary Wippel
AfII	*Coyote and Woodtick* (Arcasa folktale II) 1966 Story told by Isabel Arcasa and transcribed by M. Dale Kinkade and Mary Wippel.
AfIII	*Woman and her Children* (Arcasa folktale III) 1966 Story told by Isabel Arcasa and transcribed by M. Dale Kinkade and Mary Wippel.
AnI	*The Friedlander Family* (Arcasa narrative I) 1966 Narrative by Isabel Arcasa with transcription by M. Dale Kinkade and Mary Wippel.
AnII	*Nespelem Catholic Church* (Arcasa narrative II) 1966 Narrative by Isabel Arcasa with transcription by M. Dale Kinkade and Mary Wippel.
A-FdI	*Conversation* (Arcasa - Friedlander dialogue I) ca. 1952 Dialogue between Isabel Arcasa and Nellie Moses Friedlander with transcription by M. Dale Kinkade and Mary Wippel.

A-FdII	*Place-names* (Arcasa - Friedlander dialogue II) ca. 1952 Dialogue between Isabel Arcasa and Nellie Moses Friedlander with transcription by M. Dale Kinkade and Mary Wippel.
AMtI	*Stick-game* (Agnes Miller text I) 1966 Text by Agnes Miller with transcription by M. Dale Kinkade and Mary Wippel.
CfI	*Wildcat gets a Wife* (Cleveland folktale I) 1966 Story told by John Cleveland and transcribed by M. Dale Kinkade and Mary Wippel.
EP	Emily Peone
G	Margaret Gorr?
IA	Isabel Arcasa?
J	John Cleveland
JfI	*Coyote and Skunk* (Jack folktale I) 1952 Story told by Annie Jack and transcribed by M. Dale Kinkade and Mary Wippel.
JM	Jerome Miller
JMtII	*Killing and Butchering Game* (Jerome Miller text II) 1966 Text told by Jerome Miller and transcribed by M. Dale Kinkade and Mary Wippel.
MDK	Example from M. Dale Kinkade's files but record number unknown.
MS	Margaret Sherwood?, Moyise Simon?
NMFnI	*Nellie Moses Freidlander's Family* (Nellie Moses Friedlander narrative I) ca. 1952 Narrative by Nellie Moses Friedlander with transcription by M. Dale Kinkade and Mary Wippel.
PfI	*How Chipmunk got his Stripes* (Piatote folktale I) 1969 Story told by Margaret Piatote and transcribed by M. Dale Kinkade and Mary Wippel.
SfIII	*Woman and her Little Boy* (Simon folktale III) 1964 Story told by Moyise Simon and transcribed by M. Dale Kinkade and Mary Wippel.

SfVI	*Race Between Turtle and Eagle* (Simon folktale VI) 1964 Story told by Mose Simon and transcribed by M. Dale Kinkade and Mary Wippel.
SfVIII	*Bull and Pig* (Simon folktale VIII) 1964 Story told by Mose Simon and transcribed by M. Dale Kinkade and Mary Wippel.
SfIX	*Rock Chases Coyote* (Simon Folktale IX) 1964 Story told by Mose Simon and transcribed by M. Dale Kinkade and Mary Wippel.
SfX	*How the People got Fire Back* (Simon folktale X) 1964 Story told by Mose Simon and transcribed by M. Dale Kinkade and Mary Wippel.
SM	Susanne Matt?
TG	?
W	Mary Miller Wippel
WnI	?
Y	Jerome Miller

Appendix Two

Right-Edge Bound Stems (Lexical Suffixes)

=a?st 'rock; weapon (not necessarily round)'

kn kłqlx**á?st**
kn k-łaqlx=**a?st**
1ss + POS-*sit*=***rock***
I sat on a rock. 90.229

kłc'ik'**á?st**m
kł-c'ik'=**a?st**-m
POS-*ignite*=***rock***-m
[He heated rocks for the sweathouse.] 90.234

wíkłc wa sx̌'a?cínm
wik-łt-s
see-TR-(3AB)-3ER WA *deer*

k^{w}a? k^{w}ənn**á?st** t swəlwəlmínk
k^{w}a•n•n=**a?st**
and *grab*•OC•*grab*=***weapon***-(3AB) OBL *gun*
He saw a deer and he grabbed his gun.

=akst 'hand, finger'

kn cəkk**ákst**
kn cə•k•k=**akst**
1ss + *hit*•OC•*hit*=***hand***
I got hit on the hand. 90.268

łn̓p**ákst**
łn̓p=**akst**
break=***hand***-(3AB)
he broke his arm, finger Kinkade n.d.

=alps 'back part of the neck, nape'

c'əl'x^{w}**álps**ntm
c'əl'x^{w}=**alps**-nt-m
grab=***back part of the neck***-TR-PAS-(3AB)
[It got grabbed by the neck.] 89.09.26.32

kʷałnki?i?**álps**
kʷał-n-ki•?•?=**alps**
IR-POS-*?*•OC•*?*=***neck***-(3AB)
[her neck hurt] CD.21

=alqs 'clothes, dress'

kłwən't**álqs**
kłwənt=**alqs**
under=***clothes***
undershirt, underclothes Kinkade n.d.

t'ác'**lqs**m
t'ac'=**alqs**-m
iron=***clothes***-m
iron clothes Kinkade n.d.

=alqʷ 'tree, pole, log'

nkcə́kk**álqʷ**
n-k-cə•k•k=**alqʷ**
POS-POS-*hit*•OC•*hit*=***tree***
bump into a tree Y18.142

tk'əwlx**álqʷ**
t-k'iwlx=**alqʷ**
POS-*climb*=***tree***
vine climbing up, go up a pole, vine can grow up a string 89.09.26.24

=alqʷp 'throat'

kn mínə**lqʷp**m
min=**alqʷp**-m
1SS + *rub*=***throat***-MD
I'm rubbing my throat. 89.143

np'íq**álqʷp**
n-p'iq=**alqʷp**
POS-*scorch*=***throat***-(3AB)
He burned his mouth or throat. Y29.133

=alt 'child (human or animal)'

təx̣ʷx̣ʷ**ált** ʔací smʔámm
tux̣ʷ-x̣ʷ=**alt**
die•OC•*die*=***child***-(3AB) DET *woman*
The woman's child died. 92.427

psáyaʔ ʔací pús kʷaʔ ʔiɬn**ált**
ʔiɬn=**alt**
crazy-(3AB) DET *cat* *and* *eat*=***child***-(3AB)
That crazy cat, it's eating its kittens.

=alxʷ 'skin, hide, outer layer'

k'íx̣**lx**ʷ
k'ix̣=**alx**ʷ
striped=***hide***
striped canvas Kinkade n.d.

stk'ʷəƛ'**pálx**ʷəxʷ
s-t-k'ʷəƛ'-p=**alx**ʷ-mix
NM-POS-*come off*-IN=***outer layer***-IM-(3AB)
(animal) is shedding fur Kinkade n.d.

=áɬc'aʔ 'body, side, inside'

nsətk**áɬc'aʔ**
n-sətk=**aɬc'aʔ**
POS-*twist*=***inside***
twisted on the inside Kinkade n.d.

ʔiq'**ɬc'aʔ**
ʔiq'=**aɬc'aʔ**
scrape=***side***
scraping a hide

=aɬnîwt 'side'

nčəkk**aɬnîw't**
n-cə•k•k=**aɬniwt**
POS-*hit*•OC•*hit*=***side***-(3AB)
He got hit on the side. JM3.110.6

kc'əlt**ałniwt**stms
k-c'əlt=**ałniwt**-stu-min-s
POS-*stand*=***side***-CS-RL-(3AB)-3ER
someone standing beside someone Y27.55

=ałp 'tree, plant'

kn k'ət'**áłp**
kn k'ət'=**ałp**
1ss + *cut*=***tree***
I cut down a tree.

kn sacyák'**łp**ux^{w}
kn sac-yak'=**ałp**-mix
1ss + IM-*burn*=***tree***-IM
I am burning brush/trees.

=ałq 'fruit, food'

ƛ'a?n**áłq**
ƛ'a?an=**ałq**
look for=***fruit***
look for berries, roots Kinkade n.d.

ƛ'q**áłq**
ƛ'əq=**ałq**
dig up=***food***
dig potatoes Kinkade n.d.

=ałq^{w} 'wind'

ƛ'x̣**áłq^{w}**
ƛ'əx̣=**ałq^{w}**
strong=***wind***
strong wind Kinkade n.d.

ck^{w}**áłq^{w}**m
cək^{w}=**ałq^{w}**-m
pull=***wind***-m
wind quiets down Kinkade n.d.

=ałq'áyt 'shoulder'

nčəkk**ałq'áy't**
n-cə•k•k=**ałq'ayt**
POS-*hit*•OC•*hit*=***shoulder***-(3AB)
He got hit on the shoulder. JM3.110.1

nɬ̓ənp**ałq'áyt**
n-ɬ̓ənp=**ałq'ayt**
POS-*break*=***shoulder***
broken shoulder Kinkade n.d.

=ałx^{w} 'house, structure'

John ḥaw'iy**ałx^{w}**ncut
ḥaw'y=**ałx^{w}**-nt-cut
John *make*=***house***-TR-RF-(3AB)
John built a house for himself. 92.130

ḥaw'iy**áłx^{w}**
ḥaw'y=**ałx^{w}**
make=***house***
put up a tipi EP2.70.3

=ana? 'ear; all over'

kcəkk**ána?**
k-cə•k•k=**ana?**
POS-*hit*•OC•*hit*=***ear***
He got hit on the ear. JM3.109.1

nt'əq^{w}c**nánə?**n
n-t'əq^{w}cin=**ana?**-nt-n
POS-*holler*=***ear***-TR-(3AB)-1SS
[I hollered into his ear.] Y35.27

kckmn**ána?**n ɬ̓ə̓t'
k-cəkmin=**ana?**-nt-n
POS-*throw*=***all over***-TR-(3AB)-1SS *wet*
I dumped something wet on it. JM3.180.11

kn ktəp**na?**ncút t síc'm
k-təp=**ana?**-nt-cut
1SS + POS-*cover*=***all over***-TR-RF OBL *blanket*
I covered myself with a blanket. 92.50

=ank 'stomach; flat surface; want'

q^{w}ətn**ánk**
q^{w}tun=**ank**
*big=**stomach***
big stomach (fat or pregnant)

nlək'**ánk**tn
n-lək'=**ank**-tn
POS-*tie up=**stomach***-INS
belt EP2.7.7

nk'əwlx**ánk**
n-k'iwlx=**ank**
POS-*climb=**flat surface***
climb a bluff Y26.135

nak'áx^{w}**ənk**
na-k'ax^{w}=**ank**
POS-*opening=**flat surface***
opening or hole in a wall Y32.106

nx̣əlq'm**ánk**mn
n-x̣əlq'm=**ank**-min-nt-n
POS-*kill=**want***-RL-TR-(3AB)-1SS
I want to kill him JM3.187.3

Moyatat	n?iłn**ánk**	t	st'úk'^{w}m
	n-?iłn=**ank**		
Moyatat	POS-*eat=**want***-(3AB)	OBL	*carrot*

Moyatat wanted to eat the carrot.

=ap 'foot, lower end; rope; egg'

nck^{w}**ápmn**
n-cək^{w}=**ap**-min-nt-n
POS-*pull=**lower end***-RL-TR-(3AB)-1SS
I am dragging it Y17.77

tər'q**ápn**
tər'q=**ap**-nt-n
*kick=**lower end***-TR-(3AB)-1SS
I kicked the bottom of the tree Kinkade n.d.

qaqa?**áp**
q-qa?=**ap**
DM-*small around=**rope***
small rope Kinkade n.d.

ƛ̓'íc'p**ap**
ƛ̓'ic'p=**ap**
*strong=**rope***
strong rope — Kinkade n.d.

nt'k^{w}p**áp**
n-t'ək^{w}-p=**ap**
POS-*burst*-IN=***egg***
it burst (of an egg) — Kinkade n.d.

nləx̣^{w}atk^{w}**áp**n
nləx̣^{w}atk^{w}=**ap**-n
boil=***egg***-?
boil an egg — Kinkade n.d.

=apas, =aps 'tooth'

kn nxəs**apás**
n-xəs=**apas**
1SS + POS-*lose*=***tooth***
I lost my tooth.

sx^{w}iy**áps**
s-x^{w}iy=**aps**
NM-*sharp*=***tooth***
toothache — Kinkade n.d.

=apla? 'handle'

kmáʕ'^{w}**pəla?**n
k-maʕ'^{w}=**apla?**-nt-n
POS-*break*=***handle***-TR-(3AB)-1SS
I broke the handle. — Y26.102

tk^{w}án**pla?**n — ʔinx̣ƛ̓'cín
t-k^{w}an=**apla?**-nt-n — ʔin-x̣ƛ̓'cin
POS-*grab*=***handle***-TR-(3AB)-1SS — 1SPS-*horse*
I led my horse with a rope. — W4.82

=asq't 'day'

txt'**ásq't**m
txət'=**asq't**-m
take care of=***day***-m
keep track of the days — JM4.6.6

tx^{w}úk'^{w}**sq't**
t-x^{w}ək'^{w}=**asq't**
POS-*clear*=***day***
clear sky, clear day Y28.10

=atk^{w} 'water'

kat's**átk^{w}**m
kat-t'əs=**atk^{w}**-m
POS-*slap*=***water***-m
slap the water Y18.198

nat'ucc**k^{w}**
na-t'u•c•c=**atk^{w}**
POS-*fall*•OC•*fall*=***water***-(3AB)
He fell in the water. 89.66

=atk^{w}p 'fire'

ƛ'əw'**átk^{w}p**
ƛ'uw'=**atk^{w}p**
extinguish=***fire***-(3AB)
the fire went out Kinkade n.d.

x^{w}úl**k^{w}p**m
x^{w}ul=**atk^{w}p**-m
drill=***fire***-m
start a fire with a fire-drill Kinkade n.d.

=aw's 'middle'

kcəkk**áw's**
k-cə•k•k=**aw's**
POS-*hit*•OC•*hit*=***middle***-(3AB)
he got hit on the belly/groin JM3.110.5

kanuχ^{w}t**áw's**
kat-nuχ^{w}t=**aw's**
POS-*walk*=***middle***
walk across a field Y22.62

=aχn 'upper arm'

ɬəmk^{w}**áχn**
ləmk^{w}=**aχn**
break off=***upper arm***-(3AB)
[He broke his upper arm.]

kʷánx̣ncn
kʷan=**ax̣n**-nt-si-n
grab=***arm***-TR-2sO-1ss
I grabbed you by the arm. 90.3

=aya? 'pretend'

q'ilq'il**táya?**
q'il-q'il-t=**aya?**
sick-ADJ-ADJ=***pretend***-(3AB)
someone making believe they're sick 89.133

ləxʷcn**máya?**
ləxʷcinm=**aya?**
cry=***pretend***
pretend to cry

=cin 'mouth; food; creek, shore'

np'iq**cín**
n-p'iq=**cin**
POS-*scorch*=***mouth***-(3AB)
He burned his mouth. Kinkade n.d.

lu?p**cín**
lu•?•p=**cin**
dry•IN•*dry*=***mouth***
mouth is dry Kinkade n.d.

kn sactáw**cn**uxʷ
sac-taw=**cin**-mix
1ss + IM-*buy*=***food***-IM
I am buying food. W4.15

nx̣ə**lcínm**
n-x̣əli=**cin**-m
POS-*ask for*=***food***-m
ask for food Kinkade n.d.

łqalx**cín**
łaqlx=**cin**
sit=***shore***
sit on the edge of a river Kinkade n.d.

təxʷxʷ**cín**
tə•xʷ•xʷ=**cin**
cross in a boat•OC•*cross in a boat*=***shore***
land on the shore in a boat Kinkade n.d.

=ələwás 'chest'

kłcəkkələwás
kł-cə•k•k=ələwas
POS-*hit*•OC•*hit*=***chest***-(3AB)
He got hit on the chest. JM3.110.4

kłyəmələwás
kł-yəm=ələwas
POS-*pin*=***chest***
pin on chest Kinkade n.d.

=əlqs 'nose; point'

t'ə́mm'ə́lqs
t'ə•m'•m'=əlqs
cut•OC•*cut*=***nose***-(3AB)
He cut his nose. G2.40

niʔcə́kkə̓lqs̓
niʔ-cə•k•k=əlqs
POS-*hit*•OC•*hit*=***nose***-(3AB)
He got hit on the nose. JM3.108.11

nayə́klqs
na-yək=əlqs
POS-*blunt*=***point***
blunt (point or blade) Kinkade n.d.

cktə́qʷiy'lqs
c-k-təqʷiy'=əlqs
DIR-POS-*go down a hill (pl.)*=***point***-(3AB)
people coming down a ridge Kinkade n.d.

=îc'aʔ 'blanket, skin, hide, outer layer'

kʷłnîc'aʔn
kʷułn=ic'aʔ-nt-n
lend=***blanket***-TR-(3AB)-1sS
I lent him a blanket. W8.252

ʔíq'c'aʔtn
ʔiq'=ic'aʔ-tn
scrape=***skin***-INS
skin scraper (made of deer rib) JM3.75.11

kmíƛ'**c'a**s wa stx^{w}úl
k-miƛ'=**ic'a**ʔ-nt-s
POS-*paint*=***outer layer***-TR-(3AB)-3ER WA *house*
He painted the house.

=ikn 'back'

nqsî**kn**cx^{w} taʔ
n-qəs=**ikn**-nt-sa-x^{w}
POS-*scratch*=***back***-TR-1SO-2SS + IMPS
Scratch my back. Y21.117

ncəkkî**kn'**
n-cə•k•k=**ikn**
POS-*hit*•OC•*hit*=***back***-(3AB)
He got hit on the back. JM3.110.2

=lup 'bed, foundation, floor'

ḥaw'iy**lúp**m
ḥaw'y=**lup**-m
make=***bed***-m
fix a bed Y33.77

katx^{w}k^{w}**lúp**
kat-x^{w}uk'^{w}=**lup**
POS-*clean*=***floor***
clean the floor JM3.63.8

=qin 'head, top'

ṣaḥ**qîn**m
saḥ=**qin**-m
shake off=***head***-MD
shake head back and forth (to shake off water or weeds) MDK

katxən'**qîn**t taʔ
kat-xən'=**qin**-nt
POS-*lay flat on*=***top***-TR-(3AB)-(2SS) + IMPS
Cover it! Y11.107

=spantk 'year'

sal**spántk**
sal=**spantk**
*two=**year***
'two years; two years old' Kinkade n.d.

=sqáẋa? 'domestic animal'

sc?əmt**sqáẋa?**əx^{w}
sc-?əmt=**sqaẋa?**-mix
IM-*feed*=***domestic animal***-IM-(3AB)
S/he is feeding the deer.

tər'q**ṣqáẋa?**
tər'q=**sqaẋa?**
kick=***domestic animal***-(3AB)
He kicked the animal.

=(t)samx^{w} 'breast'

təẋ^{w}**tsámx^{w}**n
təẋ^{w}=**tsamx^{w}**-nt-n
stop=***breast***-TR-(3AB)-1SS
'I weaned him' Kinkade n.d.

=úl'əx^{w} 'soil, earth, ground'

?ast'úc**əl'ux^{w}**
?as-t'uc=**ul'əx^{w}**
?as-*lie down*=***ground***
lying on the ground G6.30–32

sc'x^{w}**úl'ux^{w}**
s-c'əx^{w}=**ul'əx^{w}**
IM-*spill*=***ground***
sprinkle the ground Y14.29

=ups 'tail, rump'

ncəkk**úps**
n-cə•k•k=**ups**
POS-*hit*•OC•*hit*=***rump***-(3AB)
He got hit on the bottom. JM3.11.3

txát**ps**m
t-xat=**ups**-m
POS-*lift*=***tail***-MD-(3AB)
horse raising its tail — Kinkade n.d.

=us 'face; fire'

xʷúk'ʷ**s**
xʷuk'ʷ=**us**
clean=***face***-(3AB)
His face is clean. — G6.103

c'lx̣**us**nc
c'əlx̣=**us**-nt-sa-s
scratch=***face***-TR-1SO-3ER
It scratched my face. — Y26.47

niʔt'úcsc
niʔ-t'uc=**us**-nt-s
POS-*put down*=***fire***-TR-(3AB)-3ER
put into a fire — Y28.152

niʔckmnúsn
niʔ-cəkmin=**us**-nt-n
POS-*throw*=***fire***-TR-(3AB)-1SS
throw into fire — EP2.55.7

=wil 'vehicle'

ḥaw'i**wil**m — t — stə́ɬm
ḥaw'y=**wil**-m
make=***vehicle***-m-(3AB) — OBL — *boat*
He built a boat.

kałx**wil** — ʔací — t — x̣ƛ'cín
kałx=**wil**
give=***vehicle***-(3AB) — DET — OBL — *horse*
Someone gave the horse away.

=xn 'foot'

ʔəxʷʔúxʷ**xn** — kn
ʔəxʷ-ʔuxʷ=**xn**
AUG-*freeze*=***foot*** + 1SS
I froze my feet. — Y36.20

yərxnmís	wa	ʔací	xƛ'út
yər=**xn**-min-nt-s			
*push=**foot***-RL-TR-(3AB)-3ER	WA	DET	*rock*

He pushed the rock aside with his foot.

Appendix Three

Left-Edge Bound Stems (Lexical Prefixes)

nk'^{w}= 'co-, fellow'

nk'^{w}yúp'a?mstms
nk'^{w}=yup'a?-min-stu-m-s
***co*=*play*-RL-CS-1SO-3ER**
He's playing with me. W.6.1

nk'^{w}tər'qmís
nk'^{w}=tər'q-min-nt-s
***co*=*dance*-RL-TR-(3AB)-3ER**
S/he danced with her/him. EP2.166.9

s**nk'^{w}**acwáx
s-**nk'^{w}**=?acwax
IM-***co*=*live***
live together in the same house Y27.28

s**nk^{w}**skínts
s-**nk'^{w}**=skint-s
NM-***fellow*=*indian*-3PS**
his/her people Y23.64

pu?= 'spouse'

pu?k^{w}anmúl
pu?=k^{w}nam-ul
***spouse*=*grab*-HB-(3AB)**
He took off with someone else's wife W.4.71

k^{w}n' **pu?**q'aẋílẋil sisíl
pu?=q'aẋilẋil
MOD ***spouse*=*two*** *Cecilia*
I guess Cecilia has two husbands. W.6.47

yap= 'on the way'

ay ƛ'ə́m lx txa? ci lx **yap**wíkłn
yap=wik-łt-n
FUT *?*-(3AB) + PL *here* SUB + PL ***on the way*=*see*-TR-(3AB)-1SS**
They were right through here when I saw them.
CD.17

nasuʔ kt **yap**tuχ̣^{w}p
yap=tuχ̣^{w}p
FUT + 1SS ***on the way***=*ʔ*-(3AB)

k^{w}aʔ wíkłtm ʔaní sccəm'ált
wik-łt-m
and *see*-TR-(3AB)-1PS DET *children*

We will stop by and see the children. 90.149

Appendix Four

Multiple Left-Edge Bound Stems

=alq^{w}=akst 'sleeve, arm'
s.t. long+hand

kyər'yər'k^{w}**alq^{w}ákst**m
k-yər'-yər'k^{w}=**alq^{w}=akst**-m
POS-AUG-*bend*=***s.t. long*=*hand***-MD
rolling up cuffs, sleeve 89.67

kp'ə?q**alq^{w}ákst**
k-p'iq=**alq^{w}=akst**
POS-*scorch*=***s.t. long*=*hand***
scald the arm JM3.91.8

=alq^{w}qin=akst 'wrist'
s.t. long+head+hand

kłc'aw'**lq^{w}qnákst**m
kł-c'aw'=**alq^{w}=qin=akst**-m
POS-*wash*=***s.t. long*=*head*=*hand***-MD
washing your wrists 89.09.26.43

=ałc'a?=ap 'hip'
side+base

kcəkk**łc'a?áp**
k-cə•k•k=**ałc'a?=ap**
POS-*hit*•OC•*hit*=***side*=*base***-(3AB)
He got hit on the hip. JM3.109.11

=ałc'a?=wil 'side of container'
side+container

tk^{w}ən**łc'a?wîl**n
t-k^{w}an=**ałc'a?=wil**-nt-n
POS-*take*=***side*=*container***-TR-(3AB)-1SS
I caught the side of it. (e.g. a box) JM3.95.8

=ank=akst 'hand' (possibly 'flat part of the hand')
flat+surface

sniʔxn'p**an'kákst**
s-niʔ-xn'p=**ank=akst**
NM-POS-*form a crust=**flat=surface***
callus on the hand — Y9.182

=ap=aw's=qin 'mouth'
base+middle+head

kask'^{w}əƛ'p**aʔpáw'sqn**m
kat-s-k'^{w}əƛ'-p=**ap=aw's=qin**-m
POS-*?-come off*-IN=***base=middle=head***-MD
let go from the mouth — MDK

=ap=us=aχn 'upper arm'
base+face+upper arm

ncəkk**àpúsχn**
n-cə•k•k=**ap=us=aχn**
POS-*hit*•OC•*hit=**base=face=upper arm***-(3AB)
He got hit on the (upper) arm. — JM3.109.6

=ap=xn 'heel'
base+foot

nɬənp**ápxn**
n-ɬəp=**ap=xn**
POS-*break=**base=foot***
broken off at the ground — Y22.135

=aw's=cin 'crotch of something'
middle+mouth

nq'aʔ**uʔscínn**
n-q'aʔ=**aw's=cin**-nt-n
POS-*wedge into=**middle=mouth***-TR-(3AB)-1sS
I put it in the crotch of a tree. — JM3.144.1

=aw's=us 'forehead'
middle+face

ni?cəkk**uw's**ús
ni?-cə•k•k=**aw's=us**
POS-*hit*•OC•*hit*=***middle*=*face***-(3AB)
He got hit on the forehead. JM3.108.8

=aya?=qin 'head'
head+head

həmp**áya?qn**
həmp=**aya?=qin**
fall=***head*=*head***-(3AB)
Someone lost something off their head. (like a hat)

=cin=akst 'wrist'
mouth+hand

kłkʷən**cnáks**n
kł-kʷan=**cin=akst**-nt-n
POS-*take*=***mouth*=*hand***-TR-(3AB)-1SS
grab by the wrist Y26.60

=cin=ana? 'cheek, side of head'
mouth+ear

nt'əs**cnánə?**n
n-t'əs=**cin=ana?**-nt-n
POS-*slap*=***mouth*=*ear***-TR-(3AB)-1SS
slap on the cheek/side of head Y35.31

=cin=atkʷ 'shoreline, shore'
shore+water

łaqlx**cnátkʷ**
łaqəlx=**cin=atkʷ**
sit=***shore*=*water***
sitting close to shore of water of any kind 89.62

=əlqst=xn 'shin'
shin+foot

sklíyy**lqstxn**
s-k-li•y•y=**əlqst=xn**
NM-POS-*poke*•OC•*poke*=***shin=foot***
sliver in the lower part of the leg — Kinkade n.d.

=ic'a?=ałx^{w} 'outside of house'
outer layer+house

kmíƛ'**c'a?ałx^{w}**s — wa John l stx^{w}úls
k-miƛ'=**ic'a?=ałx^{w}**-nt-s — stx^{w}ul-s
POS-*paint*=***outer layer=house***-TR-(3AB)-3ER WA *John* GN *house*-3PS
He painted the outside of John's house.

=us=alx^{w} 'floor, roof'
face+skin

katmíƛ'**səlx^{w}**
kat-miƛ'=**us=alx^{w}**
POS-*paint*=***face=skin***-(3AB)
There is paint all over the floor. — G6.38
paint on the roof — Y

=us=ałx^{w} 'window'
face+house

ntəp**sáłx^{w}**tn
n-təp=**us=ałx^{w}**-tn
POS-*cover*=***face=house***-INS
curtain — EP2.80.4

=atk^{w}úp=us 'fire'
fire+fire

tk'əc'**satk^{w}úp**
t-k'əc'=**us=atk^{w}up**
POS-*lay a pole down*=***fire=fire***
put a pole or log on a fire — Kinkade n.d.

=us=xn 'leg'
face+foot

ncəkk**úsxn**
n-cə•k•k=**us**=**xn**
POS-*hit*•OC•*hit*=***face***=***foot***-(3AB)
He got hit on the leg. JM3.109.8

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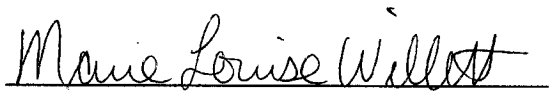
Author 

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August 29, 2003