ASPECT AND CATEGORY IN OKANAGAN WORD FORMATION

by

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Category and aspect in Okanagan word formation

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Aspect and Category in Okanagan Word Formation

This thesis describes the role of aspect and category in the word formation processes of Okanagan, a Southern Interior Salish language spoken in north central Washington and south central British Columbia. The data come from field work conducted in 1992-1996 and the study of published and unpublished Okanagan texts. The goal of the thesis is to articulate what it is that Okanagan speakers know about lexical items that allows them to derive new words and inflect them properly.

In Chapter 1, I briefly introduce the concepts and assumptions of lexeme-based morphology. I explain the difference between **bases**, the basic vocabulary items of the language, and **stems**, the lexical items that are related to bases by word formation rules. Bases undergo derivational processes that produce a cluster of conceptually related stems; stems undergo inflectional processes that produce grammatical words. Chapter 2 provides an overview of Okanagan morphology and syntax. It concludes with a preliminary description of the derivational and inflectional word formation rules that I will discuss in the remainder of the thesis.

Chapter 3 contains a classification of bases in Okanagan. I describe four base classes which are ontologically defined. The bases in three of the four

classes encode either a temporal span or the potential to express a change of state. As a group these three classes denote prototypical situations. As situations, these bases have aspectual variants that are formed by the regular core of derivational rules. Bases in the fourth class denote atemporal entities. Unlike bases denoting situations, bases that denote entities do not form aspectual variants via derivation. In line with a major cross-linguistic pattern, Okanagan situations are grammatically coded as verbs, while entities are coded as nouns.

In Chapter 4, I use morphological and syntactic tests to demonstrate the grammatical differences between nouns and verbs in Okanagan. I discuss the areas of the grammar where the contrast between nouns and verbs is less than sharp, i.e. in predicate nominal constructions and nominalizations. Despite some overlap in syntactic function and morphological shape, nouns and verbs belong to distinct derivational and inflectional classes. All lexemes, whether bases or stems, have aspectual properties and category features that speakers use to properly derive and inflect words.

In Chapter 5, I review evidence that the form of a lexeme does not reliably classify it. Many key affixes serve multiple functions, and a single function may be marked by a variety of affixes, or no affix at all. The relatively poor fit between form and function in Okanagan word formation

suggests that base and stem classification is based on the speakers' knowledge of the ontological, semantic, aspectual, and categorial properties of bases and stems. This finding suggests that the Okanagan lexicon contains all the lexemes of the language, regardless of their morphological complexity. Furthermore, affixes do not have the status of lexemes, therefore they are not listed in the lexicon. Affixes are merely the formatives found in an autonomous morphological component that spells out the shape of a lexeme.

Although various works have explored the morphology and syntax of Salishan languages, this thesis is the first work wholely devoted to the organization of the lexicon of a Salish language. Lexeme-based morphology illuminates lexical patterns in Okanagan that morpheme-based morphology cannot, particularly in the area of derivation. Moreover, these patterns suggest a significant relationship between cognition and grammar that is cross-linguistically viable.

Acknowledgments

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List of Abbreviations

ABS	intransitive subject	LCS	Lexical Conceptual Structure
ac	anticausative		
art	article (determiner)	loc	locative
asp	aspect	mid	middle
caus	causative	neg	negator
con	continuative	neut	neut
cont	continuous	nom	nominalizer
conj	conjunction	OBJ	object of transitive
cs	case marker	otr	open transitional
ctr	closed transitional	p	plural
cust	customary	pcont	perfect continuous
dat	dative	perf	perfective
des	desiderative	pos	possessional
dis	distributive	POSS	possessor
ES	Event Structure	prft	perfect
ev	evidential	prep	preposition
fact	factive	prt	particle
fut	future	ref	reflexive
dpr	deictic (pronoun)	s	singular
ERG	transitive subject	sb	subordinator
GEN	genitive subject	Sub	subject of predicate nominal
imp	imperative	Trans	transitive
Intr	intransitive	UnPOSS	unrealized possessor
interr	interrogative	UnSub	underspecified transitive subject
irr	irrealis		
lc	limited control	Vi	intransitive verb

Chapter 1. Background

1.0 Introduction. This thesis is an investigation of the relationship between aspect and category in the formation of words in Okanagan Salish. It is motivated by the observation that although Okanagan has a rich supply of free and bound morphological formatives, the combination of these within a word is sharply limited. How does an Okanagan speaker know what combinations are possible? In the chapters to follow I demonstrate that word formation is constrained by the inherent and grammaticalized aspectual and categorial features of lexemes. These features are best discovered in a lexeme-based morphological framework such as that developed in Matthews 1972, Beard 1987, 1993, 1995, Zwicky 1990, Anderson 1992, and Aronoff 1992, 1994. In a lexeme-based model of word formation, the lexeme contains all of the lexical semantic information that conditions derivation and inflection. Thus, the lexeme provides a single locus for the sometimes complex (and interdependent) sets of semantic features that play a role in word formation. A morpheme-based approach, by contrast, scatters this information across the lexicon in the subcategorization frames of affixal morphemes. In lexeme-based morphology, an affix is merely the formative that an autonomous morphological component associates with a word formation process.

Okanagan is a language spoken in north-central Washington state and south-central British Columbia. There are approximately 500-1,000 predominantly adult speakers of varying fluency. Speakers who live in the United States refer to the Okanagan language as Colville, but there are only minor dialectal differences between Okanagan and Colville.[1] Okanagan is classified with six other Salishan languages as Interior Salish. It is more narrowly classified as Southern Interior Salish along with Coeur d'Alene, Moses-Columbia, and the Spokane-Kalispel-Flathead language continuum. Recent comparative work on the Northern Interior subgroup suggests that grammatical patterns even within a subgroup may show surprising variety (Gardiner et al. 1993, Demirdache et al. 1994). Therefore, the results of this investigation of Okanagan should not be taken to imply uniformity within the Southern Interior subgroup. A thorough comparative and historical study of aspect, mood, category, and word formation in Southern Interior Salish remains to be done.

There is a substantial amount of published literature on Okanagan produced by a small number of analysts. Donald Watkin's dissertation (1970)

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[1]My fieldwork was carried out primarily in British Columbia, which leads me to refer to the language as Okanagan. The language is often referred to in the linguistic literature as Colville-Okanagan or its abbreviation, CvOk. The members of the Colville Language Preservation Program in Omak, Washington refer to CvOk as *nsylxcín* or *nsəlxcín.*

focussed on the phonology of the most northerly Okanagan dialect known as Head-of-the-Lakes Okanagan. Yvonne Hébert (1982a, 1982b, 1983) carried out morphosyntactic work on a western dialect (Nicola Valley). She produced an a dissertation on its syntax in the Relational Grammar framework and articles describing aspectual and lexical categories. Anthony Mattina began work on Okanagan in 1968, first producing a grammatical sketch of it in 1973. He has since edited and published a long analyzed text by Colville speaker Peter Seymour (A. Mattina 1985), a Colville-Okanagan dictionary (A. Mattina 1987), and several dozen notes and articles on Okanagan grammar and narrative practices. The En'owkin Centre, a cultural and educational center developed and staffed by Okanagan tribal members in Penticton, B.C., has begun to publish pedagogical materials developed by local Okanagan speakers and A. Mattina (e.g. En'owkin 1993, 1994).

Few other languages of the Southern Interior have been so well studied. The critical mass of data and analysis provide an excellent opportunity for the study of the lexicon and word formation. The data on which this thesis is based come from published materials and from my own fieldwork with speakers in the Okanagan Valley of British Columbia. My primary consultants have been Sarah Peterson (Similkameen Band), Jane Stelkia (Osoyoos Band), Delphine Derrickson (West Bank Band) and Clara Jack (Penticton Band). Colville

speakers Mildred Steele (originally from Vernon, B.C.), Hazel Burke, and

Elaine Emerson, all of Omak, Washington, have also provided me with data.

Field studies were conducted chiefly between September 1992 and June 1994,

and more sporadically since that time.

My overall goal in this thesis is to add to what is already known about

Okanagan. In particular, I wish to be more explicit about the organization of

the Okanagan lexicon and what is recorded there, although I do not promise an

exhaustive, completely integrated account. Because my account is couched in

the assumptions and terms of lexeme-based morphology, it presents a challenge

to the morpheme-based approach to word formation. The primary assumptions

of the morpheme-based model are these: 1) that the morpheme exhibits a

regular correspondence between form and function, i.e. morphemes are

linguistic signs, 2) that words are exhaustively parseable into constituent

morphemes, and 3) that free and bound morphemes alike are listed in the

lexicon. These assumptions, articulated in Bloomfield's classic monograph

Language (1933), are evident in recent influential studies in theoretical

morphology including Selkirk 1982, Di Sciullo and Williams 1987, Baker

1988, and Lieber 1992.

The morpheme-based approach is well established in the Salish

literature. It has yielded a wealth of data and analysis that provides the new

student of Salish with fundamental insights into these languages. However, as the literature on Salish has grown, the opportunity to ask new questions has also increased. My study of Okanagan has led me to ask if the morpheme-based approach is the best model of word formation for this language. For example, I find that a morpheme-based analysis of Okanagan does not reflect the extent to which form diverges from function, i.e. in cases where an affix has multiple functions, or, when a function has phonologically diverse markers. In addition, the morpheme-based approach directs our attention to the etymology of words rather than to their status in an active grammar. That is, the morpheme-based approach allows linguists to parse a word using historical and comparative information. However, as historical and comparative analysis is not available to a child learning Okanagan, the linguist's *post hoc* analyses do not explain the synchronic, language-specific basis of word formation. Many morphemes have been identified in Salish; now the question is whether or not we can **predict** their distribution as a child might.

Finally, the morpheme-based approach tends to obscure the general organization of the lexicon, because it focuses our attention on individual affixes rather than on sets of derivational phenomena. The high level of interest shown by Salishanists in the identification of morphemes may explain why little attention has yet been paid to the workings of the Salish lexicon and the

existence of an independent morphological component. As Spencer (1993)

observes, if we do not look for specifically morphological principles, we will

never find them.

While I find that lexeme-based morphology is an insightful approach to

the study of word formation, this thesis is not a theoretical defense of lexeme-

based morphology. I do not argue for all the claims of any one version of

lexeme-based morphology, nor do I rigorously pursue all its implications.

Rather, I use some common assumptions of lexeme-based morphology to help

me integrate the aspectual and categorial facts of Okanagan word formation.

An important result of this approach is that it reveals that the lexicon is not

'incredibly boring' or lawless, as Di Sciullo and Williams (1987:3) have

argued. This finding, I believe, opens new areas of discussion that will

potentially enrich our understanding of Salish morphology, syntax, and

semantics.

1.1 Lexeme-based morphology. The goal of lexeme-based

morphology is to describe the formal and grammatical relationship between a

lexeme and its realizations. In so doing it employs concepts and a vocabulary

that differ slightly from that of morpheme-based morphology.[2] In the

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[2]In fact, morphological labels are frequently polysemous. I have developed
my own morphological vocabulary for Okanagan, in an effort to follow as
closely as possible the traditional Salishan labels.

following sections, I define the basic vocabulary (section 1.1.1), and give a

brief overview of the assumption of lexeme-based morphology as a model of

word formation (section 1.1.2.)

1.1.1 Definition of terms. Matthews (1972:22) first proposed the term

lexeme to denote the 'fundamental unit...of the lexicon', as abstract and dual

in nature as its terminological counterparts the phoneme and morpheme. The

lexeme is an abstraction of the common elements in sets of word like Latin

amo 'I love', *amas* 'you love', *amavi* 'I have loved', and *amatur* 's/he is

loved'. This abstract 'word' is captured in various lexicographic conventions

including the infinitive (Romance languages), the root (Sanskrit), and first

person singular present indicative (Latin and classical Greek) with the

understanding that many, if not all variants of the lexeme are suggested by one

form of the lexeme. However, the lexeme is not itself a form but rather

> ...a (potential or actual) member of a major lexical
> category, having both form and meaning but being
> neither, and existing outside of any particular syntactic
> context. (Aronoff 1992:14)

The lexeme, then, is a psychological entity; a full definition of it should

include psychological and grammatical elements. The lexeme is the semantic

core of a word, which means that it contains enough information to realize the

derivational and inflectional categories marked in a language. It is not itself

marked for all such categories in every realization, but it shares a core

meaning with each of its realizations. Although grammatical tests can serve to distinguish lexemes from non-lexemes, it is often the case that we must rely on speaker intuition and our theoretical assumptions to make the distinction.[3] For my descriptive purposes here, I assume that lexemes, like words, are psychologically significant to Okanagan speakers.

In this thesis, I will refer to the basic, underived lexemes of Okanagan as *bases*. Bases are the simplest lexical items of the language; they are parallel to English root words.[4] Each base is related by word formation rules (*WFRs*) to one or more *stems*. Stems are derived lexemes, or *derivates*, that are semantic alternants of the base. Stems that are related to a single base are *alternants*. The WFRs that produce stems from bases are derivational rules. Stems may be inflected (via inflectional WFRs) to produce *grammatical words*. The morphological material that marks a derivational or inflectional category is referred to as a *formative*. Formatives in Okanagan are either affixes (including reduplicative skeletons) or clitics.[5]

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[3]For a detailed argument that affixal morphemes differ from lexemes in form, function, organization, and operation, see Beard 1987.

[4]The term *root* has a special use in Salish linguistics (see section 1.2) that does not correspond well to the morphological unit I call the base. In the cross-linguistic literature, the term *base* usually denotes any form to which morphological operations apply. I use *base*, as defined in this section, to denote an entity that would be considered a root in English.

[5]There may also be evidence for morphologically-related ablaut (A. Mattina p.c.).

The relationships between bases, stems and grammatical words are depicted in (1) using the Okanagan base //ƛ'a?ƛ'a?// LOOK_FOR s.t. (Henceforth, bases are given in double slanted brackets and their glosses are in upper case letters.) Derivational formatives are indicated by '+' boundaries; inflectional formatives are indicated by '-' for affixes, and '‿' for clitics.

(1)

BASE //ƛ'a?ƛ'a?// LOOK_FOR s.t.

Derivation

Stems ⟶ Inflection ⟶ Grammatical word:

ƛ'a?ƛ'a?+ám
look for s.t.

kn‿ƛ'a?ƛ'a?ám
I looked for something.

ƛ'a?ƛ'a?+nt-
look for s.t.

ƛ'a?ƛ'a?nt-íxʷ
You looked for it.

ƛ'a?ƛ'a?+a?+núnt-
manage to look for it

ƛ'a?ƛ'a?a?núnt-xʷ
You managed to look for it.

ƛ'a?ƛ'a?+st-
look for s.t.

c-ƛ'a?ƛ'a?st-íxʷ
You were looking for it.

ƛ'a?ƛ'a?+ɬt-
look for s.o.'s s.t.

ƛ'a?ƛ'a?ɬt-ín
I looked for his s.t.

ƛ'a?ƛ'a?+xít-
look for s.t. for s.o.

ƛ'a?ƛ'a?xít-n
I looked for it for someone.

ƛ'a?ƛ'a?+á?
get looked for

kn‿ƛ'a?ƛ'a?á?
I was looked for.

ƛ'a?ƛ'a?+míx
look for s.t.

kn‿səc-ƛ'a?ƛ'a?míx
I am looking for it.

In the vocabulary of this thesis, derivation produces versions of the base

(i.e. stems) while inflection produces versions of the stem (i.e. grammatical

words). The relationships between bases, stems, and grammatical words are

understood in the context of several assumptions of the lexeme-based

morphological model I adopt here. I discuss these in the following section.

1.1.2 Assumptions of the morphological model. The data in (1)

depict the semantico-syntactic connections between bases, stems, and

grammatical words. It does not assume that semantico-syntactic features are

isomorphic to phonological forms. Rather, the morphological spell-out of a

lexeme (in any of its realizations) is essentially free of semantico-syntactic

information. This conception of the relationship between morphological form

and meaning is known as the Separation Hypothesis (Beard 1987, 1993, 1995,

Aronoff 1994). The indirect relationship between form and meaning allows for

the possibility of forms without meaning (empty morphs), forms with multiple

meanings (polyfunctionality), and multiple forms with a single meaning

(functional underspecification). Examples of these phenomena are not hard to

find cross-linguistically (see Beard 1987, Aronoff 1992, Anderson 1992, and

sources cited therein).[6]

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[6]English provides several examples of affixal polyfunctionality, e.g. the
suffixes -*ing*, -*s*, and -*en*. Aronoff (1992) cites the example of the English
perfect participle (as in *had eaten*) and passive participle (as in *was eaten*)
which have the same form but are not semantically or syntactically related. He

The frequency of these phenomena in Okanagan (and other languages) suggests that there is an independent morphological component that is concerned with form alone, which works with the semantico-syntactic word formation component.[7] The separation of form from meaning in word formation is schematized in (2).

points out that perfect participles and passive participles are used interchangeably. If a speaker produces a new passive participle s/he will also use the new form as the perfect participle (e.g. *bit* and *bitten*). This suggests that there is a single stem form which undergoes two word-formation rules-- perfect participle formation and passive participle formation. Aronoff has also demonstrated that the three basic stem types of Latin realize morphosyntactic categories in a less than semantically systematic fashion (Aronoff 1992:28). Beard 1987 notes that in the morphologically rich Amerindian language Kiowa, polyfunctionality is the rule rather than the exception. Finally, the commonplace of affixal polyfunctionality was noticed in Coeur d'Alene by Gladys Reichard (1938:588), who wrote: 'Coeur d'Alene, like other languages, once it developed or adopted a device seems to have worked it overtime, and so it is with the prefix *s-*'. I discuss several cases of affixal polyfunctionality in Okanagan in Chapter 5.

[7]Beard (1987) argues that morphological rules operate in the morphological component, while derivational rules operate in the lexicon. Under this view, affixation is the morphological spell-out that takes place after all derivational and inflection WFRs have applied. This differs from the 'split morphology' approach which places derivational rules and affixation in the lexicon and inflectional rules and affixation in the phonological component. At this time, I see no reason to argue that affixation takes place in two components of Okanagan grammar.

(2)

LEXEME

(Morphology)   (Word formation)   (Morpholexical level)

form   meaning   base

  ↓

form

Derivational WFR applies

↓

meaning

↓

stem

  ↓

form

Inflectional WFR applies

↓

meaning

↓
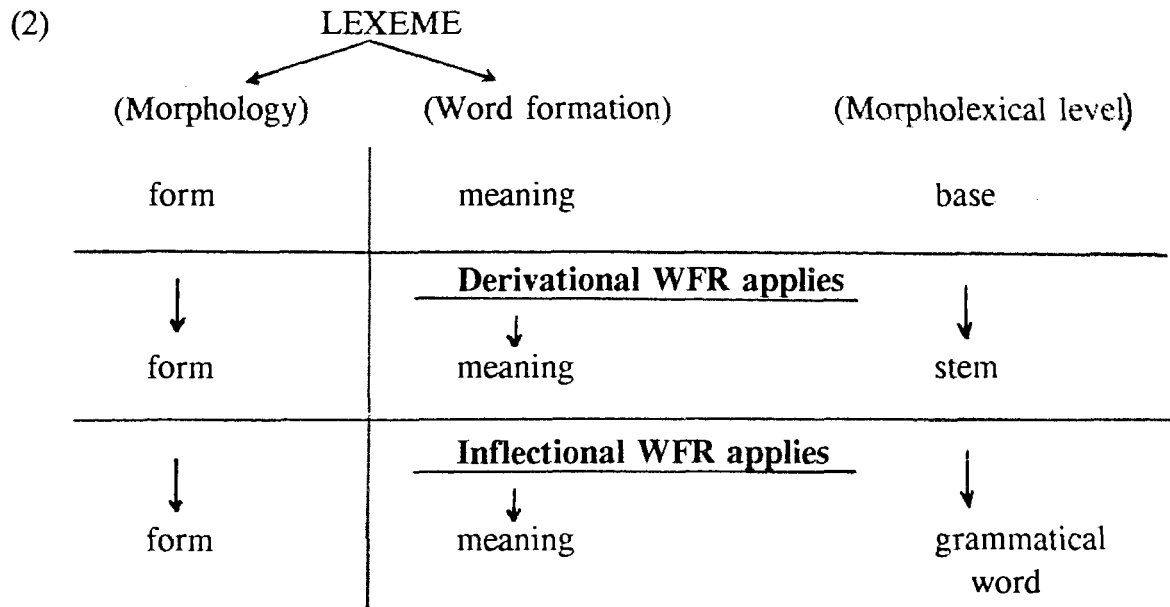
grammatical
word

As depicted in (2), WFRs mediate the morpholexical relationships
between bases, stems, and grammatical words. I assume that WFRs are of two
different types: derivational and inflectional.[8] Derivational rules affect the
lexical representation of a base prior to insertion in phrase structure. They do
this by altering either the lexical conceptual structure (LCS) (the semantic
definition of a lexeme) or the lexical features (such as category and inherent
aspect) of a lexeme. Lexical-derivational processes tend to show lexical gaps,
sensitivity to narrow semantic constraints, reanalysis, and irregularity of
expression.

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[8]The key issue in the derivation vs. inflection debate is how to define the
two types of processes cross-linguistically (Anderson 1985). Internal to most
languages, the two types are usually distinguishable, but when comparing a
large number of languages, it has proven difficult to abstract universal features.
As pointed out by Anderson (1992), the theoretical implications of the
derivation/inflection distinction have not yet been fully identified.

Unlike derivational WFRs, inflectional WFRs are structure-preserving in the sense of Emonds 1976: they may add features to a lexeme, but they do not alter existing feature specifications. For example, a stem that is lexically marked as a noun cannot be converted to a verb by an inflectional rule. In Okanagan, inflection marks syntactically relevant categories such as person, grammatical function, and sentential aspect. The addition of this kind of information to a stem does not alter the basic meaning of the stem, and it is completely regular, regardless of the stem meaning. As inflectional formatives never occur 'inside' derivational formatives in Okanagan, I assume that inflectional rules apply after derivation.[9]

Another important assumption of lexeme-based morphology is that word formation processes cluster into derivational and inflectional paradigms.[10] Assuming that all paradigms are logically closed, we shall see that the shape of a formative associated with a WFR is less important than the fact that a paradigmatic slot is filled. The paradigmatic nature of both derivation and

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[9]In lexeme-based morphology, as in other models, a rule can apply only where its conditions are met. Since only lexemes inflect, all lexeme formation must take place before inflection, hence the ordering of all derivation before inflection.

[10]Paradigmaticity, like productivity, is not restricted to inflection (see Anderson 1992, Beard 1987, Bybee 1985, and Spencer 1991 for dicussion). If by a paradigm we mean the set of forms that realize a set of functional categories, then a derivational phenomenon such as category conversion (e.g. V → N) is paradigmatic in the same way that tense is in English. That is, we expect that certain stems will be formed, even if those forms are suppletive.

inflection begins to explain why many of the affixal combinations that might exist in Okanagan never occur. This is because there are many fewer paradigms, and WFRs within them, than there are affixes.[11]

Finally, lexeme-based morphology supports a view of the lexicon as a rule-governed domain of knowledge. Although the lexicon includes a vast store of idiosyncratic data, having a lexicon also means having 1) lexical rules that generate and relate lexical items, 2) principles of storage and retrieval, and 3) linking rules (or principles) that guide lexical insertion and argument realization. I assume that the lexicon includes all the lexemes of a language, regardless of their formal complexity, and that a word need be created only once before it can be stored as a lexeme.[12] The lexicon is therefore, in part, a database that allows speakers to produce a word by looking it up. It is also generative in that it allows speakers to construct new words from basic or

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[11]Spencer (1991:181) cites the work of Fabb (1988) to illustrate the magnitude of the descriptive problem of co-occurence restrictions among affixes. Fabb selected 43 commonly occuring English derivational suffixes and calculated that there are 1,849 possible pairings. Allowing for restrictions on category, phonology, and level-ordering, the potential pairings reduce to 459. The number of attested pairings is close to 50. The implication is that factors other than subcategorization and rule ordering constrain derivation, an implication that casts doubt on the descriptive adequacy of non-paradigmatic approaches to morphology.

[12]This does not mean that each newly created word is necessarily stored. Speakers can coin a word for a particular occasion, and never use it again. Bybee (1985) advances the notion of 'lexical strength' to explain this option.

derived lexemes by rule, analogy, or a host of non-grammatical means (Anshen and Aronoff 1988).

1.2 Lexemes, roots, and affixes. The term *root* has special meaning in Salishan studies, where it is used to designate morphemes of the shape CVC (or more rarely CVCC or CCVC) that accept derivational and inflectional formatives. Under this view, a root morpheme must have a certain shape, as well as certain semantico-syntactic features that allow it to participate in word formation. Salishanists traditionally segment words into affixes, free roots, and bound roots. The latter are known widely as lexical affixes, morphemes that are 'root-like in meaning and trace historically to free forms' (Carlson and Bates 1990).[13] Lexical affixes are indicated by '=' in morphemic analyses, as in *sy-sy=ús* 'powerful' and *məl=qn=úps* '(American) eagle'. Thompson and Thompson (1992) note that in Thompson Salish a large proportion of Thompson words are complex, containing at least one root and one or more affixes. This is probably true across the Salish family.

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.

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[13]Not all Salishanists agree that lexical affixes derive historically from free forms. For example, see Hagège 1976 and sources cited there.

These are forms that are wholly or partially unanalyzable by speakers, but

which speakers nevertheless recognize as words. Some of these are listed in

(3).

(3)

captík^{w}l	tell Indian fairytales	q^{w}á^{ʕ}lx̌i	gills
siwɬk^w	water	sq^{w}lcnink	stomach
cpɫan'	eyelash	k'ɬtwnlsmist	think that one cannot
ka'ɬís	three	tr'íw'ya'm	be under a curse
skmxíst	black bear	nɬx̌^{w}p'mitk^w	dive into water
'a'úsa'	egg	nkt'kt'us	cut off s.o's head
'ickn	s.o. play	'ayxáxa	in a little while
'ácqa'	s.o. go out	ntqtqána'	deaf
ny^ʕ'ip	always, still	xarkstm	waste s.o.'s time

Personal, animal, plant, and place names are commonly larger than the

canonical root shape. Other stems involve a root-like form, but have no

unreduplicated form, as in *x^{w}əlx^{w}ált* 'alive', *c'iqc'qt* 'Engelmann spruce', and

c'q^{w}aq^w 'cry'. There are also 'cranberry' morphemes such as the putative roots

in √kən+xít 'help s.o.', √cr't=ups 'fisher', √lm=ilx^w 'another people,

tribe'.[14] The roots in these and many other words lack free forms or other

derivates.

While the canonical Salish root is phonologically prominent, as

evidenced by stress, reduplication and infixation patterns, it is not clear that it

plays the role in synchronic word formation that has been attributed to it.

Thompson and Thompson (1992:48), for example, define the root as 'the

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[14]Roots in Salish are traditionally indicated by the '√' symbol.

HEAD or central morpheme' in complex words. Roots, under this view, have argument structure, which the Thompsons describe as 'fundamentally intransitive'. In line with this general understanding of the root as the core morpheme of a word, Thompson and Thompson have decribed word formation as proceeding from the root, constrained by the lexical properties of the root. While at first glance this appears to be true, there are many cases where the meaning of the word is marginally connected (if at all) to the meaning of the root. Moreover, the root-and-affix analysis misses the fact that speakers recognize some strings of segments as words regardless of their putative morphological complexity. In deriving word meaning from the lexical properties of the root, if it often difficult to state just what lexical properties a particular root has. The forms in (4) exemplify the range of semantic alternations that a root-and-affix model of word meaning has to account for, morpheme by morpheme.[15]

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[15]The root-and-affix model has been wedded to morpheme-based morphology in practice if not in theory. That is, roots and affixes are usually treated as **things** that are concatenated according to their semantic appropriateness. This implies that multi-morphemic words are the sum of their parts, semantically speaking. The problem with this approach is that in the majority of cases, word meaning is not the sum of root and affix meaning.

(4)   √x̣'aʔ

    x̣'aʔ+nt   fetch s.t.
    x̣'aʔ+x̣'aʔ+nt   look for s.t.
    k+x̣'aʔ+x̣'aʔ=ínaʔ   look over, across s.t.
    x̣'aʔ=sqáx̌aʔ   get a horse
    x̣'aʔx̣'aʔ=ús   open-eyed
    k+x̣'aʔ=íplaʔ+nt   cause problems for s.o.
    n+x̣'aʔ=s=íw's+nt   look for s.t.
    x̣'aʔ+x̣'aʔ=ús+mn+nt   look for s.t.
    x̣'aʔ+x̣'aʔ+mín+nt   look for s.t.
    k'ɬ+x̣'aʔ+nt   be jealous of s.o.
    n+x̣'aʔ+x̣'aʔ+ús+tn   eyesight
    s+x̣'aʔ+cínm   deer
    x̣'aʔ+x̣'aʔ+mín   detector
    k+x̣'aʔ+ncút+(t)n   a seeker, searcher
    s+x̣'aʔ+míx+aʔx   a keeper, one who keeps

It is difficult to establish any essential meaning for the root √x̣'aʔ even though there are hints of one. In my view, the stems in (4) are related in the same way that the words *native*, *nation*, *natal*, and *nativity* are in English. The relationship is primarily of historical interest. These words are etymologically related, but each is a separate lexeme and not related by a synchronically productive word formation rule. Synchronically, there is little evidence to derive all of these forms from a single root. [16] How, for example, might we make lexical semantic and syntactic connections between *s+x̣'aʔ=cín+m* 'deer' and *k+x̣'aʔ=ípla?+nt* 'cause problems for s.o.' in a morpheme-based analysis?

---

[16]In Okanagan, roots occur with affixes that are said to either 'transitivize' or 'intransitivize' the root. Intuitively, the generalization that suggests itself is that roots are unmarked for transitivity. To my knowledge, no other work in Salish has pursued this possibility.

Consider their putative internal structure. In (5), I gloss each morpheme in these two words by analogy with other occurrences of the morphemes.

(5) a. s+ƛ'aʔ=cín+m   'deer'
         nominalizer-√fetch=mouth-middle(?)

     b. k+ƛ'aʔ=íplaʔ+nt   'cause problems for s.o.'
         person-√fetch=handle-transitive

The morpheme-by-morpheme glosses in (5) reveal little about the meaning of the words, or about their derivational and inflectional class. A sophisticated speaker might offer meanings for some of these morphemes, but he still needs to know, in addition, what the word means and how to inflect it. As far as derivation and inflection are concerned, there is no relevant semantic structure within the base.[17] We can indicate this by bracketing the base as in (6), or eliminating the internal boundary markers entirely.[18]

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[17]Chierchia and McConnell-Ginet (1990:368) note that 'the linguistically specified meaning of a word often goes beyond what is determined by the interpretation of its constituents and their structural relations'. Some words seem straightforwardly compositional, or *transparent*, while others are less so. Chierchia and McConnell-Ginet coin the term *translucent* for those words that are partly compositional (as in English *likeable* and *washable*). I chose the data in (5) to exemplify the common non-transparent type in Okanagan, although transparent and translucent words occur. As Chierchia and McConnell-Ginet warn, it is tempting, but ultimately inadequate, to generalize about word formation on the basis of transparent words only.

[18]In this thesis I usually dispense with the base-internal boundary markers unless they are relevant to the discussion. This practice serves to highlight the derivational and inflectional markers.

(6) a.   [s+ƛ'aʔ=cín+m]   'deer'

     b.   [k+ƛ'aʔ=íplaʔ]+nt   'cause problems for s.o.'

Many phonological roots occur in a large array of words that are not straightforwardly derived from a core meaning. In (7)-(9), I give additional examples of this phenomenon.

(7) √t'k'ʷ

t'k'ʷ+nt	put s.t. down
t'k'ʷ=íw's+nt	put s.t. in the middle
t'k'ʷ=w's=íkst+nt	carry s.t in one's arms
kɬ+t'k'ʷ+nt	place s.t. on
k+t'k'ʷ=ínaʔ+nt	put s.t. on top
k'ɬ+t'k'ʷ+nt	put s.t. under
kɬ+t'k'ʷ=ítkʷ+nt	float s.t.
n+t'k'ʷ=íkn+nt	put s.t. on one's back
k+t'k'ʷ=íw's+nt	put s.o. (on a horse)
n+t'k'ʷ=kiʔ=sqáx̌aʔ	saddle a horse
n+t'k'ʷ=ílt	be pregnant
s+t'k'ʷ=ílp	mattress
s+t'+t'k'ʷ=ílaʔp	pillow, cushion
n+t'k'ʷmín	coffin
s+n+t'+t'k'ʷ+ncút+(t)n	cot
n+t'k'ʷ=kiʔ=sqáx̌aʔ+tn	saddle

(8) √piq

piq	white
piq=sxn	silver coins
s+pá+pq=łc'a?	weasel (in winter)
s+pq=míx	swan
pq+m=áya?=qn	gray-haired person
k+piq=lps	palomino horse
n+paq=s	cataract, be white-eyed
pq+l=qín	bald eagle
pq+pq=qín'	whiskey jack

(9) √tq

tqam	touch s.t.
k+tq=ína?	press down
k'ł+tq+ncut+m	protect oneself
n+tq=qin+nt	vote for s.o.
k'ł+tq+ap	be worried
tq+q++t=w's=aqst=xn	cross one's legs
tq+q+nunt	fool s.o.

The view that roots and affixes are morphemes requires us to be able to state very precisely the meaning of a root and the meaning or function of an affix (Spencer 1991). The data above show that the meaning of a root changes with its context. This means that roots do not meet the condition that a lexeme be a context-free vocabulary item. The context-bound nature of a root cannot be explained by appealing to the semantic contribution that affixes make to a word. Affixes in Okanagan are frequently polyfunctional, or make no apparent semantic contribution to a word. For example, the prefix s- appears on some derived nouns and therefore is in some cases associated with a nominalizing

WFR. However, s- seems superfluous on other stems where another

nominalizing suffix appears.

(10)   a.   s+√qiy's   dream
                             nom+dream$_V$

        b.   s+√tx+mín   comb
                             nom+comb$_V$+nom

        c.   nik'+mn   knife
                             cut$_V$+nom

        d.   s+n+√t'l=úla?x^w+tn   plow
                             nom+loc+rip$_V$=land+nom

        e.   √sp'=qin+tn   threshing machine
                             hit=head+nom

If affixes can be semantically empty, as the s- appears to be in (10b) and

(10d), then they are even more context-sensitive than roots.[19]

Even when an affix appears to have a lexical meaning, the meaning

differs in unpredictable ways from stem to stem. The suffix -tn commonly

occurs on nouns that are instruments (e.g. (10d) and (10e)) but its meaning in

(11) and (12) is idiosyncratic.

(11)   [k'^{w}l'+ncut+(t)n]   Creator

(12)   [k'ł+cut+(t)n]   proper behavior (COD11)

---

[19]Beard (1987) argues that one of the key differences, in principle, between lexemes and affixal morphemes is that affixal morphemes can be phonologically null, but lexemes never are.

In fact, (11) and (12) also illustrate the idiosyncratic use of another affix, the suffix -*(n)cút*. This suffix marks predicates as reflexive, as part of a regular derivational rule.

(13)   kn‿x̌cmn+(n)cút   I got myself ready.

The reflexive interpretation is clear with certain base types. In (11) and (12), however, -*(n)cút* serves no apparent grammatical or semantic function.[20] It has been lexicalized in the words *kʷl'ncutn* and *k'ɬcutn*. Examples such as these show that affixes lead a double life. They mark the operation of a regular, grammatical word formation rule in one word. In another, they are idiosyncratic and synchronically irrelevant. As a result, not all words can be exhaustively parsed into constituent morphemes using sound-meaning correspondences.[21]

It may be possible to associate roots and affixes with highly abstract semantic primitives that interact to produce the semantics of the stems. But any

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[20]A. Mattina (1994) exemplifies the idiosyncratic behavior of two other verbal suffixes, -*min* and -*mist*. The data he provides demonstrate how difficult it is to maintain a correspondence between the form of an affix and a single, putative function. Mattina concludes that 'the internal structure of the base is irrelevant' (p.228). I note that Hébert 1982a was unable to distinguish a class of roots that could combine with -*mín*, a fact which reinforces A. Mattina's view that

> [-*min*] is a derivational affix that attaches to certain bases, not to others. All such derived -*min* bases are lexical entries.

[21]Okanagan has subgrammatical means of word formation (such as backformation, blending, reanalysis, and folk etymologizing). I will not describe these idiosyncratic, sporadic phenomena here.

strictly compositional account such as that required by the root-and-affix model has also to answer why if $s+pq=mix$ is analyzed as 'nominalizer-white-creature' or 'nominalizer-it is being white', *spqmix* refers to a swan and not a snowshoe hare or weasel in winter. Note also that $pq+l=qin$ might be analyzable as 'white-on-head', but *pqlqin* refers only to the bald eagle, and not to white-haired people or seagulls. In the case of the root $\sqrt{t'k^w}$, we might ask why $n+t'k^w+min$ is something (of a particular shape and dimension) one lies in for the purpose of burial, and not any instance of 'something one lies in'. In short, these words have the denotational integrity that we associate with lexemes. Roots and affixes have meanings by virtue of their place in a word, contrary to what we would expect if they were lexical items. Lexemes, by contrast, are typically context-free signs that show a high degree of sound-meaning correspondence, whatever their putative internal constituency.

Salishan roots, as traditionally defined, are not relevant to synchronic semantico-syntactic relationships between underived lexemes and their derivates. Therefore, I will not analyze Okanagan words in terms of roots. Similarly, affixes that have been lexicalized in a lexeme are also irrelevant to synchronic word formation. For the most part, I will not segment roots and lexicalized affixes within the base in the many examples to come. This is because bases do not have internal structure that is relevant to word formation,

In addition, bases do not have internal structure that is relevant to syntax. Even

affixes that are added to bases ny WFRs are neither linguistic signs nor

'morphological heads'. They are merely formatives that express the operation

of WFRs. Neither roots nor affixes are taken to be lexical items in the

description of word formation that follows.

1.3 Lexeme classification. This study of Okanagan word formation is

related to other work in Salish which proposes to classify Salishan predicates.

Thompson (1976, 1979) was the first to articulate a predicate classification for

Salishan languages. His classification was based on the notion of *protagonist*

control and its expression through free and bound morphemes. Thompson

observed that Salishan words frequently expressed degrees of protagonist

control such as *limited control* vs. *out-of-control*, and he associated these

denotations with affixal morphemes added to the root. Thompson subsequently

developed the notion of *control roots* and *non-control roots*. Thompson's

pioneering work lead to classificatory schemes based on thematic roles (agent-

oriented vs. patient-oriented) or predicate argument structure (e.g. unary vs.

binary). While the centrality of 'protagonist control' as a morphological

category has not been universally accepted, Thompson's view that roots are the

basic lexemes of Salish is assumed in many of the more recent predicate

classifications (e.g. Howett 1993, L. Thomason 1994, S. Thomason et al. 1994, and Davis 1996).

My classification differs in several ways from those just mentioned. First, I reject the root-and-affix model, which takes the root to be the semantico-syntactic core of every word. Instead, I take the lexeme to be the basic lexical unit, for the reasons given in sections 1.1. and 1.2. Second, my classification is broader than others in that I classify all open class lexemes, not just verbal lexemes. I assume that the potential of a lexeme to act as a predicate in the syntax is irrelevant to its lexical class. Third, I propose that aspectual, modal, and categorial features are criterial in lexeme classification.

Despite the lexeme-based approach, my classification draws on the insights of other Salishanists. For example, B. Carlson (1972) and A. Mattina (1973) assert that bases rather than roots are at the heart of the word formation systems of Spokane and Colville-Okanagan, respectively. Outside of Southern Interior Salish, Hess (1993) has concluded that the stem and not the root is 'the basic descriptive unit of [the Lushootseed] verb'.[22] In lexeme classification, I follow the lead of Vogt (1940), Nater (1984), Kroeber (1988), Gerdts (1991a), 1996), and Saunders and Davis (1993) who have found aspectual classes in

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[22]Other Salishanists may hold this view of word formation, but have not published on this topic. In reading the extant grammars and dictionaries, I find references to stems, bases, and words, as well as to roots and affixes. However, analysts are rarely explicit about the sense of these terms.

Salish languages that constrain word formation. Vogt explicitly relates the aspectual classes he finds in Kalispel to category distinctions. I was also influenced by Thompson's work on protagonist control, and the recurrent references to it across the Salishan family. By building upon the observations of other Salishanists, I hope to advance our understanding of the nature of derivation, inflection, and the lexicon in one Salish language.

1.4 Organization of thesis. In Chapter 2, I provide a brief overview of the syntax and morphology of Okanagan. In addition, I inventory the inflectional and derivational categories of Okanagan that are the focus of the thesis. In Chapter 3, I propose a classification of bases that uses ontological criteria. I describe four base classes using two binary, aspectual features. Three of these classes denote prototypical situations, which I refer to as Transitions, Processes, and States, following Pustejovsky 1991. The remaining class denotes entities. I demonstrate that each base class has a distinctive set of derivational possibilities. The featural and paradigmatic evidence for base classes suggests that there is a cross-linguistically familiar semantic motivation for the noun/verb distinction, i.e. the distinction between entities and situations.

In Chapter 4, I take up the question of whether Okanagan has more than one lexical category. While it has been claimed that Salish languages

generally lack the grammatical effects that support the noun/verb distinction in other languages (Kuipers 1968, Kinkade 1983, Jelinek and Demers 1982, 1994), I demonstrate that there are grammatical distinctions between nouns and verbs in Okanagan. I also describe the status of nominalizations and adjectives with respect to the ways in which category is expressed in Okanagan. I demonstrate how bases carry aspectual features as well as category features. The category features of a base are largely predictable from the aspectual features of a base.

In Chapter 5, I review the evidence that demonstrates that speakers of Okanagan cannot rely purely on the form of stems and affixes to classify bases and stems. I illustrate six arrangements of form, meaning, and lexico-syntactic properties that are attested by the data in this thesis. These six form-function classes show that form and function are not typically implied in Okanagan. This finding supports the adoption of the Separation Hypothesis in particular, and lexeme-base morphology in general for the study of Okanagan word formation. I briefly review the major derivational and inflectional classes of Okanagan before I discuss the direction of future research in this vein.

Chapter 2. An overview of Okanagan

2.0 Introduction. In this overview of Okanagan, I discuss the points of

syntax and morphology that are relevant to the remainder of the thesis. The

phonemes of the language appear in Appendix I, with brief phonological notes.

Fuller treatments of the phonology are to be found in Watkins 1970 and

Mattina 1973.[1] My discussion of the syntax and morphology benefits from

data and analysis presented in Hébert 1982a, 1982b, 1983 and in Mattina 1973,

1982, 1985, 1993a, 1993b, and 1994. In the first three sections of this chapter,

I discuss basic sentence types (section 2.1), transitive syntax and inflection

(section 2.1.1), and the major grammatical relations (section 2.1.2). Next, I

describe the structure of Okanagan words, with particular attention to the

distinction between inflection and derivation. I conclude the chapter with an

inventory of a group of derivational word formation rules that are crucial to the

description of base classes (Chapter 3) and inflectional classes.

2.1 Okanagan sentences and clauses. The simplest Okanagan sentence

consists of a single, predicative grammatical word. In connected discourse,

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[1]I leave detailed investigation of the interaction between morphology and
phonology for future research. To assist the reader with the Okanagan
transcriptions, I provide phonological notes in the text or footnotes when
necessary. I mark only primary stress in full words. I do not mark stress in
monosyllabic words. Inherent or morphological stress is marked in
transcriptions of bases, stems, and affixes, following traditional practice.

however, a main predicate is usually accompanied by a modal particle (or

two), a noun phrase (*NP*), a prepositional phrase, or some combination of

these. Sentences may consist of one clause, or they may consist of a main

clause with one or more embedded clauses. Clauses are of two types in

Okanagan. The first type is headed by a verbal predicate, transitive (1a) or

intransitive (1b).[2]

(1)   a.   ʕacənt-ís   iʔ   sənkɬc'aʔsqáx̌aʔ
                tie-3sERG   art   horse
                He tied the horse.

    b.   wəhám   iʔ   kəkəwʔápaʔ
                bark-3sABS   art   dog
                The dog barked.

The second type consists of two adjacent NPs standing in an

equivalence relationship interpreted as 'NP = NP'.[3] Equational sentences have

neither a lexical verb nor a copula.

(2)   a.   [Tarás]$_{NP}$ [i-   sk^{w}íst]$_{NP}$
                Teresa   1sPOSS   name.
                Teresa is my name.

    b.   [ixíʔ]$_{NP}$ [an-   cáwt]$_{NP}$
                dpr   2sPOSS   deeds
                That is what you did.

The preference for at most one direct argument NP complement per clause is

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[2]Abbreviations are as follows: ERG = transitive subject; art = article; ABS = intransitive subject; dpr = deictic pronoun; POSS = possessive marker. The person marking paradigms are given in section 2.1.1, Figure 1.

[3]A. Mattina brought the presence of equational sentences to my attention.

so pervasive in Okanagan that I do not distinguish clause types by their relative

ability to have multiple argument NPs.[4] Thus the verbal predicate in (1a) is

inflected as a transitive verb, while the predicate in (1b) shows intransitive

inflection. (I describe transitivity in section 2.1.1, and inflection in section

2.2.1). While the transitive/intransitive distinction is salient in the inflectional

system of Okanagan, my point in conflating transitives and intransitives in this

discussion is to highlight the basic syntactic contrast between verbally-headed

clauses and equational clauses.

Verbally headed clauses and equational clauses both function as main

and subordinate clauses. Typically a subordinate clause is indicated by a

subordinating particle. However, these particles may be omitted under

circumstances that I do not yet understand. The data in (3a) and (4a) exemplify

verbal clauses and equational clauses as subordinate clauses, respectively. The

data in (3b) and (4b) exemplify them with null marking. (The subordinating

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[4]A. Mattina (1985:70) describes Okanagan as showing 'a predilection for
sentences with an initial predicate followed by only one (unmarked) major
relation (the subject, the direct object, the indirect object).' I have elicited
sentences that include two or more argument NPs. However, study of the
substantial amount of textual material that is available in Okanagan shows that
sentences with multiple argument NPs are extremely rare. My decision to
describe Okanagan clauses as limited to one argument NP is also influenced by
Kinkade (1983:32), who suggests that English influence has caused Salish
speakers to accept from linguists clauses that have more than one argument
NP. I note also that Hess (1993) states that only one argument NP is allowed
in Lushootseed clauses.

particle (*sb*) is in bold-face.)[5] Other particles are indicated with *prt*.)

(3)   a.   way' t'i   x̌ast   ɫ   k'əɫx̌ʷílst   -əm

            prt   prt   good **sb** throw_away -1pERG
            It's better that we do away with him. COD151

     b.   way' miyst -s   ʊ   incá
            prt   know -3sERG cs   I
            He'll know

            kʷʊ   i-   s-   kʷúl'stəm
            2sOBJ   1sGEN   asp-   send
            (that) I sent you. GW610

(4)   a.   kn̓ʊ   c-   t'xətmíst aɫí
            1sABS   asp- careful   **sb**

            ixíʔ   sʔíɫn   -tət
            dpr   food   1pPOSS
            I was careful because it was our food.

     b.   əc-   myst -ín   ixíʔ   sqlaw'
            asp- know -1sERG   dpr   money
            I know it's money.

Any sentence or clause can be preceded by one or more particles, as shown in (5) with the negator *luɫ* (*neg*), and in (6) with *luɫ* and *t'i* 'evidential' (*ev*).

(5)   luɫ   kʷuʊ x̌lítnt   -xʷ
      neg   1sOBJ call   2sERG
      You didn't call me.

---

[5]Remaining abbreviations are: prt = particle; GEN = genitive subject; asp = aspect; cs = case marker.

(6) lut   t'(i)   in-   x̌mínk i?   siwɫkʷ
    neg.   ev   1sPOSS-   liking art water
    I don't (really) like the water. GW294

Sentences and clauses can also be modified by adverbs. Adverbs occur in

prepredicate position, without or without a complementizer. A. Mattina

(1973:137) gives these examples:

(7) a.   kʷmiɫ   xʷuy
           suddenly   go
           He went suddenly.

     b.   kʷmiɫ   ki?   xʷuy
           suddenly   comp go
           It was suddenly that he went.

     c.   *xʷuy kʷmiɫ

Neither modal particles nor adverbs can stand alone as predicates.

Word order in Okanagan verbal clauses is typically predicate initial.

This order conforms to the word order found in other Salish languages

(Kroeber 1991:26). In elicitation contexts, speakers report that an argument NP

can occur in initial position, as in (9).

(8) t'uxʷt   in-   kəwáp
     fly   1sPOSS   horse
     My horse flew.

(9) in-   kəwáp   t'uxʷt
     1sPOSS   horse   fly
     My horse flew.

This apparent freedom of word order is also found in possessed NPs, as in (10)

and (11).

(10) Pit   iʔ   kəwáp -s
      Pete   art   horse 3sPOSS
      Pete's horse

(11) iʔ   kəwáp -s   Pit
      art   horse 3sPOSS   Pete
      Pete's horse

However, there are word order constraints with respect to adverbs (exemplified

above in (7)) and in other constituent types (Chapter 4). Therefore Okanagan

cannot be said to show free word order.

2.1.1 Transitivity. Transitivity of the Salish clause has long been

equated with the presence of one of a set of suffixes on the clause head. In

Okanagan these suffixes are: *-nt, -st, -xít, -łt, -túłt, ·núnt, -núłt, and -núst*

(A. Mattina 1982, 1994).[6] However, it is more accurate to say that the

---

[6]All the Interior languages have cognate formatives for some or all of these Okanagan suffixes that include *t*. As a group, they are consistently associated with transitive inflection. However, the semantic details of predicates and classes of predicates with these markers differ from language to language, as demonstrated by comparing the data and analysis in B. Carlson 1980, Kinkade 1980, Thompson and Thompson 1980, A. Mattina 1982, and N. Mattina 1993. The *t* that is common to these suffixes is not synchronically segmentable in Okanagan, as only one verb *ʔam+t-* (e.g. *ʔam+t-ín* 'I ate it') shows transitive suffix *-t*. I do not segment *-nú* from *-núnt, -núłt*, and *-nust*, which are the *limited control* (*lc*) transitive suffixes (see section 2.2.2.11). *-nú* does not occur without the two final consonants of the suffix, except before the 1sERGsub suffix *-ən*. Compare (i) and (ii).

(i). xəƛ'p+núnt -xʷ   (ii). xəƛ'p+nú(nt)   -n
      finish+lc   -2sERG   finish+lc   1sERG
      You managed to finish it.   I managed to finish it.

transitivity of a clause is indicated by the inflectional class of the clause head.

(I describe these classes below.) In terms of their form, the heads of transitive

clauses have subject and object person markers from the ergative or genitive

person marking sets.[7] Heads of intransitive clauses have subject markers from

the absolutive person marking set (see section 2.1.2 for discussion of

grammatical relations). The affixes and clitics that comprise these person

marking sets are given in Figure 1.

Several other Interior languages have a transitive suffix *-mín*, but in Okanagan this suffix is found on transitive and intransitive verb stems.

[7]I use the terms *person marker* and *person marking* to refer to the marking of person, number, and grammatical function on heads. On verbs, person, number, and grammatical function are typically marked by a portmanteau formative in a single inflectional paradigm.

Figure 1. Person marking paradigms.

I. Ergative Paradigm

i. Ergative (Subject)

1	-(í)n	-(í)m
2	-(í)xʷ	-(í)p
3	-(í)s/ -m	-(í)s-lx/ -m-lx

ii. Object

with -*nt*

1	kʷu͜	kʷu͜
2	-s	-(úl)m
3	∅	-lx

with -*ɬt*

1	kʷu͜	kʷu͜
2	-s	-s
3	∅	-lx

with -*st*

1	kʷu͜	kʷu͜
2	-(ú)m	-(ú)m
3	∅	-lx

with -*x(í)t*

1	kʷu͜	kʷu͜
2	-m	-m
3	∅	-lx

II. Absolutive Paradigm

1. kn͜	1p. kʷu͜
2. kʷ͜	2p. p͜
3. ∅	3p. (-lx)

III. Genitive Paradigm

i. Genitive (Subject)

1. in-	1p. -tət
2. an-	2p. -əmp
3. -s	3p. -s-lx

ii. Object

1. kʷu͜	1p. kʷu͜
2. kʷ͜	2p. p͜
3. ∅	3p. ∅-lx

The object markers in the ergative paradigm vary in form depending on the form of the transitive suffix. The object markers with *-núnt, -nútt, and -núst* are the same as those for *-nt, -tt, and -st,* respectively. Third person singular object markers are phonologically null. The third person singular intransitive subject marker is also phonologically null. The third person plural suffix *-lx* can refer to subjects or objects, depending on the predicate type (A. Mattina 1985).

The canonical transitive clause is exemplified in (11) and (12). As in all transitive clauses, two participants are referenced by person markers on the clause head. Example (11) is a transitive clause where both (non-third person) arguments are coded on the clause head with ergative person-marking. (12) shows a transitive clause with an NP argument. In (12), the third person object marker is zero.

(11) kʷuɔ   ʕac+nt   -íxʷ
      1sOBJ   tie(Trans)   2sERG
      You tied me up.

(12) ʕac+nt   -íxʷ   iʔ   snkɬc'aʔsqáx̌aʔ
      tie(Trans)   2sERG   art   horse
      You tied up the horse.

There are three types of non-canonical transitives which demonstrate that there is no single pattern of transitive marking for all predicate types. First, there are predicates that have one of the transitive suffixes, but genitive

rather than ergative person markers, as (13).

(13) kʷu͜ a-   ks-   ʕac+ɬt+ím   in-   kəwáp
     1sOBJ 2sGEN   irr   tie(Trans) 1sPOSS   horse
     You will tie up my horse.

The difference between (13) and the canonical transitives in (11) and (12), is

that (10) is inflected for irrealis mood (*irr*) with the prefix *ks-*. (Irrealis mood

is discussed in section 2.2.1). The irrealis/realis contrast, therefore, conditions

the distribution of ergative and genitive person-marking with transitive

predicates (A. Mattina 1993a).[8]

A second kind of non-canonical transitive predicate lacks a transitive

suffix. This kind of predicate occurs with both the realis and irrealis inflection.

The presence of two person markers in (15) shows that the clause is transitive.

(14) wik   -n   iʔ   pəptwínaxʷ
     see(Trans)   1sERG   art   old lady
     I saw the old lady.

(15) kʷu͜ a-   ks-   ʕacám
     1sOBJ 2sGEN   irr   tie(Trans)
     You will tie me up.

The *-nt* transitive suffix is lost in certain forms of the realis and irrealis person

---

[8]The transitive stem to which the marker of irrealis mood, *ks-*, ends in
-(V)m. The suffix is not an object person marker, as example (13) shows. The
genitive subject marker is *a-* and the genitive object marker is *kʷu*. The suffix
-(V)m may indicate that the stem is transitive; however, the same suffix is
found on intransitive stems that do not allow subject and object person
marking. I do not have a complete analysis of this suffix and its many
functions, although others (e.g. Thomason and Everett 1993, Davis 1996) have
made proposals concerning the cognate suffix in the Interior.

paradigms. In realis mood, stems with inherently stressed, or *strong* roots, do

show -*nt* in first person singular, and third person singular and plural forms, as

in (16). Stems with unstressed or *weak* roots have -*nt* for all persons. This

pattern is shown in (17). All of the examples here have zero third singular

objects, but the patterns hold for all subject/object combinations.

(16) 1sub wik-n   wík+nt-əm
      2   wik+nt-xʷ   wík+nt-əp
      3   wik-s   wík-s-əlx

(17) 1sub λ'aʔ+nt-ín   λ'aʔ+nt-ím
      2   λ'aʔ+nt-íxʷ λ'aʔ+nt-íp
      3   λ'aʔ+nt-ís   λ'aʔ+nt-ís-əlx

In irrealis mood, the -*nt* transitive suffix is lost in the all plural person

forms, regardless of the type of root in the stem.

(18) 1sub i-ks-wík+əm   ks-wík+nt+əm
      2   a-ks-wík+əm   ks-wík+nt+əp
      3   ks-wík+əm-s   ks-wík+əm-s-əlx

The other transitive suffixes are present in all persons in both realis and irrealis

mood (e.g. *kʷu̯ˤac+ɬt+ís* 'He tied it for me'; *kʷu̯a-ks-ˤac+ɬt-ím* 'You tied

something of mine').[9] What the data in (14)-(18) show is that the -*nt* suffix

---

[9]A morphological model that allows for the independence of form and
meaning at some stage of the derivation can express the phonological side
effects of a WFR in the WFR itself, as the phonological spell-out of a stem.
The mixed surface forms of closed transitionals can be understood as the
realization of a mixed paradigm: some of the realizations of the person
marking rules select the stem form /base form + nt/ while others select the
stem form /base form + 0/. Such spell-outs are the stuff of pure morphology.
There is no need to recognize a distinct class of morphophonemic rules in this

itself does not mark transitivity. Speakers (and learners) know certain

predicates to be transitive in the absence of a transitive suffix. Therefore,

transitive suffixes only partly distinguish the class of transitive predicates.

The third type of non-canonical transitive shows a suffix -*(V)m* that

alternates with -*s* 3s/pERG subject (see Figure 1, above). I label the -*(V)m*

suffix *underspecified subject (Unsub)*.[10] This suffix occurs in certain

discourse contexts. Informally, I characterize its interpretation as *the other one*

or *another one*. An example of this type of non-canonical transitive appears in

(19).

(19)	qʷəlqʷíl+st	-əm	iʔ	⌣	kəwáp	-s
	talk(Trans)	Unsub	art	cs	horse	3sPOSS

His horse said to him: ...

Clauses headed by this type of predicate are similar in their

interpretations to passive constructions in other languages. However, the

evidence that predicates with underspecified subjects are passive (and therefore

intransitive) is not strong in Okanagan. First, we cannot determine from person

marking alone if these predicates are transitive or intransitive. This is because

Unsub predicates are limited to expressing third person referents. Third person

intransitive subjects and third person transitive objects are zero-marked.

---

view (Anderson 1992:225).

[10]In A. Mattina 1994, this suffix is labeled *switched passive subject*. As I argue here, I am not convinced that these predicates are syntactically intransitive.

Therefore, the Unsub predicate like that in (19) might have either a null

intransitive subject marker, or a null transitive object marker. Case marking of

the agent NP suggests that Unsub predicates head transitive clauses. The agent

NP of both canonical and Unsub transitives is preceded by the case marker *t*

(*cs*). Compare (19) with (20).

(20) cu   -s   i?   ƚ   ƛ'əx̌əx̌ƛ'x̌áp   -s
      say(Trans)   3sERG   art   cs   elders   3sPOSS
      His elders told him: ...

Furthermore, as the translation of (19) shows, speakers do not consistently

translate Unsub transitives with English passives, i.e. with the meaning *y was*

V'd (by x). In my view, Unsub predicates are basically active, and therefore I

do not use the label *passive* for them.[11]

In sum, there are three non-canonical transitive stem types: 1)

transitives in irrealis mood 2) transitives that regularly lack the *-nt* transitive

suffix for some persons; and 3) transitives that have the Unsub suffix. These

non-canonical transitives demonstrate that the notion *transitive stem* is not

isomorphic with one set of transitive suffixes or person markers. Furthermore,

because clauses rarely (if ever) contain more than one NP, a transitive stem

---

[11]Thomason and Everett (1993:327) describe the cognate construction in
Montana Salish (aka Flathead) as 'an ordinary active transitive'. There seems
to be general agreement that full description of this construction in the Interior
will involve discourse analysis. My point here is that until this phenomenon is
better described, it is misleading to refer to it as *passive*.

cannot be defined as one that takes two or more NPs in its clause. I assume that transitivity is defined structurally or relationally in the syntax. Syntactic transitivity is licensed by a predicative stem that is notionally transitive. A notional transitive is one that encodes the following in its lexical conceptional structure (LCS): 1) two participants, the external argument (usually an actor) and an internal argument (usually a patient); and 2) the internal argument is referential.[12] A notionally intransitive predicate may have one of two types of lexical conceptual structures.[13] One intransitive type, the *simple intransitive*, does not encode an internal argument. The second intransitive type encodes an internal argument, but this argument is non-referential or *generic*. I refer to this type of intransitive as the *generic object intransitive*.[14] The three

---

[12]By internal argument I mean the second of two ordered semantic participants as specified in the lexical conceptual structure of a verb. Thus the logical structure of a transitive predicate is $P(x,y)$ where y is the internal argument. I am assuming that all internal agruments are mapped to the syntactic object position (i.e. VP internal, following Williams 1981), and that all external arguments are mapped to the syntactic subject position. This means that Okanagan has no empty subject positions at d-structure, or, in the terms of Relational Grammar, there are no advancements to the subject relation.

[13]The base of a predicate determines which kind of intransitive it is. See Chapter 3 for a classification of Okanagan bases.

[14]This construction and its cognates in other languages are referred to as the intransitive object, indefinite object, and/or middle construction. The example in (i) shows that the object of this construction is not indefinite, since it is quantified.

(i). Xlap   kʷ   km'am   ṭ   mus   sq'lips
     tomorrow   2sABS   take   cs   four   handkerchiefs
     Tomorrow you will take four handkerchiefs. GW262

In Chapter 4, I give evidence that Okanagan has a middle construction that is

predicate types are illustrated in (21)-(23).

(21)   *Transitive*

kic	-səlx	axá?	i?	ttw'it
get_to(Trans)	3pERG	dpr	art	boy

They got to the boy.

(22)   *Simple intransitive*

s-	cxʷuy	-s	i?	pəptwínaxʷ
asp-	come(Intr)	3sGEN	art	woman

The old woman came closer.

(23)   *Generic object intransitive*

way'	p	ƛ'xʷup	i?	t̯	sqlaw'
prt	2pABS	obtain(Intr)	art	cs	money

Then you will get some money. GW17

The internal argument of the generic object intransitive cannot be

possessed. I assume that this is because possessed NPs are referential.

(24)

*kn̯	wikm	(i?)	t̯	in-	cítxʷ
1sABS	see(Intr)	art	cm	1sPOSS	house

(I saw my house.)

---

distinct from the generic object intransitive.

The argument NPs of simple intransitives and transitives can be possessed.[15]

(25) ʕac+nt   -ín   in-   q'aʔxán
      tie(Trans)   1sERG   1sPOSS   shoe
      I tied my shoe.

(26) wəhám   in-   kəkəwápaʔ
      bark(Intr)   1sPOSS   dog
      My dog barked.

In order to distinguish notional transitivity from syntactic transitivity, I
have developed a set of labels for the notional types of predicates in (21)-(23)
and their subtypes. I introduce these labels and define them in sections 2.2.2.1-
2.2.2.14. First, however, I describe the major grammatical relations in Okana-
gan, and how I test for them.

---

[15]Perhaps a full account of notional transitivity would make use of the
Givenness Hierarchy proposed in Gundel, Hedberg, and Zacharski 1993.
Gundel et al. correlate the form of an NP with its cognitive status in discourse.
In English, the Givenness Hierarchy conditions the form of the NP as follows:

(i). The Givenness Hierarchy

in focus	>	activated	>	familiar	>	uniquely identifiable	>	referential	>	type identifiable
it		that / this / this N		that N		the N		indf. this N		a N

In Okanagan, this hierarchy is expressed by the predicate type rather than the
NP type.

2.1.2 Grammatical relations. Okanagan person-marking distinguishes subject and object grammatical relations. The affixes that mark these relations were given in Figure 1, above. Okanagan also has a case marking system that weakly distinguishes a second object relation, and an oblique relation. In this case marking system, certain NPs are preceded by the proclitic *t*. I refer to these as *t-marked* NPs.[16] Other NPs lack the *t*, hence I refer to them as *plain*. In the core case marking pattern, the case marking of an NP is predictable on the basis of whether that NP is cross referenced with a person marker on the clause head. Those NPs that are cross-referenced on the predicate are plain; those that are not are t-marked. Most plain NPs are direct arguments of the predicate, in either subject or object function. In (27), (28), and (29), the NP is transitive subject, transitive object, and intransitive subject, respectively.

(27) kʷuᴗ   wík   -s   Mári
      1sOBJ   see(Trans)   -3sERG   Mary
      Mary saw me.

(28) p'íc'+nt   -xʷ   iʔ   pus
      pinch(Trans) -2sERG   art   cat
      You pinched the cat.

(29) t'uxʷt   iʔ   sənkɬc'aʔsqáx̌aʔ
      fly(Intr)   art   horse
      The horse flew.

---

[16]Cognates of *t* in the Northern Interior are sometimes referred to as the oblique marker. Okanagan, Columbian (Kinkade p.c), and Montana Salish (Thomason and Everett 1993) use *t* to mark other grammatical functions beside oblique. I discuss the many functions of *t* in Okanagan in Chapter 4.

NPs that are not cross-referenced on the predicate are not direct arguments. They are t-marked, as in (30) and (31).

(30) kn‿   ník'm   iˀ   t‿   sp'íc'ən
     1sABS   cut(Intr)   art   cs   rope
     I cut a rope.

(31) kn‿   c'wak   iˀ   t‿   t'íc'mən
     1sABS   get burnt   art   cs   iron
     I got burnt by the iron.

Case marking is not a completely reliable means of identifying the grammatical relation of an NP. That is, there are case marking patterns for certain predicate types that do not conform to the core pattern. For example, third person subjects of canonical and underspecified subject transitives are expressed as t-marked NPs. The person markers and transitive suffixes of these transitive predicates indicate that these NPs are not oblique (see examples (19)-(20)). Case marking does not follow the core pattern with a second predicate type, also transitive. With predicates that include the transitive suffix -ɬt, a plain NP may occur in the clause even though it is not cross-referenced on the predicate. I refer to these predicates as *possessionals* (see also section 2.2.2.3). Possessionals predicates (*pos*) may have third person ergative subject and object markers. The subject marker refers to the notional agent; the object

marker refers to the possessor of the theme.[17] The theme is frequently expressed in an NP, as in (32).[18]

(32) ˤac+ɬt   -ís   i?   kəwáp -s
       tie(pos)   3sErg   art   horse 3sPOSS
       He tied his₁ horse for him₁.

He tied his$_1$ horse for him$_1$.

In (32), the theme NP is not marked oblique, as might be expected because it is not cross referenced on the predicate. In fact, it patterns with direct arguments in that it can be extracted from the clause in a cleft construction, as in (33). In (34), (35), and (36), I give cleft constructions involving the direct arguments, i.e. transitive object, transitive subject, and intransitive subject, respectively.

(33) i?   kəwáp -s   i?   ˤac+ɬt   -ís
       art   horse 3sPOSS   sb   tie(pos)   3sERG
       His horse is what he tied for him.

(34) in-   q'a?x̌án   i?   ˤac+nt   -ín
       1sPOSS   shoe   sb   tie(Trans) 1sERG
       My shoe is what I tied.

(35) ʟ   anwí ki?   kʷuʟ   kʷən+núnt -xʷ
           you   sb   1sOBJ grab(Trans) 2sERG
       It's you who managed to get me. GW373

---

[17]The possessor of the theme is always animate, usually human. There is no regular alternate person/case pattern in which the theme is marked as the object and the possessor appears in a plain NP.

[18]POSS is an abbreviation for *possessor person*, an inflectional category of nouns. -*kəwáp* 'horse' is the bound alternant of *sənkɬc'a?sqáx̌a?* 'horse' with possessive markers.

(36) i?   sqltmixʷ   ki?   ?ukʷt
     art   man   sb   crawl(Intr)
     It's the man who crawled.

Oblique NPs cannot be extracted.

(37) a.   knʾ   wíkəm   i?   tʾ   s?íɫən
       1sABS   see(Intr)   art   cs   food
       I saw some food.

     b.   *(i?) tʾ   s?íɫən i?   knʾ   wíkəm
       art cs   food sb   1sABS   see(Intr)
       It was some food I saw.

(38) a.   knʾ   ʕacác   i?   tʾ   sqltmixʷ
       1sABS   get_tied(Intr) art   cs   man
       I got tied up by the man.

     b.   *i   tʾ   sqltmixʷ   ki?   knʾ   ʕacác
       art cs   man   sb   1sABS   get_tied(Intr)
       It was by the man that I got tied up.

The theme NP's of possessional predicates have an intermediate status; they are neither direct nor oblique arguments. The same is true for the theme NP of another predicate type, the *dative* (*dat*) (see also section 2.2.2.4). Like possessionals, datives take ergative subject and object person markers. The notional theme can be expressed only as an NP.

(39) ʕac+xít   -s   i?   tʾ   sənkɫc'a?sqáx̌a?
     tie(dat)   3sErg art   cs   horse
     He tied the horse for him.

Possessionals and datives differ formally in that the theme NP of the dative is

t-marked, while the theme NP of a possessional is plain.[19] However, both

theme NPs can be extracted. The theme NP of possessionals can be extracted

as shown above in (33), above. (40) shows that the theme NP of datives can

also be extracted.

(40)   i?   sənkɬc'a?sqáx̌a?   i?   ʕac+xít   -s
      art   horse   sb   tie(dat)   3sERG
      The horse is what he tied for him.

Because of their accessibility in the cleft construction, I distinguish theme NPs

with these two predicate types as bearing the grammatical relation *second*

object to the predicate.

To summarize, person marking distinguishes three functions: subject,

object, and oblique. Nominal case-marking indicates a distinction between

direct arguments (plain) and non-arguments (t-marked), yet there are systematic

exceptions to the general pattern. Subjects and objects, but not obliques, can be

extracted in cleft constructions. I distinguish the grammatical relation *second*

object pretheoretically for NPs that do not pattern completely with either direct

arguments or obliques. I summarize the behavior of NP's in each grammatical

function in (41).

---

[19]These theme NP's also differ in terms of their referentiality. The theme
of a possessional is possessable and therefore referential. The theme of a dative
is not possessable and therefore is generic. The dative theme is regularly
translated as 'some X' where X is an entity.

(41)	Subject	Object	2nd Object	Oblique
Cross-referenced on the head	+	+	-	-
t-marked	-	-	-	+
Extractible in clefts	+	+	+	-

Clearly these distinctions can be instantiated in a formal grammar in a number of ways. However, this pre-theoretical treatment of grammatical relations is sufficient for the level of syntactic analysis involved in this thesis. The issue of the precise relationship between NPs and co-referential person markers, for example, is not addressed. I assume that cross-referencing of NPs with person markers is a kind of agreement. This agreement allows NPs to be dropped from the clause as the speaker chooses. For detailed discussions of argument realization in Salish, I refer the reader to Gerdts 1988, 1993a, 1993b, Hébert 1982a, Hukari 1976, Jelinek and Demers 1982, 1994, and Gardiner 1993.

2.2 Okanagan words. An Okanagan word consists formally of a base plus any derivational or inflectional formatives.[20] A base plus any derivation-

---

[20]Words are distinct from particles in that the latter do not take derivational or inflectional markers. Okanagan particles comprise modals, prepositions, deictics, conjunctions, complementizers, interrogatives, quantifiers, etc. A. Mattina 1973 surveys the Colville-Okanagan particles and his Colville-Okanagan dictionary (1987) contains examples in context.

al affixes is a stem. A stem is an uninflected word; and inflected stem is a *grammatical word* (following Matthews 1972). If a stem's form, distribution, or meaning indicates that a WFR has applied, that stem is a derived stem. The derived stem contrasts with a default stem, the semantically and morphological-ly simplest realization of a base. The relative order of derivational and inflec-tional suffixes mirrors the order of WFR application. That is, all derivation precedes inflection. Evidence for this is that inflectional formatives never occur closer to the base than derivational formatives. Derivational affixes are always at the edges of the stem, i.e. they are either stem-initial or stem-final. In this position, they identify the inflectional class of the stem. Formatives with the shape of derivational affixes that are not at the edges of the stem are base formatives. They are are not relevant to the inflectional class of the stem. Base formatives may be multiple, including at times more than one root plus other base formatives, e.g. √malx̌aʔ+s+√x̌ʷáqʷ=əlqs+əm

(*pretend*+connector+*snore*) 'pretend to snore'.[21] Figure 2 is a formal sche-matic of the Okanagan verb (Bsf = base formative, Drf = derivational formative, and Inf = inflectional formative.)

---

[21]A full inventory of base formatives in Okanagan would include the affixes that mark diminutive, plural, locative, and directional notions, as well as lexical affixes. Okanagan has many more affixes than I describe here; it remains to be seen which of the remaining ones act strictly as base formatives, and which are markers of a synchronic WFR. I discuss the reanalysis of stem formatives as base formatives in Chapter 5.

Figure 2. Formative order in the verb stem.

	Inf pfrx/ cltc	(Drf) prfx-	(Bsf) prfx-	√root	(Bsf)* -sfx	(Drf) -sfx	Inf -sfx

e.g.

(a)			k'əɬ	+√ʔaw+cn+íʔst+m			-s
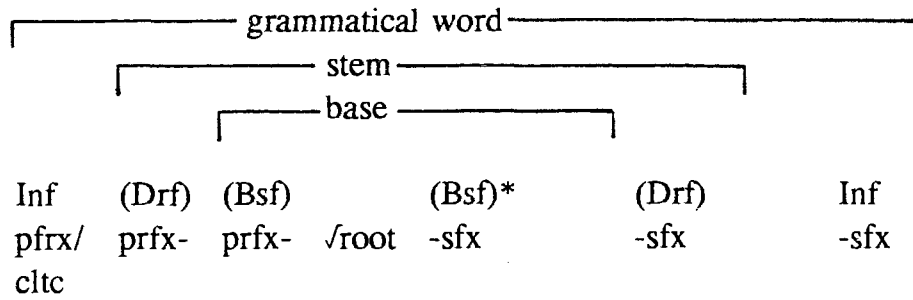
k'əɬʔawcníʔstms
'3s mistakes 3s'

(b)			n+	√q'aʔ	+íls	+nt	-xʷ

nq'aʔílsntxʷ
'2s worries 3s'

(c)	kʷ‿	kɬ+	s+	√qəlt	+míxʷ		

kʷ‿ksqəltmíxʷ
'2s has_husband'

(d)	kʷu‿			√qʷaʔ+qʷaʔm	+ncút		

kʷu‿qʷaʔqʷaʔmncút
'1p practice'

(e)	kʷ‿			√t'uxʷt			

kʷ‿t'uxʷt
'2s flew'

(f)				√ʔitx			

ʔitx
'3s slept'

Derivational WFRs that involve reduplication or infixation typically target the phonological root, the phonological core of the word as in example (d) in Figure 2. Okanagan inflectional markers are a mix of clitics, prefixes, and suffixes. Predicates can have inflectional markers both before and after the stem, depending on the categories marked on the stem. For example, the stem in form (d) in Figure 2 can have two inflectional prefixes. It is shown in (d) with a person marker only. If the stem *qʷaʔ+qʷaʔmncút* is inflected for irrealis mood, the irrealis marker *ks-* and the subject marker *i(n)-* precede the predicate, as in *i-ks-qʷaʔqʷaʔmncút* 'I will practice'. As a stem with reflexive meaning, however, this stem never has an inflectional suffix or a second person marker. Other stems allow up to three markers before the stem as in *kʷu̱a-ks-wíkəm* 'you will see me'. Still other stems have forms where person marking and sentential aspect marking involve no formative at all, e.g. Figure 2 (f). In sum, stems may have zero to three inflectional formatives. These are realized at one or both ends of the stem.

The arrangement of formatives within a noun parallels that of a verb. The difference between the form of nouns and verbs is in the kinds of WFRs that apply to them (see Chapters 3 and 4). The noun form is schematized in Figure 3.

Figure 3. Formative order in the noun stem.

```
  ┌──────────────── grammatical word ───────────┐
  │     ┌──────────── stem ──────────────┐      │
  │     │   ┌──────── base ───────────┐  │      │
  Inf   (Drf)  (Bsf)*  √root    (Bsf)*  Inf
  prfx- prfx-  prfx-            -sfx
```

(a)   an-   √kəwáp   ankəwáp
                                                 '2sGEN horse'

(b)   səxʷ+   √k'ʷul'   +m   -s   səxʷk'ʷul'ms
                                                 '3sGEN workman'

(c)   s+k+ cəw+√cəw +ʕáqst+xn skcəwcəwʕáqstxn
                                                 'fringed wing chaps'
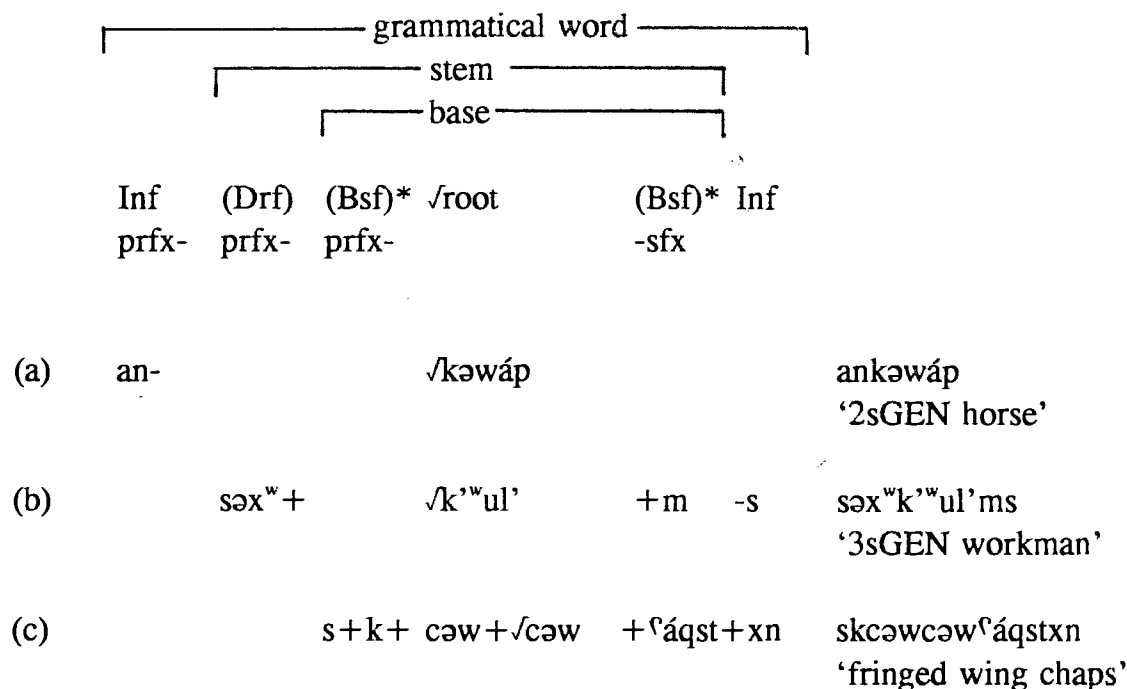
One striking property of nouns is that they take derivational prefixes,

but not derivational suffixes. Inflectional markers are prefixes (e.g. 1s and 2s

possessive) or suffixes (3s/p, 1p, 2p possessive). Like the verb, the noun may

contain more than one base formative, as in (c).[22]

---

[22]A noun in predicate function can have both an inflectional proclitic and
an affix, as in (i) and (ii).

    (i).   kʷuͺ   an-   tkɬmílxʷ
          1sABS   2sPOSS   wife
          I am your wife.

    (ii).   kʷuͺ   tkɬmilxʷ   -s
          1sABS   wife   3sPOSS
          I am his wife.

This pattern is like that of irrealis transitive predicates (section 2.1.1). Because
the person marking of predicate nominals is distinct from that of all other
predicate types, it represents a fourth paradigm of person marking. I discuss

In the following sections I describe the sets of inflectional and derivational WFRs that are the focus of this thesis. In 2.2.1, I describe two major inflectional categories of Okanagan. I also describe the inflectional paradigms, which demonstrate that there are two inflectional classes of verbs in Okanagan. In 2.2.2, I introduce an important derivational paradigm that marks aspectuomodal categories in the stem. I refer to these derivational categories as *stem aspects*. I discuss category-changing WFRs in section 2.2.2.16.

2.2.1 Inflection. Stems undergo inflectional WFRs if they meet the conditions of the syntax for inflection. Inflection differs from derivation chiefly in that inflection is restricted to adding features of three kinds: those that indicate person marking, sentential aspect, and sentential mood. Furthermore, inflection differs from derivation in the manner proposed by Bybee (1985): inflection is obligatory, while derivation is not. That is, there are underived stems in Okanagan, but no uninflected ones. Verbs are inflected for person marking, sentential aspect, and sentential mood in two inflectional paradigms, the transitive paradigm and the intransitive paradigm. I consider only one contrast in sentential mood, the irrealis/realis contrast. Realis mood is indicative; irrealis mood expresses relatively less commitment to the truth of

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predicate nominals in more detail in Chapter 4.

the assertion by the speaker.[23] This mood contrast plays a significant role in determining the inflectional marking of a predicate. Other sentential moods have been identified in Okanagan (A. Mattina 1980, 1993a), but I do not discuss them here.[24]

2.2.1.1 Person marking. Okanagan marks six persons for each of four person marking paradigms. I refer to these paradigms as the ergative, absolutive, genitive, and predicate nominal paradigms. The ergative and genitive paradigms mark subject and object persons (A. Mattina 1982, 1993a). The absolutive and the predicate nominal paradigms mark subject person only. (see also Figure 1, section 2.1.1). Nouns in either predicate or non-predicate function may inflect for possessor person. The possessor person markers are given in (42).

(42) 1   in-   -tət
      2   an-   -əmp
      3   -s   -s-lx

The form of possessor person markers is identical to the form of

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[23]The marker of irrealis mood is the prefix *ks-*. Predicates with this prefix translate as futures, prospectives, or negative imperatives, depending on their contexts.

[24]A. Mattina (1980) describes imperative formation. A. Mattina (1993a) describes several prefixes in his paper on Okanagan aspect that might be better described as mood markers. Moods may be expressed lexically, inflectionally, and/or at the phrasal level. In short, mood in Okanagan is very complex and deserves an in depth treatment.

genitive subject markers. Although it is customary to consider possessive and genitive markers as belonging to a single paradigm, I distinguish them because possessive markers attach only to nouns.[25] Genitive markers attach only to verbs (see Chapter 4 for discussion) Speakers translate these markers as agents or possessors when they are in genitive function. In possessor person function, only the possessor interpretation is possible. This contrast is shown in (43) and (44).[26]

(43)　i-　　　　　s-　　x^{w}uy
　　　　1sGEN　　　asp　go
　　　　I went/ my going

(44)　in-　　　　q'əy'mín
　　　　1sPOSS　　paper
　　　　my paper/ *I paper

I discuss additional facts related to the distinction between genitive and possessive marking in Chapter 4.

The major inflectional classes of Okanagan verbs are the transitive and intransitive classes. These classes are semantically motivated (see section 2.1.1). Transitive stems inflect with the ergative or genitive person markers. Intransitive stems inflect with the absolutive or genitive person markers. The choice between the transitive ergative and transitive genitive inflection involves

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[25]Under the Separation Hypothesis (section 1.1.2), the formal identity of possessive and genitive markers is an example of affixal polyfunctionality.

[26]*in-* and *an-* are *i-* and *a-* respectively before *s* and stem-initial *ł* of kin terms.

the contrast between realis and irrealis mood. The transitive class of stems can

inflect either as ergative-realis (45) or genitive-irrealis (46).[27] The marker of

irrealis mood is *ks-*.

(45) kʷuʟ   xʷəlxʷəlt+st   -íxʷ
      1sOBJ   save(Trans)   2sERG
      You saved me.

(46) kʷuʟ a-   ks-   xʷəlxʷált+st+əm
      1sOBJ 2sGEN   irr   save(Trans)
      You will save me.

Other inflectional patterns depend upon the speaker's choice of sentential

aspects. Before I present the full set of inflectional patterns, I discuss sentential

aspect and its subtypes in section 2.2.1.2. I summarize the inflectional patterns

in section 2.2.1.3.

2.2.1.2 Sentential aspect. The function of sentential aspect is to signal

what portion of an event is relevant in the utterance. Sentential aspect provides

a temporal perspective on an event, which the speaker chooses according to his

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[27]All transitive stems in irrealis mood end in *-(V)m*. I do not segment it in
these forms because I do not have an analysis of it. Many verbs end in *-(V)m*
in Okanagan, and I have not decided on the best way to handle this apparent
suffix. For example, it is also found on generic object intransitive verb stems.
I do recognize a suffix *-(V)m* that is associated with the formation of middle
verbs (see section 2.2.2.6). For the present, I handle other instances of *-(V)m*
as part of the stem **form** required by some WFR's. Okanagan stem-final
-(V)m is cognate with suffixes referred to as *middle*, *antipassive*, and *intransi-
tive* in the Salish literature (e.g. Thompson and Thompson 1992, Gerdts 1988,
Thomason and Everett 1993).

viewpoint or intentions at the time.[28] Okanagan exhibits the cross-linguistical-

ly common distinction between perfective and imperfective aspect (Comrie

1976).[29] The two kinds of aspect may be defined as follows:

(47)   **Perfective:** focuses on the situation as a whole, lacking explicit
            reference to the internal temporal constituency of the event.

(48)   **Imperfective:** focuses on the internal temporary constituency of the
            event, viewing it from within.

Perfective predicates are aspectually closed; they do not allow continu-

ous or progressive interpretations. In Okanagan, predicates that are perfective

do not allow modification by the temporal adverb *púti?* 'continuously'.[30]

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[28]Smith (1991) writes of this circumstance:

> ...Speakers choose aspectual meanings in order to present
> situations from a certain point of view: they use the meanings
> grammaticized in a given language to give a particular focus or
> emphasis (including the neutral) to their presentation. The
> choices are not entirely unconstrained: they are limited by
> conventional categorization, conventions of use, and the
> constraints of truth. Nevertheless there is a very clear sense in
> which the aspectual meaning of a sentence reflects the decision
> of a speaker to present material in a certain way. Grammarians
> of all traditions have recognized aspect as a domain in which
> subjective factors are of paramount importance (1991:11).

[29]A. Mattina 1993a gives the first detailed description of Okanagan aspect,
from which I draw my description. I use labels that differ from his where my
analysis warrants them.

[30]There are some predicates that look like perfectives but are not. These
are stative stems (section 2.2.2.13). Stative stems are interpreted as perfective
or imperfective when they do not have an overt aspectual aspectual marker.
They can be modified with *púti?*. Other stem types must have an overt aspec-
tual marker to indicate imperfective aspect. Compare the stative clause in (i)
with the active one in (ii).

(i).   púti? nˤalt   (ii).   *púti? xʷuy

Speakers typically translate *púti?* with English *still*, as in (49b).

(49) a.   wík   -n   i?   p'úkʷla?
               see   1sERG   art   ball
               I saw the ball.

       b.   *púti?   wík   -n   i?   p'úkʷla?
               still   see   1sERG   art   ball
               (I still saw the ball.)

There are two kinds of perfectives in Okanagan, the *simple perfective* (perf)

and the *perfect* (prft). The perfect indicates 'the continuing present relevance of

a past situation' (Comrie 1976:52). The simple perfective marker is phono-

logically null, as in (49a). The perfect marker is *ksc-*. The perfective is

illustrated in (50).

(50) a.   kn͜   ksc- wik t͜   spʕáɫa?
               1sABS   prft see cs   monster
               I have seen a monster.

       b.   *púti?   kn͜   ksc- wík t͜   spʕáɫa?
               still   1sABS   prft see cs   monster
               (I still have seen a monster.)

Imperfectives are interpreted as situations that are ongoing relative to a

temporal frame. There are four types of imperfective aspects in Okanagan.

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still   sunk   still   go
It's still sunk.   He still goes.

They are listed and informally defined in (51)-(54).[31] The formative for each

aspectual type is in boldface.

(51) *continuous* (cont): A situation in progress.

    e.g.   ixíʔ   **səc-**   ʔácqaʔ+x

                dpr   **cont** going_out

                That one is going out.

(52) *perfect continuous* (pcont): A situation in progress with present
        relevance.

    e.g.   s-   tər'q+míx

                pcont dancing

                He has been dancing

(53) *prospective*: A situation in progress with future relevance.[32] (The
        irrealis prefix *ks-* is added to the continuative stem type
        (section 2.2.2.9))

    e.g.   knʌ   **ks-** xʷúy+aʔx

                1ABS   **irr** go

                I'm going/ going to go.

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[31] I do not have collocational or other tests that identify these aspectual
contrasts. The description here is based on English translations and discussions
of these forms with speakers. It should be possible to describe each aspect in a
formal grammar that is justified by Okanagan grammar and cross-linguistic
categories.

[32] Comrie (1976:64) describes the complementarity between perfect and
prospective aspect as follows:

> The perfect is retrospective, in that it establishes a relation
> between a state at one time and a situation at an earlier time. If
> languages were completely symmetrical, one might equally well
> expect to find prospective forms, where a state is related to
> some subsequent situation, for instance where someone is in a
> state of being about to do something.

(54) *habitual, customary* (cust): a situation that is viewed as characteristic of
a whole period rather than of a moment (Comrie 1976).

e.g. kʷuᷱ   ac-   p'íc'+st   -s
1sOBJ   cust   pinch   3sERG
It (habitually) pinches me.

The continuous, perfect continuous and prospective aspect are marked
only on certain stem types (see section 2.2.2.9), all of which are intransitive.
Customary aspect is marked on both transitive and intransitive stems (A.
Mattina 1993a).[33]

Smith (1991) identifies a third, major aspectual type, which she calls
neutral aspect. Neutral aspect focuses on the initial point of an event and at
least one internal stage of an event. Because of this focus, neutral aspect allows
both continuous and closed interpretations. Smith argues for this third basic
aspectual type cross-linguistically, citing French, Mandarin, Finnish, Navajo,
and Eskimo as languages that exhibit it. In Smith's view, neutral aspect

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[33] Stative stems have a more active reading when they are in customary
aspect. Compare (i) and (ii) which are adapted from A. Mattina 1993a:242.
(The customary prefix is c- following a consonant.)
(i). knᷱ   c-   ʔayx̌ʷt   knᷱ   ɬaʔ   c-   maʔyám
1sABS cust tire   1sABS   sb   cust   storytell
I tire when I tell stories./*I am customarily tired when I tell stories.

(ii). knᷱ   ʔayx̌ʷt
1sABS   tired
I am tired.

...complements the other viewpoints in the amount of
information it makes visible about an event. The neutral
viewpoint includes one endpoint, the perfective both endpoints,
the imperfective neither. Thus unlike the imperfective the neutral
viewpoint allows closed readings by inference (1991:123).

Okanagan exhibits neutral aspect in addition to perfective and imperfective aspect. Predicates in neutral aspect are not compatible with *púti?*, a fact that demonstrates that they are not imperfective. However, speakers freely translate them as inceptives or progressives. The neutral aspect marker is *s-*. In (55)-(58) I give examples of neutral aspect. The neutral marker is in boldface.

(55) way' ixí? s- pa?pa?ínk -s axá? i? ttw'it
     prt dpr **neut** feel_bad 3sGEN dpr art boy
     The boy felt bad/ started to feel bad.

(56) s- c'q^waq^w -s ixí?
     neut cry 3sGEN dpr
     He started to cry,

     náx̌əmɬ lut ixí? s- c'q^waq^w -s
     but neg dpr **neut** cry 3sGEN
     but he didn't cry.

(57) cx^wúy?ilx uɬ niʕ'íp c- mist -ís i? sqilx^w
     many_come and always cust know 3sERG art people
     They kept coming and the Indian people knew all along

     i? s- t'əcx^wúy -s i? sáma?
     sb **neut** arrive 3sGEN art whiteman
     that the White people were coming/had come. EC:4

(58) i- s- ƛ'ə?ám i? k^wək^wr'it i? tkɬmilx^w
     1sGEN **neut** fetch art golden art woman
     He sent me to get the Golden Woman. GW333

Predicates with neutral aspect can be interpreted as inceptives, but perfectives cannot be interpreted as inceptives. The (unmarked) predicate in (59) is perfective.

(59) *wəhám   iʔ   kəkəwáp   náx̌əmɬ   lut   wəhám
      bark(perf) art   dog   but   neg   bark(perf)
      The dog started to bark but it didn't bark.

Neutral aspect in Okanagan is reminiscent of the aspectual vagueness of English gerunds and infinitives. It may also be used in special discourse contexts that I cannot yet describe precisely.[34] Across the Salishan family, predicates that have the prefix s- and genitive person marking are usually referred to as *nominalizations*. In Chapter 4, I give evidence that predicates in neutral aspect are not nominalizations in Okanagan.

2.2.1.3 Summary of inflectional patterns. Person marking and sentential aspect marking co-occur in a relatively small number of combinations. The class of transitive predicates can be inflected with either the ergative person marking set in realis mood, or with the genitive person marking set in

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[34]Speakers are reluctant to produce clauses in neutral aspect in isolation. This suggests that neutral aspect is basically found in subordinate clauses. However, there are many examples of what appear to be main clauses in neutral aspect in texts. In some contexts, neutral aspect may have the rhetorical effect of the English historical present (e.g. *Then I give the guy a fiver and he goes out and buys cigarettes!*) which may be found in both main and subordinate clauses. Kroeber (1991:122) reports that in Thompson Salish the cognate construction is a nominalized clause which is translatable as 'and then...'. Okanagan clauses in neutral aspect may be hard to elicit in isolation because of their connective role in a stretch of discourse.

irrealis mood or neutral aspect. In realis mood, transitives may show perfective, imperfective, or neutral aspect. The class of intransitive predicates can be inflected with either the absolutive person marking set in perfective or imperfective aspect, or with the genitive person marking set in neutral aspect. In both realis and irrealis mood, intransitives may show perfective or imperfective aspect. These inflectional patterns are charted in (60).

(60)

Inflectional Class	Mood	Aspect	Person paradigm
Transitive	realis	perfective imperfective	Ergative
	irrealis	perfective neutral	Genitive
Intransitive	realis	perfective imperfective	Absolutive
	irrealis	perfective imperfective neutral	Genitive

All verbal predicates must be inflected for both person marking and sentential aspect. Nouns do not inflect for sentential aspect (see Chapter 4), but

inflect for possessor person only. Predicate nominals have a distinctive inflectional paradigm that I describe in Chapter 4.

2.2.2 Derivation. In Okanagan, derivational WFRs cluster into sets of WFRs that express a single grammatical category in the same way that inflectional WFRs realize grammatical categories in other languages (e.g. tense or number in English). One such cluster of derivational WFRs determines the derivational paradigm of *stem aspect*. In the following sections, I describe the categories of stem aspect and their formatives. In section 2.2.2.16, I discuss WFRs that convert stems from one category into stems of a different category. I maintain that category-changing WFRs do not belong in the stem aspect paradigm.

A particularly important set of derivational WFRs belongs to a word formation paradigm that expresses *stem aspect*. The stem aspect paradigm creates aspectuo-modal alternants of bases (these are described individually below in sections 2.2.2.1 through 2.2.2.14). As in an inflectional paradigm, each lexeme has one realization for each paradigm slot of the stem aspect paradigm. For example, the single application of an inflectional person marking rule (e.g. 1sABS marking) exhausts the inflectional possibilities of a stem in that category. In the (derivational) paradigm of stem aspect, stems may realize one kind of stem aspect at a time. Thus, the WFRs within the stem

aspect paradigm are mutually exclusive in the same way that person marking rules are. The paradigm severely limits the combinatorial possibilities of derivational WFRs. The stem aspect paradigm is particularly important in Okanagan because it produces the stem types over which inflectional classes may be stated.

Stem aspect as a derivational macro-category is conceptually similar to the notion of *Aktionsart*. Like Aktionsart, stem aspect emphasizes certain aspectual features of the base; it focuses on parts or phases of a situation. For example, Russian has Aktionsart variants such as *plakat'* 'cry' and *zaplakat'* 'burst into tears'. In German, the verbs *lagen* 'read' and *erlagen* 'read through' have been described as Aktionsart alternations (Binnick 1991).[35] Aktionsart alternants share a semantic core, yet they name different events. The distinctions that Okanagan makes at this level of the grammar go beyond variations in temporal focus. The category *stem aspect* also marks *agent modality*. Bybee (1985) observes that agent modality 'imposes lexical condi-

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[35]Binnick 1991 observes that Aktionsart distinctions (Aktionsarten) are usually thought of as derived forms of a verb, i.e. distinct lexical items. Aktionsart is, therefore, lexicalized aspect. Aktionsart contrasts with sentential aspect in that sentential aspect alternations are not derived lexical items, but versions of a single verb related by an inflectional paradigm. I discuss the three levels of aspect that I distinguish in Okanagan in Chapter 3, section 3.0.

tions on the agent with respect to its intentionality or ability'.[36] The ontological connections between temporal focus and agent modality are indeed obscure. Yet, as I will demonstrate here and in Chapter 3, the formatives that have been traditionally associated with protagonist control also signal stem aspect.[37] For this reason, I define the stem aspect paradigm as one that creates aspectuo-modal derivates of basic situation types (situation types are classified in Chapter 3, section 3.3).

All of the stem aspect WFRs have suffixal formatives, except for a single, narrowly-distributed infix (section 2.2.2.10). Apart from this infix, stem aspect formatives occur at the right edge of the stem. Inflectional suffixes, if any, follow the stem aspect formatives (section 2.2). The default stem of a base does not have a stem aspect suffix or exhibit any of the aspectual nuances marked by stem aspect WFRs. Its stem aspect follows from the

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[36]Mood, by contrast, has an entire proposition in its scope and signals 'how the speaker chooses to put the proposition into the discourse context' (Bybee 1985:165).

[37]There is a long history to this view. Reichard 1938 and Vogt 1940 identified at least some of the transitive suffixes with aspectual functions for Coeur d'Alene and Kalispel, respectively. A. Mattina (1982) describes the transitive suffix -st as marking 'customary stems'. Hébert (1982b) argues that Nicola Valley Okanagan -st and -nt are aspectual variants rather than control variants. Doak (1993) finds -st in Coeur d'Alene to play a role in participant tracking, a function associated with aspectual categories in other languages. Most recently, B. Carlson (forthcoming) argues that the suffix -nú has a simultaneous control/aspect function. Semantic and formal linkages between tense/aspect and modality are likely to be explained by diachronic analyses rather than synchronic ones (Bybee et al. 1994).

aspectual features of the base (see Chapter 3, section 3.3).

In (61), I list the names of the WFRs that are in the stem aspect

paradigm. The typical formatives of these WFRs are shown beside the label. I

will describe each of these WFRs individually in sections. 2.2.2.1 through

2.2.2.13. There may be other stem aspect WFRs in Okanagan, and I discuss

these in section 2.2.2.14.

(61)	closed transitional	-nt, -st, Ø
	open transitional	-st
	possessional	-ɬt
	dative	-x(í)t
	reflexive	-(n)cút
	middle	-(V)m
	reciprocal	-(n)wíxʷ
	causative	-st
	continuative	-(mí)x, -(míx)-aʔx
	anticausative	-p, -ʔ-, -wílx, -(V)C$_2$ rdp.
	limited control	-núnt, núst, -nuɬt
	desiderative	(n-)...-íls
	stative	-t, CVC rdp., -scút, -úɬ, -ímn

2.2.2.1 Closed transitionals. The WFR that I refer to by the label

closed transitional creates a stem type with these characteristics: 1) it encodes

two participants, an external and an internal argument, and 2) it is an event

that includes a product or outcome.[38] Typically, closed transitional stems

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[38]Mourelatos (1981) argues that the distinction between English achieve-
ments (e.g. *win a race*) and accomplishments (e.g. *run a mile*) in the Vendler
typology (Vendler 1957) obscures the fact that both verb types involve 'a
product, upshot, or outcome' (1981:193). Mourelatos classifies such verbs as
events. Because Okanagan also distinguishes events from other situation types,
I give a representation for them in Chapter 3.

include the suffix -nt. (62) is an example of a closed transitional stem (ctr).

The stem is inflected with the ergative person marking set. The sentential

aspect is perfective.

(62) pix̌nt   -xʷ   iʔ   skmx̌ist
      hunt(ctr)   -2sERG   art   bear
      You hunted the bear.

(63) lists additional examples of closed transitional stems with the suffix

-nt.

(63)

BASE   Closed transitional stem

//p'ic'//   p'ic'+nt-   pinch s.t.
//nik'//   nik'+nt-   cut s.t.
//txʷuymin//   txʷuymn+(n)t-   go meet s.o.
//cənxƛ'íks//   cənxƛ'íks+nt-   hand out s.t.
//nməlx̌aʔcín//   nməlx̌aʔcín+(n)t-   lie about s.o.
//cqʷən'qʷən'scínmən//   cqʷən'qʷən'scínmən+(n)t-   beg for s.t.
//ɬwín//   ɬwín+(n)t-   leave s.o. behind
//ʔayx̌ʷtmín//   ʔayx̌ʷtmín(n)t-   tire of s.o.

Not all closed transitional stems include the suffix -nt. The closed

transitional stems in (64) have the suffix -st.

(64) //pulst//   pul+st-   beat s.o. up
      //kʷulst//   kʷul+st-   send s.o.
      //wiʔ//   wiʔ+st-   finish s.t.
      //qʷəlqʷíl//   qʷəlqʷíl+st-   talk to s.o.

The bases in (64) do not have an alternate form with the -nt suffix. They are

formed from bases that do not belong to the class of bases that form causatives

(section 2.2.2.8) with the suffix -st. Furthermore, they do not require custom-

ary sentential aspect as do other stems with -st that I describe as

open transitionals (see following section). Synchronically, the closed transi-

tional stems in (64) are simply morphologically irregular.[39] [40]

2.2.2.2 Open transitionals. A second kind of stem aspect WFR

creates *open transitional* stems (*otr*). Open transitionals are very similar to

closed transitions. They encode two participants and they name an event that

has a result or outcome. The open transitional, however, focuses on the

internal temporal constituency of the event. It is inherently imperfective or

durative. This stem type is always inflected with the *customary* sentential

aspect (section 2.2.1.2). The stem formative for open transitionals is -st. (The

customary prefix is *ac-).* The contrast between closed and open transitionals is

illustrated in (65) and (66).

(65) a. $k^w u$ ͜ p'ic'+nt   -x^w
          1sOBJ pinch(ctr)   2sERG
          You pinched me.

      b. $k^w u$ ͜ ac-   p'íc'+st   -x^w
          1sOBJ cust   pinch(otr)   2sERG
          You customarily pinch me.

---

[39]Thompson and Thompson 1992:71 report a handful of similar cases in Thompson Salish. B. Carlson (forthcoming) notes that -st alternates with -nt in Spokane.

[40]Note also that the -st is present for all persons of the person paradigm. -nt, by contrast, is not present in the 1s and 3s/p persons when the base contains a strong root (section 2.1.1).

(66) a.   p'ix̌   -n   iʔ   sƛ'aʔc'ínm
          hunt(ctr)   1sERG   art   deer
          I hunted the deer.

      b.   ac-   p'íx̌+st   -n   iʔ   sƛ'aʔc'ínm

          cust hunt(otr)   1sERG   art   deer
          I usually hunt deer.

The imperfectivity of open transitionals cannot be tested directly because these stems always occur with imperfective customary prefix. The customary prefix never occurs with closed transitionals. For this reason, I distinguish closed from open transitionals.

2.2.2.3 Possessionals. All bases that form closed transitionals also have a derivate that has *possessional* stem aspect (*pos*). Possessionals encode two animate participants. The external argument is typically agentive, and the internal argument is a possessor. A third participant is the possessee (i.e. the thing possessed by the possessor), which is usually, but does not have to be, inanimate. Like the closed and open transitionals, possessionals encode an outcome. The difference between closed transitionals and possessionals is illustrated in (67)-(69).

(67) a.   kʷu̓ ƛ'aʔƛ'aʔ+nt -ís
          1sOBJ look_for(ctr) 3sERG
          He looked for me.

      b.   kʷu̓ ƛ'aʔƛ'aʔ+łt -ís   i-   sqʷəsqʷsíʔ
          1sOBJ look_for(pos) 3sERG   1sPOSS   children

He looked for my children.

(68) a. maˤ'   -n   iʔ   laprít
         break(ctr)   1sERG   art   bridle
         I broke the bridle.

     b. maˤ'+ɬt   -s   -n   an-   laprít
         break(pos)   2sOBJ   1sERG   2sPOSS   bridle
         I broke your bridle.

(69) a. nxƛ'íks   -n   iʔ   snɬsípnaʔ
         pass_around(ctr)   1sERG   art   cigars
         I passed around the cigars.

     b. nxƛ'íkst+ɬt   -n   iʔ   snɬsípnaʔ   -s
         pass_around(pos)   1sERG   art   cigars   3sPOSS
         I passed around his cigars.

Speakers translate some possessional stems with English datives. The

transfer of possession that English datives denote is suggested in some

Okanagan possessionals, as in (70).

(70) xʷíc+ɬt   -s   -n   an-   lasmíst
     give(pos)   2sOBJ   1sERG   2sPOSS   shirt
     I gave you your shirt.

However, many tokens demonstrate that 'transfer of possession' is not the

semantic focus of possessional stems.[41]

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[41]Not only are stems in possessional aspect not generally transfers of
possession, neither should they be characterized as 'benefactive' or
'malefactive'. In stems that appear to encode transfer of possession, the
direction of transfer is inherent in the base meaning. Bases such as //naqʷⁿm//
STEAL and //maˤ'// BREAK reference a loss of possession, while bases such
as //xʷic'// GIVE and //kʷul'// MAKE reference a gain of possession. The
WFR that produces possessional stems does not assign benefactive or
malefactive interpretations to its output.

(71) cˤaw+ɬt   -s   -n   a-   sqʷəsqʷsíʔ
      bathe(pos) 2sOBJ 1sERG   2sPOSS   children
      I bathed your children.

(72) kʷu̯   ˤ'aw'm+ɬt   -xʷ   yaʔ   ˤacsqáx̌aʔtn
      1sOBJ loosen(pos)   2sERG   art   reins
      Let loose my reins. GW23

(73) lut   t'ə   kaʔkíc+ɬt   -səlx   iʔ   sqiltk -s
      neg   ev   find(pos)   3pERG   art   body   3sPOSS
      They never found his body. COD27

(74) ník'+ɬt   -n
      cut(pos)   1sERG
      I cut something of his.

The key difference between a possessional stem and a closed (or open) transitional is that the internal argument of a possessional stem must be a possessor. The possessee is logically implied. When the clause head is a possessional stem, the possessee is expressed in an NP (e.g. (71)-(73)).[42]

2.2.2.4 Dative. Some bases that form closed and open transitionals also form derivates in *dative* stem aspect (*dat*). Dative stems encode two participants. Both the external and internal arguments must have animate referents. Because this stem type denotes a transfer of possession or benefit from an agent to a recipient, a third entity is logically implied. This third

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[42]Closely related in form are predicates containing the suffix *-túɬt*. These predicates are extremely rare, and difficult to elicit. A. Mattina 1994 describes them briefly, but I do not include them here because I have not studied them sufficiently.

participant is typically inanimate and generic. I refer to it as the *theme*. Like

closed and open transitionals and possessionals, datives encode an outcome. I

exemplify the dative in (75).

(75) kʷu‿ nik'+xt -xʷ iʔ t‿ síp'iʔ
     1sOBJ cut(dat) 2sERG art cm hide
     You cut some hide for me.

Relatively few bases have derivates with dative stem aspect. Bases that

do not have a dative derivate include those with external arguments that are

experiencers. For example, a dative derivate of the base //wik// SEE, *wíkxt-*

'see s.t. for s.o.' was rejected by speakers. Other bases, such as //ʔíɬn// EAT

and //q'əm// SWALLOW do not have dative derivates (i.e. *ʔiɬxt-* 'eat for

s.o.' and *q'əmxít-* 'swallow for s.o.'). Actions that cannot be delegated to

another person do not lend themselves to dative predications.[43]

A second kind of base that rarely has a dative derivate is that which

ends in a suffix *-mín*. This suffix has cognates in all the Interior Salish

languages (see especially descriptions of *-mín* in Kinkade 1980, Thompson and

Thompson 1980, Kuipers 1992, and L. Thomason 1994). The distribution of

Okanagan *-mín* is idiosyncratic and not parallel to that reported for other

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[43]A delegative reading, when it is possible, arises naturally from some
benefactive acts. If someone cooks a meal for you, then it is possible to ·
assume that he cooked in your stead. If someone swallows for you, he can
swallow something at your command, but not in your stead. B. Carlson 1980
reports a consistent delegative reading for the cognate stem type in Spokane.

Southern Interior languages.[44] It is best analyzed as a base formative (A.

Mattina 1994). I have not determined what motivates the failure of these bases

to form datives.[45]

The contrast in meaning between datives and possessionals is brought

out by the data in (76)-(80).

(76) a. nc'iw+ɬt   -məlx   n'íɬntn   -səlx
          wash(pos)   Unsubp   dishes   3pPOSS
          She washed their dishes.

---

[44]See, for example, Kinkade 1982b on Columbian, and L. Thomason 1994 on Montana Salish. In these two languages, -mín does occur in dative stems.

[45]Okanagan -mín does occur in closed and open transitionals, and in posssessionals. In many stems, its presence correlates with a lexicalized path, as in the examples in (i). Other stems lack this correlation, as shown in (ii).

(i). kʷụkʔukʷt-m(n)+(nt)-s   He crawled **towards** me.
      ʔukʷt   He crawled.
      txʷist-mn+(n)t-m   They walked **towards** someone.
      xʷist   He walked.
      səp'-mí(n)+(nt)-n   I batted it **away**.
      səp'+nt-ís   He batted it.
      yr-mín+(n)t-xʷ   You pushed it.
      ir+nt-ín   I rolled (coiled) it.

(ii). kṇx̌c-mn+(n)cut   I got myself ready.
       kṇx̌ac   I am ready.
       kpulx-m(n)+(nt)-n   I camped with him.
       kṇpulx   I camped

This suffix may be polyfunctional, with one or more of its functions being stem aspect marking. I do not purse this possibility here. There is one dative stem that might be analyzed as containing -mín (reduced to -m): nəqʷmxít- 'steal s.t. for s.o.'. I analyze this form as being derived from the base //naq'ʷm// STEAL.

b. nc'íw'+xt   -n   iʔ   ͻ   nʔíɬntn
    wash(dat)   1sERG   art cs   dishes
    I washed some dishes for them.

(77) a. way' kʷí(n)+ɬt   -s   -ən   a-   sk'əɬpáʔx̌
         prt grab(pos)   2sOBJ 1sERG   2sPOSS advice
         I'll take your advice.

b. kʷní+xt   -əm   iʔ   ͻ   kɬnt'ək'ʷmín -s
    grab(dat)   1pERG   art cs   coffin 3sPOSS
    We'll get him a coffin.

(78) a. k'ʷaʔk'ʷaʔ+ɬt   -ín
         chew(pos)   1sERG
         I chewed it up on him.

b. k'ʷaʔk'ʷaʔ+xít   -n
    chew(dat)   1sERG
    I chewed it for him (because he is a toothless elder).

(79) a. ƛ'xʷúp+ɬt   -n
         win(pos)   1sERG
         I won it off of him.

b. ƛ'xʷúp+xt   -n
    win(dat)   1sERG
    I won it for him.

(80) a. x̌aq'+ɬt   -s
         pay(pos)   1sERG
         He paid him (paid him his due).

b. x̌aq'+xt   -m   -n
    pay(dat)   2sOBJ 1sERG
    I paid for you.

Okanagan datives encode a transfer of possession that is beneficial to an

animate recipient. Possessionals do not typically encode a transfer. Unlike

closed and open transitionals, datives and possessionals logically imply a third

participant. With datives, the third, or theme participant is the generic entity

that is transferred. With possessionals, the theme is the possessee of the

internal argument.

2.2.2.5 Reflexives. A working definition of the notion *reflexive* is that

the external argument is coreferential with the internal argument, as in *Chris*

cut himself. Most bases that form closed transitionals also form stems with this

reflexive meaning. Reflexive stems (*ref*) encode an outcome that is the result of

an intentional act by the external argument. The formatives that mark reflexive

stem aspect are *-(n)cút* or *-(s)cút*.

(81) kn‿nək'+ncút   I cut myself.
      kn‿tx+ncút   I combed myself.
      kn‿k'ʷa?+ncút   I bit myself.
      kn‿t'k'ʷ+ncút   I laid myself down.
      kn‿qcpm+ncút   I shrank (myself) away.
      kn‿x̌nəm+scút   I hurt myself.
      kn‿pəl+scút   I killed myself.
      kn‿nuslx+scút   I lifted myself up.

The suffixes *-(n)cút* and *-(s)cút* are commonly found in stems that do

not have the basic reflexive meaning of 'agent acts intentionally on self'. These

stems show a range of meanings that seem to be related to reflexivity, broadly

interpreted. That is, cross-linguistically, reflexive markers have been associated

with inherent, impersonal, aspectual (including stative and inceptive) and

middle reflexive constructions.[46] The stems in (82) contain the form of a

reflexive suffix, but they do not derive from bases that also form closed and

open transitionals. These stems do not denote 'agent acts intentionally on self'

in any obvious way. Many of them are stative (section 2.2.2.13).[47]

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[46]Nishida (1994) observes that the Spanish reflexive clitic *se* is commonly classified as marking simple reflexive (*Los niños se miraron* 'The children see themselves'); inherent (*Juan se arrepintió* 'Juan regrets'); middle (*Los carros japoneses se venden bien aquí* 'The Japanese cars sell well here'); passive (*Esos puentes se construyeron en' 1800* 'Those bridges were built in 1800'); and inchoative (*Se han roto todos los vasos* 'All the glasses have broken'). He adds to this list of reflexive constructions the use of *se* in transitive constructions such as *Juan se tomó una copa de vino* ('Juan drank a glass of wine'). The presence of *se* in a transitive clause demonstrates that *se* does not always reduce the valence of a verb. Nishida argues that *se* marks a class of situation types. Specifically, *se* marks a class of events and states that are quantitatively delimited. While Nishida's analysis of the Spanish reflexive clitic is not transportable to Okanagan, it is noteworthy that reflexive markers should have a similar range of functions in two unrelated languages. Moreover, these reflexive markers indicate the properties of argument structure and aspectual class simultaneously.

[47]I segment the relevant suffix with '-' for expository convenience. My point is that the suffixes in (82) are a part of the base. They are not stem formatives affixed to a base through a synchronic WFR.

(82) ntərqp-ncút   run
      xʷət'p-ncút   run away
      ɬxʷɬxʷ-ncut   breathe
      kɬaʔm-ncút   get closer to s.t.
      ʕ'ʷəy-ncút   laugh
      wəlq(n)-ncút   recover (one's health)
      siym-scút   do one's best
      ʕalp-ncút   be the loser
      nq'ʷaʔls-ncút   be cranky
      kwk-scut   be lucky
      ƛ'əx̌-scút   be in a hurry
      nƛ'x̌c-ncút   be loud
      k'əɬwiʔnaʔ-scút   be prepared
      sq'ʷnəm-scút   be pitiful
      cəkʷm-scút   be hard to get
      xʔim-scút   be at the limit
      pəx̌pəx̌-scút   be quickminded
      səlxʷaʔ-scút   be high class

Other stems have -(n)cút or -(s)cút followed by a stem aspect suffix.

This ordering of suffixes demonstrates that -(n)cút and -(s)cút are base

formatives in this context. They do not contribute reflexive meaning or

argument structure to the stem aspect of the stem. (The stem aspect suffixes are

preceded by '+'.)

(83)
      kʕ'ʷəy-ncút-mn+(n)t-   laugh at s.o.
      kʔmplaʔ-ncút-mn+nt-   call s.o. a relative
      nt'inaʔ-scút+xt-   dispute s.o.'s words to s.o.

There are also nouns that include -(n)cút or -(s)cút. I analyze these suffixes

as base formatives in these forms also.

(84) scuw-ncút   a person in training
      k'ʷəl'cn-cút-(t)n   a cook
      k'ʷəl'-ncút-(t)n   Creator
      sx̌-cút   a companion
      ƛ'aʔλaʔ-ncút-(t)n   a searcher, seeker

The WFR that forms reflexive stems in the stem aspect paradigm impose the meaning 'agent intentionally acts on self'. The intentionality of the act is evident from the fact that speakers judged Okanagan translations of *the deer cut itself* and *the infant cut himself* with reflexive stems to be ill-formed. Thus reflexive stem aspect imposes the condition that the external argument controls his actions.

2.2.2.6 Middles. A relatively small set of bases form *middle* stems. This stem type is parallel in meaning to English *he bathed* or *he shaved*. The formative that marks middle stem aspect is -*(V)m*.[48] In (85), I contrast middle stems with reflexives.

(85) kn‿tx+ám   I combed./ I am combed.
      kn‿tx+ncút   I combed myself.

---

[48]Middle is typically a voice distinction, and it may be one in Okanagan. In section 2.2.2 I noted that I construe stem aspect broadly to include some notions such as agent control and intentionality that are not traditionally considered to be aspectual categories. Stem aspect, as I use it here refers to a group of categories that, like Aktionsarten, express *kinds of actions*. I include middles as one of these kinds of action, until a classification of voice types in Okanagan can be carried out. Clearly a complete classification of Okanagan's morphological categories should include descriptions of the interrelationships between kinds of action, inflectional aspect, mood, and voice.

kn̩c̣ʕalx+m   I bathed./ I am bathed.
kn̩c̣ʕalx+ncút   I bathed myself.

kn̩q̓ʷácqn+m   I put a hat on./ I am hatted.
kn̩q̓ʷəcq+ncút   I put a hat on myself.

The difference between reflexive stem aspect and middle stem aspect is that in the latter, the outcome of the reflexive act is emphasized. In reflexives, the act and its outcome are equally prominent. The middle WFR applies to a much smaller class of base types than does the reflexive WFR. The bases that form middles are limited to those that denote acts of grooming or dressing.

(86)   a.   //kc'aw'íw's// HAVE A WASHED FACE
           kn̩kc'aw'íw's+m
           I washed my face.

     b.   //ʔaq'ʷ// SCRAPE s.t.
           kn̩ʔaq'ʷ+m
           I shaved.

     c.   //ʔip'// WIPE s.t.
           kn̩ʔíp'+m
           I wiped my face.

     d.   //pikst// GLOVE
           kn̩pikst+m
           I put my gloves on.

     e.   //lasmíst// SHIRT
           kn̩lasmíst+m
           I put a shirt on.

     f.   //kʷílstn// SWEATBATH
           kn̩kʷílstn+m
           I took a sweatbath.

Bases that are not related to grooming or dressing do not form middle stems.

(87) a.   //λ'aʔλ'aʔ// LOOK_FOR s.t.
                              kn‿λ'aʔλ'aʔ-ám
                              *I looked for myself.

       b.   //nik'// CUT s.t.
                              kʷ‿ɲik'əm
                              *You cut yourself.

Many stems that do not have middle stem aspect end in -(V)m in

Okanagan. These include the default stem of many verbs. For example, some

bases form a default stem that is formally identical to their middle derivate.

The base //tx// COMB is an example of this type of base.

(88) a.   kn‿   txam
              1sABS   comb(mid)
              I combed/am combed.

       b.   kn‿   txam
              1sABS   comb
              I combed something.

There are also bases ending in -(V)m that denote expressive bodily acts,

such as those in (89).

(89)   nɬək'ɬək'tám   s.o. sobs
          nc'ípc'əpsəm   s.o. blinks his eyes (shut)
          k'át'qnəm   s.o. raises his head
          kˤaxʷám   s.o. yells
          wəhám   s.t. barks
          xʷíwəm   s.o. whistles
          k'ram   s.o. swims

While the bases in (89) have the semantics of middles, they do not appear to

be derived from simpler, non-middle forms. I conclude that -*(V)m* is a

synchronically significant derivational suffix in some stems, and that it is

lexicalized in many others.

2.2.2.7 Reciprocals. The WFR that forms stems indicating reciprocity

of action uses the suffixes -*(n)wíx*ʷ and -*twíx*ʷ. These formatives, like the

reflexive formatives, express the operation of a derivational WFR in some

stems, but are base formatives in others. Reciprocal stems encode an external

and an internal argument who act upon one another. As the starred examples in

(90e,f) illustrate, reciprocity is limited to certain kinds of actions.

(90) a. kʷuᷓ   pəlst+wíxʷ
           1pABS   kill(rec)
           We will kill one another. COD229

      b. kʷuᷓ   c-   wk+twíxʷ   əl   sk'láxʷ
           1pABS   cust   see(rec)   in   evening
           We see each other in the evening. COD230

      c. m'ay?xt+wíxʷ
           tell(rec)
           They talk things over.

      d. kʷuᷓ   nsəxʷna?mn+(n)wíxʷ
           1pABS   understand(rec)
           Let's understand one another. COD229

      e. *kʷuᷓ   p'y'q+nwíxʷ
            1pABS   cook(rec)
           ??We cook each other.

f.   *kʷu͜   ʔayx̌tmn+(n)wíxʷ
     1pABS   tire(rec)
     We tire one another.

Like the reflexive suffixes, reciprocal suffixes often precede stem aspect

suffixes. In this position, they are base formatives, as in (90).

(90)   nʔəlqs-nwíxʷ-m+(nt)-s-əlx   They fight over something.
       c'əpq'mn-(n)wíxʷ+st-s-əlx   They glue it together.
       ʕac-mn-(n)wíxʷ+st-xʷ   a-snsíswxn   Tie your socks together.
       kʷnkʷnks-nwíxʷ-mn+nt-əp   You(pl) hold him on either
                                        side.

2.2.2.8 Causatives. The *causative* WFR creates a stem that encodes

two participants, one of which, the external argument, is directly or indirectly

responsible for the action or condition of the internal argument. The formative

on stems with causative stem aspect is consistently *-st*.[49] Unlike the stem

aspects described in sections 2.2.2.1-2.2.2.7, causatives (*caus*) are formed

from bases that do not inherently encode an act with an outcome. Examples of

stems in causative stem aspect appear in (91).

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[49]The suffix *-st* is also found in open transitionals and in some closed
transitionals (sections 2.2.2.1 and 2.2.2.2).

(91)

//c'qʷəqʷ// CRY	c'qʷəqʷ+st-íxʷ	You made s.o. cry
//mut// SIT	mut+st-xʷ	You made s.o. sit
//pulx// CAMP	pulx+st-xʷ	You bedded s.o. down
//ʔitx// SLEEP	ʔitx+st-n	I made s.o. sleep
//ʔukʷt// CRAWL	ʔukʷt+st-n	I made s.o. crawl
//c'sap// GONE, EMPTY	c'sp+st-íxʷ	You emptied,finished s.t.
//k'sasq't// STORMY	k'sasq't+st-s	He made it stormy
//nλ'ʕámcn// THIRSTY	nλ'ʕamcn+st-n	I made him thirsty
//suy't// CHILLY	suy't+st-n	I made s.o. chilly
//xʷəlxʷált// ALIVE	xʷlxʷəlt+st-ín	I kept s.o. alive

2.2.2.9 Continuatives. All verb bases have a derivate that has

continuative or progressive stem aspect *(con)*. The continuous act does not

have an outcome, and the aspectual focus is on the duration of the act. The

WFR that forms stems with continuative stem aspect uses two formatives. One

is *-(míx)aʔx*, the other is *-(mí)x*. (The long form of each affix is found with

phonologically weak bases). The continuative stem that ends in *-(míx)aʔx* is

used to form prospective sentential aspect in conjunction with the prefix *ks-*,

which marks irrealis mood (section 2.1.1). Continuous and perfect continuous

sentential aspects are formed on continuative stems that end in

-(mí)x. The continuous and perfect continuous sentential aspect prefixes are

səc- and *s-*, respectively. Stems in continuative stem aspect, in each of their

three sentential aspects, are illustrated in (92)-(94).[50]

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[50]A. Mattina 1993a sets up the aspectual circumfixes /ks-...(míx)aʔx/
'future progressive' and /səc-...-(mí)x/ 'perfect'. I analyze these constructions
as containing inflectional aspect prefixes (e.g. *ks-* and *səc-*) that attach to stems

(92) Prospective (a) strong (b) weak

a.   kn͜   ks-   níkʼ+aʔx
    1sABS   irr   cut(con)
    I am going to cut (something).

b.   kn   ks-   ƛʼaʔƛʼaʔ+míxaʔx
    1sABS   irr   look_for(con)
    I am going to look for (something).

(93) Continuous (a) strong (b) weak

a.   kn͜   səc-   nikʼ+x
    1sABS   cont   cut(con)
    I am cutting (something).

b.   kn͜   səc-   ƛʼaʔƛʼaʔ+míx
    1sABS   cont   look_for(con)
    I am looking for (something).

(94) Perfect continous (a) strong (b) weak

a.   kn͜   s-   xʷúy+x
    1sABS   pcont   go(con)
    I'm going.

b.   kn͜   s-   kʼəwp+míx
    1sABS   pcont   silent(con)
    I am silent.

2.2.2.10 Anticausatives. The stem aspect *anticausative* (*ac*) refers to a

stem type that denotes a change of state without reference to the act leading

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that contain derivational suffixes -*(míx)aʔx* or -*(mí)x*. I classify -*(míx)aʔx* and -*(mí)x* as derivational suffixes on the grounds that they cannot co-occur with other stem aspect formatives. Therefore, they are not like inflectional sentential aspect markers, which occur with a variety of stem aspect types. Furthermore, all sentential aspect markers are prefixal, and my analysis maintains this general pattern.

up to the change. Anticausatives encode a single participant, the external

argument, who is a notional patient. There are a number of formatives

associated with the anticausative WFR. They include the suffixes -*(V)p*,

-*(t)wílx*, and a reduplicative suffix that targets the second consonant of the

phonological root of a base. I refer to this formative as -(V)C$_2$ reduplication,

following A. Mattina 1993b. Last, some anticausatives are formed with an

infixed glottal stop (-?-).[51] The phonological root is also the target for this

infix.[52] In the (a) examples of (95)-(102), I give examples of anticausative

stems. The (b) examples are the closed transitional counterparts of the

anticausative derivates. The anticausatives in examples (101)-(102) do not have

closed transitional counterparts; I contrast them with their stative counterparts.

(95)   a.   kn◡   k'ɬk't'+áp
               1sABS   separate(ac)
               I got cut off/separated.

        b.   k'ɬk't'+nt   -ísəlx
              separate(ctr) 3pERG
              They cut it off (as in cutting a cattle herd).

---

[51]The distribution of the formatives may be determined at least partly on phonological grounds. Comparative evidence suggests that -*p* and -*?*- were at one time correlated with weak and strong roots, respectively, in the Interior languages. Kinkade 1989 observes that this pattern seems to be breaking down across the subgroup, with the infix occuring less commonly than the suffix. Infixed forms are less numerous than suffixed ones in the Okanagan corpus.

[52]The tradition is to treat these formatives as separate morphemes. However, it is clear that stems with these formatives are basically similar in their aspect, category, thematic structure, and argument structure. I discuss these properties in more detail in Chapter 3.

(96) a.   taʔlíʔ   uɬ   cx̌ʷ+áp
            really   sb   stock(ac)
            It's really stocked up.

     b.   cx̌ʷ+nt   -ín   iʔ   t̻   sc'íɬən
            stock(ctr)   1sERG   art   cs   food
            I stocked it with food.

(97) a.   ck'+ák'   iʔ   sqlaw'
            count(ac)   art   money
            The money is counted.

     b.   ck'+nt   -ísəlx
            count(ctr)   3pERG
            They counted it.

(98) a.   ʕac+ác   iʔ   snkɬc'aʔsqáx̌aʔ
            tie(ac)   art   horse
            The horse got tied up.

     b.   ʕac+nt   -ís   iʔ   sic'm
            tie(ctr)   3sERG   art   blanket
            He tied up the blanket.

(99) a.   kn̻   tq'lá+ʔ+xʷ
            1sABS   hook(ac)
            I got hooked (on something like a nail).

     b.   tq'lxʷ+nt   -ín   il   k'ɬnk'əmíp
            hook(ctr)   1sERG   on   door
            I hooked it on the door.

(100) a.   p'+ʔ+áxʷ
            shine(ac)
            It's lit up.

     b.   p'íxʷ+nt
            shine(ctr-imperative)
            Shine it.

(101) a. kn⌣ x̌əst+wílx
          1sABS good(ac)
          I got better.

     b. kn⌣ x̌ast
          1sABS good(sta)
          I am fine.

(102) a. ixíʔ səlxʷaʔ+twílx
          dpr big(ac)
          It's gotten big.

     b. ixíʔ sílxʷaʔ
          dpr big(sta)
          It's big.

Multiple anticausative formatives do not usually occur in a single

stem.[53] Rarely, a base will have more than one anticausative, as in the

doublet ˤəmáp and ˤamˤám 'it's thawing/thawed'. Although anticausatives do

not refer to the act leading up to the change of state, an instrument, source, or

agent is logically implied. This logically implied participant is expressed in an

oblique NP, as in (103)-(105).

(103) kn⌣   ník'+ək'   iʔ   ⌣   ník'mn
       1sABS   cut(ac)   art   cs   knife

---

[53]As with other stem formatives, sometime anticausative formatives occur
inside the base, where they have been lexicalized. For example, the stem
nk'aʔsíls seems analyzable as having the anticausative marker -ʔ- in it.
However, the stem means 'be angry' not 'become angry'. To say that someone
became angry, the form is nk'aʔsəls+wílx. Thus, only the suffix -wílx
produces the canonical anticausative meaning. This 'double' marking of a
notion is familiar from English words like *reduplication* and *reiterate*.
It supports my contention that form and function are not consistently mutually
implied.

I got cut with a knife.

(104) ˁam+áp   iˀ   ʟ   x̌əyáɬnəxʷ
thaw(ac)   art   cs   sun
It was thawed by the sun.

(105) t'i   p'+ˀ+áx̌ʷ   iˀ   ʟ   nc'ík'ʷˀəsxntn
ev   shine(ac)   art   cs   lamp
It's lit up by a lamp.

2.2.2.11 Limited control. *Limited control* stems (*lc*) translate with

English 'someone managed to [verb]', as in *I managed to finish it.* As the

English translation implies, the external argument of the limited control stem

refers to an agent who manages to bring about a result, either with difficulty or

accidentally. That is, the external argument referent is less than efficient and

exercises limited control over his act. There are three subtypes of limited

control stems. The limited control WFR forms stems that have the properties

of closed transitionals (section 2.2.2.1), open transitionals (section 2.2.2.2),

and possessionals (section 2.2.2.3). The suffixes that mark limited control stem

are *-núnt*, *-núst*, and *-núɬt*, respectively. In addition, limited control stems

typically show reduplication of the second consonant of the phonological root.

I illustrate each limited control subtype in (106)-(108), contrasted with its non-

limited control counterpart.

(106) a.   nˁal+nt   -ín
         sink(ctr)   1sERG
         I sank it.

b.   nˁal·+núnt   -xʷ
        sink(lc-ctr)   2sERG
        You managed to sink it.

(107) a.   ac-   nˁal+st   -ín
             cust   sink(otr)   1sERG
             I usually sink it.

       b.   ac-   nˁal·+núst   -xʷ
             cust   sink(lc-otr)   2sERG
             You could (usually) sink it.

(108) a.   nˁal+ɬt   -ín   iʔ   ɬkap -s
             sink(pos)   1sERG   art   bucket 3sPOSS
             I sank his bucket on him.

       b.   nˁal·+núɬt   -xʷ
             sink(lc-pos)   2sERG
             You managed to sink something of his.

2.2.2.12 Desideratives. Stems in desiderative stem aspect encode an external argument who wishes to perform the act named by the base. The formative in most cases is the circumfixal *(n+)... +íls*. However, in some cases the prefixal portion of the marker is absent. Examples of the desiderative *(des)* appear in (109).

(109) knˍn+xʷuy+íls   I want to go.
       kʷˍn+pəlx+íls   You want to camp.
       knˍn+ˁaynst+íls   I feel like laughing.
       knˍnək'm+íls   I want to cut (something).
       knˍn+pəx̌m+íls   I want to hunt (something).
       knˍn+pəc'm+íls   I want to pinch (something).

       knˍsaʔst+íls   I want to drink.
       kʷˍmət+íls   You want to sit.

The formative *(n+)... +íls* appears in words that lack desiderative stem

aspect, i.e. the notion that a cognizer wants to do X.[54] In these cases, the

formative is found in a word with a stem aspect suffix. I analyze *(n+)... +íls*

in these contexts as a base formative. Examples of *(n+)... +íls* as a base

formative appear in (110).

(110)

n-k'aʔs-íls	be angry, cranky
n-st-íls	think
kt-íl·s	stomach bursts
n-q'aʔ-íls	the matter, business
k'łʔamt-íls+nt-	sit in front of someone
n-ac'nt-íls	be preoccupied
k'łtwn-ls-míst	lack confidence
q'səsp-íls-mn+(n)t-	wait for someone a long time
tkcx-íls	be hurting, suffering
npút-əls	be satisfied

2.2.2.13 Statives. Stems in *stative* stem aspect are non-dynamic

derivates that encode the notion 'have the property x'. Formal markers are

various, including a suffix *-t* and a combination of this suffix with

reduplication of the root form. The suffix *-scút* may also mark statives (*sta*).

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[54]Historically and comparatively, *-íls* is analyzable as a lexical suffix that
refers to feelings or internal states.

(111) Statives with *-t*

nˤal+t	sunk
sal'+t	lost
k'iy+t	cold
suy'+t	chilly
c'aɬ+t	cold
kʷal+t	warm
c'ak'ʷ+t	stiff
nˤas+t	heavy
qiɬ+t	wakened

(112) Statives with root reduplication and *-t*

tɬtaɬ+t	straight, honest
kʷrkʷriʔ+t	golden
cix̌cx̌+t	very hot
c'wc'ˤaw+t	hard to peel
qmqam+t	be laying about

(113) Statives with *-scút*

xʔim+scút	be at the limit
kɬəp'əm+scút	be disgusted w/oneself
qʷn'əm+scút	be hard up

Statives that are derived by the stative WFR are not formally distinct from the default stems of State bases (for a classification of base types, see Chapter 3). The stems in (114) are statives that do not derive from active bases, as the derived statives in (111)-(113) do.

(114)

ƛ'ax̌t	fast	(*ƛ'ax̌)
x̌ʷupt	tired	(*x̌ʷup)
qalt	raw	(*qal)
sílx̌ʷaʔ	big	
c'uy	dark	
piq	white	
kəkaʔlíʔ	slow	
x̌ʷəlx̌ʷált	alive, healthy	(*x̌ʷəlx̌ʷál, *x̌ʷal)
qʷəmqʷámt	excellent, beautiful	(*qʷəmqʷám, *qʷam)
płałt	thick	(*płał)
paʔpáʔt	generous	(*paʔpáʔ, *paʔ)
qʷn'qʷán't	be hard up, pitiful	(*qʷn'qʷán, *qʷan)
kʷuskʷst	frisky	(*kʷuskʷs, *kʷus)
x̌áʔx̌aʔ	sacred	

The frequency of the suffix -t and root reduplication in these statives that are not derived from active bases suggests that -t and root reduplication are historically important stative formatives. However, because there is an imperfect correspondence between -t and/or root reduplication and stative meaning, I am uncertain about the synchronic productivity of stative formation with these markers. The pairs of stems in (115) and (116) do not show active (e.g.(a)) versus stative (e.g (b)) semantics, even though the stems in the (b) examples have -t or root reduplication.

(115) limt   happy, glad
      límləmt thank you

(116) qʷəlqʷílt   talk
      qʷəlqʷílst talk to someone

A subtype of stative stems is the *characteristic* stem, described in A.

Mattina 1993b. The formatives *-ímn* and *-úⱡ* are found in stems denoting habitual or repeated behaviors that characterize an individual. A. Mattina notes that *-úⱡ* occurs in stems in which the root is reduplicated. The suffix *-ímn* occurs in stems in which the root is not reduplicated. I exemplify these in (117) and (118).

(117) qʷəlqʷəlt+úⱡ   talks all the time, likes to t..k
       *qʷəlt+ímn

(118) ʔəⱡn'+ímn   eats all the time, likes to eat
       *ʔəⱡʔəⱡn+úⱡ

Like other statives, stems with *-úⱡ* and *-ímn* tend not to be found in continuous aspect (e.g. *ʔkn̩ sac+ʔatx+ímn+x* 'He's being a sleeper'), but may be possible with other stems, e.g. *kn̩ sac+qʷəl'qʷəl't+úⱡ+x* 'I'm being a real talker'. In general, statives tend to be aspectually ambiguous, which is one of their typological characteristics.

2.2.2.14 Other possible stem aspects. There are a number of other suffixes in Okanagan that may signal additional stem aspects. I do not describe them because I am not yet able to offer an analysis of them. Other stem aspects may include *distributive* (marked by root reduplication), *diminutive* (marked by C₁- reduplication) and *root possibility* (marked by *-íʔst* or *-míst*). I discuss distributive aspect in Chapter 4, section 4.3 with respect to the kind of bases that are compatible with it. I leave for future research a full description

of distributive, diminutive and root possibility formations in the stem aspect

paradigm.

2.2.2.15 Stem aspect and inflectional classes. Stem aspects

correspond to the inflectional classes *transitive* and *intransitive* as shown in

(119).

(119) **Transitive**   **Ir transitive**

closed transitional	reflexive
open transitional	middle
possessional	anticausative
dative	continuative
causative	desiderative
limited control	stative

That is to say, each of the stem types in the Transitive column has all of the

person/sentential aspect inflections and the properties of the lexical conceptual

structure associated with predicate transitivity. The stem types in the

Intransitive column share inflectional patterns and LCS properties that

distinguish them from transitives. Canonically, transitive stems inflect with the

ergative person marking paradigm, while intransitive stems inflect with the

absolutive paradigm. However, the genitive person marking paradigm is used

for either stem type when the stem is in irrealis mood or neutral aspect.

Because neither inflectional nor derivational markers exhaustively distinguish

transitive stems from intransitive stems, the two inflectional classes must be

distinguished on the basis of the meaning of the stem. Thus, properties of

lexical conceptual structure (LCS) play an important role in determining the inflectional class of a stem. I give LCS representations for most of these stems types in section 3.4.

2.2.2.16 Category-changing rules. Okanagan has WFRs that change verbs into nouns, and nouns into verbs. In Chapter 4, I discuss the tests for category that make it necessary to set up category-changing WFRs. Okanagan uses a variety of means to indicate categorial derivates, including what is commonly referred to as zero derivation. Here, I briefly introduce some of the formations used in category-changing WFRs. I focus only on the change from verbs to nouns and from nouns to verbs.

The morphology associated with lexical verb → noun word formation rules includes prefixes and suffixes. (120) gives the most common markers and examples.

(120)

Formative	Verb		Noun	
s-	ʔayx̌ʷt	'tired'	s+ʔayx̌ʷt	fatigue
-tn	nt'ək'ʷ'ki ʔsqáx̌aʔ	'mount'	nt'ək'ʷ'ki ʔsqáx̌aʔ+tn	saddle
-mín	q'y'am	'write s.t.'	q'əy'+mín	writing tool
sxʷ-	k'ʷ'ul'm	'make, do'	sxʷ+k'ʷ'ul'm	worker
√redup.	c'lam	'stand s.t. up'	c'l+c'al	timber

In addition, some lexical affixes appear to nominalize a verb base.[55]

Many plant names show the lexical suffix =(i)ɬp as in (121) (examples are from COD82). The glosses show that these names are not straight-forwardly derived from simpler bases.

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[55]Lexical affixes, most of which are suffixes, behave like bound lexemes in some words, like word formation formatives in others. That is, they seem to contribute semantic content to a base as in compounding: (i).

(i).	a.	səp'=qín	'hit on the head'
		hit=head	
	b.	səp'=ilsxn	'hit on the forehead'
		hit=forehead	
	c.	səp'=aqs	'hit on the nose'
		hit=nose	
	d.	k'ʷəƛ'=qín	'take (hat) off of head'
		pull_off=head	

Yet more often, the apparent meanings of lexical affixes are lost through lexicalization. For example, the lexical suffix =ús refers transparently to 'eye' in many words (e.g. ɬ+x̌w'x̌w'=ús (dry-eye) 'dry eyes'), 'face' in others (e.g. p'y=ús (wrinkled-face) 'wrinkled face'. In other cases, the 'meaning' of =ús is not clear.

(ii).	a.	sy-sy=ús	'powerful'
		?=ús	
	b.	kɬ-xn=ús	'sunset low on the horizon'
		on-low(?)=ús	
	c.	ƛ'aʔ=ús	'look around'
		fetch/look(?)=ús	

Furthermore, the possible combinations of lexical affixes with bases cannot be easily predicted. Based on the examples in (i.a-c), we would expect the form for 'hit on the mouth' to be the verb base səp' plus the lexical affix that often means 'mouth', =cín. However, the form is not *səp'=cín but səp'=aɬx̌ʷl (hit=mouth/throat/neck) or səp'p'=aws=qn (hit=middle=head). The form for 'hit in the face' is səp'p'=w's=ús (hit=middle=face). (The doubling of p' is unexplained in the last two examples.)

(121) a.   pəkɫn'=íɫp   bitter cherry
        ?=íɫp

    b.   cq'=íɫp   Douglas fir
        ?=íɫp

    c.   páx̌ʷpəx̌ʷ=ɫp   grey willow
        (spread?)=ɫp

Other plant names show no lexical suffix, and still others have a lexical suffix

other than *=(i)ɫp*, as in (122).

(122) a.   cur   all willowherb COD10
    b.   swíya   fern COD188
    c.   snc'i'c'q=p=na?   dwarf or creeping juniper COD17
    d.   wswas=xn=qn   lupine COD228
    e.   st'ikʷ(l)=lqʷ   subalpine fir COD186

Because lexical affixes nominalize verb bases only sporadically, I do

not analyze them as the formatives of category-changing WFRs derivational in

every stem. A full treatment of the distribution and function of lexical affixes

is beyond the scope of this thesis.

Okanagan also has WFRs that derive verbs from nouns. Two productive

WFRs that form verbs from nouns are 1) 'have something' verb formation and

2) 'get something' verb formation. The formatives are *kɫ-* and *ta?x̌ʷ-ɫ-*,

respectively.[56] Denominals are exemplified in (123).

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[56]*ta?x̌ʷ-* requires what A. Mattina (1987) calls a 'compound connector', the
segment *-ɫ-*. It is lost before stems that begin with *s*. It may be that both of the
denominal constructions exemplified in (123) are better understood as
compounds. I assume that they are lexically derived.

(123)

Formative	Noun		Verb	
kɬ-	//p'ína?//	BASKET	kɬ+p'ína?	s.o. has a basket
ta?xʷ+ɬ-	//citxʷ//	HOUSE	ta?xʷ+ɬ+cítxʷ	s.o.gets a house

The derivation of verbs from nouns also takes place by zero derivation, where a WFR applies without an affix or other formative. I discuss denominals and zero derivation in more detail in Chapter 4.

2.3 Summary. In this chapter, I have briefly described Okanagan grammar at the level of the sentence or clause, and at the level of the word. Okanagan sentences are of two main types: 1) those headed by a verbal predicate, and 2) those that consist of two NPs in an equivalence relationship. The latter are equational clauses. A verbally-headed clause is transitive if its head is notionally transitive. Notionally transitive heads encode an external argument and a referential internal argument. Other verb heads are notionally intransitive; they head syntactically intransitive clauses. Syntactically transitive clauses have both a subject and an object. Other grammatical relations in Okanagan are second object and oblique object. Person marking, nominal case marking and NP extraction tests reveal these four grammatical relations.

The Okanagan word consists of a base plus derivational and inflectional markers. Inflectional formatives mark person (a synthetic marker of person,

number, and, on verbs, grammatical function) and one of three sentential

aspects, perfective, imperfective, or neutral. At least one contrast in sentential

mood, the irrealis/realis contrast, plays a role in the inflectional paradigms that

mark person and sentential aspect. An important derivational paradigm marks

stem aspect, the aspectuo-modal alternations that create distinct but related

derivates of a base verb.

The stem level is pivotal in the description of word formation in

Okanagan. On the one hand, the stem aspect of a stem determines the

inflectional class of the stem. On the other, certain stem aspects are restricted

to certain base types. I investigate the role of the stem and stem aspect WFRs

in this diagnostic function in the next chapter.

Chapter 3. Base Aspect

3.0 Introduction. Okanagan bases differ with respect to their derivational possibilities. Specifically, certain stem aspects can be formed from one base type, but cannot be formed from another base type. In this chapter, I describe the contrastive distribution of stem aspects over four base types. The inherent aspect of the base conditions which stem aspect alternants a base can have. This inherent aspect, which I refer to as *base aspect*, differs from both stem aspect (section 2.2.2) and sentential aspect (section 2.2.1.2).[1] Base aspect is the set of categories that characterize situations by ontological or conceptual criteria. For example, classifications of situation types universally include an intuitive distinction between states and non-states, even though this contrast is rarely distinguished in a straightforward manner in the grammar of a particular language.[2] Base aspect, then, is best understood as a small set of

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[1]In his detailed survey of tense and aspect, Binnick (1991) finds that at least three kinds of aspect are distinguished in the cross-linguistic literature. His three types are Aristotelian aspect, Aktionsart, and aspect proper; these are the categories I recognize in Okanagan as base, stem, and sentential aspect. Binnick states that his first two categories, Aristotelian aspect and Aktionsarten, are lexical categories, while aspect proper reflects 'how a speaker intends to fit the situation into the discourse'. Most aspectologists recognize more than one level of aspect and see them as nested, semi-autonomous layers (e.g. Chung and Timberlake 1985).

[2]There is a huge literature, dating back at least to Aristotle, that attempts to give language specific and universal linguistic tests for situation type. Recent proposals include Vendler 1957, Kenny 1963, Mourelatos 1981, Verkuyl 1989, and Smith 1991 and sources cited therein. As for the success of any one

situation prototypes that speakers understand as basic and given. In (1), I

summarize the properties of base, stem, and sentential aspect in Okanagan.

(1) **Base aspect**   primitive situation type, inherent, ontological,
                             prototypical

     Stem aspect   derivational, serves to focus a temporal phase or
                             modality

     Sentential aspect   inflectional, sets the situation in a temporal frame
                             in sequence with other situations in the
                             discourse

In the classification of Okanagan bases that follows, I recognize three

situation types that I call Transitions, Processes, and States, following

Pustejovsky 1991.[3] I describe each of these base aspects in section 3.3. I give

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classification and its linguistic criteria, Mourelatos (1981:210) succinctly
observes, 'there are--notoriously--complications'. The chief complication seems
to be the creative abilities of speakers who are adept at using a single word in
a rich variety of logically related senses (Pustejovsky 1994). Vendler (1957:9)
also noticed that situation types defined fuzzy sets when he wrote of states that
'the role of verbs melts into that of predicate, and actions fade into qualities
and relations'. I assume that a detailed semantic account of lexeme meaning
could be developed to accommodate the sense extensions of Okanagan lexemes.

[3]In a critique of verb aspect typologies, Verkuyl 1989 argues that English
aspect is phrasally determined, citing evidence that the situational or base
aspect of a verb is regularly overriden by other constituents (e.g. negation,
definiteness of the internal NP) in the phrase or clause. He rejects inherent
aspectual classes as 'of no use to aspectual theory'. I think Verkuyl's
compositional hypothesis is overstated with respect to Okanagan, which has
richer word-level phenomena than English. To the extent that lexical aspectual
classes organize the word formation component and/or lexicon of a language,
those classes are pertinent to aspectual theory.

linguistic tests for each of these base aspects in sections 3.1 and 3.2. I interpret the results of these linguistic tests as indicating the feature value for each of two binary features, [±E] and [±C]. The feature [±E] stands for the ability of a base to encode a situation that 'takes time'. The feature [±C] stands for the relevance of a base to the notion 'change of state'. I describe both of these features in more detail below. Using these features, I define Transitions, Processes, and States (section 3.3). The classification by binary features yields a fourth base aspectual class that I refer to as Entities. Entities, which have negative feature values for both [E] and [C], contrast with situations, which have at least one positive feature value for [E] and [C]. As in other languages, the aspectual contrast between Entities and situations parallels the grammatical distinction between nouns and verbs.

3.1 Eventhood. Okanagan distinguishes between situations that encode 'internal temporal constituency' (Comrie 1976:3) and those that do not. I refer to those situations that encode internal temporal constituency as *events*. Events 'take time', though that time may be long (durative), incalculably short (momentary), or unbounded (atelic). They have internal constituency in the sense that they have a beginning, middle, and end, any one of which can be emphasized in a related linguistic expression. I represent bases that encode events as having the feature [+E]; those bases that do not encode an event

have the feature [-E]. I use two tests to determine if a base is an event or not.

The first test involves compounds with *wiʔs-* 'done'.[4] *wiʔs-*

compounding creates stems that are aspectually terminative.[5] The salient

feature of the event is its termination or 'finished-ness'; however, the

beginning and middle stages of the event are implied by the emphasis on

termination. Examples of bases that compound with *wiʔs-* appear in (2).

(2)

//tx// COMB	kn‿wiʔs-txám	I finished combing s.t.
//cˤawlx// BATHE	kʷ‿wiʔs-cˤáwlx	You are done bathing.
//q'əy'// WRITE	wiʔs-q'y'ám	He got done writing s.t.
//tqmín// PUT DOWN	wiʔs-təqmínəms	He already threw it down.
//m'ayaʔ// SHOW	kn‿wiʔs-m'áyaʔm	I'm done showing it.
//p'ic'// PINCH	kn‿wiʔs-p'íc'əm	I already pinched s.t.
//tkʷl·íws// MOUNT	p‿wiʔs-tkʷl·íw's	You (pl.) are already mounted.
//ʔitx// SLEEP	kn‿wiʔs-ʔítx	I've already slept.
//ʔacqáʔ// COME_OUT	wiʔs-ʔácqaʔ	He's already left.
//ʔukʷt// CRAWL	kn‿wiʔs-ʔúkʷt	I finished crawling.
//tr'qpncut// RUN	wiʔs-tr'qpncút	He's finished running.
//nɬik'ɬík'tám// SOB	wiʔs-nɬək'ɬək'tám	He's done sobbing.

There are many bases that do not compound with *wiʔs-*. Examples of

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[4]*wiʔs-* is historically analyzable as a root √*wiʔ* 'finish' followed by a grammatical connector *s*. Kroeber (1991) analyzes the *s* as a prefix that nominalizes the second root. In Okanagan, *wiʔs-* compounds with stem types that do not form nominalizations with *s-* (e.g. *wiʔs+ˤacntín* 'I finished tying it'; **s-ˤacntín*). Therefore, *s-* is better analyzed synchronically as a 'compound connector' or empty morph (cf. A. Mattina 1987). I do not segment the *s* as far as I can tell it always occurs in these compounds.

[5]A base is said to compound with *wiʔs-* if its default stem does so.

these bases appear in (3).

(3)

//x̌ʷupt// WEAK	*wiʔs-x̌ʷúpt	(done being weak)
//piq// WHITE	*wiʔs-píq	(done being white)
//ckiw't// SKINNY	*wiʔs-ckíwt	(done being skinny)
//x̌ast// GOOD	*wiʔs-x̌ást	(done being good)
//ƛ'axʷt// FAST	*wiʔs-ƛ'áxʷt	(done being fast)
//p'uy// WRINKLED	*wiʔs-p'úy	(done being wrinkled)
//k'ast// BAD	*wiʔs-k'ást	(done being bad)
//citxʷ// HOUSE	*wiʔs-cítxʷ	(done being a house)
//yámx̌ʷaʔ// WOVEN BASKET	*wiʔs-yámx̌ʷaʔ	(done being a woven basket)
//xǝwíɬ// ROAD	*wiʔs-xǝwíɬ	(done being a road)
//sp'ic·n// ROPE	*wiʔs-sp'íc'n	(done being a rope)
//sx̌iƛ'xn// TROUSERS	*wiʔs-sx̌íƛ'xn	(done being trousers)
//tkɬmilxʷ// WOMAN	*wiʔs-tkɬmílxʷ	(done being a woman)

A second test for eventhood picks out the same set of bases as *wiʔs-* does. This test involves the compatibility of a base with the higher predicate *qɫnúnt-* 'be able to'. *qɫnúnt-* selects an irrealis complement clause that is headed by a base that encodes an event. I refer to these as *abilitative* constructions.

(4)	qɫnu(nt)	-n	ɬ	i-		ks-	píx̌m
	able	1sERGsub	sb	1sGEN		irr	hunt
	I was able to hunt.						

(5)	lut	qɫnu(nt)	-n	i-	ks-	kɬmút
	neg	able	1sERG	1sGEN	irr	sit_there
	I never could sit there.					

(6)   way'   k'iwlx uɬ   lut   qɬnú(nt)   -s
          prt   old   and   neg   able   3ERG
          He's old and he's not able

          k'a ʔkin   ɬ   ks-   xʷuy -s
          anywhere sb   irr   go   3sGEN
          to travel anywhere. COD150

The abilitative construction implies that a higher level of effort or successive attempts are required for the achievement of a result. This higher level of effort is compatible with bases that have internal temporal structure in which the extra effort or successive attempts can be distinguished.[6] Bases that lack internal temporal structure fail in the abilitative construction.

(7)   *qɬnú(nt)   -n   ɬ   i-   ks-   tkɬmílxʷ
          able   1sERG   sb   1sGEN   irr   woman
          (I was able to be a woman.)

(8)   *lut   qɬnú(nt)   -s   ɬ   ks-   x̌ʷupt -s
          neg able   3sERG   sb   irr   weak   3sGEN
          (He wasn't able to be weak.)

---

[6]B. Carlson (forthcoming) describes a set of morphemes in Spokane that mark both (agent) control and aspect. Of these 'success' morphemes, the transitive success morpheme is cognate with the *-nú(nt)* of Okanagan *qɬ-nú(nt)-*. Carlson states:

> The control function of the success morpheme emphasizes extra effort. The aspectual function emphasizes duration with eventual completion or change of state. (p.11)

He analyzes transitive success stems as [+durative] (following Smith 1991), and notes that they are accomplishments (following Vendler 1957).

(9)   *lut   qɬnú(nt)   -s   ɬ   ks-   x̌ást   -s

        neg   able   3sERG   sb   irr   good 3sGEN

        (He wasn't able to be good.)

On the basis of these two tests for internal temporal structure, I assign

the feature [±E] as follows: Bases that can compound with *wi?s-* **and** appear in

the abilitative construction have the feature [+E] in their lexical

representations. Remaining bases share the feature [-E]. The distinguishing

characteristic of [+E] bases is that temporal structure is linguistically relevant

to these signs; the opposite is true of [-E] bases.

There are a number of bases that test to be events in the tests just

described, but which are prototypically non-events. These bases all encode

states. The base *limt* is an example of this base type.

(10)   //limt// HAPPY

        kn‿wi?s-límt   I'm done being happy.

        lut qɬnú(nt)-n ɬ ikslímt   I wasn't able to be/stay happy.

The acceptability of some states (like *limt*) with *wi?s-* and *qɬnúnt-* derives from

their interpretation as stage-level predicates (G. Carlson 1977). A stage-level

predicate characterizes its argument as a set of stages or realizations rather than

as an undifferentiated individual. When a state is predicated of an individual

conceived of as a set of stages, that predication has a beginning and end. The

property of 'being happy' in (10) is understood as a phase. Some states lend

themselves more readily to a stage-level interpretation than others. For

example, *nk'əwpíls* 'lonesome' is like *límt* in that it is interpretable as denoting

a temporary phase. By contrast, states such as *pəx̌páx̌t* 'smart' and *x̌ʷupt*

'weak, infirm' name more permanent situations that are characteristic of an

individual as a whole. I assume that states are protoypically of the individual-

level type, which means that they do not encode phases or temporal

constituency. However, many have natural sense extensions in which they have

stage-level interpretations. The contrast between states and events derived from

states is brought out in the data in (11)-(14). In these examples I show that

states in their default forms do not compound with *wiʔs-*, but in their

anticausative (ac) alternant, they do combine with *wiʔs-*.

(11)   //nˤas// HEAVY
      a.   *wiʔs-nˤas   finished being heavy
      b.   wiʔs-[n+ʔ+ˤas]   finished getting heavy

(12)   //x̌ast// GOOD
      a.   *wiʔs-x̌ast   finished being good
      b.   wiʔs-[x̌əst+wílx] finished getting better

(13)   //c'uy// DARK
      a.   *wiʔs-c'uy   finished being dark
      b.   wiʔs-[c'+ʔ+uy]   finished getting dark

(14)   //c'nc'ˤant// TIGHT
      a.   *wiʔs-c'nc'ˤan+t finished being tight
      b.   wiʔs-[c'nˤ+áp]   finished tightening

The anticausative alternant encodes a resulting state, and concomitantly,

internal temporal constituency. The contrasts in (11) through (14) suggest that

states inherently lack internal temporal constituency, since they have an alternant that specifically adds temporal constituency to the base features.

Despite some inconclusiveness with respect to States, the tests with *wiʔs-* and the abilitative construction reveal a primitive contrast between events and non-events among Okanagan bases. There is, however, another primitive distinction in Okanagan that crosscuts the event/non-event distinction. I turn to this aspectual distinction in the section to follow.

3.2 Change. A base's relevance to change of state is a second major aspectual distinction in Okanagan. Relevance to changes of state includes two kinds of situations: situations that result in a change of state, and situations that are stative. I use the feature [±C] to represent the change criterion.[7] A base with the feature [+C] is inherently capable of expressing a change of state. A base with the feature [-C] cannot express change of state. I use tests from the stem aspect paradigm to determine the status of a base with respect to change of state. A base that can form an anticausative stem **and** a limited control stem (both described below) has the feature [+C]. All others have the feature [-C].

---

[7]Davidson (1980) associates all verbs with time and change. Frawley (1993) argues that some verbs, like *persist*, encode time but not change. In ways that I will describe in section 3.4.1, Okanagan States pattern derivationally with events that have outcomes, i.e. Transitions. In English, states tend to pattern with processes under certain tests (Mourelatos 1981 and Verkuyl 1989). I see no illogic in the Okanagan pattern, but I do not know if other languages have similar patterns.

The first test from the stem aspect paradigm is the ability of a base to

form an anticausative derivate. Anticausative stems (section 2.2.2.10) encode a

result or outcome that 'happens to' a passive external argument. Examples of

anticausative stems appear in (15).

(15)

//p'ic'// PINCH s.t.	knˌp'íc'+əc	I got pinched.
//ɬʕat'// WET	ɬ+ʔ+ʕat' ixíʔ	That got wet.
//ck'ʷʷam// STIFF	ck'ʷ+áp iʔ síp'iʔ	The hide got stiff.
//taʔp// DIRTY	təʔ+áp ixíʔ.	That one got dirty.
//nik'// CUT s.t	knˌník'+ək'	I got cut.
//c'il'// SHADY	c'il'+l'	It's shaded.
//c'uy// DARK	c'+ʔ+uy	It got dark.
//nʕas// HEAVY	knˌn+ʔ+ʕas	I'm getting heavy.
//nwis// HIGH	nw+ʔ+as iʔ t'uxʷt	The plane lifted up.
//p'uy// WRINKLED	p'+ʔ+uy ixíʔ	It's wrinkled.
//sílxʷaʔ// BIG	səlxʷaʔ+twílx	It's getting big.
//c'nc'ʕánt// TIGHT	c'nc'ʕant+wílx	It's getting tight.

Many other bases do not form anticausative stems. Because the formatives of

the anticausative WFR are various, I do not give starred examples. Rather, the

list of bases in (16) is representative of the bases that do not form

anticausatives with any of the known formatives of the anticausative rule.

(16)

//t'uxʷt//	FLY	//ʔácqaʔ//	GO OUT
//ʔukʷt//	CRAWL	//xʷt'ilx//	JUMP UP
//ʔitx//	SLEEP	//k'ɬxʔyust//	GO UNDER A SHELTER
//xʷist//	WALK	//xʷuy//	GO
//c'qʷaqʷ//	CRY	//p'lak'//	TURN BACK
//mut//	SIT	//kxan//	GO ALONG
//qʷaʔqʷʔimt//	BELCH	//pulx//	CAMP

A second test for the feature value of [±C] is the ability of a base to

form limited control predicates (section 2.2.2.11). The limited control WFR

creates a derivate that encodes an agent who succeeds in producing a change of

state with difficulty or accidentally. All the bases in (15) and those in (17)

form limited control stems.[8]

(17) //p'ic'//PINCH   kʷu͜ʟ   p'ic'c'+núnt -xʷ
                       1sOBJ pinch(lc)   2sERG
                       You managed to pinch me.

(18) //ɬˤat'// WET   ɬˤat't'+nú(nt)   -n
                       wet(lc)   1sERG
                       I managed to get it wet.

(19) //ƛ'aʔƛ'aʔ// FETCH ƛ'aʔaʔ+nú(nt)   -n
                       fetch(lc)   1sERG
                       I managed to fetch it.

(20) //ƛ'xʷp// BEAT s.o. ƛ'xʷxʷp+nú(nt)   -n
                       beat(lc)   1sERG
                       I managed to beat him (at a contest).

(21) //piq// WHITE   pqəq+nú(nt) -n
                       white(lc)   1sERG
                       I got it white.

---

[8]The reduplication of the second root consonant in limited control stems is
not anticausative marking. Rather, it is a regular concomitant of limited control
morphology. The anticausative form of a base frequently differs from the
reduplicated form in the limited control stem. For example, the anticausative
stem for *piq* 'white' is *pəʔáq* 'turned white, bleached'. The limited control
stem is *pqəqnúnt-* 'whiten s.t.' not **pəʔaqnúnt-*. Therefore, anticausative
formation and limited control formation are two distinct tests for the feature
[±C].

(22)   //nwis// HIGH   nwʔas+nú(nt)   -n
                       high(lc)   1sERG
                       I got it lifted up.

(23)   //nˤas// HEAVY   nʔˤas+núnt   -xʷ
                        heavy(lc)   2sERG
                        You managed to make it heavy.

The bases that do not have limited control derivates include those in (16).

Bases that have both anticausative **and** limited control derivates have the feature [+C] in their lexical representations. All other bases have the feature [-C].

3.3 Base classification. The features [±E] and [±C], in combination, identify four base classes in Okanagan, evidencing each of the four possible combinations of these two binary features.

(24)   i.   [+E, +C]   e.g.   //p'ic'// PINCH s.t.
                                   //ˤac// TIE_UP s.t.
                                   //ƛ'aʔ// FETCH s.t.
                                   //kɬnk'ʷˣλip// CLOSE s.t.
                                   //tqmin// LAY_DOWN s.t.

       ii.   [+E, -C]   e.g.   //t'uxʷt// FLY
                                   //xʷist// WALK
                                   //ʔitx// SLEEP
                                   //xʷuy// GO
                                   //ʔukʷt// CRAWL

       iii.   [-E, +C]   e.g.   //x̌ʷupt// WEAK, INFIRM
                                   //ʔayx̌t// TIRED
                                   //piq// WHITE
                                   //sílxʷaʔ// BIG
                                   //qʷámqʷəmt// EXCELLENT

iv.   [-E, -C]   e.g.   //yámx̌ʷaʔ// WOVEN BASKET
                                     //snkɫc'aʔsqáx̌aʔ// HORSE
                                     //ɫkap// BUCKET
                                     //nik'mn// KNIFE
                                     //kiláwnaʔ// male GRIZZLY BEAR

Although the notion *situation* must remain an undefined primitive,

attempts to define it repeatedly note the importance of time and change

(Vendler 1957, Givón 1979, 1984, Gabbay and Moravscik 1980, Davidson

1980, Barwise and Perry 1983, Binnick 1991, Smith 1991, and Frawley 1993).

Because cross-linguistically time and change are relevant in the description of

situations, I designate classes (18i-iii) as the prototypical situation types of

Okanagan. This designation is supported by evidence beyond the featural tests

used here. First, all of the bases in classes (18i-iii) have stem aspect derivates.

Recall that these derivates are modifications of the basic temporal and/or modal

structure of the base (section 2.2.2.1). Second, bases in classes (18i-iii) all

inflect for person and sentential aspect, in their default or derived forms. By

contrast, the bases of class (18iv) have neither the derivational (stem aspect)

nor inflectional (person-sentential aspect) alternants that the other three classes

have. What the featural, derivational and inflectional evidence suggests is that

there is a primitive contrast between situations and entities in Okanagan.

In addition to underscoring the ways in which situations differ from

entities in Okanagan, the featural tests distinguish three situation types (i.e.

classes (i), (ii), and (iii)). This division into three situation types matches the

typology of situations proposed in Pustejovsky 1991 and therefore is at least

partially validated by cross-linguistic patterns.[9] Pustejovsky identifies three

basic situations: Transitions, Processes and States. Each of these situations is

defined by a distinctive Event Structure (ES). Pustejovsky argues that ES is a

level of lexical representation independent of argument structure.[10] I give his

definitions of the three situation types and his structural representation for each

type in (25)-(27).[11]

---

[9]Pustejovsky credits Aristotle for the tripartite division, as well as several recent analysts including Bach 1986, Dowty 1979, and Vendler 1957. (Vendler's typology actually posited four basic situation types.) Kenny 1963 and Mourelatos 1981 also make a tripartite division. Other typologies are based on a binary division between events and states (e.g. Jesperson 1924, Smith 1991), where processes or activities are a subtype of event.

[10]Grimshaw 1990 also argues for a level of event structure in the lexical representation of verbs. Event structure helps to explain the differences and similarities between alternants of an Okanagan verb base in terms other than transitivity and thematic structure.

[11]Pustejovsky actually refers to these as 'event types', but their primitive idealized nature matches that of 'situations'. To avoid terminological confusion here, I have everywhere substituted 'situation' where Pustejovsky would use 'event'.

(25)   **Transition** (T): an event identifying a semantic expression which is
        evaluated relative to its opposition.
        structural representation: (where E is a variable for any event type)

$$
\begin{array}{c}
\text{T} \\
\diagup \diagdown \\
E_1 \qquad \neg E_2
\end{array}
$$
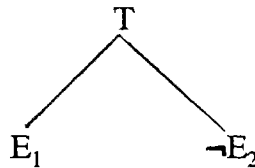
(26)   **Process** (P): a sequence of events identifying the same semantic
        expression.
        structural representation:

$$
\begin{array}{c}
\text{P} \\
\diagup \diagdown \\
e_1 \quad \cdots \quad e_n
\end{array}
$$
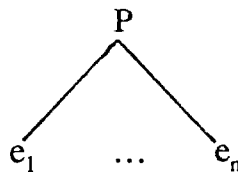
(27)   **State** (S): a single event which is evaluated relative to no other event.
        structural representation:

$$
\begin{array}{c}
S \\
| \\
e
\end{array}
$$

Pustejovsky's formalism is useful in several ways. First, it provides a

graphic representation for internal temporal constituency. Note that two

situation types show this inner structure, Transitions and Processes. Of these

two types, only one implies a predicate opposition, which Pustejovsky claims

is functionally equivalent to the semantic operator *become* in the predicate's

LCS. This division corresponds to the distinction in Okanagan between [+E,+C] and [+E,-C] lexemes. Pustejovsky's States lack internal temporal constituency, as depicted by the non-branching structure in (27). Okanagan lexemes with the features [-E,+C] correspond to this Event Structure.[12] In (28), I identify Okanagan classes (i), (ii), and (iii) with Pustejovsky's situation types. Class (iv) lexemes, which are not situations, I refer to as Entities.[13]

(28) i.   [+E, +C]   Transitions
      ii.   [+E, -C]   Processes
      iii. [-E, +C]   States
      iv.   [-E, -C]   Entities

Pustejovsky's proposal over the representation of situations includes the idea that information in a predicate's LCS can be mapped to the structural representations in (25)-(27). He proposes that *Event Structure* (ES) is a level of lexical representation which expresses the basic temporal structure of a lexeme. The ES is derived from the LCS, which is itself an ordered set of predicates. In LCS, the irreducible meaning of the lexeme is expressed along with a small group of operator-like predicates such as *act*, *become*, and *at*, and argument

---

[12]The fact that States do not take time does not mean that they are not 'in time'. Okanagan situations (i.e. Transitions, Processes, and States) all have stem aspect alternants that inflect for sentential aspect. Entities, by contrast, lack stem aspect alternants and do not inflect for sentential aspect in their canonical uses. Thus time is relevant to all Okanagan situations, but not all situations have internal temporal constituency.

[13]I discuss the derivational possibilities of bases that name entities in more detail in Chapter 4.

variables. For example, the English lexeme *close* (as in *John closed the door*)

has the following LCS:

(29)   close: cause([act(x,y)], become([closed(y)]))

In Pustejovksy's view, lexical meaning can be partially decomposed

into LCS subpredicates, and these subpredicates can be partitioned according to

the stages of ES. In (30) I give Pustejovsky's representation of the LCS-to-ES

mapping for the English situation *John closed the door*. Pustejovky uses a level

he calls LCS' to depict the partitioned LCS.[14] The & indicates simultaneity

of expressions. The *cause* operator is derived from the agentive (act) predicate

within the initial subpredicate of the LCS.

(30)

$$
\begin{array}{ccc}
 & & T \\
 & & \diagup\ \diagdown \\
\text{ES:} & P & S \\
 & | & | \\
\text{LCS':} & & [\text{closed(door)}] \\
 & | & \\
\end{array}
$$

[act(John,door) & ¬closed(door)]

LCS: cause([act(John,door)], become([closed(door)]))

Not all lexemes that express a predicate opposition (translated into ES

from the *become* subpredicate) involve the cause operator, as illustrated in (31).

---

[14]It is not clear to me if the level LCS' has any independent status in
Pustejovsky's theory. It does make the structural representations easier to
understand, so I maintain his notation in my examples.

(31)   The door closed.

```
                         T
                        / \
ES:                    P   S
                       |   |
LCS':                  |  [closed(door)]
                       |
                  [¬closed(door)]
```

LCS: become([closed(door)])

At the level of ES, *John closed the door* and *The door closed* are the same kind of situation. The differences in detail are expressed at LCS, where argument structure, thematic structure, and modality are coded.[15] (30) and (31) illustrate how various LCS alternants of a base lexeme can be related at the level of ES. In Okanagan, we can exploit Pustejovksy's assumptions and representations to describe how stem aspect alternants of base situations are related to the base and to each other.

3.4 Base classes and derivational paradigms. In addition to the featural tests for base class and their cross-linguistic parallels, the situation types of Okanagan are revealed by paradigmatic evidence. That is, each of the base classes has a distinct array of derivational possibilities that distinguishes it

---

[15]It may be the case that LCS projects separate representations (or tiers) for argument structure, thematic structure, and modality. A full discussion of the interplay of the elements in a lexeme's lexical representation is beyond the scope of this thesis. Pustejovksy 1991 addresses the relationship between event structure and argument structure, as do Jackendoff 1993, Grimshaw 1990, Pinker 1989, and Tenny 1987.

from the others. The diagnostic tests for situation type all come from the stem aspect paradigm. Each situation base type has some but not all stem aspect alternants. As a result, we can refer to subparadigms of stem aspect. Because there are three subparadigms and they correlate with the three situation types I have proposed, I refer to the subparadigms as the Transition paradigm, the Process paradigm, and the State paradigm. These subparadigms provide additional evidence that the universal situation types, Transitions, Processes, and States are relevant in Okanagan. Tests for base class based on stem aspect alternations also emphasize the difference between situations and entities.[16] As the chart in (32) shows, entities do not have any of the stem aspect alternants that are diagnostic of situation type. ((+) indicates that the base type typically has the derivate; (*) indicates that it typically does not have the derivate; (#) indicates that many lexemes of this base type have the derivate.)

---

[16]Not all stem aspect WFRs are diagnostic of base class. All situation bases have continuative and stative alternants, for example. Entities, however, do not have even the non-diagnostic stem aspect alternants.

(32)

Stem aspect	**Transitions**	**Processes**	**States**	**Entities**
closed transitional	+	*	#	*
open transitional	+	*	#	*
possessional	+	*	#	*
dative	+	*	*	*
reflexive	+	*	#	*
limited control	+	*	+	*
anticausative	+	*	+	*
causative	*	+	+	*
e.g.	//p'ic'//	//c'q^{w}aq^w//	//piq//	//p'ína?//
	PINCH	CRY	WHITE	BASKET

Transitions form all of the diagnostic stem aspects except causative.

Processes form only causatives. States form causatives and at least one other

stem aspect that is formed by Transitions also. States are therefore the most

difficult to identify; no single form demonstrates that a base is a State. Rather,

a State shows a general pattern of stem aspect derivation that crosses into the

Transition paradigm and the Process paradigm. This mutability is the defining

characteristic of the State type. In the following sections, I describe each base

type according to its stem aspect subparadigm.

3.4.1 Transitions. The set of stems that may be derived from a

Transition base via stem aspect WFRs is illustrated in Table 1. with the base

//p'ic'// PINCH, SQUEEZE.

Table 1. Transition Paradigm

//p'ic'//   PINCH s.t.

default   kn͜   p'ic'm
                                 1sABS   pinch(Intr)
                                 I pinched (something).

closed transitional   p'íc'+nt   -xʷ
                                 pinch(ctr)   2ERG
                                 You pinched it.

open transitional   ac-   p'ic'+st   -xʷ
                                 cust- pinch(otr)   2sERG
                                 You usually pinch it.

possessional   kʷu͜   p'íc'+ɫt   -xʷ
                                 1sOBJ pinch(pos)   2sERG
                                 You pinched my ____.

dative   kʷu͜   p'íc'+xt   -xʷ
                                 1sOBJ pinch(dat)   2sERG
                                 You pinched it for me.

reflexive   kn͜   p'əc'+ncút
                                 1sABS   pinch(ref)
                                 I pinched myself.

limited control   p'əc'c'+nú(nt)   -n
                                 pinch(lc)   1sERG
                                 I managed to pinch it.

anticausative   p'íc'+əc'
                                 pinch(ac)
                                 It's (been) pinched.

causative   *

The derivational paradigm of //p'ic'// is canonical in the sense that

//p'ic'// has all the stem alternants that are identified with the paradigm. However, not all Transitions occur in all of these stem aspects. For example, for some bases, a stem alternant is blocked by the presence of a different lexeme, as with *wəkncút 'see oneself' which is expressed instead with ʕac'ncút from the base //ʕac'// LOOK_AT. Sporadic reanalysis of a stem form can also block or eclipse stem alternants. As an example, A. Mattina (1993a:209) reports that the base //cun// TELL has both the closed transitional stem cu(n)(nt)- 'someone tells someone' and the possessional stem alternant cu(n)łt- 'someone tell someone's relative'. The possessional stem form is commonly understood with the meaning of a transitional, as in kʷu cúłt-s 'He told me'. The latter use of the possessional stem form is a 'fancying up' or hypercorrection of kʷu̬cús, the expected form of 'He told me'.

In addition, narrow and sometimes obscure semantic restrictions exclude some Transitions from having certain alternants. For example //wik// SEE and //cun// TELL lack the dative alternate (*wikxt- and *cuxt-) for reasons that are not clear to me. //xik'// MISS (a shot)/ERR (in the stick game) does not have reflexive or dative alternates. In other cases, selectional restrictions apply. For example, the base //pix̌// HUNT (game) does not have a reflexive alternant *pax̌ncút ('hunt myself'). Also, morphologically complex Transitions tend to have fewer stem alternants than simple bases. Bases such as

//ncaʔ+lqs+íkst+mn// ELBOW s.o. and //naʔkʷ=cín// TAKE FOOD to s.o.

do not form anticausatives. Whatever the reasons for these paradigmatic gaps,

morphological complexity is not the cause of them. In (33), I give several

examples of morphologically complex Transition bases that do form

anticausatives.[17]

(33)

//tqcnaʔm//RUN_OVER s.t.	kn‿tqəc+c+náʔm	I got run over.
//k'ɫnk'ʷƛ'ip//CLOSE s.t.	k'ɫnk'ʷƛ'+ƛ'+ip	It got closed.
//cq'min// THROW s.t.	kn‿cq'+q'+min	I got hit (by s.t. thrown).
//c'lx̌iw'//SCRATCH s.t.	kn‿c'l+l+x̌iw'	I got scratched (clawed).
//klíq'naʔ//BURY s.t.	way' klíq'+q'+naʔ	It got buried.

It is clear from the paradigmatic gaps in the Transition paradigm that there are

subgroups within the class of Transitions that await further definition.

The general property of Transitions as revealed by their stem aspect

subparadigm is that they have the ES shown in (34).

---

[17] All transitions have the inflectional option of the 'underspecified subject' (Unsub) formation which can have a passive interpretation (section 2.1.1). The backgrounding effect of the underspecified subject form, although limited to third person participants, could be interpreted as the functional equivalent of the anticausative: *ncaʔlqsíkstmnt-m* 's.o. elbowed him/he got elbowed'; *naʔkʷcín(n)t-m* 's.o. took him food/he was taken food'.

(34)

$$T$$
$$\overset{\displaystyle P \qquad S}{\diagup \quad \diagdown}$$

ES: P   S

LCS':   [act(x,y) & ¬Q(y)]   [Q(y)]

LCS: cause([act(x,y)], become([Q(y)]))
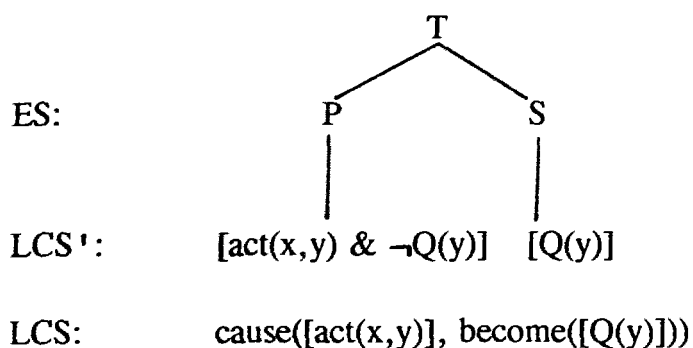
The ES in (34) does not reflect differences at LCS between derivates, nor does it directly reflect argument structure. Importantly for the description of Okanagan, the ES in (34) conveys that stems with this ES have internal temporal constituency **and** they encode a predicate opposition. I interpret the predicate opposition (translated from the *become* operator of LCS) as marking *change-of-state* in the event. The State subevent at ES is equivalent to the outcome or result of the event. The ES $[P,S]_T$ signals an event that consists minimally of a change and its result.

In the following sections, I describe the differences between the alternants of the Transition subparadigm. There are two reasons to do this. First, I want to formalize the definitions of the relevant stem aspect WFRs, now that I have introduced the concepts and representations in Pustejovksy 1991. Second, in reviewing these stem aspects, I will demonstrate how all of the differences between the derivates arise from properties of LCS that do not affect ES. Furthermore, I give data that suggest some of the properties that are

not relevant to the definition of the stem types. The LCS of the default stem of a Transition provides a basis for comparison. Therefore, I begin by describing it.

3.4.1.1 Default Transition. The default stem, generally, is that realization of a base to which no stem aspect WFR has applied. It is the semantically simplest form of the base lexeme. In the case of the default Transition, the basic ES, $[P,S]_T$, is instantiated, and two arguments are coded in LCS. Because the second of these arguments cannot be referential, I referred to these stems as *generic object intransitives* (see section 2.2). An example of a default Transition (marked *Intr*) as the head of a clause appears in (35).[18]

(35) kn͜   nik'm   i˄   t͜   sl'ip
      1sABS   cut(Intr) art cs   wood
      I cut some wood.

The LCS of a default Transition is as follows:

(36) cause([act(x,y)], become (Q(y)))

The fact that the internal argument is not a direct syntactic argument must be captured in statements over the mapping of LCS to syntactic structure.

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[18] The stem-final *-(V)m* of the default transitional stem occurs in the stem form of other stems based on Transitions. For example, it is present in the closed transitional in irrealis mood, as in *i-ks-nik'əm* 'I will cut it' and in neutral aspect *i-s-nik'əm* 'I cut it'. This suggests to me that there is a single stem form for Transitions that ends in *-(V)m* which is used as the base form for more than one WFR. I do not segment *-(V)m* because I cannot yet associate it with a WFR.

This fact has no effect on the event structure, however.

3.4.1.2 Closed and open transitionals. Closed and open transitionals differ from the default transitional stem primarily in that they encode referential, non-generic internal arguments. The condition that they have referential internal arguments does not affect their ES with respect to that of default Transitions. In English, the presence of a particular kind of internal argument (specifically, a bare plural or mass noun) affects the event structure of the predicate. This effect in English is exemplified in (37).

(37) a. John ate the/an apple (*for an hour).   non-durative
      b. John ate apples (for an hour).   durative
      c. John ate snow (for an hour).   durative

Using the adverb of duration *púti⁷* , I test for similar sensitivity to internal object type in Okanagan (38).

(38) *púti⁷ k'ʷa⁷k'ʷa⁷-nt-ís i⁷ apl.   Still, he ate the/an apple.
      *púti⁷ k'ʷa⁷k'ʷa⁷-nt-ís i⁷ smikʷt.   Still, he ate snow.
      *púti⁷ k'ʷa⁷k'ʷa⁷-ám i⁷ t apl.   Still, he ate some apple/apples.
      *púti⁷ k'ʷa⁷k'ʷa⁷-ám t smikʷ't.   Still, he ate some snow.

The data in (38) suggest that the type (i.e. count or mass) of the internal argument does not affect the aspect of the predicate. The predicates in (38) are all perfective regardless of the kind of internal argument. Nor is it the case that the internal argument of such stems is more or less affected than in the default Transition. Finnish, for example uses case marking to indicate relative affectedness. In (39), partitive case marks the internal argument as less

drastically affected than when it is marked with accusative case, as in (40)

(data cited in Tenny 1987:48).

(39)   metsästäjä   ampui vahingossa   lehmää
          hunter   shot   accident_in   cow-PART
          The hunter shot (at) a cow by accident.

(40)   metsästäjä   ampui vahingossa   lehmän
          hunter   shot   accident_in   cow-ACC
          The hunter shot (and killed) a cow by accident.

Okanagan speakers report no difference in affectedness between default

transitionals and closed and open transitionals. In all three transitional types,

the internal argument may be affected, as in (41)-(43), or unaffected, as in

(44)-(46).

(41)   maʕ'+nt   -ís   iʔ   ɬkáp
          break(ctr)   3sERG   art   bucket
          He broke the bucket.

(42)   ac-   maʕ'+st   -ís   iʔ   ɬkáp
          cust break(otr)   3sERG   art   bucket
          He always breaks the bucket.

(43)   cəm' kn� maʕ'ám   iʔ   t̯   ɬkap
          might 1sABS break(Intr)   art   cs   bucket
          I might break a bucket.

(44)   k'ɬpax̌+nt   -ín
          think_about(ctr)   1sERG
          I thought about it.

(45)   stim' aʔ   c-   k'ɬpax̌+st   -íxʷ?
          what art   cust think_about(otr)   2sERG
          What did you (usually) think about?

(46) kn͜   k'ɬpəx̌ám
      1sABS   think_about(Intr)
      I thought things over.

The key difference between closed/open transitionals and default

transitionals is that in the former the internal argument must be a referential

participant in LCS. The LCS of closed/open transitionals is that given in (36),

with the condition that the (y) variable refer to a specific entity. Because closed

and open transitionals differ only in that the first is inherently perfective while

the second is inherently imperfective, I will refer to both as *transitionals* in the

remainder of the discussion.

3.4.1.3 Possessionals. The LCS of possessional stems encodes a pre-

existing condition, which is that the (y) variable is owned by an animate

possessor. I represent this pre-existing condition at LCS in (47).

(47) LCS: cause([act(x,y),(own(z,y))], become Q(y))

While this LCS notionally encodes two related situations, *act(x,y)* and

own(z,y), the condition necessary for *act(x,y)*. *own(z,y)* does not have any

status in the ES of the possessional situation. The LCS in (47) maps to ES as

in (48).

(48)

```
              T
            /   \
ES:        P     S
           |     |
LCS':  [act(x,y) & ¬Q(y)]  [Q(y)]
```

LCS: cause([act(x,y),(own(z,y))], become([Q(y)]]))
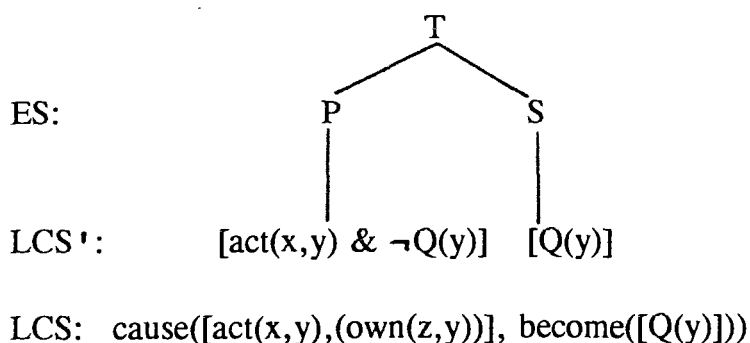
Like the closed and open transitional, the possessional encodes a condition on

the (y) variable at LCS. (y) must be referential and it must be possessed.[19]

The internal argument is not generic, as it is a possessed entity. In (49)-(51), I

contrast the closed transitional stem with the possessional stem.

(49)   a.   kʷuᴗ   x̣'aʔx̣'aʔ+nt   -ís
            1sOBJ   look_for(ctr)   3sERG
            He looked for me.

       b.   kʷuᴗ   x̣'aʔx̣'aʔ+ɫt   -ís
            1sOBJ   look_for(pos)   3sERG
            He looked for something of mine.

(50)   a.   maᶜ'+(nt)   -n   iʔ   laprít
            break(ctr)   1sERG   art   bridle
            I broke the bridle.

       b.   maᶜ'+ɫt   -s   -n   an-   laprít
            break(pos)   2sOBJ   1sERG   2sPOSS   bridle
            I broke your bridle.

---

[19]Recall that possessional stems are inflected for subject and object
persons; the subject is the notional agent and the object is the notional
possessor. The theme argument is expressed as a possessed NP. The marking
of grammatical relations on possessionals suggests that Okanagan has a
thematic hierarchy that ranks themes lower than agents and possessors.

(51) a. ənxƛ'íks+(n)t   -n   i?   snłsípna?
         pass_around(ctr)   1sERG   art   cigars
         I passed around the cigars.

     b. nxƛ'íkst+łt   -n   i?   snłsípna?   -s
         pass_around(pos)   1sERG   art   cigars   3sPOSS
         I passed around his cigars.

3.4.1.4 Datives. The dative encodes a transfer of possession or service

from the agent to the recipient. This concept or set of concepts parallels the

English dative, so I adopt the LCS proposed for English datives by Pustejovsky

as the LCS of Okanagan datives. The LCS of datives is given in (52).

(52)   LCS: cause([act(x,y) & ¬(have(z,y))], become([have(z,y)]))

In (52), the notion of transfer is conveyed by the subevent *have(z,y)*,

which is simultaneous with the *act(x,y)* subevent. The simultaneity of the

second subevent with the first makes them both relevant to ES. Therefore, the

second subevent may be evaluated relative to its opposition. The mapping of

the dative LCS to ES is as follows:

(53)

```
                           T
                          / \
ES:                    P'     S
                       |       |
LCS':   [act(x,y) & ¬have(z,y)]  [have(z,y)]

LCS:    cause([act(x,y) & ¬(have(z,y))], become([have(z,y)]))
```
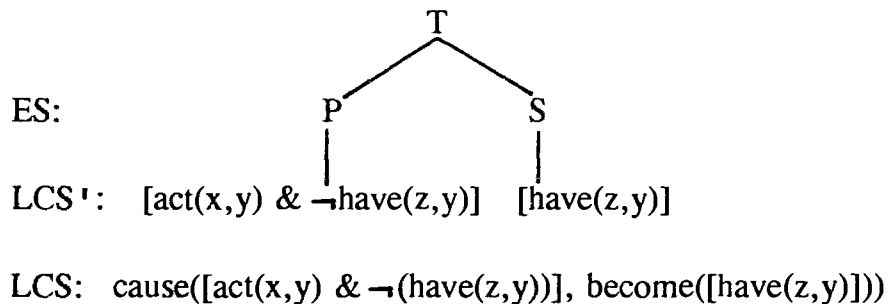
The LCS in (53) differs from that of the possessional LCS (see (48)) as follows: *own(z,y)* is a condition of the *act(x,y)* event, but it is not a simultaneous event in which an opposition is relevant. There is no change in the *own* pre-condition of a possessional, as there is in the *have* event of the dative.

Datives also differ from possessionals in their agent modality. While possessionals characterize the internal argument, datives require animate, efficient agents as external arguments. For example, datives rarely have an experiencer as the external argument.

(54)   a.   *kʷuᵥ   ʔíɬ+xt   -s
            1sOBJ   eat(dat)   3sERG
            (He ate for me.)

       b.   kʷuᵥ ʔíɬ+(ɬ)t   -s
            1sOBJ eat(pos)   3sERG
            He ate it up on me.

(55)   a.   *wik+xt   -m   -n
            see(dat)   2sOBJ   1sERG
            (I saw for you.)

       b.   wik+ɬt   -s   -n
            see(pos)   2sOBJ   1sERG
            I saw something of yours.

Further, dative stems do not contrast with a dative limited control stem. Recall that transitionals and possessionals have a related stem type that encodes an agent with limited control over his/her act (section 2.2.2.11). In (56), a closed

transitional is contrasted with its limited control counterpart; in (57) a

possessional stem is contrasted with its limited control counterpart.

(56) a.   k'ʷƛ'qín+(n)t   -íxʷ   iʔ   tkɬmilxʷ
             remove_hat(ctr)   2sERG   art   woman
             You took the hat off the woman. COD63
             (lit. You dehatted the woman.)

      b.   k'ʷƛ'ƛ'qn+(n)únt   -xʷ
             remove_hat(lc)   2sERG
             You managed to take her hat off.
             (lit. You managed to dehat her.)

(57) a.   k'ʷƛ'+ɬt   -íxʷ   iʔ   qʷácqən   -s
             remove_hat(pos)   2sERG   art   hat   3sPOSS
             You remove her hat. COD63

      b.   k'ʷƛ'ƛ'+núɬt   -xʷ
             remove_hat(lc)   2sERG
             You managed to remove her hat.

Datives do not have a limited control counterpart.

(58) a.   ʕac+xít   -s   -n
             tie(dat)   2sOBJ   1sERG
             I tied it up for you.

      b.   *ʕac+núxt-
             (manage to tie something for someone)

(59) a.   kʷuᴗ xʷíc'+xt   -xʷ
             1sOBJ give(dat)   2sERG
             You gave me something.

      b.   *xʷəc'+núxt-
             (manage to give someone something)

The dative agent must be in control of his/her actions in order to bring about

the result. This focus on the kind and manner of the agent is also revealed in the lack of emphasis datives place on the recipient. Despite the fact that a transfer of possession is conceptually and aspectually salient in datives, final possession is not relevant. In fact, the entity that is transferred (the theme argument) cannot be expressed as a possessed object.[20] Datives contrast with possessionals in this respect: dative themes cannot be possessed, and possessional themes must be possessed.[21] The possessed theme in (61) makes the sentence ungrammatical.

(60) npus+xt   -n   iʔ   ʟ   ʔaʔúsaʔ
      boil(dat)   1sERG   art   cm   eggs
      I boiled him some eggs.

(61) *npus+xt   -n   iʔ   ʟ   ʔaʔúsaʔ   -s
      boil(dat)   1sERG   art   cm   eggs   3sPOSS

(62) npus+ɬt   -n   iʔ   ʔaʔúsaʔ   -s
      boil(pos)   1sERG   art   eggs   3sPOSS
      I boiled his eggs.

In sum, the dative event entails a successful, usually benefactive,

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[20]The theme argument of a dative predicate may take the possessive prefixes in unrealized mood (Chapter 4), as in xʷíc'xt-m-n ʟak(ɬ)-sqláw 'I gave you what will be your money'. Unrealized possession contrasts here with actual possession, with a grammatical consequence.

[21]As I pointed out in section 2.2, this contrast is related to referentiality. The dative theme is usually translated as a partitive 'some X', while the possessional theme is referential.

transfer of a possession or service in which the external argument intends and controls the transfer. Datives express this agent modality via conditions on the (x) variable. They express the notion of 'transfer' in LCS. Like transitionals and possessionals, datives predicate an outcome.

3.4.1.5 Reflexives. Reflexives encode an agent modality and a condition on the internal argument. The agent must control or intend his actions (see section 2.2.2.5). This explains why speakers do not use reflexive stems to translate English expressions (with non-intentional readings) of *I burned myself* or *The child cut himself.* Rather, the non-agentive anticausative stem better expresses the accidental interpretation of the English reflexive.

(63) a. kn̲̲   nək'+ncút
         1sABS   cut(ref)
         I cut myself (on purpose).

     b. kn̲̲   ník'+ək'
         1sABS   cut(ac)
         I got cut (by accident).

(64) a. ɬʕat'+ncút   iʔ   ʔux̌tílt
         wet(ref)   art   infant
         The baby wet himself.

     b. way'   ɬ+ʔ+ʕat'
         prt   wet(ac)
         He got wet (by accident).

The external argument of a reflexive must refer to an animate agent capable of

intending and/or performing an act.[22] The internal argument must be co-referential with the external argument. A willful act perpetrated on oneself is aspectually equivalent to one perpetrated on another individual. Therefore the LCS of the reflexive is identical to that of default Transitions and transitionals, except for the constraints on the nature of the (x) and (y) variables.

3.4.1.6 Limited control. The LCS of limited control stems express agent modality in addition to conditions on the internal argument. The agent modality restricts the referent of an external argument to an agent who is less than efficient in the performance of the event. The agent of a limited control stem performs or accomplishes the act either by accident, or with difficulty. This ambiguity of interpretation parallels that of the English construction with the modal predicate 'managed to'. In (65), a limited control transitional (a) appears with transitional (b), possessional (c), and anticausative (d) counterparts.

(65) a. kʷnn+(n)únt -xʷ
          take(lc)   2sERG
          You managed to take it.

      b. kʷi+(n)nt   -xʷ
          take(ctr)   2sERG
          You took it.

---

[22]Anthropomorphized inanimates and animals may be subjects of reflexives.

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c.   kʷu̯   kʷi+łt   -xʷ
    1sOBJ take(pos)   2sERG
    You took something of mine.

d.   kn̯   kʷin+n
    1sABS   take(ac)
    I was taken(grabbed).

The limited control and the anticausative stems both have an interpretation in which the act is accidental or not in the full control of the agent. However only the limited control stem expresses an agent modality, because the *act* subpredicate of LCS encodes an agent. The anticausative, by contrast, does not have an agentive subpredicate at LCS, and therefore 'agent modality' is anomolous. The external argument of the anticausative is instead a patient, which notionally lacks control over the event. Thus, in anticausatives, the notional 'lack of control' is a concomitant of absence of agency.[23] In limited

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[23]B. Carlson (forthcoming) observes that the cognate formation in Spokane 'focuses the process of a transitive event as it leads to a natural termination' (p.6). Spokane has two transitive limited control formations. The first, which Carlson calls the success transitive, is formed by the root followed by the transitive suffix -*nt*. The second consists formally of the root followed by 'a -VC$_2$ copy of a typical CVC(c) root' (p.5). Carlson refers to the reduplicative suffix as marking 'out-of-control' (OC) (following Carlson and Thompson 1982). The forms with OC reduplication express the idea that the agent is not in control of his action, and therefore the result of the event arises by accident. Thus Spokane has a formal contrast between two success transitives; one expresses successful accomplishment (abbreviated below as success in (i) while the other expresses an accidental accomplishment (ii)).

(i).   łuʔ-nú(-nt)   -en   (ii).   łuʔʔ-nú-(nt)   -en
     stab(success) 1sERG   stab(OC+success)   1sERG
     I managed to stab him.   I mngd. to stab him by accident.

control stems, the notion of limited control is a derived feature of the stem.

There are two subtypes of limited control stems. First is the limited

control transitional, in which the internal argument must be referential (section

2.2.2.1 and 2.2.2.2). The second is the limited control possessional, in which

the internal argument must be a referential and a possessor (section 2.2.2.3).

Both of these subtypes express limited agent control in addition to referential

internal arguments. These conditions are not relevant to ES, and limited

control transitionals and limited control possessionals have the same ES as their

non-limited control counterparts (see (34) and (48) above).[24]

3.4.1.7 Anticausatives.
Anticausatives differ from all of the stem types

in sections 3.4.1.1 through 3.4.1.6 in that they lack an agentive first subevent

at LCS. Therefore, they lack the *cause* operator at LCS. Like all the stem

types described in the preceding sections, they encode the *become* operator at

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Okanagan does not distinguish formally between the successful and accidental readings in the cognate stem. The phonological root in Okanagan limited control stems is consistently altered from its canonical CVC shape.

[24]Limited control stems are formally interesting because they appear to be built on anticausative stems. That is, the form of a resultative often includes a reduplication of the root's second consonant and the resultative suffix -*núnt* or -*nútt*, e.g. /√p'x+x+k'ʷ+nú(nt)-n/ 'I managed to crumble it'. Moreover, there is something of the anticausative semantics in limited control stems that is reflected in translations such as 'someone managed to get something crumbled'. However, limited control stems differ clearly at LCS, and in their thematic and syntactic properties, from the anticausative.

LCS. All changes of state have some conceivable stimulus. I express this in the

anticausative LCS with an operator *by means of*: (66).

(66)   LCS: become(([Q(y)]) by means of x)

The *by means of* operator accounts for the (oblique) agentive or instrumental

phrase that may accompany an anticausative stem (see also section. 2.2.2.10).

(67)   tqác+c+na⁹   i⁹   ⌣   atumopíl
        run_over(ac)   art   cs   automobile
        It got run over by a car.

While the causal act is outside of the aspectual focus of the

anticausative, the result of the act is evaluated relative to its opposite state. The

anticausative LCS maps to ES as follows:

(68)

ES: T
                          ╱   ╲
                       P   S
                       | |
LCS':   I-Q(y)]   [Q(y)]
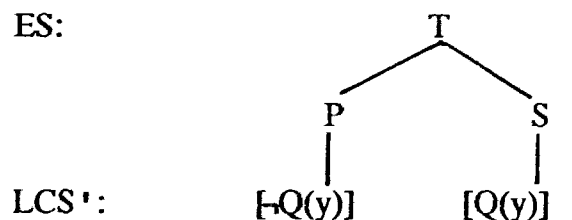
LCS: become(([Q(y)]) by means of x)

The key difference between anticausatives and all of the stem types discussed

above lies in their non-agentive first subpredicate at LCS. This property in

LCS has implications for the argument structure of the anticausative stem type,

but the ES of anticausatives is that of a Transition.

3.4.1.8 Causatives. Transitions do not have a stem aspect alternant

with causative aspect. The incompatibility of Transition bases with causative stem aspect arises from the particular ES of the causative aspect. Pustejovsky illustrates the 'causative process' as follows with the English expression *Mary pushed the cart*.

(69)

ES:
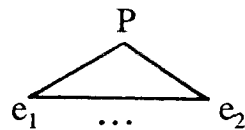
LCS': [act(Mary,cart)] & [move(cart)]

LCS: cause([act(Mary,cart)], [move(cart)])

The causative process does not have a natural termination in the transition from one state to its opposite. Instead, the duration of the event is indeterminate or atelic. That is, the causative process is an agentive event which does not involve change of state.

Because Transition bases inherently encode a process that leads to an outcome (change of state), Transition bases cannot be reconfigured as causative processes. (70) and (71) exemplify the incompatibility of a Transition base with causative stem aspect.

(70)   *kʷuᷩ   p'íc'+st   -xʷ
       1sOBJ   pinch(caus) 2sERG
       (You made me pinch it.)

(71) *ník'+st   -n   i?   ttw'ít
       cut(caus)   1sERG   art   boy
       (I made the boy cut something.)

Transitions are not inherently incompatible with the concept of one participant

forcing a second to perform an act. Transitions appear in the periphrastic

causative construction with *nlk'st-* or *nlk'mniksnt-* 'force someone to do

something'.

(72) nlk'mst   -íxʷ   ki?   kn‿   ?íɬən
       force(caus)   2sERG   sb   1sABS   eat(Intr)
       You force me to eat.

(73) nlk'mniksnt   -xʷ   ki?   kn‿   xʷuy
       force(ctr)   2sERG   sb   1sABS   go(Intr)
       You (forcibly) made me go.

Causatives have the same argument structure as transitionals, and their

internal arguments must be referential. These properties are sufficient to place

causatives and transitionals in the same inflectional class. However, in terms of

event structure, causatives are distinct from transitionals. Causatives encode an

agentive act that does not result in a change of state; Transitions encode an

agentive act that does result in a change of state. This difference underscores

the primitive contrast between Transitions and Processes in Okanagan (see also

section 3.4.2).

3.4.2 Processes. Bases with the features [+E,-C] express events

conceived of as internally homogenous, with arbitrary endpoints. More

formally, a Process base expresses a sequence of events where if the semantic

expression P' identified with P is true at an interval I, then P' is true for all

subintervals of I. Processes may logically refer in LCS to multiple participants,

motions and goals, but they do not express change of state. The derivational

possibilities of a Process base follow from its inherent aspectual type. With

respect to the diagnostic stem aspect WFRs, Process bases have the

subparadigm depicted in Table 2. for the base //c'qʷaqʷ// CRY.

Table 2. Process Paradigm

default	knᴗ	c'qʷaqʷ
	1sABS	cry
	I cried.	
closed transitional	*	
open transitional	*	
possessional	*	
dative	*	
reflexive	*	
limited control	*	
anticausative	· *	
causative	c'qʷqʷ+st	-ín
	cry(caus)	1sERG
	I made someone cry.	

Process bases undergo only the causative WFR of the diagnostic stem

aspect WFRs. Transitionals (open and closed), possessionals, datives, reflexives, limited control events, and anticausatives are events that terminate in a change of state. Process bases do not have these stem aspect alternants because they do not have the inherent ES required for these alternations. The Process base and all of its stem aspect alternants have the ES in (70).

(70)   ES:

$$\triangle \atop e_1 \quad ... \quad e_2$$
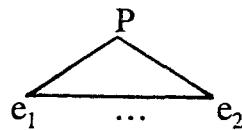
This ES is mapped to an LCS that lacks the semantic operator *become*. In the default Process stem, there is an agentive first subpredicate, hence there is an external argument. There is no internal argument. This is depicted in the LCS for the default Process in (71).[25]

(71)   LCS: cause([act(x)])

The causative stem alternant of a Process base differs from the default Process in several ways. First, the causative process has a different argument structure; it encodes both an external and an internal argument. The internal argument must be referential. Second, causative aspect focuses on the intentions and responsibility of the agent. There are two interpretations of causative stems: either the agent performs intentionally out of duty or obligation, or s/he allows a process to occur through a failure of will or duty.

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[25]Recall that the *cause* operator is derived from the agentive subpredicate *act* at LCS (Pustejovsky 1991).

obligation, or s/he allows a process to occur through a failure of will or duty.

In defining causative constructions cross-linguistically, Comrie (1981)

distinguishes between the *true causative* (as in *I made the vase fall*) and the

permissive (as in, *I let the vase fall*). Comrie gives an example of the

ambiguous role of the agent in a Georgian causative (given here as (72)),

which is semantically comparable to the Okanagan causative, exemplified in

(73).

(72) Mama   švil-s   ceril-s   a-cer-in-eb-s
     father   son-dative   letter-accusative   write 3s
     Father makes/helps/lets his son write the letter. (Comrie 1981:164)

(73) ʔukʷt+st   -n   iʔ   ʔux̌tílt
     crawl(caus)   1sERG   art   baby
     I made/helped/let the baby crawl.

In sum, the responsibility of the agent is in focus in causative stems. In (74)-

(77), I give Okanagan causatives that are best interpreted as emphasizing the

obligation and/or responsibility of the agent in this stem type.

(74) kʷu̯   siw'stm(n)+st   -xʷ
     1sOBJ waterᵥ(caus)   2sERG
     You gave (granted) me a drink.

(75) kʷu̯   a-   ks-   qʷaʔmənwíxʷ+stm
     1sOBJ 2sGEN   irr   introduce(caus)
     (You must/should) Introduce us.

(76) c'əm   ƛ'mip+st   -xʷ   a-   ɫəɫqáqcaʔ
     might   be_late(caus) 2sERG   2sPOSS   older brothers
     You'll be too late for your brothers. GW488

(77) pulx+st   -n   iʔ   scəcm'ála̓ʔ
      bed_down(caus)   1sERG   art   children
      I put the children to bed.

(78) nyˤ'ip   lut+st   -s
      always   no(caus)   3sERG
      He keeps saying no. GW296

In general, causatives based on Process bases favor the reading in which

the agent intends to control the internal argument (e.g. (77)). With State bases,

the permissive reading is more common: the agent allows a situation to occur,

as in (79).[26]

(79) lut   a-   ks-   k'íy't+stəm
      neg   2sGEN   irr   chilly(caus)
      Don't let it get wet.

The control exerted by an agent in a causative predicate is ambiguous.

This ambiguity with respect to agent control is parallel to the ambiguous agent

control that is a part of the meaning of limited control stems. That is, in one

reading of the limited control stems, the agent intends the act, but in the other,

the agent passively allows the act.[27] Compare the ambiguity of the limited

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[26]Comrie (1981) states that the true causative and the permissive causative
are alike in that 'the realization of the effect is, at least partially, within the
control of the causer/permitter' (p.164).

[27]Kuipers (1992) describes the Shuswap limited control cognates -nweʔns
and -nwens as expressing 'on the one hand ability, on the other hand non-
intention'. He goes on to describe these suffixes in a way that characterizes
Okanagan causatives as well:

The semantic ambiguity as such is comparable (though

control transitional in (80) with the ambiguity of the causative in (73), above.

(80)　ha　　　　ləq'q'+núnt　-x^w　　i^ʔ　píqsx̌ən
　　　interg　　bury(lc)　　2sERG　　art　coins
　　　Did you (finally) manage to bury the coins? *or*
　　　Did you accidentally manage to bury the coins?

The ambiguous control of the agent of the causative process may explain why

there is no limited control causative in Okanagan: (81).

(81)　//t'ux^wt// FLY　　　*t'əx^wt+núst -n
　　　　　　　　　　　　　　fly(caus)　　1sERG
　　　　　　　　　　　　　　(I managed to make it fly.)

Like the limited control stem, the causative stem encodes an agent whose

control over the event is ambiguous. Causative and limited control stems differ

in that they encode distinct Event Structures. This is possible because agent

modality is irrelevant to Event Structure.

Of the three base types, Transitions, Processes, and States, Processes

are the only type that do not have anticausative alternants. None of the

expected anticausative stem forms are possible with a Process base. The forms

in (82) and (83) were rejected by speakers.

(82)　//t'ux^wt// FLY + ac → (It got flown.)
　　　*t'ʔux^wt
　　　*t'əx^wtwílx
　　　*t'ux^wx^wt
　　　*t'əx^w(t)áp

(83)　//pulx// BED_DOWN + ac → (He got bedded down.)
　　　*pʔulx
　　　*pəlxwílx

(83)   //pulx// BED_DOWN + ac → (He got bedded down.)
       *pʔulx
       *pəlxwílx
       *pullx
       *pəlxáp

Process bases encode homogeneous events with arbitrary endpoints, and
no change of state. For this reason they do not have alternants in which change
of state is is encoded.

3.4.3 States. The class of States in Okanagan is semantically parallel to English adjectives in that they name attributes, properties, or kinds.[28] Unlike Processes and Transitions, they do not inherently encode an agentive subpredicate at LCS. This property translates into an ES that lacks internal temporal constituency. States are relevant to the temporal modifications available through some stem aspect WFRs, but they lack dynamism.[29] The distinctive property of States is that they encode the semantic operator *be* at

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[28]Okanagan States are not to be confused with states defined as *stative verbs* such as English *know* and *love*. Okanagan States are not events or actions; in some typologies the kind of states that I am referring to are not considered to be situations. A footnote in Mourelatos 1981 refers to a distinction "in the physical realm between states and what we might noncommitally call 'changes': *to be hard* or *to be yellow*". Mourelatos goes on to refer to states that are not "properly of agents, but include [ ] such physical or neutral states as ...*be blue, be taller than*". It is the physical states that Mourelatos calls 'changes' that are State bases in Okanagan. Stative verbs such as *know* (Ok //my//) and *love* (Ok //x̌mink//) are Transition bases in Okanagan.

[29]Recall that the notion State as I use it here is an ontological primitive. I assume, following Smith 1991, that certain concepts are formed without language and may be 'covert' in language. Miller and Fellbaum 1991:210 observe that in English, "the basic semantic relation among adjectives is antonymy", or paired oppositions. By contrast, nouns and verbs are not typically related by antonymy (i.e. *dog* and *cat* are not opposites, but different kinds of entities). Testing of the semantic networks of Okanagan speakers might reveal patterns similar to those that Miller and Fellbaum found in English speakers. This would support the idea that there are conceptual distinctions that underly the grammatical categories adjective, noun, and verb. An important difference between Okanagan and English is that adjectival notions (i.e. properties and physical states) are grammaticized as verbs, rather than as adjectives, in Okanagan.

LCS. This operator is derived from the non-agentive first subpredicate of LCS, as in (84).

(84)   LCS: be([Q(x)])

Because States are conceptualized as subject to change and development, they have stem aspect alternants that encode change of state. However, not all States have all of the stem aspects that encode change of state. Some States form all of the diagnostic stem aspects except the dative; others form only a few. The first type is illustrated with the base //ɬˤat'// WET in Table 3.[30]

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[30]Occasionally, a State base that forms a closed transitional will also have the formal and aspectual equivalent of the default transitional stem, as in kn_ɬˤat'ám 'I wet something'. Speakers disagree about the grammaticality of these formations, which are rare in the first place. This suggests that they may be backformations that are interpretable, but not acceptable to all.

Table 3. State Paradigm

//ɬˤat'// WET

closed transitional	ɬˤat'+nt	-ín
	wet(ctr)	1sERG
	I wet something.	

open transitional	ac- ɬˤat'+st	-ín
	cust wet(otr)	1sERG
	I usually wet it.	

possessional	ɬˤat'+ɬt	-ín
	wet(pos)	1sERG
	I wet someone's ____.	

dative   *

reflexive	ɬˤat'+ncút
	wet(ref)
	He (an infant) wet himself.

limited control	ɬˤat't'+nú(nt)	-n
	wet(lc)	1sERG
	I managed to wet it.	

anticausative	ɬ+ʔ+ˤát'
	wet(ac)
	It got wet.

causative	ɬˤat'+st	-íxʷ
	wet(caus)	2sERG
	You let it get wet.	

Only a few State bases have all the derivates that //ɬˤat'// does. The

general pattern for these is that if a State base has a closed transitional

alternant, then it will have the open transitional, possessional, reflexive,

limited control, anticausative derivates. If a State base does not have the closed

transitional alternant, then it will have only the limited control, anticausative,

and causative alternants. A base of this type is exemplified in Table 4.

Table 4. Alternate State Paradigm

//piq//

default	(t'i) piq
	ev white
	It's white.

closed transitional	*

open transitional	*

possessional	*

dative	*

reflexive	*

limited control	pəqq+núnt -x^w
	white(lc) 2sERG
	You managed to get it white.

anticausative	p+ʔ+aq
	white(ac)
	It turned white.

causative	pq+st -ín
	white(caus) 1sERG
	I made it white.

There is a widespread ambiguity in the aspectual interpretation of States

that makes them difficult to identify. G. Carlson's (1977) distinction between

stage-level and individual-level predicates provides one explanation for the aspectual ambiguity of States. As Carlson observes, 'stages aren't things that simply **are**; they are more akin to things that **happen**' (1977:448). Thus a stage-level interpretation of the argument of a stative predicate will result in a process reading of the predicate. In their basic, individual level reading, States are recognized by speakers as situations in which no one 'does anything'. In addition, the more a State is perceived as beyond the control of its argument, the less likely it is to have a process interpretation. For example, the States //q'alt// RAW and //sílx‴aʔ// BIG, GREAT do not form causative process alternants. The typical human agent of a causative cannot make something raw (as in uncooked) or big (in the sense of imposing or great). In fact, //q'alt// is perceived as so completely static that it has neither an anticausative nor a limited control alternant. Speakers often disagree over whether a particular base lends itself to a process interpretation. Sarah Peterson (of Keremeos, B.C.) felt strongly that //x̌al// CLEAR referred to the clarity of the sky. She rejected anticausative, causative, and limited control alternants of this base. Delphine Derrickson (of West Bank, B.C.) understood //x̌al// to have such alternants. In my work with Peterson, Derrickson, and Clara Jack (of Penticton, B.C.), I came to recognize persistent disagreement over the derivational possibilities of a given base as a sign that the base was a State.

The point is that many, if not most, States easily shift between an LCS

that encodes the semantic operator *be* and one that encodes an act. When a

State is understood to refer to an act, it can have stem alternants that name

events. This is the only base type of the three whose alternants do not show the

prototypical ES of the base. This ontological mutability of States is, perhaps,

their defining characteristic.

3.5 Summary. Okanagan stems are formed from bases of four kinds.

Three of these base types are situations. The fourth base type names entities.

The three situation types of Okanagan are Transitions, Processes, and States.

Each of these situation types has a distinctive Event Structure (ES) in their

lexical representations. Transitions and Processes form stem aspect alternants

that have an ES that matches that of their base type. States, by contrast, have

stem alternants with the ES of a Transition (e.g. the anticausative derivate) or

of a Process (e.g. the causative derivate). The fact that entities lack stem aspect

alternants suggests that they do not have Event Structure and are therefore not

situations. In (85), I summarize the three Event Structures instantiated in

Okanagan situations, and group the stem aspect alternants according to their ES

type.

(85) $[P, S]_{Transition}$ $[e]_{State}$ $[e_1...e_n]_{Process}$

default Transition	default State	default Process
closed transitional		causative
open transitional		
possessional		
dative		
reflexive		
limited control		
(transitional, possessional)		
anticausative		

Each of the stem alternants under the Transition column is formed from Transition type bases and not from Process bases. Each of the stem alternants in the Process column is formed on Process bases and not from Transition bases. States form stem aspect alternants from both the Transition subparadigm and the Process subparadigm. States are defined by this ontological mutability.

Stem aspect WFRs that are diagnostic of base classes do more than specify the ES of the stem alternant. These rules also add information about the agent modality of a stem and the selectional restrictions in LCS. In (86), I summarize the agent modality and/or selectional restrictions associated with each stem aspect WFR discussed in this chapter. ('none' indicates no restrictions; 'n/a' indicates that the stem type does not have this argument type.)

(86)

Restrictions on:	External Arg.	Internal Arg.
default Transition	none	generic
default Process	none	n/a
default State	none	n/a
closed transitional	none	referential
open transitional	none	referential
possessional	animate	possessed by animate, referential
dative	animate, efficient	animate
reflexive	animate, efficient	co-referential w/external argument
limited control transitional	ambiguous control	referential
limited control possessional	ambiguous control	possessed, referential
anticausative	none	n/a
causative	ambiguous control	referential

The features and subparadigms discussed in this chapter give a broad view of

the kinds of constraints and classes Okanagan speakers must observe when forming

words. By themselves, however, aspectuo-modal properties are not sufficient to

explain all of the major word formation constraints in the language. Two stems may

belong to the same aspectual class in terms of their ES, but belong to different

inflectional classes because of other lexical properties. This means that the criteria for

stem formation differ from those of grammatical word formation. Inflectional classes

are conditioned by the distinction between transitive and intransitive stem types.

Transitive stems encode a referential internal argument at LCS; all other events are are

coded in intransitive stems. The transitive/intransitive distinction does not control the

derivational possibilities of a base; in fact, argument structure is a property of stems

only. All bases that refer to situations have transitive and intransitive stem alternants.

Only ontological distinctions, revealed by the three derivational paradigms, serve to

classify such lexemes in the derivational classes Transitions, Processes, and States.

Chapter 4. Lexeme category

4.0 Introduction. As demonstrated in the previous chapter, the notion

situation type is an important one in the description of Okanagan word

formation. The conceptual complement of the situation is the notion *entity*; it

too, is instantiated in the constraints on word formation in Okanagan. The

ontological distinction between situations and entities is grammaticized in

Okanagan as a contrast between verbs and nouns. Situations are encoded as

verbs, while entities are encoded as nouns. A number of analysts have argued

that this pattern of grammaticization is universal and reflects the conceptual

basis of language (e.g. Davidson 1980, Givón 1979, 1984, Hopper and

Thompson 1980, 1984, Jackendoff 1983, Langacker 1987, Schachter 1985, and

Frawley 1993). Frawley 1993 makes a cross-linguistic generalization as

follows:

> Change is associated with temporality, and temporality and
> change therefore motivate the categoriality of verbs, just as
> atemporality and persistence motivate the categoriality of nouns
> (p. 142).

Frawley also notes that verbs define a relatively temporal relation in

conceptual space. Nouns encode relatively atemporal regions in semantic or

conceptual space. The most salient property of situations/verbs is a temporal

relation or scale. This temporality is exploited conceptually and linguistically;

the result is what we recognize as the aspectual categories of a language. By contrast, the most salient property of entities/nouns is spatial or conceptual extent, in which temporal relations (and hence aspectual categories) are of little or no relevance. Thus it is that languages encode aspectual categories in the verbal system, and few, if any, mark these categories in their nominal systems.[1]

Cross-linguistically, the differences between nouns and verbs are often subtle; however, if we assume that the noun/verb distinction arises from a universal, conceptual distinction between entities and situations, then the grammatical differences between nouns and verbs do not need to be elaborate. The data in this chapter reveal both the subtlety and strength of the noun/verb contrast in Okanagan. In test after test, Okanagan provides evidence against the claim that Salish languages generally lack the noun/verb contrast.[2] I refer to the recent literature describing the lack of a noun/verb contrast as supporting

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[1]Tense/aspect distinctions in the nominal system have been reported for a handful of languages including Kwakw'ala and Marshallese (Anderson 1985). The rarity of such reports may prove the rule. Also, such claims may have more to do with terminology than grammar. As Palmer 1971 observes, English might be analyzed as marking tense in the nominal system on the basis of such words as *ex-husband* (past), *fiancée* (future), and *grandfather* (pluperfect) if meaning were the only criterion for tense. I assume, following Vendler 1957, that there is an inherent relationship between verbs and time. Aspect-like categories marked on nouns may be open to other interpretations.

[2]For example, see Kinkade 1983, Kuipers 1968, Jelinek and Demers 1982, 1994, and Thompson and Thompson 1992.

the 'single class hypothesis', or the claim that some Salish languages have 'a single open lexical class, the category predicate' (Demers and Jelinek 1984:40).

In essence, the single class hypothesis claims that the distinction between situations and entities is coded at the phrasal level of grammar, but not in the lexicon. That is, proponents of the single class hypothesis recognize a distinction between *predicates* and *arguments* in Salish, but they do not find independent evidence for the distinction between verbs and nouns.[3] The single class hypothesis implies that all of the morphological and syntactic differences between lexical items arise from the syntactic slot in which the lexical item appears. Stated in this way, the single class hypothesis is refuted if there are morphological or syntactic differences between classes of lexical items that do not derive from syntactic position only. Constraints on word formation that are category-dependent constitute strong evidence against the single class hypothesis.[4]

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[3]For example, Kuipers 1968 and Jelinek and Demers 1982 argue this point with respect to the Coast Salish languages, Squamish and Lummi, respectively.

[4]Kinkade 1983 presents evidence against the noun/verb distinction in a number of Salish languages. Despite his legitimate concern that a noun/verb contrast in Salish might be a eurocentric illusion, he allows that evidence of a noun/verb distinction would come from the inflectional, syntactic and semantic domains. This is precisely the kind of data that has come to light in Okanagan, and in other Salish languages, in the years since Kinkade 1983.

A number of Salishanists have argued against the single class

hypothesis with respect to individual Salish languages (Hébert 1983, Hess and

Van Eijk 1985, N. Mattina 1994, Davis and Matthewson 1995, Demirdache

and Matthewson 1995, Beck 1995). Many of the extant descriptive grammars

assume that there are noun and verb lexical categories, without further

discussion (e.g. Van Eijk 1985, Kuipers 1974, Vogt 1940). Given this

literature, I conclude that Okanagan is not alone among Salish languages in

distinguishing nouns from verbs, although the tests may differ from language

to language. In this chapter, I indicate the categorial class of Okanagan

lexemes using the feature [±V]. This feature belongs to the matrix that

identifies bases classes. Like the features for base aspect described in Chapter

3, the category feature [±V] is inherited by all derivates of a base, unless a

category-changing WFR produces the derivate. The aspectual and category

features of a derivate allow that stem to be properly inserted into phrase

structure. In this Okanagan differs little from other languages, like English,

where categoriality is defined both lexically and syntactically.

In the sections 4.1 through 4.3.3, I give six constructions that are based

on noun lexemes (henceforth simply *nouns*). In sections 4.4 through 4.7, I

describe four constructions based on verb lexemes (henceforth simply *verbs*). I

present these particular tests because they are exclusionary; lexemes that test as

nouns fail the tests for verbs, and lexemes that test positively as verbs fail the tests for noun. The results of these tests are summarized in section 4.8. I also summarize the properties of nominalizations and adjectivalizations. In section 4.9 I describe the indirect relationship between conceptual categories and lexical categories. I also develop a featural classification for all open class lexemes of Okanagan.

4.1 Nouns in possessive inflection. All nouns may be inflected to express the person and number of a possessor. Possessive markers are used solely to express the possessor relation, in NPs and predicate nominals (PN) (see also section 2.2). I repeat the person-number paradigm of possessive markers in (1).[5]

(1) 1   i(n)-   -tət
     2   a(n)-   -əmp
     3   -s   -s-lx

The forms of the possessive markers (POSS) are identical to the forms of the genitive subject markers. However, unlike the possessive markers, genitive subject markers are interpreted as agentive subjects. Compare the possessed nominals in (2) and (3), with the genitive subject in (4). (*in-* and *an-* are realized as *i-* and *a-*, respectively, before *s* and stem-initial *ł* of kin terms.)

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[5] I write these inflectional markers as affixes, although historically they were probably clitics (Kinkade, p.c.).

(2) in-   q'a?xán
     1sPOSS   shoe
     my shoe

(3) kʷụ   an-   tum'
     1sABS   2sPOSS   female's mother
     I am your mother.

(4) way' ixí? i-   s-   xʷuy
     pt   dpr   1sGEN   asp   go
     I'm going.

In addition to the difference in interpretation between possessive

markers and genitive subject markers, the possessive markers show a contrast

between realized and unrealized possession. Realized or actual possession is

marked with the forms in (1). Unrealized possession (UnPOSS) marks the

noun stem as 'about to be possessed'. It is marked by the prefix *kł*- and a

possessive affix, as shown in (5).[6] (*kł*- is realized as *k*- before *s* and *ł*.)

---

[6]Translations of the NPs in (5) usually are of the form 'someone's N-to-be'
(e.g., *ikł-cítxʷ* 'my house-to-be'). This type of translation gives the impression
that the noun has inceptive or inchoative aspect. My translation is awkward
English, but it is more representative of the modality expressed in unrealized
possession.

(5) a. a-   kɬ-   p'ína?
         2s   UnPOSS   basket
         your basket (lit. 'yet-to-be-your basket')

     b. i-   kɬ-   cítxʷ
         1s   UnPoss   house
         my house (lit. 'yet-to-be-my basket')

     c. k-   slax̌t   -s
         UnPOSS   friend 3s
         his friend (lit. 'yet-to-be-his friend')

The possessed noun is not interpreted as inchoate. Rather, it is the relationship between the possessee (the noun) and the possessor that is not fully realized. The category *unrealized possession* indicates that possession of the possessee is only highly probable or possible, in the view of the speaker. Unrealized possession is therefore a modal category. It is expressed inflectionally, as a subparadigm of the category *possessor person*.

The difference between nouns in realized and unrealized possession is best illustrated when nouns occur in NPs that are the arguments of possessional and dative transitive verbs (section 3.4.1.3 and 3.4.1.4). Possessional and dative verbs differ in that the dative does not allow a possessed theme NP. (6) illustrates a dative verb with an unpossessed, generic theme NP. A dative verb with a possessed theme nominal is ungrammatical, as shown in (7).

(6) kʷuᴗ ʕac+xít   -xʷ   i?   tᴗ   snkɬc'a?sqáx̌a?
     1sOBJ tie(dat)   2sERG   art   cs   horse
     You tied a horse for me.

(7)　　*kʷu͜　　ʕac+xít　　-xʷ　　　　u͜　　in-　　　kəwáp
　　　　　1sOBJ　　tie(dat)　　2sERG　　cs　　1sPOSS　　horse
　　　　You tied my horse for me.

If the theme NP is possessed, a possessional verb must be used to express this

idea, as in (8).

(8)　　kʷu͜　ʕac+łt　　　-íxʷ　　　　in-　　　kəwáp
　　　　1sOBJ　tie(pos)　　2sERG　　1sPOSS　　horse
　　　　You tied my horse for me.

The incompatibility of possessed themes with dative verbs does not

extend to themes that are only likely to be possessed, i.e. themes that are

marked for unrealized possession. That is, datives verbs may have theme NPs

marked for unrealized possession, as in (9).

(9)　　kʷu͜　ʕac+xít　　　-xʷ
　　　　1sOBJ　tie(dat)　　2sERG

　　　　　　　iʔ　　　u͜　　i-　　kł-　　　kəwáp
　　　　　　　art　　cs　　1s　　UnPOSS　horse
　　　　You tied the horse (that will be mine) for me.

Possessional verbs accept theme NPs in either realized or unrealized modes.

Compare (8) with (10).

(10)　　kʷu͜　ʕac+łt　　　-íxʷ　　　i-　　kł-　　　kəwáp
　　　　1sOBJ　tie(pos)　　2sERG　　1s　　UnPOSS　horse
　　　　You tied the yet-to-be-my horse.

Verbs do not inflect for unrealized possession. Speakers report that the

forms in (11) are uninterpretable.

(11)　a.　*a-　　kɫ-　　　　xʷuy
　　　　　　2s　　UnPOSS　　go

　　　b.　*i-　　kɫ-　　　　p'íc'+nt
　　　　　　1s　　UnPOSS　　pinch(ctr)

　　　c.　*kɫ-　　　　laẍtm+nt　-s
　　　　　　UnPOSS　　befriend(ctr)　3s

Only nouns inflect for realized and unrealized possession.

4.2. Derivation based on nouns. Some derivational WFRs apply to nouns and not verbs. I describe two WFRs that apply only to nouns in 4.2.1 and 4.2.2. Both of these derivational WFRs are category-changing rules. They form verb stems from nouns.

4.2.1 'have-something' verbs. A derivational WFR applies to nouns to form verb stems that mean 'someone has something'. The prefix *kɫ-* is the formative associated with this WFR. The output of the rule is an intransitive verb that inflects with intransitive (ABS) person markers. (*kɫ-* is realized as *k-* before *s* and *ɫ*.)

(12)　a.　kn‿　　　　kɫ+p'ína?
　　　　　　1sABS　　have-basket
　　　　　　I have a basket.

　　　b.　kʷ‿　　　　kɫ+citxʷ
　　　　　　2sABS　　have-house
　　　　　　You have a house.

c.   k+slax̌t
       3sABS have-friend
       He/she has a friend.

Third person forms of this derived verb type allow existential readings,

as in (13) and (14).

(13)   aɬíʔ   kɬ+psʕáyaʔ   axáʔ   əl   təmxʷúlaʔxʷ
       dpr   have-foolish_ones dpr   on   earth
       There are no good people here on earth. GW851

(14)   ilíʔ   k+səxʷmrím   uɬ   aɬíʔ   nak'ʷaʔ   kɬ+mrimstn
       dpr   have-doctor   conj   dpr   neg   have-medicine
       There was a doctor there, but he didn't have medicine. GW623

Verbs cannot undergo the 'have-something' WFR. Speakers report that

the forms in (15) are not interpretable.

(15)   a.   *knⱼ   kɬ+xʷuy
               1sABS   have-go

       b.   *knⱼ   kɬ+limt
               1sABS   have-happy

       c.   kʷⱼ   kɬ+p'ic'm
               2sABS   have-pinch

4.2.2 'get-something' verbs. A derivational WFR applies to nouns to

form a verb stem that means 'someone get something'. The formative *taʔxʷ-* is

associated with this WFR. The output verb is intransitive, and inflects with

intransitive person markers. (The connector suffix *ɬ* usually occurs between

taʔxʷ and the noun stem. It is not present if the noun stem begins with *s*.)

(16) way'   q'ʷəyʕás   taʔxʷ+sqláw',
     well   black-one   got-money

     uɬ   taʔxʷ+ɬ+cítxʷ   iʔ   sx̌ʷílmən
     and got-house   art devil

The Black Man got the money and the Devil got the house. COD209

(17) kʷ‿   taʔxʷ+sck'ʷúl'
     2sABS   got-work

You got a job.

(18) aɬíʔ   x̌'lal   i-   sx̌ílwiʔ,
     because   dead   1sPOSS   husband

     uɬ   axáʔ   kn‿   taʔxʷ+ɬ+nq'ʷíctn
     and dpr   1sABS   got-new-husband

My husband is dead and I got a replacement husband. COD208

Like 'have-something' verbs, 'get-something' verbs may have an

existential interpretation as shown in (19) and (20).

(19) ixíʔ uɬ mət náx̌əmɬ   taʔxʷ+ɬ+xwíɬ
     then perhaps   got-road

Maybe they have roads there. COD208

(20) taʔxʷ+ɬ+t'əxʷtwís
     got-airplanes

They had airplanes.

Verbs do not undergo the 'get-something' WFR. Speakers find the

forms in (21) ill-formed.

(21) a.   *kn‿   taʔxʷ+ɬ+xʷúy
          1sABS   get-go

     b.   *kʷ‿   taʔxʷ+ɬ+límt
          2sABS   get-happy

c.   *p̌   taʔxʷ+ɬ+ʔitx
      2pABS   get-sleep

4.2.3 Category conversion.

Some nouns are homophonous with a verb stem whose meaning is closely related to the noun. I analyze these as cases of *category conversion*, a phenomenon that involves affixless category change. Cross-linguistically, category conversion is widespread when the direction of derivation is N → V, but rare in V → N derivation. Hopper and Thompson (1984:745) observe that 'languages tend to have special nominalizing morphology, but no special **productive** verbalizing morphology'. This 'apparently universal generalization' holds for Okanagan.[7] A small, semantically restricted group of nouns have formally identical verbal counterparts. The semantic restriction is that the noun must refer to an article of clothing or instrument of (human) grooming. The verbal counterparts of the nouns in this group are eligible for middle formation (section 2.2.2.6). In middle aspect, an agent performs a self-directed act of dressing or grooming. The formative for the middle WFR is the suffix *-(V)m*. The verb stems in the (a) examples of (22)-(27) have homophonous nominal counterparts (shown in their possessed forms, (b) examples).

---

[7]Hopper and Thompson limit the scope of their generalization to those derivational processes that simply shift a lexeme into the other category. Rules such as 'have-something' (section 4.2.1) or 'get-something' (section 4.2.2) formation are excluded from the generalization because they add semantic content to the noun base.

(22)

a. kn◡   qʷácqn+m   b. in-   qʷácqn_N
    1sABS   hat_V(mid)   1sPOSS   hat
    I put on a hat.   my hat

(23)

a. kn◡   lasmíst+m   b. in-   lasmíst_N
    1sABS   shirt_V(mid)   1sPOSS   shirt
    I put a shirt on.   my shirt

(24)

a. kn◡   pikst+m   b. in-   píkst_N
    1sABS   glove_V(mid)   1sPOSS   glove
    I put my gloves on.   my glove(s)

(25)

a. kn◡   q'a²xán+m   b. in-   q'a²xán_N
    1sABS   shoe_V(mid)   1sPOSS   shoe
    I put my shoes on.   my shoe(s)

(26)

a. kn◡   x̌ayƛ'xn+m   b. in-   x̌áyƛ'xn_N
    1sABS   pants_V(mid)   1sPOSS   pants
    I put my pants on.   my pants

(27)

a. kn◡   siswxn+m   b. in-   síswxn_N
    1sABS   socks_V(mid)   1sPOSS   sock
    I put my socks on.   my sock(s)

Evidence that the stems in the (a) forms of (22)-(27) are verbs comes

from the fact that these stems form other verbal stem types, including closed

transitionals.

(28) qʷacqn+(n)t -xʷ
      hat(ctr)   2sERG
      You put a hat on him.

(29) lasmíst+(nt) -n
      shirt(ctr)   1sERG
      I put a shirt on him.

They also may inflect for customary aspect, as in (30) and (31).

(30) kn◡   c-   qʷacqn
      1sABS   cust   hat_v
      I have a hat on.

(31) kn◡   c-   lasmíst
      1sABS   cust   shirt_v
      I have a shirt on.

The data in (32) through (34) show that nouns do not form middles ((a)

examples), closed transitionals ((b) examples), or stems in customary aspect

((c) examples).

(32) a.   *kn◡   p'ína?m
             1sABS   basket(mid)
             (I am basketed.)

      b.   *p'ína?+nt   -xʷ
             basket(ctr)   2sERG
             (You basketed him.)

      c.   *c-   p'ína?
             cust   basket
             (It's being a basket./It's basketed.)

(33) a. *kn͜ síyaʔm
         1sABS   sarviceberry(mid)
         (I am sarviceberried.)

      b. *síyaʔ+nt   -xʷ
         sarviceberry(ctr)   2sERG
         (You sarviceberried him.)

      c. *c- síyaʔ
         cust   sarviceberry
         (It's serviceberried.)

(34) a. *kn͜ snkʷúmcntnm
         1sABS   storage_place(mid)
         (It's storage-placed.)

      b. *snkʷúmcntn+(n)t   -xʷ
         storage_place(ctr)   2sERG
         (You storage_placed it.)

      c. *c- snkʷúmcntn
         cust   storage_place
         (It's storage_placing.)

The data in (22) through (31) suggest that there are nominal and verbal

stems if the nominal refers to an item of clothing or grooming. That is, there

are homophonous noun-verb pairs in Okanagan that are like English noun-verb

pairs for *golf, hike, edge, toast, dress* and *shower*, except that the Okanagan

noun-verb pairs are restricted to a small semantic domain. Within this limited

domain (items of clothing and grooming), N → V is accomplished without

verbalizing morphology, as predicted by Hopper and Thompson 1984.

Category change in the direction of V → N is consistently marked by a number

of affixes. (I discuss V → N WFRs in section 4.7). Following cross-linguistic

patterns, category conversion in Okanagan applies to nouns, but not to verbs.

4.3 Nouns in the syntax. Nouns head NPs in an Okanagan clause.

They are introduced by a determiner *iʔ* or a deictic such as *ixíʔ* 'that' or *axáʔ*

'this'. Outside of the predicate nominal construction, nouns are not predicative;

they have no propositional force in isolation from a verb or predicative

particle. In the following sections, I describe three syntactic constructions--

predicate nominals, prepositional phrases, and modified noun phrases--that are

distinct from verbal clauses.

4.3.1 Predicate nominals. All nouns are eligible for predicate nominal

(PN) formation. Despite their formal resemblance to verbal constructions,

predicate nominal clauses are interpreted as equational propositions, meaning

'NP = NP', as shown in (35) and (36).[8]

(35) kʷ͜   snʔímaʔt
      2sABS   grandson
      You are a grandson.

(36) kʷ͜   in-   tum'
      2sABS   1sPOSS   female's mother
      You are my mother.

---

[8]The predicate nominal construction typically has a kin or affinal term as
the predicate. Other types of nouns appear in the PN construction in
storytelling contexts. Expressions such as *kʷ_incítxʷ* 'you are my house' or
kn_citxʷ 'I am a house' involve anthropomorphization or metaphor and are
hallmarks of poetic or humorous speech.

The propositional content of predicate nominal clauses is limited to the expression of identity and interpersonal relation, a functional type that is widely attested cross-linguistically (Amith and Smith-Stark 1994, Beck 1995).[9] The fact that there are formal resemblances between the predicate nominal clauses and verbally-headed intransitive clauses (Vi) might suggest that the nominal head of a PN is basically predicative, and therefore, verbal.[10]

---

[9]Amith and Smith-Stark 1994 observe that languages make use of transitive (*I call you brother*) or predicate nominal (*You are my brother*) constructions to express kinship relations. Cross-linguistically, predicate nominal constructions have intransitive case-marking. Yet when the head of the predicate nominal clause is a kin or affinal term, predicate nominal constructions encode two arguments. The semantic roles of these arguments are not like those of a typical transitive verb, however, so that the interpretation of predicate nominals depends heavily on the fact that the predicate nominal construction has a nominal head, the transitive clause a verbal head. Unlike Hopi, Huichol and Chinook, Okanagan uses only the predicate nominal construction to express interpersonal relations. In fact, the pattern of inflection for predicate nominals in Okanagan is cross-linguistically unremarkable: the nominal, or *relator*, names the relationship, a subject proclitic or deictic pronoun codes the features of the argument that is identified with the relator, and a possessive marker codes the second argument. The Hopi equivalent of (34) is given in i. *nguʔu* is the relator. The proclitic *um* is the grammatical subject, and the possessive prefix is the second argument.

    i.   um   i-   ngu-'u
           2sSub   1sPOSS   mother-pausal
           You are my mother. (cited in Amith and Smith-Stark 1994:514).

[10]It is standard to assume that the terms *predicate* and *verb*, just like *argument* and *noun* are not synonymous. Some of the earliest arguments for and against the single class hypothesis were based on the opposite assumption, that anything used as a predicate was basically (i.e. lexically) verbal. In Okanagan, there are formal differences between nouns in predicate function and verbal predicates, so that the noun/verb contrast is more than definitional.

However, there are three ways that PNs differ morphosyntactically from verbally-headed intransitive clauses (Vi's).

First, the person marking paradigm used with PN's is distinct from that used to inflect the verb in Vi clauses. In PNs, the first and second subject persons are marked by the proclitics shown in (37).

(37)　1　kṇ, kʷuᴗ　　kʷuᴗ
　　　2　kʷᴗ　　　　pᴗ

The first person singular has two forms. The first is used when the nominal is not possessed, as in (38); the second is used when the nominal is possessed (39).

(38)　kṇ　suknaqínx
　　　1sSub　Okanagan
　　　I am (an) Okanagan.

(39)　kʷuᴗ　lʔíw　-s
　　　1sSub　father　3sPOSS
　　　I am his father.

The first singular absolutive person marker is *kn*ᴗ only.

(40)　a.　kṇ　　　ʔitx
　　　　　1sABS　　sleep
　　　　　I slept.

　　　b.　*kʷuᴗ　　ʔitx

Third subject is indicated differently in PN's and Vi's. In the Vi, the absolutive subject marker is ∅, as in (41). A PN with third subject is expressed with an overt deictic pronoun as in (42) and (43).

(41)   ʔitx
        sleep(3sABS)
        He slept.

(42) a.   axáʔ   an-   qaqnáʔ
             dpr   2sPOSS   grandmother
             This one is your grandmother.

       b.   an-   qaqnáʔ
             2sPOSS   grandmother
             your grandmother
             *She is your grandmother.

(43) a.   ixíʔ   lʔíw
             dpr   father
             That one is a father.

       b.   lʔíw
             father
             *He is a father.

The deictic pronoun that serves to mark third person subject in a PN must be adjacent to the noun, as is typical of the equational clause type (section 2.1). Non-third persons do not require a deictic pronoun subject, although an independent pronoun is possible.

(44) anwí kʷ˯   in-   qaqnáʔ
        you   2sSub   1sPOSS   grandmother
        You are my mother.

(45) incá knᵕ lʔíw
        I   1sSub father
        I am a father.

The second difference between a PN and a Vi is that a PN inflects for future and prospective aspect, while Vi's may inflect for a wider range of

sentential aspects. The aspects in which PNs can be found are shown in (46).

Those of Vi's are shown in (47).

(46) a.   kn‿   kɬ-   naʔník'mn   (future)
             1sABS   fut   knife
             I will be a knife.

      b.   kn‿   ks-   naʔník'mn+aʔx   (prospective)
             1sABS   irr   knife(con)
             I am going to be a knife.

(47) a.   i-   ks-   t'uxʷt   (future)
             1sGEN   irr   fly
             I will fly.

      b.   kʷ‿   ks-   t'úxʷt+aʔx   (prospective)
             2sABS   irr   fly(con)
             You are about to fly.

      c.   kʷ‿   s-   t'uxʷt+x   (perfect
             2sABS   pcont   fly(con)   continuous)
             You are flying.

      d.   kʷ‿   səc-   t'úxt+x   (continuous)
             2sABS   cont   fly(con)
             You are flying.

      e.   kn‿   ksc-   t'uxʷt   (perfect)
             1sABS   pft   fly
             I have flown.

      f.   kʷ‿   t'uxʷt   (perfective)
             2sABS   fly
             You flew.

      g.   i-   s-   t'uxʷt   (neutral)
             1sGEN   neut   fly
             I fly/flew.

The PN in prospective aspect is not attested in texts. In elicitation

contexts, speakers observed that some predicate nominals in prospective aspect

were better than others. For example, they rejected *kn̩_ks(s)qltmíx"aʔx 'I am

going to be a man' in favor of (48).

(48) kn̩‿   ks-   qltmx"wílx+aʔx
      1sABS   irr   become_man(con)
      I am going to become a man.

In (48), the stem qltmx"wílx is an intransitive verb, in anticausative stem

aspect. It is inflected for prospective (sentential) aspect. As an intransitive verb

in prospective aspect, it cannot express a possessor argument, as shown in

(49).

(49) *kn̩‿   a-   ks-   qltmx"wílxaʔx
      1sABS   2sPOSS   irr   become_man(con)
      (I am going to be your man.)

In the PN construction, both a subject and possessor are possible in future

aspect.

(50) k"u‿ a-   kɬ-   citx"
      1sSub 2sPOSS   fut   house
      I will be your house.

To express prospective aspect with respect to the notion of manhood,

the speakers preferred the Vi construction to the PN construction. Where

prospective aspect is possible with predicate nominals, it seems that the

speakers can generalize the notion 'future' to two constructions, and they accept, if not produce, both. Despite the sporadic borrowing of prospective aspect from the verbal paradigm, PNs do not form any other aspect from the sentential aspect paradigm. This would be an arbitrary distributional difference if PNs were not distinct from Vi's.

The third way in which PNs and Vi's differ is in the morphological realization of future meaning. The prefix that marks future in a PN is *kɬ-*. A Vi in future has the irrealis prefix *ks-*.[11] The distinctiveness of the two WFRs that involve *kɬ-* and *ks-* is revealed in three ways. First, their phonological expression is only partially isomorphic (Mattina and Mattina 1995). *ks-* is *k-* before stem-initial *s* (51a) and *ɬ* (51b). If the base begins in *ɬ*, *ks-* is realized as *ks-* (51c).

(51)   a.   kʷ‿   i-   k(s)-   síwm
            2sOBJ 1sGEN   irr   ask
            I will ask you.

       b.   kn‿   k(s)-   ɬ-   xʷúy+aʔx
            1sABS   irr   back   go(con)
            I am going back (home).

       c.   kʷ‿   i-   ks-   ɬwínəm
            2sOBJ 1sGEN   irr   leave
            I am going to leave you.

By contrast, *kɬ-* is *k-* before any *s* and *ɬ*. This is illustrated in (52).

---

[11] *ks-* also occurs in transitive clauses (section 2.1.1).

(52) a.   ixíʔ   i-   k(ɬ)-   sqʷsqʷsiʔ
             dpr   1sPOSS   fut   child
             That will be my child.

       b.   ixíʔ   i-   k(ɬ)-   ɬúmən
             dpr   1sPOSS   fut   spoon
             That will be my spoon.

Because *ks-* and *kɬ-* are *k-* before *s*, their formal differences are neutralized in many tokens, as in (51a) and (52a). However, their formal distinctiveness (cf. (51b) and (52b) corresponds to a difference in their distribution. *kɬ-* 'future' occurs with only with nouns (53), while *ks-* 'irrealis' occurs with verbs (54).[12]

(53) a.   kʷ⌣   kɬ-   xʷʕaylx
             2sSub fut   fox
             You will be fox.

       b.   *kʷ⌣ks-xʷʕaylx

(54) a.   a-   ks-   cʼəpcʼípsəm
             2sGEN   irr   close_eyes

---

[12]Speakers do sporadically use *ks-* with a noun in predicate function as in (i) (Mattina and Mattina 1995). The expected form is that in (ii).

(i)   way'   axáʔ   a-   ks-   ənʔaʔmútən
          prt   dpr   2sPOSS   irr   seat
          This will be your seat.

(ii)   way'   axáʔ   a-   kɬ-   ənʔaʔmútən
          prt   dpr   2sPOSS   fut   seat
          This will be your seat.

The similarities between the two prefixes and their functions probably lend themselves to speaker reanalysis. Moreover, individual speakers may be inclined to treat predicate nominals more as verbs, or more as nouns. In other contexts, *ks-* and *kɬ-* are in complementary distribution.

You will close your eyes.

b.   *a-kɬ-c'əpc'ípsəm

Finally, *kɬ-* 'future' is morphophonologically, distributionally, and

functionally related to *kɬ-* 'unrealized possession'. In section 4.1, I described

unrealized possession as encoding an epistemic modality. It expresses the

possibility or likelihood that a possessional relationship will occur with respect

to a possessor and a nominal. Cross-linguistically, markers of possibility

frequently develop the sense of a prediction (Bybee et al 1994). The key

function of the future is to make a prediction. Therefore, it is very likely that

the future meaning of *kɬ-* developed from the meaning of the *kɬ-* that marks

unrealized possession on nominals. The meaning difference between *future* and

unrealized possession pivots on the the reference to the possessive relationship;

the category *unrealized possession* is generalized to the notion 'unrealized', and

hence to *future*. A concomitant of this functional shift is the loss of the

requirement that *kɬ-* occur with a possessive marker. That is, *unrealized*

possession always implies a possessor (55), while the *future* marker does not

(56).

(55)	a.	wik	-n	ɬ	i-	kɬ-	citxʷ
		see	1sERG	cs	1s	UnPOSS	house

I saw the yet-to-be-mine house.

b.   *wik -n   ɬ   kɬ-citxʷ

(56) a.   kʷuᵥ   a-   kɬ-   ylmíxʷəm
          1sSub   2sPOSS   fut   chief
          I will be your chief.

      b.   kʷuᵥ   kɬ-   ylmíxʷəm
          1sSub   fut   chief
          I will be chief.

Unrealized possession and *future* are closely related categories. They both

occur on nouns only. *ks-* 'irrealis' occurs only on verbs. It is found in

aspectuo-modal constructions that include prospective aspect, and negative

imperative, deontic, and epistemic moods.

The formal and interpretational differences between PNs and Vi's are

sufficient to indicate a basic distinction between clauses headed by a noun in

predicate function and verbal predicates. The fact that all nominals can be used

predicatively in the PN construction does not support the single class

hypothesis. The special properties of the PN derive from the category of the

predicate, else the differences between PNs and Vi's are unexplained.

4.3.2 Nouns as prepositional objects. Several proclitics have

prepositional function in Okanagan, including the proclitic *t*.[13] *t* marks a

---

[13]A few other proclitics serve both prepositional and complementizing
functions, e.g. *k'əl* 'to, toward, from, because' and *əl* 'in, at, while'. *t* alone is
consistently a preposition. One verb, *cʔx̌iɬ* 'do like' or 'seem as if' requires *t*
before its complement. The complement may be verbal, as in (i).

(i)   way'   kiʔ   cʔx̌iɬ ᵥ   ənt'aʔíls
        prt   when seem   come_to_one's_senses
        That's when he came to himself. COD222

variety of grammatical and semantic categories. It indicates grammatical

function (see also section 2.1.2) and a several of semantic case roles. It is also

used to mark emphatic transitive subject NPs. As a marker of grammatical

case, *t* cliticizes to nominals in these functions: transitive subject (57)-(58),

dative theme (59), and intransitive generic object (60).

(57)	lut	t'ə	ks-	m'i⁊+núⁱt	-səlx
neg	ev	irr	know(lc)	3pERG

| i⁊ | t‿ | n⁊əⁱna⁊sqlíxʷtn
--- | --- | --- | ---
| art | cs | maneater

The maneater won't know the difference. GW897

(58)	way'	myp+nú	-s	t‿	incá	kʷúlstm	-ən
prt	know(lc)	3sERG	cs	I	send	1sERG

He'll know I sent you. GW141

(59)	kʷni+xt	-m
grab(dat)	1pERG

| i⁊ | t‿ | kⁱ- | ənt'k'ʷmín | -s
--- | --- | --- | --- | --- | ---
| art | cs | UnPOSS | coffin | 3s

We'll get him his coffin. COD56

(60) | kn‿ | | wikm | i⁊ | t‿ | sƛ'a⁊cínəm
--- | --- | --- | --- | --- | ---
| 1sABS | | see | art | cs | deer

I saw some deer.

t precedes ergative subject nominals inflected for third singular and plural

---

This use of *t* may be a grammatical relic; synchronically it is a small irregularity in the distribution of *t*. When questioned specifically about *t* speakers often change their minds about whether *t* belongs in a particular construction or not. The general pattern of distribution as I have stated it is well attested in texts.

subjects (including Unsub subjects) with first, second, or third singular objects

(57). With first or second person subject reference, *t* is interpreted as an

emphatic marker (58).

As a marker of semantic case, *t* precedes nominals in these roles:

locative (61), *instrument* (62), *source* (63), *path* (64), and *factitive* (65).[14]

(61)   axá?   kʷu͜   ks-   təkʷtəkʷ?úta?x
        dpr   1pABS   irr   travel(con)

               i?   t͜   təmxʷúla?xʷ
               art   prep world
We are going to travel around the country/world. GW5

(62)   səp'nt   -ís   i?   t͜   qəxʷsqáx̌a?tn
        club(ctr)   3sERG   art   prep whip
He clubbed him with a whip. GW34

(63)   kn͜   səc-   húy+x   i?   t͜   sk'íwəlx
        1sABS   cont tired(con)   art   prep old_age
I am tired out from old age. GW37

(64)   tə͜   nɬa?mínk   i?   t͜   stk'másq'ət ki?   xʷuy
        prep next   art   prep sky   sb   go
Right (along) next to the sky he went. GW273

(65)   way'   yəyʕát   k'ʷul'   -lx   t͜   sqilxʷ
        prt   all   turn_into 3pABS   prep humans
They all turned into humans. COD61

The proclitic *t* does not cliticize to stems that contain verbal

---

[14]Factitive complements of *t* occur only with the verb *k'ʷul'* 'turn into N'.

morphology, e.g. verbal person marking, sentential aspect, or stem aspect.[15]

It does not occur in equational clauses or predicate nominal constructions. *t* may be followed by a possessed nominal, if the semantics of the clause head allow it.

(66)   kʷu͜   ʔəɫnmsqáx̌aʔm   -səlx   axáʔ iʔ
        1sOBJ feed(ctr)   3pERG   dpr art

        t͜   i-   ɫəɫqáqcaʔ
        cs   1sPOSS   older brothers
        They are feeding me to her, my brothers. GW194

Unlike other particles in Okanagan that translate as prepositions in English, *t* is unique in its preference for nominal complements. There are at least two other behaviors of *t* that suggest it is basically a marker of case. First, if an NP is in a grammatical or semantic role that is marked by *t*, then both the noun and its modifier are preceded by *t*, as in (67)-(69).

(67)   síwstm+st   -m   -əlx   axáʔ
        drink(caus)   Unsub 3pOBJ   dpr

        iʔ   t͜   kʷəkʷrít   iʔ   t͜   tkɫmilxʷ
        art   cs   golden   art   cs   woman
        The Golden Woman gave them drinks. GW655

(68)   way' nixʷ t͜   k'ʷək'ʷyínaʔ iʔ   t͜   sqláw'
        prt   also cs   a little   art   cs   money

        xʷic'+xt   -xʷ
        give(dat)   2sERG

---

[15]Only nominalized verbs may follow *t*. Nominalizations are describe in section 4.7.

Also a little money give him. GW23

(69) ca?kʷ   axá?   i?   ᒡ   təmxʷúla?xʷ
     perhaps   dpr   art   cs   ground

         uɬ   way'   ks-   n?úcx+nt   -m
         and   prt   irr   track(ctr)   1pERG

         i?   ᒡ   sxʷúytn   -s
         art   prep   tracks   3sPOSS

         i?   ᒡ   snkɬc'a?sqáx̌a?
         art   prep   horse

If [it had gone] along the ground, we could follow him by the horse's tracks. GW680

This repetition of *t* within an NP follows a pattern known cross-linguistically as *case agreement* (Gerdts 1991b). Case agreement identifies the modifier-head as a constituent, whether the subconstituent structure is adjective-noun ((67) and (68)) or possessor-noun (69).

A second property of *t* that suggests that is a preposition is its semantic dependence. Its interpretation is tied to the lexical features of the clause head. Thus, verbs of manipulation or creation tend to take instrumental prepositional phrase, while verbs of motion typically take locative or path prepositional phrases. As a preposition, *t* cannot form equational clauses. That is, *t̲samasc'mqín* does not mean 'it's a computer'. Rather, *t* serves a verbal head by linking nominals to the verb phrase. This arrangement between an argument-taking head (capable of assigning thematic roles) and a preposition is

familiar from many other languages.

4.3.3 Modified nouns. Nouns may be modified by a verb functioning

as an adjective. The verb typically follows the determiner, and is adjacent to

the noun. The data in (70), from texts, illustrate the construction.

(70) a.   iʔ   x̌áʔx̌aʕ   iʔ   skəkʕáka ʔ
           art   sacred   art   animals
           sacred animals   EC165

      b.   axáʔ   ʕant
           dpr   look(imp)

                    iʔ   suknaqínx   nək'ʷcwílxtən   ixíʔ
                    art   Okanagan   villages   dpr
           Look at the Okanagan villages here and there. EC30

      c.   ks-   ckícx+aʔx   kʷúkʷa   iʔ   sqilxʷ
           irr   arrive_(con)   strange   art   people
           Strange people are going to arrive.   EC6

      d.   iʔ   k'əl   sqilxʷ   sənm'aʔm'áy'aʔtn   k'ʷul'nt   -xʷ
           art   toward   Indian   education   work(ctr)   2sERG
           You work towards Indian(-style) education.   EC13

      e.   way'   ixíʔ   mət   iʔ   sílxʷaʔ   siwɬkʷ
           prt   dpr   maybe   art   big   water
           That must be the big water (ocean).   GW276

Although the modified noun construction is rare in texts, the adjective

consistently precedes and is adjacent to the noun.[16] Other word orders are

ungrammatical, as illustrated in (71) and (72).

---

[16]Davis and Saunders 1978 observe that modified nouns in Bella Coola
have the order modifier-noun. They conclude that this order serves to
distinguish modifier-noun constructions from predicate-argument constructions.

(71) a.

iʔ	síłxʷaʔ	iʔ	mlqnups	t'uxʷt
art	big	art	eagle	flew

The big eagle flew.

    b.   *iʔ mlqpnups iʔ síłxʷaʔ t'uxʷt

(72) a.

k'ʼʷul'+xt	-n	t‿	síłxʷaʔ	t‿	citxʷ
make(dat)	1sERG	cs	big	cs	house

I made him a big house.

    b.   *k'ʼʷul'xtn t‿citxʷ t‿síłxʷaʔ

The rigidity of adjective-noun order contrasts with that of a verb and an

argument NP. As shown in (73) and (74), the head of a clause may precede or

follow its argument.

(73) a.

iʔ	kəkəwáp	wəhám
art	dog	bark

The dog barked.

    b.   wəhám iʔ kəkəwáp

(74) a.

t‿	k'ʼʷək'ʼʷyína	iʔ	t‿	sqlaw'
cs	little	art	cs	money

xʷic'+xt	-xʷ
give(dat)	2sERG

Give him a little money. GW23

    b.   xʷic'xtxʷ t‿k'ʼʷək'ʼʷyína iʔ t‿sqlaw'

The word order restriction emphasizes that the verbal element in an

adjective-noun collocation is not functioning as an intransitive predicate.[17]

---

[17]A predicative State lexeme is frequently introduced by the evidential particle t'i. Compare the evidential, predicative construction in (i) with the attributive construction in (ii).

Rather, it has an attributive function that is typical of adjectives. Adjective-

verb collocations are impossible, as shown in (75).[18]

(75)   a.   *sílxʷaʔ t'uxʷt iʔ mlqnups
           (Big fly is the golden eagle)

(i)   t'i piq iʔ kəwáp-s   (ii)   iʔ piq iʔ kəwáp-s
       his horse is white   his white horse

State lexemes are adjective-like in that they can be used referentially as well as attributively. They may be used as a referring expression when the State is characteristic of an individual, at least sufficiently so that it identifies a referent in the discourse.

(iii)   wik-n iʔ piq
        I saw the white one.

In both attributive and referential function, the State lexeme shows neither stem nor sentential aspect. It cannot be inflected for verbal person-marking.

(iv)   iʔ x̌ʷupt iʔ snkɬc'aʔsqáx̌aʔ   a tired horse
       *iʔ x̌ʷəptwílxʷ iʔ snkɬc'aʔsqáx̌aʔ   (a getting tired horse)
       *iʔ x̌ʷəpt+st-ím iʔ snkɬc'aʔsqáx̌aʔ   (a made-tired horse)
       *iʔ səc-x̌ʷupt-x iʔ snkɬc'aʔsáx̌aʔ   (a tiring horse)
       *iʔ in-x̌ʷupt iʔ snkɬc'aʔsqáx̌aʔ   (my tired horse)

[18]Matthewson and Demirdache (1995) discuss a similar finding in Lillooet Salish.

b. *x̌á?x̌a? qʷəlqʷílsts i? k'ʷul'ncútn[19]
(Sacred spoke the creator)

Modified nouns also show case agreement (section 4.3.2) with their

modifier, as in (76).

(76) t'i   łip   i?   ↄ   sílxʷa?   i?   ↄ   siwłkʷ
      ev   disappear   art prep big   art prep water
      She disappeared in the big water. GW338

As discussed in the previous section, verbs do not occur after *t*. As a result,

the forms in (77) are ill-formed.

(77) a.   *(i?)   ↄ   sílxʷa?   ↄ   t'uxʷt
           art   prep bigᵥ   prep flyᵥ

      b.   *(i?)   ↄ   t'uxʷt   ↄ   mlqnups
           art   prep flyᵥ   prep eagleₙ

Verbs in adjectival function can modify only a noun. To do so, the verb

must precede the noun; the verb in adjectival function typically follows the

determiner *i?*. These constraints make reference to the existence of a class of

NPs and nouns in the syntax.

4.4 Verbs and aspect. The general term *aspect* refers to three types of

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[19]The correct way to express the sense of this utterance appears in (i).
    (i)   qʷəlc̣ʷíl'+st   -s   i?   k'ʷul'ncútn
          speak(ctr)   3sERG   art Creator

          uł   t'i   x̌á?x̌a?
          and ev   sacred
          The creator spoke and it was sacred.

In (i), the stative predicate *x̌á?x̌a?* ': icɾeʼl' heads its own VP.

temporal-modal phenomena that I refer to as base, stem and sentential aspect

(section 3.0). Base aspect refers to the ontological classification of lexemes as

situations or entities. In Okanagan, ontological entities are coded in the

grammar as nouns. Situations are coded as verbs. Furthermore, all

situations/verbs have stem aspect derivates, and these inflect for sentential

aspect. Nouns do not participate in either stem aspect derivation or sentential

aspect inflection. In section 4.4.3, I examine the evidence for a stem aspect

referred to in the literature as 'distributive aspect'. This aspectual category has

been described as evidence that aspectual categories apply equally to nouns and

verbs in Salish (Jelinek and Demers 1984). In Okanagan, however, distributive

aspect is strictly a verbal category.

4.4.1 Sentential aspect. Verbs inflect for sentential aspect (section

2.2.1.2); nouns do not. All verb bases occur in all sentential aspects,

regardless of the base type. I show the sentential aspects with a Process base in

(78), and with a Transition base in (79). A noun base is ill-formed in every

sentential aspect type (80).[20]

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[20]As noted in section 4.3.1, some nouns are acceptable in prospective
aspect in the predicate nominal construction. All speakers were able to interpret
this form, but only some said they would use it.

(78)

Sentential aspect	Process base: //xʷuy// GO	
perfective	kn‿xʷuy	I went.
perfect	kn‿ksc-xʷuy	I have gone.
continuous	kn‿səc-xʷúy+aʔx	I am going.
immediate continuous	kn‿s-xʷuy+x	I am going now.
prospective	kn‿ks-xʷúy+aʔx	I am about to go.
customary	kn‿ac-xʷúy	I usually ɡɔ.
future	i-ks-xʷúy	I will go.
neutral	i-s-xʷúy	I went/I am going/ʔ go.

(79)

Sentential aspect	Transition base: //ʕac// TIE	
perfective	kn‿ʕacám	I tied something.
perfect	kn‿ksc-ʕacám	I have tied something.
continuous	kn‿səc-ʕac+míxaʔx	I am tying something.
immediate continuous	kn‿s-ʕac+míx	I am tying something now.
prospective	kn‿ks-ʕac+míxaʔx	I am going to tie something.
customary	ac-ʕacst-ín	I usually tie it.
future	i-ks-ʕacám	I will tie it.
neutral	i-s-ʕác	I tied/ am tying/tie something.

(80)

Sentential aspect	Noun base: //p'ína?// BASKET	
perfective	*p'ína?	*It was a basket.
perfect	*kn̩ksc-p'ína?	*I have been a basket.
continuous	*kn̩səc-p'ína?+a?x	*I am basketting it.
immediate continuous	*kn̩s-p'iná?+x	*I am basketting it now.
prospective	*kn̩ks-p'ína?+a?x	*I am going to basket.
customary (tr)	*ac-p'ína?(+st)	*Someone usually baskets.
customary (itr)	*kn̩əc-p'ína?	*I am basketted.
future	*i-ks-p'ína?	*I will basket.
neutral	*i-s-p'ína?	*I basketted./*I am basketting./*I basket.

Accordingly, verbs that are derived from noun bases do inflect for sentential aspect. This is evidence that a shift in category has taken place. For example, both 'have-something' and 'get-something' verbs are derived from nominal bases. Both kinds of derived verbs inflect for sentential aspect, as shown in (81) through (84).

(81) uɬ   way' pᵕ   ks-   k+sqláw'+a?x
     and   prt   2pABS   irr-   have_money(con)
     You are going to get money. GW18

(82) lut   pən'kín'   ks-   ks+way'   -s
     neg   ever   irr   have_end   3sGEN
     There will never be an end. EC147

(83) knᵕ   səc-   ta?xʷ+sqláw'+a?x
     1sABS   cont   get_money(con)
     I am getting some money.

(84) ks-   taʔxʷ+sɬíqʷ+aʔx
      irr   get_meat(con)
      He is going to get/getting meat.

Nouns do not inflect for sentential aspect. This is plainly seen when a noun is inflected for the nominal category *unrealized possession*, as in (85).

(85) a. *a-   ks-   kɬ-   p'ínaʔ
          2sPOSS   irr   UnPOSS   basket

      b. *a-   ks-   kɬ-   p'ínaʔ
          2sPOSS   irr   UnPOSS   basket

      c. *kn̩   ksc-   kɬ-   ɬsísncaʔ
          1sABS   prft   UnPOSS   older brother

      d. *kn̩   səc-   kɬ-   snɬq'ʼʷútn+aʔx
          1sABS   con   UnPOSS   bed(con)

4.4.2 Stem aspect. Stem aspect derivation alters the temporal and modal features of the base lexeme. All verbs have at least a few of the stem aspect derivates listed in (86), but nouns have none (see also section 3.4).

(86) closed transitional
      open transitional
      possessional
      dative
      reflexive
      middle
      reciprocal
      continuative
      desiderative
      limited control
      anticausative
      causative
      stative

Nouns do not form any of these derivates, regardless of their position in the syntax.

4.4.3 Distributive aspect. In addition to the stem aspects listed above, Okanagan also has a word formation rule that expresses *distributive aspect*. Mithun 1987:221 defines distributive aspect as a phenomenon that

> distribute[s] actions over time, indicating iterative or continuous action, or over space, indicating multiple locations or participants.

In Okanagan, as in many of the Salish languages, distributive aspect is associated with a reduplicative prefix that copies C_1VC_2 of the phonological root. This reduplicative prefix also occurs in some noun stems, which might suggest that nouns are marked for aspect in Okanagan. In fact, C_1VC_2 reduplication corresponds rather poorly with distributive meaning, even in verbs. Further, nouns with this reduplication generally lack distributive semantics, i.e. they are neither plurals nor distributive plurals.

Transitive verb stems in distributed aspect are interpreted as repeated action that occur over distinct location within a single event. Distributive transitives translate into English as verbs with plural internal arguments, as in (87a). (The vowel of the reduplicative prefix (*dis*) is reduced to *ə* when unstressed.)

(87) a.   k'ʷəl+k'ʷúl'+nt   -xʷ[21]
            (dis)make(ctr)   2sERG
            You fixed more than one. (lit. You fixed one after another.)

      b.   sw'+siw'+nt   -xʷ
            (dis)ask(ctr)   2sERG
            You questioned him. (lit. You asked him a series of questions.)

Intransitive stems with distributive aspect are interpreted as actions performed by more than one participant.

(88) a.   k'əw+k'áw
            (dis)gone
            They are gone.

      b.   wiʔs+tx+txá+m   -əlx
            done_(dis)comb(mid)   3pABS
            They were all combed.

However, distributed aspect via C_1VC_2 reduplication is not fully productive among transitive and intransitive verb stems. Speakers rejected many verb stems with distributive aspect/C_1VC_2 reduplication. Examples of rejected forms appear in (89).[22]

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[21]The plurality of the object argument does not have to be expressed in the person marker. The plural object marker *-əlx* is optional.

[22]The examples in this list may be possible words, which speakers might coin as needed in a particular discourse. However, the speakers' negative reactions to them suggest that they are not lexicalized.

(89) Reduplicated form   Unreduplicated form meaning

        *kc+kíc+nt   kicnt-   get to s.o.
        *t'x^w+t'úx^{w}t   t'ux^{w}t   fly
        *ƛ'x̌+ƛ'ax̌t   ƛ'ax̌t   fast
        *x̌^{w}p+x̌^{w}upt   x̌^{w}upt   tired, weak
        *x̌s+x̌ast   x̌ast   good

Furthermore, many verb stems show C_1VC_2 reduplication, but do not have the semantics of distributive aspect. In (90), I give examples of verbs that contain C_1VC_2 reduplication, but which do not express distributive aspect ((a) examples) and/or do not derive straightforwardly from an unreduplicated base ((b) examples).

(90)a.

Reduplicated form	meaning	Unreduplicated form	meaning
ʕacʕacnt-	tangle s.t. up	ʕac+nt-	tie s.t up
m'ym'iy'ám	report news	m'yʔ+nt-	tell, teach s.t.
təkʷtəkʷʔút	(pl.) travel	tkʷʔut	(pl.) walk
ncw'cw'cín(n)t-	repeat s.t.	ncw'cín+(n)t	repeat s.t.
xʷaʔxʷaʔcín	talk too much	xʷaʔcín	talk alot
lq'ʷlq'ʷíw's	s.t. breaks in two	lq'ʷnt-	break off s.t.
t'qʷt'aʔqʷcin	holler	t'q'ʷcin	holler
limlmt	thank you	limt	be glad,happy
cix̌cx̌t	very hot	cix̌	hot

(90)b.

kən'+kn'ám	butcher s.t.
kckʷckʷína?	pull_ears of s.o.
cnɬək'ɬək'tám	sob
c'm'c'um'nt-	suck on s.t.
kcaʔcaʔálqʷm	knock on a door
paʔpáʔt	generous
ɬaqʷɬqʷt	huge
maʔmáʔt	bothersome

The data in (90) show that distributive notions marked by C_1VC_2 reduplication are often lexicalized in verb lexemes in idiosyncratic ways. There are other cases in which distributive semantics is encoded in a stem that does not show C_1VC_2 reduplication. For example, *c'w'c'iw'sm* and *c'iw'sm* mean 'wash one's eyes' and *c'acʕálx* and *c'alx* both mean 'bathe'. Two speakers observed that both kinds of washing implied repeated motions (i.e. of dipping water over the face and body), yet the reduplicated and unreduplicated forms are free alternates. Moreover, the lexemes *k'ram* 'swim' and *t'qʷam* 'sew'

also express repeated actions, yet these lexemes do not have reduplicated

alternates. In sum, it is not possible to predict when a verb stem will have a

distributive counterpart marked by C_1VC_2 reduplication and when it will not.

This indicates that distributive aspect is not an inflectional category in

Okanagan.

When C_1VC_2 reduplication is found in noun stems, it is typically

lexicalized in the stem and does not express distributive aspect. Many noun

stems with C_1VC_2 reduplication lack unreduplicated counterparts that would

indicate a derivational relationship between distributed and non-distributed

lexemes (91).

(91)　Noun stem

nax̌ʷ+nəx̌ʷ	wife
nx̌ʷ+nx̌ʷiw's	couple
c'iq+cq't	Engelmann spruce
c'ixʷ+c'xʷ	fish hawk
wap+wpxn	lynx
ct'ək'ʷ+t'ák'ʷ	nest
skʷr+kʷrí'ca	tomato
ƛ'x̌+ƛ'x̌ap	old man
nx̌əs+x̌astátkʷ	watercress

The nouns in (91) are neither special plurals nor do they name repeated

actions. They are etymological related to other lexemes, some of which may

have been verbs with C_1VC_2 reduplication.

Canonically, distributive aspect indicates a repeated action involving

multiple participants. Mithun (1987) observes that cross-linguistically, the notional iterativity in distributive aspect can be semantically extended to mean 'plural occurrence'. When this happens, the nominal stems of a language may become eligible for plural formation that uses the distributive aspect marker as the plural marker. According to Mithun, verbal number distinctions such as distributive aspect have rarely developed into inflectional categories in Noth American Indian languages. Where they have, distributive aspect has sometimes developed into the inflectional category 'plural' for nouns, particularly under the influence of English. Distributive aspect is not an inflectional (i.e. sentential) aspect in Okanagan. Therefore, based on the cross-linguistic pattern described by Mithun, we would not expect distributive aspect to have developed into an inflectional plural for nouns. It has not.[23]

Certainly nouns that show C_1VC_2 reduplication may derive historically from verbs in distributive aspect, but there is no evidence that distributive aspect applies to nouns. Nouns are not marked for any kind of aspect in Okanagan.

4.5 Verbs and imperative formation. Verbs occur in imperative mood, but nouns do not. I illustrate this point with reference to second person

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[23]Kinkade 1995 observes that C_1VC_2 reduplication is not ordinarily used to mark plural lexical arguments in Upper Chehalis Salish. Rather, it indicates distributed action on predicates.

positive and negative command forms.[24] Transitions form imperatives

differently from Processes and States. Process and State bases form positive

second person commands with the suffix -x 'singular' or -wi 'plural' in place

of the second person absolutive subject markers (A. Mattina 1980).

(92)   a.   kʷ‿   xʷuy
              2sABS   go
              I went.

        b.   xʷuy -x
              go   Imp(s)
              Go!

        c.   xʷúy -wi
              go   Imp(p)
              Go!

Transitions form commands based on a transitive stem plus the suffix -i

in place of ergative person markers when the subject has second plural subject

reference (93). Singular commands have no subject marker (compare (94) and

(95).[25]

(93)   a.   pɬ'nt   -i
              peel(ctr) Imp(p)
              Peel it!

---

[24]Polite, first person, and periphrastic commands are also formed only on verbs.

[25]A. Mattina (1980) notes that the singular transitive command form is frequently substituted for the plural transitive command. This may reflect the influence of English.

b.   kʷuͺ   paʔpín'+ɬt   -i
     1sOBJ fold(pos)   Imp(p)
     Fold it![26]

(94) a.   pƛ̓'+nt
        peel(ctr)
        Peel it!

b.   kʷuͺ   xʷic'+xt
     1sOBJ give(dat)
     Give it to me!

(95) a.   pi'ƛ̓'+nt   -s
        peel(ctr)   3sERG
        He peeled it.

b.   kʷuͺ   xʷíc'+xt   -xʷ
     1sOBJ give(dat)   2sERG
     You gave it to me.

The negative command contains two elements, first the negative particle

lut 'not' followed by a verb inflected for irrealis mood. Subject marking is

from the genitive paradigm.

(96) a.   lut   kʷuͺ a-   ks-   p'íc'm
        neg   1sOBJ 2sGEN   irr   pinch
        Don't pinch me.

b.   lut   a-   ks-   náq'ʷ+ɬtm
     neg   2sGEN   irr   steal(pos)
     Don't steal someone's something.

---

[26]Recall that possessional verbs require a referential, possessed theme, the possessor of which is coded as the grammatical object. This example means 'Fold it!' where 'it' refers to some referent that belongs to the referent of the first person singular person marker.

(97) a.   lut   a-   ks-   xʷúy
             neg   2sGEN   irr   go
             Don't go.

      b.   lut   a-   ks-   nc'ípc'əpsəm
             neg   2sGEN   irr   blink_eyes
             Don't close your eyes.

Only some State bases form positive second person commands, as in

(98).

(98) a.   lut   a-   ks-   k'ast
             neg   2sGEN   irr   bad
             Don't be bad.

      b.   *lut   a-   ks-   k'iy't
             neg   2sGEN   irr   cold
             (Don't be cold.)

All States have derivates that form negative commands, as in (99) and (100).

(99) lut   a-   ks-   k'ʔiy't
        neg   2sGEN   irr   cold(ac)
        Don't get cold.

(100) lut   a-   ks-   k'iy'tstm
        neg   2sGEN   irr   cold(caus)
        Don't let it get cold.

In (99), the negative command is based on the anticausative derivate of the

State base //k'iy't// COLD. This is also the base for the negative command in

(100), in which the causative derivate is used.

While all verb types show one or more of these imperative formations,

nouns do not occur in any of these imperative frames, as shown in (101) with

the base //ɬkap// BUCKET.

(101) ɬkap 'bucket'   Imperative form

    *ɬkáp-x   singular intransitive
    *ɬkáp-wi   plural intransitive
    *ɬkápnt   singular transitive
    *ɬkápnt-i   plural transitive
    *lut a-ks-ɬkáp   negative intransitive
    *lut a-ks-ɬkápm   negative transitive
    *lut a-ks-[*anticausative] negative anticausative
    *lut a-ks+ɬkáp+stm   negative causative

As a final example of the contrast between verbs and nouns with respect to imperative formation, compare the forms in (102) and (103).

(102) a.   sqəltmíxʷₙ
          (a) man

      b.   *sqəltmíxʷ-x
          Be a man!

(103) a.   qəltmxʷscútᵥ
          He is acting like a man.

      b.   qəltmxʷscút   -x
          Be a man!

Only verbs occur in imperative mood.

4.6 Verbs as clause heads. In many languages, argument positions may be filled with verbal expressions. Okanagan is no exception to this, as illustrated in (104) and (105).

(104) way' kʷuˏ k'əɬq'əy'+ɬt   -íxʷ
     prt 1sOBJ write_down(pos)   2sERG

     axáʔ iʔ qʷəlqʷíl+st -m   -ən
     dpr sb tell(ctr) 2sOBJ 1sERG
     Write down what I tell you. GW49

(105) lut t'əxʷ t'ə c-   my+st   -ín
     neg prt ev cust know(otr)   1sERG

     əl   k'ʼʷinx kiʔ təkʷkʷʼaʔtíʔst -əlx
     at   when   rel travel   3pABS
     I don't know at what time they got started. GW842

More typically, argument positions are filled with NPs, as in (106) and (107).

The head noun is preceded by the determiner iʔ.[27] The determiner is followed

by the case marker t if it is required by the syntax.

(106) axáʔ ncəq'əmníls+nt -xʷ   axáʔ iʔ pəptwínaxʷ
     dpr mislead(ctr)   2sERG dpr art old_lady
     You'll mislead the old lady. GW71

(107) kʷuˏ ʔəɬnəmsqáx̌aʔm -səlx axáʔ
     1sOBJ feed(ctr)   3pERG dpr

---

[27]The determiner iʔ is deleted if the head noun is inflected for first or
second singular possessor, as in (i) and (ii).

(i)   ʕac+nt   -ín   in-   q'aʔx̌án
     tie(ctr)   1sERG 1sPOSS shoe
     I tied my shoe.

(ii) ʕa+ɬt   -ís   an-   q'aʔx̌án
     tie(pos)   3sERG 2sPOSS shoe
     He tied your shoe.

The determiner is absent under other circumstances that I do not fully
understand.

iʔ	ɬ	i-	ɬəɬqáqcaʔ
art		1sPOSS	brothers

They are feeding me (to her) my brothers. GW194

Apart from the fact that complement clauses do not follow the case

marker *t*, in practice there is often no formal marker of a subordinate

complement clause, as in (108) and (109).

(108)
ixíʔ uɬ	kʷ	s-	nˤacúsm	-s
But	2sOBJ	neut	trap	3sGEN

	ks-	púlst	-əm	-s
	irr	kill(ctr)	2sOBJ	3sERG

But she traps you to kill you. GW503

(109)
c-	my+st	-íp	kn	ylmíxʷəm
cust	know(otr)	2pERG	1sSub	chief

You know that I am the boss. COD104

Also, the determiner *iʔ* serves as a subordinating particle (e.g. in (110).

(110)
way'	ixíʔ	x̌əstmí+(nt)	-s
ptc	dpr	enjoy(ctr)	3sERG

	iʔ	s-	kʷʔal	-s
	sb	neut	warm(ac)	3sGEN

He really liked (how) he was getting warm

The multiple functions of *iʔ* make it a weak indicator of the category of

the syntactic phrase which it introduces. However, there are two other

subordinating particles that precede verbal clauses only. These diagnostic

particles are the complementizers *ƚ* (111) and *mi* (112). The do not cooccur

with *iʔ*. *mi* consistently has future or conditional overtones.

(111) a.

pna⁷ cmay	nq'əltúsəs	ɫ	nk'əwpíls
might	sicken	if	lonely

He might get sick if he's lonesome. GW814

b.

kn̓‿sk'int	ɫ	iksnkʷaʔcnúxʷ
I'm afraid	that	I'll be late

kəm'	ɫ	iksnsl'íp
or	that	I'll get lost

I was afraid that I'd be late or that I'd get lost. GW516

c.

ksmypnúntəm	ɫ	kscxʷəlxʷálts
We'll find out	if	she's alive

We will find out if she is alive. COD78

(112) a.

n'ín'w'i⁷	put	nk'ʷˀəspíntk	put apná⁷ sx̌əlx̌ˤált
probably	just	one year	to this day

mi	kʷu‿ɫcyáˤp
that	we come back

It'll be one year to the day when we will come back. GW459

b.

cəm' t'i	kʷ‿məlmíl·x	mi	ƛ'mípstəm
maybe if	you dawdle	then	it gets late

If you fool around (then) you'll be late. GW489

c.

kʷ‿nis	kʷ əlkʷákʷ,	mi	kn̓‿x̌ʷət'ət'pnúmt,
You	are gone	then	I'll jump up

mi	kəlkílstən,	nkəcníkəntsən,
then	I will chase you	catch up with you

mi ixí⁷	kʷu‿sʔaɫ⁷íɫəns	i⁷ tl' astíwcən
then	we'll eat	the groceries

When you are gone a little ways, I will jump up, I will chase
   you, catch up with you, and we will eat the groceries that
   you got. EC142

Only clauses headed by verbs occur following *ł* and *mi*.[28] A full

account of subordination in Okanagan is not yet available. However, even in

its outlines, there is a constraint on the category of the head of the subordinate

clause. Nouns do not typically head clauses, outside of the predicate nominal

and equational constructions.[29] This is because nouns basically lack

---

[28]There are other subordinating particles including *ki?*, *ałi?*, *ǝl* and *k'ǝl*.
(The last two also function as prepositions). I do not discuss them because I am
less familiar with them, and because subordination in general in Okanagan
deserves a detailed treatment that I cannot yet give.

[29]Equational clauses (NP=NP) may serve as subordinate clauses. When they
do, there is no overt complementizer, as in (i).

(i) ac-   my+st   -ín   ixí   sǝn?íckstn
     cust   know(otr) 1sERG   dpr   toy
     I know that it is a toy.

Furthermore, an equational clause may follow the subordinator *ałí* 'because'.
In this context, the deictic pronoun of the equational clause is optional.

(ii) cniłc   x*w*?it   ł   ac-   ?íłǝn
      he   alot   sb   cust   eat

      ałí   (ixí?)   sqǝltmíx*w*
      because   dpr   man
      He eats alot because he is a man.

(iii) kn̓   c-   t'xǝtmíst   ałí   ixí?   s?íłn   -tǝt
      1sABS   cust careful   because   dpr   food   1pPOSS
      I was careful because it was our food.

(iv) cniłc   ǝc-   c'q*w*áq*w*   ałí   s-   nx*w*ǝyíls
      he   cust cry   because   neut   go(des)
      He is crying because he wants to go along.

These are formally parallel to subordinate reason clauses headed by verbs.

propositional force. Nouns in isolation do not assert a proposition. They are not a possible response to the question *sacʔkínx*, the rough equivalent of the English 'What happened?' Existential propositions take the form of equational clauses, as in the question and response in (113).

(113) a.   Question   stim'   ixíʔʔ?
                           what   dpr
                           What is that?

     b.   Answer   axáʔ   x̌ax̌ʔúlaʔxʷ
                           dpr   rattlesnake
                           This is a rattlesnake.

There are also deictic particles that combine with nouns to form existential or locative propositions, as in (114) and (115).

(114) aláʔ   iʔ   sənc'lúlaʔxʷ   pútiʔ aláʔ
      here   art   fruit_trees   still   here
      The fruit trees are still here. EC97

(115) ilíʔ   kiʔ   iʔ   cətcítxʷ   -səlx
      there sb   art   house   3pPOSS
      That's where their houses were. EC150

Only verbs have predicative force in isolation, either as a command (see (94) above) or as a simple declarative clause (116).

(116) xlak
      whirl
      It whirls.

These are formally parallel to subordinate reason clauses headed by verbs.

4.7 Nominalized verbs. Like many other languages, Okanagan has a

means of nominalizing predications to encode an event as an individual 'object

of discourse' (Jelinek and Demers 1982). However, it is important to recognize

that Okanagan has both lexical nominalizations and propositional

nominalizations. In a lexical nominalization, a noun is formed from a verb to

create a new lexeme. Lexical nominalization always involves an overt

formative. The prefix *s-* is a common marker of lexical nominalization. I give

several examples in (117) (see also section 2.2.2.16).

(117) Verb   Noun stem

t'ik'əl	feed	s-	t'ik'əl	grub[30]
c'aɬt	cold(sta)	s-	c'aɬt	cold weather
cʔak'ʷ	bloom(ac)	s-	cʔak'ʷ	flower
q'iy'	dream	s-	q'iy'	dream
ník'ək'	cut(ac)	s-	ník'ək'	wound

Two suffixes, *-mín* and *-tn*, and a prefix, *sxʷ-* are nominalizers, as in

the examples in (118).

---

[30]Speakers consistently translate *st'ík'əl* as 'grub'. Hazel Burke clarified
this as food that is packed for travel, i.e. a bagged lunch or supper.

(118)

	Verb		Noun	
a.	ɫw'am	pierce	ɫw'-min	spear
	x̣ʷaq'm	grind	x̣ʷaq'-mn	grinder
b.	x̣ʷíc'la?xʷm	cut_grain	x̣ʷíc'la?xʷ-tn	grain cutter
	nt'k'ʷki?sqáx̣a?m	saddle_horse	nt'k'ʷki?sqáx̣a?-tn	saddle
c.	k'ʷúl'əm	make, do	sxʷ+k'ʷúl'əm	worker
	m'a?m'áya?m	teach	sxʷ+m'a?m'áya?m	teacher

Some lexical affixes seem to nominalize verb bases, but most if not all of them occur on both nouns and verbs, as in the examples with the lexical suffix =qin in (119). Nouns that contain =qin often have s- or other nominalizing morphology.

(119) nc'a?r=qín$_V$ have a headache
       səp'əp'áp=qn$_V$ get hit on the head
       ɫəc'=qin+nt$_V$ hit on the head
       k'ʷƛ'=qn$_V$ take off one's hat
       lʕʷ=qin+nt$_V$ put the lid on s.t.
       məc'=qín+m$_V$ oil one's hair
       qʷac=qn$_N$ hat
       yaʕp=qín$_N$ crowd, lots
       p'ƛ'=qin$_N$ mushroom
       c'á?si=qn$_N$ head
       s+sp'=qín$_N$ wheat
       s+taʕán=qn$_N$ fur hat
       qp=qín+tn$_N$ hair
       nc'əcq'=qín+tn$_N$ hammer

While nouns often contain nominalizing morphology, noun bases do not undergo nominalization. The forms in (120) are ill-formed.

(120) a.   *s-   qʷac=qn   (nom-hat)
       b.   *s-   p'ína?   (nom-basket)
       c.   *tinx -tn   (sinew-nom)

Lexical nominalization is a derivational process that creates noun stems from verb stems. The output of V → N derivation has all the properties of a noun as described in sections 4.1-4.3.3 and none of the properties of verbs (sections 4.4-4.6). Notably, derived and underived nouns cannot have internal arguments, and they are marked for person only when they are possessed.

In addition to lexical nominalization, Okanagan has another kind of nominalization process in which a situation is treated as if it were a concrete entity. I refer to this kind of nominalization as factive nominalization.[31] Hopper and Thompson (1984:745) describe what I mean by factive nominalization as follows:

> A nominalization names an event taken as an entity; however, a 'verbalization' does not name an 'entity taken as an event,' but simply names an event associated with some entity. In other words, a nominalization still names an event, albeit one which is being referred to rather than reported on in the discourse; it is accordingly, still in part a V, and not a 'bona fide' N.

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[31]Beck (1995) defines factive nominalizations in Lushootseed Salish in terms of the Cognitive Grammar framework, but settles on referring to them as 'participles'. 'Factive' may prove not to be the best label for the cognate construction in Okanagan, but it is necessary to distinguish terminologically between lexical V → N derivation and the event → entity phenomenon as described by Hopper and Thompson.

Factive nominalization in Okanagan involves the prefix *sc-*, which added to verb stems names an event taken as an entity.[32] Examples, with the relevant nominalizations in brackets, follow.

(121) kmatəm   [kʷ‿   i-   sc-   my+ɬtím]
       certainly   2sOBJ 1sGEN   fact   know(pos)

           ixíʔ   way'   ixíʔ   an-   cawt
           dpr   prt   dpr   2sPOSS   deed
           Certainly this is what I know of your deeds. GW620
           (lit. Certainly what I know about you is your deeds.)

(122) talíʔ   in-   x̌ast   [i-   sc-   ʔitx
       really 1sPOSS   good   1sGEN   fact   sleep]
       I slept well. (lit. My sleep was very good.)

(123) axáʔ   [i-   sc-   nq'aʔíls]
       dpr   1sGEN   fact   worry
       This is my business. GW331

(124) uɬ   haʔ   wnixʷ   haʔ   ixíʔ
       and   interr   true   interr   dpr

       [a-   sc-   qʷəlqʷílt]
       2sGEN   fact   talk

       l   [a-   sc-   q'ay
       in   2sGEN   fact   write
       Is it true what you wrote in your letter? GW189

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[32]The prefix that forms factive nominalizations may be further analyzable as *s-c-*. The *s* of the prefix may be the (fossilized) neutral aspect marker. I discuss the form of the prefix presently.

(125) məɬ ixíʔ   m'ayʔncút   -əlx
     and then   discuss   3pABS

        t'əxʷ   əl   [sc-   mypnwíɬən   -səlx];
        prt   in   fact   learn   3pGEN

        way' uɬ   cút   -əlx:
        then   say   3pABS

        ks-   qʷaʔmíkstm+nt   -əm
        irr   get_accustomed_to   1pERG

        iʔ   [sc-   m'im'yaʔncút   -tət],
        art   fact   learn   1pGEN

        iʔ   [sc-   k'ʷul' -tət]
        art   fact   make   1pGEN

And they tell each other what they learned; and they say: "We're going to get used to what we're learning, our work." GW156

Factive nominalizations pattern with nouns in that they can occur as objects of the preposition *t*.

(126) ixíʔ   kʷa   ilíʔ   kn◡   ƛ'láp
     dpr   prt   there 1sABS   stop

        iʔ   t◡   [i-   sc-   captíkʷɬ]
        art   cs   1sGEN   fact   storytell
     That's where I stopped in my storytelling.

(127) way' t'əxʷ kʷu◡   səc-   ƛ'aʔƛ'aʔ+míxaʔx
     prt   prt   1pABS   cont   look_for(con)

        iʔ   t◡   [k   sc-   k'ʷul' -tət]
        art   cs   irr   fact   work   1pGEN

We are looking for what will be our work. GW114

(128) wiʔskɬsəlxít -əm   -s   iʔ   ʟ   pəptwínaxʷ
       done_set(dat) 2sOBJ 3sERG   art   cs   old lady

       iʔ   ʟ   a-   k-   sc-   ʔíɬən
       art   prep   2sGEN   irr   fact   eat

The table has already been set by the old lady with your food. GW514

In (127) and (128), the factive nominalizations can be marked for irrealis

mood. However, they do not show the aspectual range of verbs, as suggested

by the example in (129).

(129) *[iʔ   ʟ   ksc-   sc-   k'ʷul' -tət]
        art   cs   perf   fact   work   1pGEN
       (What we had done)

Like nouns, factive nominalizations cannot stand alone as main clauses.

Rather, they occur only in argument positions.[33] The form of the factive

nominalizer sc- and the fact that it precludes other aspectual prefixes suggests

the sc- either derives historically from an aspectual prefix (or combination of s-

'neutral' and (a)c- 'customary'), or that it is, synchronically, an aspectual

prefix. I am inclined to think that sc- is basically an aspectual prefix for two

reasons. First, it is completely productive over the set of verb bases, like other

sentential aspect markers. Second, forms with sc- require subject person

marking, like all verbs in any aspect. Therefore, while the term *nominalization*

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[33]Jelinek and Demers (1982) argue that the cognate construction in Lummi
mentions rather than **asserts** a proposition, an idea they borrow from Davis
and Saunders' 1981 analysis of the (roughly) cognate construction in Bella
Coola.

is often taken to refer to a derivational process (e.g. Chomsky 1968, Zucchi 1993), factive nominalization in Okanagan has the appearance of regular, verbal inflection.[34]

The term *nominalization* is used in much of the Salish literature to refer to clauses like the lower clause in (130).

(130) niˁ'íp   c-   mist   -ís   iʔ   sqilxʷ
      always   cust   know(otr)   3sERG   art   people

        iʔ   [s-   t'cxʷúy   -s   iʔ   sámaʔ]
        art   neut   come_across   3sGEN   art   whiteman
     The Indian people knew all along that the White people were
        coming.(EC4)

---

[34]Okanagan also has syntactic rules that nominalize propositions. These lack the morphology of lexical and factive nominalizations, and they generally translate as English relative clauses.

(i)   stim'   iʔ   wik+nt   -xʷ
     what   art   see(ctr)   2sERG
     What was it that you saw?

(ii)   cawt   -s   iʔ   sqilxʷ
     deads   3sPOSS   art   people

      iʔ   c-   múskstəm
      art   cust   risk_taking
     People must take chances. (lit. People's actions are for risk-
taking.)

(iii)   ixíʔ   t'ik'l+nt   -s   -ən
     dpr   feed(ctr)   2sOBJ   1sERG
     This is what I am feeding you. GW17

Kroeber (1991:184) describes the clauses that follow the determiner as headless relative clauses.

The nominalized verb is *t'cxʷuy* 'come across'. The prefix *s-* is usually referred

to as the nominalizing morpheme. In Chapter 2, I described this prefix as the

marker of neutral sentential aspect. Verbal lexemes with this *s-* prefix have a

broad aspectual range that allows inceptive, perfective, and imperfective

readings (section 2.2.1.2).[35] Although there are good reasons to suppose that

the various *s-* prefixes of Okanagan derive historically from the same source,

synchronically, clauses in neutral aspect differ in their distribution and

function. Unlike factive nominalizations, clauses in neutral aspect are not

always subordinate. Furthermore, clauses in neutral aspect do not follow *t*.[36]

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[35]Proponents of the single class hypothesis have argued that *nominalization* is a misnomer for constructions like that in (130). Kinkade 1983, for example, demonstrates that the *s-* that is usually referred to as the pan-Salishan nominalizer marks continuative aspect in Chehalis Salish.

[36]The following example from the *Golden Woman* (Mattina 1985) illustrates with a single verb base the contrast between neutral aspect (line (i)), perfective aspect (lines (ii-iv)), and a factive nominalization (line (v)).

(i)   ixíʔ   s-   q'y'ám   -s;
       dpr   neut   write   3sGEN
       He started writing;

(ii)   q'y'ám   iʔ   k'əl   ylmixʷəm
       write   art   prep   chief
       he wrote to the chief.

(iii)   q'y'ám,
       write
       He wrote,

(131) *kʷu̯   səc-   x̌’aʔx̌’aʔ+míxaʔx
       1pABS   cont   look_for(con)

        iʔ   u̯   s-   k’ʷul’ -tət
        art cs   neut work 1pGEN

(We are looking for our working).

Also, clauses in neutral aspect have aspectual and modal interpretations that are not available to factive nominalizations. Clauses in neutral aspect report on an actual event, while factive nominalizations name an instance of an event. Jelinek and Demers (1982) have suggested that the cognate construction in Lummie lacks illocutionary force and truth value. Okanagan clauses in neutral aspect have both. However, clauses in neutral aspect and nominalizations do have one very important thing in common: they are both formed on verb stems. The most notable consequence of this is that they both **require** subject person marking. Nouns have person marking only when they are possessed, as shown in (132).

(iv) wiʔsq’y’+nt   -ís
      done_write(ctr)   3sERG
      he got done writing

(v)   iʔ   sc-   q’ay’   -s
      art   fact   write   3sGEN
      what he was writing,

(vi) uɬ ixíʔ paʔpín-iʔs, nləʕ’ʷnt-ís, k’ɬnt’ɬíp-s,
      and he folded it, he put it in an envelope, sealed it,
      GW174-75.

(132) a. tq+nt   -ín   in-   qpqíntn
          touch(ctr) 1sERG   1sPOSS   hair
          I touched my hair.

     b.   tq+nt   -ín   iʔ   qpqíntn
          touch(ctr) 1sERG   art   hair
          I touched the hair.

Cross-linguistically, factive nominalizations form a middle ground

betwee verbs and nouns, showing properties of both. This is because a factive

nominalization refers to an event as if it were an entity. In Okanagan, this type

of nominalization is accomplished by inflecting a verb stem with *sc-*. Stems

with *sc-* share properties with nouns and verbs. Lexical nominalization simple

creates nouns from verbs; the resulting nouns have all of the properties of

nouns and none of those of verbs. One of the formatives associated with

V → N derivation is *s-*, but there are other productive affixes such as *-tn*, *-mín*

and *sxʷ-*. Both lexical and factive nominalization are always morphologically

indicated.

4.8. Category features and lexeme classes. Noun and verb are

distinguished in the lexicon and grammar of Okanagan. I designate the class of

verbs as those lexemes having the category feature [+V]. Nouns have the

feature [-V]. While verbs from the State class can function as adjectives, there

is no evidence for a distinct lexical class of adjectives. Therefore, the feature

[±V] suffices for distinguishing the lexical categories of Okanagan. Syntactic

devices for overriding category distinctions include adjectivalization,

nominalization and the use of nouns as predicates in the predicate nominal

construction. In Figure 3, I chart the properties of nouns, verbs, and factive

nominalizations in terms of their morphology and their distribution.

Figure 3. Morphological and syntactic tests for category.

	Nouns	Verbs	F. Nominalz.
1. possessive inflection	+	-	n/a
2. 'have s.t' verbs	+	-	n/a
3. 'get s.t.'verbs'	+	-	n/a
4. category conversion	+	-	n/a
5. predicate nominals	+	-	n/a
6. prepositional objects	+	-	+
7. modified by adjective	+	-	-
8. sentential aspect	-	+	+
9. stem aspect	-	+	+
10. distributive aspect	-	+	+
11. imperative formation	-	+	-
12. main clause head	-	+	-
13. subordinate clause head	-	+	+
14. nominalization	-	+	n/a
15. illocutionary force	-	+	-

While there may be some areas of the grammar where the distinction

between nouns and verbs is neutralized, the number and type of differences

between noun and verb described here demonstrate that both categories are

distinguished.

4.9. Category features and base classes. The category features interact

with the ontological features [±E] and [±C] to define broad lexical classes for

the purposes of word formation and other grammatical phenomena. In the

assignment of the aspectual features [±E] and [±C] (section 3.3), all four of

the combinatory possibilities of the two binary features are realized. Bases also

carry category features which are inherited from the base if a WFR makes no

reference to category change. Thus all bases are classified by three binary

features, [±E], [±C], and [±V]. The number of possible feature matrices (and

therefore base classes) is eight. However, the number of basic feature matrices

instantiated in Okanagan bases is only four, as shown in (133).

(133)

	Realized	**Not realized**
Transitions	[+E,+C,+V]	[+E,+C,-V]
Processes	[+E,-C,+V]	[+E,-C,-V]
States	[-E,+C,+V]	[-E,+C,-V]
Entities	[-E,-C,-V]	[-E,-C,+V]

Of the realized matrices, [+V] occurs if either [E] or [C] is positive.

If [V] is negative, then neither [E] nor [C] can be positive. The correlations

between ontological features [E] and [C] and [V] reflect the grammaticization

of conceptual categories into lexical categories. However, base aspectual

features are at least partially independent in the lexical representation. Most

importantly, base aspectual features alone do not explain the contrast between

the derivational and inflectional possibilities of Transitions, Processes and States as compared to those of Entities. Furthermore, States but not Transitions or Processes undergo adjectivalization. Both kinds of features are needed to classify lexemes according to the word and phrasal formations discussed in this chapter.

4.10. Conclusion. A close examination of the conditions on morphological and syntactic phenomena in Okanagan shows that lexical categories are discernible in the context of the general grammatical patterns of the language. In this chapter I have described seven constructions that involve noun stems but not verb stems. There are three derivational processes that derive verb stems from noun stems (sections 4.2.1-4.2.3). Nouns alone can be inflected for possessor person, in two moods, realized and unrealized possession. As in other languages, Okanagan nouns are found in a predicate nominal construction. Predicate nominal constructions superficially resemble intransitive clauses with verbal heads, but the two clause types differ in person marking and semantic interpretation. Two collocational tests point to the existence of phrase structure rules that involve nouns only. First, objects of the preposition *t* are limited to noun phrases (section 4.3.2). Second, only nouns can be modified by an adjective (section 4.3.3).

Verbs, by contrast, do not participate in any of the constructions just

listed. Instead, they inflect for stem aspect and sentential aspect. They also

appear to show distributive aspect, which is a kind of stem aspect. In addition,

verbs can be used in imperative mood. Okanagan has a number of derivational

processes that change verbs into nouns. Unlike N → V rules, WFRs of the

V → N type always add an overt derivational formative to the input stem.

Verbs typically function as the head of main and subordinate clauses. Clauses

headed by verbs may function as arguments, but these are recognizable by their

special morphology or their syntactic frame. Factive nominalization refers to

an event taken as an entity. They share properties of both nouns and verbs. For

example, they lack the aspectual range of clauses in neutral aspect, but, like

nouns, they can be the object of the preposition t.

Isolated phenomena seem to support the single class hypothesisin

Okanagan. Yet the single class hypothesis can be maintained only at the

expense of an adequate description of the subsystems of the grammar. The

single class hypothesis requires that we ignore the conceptual motivation for

lexical categories that is cross-linguistically attested. Situations and entities tend

to be coded as verbs and nouns, respectively, in many languages. This pattern

is reflected in Okanagan, where concepts involving time and change are coded

as verbs, and atemporal entities are coded as nouns. The correlation of

ontological features with lexical category may explain why the noun/verb

contrast can be masked in the grammar in some areas: overt marking of lexical category is partially redundant.

It may be possible to give an alternate account of the grammar that avoids use of the traditional lexical categories. However, the noun/verb contrast in Okanagan is realized in many of the same ways that it is realized in other languages. Therefore, attempts to do away with the noun/verb distinction in Okanagan would call into question the noun/verb contrast in many other languages as well.[37] The noun/verb distinction classifies the inventory of lexemes in Okanagan in such a way that we can find significant, productive patterns in derivation and inflection that are organized into paradigms. This descriptive advantage outweighs the fact that the concepts *noun* and *verb* continue to be difficult to define precisely.

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[37]For example, Hopper and Thompson 1984 argue that cross-linguistically, the noun/verb distinction holds at the level of discourse structure only. In support of their claim they make use of English and Salish data, as well as a broad selection of other genetically and geographically diverse languages.

Chapter 5. Conclusion

5.1 Form and function classes in Okanagan. In this thesis I have

addressed some problems of classification that are of a general interest in the

field of Salishan studies, and of particular concern in the study of word

formation in Okanagan. Various classificatory schemes have been proposed in

the literature, none of which seem suitably descriptive or explanatory for

Okanagan. In the process of developing a classificatory scheme for Okanagan,

I found that certain problems of classification could be dealt with only by

broadening my view of the possible relationships between form and function in

grammar. Rather than assume, for example, that roots and affixes have forms

that correspond to a single function (wherever they may occur in a word), I

easily found data to support the view that there are multiple arrangements of

form and function. That is, in order to maintain that form and function

correspond biuniquely in the morpheme, I would have had a list of irregular

forms larger than the regular ones. In adopting some of the assumptions of

lexeme-based morphology, I had the experience described by Hess 1993, who

wrote of Lushootseed verb stems:

> Once the correct criteria for stem identification were realized,
> large classes of stems fairly leapt out of the data; whereas before
> there seemed to be no stem class larger than one member.
> (1993:114)

While the 'correct criteria' for Lushootseed stem classification are somewhat

different from those I have described for Okanagan, my classification, like Hess', does not depend upon the canonical Salishan (C)CVC(C) root. Rather, I classify lexemes, regardless of their shape, using two key assumptions: 1) lexemes are the fundamental unit of the lexicon and, 2) the relationship between form and function in morphology is indirect. The first assumption means that we allow for a linguistic primitive, the lexeme, that may never be satisfactorily defined. Like its abstract counterparts the phoneme and the morpheme, the lexeme is valuable if, by adopting it, we find significant, cross-linguistically recurrent patterns in the data. However difficult it may be to define, the lexeme often tacitly plays a role in morpheme-based analysis, and it is a concept that continues to be of interest to theoretical morphologists.

The second assumption--that form and function are mapped to one another from semi-autonomous components--is perhaps the more radical of the two, although it continues to interest theoretical morphologists (Beard 1995 and sources cited therein). Under this assumption, which is now referred to as the Separation Hypothesis, the core task of morphology is to map form to semantic and syntactic function, independently of lexical derivation and inflection. This separation of affixation (or other formal changes) from the cycles of derivation and inflection allows for a variety of arrangements between form, meaning, and lexico-syntactic properties. The Separation Hypothesis allows for a

biunique relationship between form and semantico-syntactic function, but other

mappings are not only possible but expected. In the list in (1), I state the

various arrangements of form, meaning, and lexico-syntactic properties

(abbreviated as *syntactics*) that the Separation Hypothesis predicts.

(1) I.   Morphological formatives with both the semantics and syntactics
           of a morphological category

     II.   Morphological formatives with the semantics but not the
           syntactics of a morphological category

     III. Morphological formatives without semantic or syntactic function

     IV.   Morphological formatives with more than one semantic or
           syntactic function

     V.   Semantic or syntactic function marked by more than one
           morphological formative

     VI.   Semantic or syntactic function marked by no morphological
           formative

For convenience, I refer to the arrangements of form and function listed

in (1) as *form-function classes* I-VI. Although morpheme-based morphology

would lead us to concentrate on the phenomenon where form and semantico-

syntactic function are mutually implied (i.e. form-function class I), Okanagan

amply illustrates form-function classes I-VI. I iilustrate each form-function

class using formatives and functional categories already discussed in this thesis

as follows:

5.1.1 Form-function class I. There are formatives with both the semantics and syntactics of a functional category. For example, the suffixes in (2) all mark the stem as a transitive verb with an Event Structure of the the type $[P,S]_T$.

(2)

-nt	closed transitional	(section 2.2.2.1)
-ɫt	possessional	(section 2.2.2.3)
-núnt	limited control closed transitional	(section 2.2.2.11)
-núɫt	limited control possessional	(section 2.2.2.11)

I have not found any stems or grammatical words where these derivational suffixes indicate anything other than the semantic and inflectional class of the predicate as I have described it.

Cross-linguistic evidence suggests that a one-to-one correspondence between sound and semantico-syntactic meaning is in some psychological sense 'ideal'. Therefore it would be surprising if Okanagan did **not** have some formatives that consistently mark a single semantico-syntactic function.

5.1.2 Form-function class II. Okanagan makes broad use of form-function class II phenomena. The formatives in bold-face in the (b) examples of (3)-(11) occur in stems where their semantic features are part of the meaning of the lexeme. Their usual syntactic features, discernible from other stems such as those in the (a) examples, are not expressed in the (b) examples.

(3)   -(n)cút 'reflexive'

        a. a-s-c-əlk'+m+əncút   You forced yourself here. COD11

        b. kʕ'ʷəy+ncút+m+nt-əlx   He laughed at them. COD10

(4)   -(n)wíxʷ 'reciprocal'

        a. kʷu̟pəlst+wixʷ   We kill one another. COD229

        b. qʷaʔm+nwíxʷ+st-məlx   Someone introduced them.

(5)   -tn   'location, instrument'

        a. n+k+ʔəmt=íw's+tn   saddle horse

        b. x̌əq'+ɬ+mrim+st+(t)n-m   Someone paid for a cure. COD102

(6)   -mín   'instrument, location'

        a. t+q'ʷl+mín   barbecuing stick COD100

        b. s+k+ɬw'+mín+tn   pole for a spear COD86

(7)   n-...-íls 'desiderative'

        a. kn̟n+xʷy+íls   I want to go.

        b. n+kʷəʔ+ls+ncút   She started to fret. COD10

(8)   -t 'stative'

        a. ƛ'axʷ+t   It's dead.

        b. limləm-̓t   thank you

(9)   -(V)C$_2$ reduplication 'anticausative'

     a. kn‿wík+ək   I got seen (caught).

     b. s+c'ik'+ək'=lá?x^w forest fire, burned land
                                       COD171

(10)   -?- 'anticausative'

     a. p'+?+uy   It got wrinkled.

     b. c'a?+c'a+?+x+úł   bashful COD20

(11)   C$_1$VC$_2$- reduplication 'distributive'

     a. c-ƛ'w+ƛ'aw   They (lights) are out.

     b. s+ən+ta?+ł+wl+wlím+tn blacksmith's shop

(12)   -x(í)t 'dative'

     a. c'ək+xít-s   He counted it for him.

     b. k^{w}n+xt+wíx^w+m+st-m We take something and
                                     pass it back and forth.
                                     COD58

This form-function class predicts the phenomenon I have described as a *base formative* in Okanagan words. Base formatives are not relevant to the semantic or inflectional classification of lexemes; they are 'inside' the lexical stem and are lexicalized elements. Words in this form-function class are often semantically 'translucent' in that their founding metaphor is still suggested. For example, *nk^{w}ə?lsncút* 'to fret' may have the etymological sense of 'chew self's feelings'. While we can imagine a connection between *feelings* and *desiderative*

aspect, there is no grammatical expression of desiderative aspect in

nkᵂəʔlsncút. Clearly, fluent speakers can assign meanings to some base

formatives in some words by analogy with other forms, i.e. through

redundancy rules rather than through synchronically active WFRs (Aronoff

1976). I maintain that no thoroughly predictive rules can be stated over base

formatives, since they may be arranged by surface analogy, metaphoric

extensions, or other non-grammatical means.[1]

It is important to note that the difference between a formative with both

the semantics and syntactics of a function and a formative with only the

semantics of a function is not always a matter of a formative's absolute

position in a word (see examples (6b) and (8b)). A speaker knows by the

aspectual type of the base whether the formative is marking both semantic and

syntactic function. Process bases, for example, never take the suffix *-(n)cút* as

a derivational formative (e.g. **knꞮʔitx+(n)cút* 'I sleep myself'), but only as a

base formative, as in *ꞓᵂəy+ncút* 'laugh'.

5.1.3 Form-function class III. Okanagan also has formatives that mark

neither semantic nor syntactic function. These are more conveniently referred

to as empty morphs. Examples in this thesis include the compound connectors -

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[1]This does not preclude an investigation of the relationship between conceptual and/or cultural knowledge and base formation. However, we need not wait until we have detailed epistemological models for each language and culture before we describe how word formation works in a language.

s- and -*ɬ*-. -*s*- occurs in the terminative construction with *wiʔs*-, in which the base //wy'// DONE is joined to Transition or Process verb bases (section 3.1).

(13) wiʔ+s+əlk'+íw's+m   He got done tying something.

-*ɬ*- joins the formative *taʔx*ʷ- to noun bases to form verbs of the 'get-something' types (section 4.2.2).

(14) kn‿taʔxʷ+ɬ+cítxʷ   I got a house.

A. Mattina (1987, 1994) refers to -*m*- as a stem-formative. This may be the -*m*- that is occasionally found in desiderative stems, as in (15a).

(15) a.   kn‿n+pax̌+m+íls   I want to hunt.

      b.   kn‿n+xʷy+íls   I want to go.

It also occurs in many stative bases that end in -*(s)cút*, e.g. *q*ʷ*ən'+m+scút* 'be pitiful' and *siy+m+scút* 'be at one's best'.

One also finds spurious reduplications or inserted segments that arise from folk etymology, reanalysis, or misperception. Though presumably sporadic, these empty morphs can extend beyond a single form, and affect a small lexical domain, as in the case of stems having to do with hitting. The stems in (16) are agentive transitionals, while those in (17) are anticausative.

(16) a.   kn‿sp'am   I hit something.
      b.   sp'nt-ín   I hit it.
      c.   k+sp'=íc'aʔ-n   I hit it on the body.
      d.   k+sp'=ús-n   I hit him in the eye.

(17) a. kn̓ sp'áp'   I got hit.
      b. kn̓ sp'p'=aX̌n   I got hit on the arm.
      c. kn̓ sp'p'=w's=us   I got hit on the face.
      d. kn̓ sp'p'=qín=xn   I got hit on the knee.

In (17), the anticausative formative -(V)C₂ reduplication indicates that the subject is a patient, rather than agent. Yet one etymologically-related stem has -(V)C₂ reduplication even though the stem meaning is transitional, not anticausative.

(18) sp'+ap'=q(n)+nt-xʷ You hit it on the head.

The lexicalized reduplication in (18) is also found in the nominal derived from (18) with the nominalizer -tn.

(19) sp'ap'=qn+tn salmon club

We would expect a salmon club to be 'something one hits (salmon) with' rather than 'something one gets hit with'. The reduplication of the final root consonant is inherited from the input verb, and it does not contribute semantically or syntactically to the noun stem.

5.1.4 Form-function class IV.

There are also many-to-one relationships between form and function in Okanagan. Some formatives serve more than one semantico-syntactic function. An example of this phenomenon is the suffix -st. This suffix is found at the right edge of open transitional stems (section 2.2.2.2) (the stem is bracketed).

(20) c-   [kəm'kəm'+st]   -ín
      cust   (otr)   1sERG
      I usually select it.

Stems like that in (20) have these characteristics: 1) they are transitive, 2) they

have the Event Structure $[P,S]_T$, and 3) they are the input stems for the

imperfective counterparts of closed transitionals. A stem must have -*st* to have

these properties. However, there is a second semantico-syntactic function of

-*st*. In other stems, -*st* is the formative used to form causative stems, as in

(21).

(21) t'ux^{w}t+st   -n
      fly(caus)   1sERG
      I made it fly.

Open transitional stems always carry the customary sentential aspect prefix

(a)c-, as in (20). The causative stem occurs in either perfective aspect, as in

(21), or customary aspect, as in (22).

(22) ac-   t'ux^{w}t+st   -n
      cust   fly(caus)   1sERG
      I usually fly.

Differences in form between open transitionals and causatives are neutralized

when both are in customary aspect. However, it is clear that the two functions

are separate because they are expressed in two different stem aspect paradigms.

The open transitional regularly has a closed transitional counterpart (with the

suffix -*nt*) (23). The causative stem does not have a closed transitional

counterpart (24).

(23) kəm'kəm'+nt   -ín
     (ctr)   1sERG
     I selected one.

(24) *t'uxʷt+nt   -n
     fly(ctr)   1sERG
     (I flew it.)

In addition, a verb base that forms open transitionals typically forms possessional, limited control, and anticausative stems as well. Verb bases that form causatives do not form these other stem types.

Other polyfunctional formatives discussed in this thesis include *s-*, which is a lexical nominalizer in some contexts (section 4.7), and an aspectual marker in others (section 4.7). Also in this group is the suffix -*(V)m* which marks middle stem aspect (section 2.2.2.6) and the default stem aspect of Transition bases (section 3.4.1.1). The prefix *kɬ-* marks N → V derivation of the 'have-something' type (section 4.2.1), as well as unrealized possession (section 4.1) on noun stems.

Polyfunctionality is not limited to derivational formatives. There are a number of polyfunctional inflectional formatives. Just a few of these are:

(25) a. kʷu̯   1pABS, 1s/pOBJ, 1sSub (predicate
                                nominal)

      b. ∅   3sABS, 3sOBJ

      c. all GEN subject   all POSS
          markers   markers

      d. -(V)m   1pERG, Unsub(ERG)

Syncretism of form is extremely common in person marking systems

cross-linguistically (Mithun 1991 and sources cited therein). While there seem

to be patterns of inflectional syncretism cross-linguistically, Mithun (1991:510)

argues that syncretism in any one language is the product of "successive

diachronic developments, each individually motivated." Because children do

not have access to the history of their language as they learn it, we have to

assume that polyfunctionality is a phenomenon that does not impede language

learning. Rather, it is accomodated by lexical and inflectional paradigms that

constrain word formation.

5.1.5 Form-function class V. Even where a formative conveys both

the semantics and syntactics of a function, that function may also be expressed

through other formatives. The various morphological expressions of

anticausative stem aspect are a good example of this. Recall that the formatives

of the anticausative stem include -(V)C₂ reduplication, the suffixes -(V)p and

-(t)wílxʷ, the infix -ʔ-, or ∅. This range of formative types and shapes cannot

be explained phonologically. However, this set of affixes is united by a common function, which we might not fully recognize if form were the only criterion for identifying a morphological category. Two other semantico-syntactic functions that utilize more than one formative are *transitional* stem aspect (*-nt, -st, Ø*), and *stative* stem aspect (*-t, -(n)cút, -(s)cút, -út̓, and -ímn*).

5.1.6 Form-function class VI. Finally, Okanagan has a variety of functions that are indicated by no morphological formative. In previous chapters I discussed category conversion of the type N → V as lacking overt morphology (section 4.2.3). In addition, some portions of the paradigm of closed transitionals in realis and irrealis subparadigms have Ø where *-nt* is expected (section 2.1.1). In the inflectional paradigms, third person singular absolutive and third person singular object are not marked with a formative. A strict morpheme-based analysis is not compatible with the notion of a phonologically null affix, since it that entails that silence and meaning are mutually implied (Beard 1987). If the lexicon were an unstructured list of roots and affixes, affixless derivation or inflection should be impossible. Affixless derivation in Okanagan points to the importance of the paradigm in lexical organization, as well as the separation of form and function in word formation.

The Separation Hypothesis regularizes all of the form-function classes II-VI; that is, they are predicted by it. Furthermore, lexemes are distinguished

from morphological formatives because form and function are consistently
mutually implied, except in cases of contrastive ambiguity.[2] Lexemes,
therefore, are stored in the lexicon, regardless of their internal structure.[3]
Formatives are stored in the morphological component, along with instructions
for mapping form to semantic and lexico-syntactic information.

To separate form from function in derivation and inflection is to study
word formation 'without the distractions of phonology' (Beard 1995). The
success of this enterprise may be judged by the extent to which I have been
able to identify semantic and lexico-syntactic features and paradigms that
provide a means to classify Okanagan lexemes. I review my classification in
the following section.

5.2 Lexeme classes in Okanagan. I refer to underived lexemes as
bases; derived lexemes are stems. In Chapter 3, I described tests that revealed
the ontological properties of bases with respect to the notions of temporal
constitutency and relevance to change. I represented these properties with the

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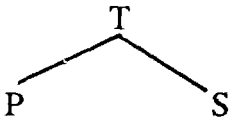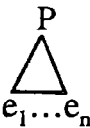
[2]Pustejovsky 1995 distinguishes *contrastive ambiguity* or 'the essentially
arbitrary asoociation of multiple senses with a single word' from
complementary polysemy. Complementary polysemy occurs when two words
have logically-related senses, as with *lamb* in *The lamb is running in the field*
and *John ate lamb for breakfast* (Pustejovsky 1995:31, example (16)). It is my
impression that Okanagan has far less complementary polysemy than does
English.

[3]I am not sure if inflected forms, i.e. grammatical words are stored in the
Okanagan lexicon. I leave this issue for future research.

binary features [±E] and [±C]. Four feature matrices were possible based on

these features, and all four were realized, indicating four base classes that I

labeled as follows:

(26)   [+E, +C]   Transitions
             [+E, -C]   Processes
             [-E, +C]   States
             [-E, -C]   Entities

Because, cross-linguistically, relevance to time and/or change is the property of

prototypical *situations*, I proposed that Transitions, Processes, and States are

subtypes of situations in Okanagan. Entities contrast with situations in not

coding temporal information or change. The labels for the situation subtypes

come from Pustejovsky's 1991 typology of situations. Pustejovsky posits three

prototypical Event Structures that are projected from a wide variety of lexical

conceptual structures. The Event Structure prototypes are given in (27).

(27)
$$\begin{array}{ccc} & T & \\ P & & S \end{array} \qquad \begin{array}{c} P \\ \triangle \\ e_1 \ldots e_n \end{array} \qquad \begin{array}{c} S \\ | \\ e \end{array}$$

| Transition | Process | State |
| [+E, +C] | [+E, -C] | [-E, +C] |

I use Pustejovsky's situation typology and representations to illustrate

the relationships between bases and their derivates. I focus on an important

derivational paradigm that I refer to as the stem aspect paradigm. This

paradigm marks a group of aspectuo-modal categories of the type that are often

described as Aktionsarten in other languages. Each base type has a distinctive set of derivational possibilities with respect to a subset of the stem aspect WFRs. I refer to this set of derivational possibilities by the name of the base type, as in the Transition paradigm, the Process paradigm, and the State paradigm. The derivates in the Transition and Process paradigms all have the Event Structure of their bases. The derivates in the State paradigm have the Event Structures of Transitions, Processes, and States. This variability with respect to Event Structure distinguishes the derivational possibilities of States from those of Transitions and Processes.

In sum, Transitions, Processes, and States, as identified by ontological features and prototypical Event Structures, name derivational classes. In addition to these three, the fourth ontological class, the Entities, have none of the derivational possibilities that Transitions, Processes, and States do. Entities, therefore, comprise a fourth derivational class.

In addition to describing four derivational classes, I also described the inflectional classes of stems. Inflectional classes are determined on the basis of stem meaning rather than on base type. The stem types that I identified are listed in (28).

(28)   closed transitional
open transitional
possessional
dative
reflexive
reciprocal
middle
causative
limited control
anticausative
continuative
desiderative
stative

Speakers recognize the stem types in (28) as *transitive* or *intransitive*. Stems

that encode a referential internal argument in their lexical conceptual structure

are transitive stems; all others are intransitive. Person marking and sentential

aspect are the two verbal inflectional categories. Inflectional class interacts with

sentential mood (specifically the realis/irrealis contrast) and sentential aspect to

condition the person marking of verbal stems. The patterns are shown in (29)

(repeated from section 2.2.1.3, (60)).

(29)

Inflectional Class	Mood	Aspect	Person paradigm
Transitive	realis	perfective imperfective	Ergative
	irrealis	perfective neutral	Genitive
Intransitive	realis	perfective imperfective	Absolutive
	irrealis	perfective imperfective neutral	Genitive

The derivational and inflectional patterns of verbs differ from those of

nouns. In particular, nouns do not express derivational (stem) aspect or

inflectional (sentential) aspect. This systematic split between lexemes that

encode situations and those that encode entities is supported by other

morphological and syntactic tests that are described in Chapter 4. In (30), I

chart the distribution of nouns and verbs with respect to derivational and

inflectional classes.

(30)

		Transitive	Intransitive
Verb	Transitions	+	+
	Processes	+	+
	States	+	+
Noun	Entities	n/a	

Notice that all verb base types have derivates in both the transitive and intransitive inflectional classes. Nouns, on the other hand, are neither transitive nor intransitive. They inflect for possessor person/number, but they do not appear to have argument structure or Event Structure (cf. Grimshaw 1990 on result nominals). They are aspectually inert, as we would expect from a class of lexemes that encode atemporal entities. Without the noun/verb distinction we would have difficulty describing the different derivational and inflectional behaviors of States and Entities. I used the feature [±V] to account for the different derivational and inflectional patterns of ontological situations and entities.

5.3 Concluding remarks. The classification of lexemes just reviewed is needed to express the constraints on the formation of words in Okanagan. Classifications that invoke only one level of classification for one kind of morphological unit (e.g. Howett 1993, L. Thomason 1994, Davis 1996) are

not sufficiently rich to accomodate the Okanagan data. The Unaccusative

Hypothesis (Perlmutter 1979), for example, predicts that verbs will fall into

one of three universal categories, the unergative, the unaccusative, and the

transitive. The unergative verb encodes an agentive external argument that is

realized as an intransitive subject. The unaccusative verb encodes a non-

agentive internal argument that is realized as an intransitive subject. The

transitive verb type has both an internal and an external argument. Although

the Unaccusative Hypothesis provides a useful classification of verb types in

other languages, it is not supported by the Okanagan data. It is too narrow

with respect to semantic types, since the agentive/non-agentive contrast is only

one of several elements that determine a verb's class in Okanagan.[4] On the

other hand, the Unaccusative Hypothesis is too broad in that it predicts three

argument structure classes (unergative, unaccusative, and transitive), while

Okanagan has only two, transitive and intransitive.

Okanagan's non-conformity with respect to the Unaccusative Hypothesis

will not surprise some linguists who have questioned the viability of the

Unaccusative Hypothesis in the first place (e.g. Van Valin 1987, Grimshaw

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[4]Problems with the Unaccusative Hypothesis have surfaced in other Salish
languages. Gerdts 1991a finds that the class of putative unaccusatives in
Halkomelem consists of three subclasses determined by aspectual criteria.
Thomason et al. 1994 do not find support for the Unaccusative Hypothesis in
Montana Salish.

1987 and sources therein). Actually, the problem with the Unaccusative

Hypothesis may be a general problem for all lexical classifications that are

based primarily on syntactic classes. Pinker (1989) argues that children do not

acquire argument structure alternations from syntactic evidence alone. For

example, in order to learn that *give* has two argument realizations (*Give Mary*

the book; *Give the book to Mary*), but that *donate* has only one (*Donate the*

book to the library; **Donate the library the book*), children must generalize on

the basis of non-syntactic evidence, else the argument structure possibilities of

donate would change in a single linguistic generation. Levin and Rappaport

(1988) question the learnability of the unergative/unaccusative distinction in

English given the 'rather paltry' overt evidence to which a child might be

exposed. Levin and Rappaport conclude that more sophisticated lexicosemantic

characterizations of verbs can explain the insights of the Unaccusative

Hypothesis as well as the regularities in lexical representation across the

lexicon. Clearly, we need more detailed lexico-semantic descriptions among the

Salish languages, regardless of their theoretical implications.

When we combine the empirical and theoretical problems of syntactic

classification with the evident mismatches between form and function in

morphology, the natural place to look for explanation is in the lexicon. In this

lexeme-based treatment of word formation, I have rejected the idea that the

lexicon is 'a list of basic irregularities' (Bloomfield 1933). Rather, I have taken

the position that the lexicon is full of important lexicosemantic regularities,

including patterns within lexical conceptual structure and in the mapping of

LCS to Event Structure. As both a database and projector of syntax, the

lexicon can be conceived of as the store of both idiosyncratic and generative

and lexical semantic knowledge. Because the information in the lexicon is

expressed through morphology, it is important to understand the interface

between the lexicon and the morphological component.

In this thesis, I have focused on the lexico-semantic properties of a

handful of derivational and inflectional categories, with reference to the

formatives that express them. There are four major areas that I have left for

future research that bear on the central proposals of this thesis. First, I have

left untouched the description of how morphology interacts with phonology.

Given my assumptions, I trust that the morphophonological interface will not

contravene the morpholexical proposals I have made. I am hopeful, in fact,

that morphophonological details will support my contention that bases lack

internal morphological structure.[5]

Second, this thesis lacks discussion of the historical dimensions of

Okanagan word formation, except to exclude them. This is not an oversight so

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[5]Black (1996) provides morphophonological evidence that bases lack
internal morphological structure in Spokane Salish.

much as it is part of my plan not to confuse etymology with predictive word formation rules. Nevertheless, I assume that historical research is critical to understanding the sources of mixed paradigms, paradigmatic syncretism, homophony, semantic shifts, reanalyses, and other morphological phenomena that have attracted attention in the Salish literature.

Third, each of my lexeme-based proposals needs to be studied from a comparative perspective. There is a significant database for comparative study within the Southern Interior Salish group; for some of the Southern Interior languages there are still fieldwork possibilities. Because my assumptions differ slightly from those of others working on SI languages, it is not possible to quickly peruse a dictionary or grammar and draw comparative conclusions. Slow and objective work is needed to discover, for example, if some SI lexicons are organized on the basis of canonical (C)CVC(C) root morphemes, or if inflectional classes are organized differently from language to language. I expect to find differences in the semantic details of the morphological categories from language to language. These would not in themselves cast doubt on my analysis of Okanagan. However, the Salish literature reveals how hotly contested is the noun/verb distinction across the family, and we may eventually be persuaded that the noun/verb distinction does not exist in some members (Jelinek 1995). The question of just how much languages differ

within the family or subgroup will have to be addressed after we have very detailed descriptions of most of the Salish languages.

Finally, the fourth area of research that bears on word formation is child language acquisition and psycholinguistic research. Certainly the errors and developmental patterns of children learning Okanagan would provide clues to the nature of word formation in Okanagan. Unfortunately, there are no children that I know of who are learning Okanagan in a natural context. We have to hope that current language revitalization programs will eventually result in child learners; until then, nothing in this area can be done. Direct experimentation with adult Okanagan speakers is more probable, although I do not know of any such studies having been carried out yet for any Salish language. The question of what is stored in the lexicon and how it is stored could be addressed by psycholinguistic experiments. It would also be relevant to know if the degree of rote processing among Salish speakers differs from what has been described for speakers of other languages (Bybee 1987). We can proceed in our study of morphology either as lexeme- or morpheme-based, but it would be helpful to see if psycholinguistic experimentation would support one view over the other.

It may be that only through psycholinguistic research will we gain a window onto what a word is in Okanagan. In my fieldwork, I frequently tried

to string morphemes together into complex words. I often heard the comment, "You could say that, but that's not a word." Could all Okanagan words be, then, just the sum of their parts? I have contended here that they are not. However, there is much to be done, both language-specifically and cross-linguistically, to find out 'what's in a word'. In my view, developing an answer to the question 'What's in a word?' is a crucial part of a larger effort to represent the particular genius of Okanagan, while there are still speakers to guide the way.

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Appendix I. The phonemic inventory of Okanagan

Consonants:

	B	LD	LA	LA	V	V	U	U	L
stops									
plain	p	t	c		k	kʷ	q	qʷ	ʔ
glottalized	p'	t'	c'	ƛ'	k'	k'ʷ	q'	q'ʷ	
fricatives		s		ɬ	x	xʷ	x̌	x̌ʷ	h
resonants									
plain	m	n	r	l	y	w	ʕ	(ʕʷ)	
glottalized	m'	n'	r'	l'	y'	w'	ʕ'	(ʕ'ʷ)	

[B=bilabial, LD=laminodental, LA=laminoalveolar, V=velar, U=uvular, L=laryngeal]

Okanagan stops are voiceless, occuring in a plain and ejective series. Resonants occur in a plain and laryngealized series. The lack of a plain lateral affricate represents a gap in the system, for all dialects. The velar and uvular stops have rounded and unrounded articulations. The Colville dialect shows a contrast between rounded and unrounded post-velar resonants, indicated in parentheses. The glottal position is represented by glottal stop and /h/. The basic allophones of the fricatives are voiceless. Northern dialects such as Okanagan realize the plain lamino-alveolar affricate /c/ with slight palatalization. All fricatives except /h/ may be voiced intervocalically.

Okanagan vowels are /i,a,u,ə/; /ə/ is always unstressed.