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 The data come from field work conducted in 1992-1996 and the study of published and unpublished Okanagan texts.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

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I also wish to thank six Okanagan women for their patience and friendship over the last four years: Hazel Burke, Delphine Derrickson, Elaine

Emerson, Clara Jack, Sarah Peterson, Millie Steele, and Jane Stelkia. Thanks also go to the En'owkin Centre (Penticton, B.C.) for creating the conditions under which I was able to spend two years living in the Okanagan Valley. Those were halcyon days.

Because I wanted to complete my doctoral program without living apart from my husband and two children, I spent most of my research and writing time in our home rather than in a library or departmental cubicle. I thank my family for accommodating me whenever they could, even when I asked too much. This thesis is dedicated to Sarah and Joseph Mattina, who make difficult things worth doing.

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 wholly 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.

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List of Abbreviations

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

intransitive subject

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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 *nsyłxcín* or *nsəłxcín*.

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 *amaur* '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.

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]

Stems may be inflected (via inflectional WFRs) to produce *grammatical words*.

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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.).

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

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The relationships between bases, stems and grammatical words are depicted in (1) using the Okanagan base //ƛ'aʔƛ'aʔ// 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'aʔƛ'aʔ// LOOK_FOR s.t.

Derivation
Stems ⟶ Inflection ⟶ Grammatical word:

Stems	Grammatical word:
ƛ'aʔƛ'aʔ+ám look for s.t.	kn‿ƛ'aʔƛ'aʔ+aʔám I looked for something.
ƛ'aʔƛ'aʔ+nt- look for s.t.	ƛ'aʔƛ'aʔ+nt-íxʷ You looked for it.
ƛ'aʔƛ'aʔ+aʔ+núnt- manage to look for it	ƛ'aʔƛ'aʔ+aʔnúnt-xʷ You managed to look for it.
ƛ'aʔƛ'aʔ+st- look for s.t.	c-ƛ'aʔƛ'aʔ+st-íxʷ You were looking for it.
ƛ'aʔƛ'aʔ+łt- look for s.o.'s s.t.	ƛ'aʔƛ'aʔ+łt-ín I looked for his s.t.
ƛ'aʔƛ'aʔ+xít- look for s.t. for s.o.	ƛ'aʔƛ'aʔ+xít-n I looked for it for someone.
ƛ'aʔƛ'aʔ+aʔ get looked for	kn‿ƛ'aʔƛ'aʔ+aʔ I was looked for.
ƛ'aʔƛ'aʔ+míx look for s.t.	kn‿sәc-ƛ'aʔƛ'aʔ+míx I am looking for it.

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).
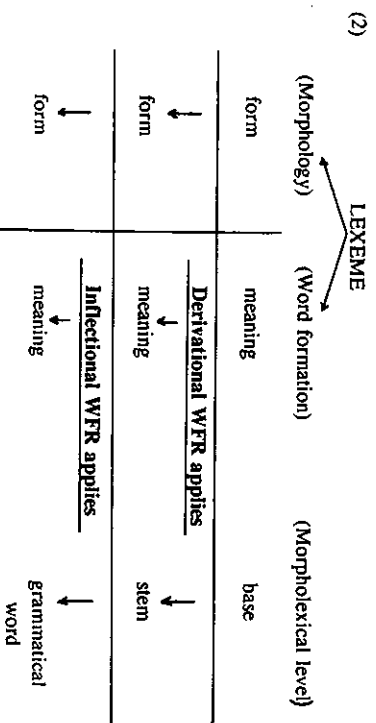
points out that perfect participles and passive participles are used interchangeably. If a speaker produces a new passive participle s/he will also use the new form as the perfect participle (e.g. *bit* and *bitten*). This suggests that there is a single stem form which undergoes two word-formation rules-- 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)

(Morphology)	LEXEME	
	(Word formation)	(Morpholexical level)
form	meaning	base
↓	↓	↓
	Derivational WFR applies	
form	meaning	stem
↓	↓	↓
	Inflectional WFR applies	
form	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.

[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 suppleitve.

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 *nuʔ=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)

captíR"l	tell Indian fairytales	q"ǎʔxi	gills
siwlk"	water	sq"lcmink	stomach
cpłanʼ	eyelash	kʼiłwnlsmist	think that one cannot
kaʔłis	three	trʼiwʼyaʔm	be under a curse
skmxíst	black bear	nłx̌ʼpʼmitkʼ	dive into water
ʔaʔúsaʔ	egg	nkʼkʼus	cut off s.o's head
ʔickn	s.o. play	ʔayx̌áxa	in a little while
ʔácqaʔ	s.o. go out	niqtqána?	deaf
nyc"ip	always, still	xarksim	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 *x̌"əkʷdlt* 'alive', *cʼilqʼcʼqt* 'Engelmann spruce', and *cʼiqʷaqʷ* 'cry'. There are also 'cranberry' morphemes such as the putative roots in √kən+xłi 'help s.o.', √crʔ=ups 'fisher', √łm=ilxʷ '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) √ƛ'a?

ƛ'a?+nt	fetch s.t.
ƛ'a?+ƛ'a?+nt	look for s.t.
k+ƛ'a?+ƛ'a?=ína?	look over, across s.t.
ƛ'a?=sqáx̌a?	get a horse
ƛ'a?ƛ'a?=ús	open-eyed
k+ƛ'a?=ipla?+nt	cause problems for s.o.
n+ƛ'a?=sɬiw's+nt	look for s.t.
ƛ'a?+ƛ'a?=ús+mn+nt	look for s.t.
ƛ'a?+ƛ'a?+mín+nt	look for s.t.
kɬ+ƛ'a?+nt	be jealous of s.o.
n+ƛ'a?+ƛ'a?+ús+tn	eyesight
s+ƛ'a?+cínm	deer
ƛ'a?+ƛ'a?+mín	detector
k+ƛ'a?+ncút+(!)n	a seeker, searcher
s+ƛ'a?+míx+a?x	a keeper, one who keeps

It is difficult to establish any essential meaning for the root √ƛ'a? 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+ƛ'a?=cín+m 'deer'

and k+ƛ'a?=pla?+m '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+λ'a?=cín+m
        nominalizer-√fetch=mouth-middle(?)   'deer'

    b. k+λ'a?=iɬqa?+nt
        person-√fetch=handle-transitive   'cause problems for s.o.'

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]

---

[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+λ'a?=cín+m]   'deer'

    b. [k+λ'a?=iɬqa?]+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

form	gloss
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=ína?+nt	put s.t. on top
k'ɬ+t'k'ʷ+nt	put s.t. under
kɬ+t'k'ʷ=íɬk'ʷ+nt	float s.t.
n+t'k'ʷ=ɬkn+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=kí?=sqáx̌a?	saddle a horse
n+t'k'ʷ=íɬ	be pregnant
s+t'k'ʷ=íɬp	mattress
s+t'+t'k'ʷ=íɬa?p	coffin
n+t'k'ʷmín	pillow, cushion
s+n+t'+t'k'ʷ=íɬa?p	coffin
n+t'k'ʷ=kí?=sqáx̌a?+ncút+(t)n	cot
n+t'k'ʷ=kí?=sqáx̌a?+tn	saddle

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

nominalizing suffix appears.

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

      b.   s+/ix+min   comb
             nom+comb$_v$+nom

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

      d.   s+n+/t'l=üla?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 -*in* 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'l+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.

(8) √piq
    piq   white
    piq=sxn   silver coins
    s+pá+pq=lc'a?   weasel (in winter)
    s+pq=mix   swan
    pq+m=äya?=qin gray-haired person
    k+piq=lps   palomino horse
    n+paq=s   cataract, be white-eyed
    pq+l=qin   bald eagle
    pq+pq=qin'   whiskey jack

(9) √tq
    tqam   touch s.t.
    k+tq=ina?   press down
    k'1+tq+ncut+m protect oneself
    n+tq=qin+nt   vote for s.o.
    k'1+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

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_x̌cnm+(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 k'l'ncúm and k'ʔcúm. 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

[20]A. Mattina (1994) exemplifies the idiosyncratic behavior of two other verbal suffixes, -mín and -míst. 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

[-mín] is a derivational affix that attaches to certain bases, not to others. All such derived -mín 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=qín might be analyzable as 'white-on-head', but pqlqín refers only to the bald eagle, and not to white-haired people or seagulls. In the case of the root √'k'ʷ, we might ask why n+t'k'ʷ+mín 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,

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

[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.

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

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. ʕacant-ís   i?   sənkɬc'aʔsqáx̌aʔ
         tie-3sERG   art   horse
         He tied the horse.

     b. wəhám   i?   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-   sk̉ʷist]$_{NP}$
         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 (s/ƛ) is in bold-face.)[5] Other particles are indicated with prt.)

(3) a. way'   t'i   x̌ast   **ƛ**   k'aƛx̌ʷłst   -am
         prt   prt   good   **sb** throw_away   -1pERG
         It's better that we do away with him. COD151

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

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

(4) a. kn̰   c-   t'xʷəmíst   **a̓fí**
         1sABS   asp-   careful   **sb**

         ixi?   s'?łn   -tət
         dpr   food   1pPOSS
         I was careful because it was our food.

    b. əc-   myst   -ín   ixi?   sqláw'
         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 lut (neg), and in (6) with lut and t'i 'evidential' (ev).

(5) lut   k'ʷṵ   x̌íłnt   -xʷ
      neg   1sOBJ   call   2sERG
      You didn't call me.

---

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

and (11).

(10) Pit   i?   kawáp -s
     Pete   art   horse 3sPOSS
     Pete's horse

(11) i?   kawáp -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, -xit, -łt, -tiłt, -núnt, -nítł, and -núst*.[6] However, it is more accurate to say that the (A. Mattina 1982, 1994).[6]

---

[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 *?um+t-* (e.g. *?um+t-ín* 'I ate it') shows transitive suffix *-t*. I do not segment *-nú* from *-núnt, -nítł,* and *-núst,* 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 *-an*. Compare (i) and (ii).

(i). xǝƛ̓'p+núnt   -x̌ʷ   (ii). xǝƛ̓'p+nu(nt)   -n
     finish+lc   -2sERG   finish+lc   -1sERG
     You managed to finish it.   I managed to finish it.

(6) lut   t'(i)   in-   x̌mínk i?   siw̓lk̓ʷ
    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. k̓ʷmił   x̌ʷuy
       suddenly go
       He went suddenly.

    b. k̓ʷmił   ki?   x̌ʷuy
       suddenly comp   go
       It was suddenly that he went.

    c. *x̌ʷuy k̓ʷmił

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'ux̌ʷt   in-   kawáp
    fly   1sPOSS   horse
    My horse flew.

(9) in-   kawáp   t'ux̌ʷt
    1sPOSS   horse   fly
    My horse flew.

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

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

ii. Object

with -nt

1	kʷuↄ	1	kʷuↄ
2	-s	2	-(ü)m
3	0	3	-lx

with -st

1	kʷuↄ	1	kʷuↄ
2	-(ü)m	2	-(ü)m
3	0	3	-lx

II. Absolutive Paradigm

with -tt

1	kʷuↄ	1	kʷuↄ
2	-s	2	-s
3	0	3	-lx

with -x(í)t

1	kʷuↄ	1	kʷuↄ
2	-m	2	-m
3	0	3	-lx

III. Genitive Paradigm

i. Genitive (Subject)

1.	in-	1p.	-tat
2.	an-	2p.	-amp
3.	-s	3p.	-s-lx

ii. Object

1.	kʷuↄ	1p.	kʷuↄ
2.	kʷↄ	2p.	pↄ
3.	0	3p.	0-lx

The object markers in the ergative paradigm vary in form depending on

the form of the transitive suffix. The object markers with *-núnt, -núłt, and*

-núst are the same as those for *-nt, -łt, 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)  kʷu     ʕac+nt      -íxʷ
      1sOBJ   tie(Trans)  2sERG
      You tied me up.

(12)  ʕac+nt      -íxʷ    i?    snk̓lc̓aʔsqáx̣aʔ
      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)  kʷu     a-      ks-   ʕac+łt+im    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      i?    pəptwínax̣ʷ
      see(Trans)  1sERG   art   old lady
      I saw the old lady.

(15)  kʷu     a-      ks-   ʕacín
      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   wik+nt-əm
       2   wik+nt-x"   wik+nt-əp
       3   wik-s   wik-s-əlx

(17)   1sub   ƛ'a'?+nt-in   ƛ'a'?+nt-in
       2   ƛ'a'?+nt-ix"   ƛ'a'?+nt-ip
       3   ƛ'a'?+nt-is   ƛ'a'?+nt-is-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-wik+am   ks-wik+nt+am
       2   a-ks-wik+am   ks-wik+nt+əp
       3   ks-wik+am-s   ks-wik+am-s-əlx

The other transitive suffixes are present in all persons in both realis and irrealis mood (e.g. k"ɬ-ʕac+ti+ts 'He tied it for me'; k"ɬ-a-ks-ʕac+ti-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 + Ø/. 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)   q"alq"ʼi1+st   -əm   i?   t̕   kawáp -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.

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[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.

view (Anderson 1992:225).

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?   ʟ   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 arguments 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). x̌lap   kʷ   km'am   ʟ   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-   cx"uy   -s   i?   pəptwínax"
asp- come(Intr) 3sGEN art   woman
The old woman came closer.

(23) *Generic object intransitive*

way'   p   ƛ'x"up   i?   ʔ   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) *knc   wikm   (i?)   in-   cîx"
     1sABS   see(Intr) art   cm   1sPOSS   house
     (I saw my house.)

---

distinct from the generic object intransitive.

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

(25) ʕac+nt   -fn   in-   q'a?xn
     tie(Trans) 1sERG 1sPOSS shoe
     I tied my shoe.

(26) wəhám   in-   kəkəwápa?
     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 Okanagan, and how I test for them.

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[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.

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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) kʷu   wik   -s   Mári
     1sOBJ   see(Trans)   -3sERG   Mary
     Mary saw me.

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

(29) t'uxʷt   i?   sankłc'a?sqáxa?
     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   nk'm   i?   t   sp'ic'an
     1sABS   cut(Intr)   art   cs   rope
     I cut a rope.

(31) kn   c'wak   i?   t   t'ic'man
     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 *-tt*, 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 2.2.3). 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   kəwáp-s
      tie(pos)   3sErg   art   horse   3sPOSS
      He tied his_i horse for him_j.

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 construc-

tion, 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) ʕ_   anwí   ki?   kʷʊ_   kʷən+nínt   -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 sənk̓c̓a?sqáx̌a? 'horse' with possessive markers.

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

Oblique NPs cannot be extracted.

(37) a.   kn_   wíkəm   i?   ʕ_   s?íɬən
           1sABS   see(Intr)   art   cs   food
           I saw some food.

      b.   *(i?)   ʕ_   s?íɬən i?   kn_   wíkəm
           art   cs   food   sb   1sABS   see(Intr)
           It was some food I saw.

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

      b.   *i?   ʕ_   sqlmixʷ   ki?   kn_   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.

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

(39) ʕac+xɬ   -s   i?   ʕ_   sənk̓c̓a?sqáx̌a?
      tie(dat)   3sErg   art   cs   horse
      He tied the horse for him.

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? sənktc'a?sqáxa? i? ʕac+xit -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 derivaion-

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[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-Okana-
gan 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. √malša?+s+√x̌ʷaqʷ=alqs+an (*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.)

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[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.

		grammatical word				
			base			
				stem		
Inf pfrx/ cltc	(Drf) prfx-	(Bsf) prfx-	(Bsf) √root	(Bsf)* -sfx	(Drf) -sfx	Inf -sfx
e.g.						
(a)		k'aʔ	+ʔaw+cn+t'ʔst+m			-s	k'aʔʔawcn̓ʔstins '3s mistakes 3s'
(b)		n+	√q'aʔ	+fis	+nt	-xʷ	nq'aʔfisnix̌ʷ '2s worries 3s'
(c)	kʷ‿	kl+	s+	√qelt	+mix̌ʷ		kʷ‿ksqeltmix̌ʷ '2s has_husband'
(d)	kʷu		√qʷaʔ+qʷaʔm		+ncut		kʷuqʷaʔqʷaʔmncut '1p practice'
(e)	kʷ‿		√ʔuxʷt				kʷ‿t'uxʷt '2s flew'
(f)			√ʔix				ʔix '3s slept'
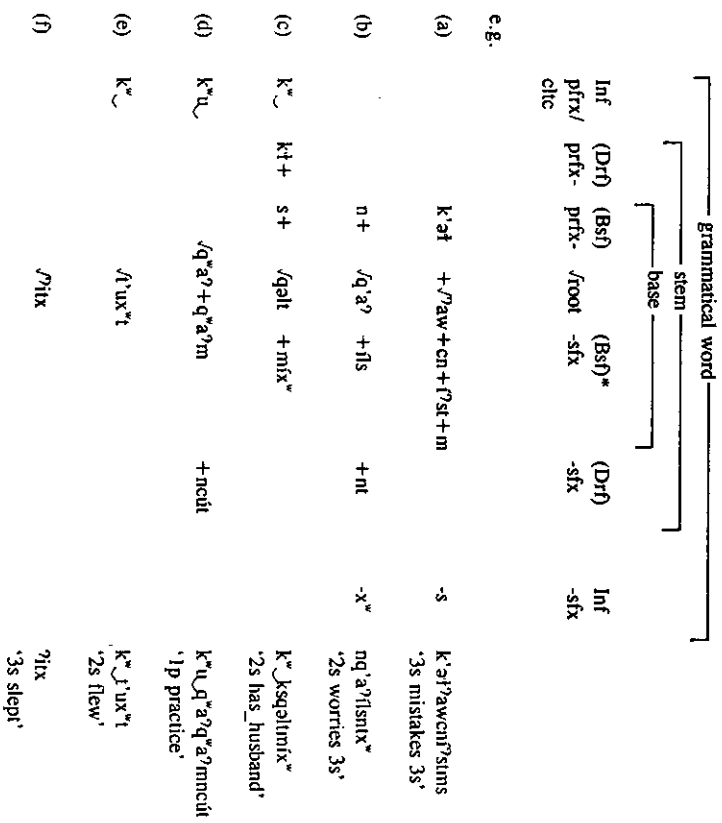
Derivational WFRs that involve reduplication or infixation typically

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 $q^waʔ+q^waʔmncút$ is inflected for irrealis

mood, the irrealis marker ks- and the subject marker $i(n)$- precede the predi-

cate, as in i-ks-$q^waʔq^waʔmncút$ '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

$k^wiƚ_a$-ks-$wík\partial m$ '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 prfx-	(Drf) prfx-	(Bsf)* prfx-	√root	(Bsf)* -sfx	(Bsf)* Inf -sfx	
(a)	an-		√kawáp			ankawáp '2sGEN horse'
(b)		saxʷ+	√kʷul'	+m	-s	saxʷkʷul'ms '3sGEN workman'
(c)		s+k+cəw+/cəw		+ʕaqstxn		skcəwcəwʕaqstxn 'fringed wing chaps'
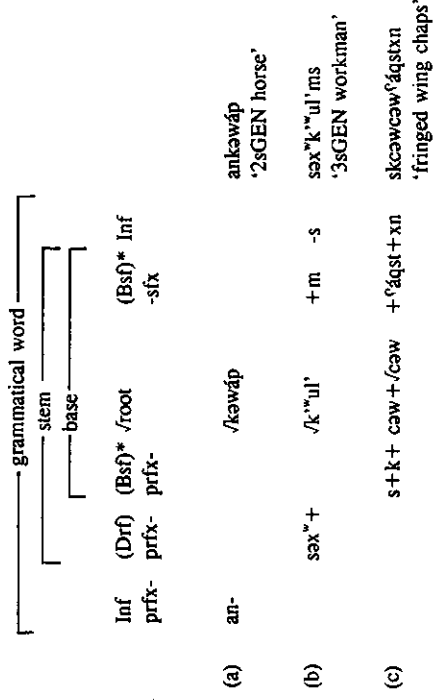
One striking property of nouns is that they take derivational prefixes,

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).   kʷu   an-   tkɬmílxʷ
         1sABS   2sPOSS   wife
         I am your wife.
  (ii).   kʷu   tkɬmílxʷ   -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 aspectuo-modal 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

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-   -tat
      2   an-   -amp
      3   -s   -s-lx

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

[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-   x̌ʷuy
      1sGEN   asp   go
      I went/ my going

(44) in-   q'ay'min
      1sPOSS   paper
      my paper/ *I paper

I discuss additional facts related to the distinction between genitive and posses-

sive 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

[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 un- are i- and a- respectively before s and stem-initial ɬ 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) kʷu̱   x̌ʷəlx̌ʷəlt+st   -íx̌ʷ
      1sOBJ   save(Trans)   2sERG
      You saved me.

(46) kʷu̱   a-   ks-   x̌ʷəlx̌ʷəlt+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

[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]

---

[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 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?   n?alt

   (ii).   *púti? x*uy

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

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

       b.   *púti?   wík   -n   i?   p'úk*la?
            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* (prf). 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.   kn⌣   ksc-   wík   t   sp̓ʕ̓at̓a?
            1sABS   prft   see   cs   monster
            I have seen a monster.

       b.   *púti?   kn⌣   ksc-   wík   t   sp̓ʕ̓at̓a?
            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.

---

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

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

e.g.   kʷu_   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

---

[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).   kn_   c-   ?ayx̌ʷt   kn_   ła? c-   ma?yám
        1sABS cust tire   1sABS sb   cust storytell
        I tire when I tell stories./*I am customarily tired when I tell stories.

(ii).   kn_   ?ayx̌ʷt
        1sABS tired
        I am tired.

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.   ixî?   soc-   ?ácqa?+x
        dpr   **cont**   going_out
        That one is going out.

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

e.g.   s-   tar'q+mix
        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 2.2.9))

e.g.   kn_   ks-   xʷúy+a?x
        1ABS   **irr**   go
        I'm going/ going to go.

---

[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.

...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 *putí?*, 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 aspect marker is in boldface.

(55)
```
way'   ixí?   s-     pa?pa?ink   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'aq"   ixí?
neut   cry       dpr
```
He started to cry,

```
náx`aml   lut   ixí?   s-     c'q'aq"   -s
but       neg   dpr    neut   cry       3sGEN
```
but he didn't cry.

(57)
```
cx"úy?ilx    ut    ni?"ip   c-     mist   -is     i?    sqilx"    i?
many_come    and   always   cust   know   3sERG   art   people    art
```
They kept coming and the Indian people knew all along

(58)
```
i.   s-      x'a?ám   i?    k"ək"r'it   i?    tkłmilx"
     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)
```
*wəxám         i?    kəkəwáp   náx`amł   lut   wəxám
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

---

[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 perfec-

tive, 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 imperfe-

ctive 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 inflec-

tional 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 mark-

ing 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-

---

[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 -nt 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   -łt
     dative   -x(í)t
     reflexive   -(n)cút
     middle   -(V)m
     reciprocal   -(n)wíxʷ
     causative   -st
     continuative   -(m)x, -(míx)-aʔx
     anticausative   -p, -ʔ-, -włx, -(V)C₂ rdp.
     limited control   -núnt, núst, -nułt
     desiderative   -(n-)...-łls
     stative   -t, CVC rdp., -scút, -úł, -ímm

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

---

[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) pixnt   -xʷ   iʔ   skmxíist
     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.
//canxƛ'íks//	canxƛ'íks+nt-	hand out s.t.
//nməłxaʔcín//	nməłxaʔcín+(n)t-	lie about s.o.
//cqʷanˈqʷanˈscínman//	cqʷanˈqʷanˈscínman+(n)t-	beg for s.t.
//łwin//	łwin+(n)t-	leave s.o. behind
//ʔayxʷtmín//	ʔayxʷtmín(n)t-	tire of s.o.

Not all closed transitional stems include the suffix -*st*. 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.	kʷu,	ac-	p'ic'+nt	-xʷ	
		1sOBJ		pinch(ctr)	2sERG	
		You pinched me.				
	b.	kʷu,	ac-	p'ic'+st	-xʷ	
		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'iẋ	-n	i?	sẋ'a?c'inm
		hunt(ctr)	1sERG	art	deer
		I hunted the deer.			
	b.	ac-	p'iẋ+st	-n	i?	sẋ'a?c'inm
		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.	kʷu,	ẋ'a?ẋ'a?+nt	-ís		
		1sOBJ	look_for(ctr)	3sERG		
		He looked for me.				
	b.	kʷu,	ẋ'a?ẋ'a?+tt	-ís	i-	sqʷasqʷsi?
		1sOBJ	look_for(pos)	3sERG	1sPOSS	children

He looked for my children.

(68) a. mac̣ʷ   -n   i?   laprit
       break(ctr)   1sERG   art   bridle
       I broke the bridle.

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

(69) a. nxλ'iks   -n   i?   snt̕sipnaʔ
       pass_around(ctr)   1sERG   art   cigars
       I passed around the cigars.

     b. nxλ'ikst+ɬt   -n   i?   snt̕sipnaʔ   -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) xʷic+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]

---

[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 //naqʷm// STEAL and //mac̣ʷ// BREAK reference a loss of possession, while bases such as //xʷic// GIVE and //k'ʷul'// MAKE reference a gain of possession. The WFR that produces possessional stems does not assign benefactive or malefactive interpretations to its output.

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

(72) kʷu_   c̣ʕaw'm+ɬt   -xʷ   yaʔ   ʕacsqáxaʔtn
      1sOBJ loosen(pos)   2sERG   art   reins
      Let loose my reins. GW23

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

(74) nik'+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 -*túlt*. 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) k"u̓ nik'+xt -x" i̓ c̓ si̓p'i̓?
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, wíkxr- 'see s.t. for s.o.' was rejected by speakers. Other bases, such as //ʔiʔɬn// EAT and //q'əm// SWALLOW do not have dative derivates (i.e. *ʔiʔxr- 'eat for s.o.' and *q'ʔməxr- '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 n̓ʔɬntn -salx
wash(pos) Unsubp dishes 3pPOSS
'She washed their dishes.'

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[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 possessionals. 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). k"u̓ k̓ʔuk̓'t-m(n)+(nt)-s He crawled towards me.
ʔuk̓'t He crawled.
tx"ist-mn+(n)t-m They walked **towards** someone.
x"ist He walked.
səp'-mi(n)+(nt)-n I batted it **away**.
səp'+nt-ís He batted it.
yr-mín+(n)t-x" You pushed it.
ir+nt-ín I rolled (coiled) it.

(ii). kn̓ x̌c-mn+(n)cut I got myself ready.
kn̓ x̌ac I am ready.
kpulx-m(n)+(nt)-n I camped with him.
kn̓ pulx 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 -mj): naq"mtí- 'steal s.t. for s.o.'. I analyze this form as being derived from the base //naq"m// STEAL.

b.   nc'iw'+xt   -n   iʔ   ʔ   n̓ʔiɬntn
    wash(dat)   1sERG   art   cs   dishes
    I washed some dishes for them.

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

b.   kʷni+xt   -əm   iʔ   ʔ   kínt'ək'ʷmin   -s
    grab(dat)   1pERG   art   cs   coffin   3sPOSS
    We'll get him a coffin.

(78) a.   kʷ'aʔk'ʷaʔ+ɬt   -in   1sERG
    chew(pos)
    I chewed it up on him.

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

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

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

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

b.   x̌aq'+xt   -m   -n   2sOBJ   1sERG
    pay(dat)
    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)   kn̓ʔək'+ncút   I cut myself.
     kn̓ix+ncút   I combed myself.
     kn̓ƛ'ʷaʔ+ncút   I bit myself.
     kn̓ʕ'k'ʷ+ncút   I laid myself down.
     kn̓qcpm+ncút   I shrank (myself) away.
     kn̓x̌nəm+scút   I hurt myself.
     kn̓pəl+scút   I killed myself.
     kn̓nuslx+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)

niarqp-ncút	run
x̌'ət'p-ncút	run away
ɬxʷɬxʷ-ncut	breathe
kɬaʔm-ncút	get closer to s.t.
cʕʷəy-ncút	laugh
wəlq(n)-ncút	recover (one's health)
siym-scút	do one's best
ʕalp-ncút	be the loser
nqʷ'aʔɬs-ncút	be cranky
kwk-scút	be lucky
ƛ'əx̌-scút	be in a hurry
nƛ'x̌c-ncút	be loud
k'ətwiʔnaʔ-scút	be prepared
sqʷ'nam-scút	be pitiful
cək'ʷm-scút	be hard to get
x̌ʔim-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)

kʷuʷəy-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'ʷʼalʼcn-cút-(ł)n   a cook
      k'ʷʼalʼ-ncút-(ł)n   Creator
      sx̌-cút   a companion
      λʼaʔλaʔ-ncút-(ł)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.

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[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.

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

      kn_q̉ʷácqn+m   I put a hat on./ I am hatted.
      kn_q̉ʷacq+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.   //kc̓awʼiwʼsʼ// HAVE A WASHED FACE
           kn_kc̓awʼiwʼs+m
           I washed my face.

      b.   //ʔaqʷ// SCRAPE s.t.
           kn_ʔaqʷ+m
           I shaved.

      c.   //ʔip̉// WIPE s.t.
           kn_ʔip̉+m
           I wiped my face.

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

      e.   //lasmist// SHIRT
           kn_lasmist+m
           I put a shirt on.

      f.   //k̉ʷłstn// SWEATBATH
           kn_k̉ʷłstn+m
           I took a sweatbath.

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

(87) a. //ʔ̓aʔʔ̓aʔ// LOOK_FOR s.t.
kn‿ʔ̓aʔʔ̓aʔ-ám
*I looked for myself.

b. //nik̓// CUT s.t.
k̓ʷ‿nik̓ʔam
*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) nⱡək̓lək̓láп   s.o. sobs
ncʔipcʔapsəm   s.o. blinks his eyes (shut)
k̓áʔqnəm   s.o. raises his head
k̓ʔaxʷám   s.o. yells
wəhám   s.t. barks
xʷiwam   s.o. whistles
k̓ram   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)wíxʷ and -twíxʷ. 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. kʷu‿   pəlst+wíxʷ
1pABS   kill(rec)
We will kill one another. COD229

b. kʷu‿   wk+twíxʷ   əl   skʷláxʷ
1pABS   cust   see(rec)   in   evening
We see each other in the evening. COD230

c. m'ayʔxt+wíxʷ
tell(rec)
They talk things over.

d. kʷu‿   nsəxʷnaʔnn+(n)wíxʷ
1pABS   understand(rec)
Let's understand one another. COD229

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

f. *kʷu̱   ʔayx̌tmn+(n)wix̌ʷ
    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) nʔalqs-nwix̌ʷ-n+(nt)-s-əlx   They fight over something.
    c'əpq'mn-(n)wix̌ʷ+st-s-əlx   They glue it together.
    ʕac-mn-(n)wix̌ʷ+st-xʷ a-snsiswxn   Tie your socks together.
    k'nk'ʷnks-nwix̌ʷ-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).

[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
//nk'ʕámcn// THIRSTY	nk'ʕamcn+st-n	I made him thirsty
//suy't// CHILLY	suy't+st-n	I made s.o. chilly
//x̌lx̌ʷált// ALIVE	x̌lx̌ʷált+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 -*(mix̌)aʔx*, the other is -*(mi)x*. (The long form of each affix is found with phonologically weak bases). The continuative stem that ends in -*(mix̌)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 -*(mi)x*. The continuous and perfect continuous sentential aspect prefixes are *sac-* and *s-*, respectively. Stems in continuative stem aspect, in each of their three sentential aspects, are illustrated in (92)-(94).[50]

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

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

a. kn‿   ks-   nik'+a?x
    1sABS   irr   cut(con)
    I am going to cut (something).

b. kn   ks-   ƛ'a?ƛ'a?+mixa?x
    1sABS   irr   look_for(con)
    I am going to look for (something).

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

a. kn‿   səc-   nik'+x
    1sABS   cont   cut(con)
    I am cutting (something).

b. kn‿   səc-   ƛ'a?ƛ'a?+mix
    1sABS   cont   look_for(con)
    I am looking for (something).

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

a. kn‿   s-   x"úy+x
    1sABS   pcont   go(con)
    I'm going.

b. kn‿   s-   k'awp+mix
    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

that contain derivational suffixes -(m)xʲ/ə?x or -(m)ix. I classify -(m)xʲ/ə?x and -(m)ix 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)w/ix, 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 (-ʔ-).[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'ik'r'+áp
         1sABS   separate(ac)
         I got cut off/separated.

b. k'ik'r'+nt   -fsəlx
    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.

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

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

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

    b. ixíʔ   sílx̌ʷaʔ
     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 ʕənáp 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‿   nikʼ+ək'   iʔ   ⌣   nkʼmn
     1sABS   cut(ac)   art   cs   knife

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[53] As with other stem formatives, sometime anticausative formatives occur inside the base, where they have been lexicalized. For example, the stem nk'aʔsils 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+wilx. Thus, only the suffix -wilx 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.

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

    b. cx̌ʷ+nt -fn iʔ ⌣ scʔɬtən
     stock(ctr) 1sERG art cs food
     I stocked it with food.

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

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

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

    b. ʕac+nt -fs iʔ sicʼm
     tie(ctr) 3sERG art blanket
     He tied up the blanket.

(99) a. kn‿ ɬqʼlá+ʔ+x̌ʷ
     1sABS hook(ac)
     I got hooked (on something like a nail).

    b. ɬqʼlx̌ʷ+nt -fn iɬ kʷɬnkʼəmíp
     hook(ctr) 1sERG on door
     I hooked it on the door.

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

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

I got cut with a knife.

(104) ʕam+áp   iʔ   c̓   k̓əyáʔnax̌ʷ
      thaw(ac) art cs sun
      It was thawed by the sun.

(105) t̓i   p̓ʼ+ʔ+ə́x̌ʷ   iʔ   c̓   nc̓k̓ʷʼasxntn
      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 *-núłt*, 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.   nʕaɫ+nt   -in
           sink(ctr)   1sERG
           I sank it.

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

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

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

(108) a.   nʕaɫ+łt   -in   iʔ   ɫkap   -s
           sink(pos)   1sERG   art bucket   3sPOSS
           I sank his bucket on him.

      b.   nʕaɫ·+núłt   -x̌ʷ
           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+)...+fls*. However, in some cases the prefixal portion of the marker is absent. Examples of the desiderative *(des)* appear in (109).

(109) kn‿n+x̌ʷuy+fls   I want to go.
       k̓ʷ‿n+pəlx+fls   You want to camp.
       kn‿n+ʕaynst+fls   I feel like laughing.
       kn‿nək̓ʷm+fls   I want to cut (something).
       kn‿n+pax̌m+fls   I want to hunt (something).
       kn‿n+pəc̓m+fls   I want to pinch (something).

       kn‿sa?st+fls   I want to drink.
       k̓ʷ‿mət+fls   You want to sit.

The formative *(n+)...+łs* 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+)...+łs* in these contexts as a base formative. Examples of *(n+)...+łs* as a base formative appear in (110).

(110)
n-k'aʔs-łs	be angry, cranky
n-st-łs	think
kt-łl·s	stomach bursts
n-q'aʔ-łs	the matter, business
k'ɬʔamt-łls+nt-	sit in front of someone
n-ac'nt-łls	be preoccupied
k'ɬtwn-ls-mist	lack confidence
q'səsp-łls-inn+(n)t-	wait for someone a long time
tkcx-łls	be hurting, suffering
npút-als	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, *-łs* 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
k'ʷal+t	warm
c'akʷ'+t	stiff
nˤas+t	heavy
qit+t	wakened

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

tɬtaɬ+t	straight, honest
k'ʷrk'ʷriʔ+t	golden
cixcx̌+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
q'n'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)

λ'ax̣	fast	(*λ̣'ax̣)
x̌ʷupt	tired	(*x̌ʷup)
qalt	raw	(*qal)
st̓ix̌ʷa?	big	
c'uy	dark	
piq	white	
kəka?ír?	slow	
x̌ʷəlx̌ʷált	alive, healthy	(**x̌ʷəlx̌ʷál, *x̌ʷal)
q̉ʷəmq̉ʷámt	excellent, beautiful	(**q̉ʷəmq̉ʷám, *q̉ʷam)
p̓t̓att	thick	(*p̓tat̓)
pa?pá?t	generous	(*pa?pá?, *pa?)
q̉ʷn̓q̉ʷán̓t	be hard up, pitiful	(*q̉ʷn̓q̉ʷán, *q̉ʷan)
k̓ʷusk̓ʷst	frisky	(*k̓ʷusk̓ʷs, *k̓ʷus)
x̌á?x̌a?	sacred	

The frequency of the suffix -t and root reduplication in these statives

that are not derived from active bases suggest 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
     limlemt   thank you

(116) q̉ʷəlq̉ʷn̓t   talk
     q̉ʷəlq̉ʷílst   talk to someone

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

Mattina 1993b. The formatives -*fmn* and -*út* are found in stems denoting

habitual or repeated behaviors that characterize an individual. A. Mattina notes

that -*út* occurs in stems in which the root is not reduplicated. The suffix -*fmn*

occurs in stems in which the root is reduplicated. I exemplify these in

(117) and (118).

(117) q̉ʷalq̉ʷalt+út   talks all the time, likes to talk
     *q̉ʷalt+ímn

(118) ?əln̓+ímn   eats all the time, likes to eat
     *?ə̕?əln+út

Like other statives, stems with -*út* and -*fmn* tend not to be found in

continuous aspect (e.g. *?kn̓_səc+?ast+ímn+x* 'He's being a sleeper'), but

may be possible with other stems, e.g. *kn̓_səc+q̉ʷəl'q̉ʷəl'ı+út+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 C_1- reduplication) and *root possibility* (marked by -*l'st* or -*m(s)*). 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**   **Intransitive**

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 absolute 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'ʷki?sqáx̌aʔ	'mount'	nt'ək'ʷki?sqáx̌aʔ+tn	saddle
-mín	q'y'am	'write s.t.'	q'əy'+mín	writing tool
sxʷ-	k'ʷul'm	'make, do'	sxʷ+k'ʷul'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'=qin   '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'ʷəx̌'=qin   'take (hat) off of head'
        pull_off=head

(ii). a. sy-sy=us   'powerful'
        ʔ=us

     b. kɬ-xn=us   'sunset low on the horizon'
        on-low(?)=us

     c. ƛ'aʔ=us   'look around'
        fetch/look(?)=us

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

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', =čín. However, the form is not *səp'=čín but səp'=aɬx̌ʷ! (hit=mouth/throat/neck) or səp'p'=aws=qn (hit=middle=head). The form for 'hit in the face' is səp'p'=w's=us (hit=middle=face). (The doubling of p' is unexplained in the last two examples.)

(121) a. pak'in'=ɬp   bitter cherry
        ʔ=ɬp

      b. cq'=ɬp   Douglas fir
        ʔ:ɬp

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

Other plant names show no lexical suffix, and still others have a lexical suffix other than =(i)ɬp, as in (122).

(122) a. cur   all willowherb COD10
      b. swíya   fern COD188
      c. snc'i'c'q=p=naʔ dwarf or creeping juniper COD17
      d. wswas=xn=qn lupine COD228
      e. st'ik'(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 kɬ- and taʔx̌ʷ-ɬ-, respectively.[56] Denominals are exemplified in (123).

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[56] taʔx̌ʷ- requires what A. Mattina (1987) calls a 'compound connector', the segment -ɬ. 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		
kt-	//p'ina?// BASKET	kt+p'ina?	s.o. has a basket
ta?xʷ+t-	//citxʷ// HOUSE	ta?xʷ+t+citxʷ	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 overridden 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

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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	kn̓_wiʔs-txám	I finished combing s.t.
//cʕawlx// BATHE	k̉ʷ_wiʔs-cʕáwlx	You are done bathing.
//qʼay// WRITE	wiʔs-q̓y̓ám	He got done writing s.t.
//tqmín// PUT DOWN	wiʔs-təqmínams	He already threw it down.
//mʼayaʔ// SHOW	kn_wiʔs-mʼayaʔm	I'm done showing it.
//pʼicʼ// PINCH	kn_wiʔs-pʼicʼəm	I already pinched s.t.
//lkʷʼiws// MOUNT	p̓_wiʔs-lkʷʼiwʼs	You (pl.) are already mounted.
//ʔitx// SLEEP	kn̓_wiʔs-ʔítx	I've already slept.
//ʔacqaʔ// COME_OUT	wiʔs-ʔácqaʔ	He's already left.
//ʔukʷt// CRAWL	kn̓_wiʔs-ʔúkʷt	I finished crawling.
//tr̓qpncut// RUN	wiʔs-tr̓qpncút	He's finished running.
//ntək̉ʼtám// SOB	wiʔs-ntək̉ʼtám	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+ʕacnín* 'I finished tying
it'; *s-ʕacnín*). 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	*wíʔs-x̌ʷúpt	(done being weak)
//piq// WHITE	*wíʔs-píq	(done being white)
//ckiw't// SKINNY	*wíʔs-ckíwt	(done being skinny)
//x̌ast// GOOD	*wíʔs-x̌ást	(done being good)
//ƛ̓ax̌ʷ// FAST	*wíʔs-ƛ̓áx̌ʷt	(done being fast)
//p'uy// WRINKLED	*wíʔs-p'úy	(done being wrinkled)
//k'ast// BAD	*wíʔs-k'ást	(done being bad)
//citx̌ʷ// HOUSE	*wíʔs-cítx̌ʷ	(done being a house)
//yámx̌ʷaʔ// WOVEN BASKET	*wíʔs-yámx̌ʷaʔ	(done being a woven basket)
//xʷuw'ł// ROAD	*wíʔs-xʷuw'ł	(done being a road)
//sp'ic'n// ROPE	*wíʔs-sp'íc'n	(done being a rope)
//sxix̌'xn// TROUSERS	*wíʔs-sxix̌ʌ'xn	(done being trousers)
//tkłmilx̌ʷ// WOMAN	*wíʔs-tkłmílx̌ʷ	(done being a woman)

A second test for eventhood picks out the same set of bases as *wíʔs-* does. This test involves the compatibility of a base with the higher predicate *qłnúnt-* 'be able to'. *qłnúnt-* selects an irrealis complement clause that is headed by a base that encodes an event. I refer to these as *abilitative* constructions.

(4)
```
qłnu(nt)   -n         ł    i-     ks-     píxm
able       1sERGsub   sb   i-     1sGEN   hunt
```
I was able to hunt.

(5)
```
lut    qłnu(nt)   -n      i-     ks-    kłmút
neg    able       1sERG   i-     irr    sit_there
```
I never could sit there.

(6)
```
way'   k'iwlx   uł    lut   qłnú(nt)   -s
prt    old      and   neg   able       3ERG
```
He's old and he's not able.
```
k'a ʔkin     ł    ks-   x̌ʷuy   -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)
```
*qłnú(nt)   -n      ł    i-     ks-    tkłmílx̌ʷ
able        1sERG   sb   1sGEN  irr    woman
```
(I was able to be a woman.)

(8)
```
*lut   qłnú(nt)   -n      ł    i-     ks-    x̌ʷupt   -s
neg    able       1sERG   sb   1sGEN  irr    weak    3sGEN
```
(He wasn't able to be weak.)

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[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 *qł-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   q'nú(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-limt   I'm done being happy.
     lut q'nú(nt)-n ł ikslimt   I wasn't able to be/stay happy.

The acceptability of some states (like *limt*) with *wi?s-* and *q*núnt-* 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

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example, *nk'əwpils* 'lonesome' is like *limt* in that it is interpretable as denoting a temporary phase. By contrast, states such as *pəx̌pɑ̌x̌r* 'smart' and *x̌ʷupt* 'weak, infirm' name more permanent situations that are characteristic of an individual as a whole. I assume that states are prototypically 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 *wi?s-*, but in their *anticausative* (ac) alternant, they do combine with *wi?s-*.

(11)   //nˤas// HEAVY
     a.   *wi?s-nˤas   finished being heavy
     b.   wi?s-[n+?+ˤas]   finished getting heavy

(12)   //x̌ast// GOOD
     a.   *wi?s-x̌ast   finished being good
     b.   wi?s-[x̌ast+wiłx]   finished getting better

(13)   //c'uy// DARK
     a.   *wi?s-c'uy   finished being dark
     b.   wi?s-[c'+?+uy}   finished getting dark

(14)   //c'nc'ant// TIGHT
     a.   *wi?s-c'nc'an+t   finished being tight
     b.   wi?s-[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 w/?s- 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'ic'+ac	I got pinched.
//ł°at?//	WET	ł+?+°at' ixt?	That got wet.
//ck°am//	STIFF	ck°+áp i? sip'i?	The hide got stiff.
//ła?p//	DIRTY	ta?+áp ixt?.	That one got dirty.
//nik'//	CUT s.t.	knˌník'+ak'	I got cut.
//c'il'//	SHADY	c'il'+l'	It's shaded.
//c'uy//	DARK	c'ˌ+?+uy	It got dark.
//n°as//	HEAVY	knˌn+?+°as	I'm getting heavy.
//nwis//	HIGH	nw+?+as i? t'ux°t	The plane lifted up.
//p'uy//	WRINKLED	p'+?+uy ixt?	It's wrinkled.
//sɛlx°a?//	BIG	sɛlx°a?+twɛlx	It's getting big.
//c'nc'ant//	TIGHT	c'nc'ant+wɛlx	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'ux°t//	FLY	//?ácqa?//	GO OUT
//?uk°t//	CRAWL	//x°t'ilx//	JUMP UP
//?itx//	SLEEP	//k'+x?yust//	GO UNDER A SHELTER
//x°ist//	WALK	//x°uy//	GO
//c'q°aq°//	CRY	//p'lak'//	TURN BACK
//mut//	SIT	//ksan//	GO ALONG
//q°a?q°?mut//	BELCH	//pulx//	CAMP

A second test for the feature value of [±C] is the ability of a base to form limited control predicates (section 2.2.11). 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   k'ʷu̱ p'ic'c'+núnt -xʷ
                          1sOBJ pinch(lc)   2sERG
                          You managed to pinch me.

(18) //ƛ'at'// WET   ƛ'at't'+nú(nt)   -n
                    wet(lc)   1sERG
                    I managed to get it wet.

(19) //ƛ'a'ʔƛ'a'ʔ// FETCH   ƛ'a'ʔa'ʔ+nú(nt)   -n
                              fetch(lc)   1sERG
                              I managed to fetch it.

(20) //ƛ'x'ʷp// BEAT s.o.   ƛ'x'ʷx'ʷp+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) //nʕʷas// HEAVY   nʕʷas+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'a'ʔ// FETCH s.t.
                                      //kɬnk'ʷʔip// CLOSE s.t.
                                      //ɬqmin/ LAY_DOWN s.t.

    ii.   [+E, -C]   e.g.   //t'uxʷ// FLY
                                        //xʷist// WALK
                                      //ʔɬtx/ SLEEP
                                      //xʷuy// GO
                                      //ʔukʷt// CRAWL

    iii.   [-E, +C]   e.g.   //xʷupt// WEAK, INFIRM
                                        //ʔayxt// TIRED
                                      //piq// WHITE
                                      //sɬxʷaʔ// BIG
                                      //qʷámqʷəmt// EXCELLENT

iv.   [-E, -C]   e.g.   //yámx̌ʷaʔ// WOVEN BASKET
/snk̓c̓aʔsqášaʔ// HORSE
//ƚkap// BUCKET
//nik'mn// KNIFE
//kiłáwna?// 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)
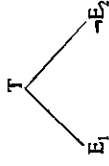
(26) Process (P): a sequence of events identifying the same semantic expression.
structural representation:
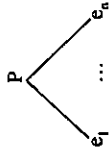
(27) State (S): a single event which is evaluated relative to no other event.
structural representation:

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.
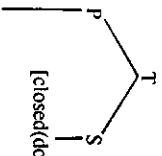
[13]I discuss the derivational possibilities of bases that name entities in more detail in Chapter 4.

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)

ES:
```
        P
       / \
      T   S
           [closed(door)]
```
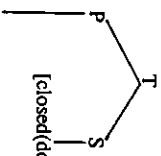
LCS':   [act(John,door) & ¬closed(door)]

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.

ES:
```
        P
       / \
      T   S
           [closed(door)]
```

LCS':   [¬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'// PINCH	//c'q'ʷaq'ʷ// CRY	//piq// WHITE	//p'ina?// 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	kn-̓	p'ic'm	
	1sABS	pinch(ntr)	
	I pinched (something).		
closed transitional	p'ic'+nt	-x̌ʷ	
	pinch(ctr)	2ERG	
	You pinched it.		
open transitional	ac-	p'ic'+st	-x̌ʷ
	cust-	pinch(otr)	2sERG
	You usually pinch it.		
possessional	kʷu-̓	p'ic'+lt	-x̌ʷ
	1sOBJ	pinch(pos)	2sERG
	You pinched my ___.		
dative	kʷu-̓	p'ic'+xt	-x̌ʷ
	1sOBJ	pinch(dat)	2sERG
	You pinched it for me.		
reflexive	kn-̓	p'ic'+ncut	
	1sABS	pinch(ref)	
	I pinched myself.		
limited control	p'əc'c'+nú(nt)	-n	
	pinch(lc)	1sERG	
	I managed to pinch it.		
anticausative	p'ic'+ac'		
	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 'ac'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 tell someone' and the possessional stem alternant cu(n)lt- 'someone tell someone's relative'. The possessional stem form is commonly understood with the meaning of a transitional, as in kʷu cútt-s 'He told me'. The latter use of the possessional stem form is a 'fancying up' or hypercorrection of kʷu cús, 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 //piẋ// HUNT (game) does not have a reflexive alternant *paẋncút ('hunt myself'). Also, morphologically complex Transitions tend to have fewer stem alternants than simple bases. Bases such as

//nca?+lqs+íkst+nn// ELBOW s.o. and //na?kʷ~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)

//lqcna?m//RUN_OVER s.t.	kn_lqac+c+ná?m	I got run over.
//k'ʔnkʷʔ'ip//CLOSE s.t.	k'ʔnkʷʔ'+ʔ'+ip	It got closed.
//cq'min// THROW s.t.	kn_cq'+q'+min	I got hit (by s.t. thrown).
//c'lxiw'//SCRATCH s.t.	kn_c'l+l+xiw'	I got scratched (clawed).
//klíq'na?//BURY s.t.	way' klíq'+q'+na?	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: *nca?lqs/kstmnt-m* 's.o. elbowed him/he got elbowed';
na?kʷcín(n)t-m 's.o. took him food/he was taken food'.

(34)

ES:

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]τ, 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) kn⌣   nik'm   i?   c̓   st'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.

---
[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'am* 'I will cut it' and in neutral aspect *i-s-nik'am* '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 *púti?*, I test for similar sensitivity to internal object type in Okanagan (38).

(38) *púti? k'ʷa?k'ʷa?-nt-ís i? apl.   Still, he ate the/an apple.
      *púti? k'ʷa?k'ʷa?-nt-ís i? smikʷt.   Still, he ate snow.
      *púti? k'ʷa?k'ʷa?-ám i? t apl.   Still, he ate some apple/apples.
      *púti? k'ʷa?k'ʷa?-ám t smikʷt.   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

(46) kn̩   k'ʼłpaxám
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).

---

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   -is   i?   łkáp
break(ctr)   3sERG   art bucket
He broke the bucket.

(42) ac-   maʕ'+st   -is   i?   łkáp
cust break(otr) 3sERG   art bucket
He always breaks the bucket.

(43) cəm' kn̩ maʕ'ám   i?   łkap
might 1sABS break(Intr) art bucket
I might break a bucket.

(44) k'ʼłpax̌+nt   -ín
think_about(ctr) 1sERG
I thought about it.

(45) stim' a? c-   k'ʼłpax̌+st   -íx"?
what   art cust think_about(otr) 2sERG
What did you (usually) think about?

(48)

ES:

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. kʷu_ λ'a'ʔλ'a'ʔ+nt   -is
     1sOBJ look_for(ctr)   3sERG
     He looked for me.

   b. kʷu_ λ'a'ʔλ'a'ʔ+lt   -is
     1sOBJ look_for(pos)   3sERG
     He looked for something of mine.

(50) a. maʔ(·)+(nt)   -n   i?   laprít
     break(ctr)   1sERG   art   bridle
     I broke the bridle.

   b. maʔ(·)+lt   -s   -n   laprít
     break(pos)   2sOBJ 1sERG   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. anxλ'íks+(n)t   -n   i?   snt̓síp̓na?
     pass_around(ctr)   1sERG   art   cigars
     I passed around the cigars.

   b. nxλ'íkst+lt   -n   i?   snt̓síp̓na?   -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)

ES:

LCS': [act(x,y) & ¬have(z,y)] [have(z,y)]

LCS: cause([act(x,y) & ¬(have(z,y))], become([have(z,y)]))

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 action (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. kn   nək'+ncút
    1sABS cut(ref)
    I cut myself (on purpose).

    b. kn   ník'+ək'
    1sABS cut(ac)
    I got cut (by accident).

(64) a. ɬʔat'+ncút iʔ ʔúxʷtit
    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

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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 ɬ ʔaʔúsaʔ
    boil(dat) 1sERG art cm eggs
    I boiled him some eggs.

(61) *npus+xt -n iʔ ɬ ʔaʔúsaʔ -s
    boil(dat) 1sERG art cm eggs 3sPOSS
    I boiled his eggs.

(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 *xʷicʼxt-m-n ɬak(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.

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.   *kʷuc   *kʷuc   -s
       1sOBJ   eat(dat)   3sERG
       (He ate for me.)

    b.   kʷuc   ʔiƛ+(ƛ)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+ƛt   -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.   kʷ'λ'qin+(n)t   -ix̌ʷ   i?   ƛḱmilxʷ
       remove_hat(ctr)   2sERG   art   woman
       You took the hat off of the woman. COD63
       (lit. You dehatted the woman.)

    b.   kʷ'λ'qn+(n)int   -xʷ
       remove_hat(lc)   2sERG
       You managed to take her hat off.
       (lit. You managed to dehat her.)

(57) a.   kʷ'λ'+ƛt   -ix̌ʷ   i?   qʷ&cqan   -s
       remove_hat(pos)   2sERG   art   hat   3sPOSS
       You remove her hat. COD63

    b.   kʷ'λ'λ'+nixt   -xʷ
       remove_hat(lc)   2sERG
       You managed to remove her hat.

Datives do not have a limited control counterpart.

(58) a.   cac+xƛt   -s   -n
       tie(dat)   2sOBJ   1sERG
       I tied it up for you.

    b.   *cac+nixt-
       (manage to tie something for someone)

(59) a.   kʷuc   xʷíc'+xt   -xʷ
       1sOBJ   give(dat)   2sERG
       You gave me something.

    b.   *xʷc'+nixt-
       (manage to give someone something)

The dative agent must be in control of his/her actions in order to bring about

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 *-nún̓t*
or *-nít̓t*, e.g. //p'x+x+k'''+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).
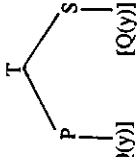
(67)   tqác+c+na? i?   ʔ   atumopíl
        run_over(ac) art   cs   automobile
        It got run over by a car.

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
        |   |
     [-Q(y)] [Q(y)]
```

LCS':   [-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

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. k̓ʷnn+(n)int -x̌ʷ
   take(lc) 2sERG
   You managed to take it.

  b. k̓ʷi+(n)nt -x̌ʷ
   take(ctr) 2sERG
   You took it.

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[22]Anthropomorphized inanimates and animals may be subjects of reflexives.

c. k̓ʷu, k̓ʷi+łt -x̌ʷ
 1sOBJ take(pos) 2sERG
 You took something of mine.

d. kn 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 -VC₂ 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). ƛ̓uʔ-nú(-nt) -en (ii). ƛ̓uʔʔ-nú-(nt) -en
 stab(success) 1sERG   stab(OC+success) 1sERG
 I managed to stab him.   I mngd. to stab him by accident.

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'q"aq"// CRY.

Table 2. Process Paradigm

default	kn⌣	c'q"aq"
	1sABS	cry
	I cried.	
closed transitional	*	
open transitional	*	
possessional	*	
dative	*	
reflexive	*	
limited control	*	
anticausative	*	
causative	c'q"q"+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:

$$\begin{array}{c} P \\ \diagup \diagdown \\ e_1 \quad \cdots \quad e_2 \end{array}$$

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).

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:
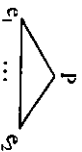
LCS': [act(Mary,cart)] & [move(cart)]

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) *k̓ʷɬ   p̓ic̓+st   -xʷ
       1sOBJ   pinch(caus)   2sERG
       (You made me pinch it.)

(71) *nik̓'+st   -n   i?   ttw̓ít
       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 *nik̓'st-* or *nik̓'nniksn-* 'force someone to do something'.

(72) nik̓'nst   -íxʷ   ki?   kn̩   ?íʔtən
       force(caus)   2sERG   sb   1sABS   eat(Intr)
       You force me to eat.

(73) nik̓'nniksnt   -xʷ   ki?   kn̩   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

control transitional in (80) with the ambiguity of the causative in (73), above.

(80) ha   ɬaqʼqʼ+núnt -xʷ   i?   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) //tʼuxʷt// FLY   *tʼəxʷt+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) //tʼuxʷt// FLY + ac → (It got flown.)
      *tʼʔuxʷt
      *tʼəxʷtw/lx
      *tʼuxʷxʼt
      *tʼəxʷ(t)áp

(83) //pulx// BED_DOWN + ac → (He got bedded down.)
      *pʼulx
      *pəlxwílx

(83) //pulx// BED_DOWN + ac → (He got bedded down.)
      *pʼulx
      *pəlxwílx
      *pulx
      *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.

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) ʔukʷ'ɬ+st   -n   iʔ   ʔuxʷɬt
     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) kʷuɬ   siw'sim(n)+st   -xʷ
     1sOBJ 2sGEN water_v(caus)   2sERG
     You gave (granted) me a drink.

(75) kʷuɬ   a-   ks-   qʷaʔmanwixʷ+stm
     1sOBJ 2sGEN irr   introduce(caus)
     (You must/should) Introduce us.

(76) c'am   ƛ'mip+st   -xʷ   a-   ɬaɬqáqcaʔ
     might be_late(caus) 2sERG   2sPOSS   older brothers
     You'll be too late for your brothers. GW488

(77) pulx+st   -n   iʔ   scaʕm'ala?
     bed_down(caus)   1sERG   art   children
     I put the children to bed.

(78) nyʕʷip   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'ƚy'ɬ+stim
     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

[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 -nwet/ns 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

Table 3. State Paradigm

//ɬc'at'// WET

closed transitional	ɬc'at'+nt	-ín
	wet(ctr)	1sERG
	I wet something.	

open transitional	ac- ɬc'at'+st	-ín
	cust wet(otr)	1sERG
	I usually wet it.	

possessional	ɬc'at'+ɬt	-ín
	wet(pos)	1sERG
	I wet someone's ____.	

| dative | * | |

reflexive	ɬc'at'+ncút	
	wet(ref)	
	He (an infant) wet himself.	

limited control	ɬc'at't'+nú(nt)	-n
	wet(lc)	1sERG
	I managed to wet it.	

anticausative	ɬ+ʔ+c'at'	
	wet(ac)	
	It got wet.	

causative	ɬc'at'+st	-íx"
	wet(caus)	2sERG
	You let it get wet.	

Only a few State bases have all the derivates that //ɬc'at'// 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	(i') piq	
	ev white	
	It's white.	

| closed transitional | * | |

| open transitional | * | |

| possessional | * | |

| dative | * | |

| reflexive | * | |

limited control	paqq+núnt	-x"
	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

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 consistency. 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 noncommittally 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 //myi/) and *love* (Ok //ximink/) 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 allernants 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 //ʕat'//

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 *kn̲ʕat'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.

(85)   [P, S]_Transition   [e]_State   [e₁...eₙ]_Process

[P, S]$_{Transition}$	[e]$_{State}$	[e$_1$...e$_n$]$_{Process}$
default Transition	default State	default Process causative
closed transitional		
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

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 //sŧix̌"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.

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.

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;

(5) a. a-　　kɫ-　　　p'ína?
　　　2s　　UnPOSS　basket
　　　your basket (lit. 'yet-to-be-your basket')

　　b. i-　　kɫ-　　　cítxʷ
　　　1s　　UnPoss　house
　　　my house (lit. 'yet-to-be-my basket')

　　c. k-　　　slaxt　　-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) kʷu_　ʕac+xɫ　-xʷ　　i?　ɫ　snkɫíc'a?sqáxa?
　　1sOBJ　tie(dat)　2sERG　art　cs　horse
　　You tied a horse for me.

---

(2) in-　　　q'a?xán
　　　1sPOSS　shoe
　　　my shoe

(3) k'ʷu_　　an-　　　tum'
　　　1sABS　　2sPOSS　female's mother
　　　I am your mother.

(4) way'　ixi?　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 *kɫ-* and a possessive affix, as shown in (5).[6] (*kɫ-* is realized as *k-* before *s* and *ɫ*.)

_____

[6]Translations of the NPs in (5) usually are of the form 'someone's N-to-be' (e.g., *ikɫ-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.

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 *un-* are realized as *i-* and *a-*, respectively, before *s* and stem-initial *t* of kin terms.)

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[5] I write these inflectional markers as affixes, although historically they were probably clitics (Kinkade, p.c.).

(16) way'   q'ʷəyʕás   taʔxʷ+sqláw',
     well   black-one   got-money

        uɬ   taʔxʷ+ɬ+cítxʷ   iʔ   sx̌ʷílman
        and   got-house   art   devil
        The Black Man got the money and the Devil got the house. COD209

(17) kʷ̓   taʔxʷ+sck'ʷúl'
     2sABS   got-work
     You got a job.

(18) atiʔ   x̌'lal   i-   sx̌ílwiʔ,
     because   dead   1sPOSS   husband

        uɬ   axáʔ   kn̓   taʔxʷ+ɬ+nq'ʷmʷícin
        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'əxʷlwís
     got-airplanes
     They had airplanes.

Verbs do not undergo the 'get-something' WFR. Speakers find the forms in (21) ill-formed.

(21) a. *kn̓   taʔxʷ+ɬ+xʷúy
        1sABS   get-go

    b. *kʷ̓   taʔxʷ+ɬ+límt
        2sABS   get-happy

c. k+slax́t
    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) atiʔ   kɬ+psʕáyaʔ   axáʔ   əl   təmxʷúlaʔxʷ
     dpr   have-foolish_ones dpr   on   earth
     There are no good people here on earth. GW851

(14) iiʔ   k+səxʷmrím   uɬ   atiʔ   nak'ʷaʔ   kɬ+mrímstn
     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. *kn̓   kɬ+xʷúy
        1sABS   have-go

    b. *kn̓   kɬ+límt
        1sABS   have-happy

    c. kʷ̓   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.)

(7) *k"u   'ac+xit   -x"   (in-   kawáp
     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) k"u   'ac+it   -ix"   in-   kawáp
     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) k"u   'ac+xit   -x"
     art   cs   i-   kt-   kawáp
     1sOBJ   tie(dat)   2sERG   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) k"u   'ac+it   -ix"   i-   kt-   kawáp
     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-   kt-   x"uy
         2s   UnPOSS   go

     b. *i-   kt-   p'ic'+nt
         1s   UnPOSS   pinch(ctr)

     c. *kt-   laxtm+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 *kt-* is the formative associated with this WFR. The output of the rule is an intransitive verb that inflects with intransitive (ABS) person markers. (*kt-* is realized as *k-* before *s* and *t*.)

(12) a. kn   kt+p'ina?
         1sABS   have-basket
         I have a basket.

     b. k"   kt+cix"
         2sABS   have-house
         You have a house.

transitionals.

(28) qʷacqn+(n)t   -xʷ
    hat(ctr)   2sERG
    You put a hat on him.

(29) lasmist+(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-   lasmist
    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.   *kn   síya?m
      1sABS   serviceberry(mid)
      (I am serviceberried.)

    b.   *síya?+nt   -xʷ
      serviceberry(ctr)   2sERG
      (You serviceberried him.)

    c.   *c-   síya?
      cust   serviceberry
      (It's serviceberried.)

(34) a.   *kn   snkʷúmcntn
      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, roast, 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

c. *n̓ ta'x̌ʷ+ɬ+ʔiix
   2pABS get-sleep

stem whose meaning is closely related to the noun. I analyze these as cases of *category conversion*, a phenomenon that involves affixless category change.

4.2.3 Category conversion.

Some nouns are homophonous with a verb

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).

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[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   q̌ʷácqn+m   b. in-   q̌ʷácqn_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-   pikst_N
   1sABS glove_V(mid)   1sPOSS glove
   I put my gloves on.   my glove(s)

(25) a. kn   q'a'xán+m   b. in-   q'a'xán_N
   1sABS shoe_V(mid)   1sPOSS shoe
   I put my shoes on.   my shoe(s)

(26) a. kn   x̌áyx̌'xn+m   b. in-   x̌áyx̌'xn_N
   1sABS pants_V(mid)   1sPOSS pants
   I put my pants on.   my pants

(27) a. kn   siswxn+m   b. in-   siswxn_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

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   kn‿, k'u‿, k'u‿
      2   k'‿   p‿

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) kn‿ suknaqínx
      1sSub Okanagan
      I am (an) Okanagan.

(39) k'u‿ l'íw -s
      1sSub father 3sPOSS
      I am his father.

The first singular absolutive person marker is kn‿ only.

(40) a. kn‿   ?ítx
          1sABS sleep
          I slept.

      b. *k'u‿ ?ítx

Third subject is indicated differently in PN's and Vi's. In the Vi, the absolutive subject marker is θ, as in (41). A PN with third subject is expressed with an overt deictic pronoun as in (42) and (43).

(41) ?ítx
      sleep(3sABS)
      He slept.

(42) a. axá?   an-   qaqná?
          dpr   2sPOSS   grandmother
          This one is your grandmother.

      b. an-   qaqná?
          2sPOSS   grandmother
          your grandmother
          *She is your grandmother.

(43) a. ixí?   l'íw
          dpr   father
          That one is a father.

      b. l'íw
          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   k'‿   in-   qaqná?
      you   2sSub   1sPOSS   grandmother
      You are my mother.

(45) incá   kn‿   l'íw
      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

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 *i?* or a deictic such as *ix?* 'that' or *ax?* '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) k"̣   sn?ína?t
      2sABS   grandson
      You are a grandson.

(36) k"̣   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 *k"_incítx"* 'you are my house' or *kn_cítx"* '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]

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[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. *ngu?u* 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.

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-   ɬwínam
         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).

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[11]*ks-* also occurs in transitive clauses (section 2.1.1).

(52) a. ixíʔ   i-   k(ɬ)-   sqʷsqʷsíʔ
         dpr   1sPOSS   fut   child
         That will be my child.

     b. ixíʔ   i-   k(ɬ)-   ɬúman
         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-   cʔapcʼípsam
         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-   anʔaʔmútan
     prt   dpr   2sPOSS   irr   seat
     This will be your seat.

(ii) way'   axáʔ   a-   kɬ-   anʔaʔmútan
     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.

sentential aspects. The aspects in which PNs can be found are shown in (46).

Those of Vi's are shown in (47).

(46) a. knↄ- kɬ- naʔnɬk'mn (future)
        1sABS fut knife
        I will be a knife.

b. knↄ- ks- naʔnɬk'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. kʷↄ- ks- t'üxʷt+aʔx (prospective)
   2sABS irr fly(con)
   You are about to fly.

c. kʷↄ- s- t'uxʷɬ+x (perfect continuous)
   2sABS pcont fly(con)
   You are flying.

d. kʷↄ- sↄc- t'üxɬ+x (continuous)
   2sABS cont fly(con)
   You are flying.

e. knↄ- ksc- t'uxʷt (perfect)
   1sABS pft fly
   I have flown.

f. kʷↄ- 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 *knↄ-ks(s)qɬtmxʷaʔx 'I am going to be a man' in favor of (48).

(48) knↄ- ks- qɬtmxʷwɬx+aʔx
     1sABS irr become_man(con)
     I am going to become a man.

In (48), the stem qɬtmxʷwɬx is an intransitive verb, in anticausative stem aspect. It is inflected for prospective (sentential) aspect. As an intransitive stem in prospective aspect, it cannot express a possessor argument, as shown in (49).

(49).

(49) *knↄ- a- ks- qɬtmxʷwɬxaʔx
     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) kʷↄ- a- kɬ- cix̌ʷ
     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 the prospective aspect is possible with predicate nominals, it seems that the

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?+núɬt   -səlx
    neg ev irr   know(lc)   3pERG

    i?   ꞁ   n'ʔəlna?sqlíxʷtn
    art cs maneater
The maneater won't know the difference. GW897

(58) way' myp+nú   -s   ꞁ   incá kʷúlstm -ən
    prt   know(lc) 3sERG cs 1   send   1sERG
He'll know I sent you. GW141

(59) ·kʷni+xt -m
    grab(dat) 1pERG

    i?   ꞁ   kɬ-   ənt'kʷʷmín -s
    art cs UnPOSS coffin   3s
We'll get him his coffin. COD56

(60) kn‿   wikm i?   ꞁ   sk'a?cínam
    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? kʷu‿   ks-   takʷtakʷʔúta?x
    dpr   1pABS   irr   travel(con)

    i?   ꞁ   təmxʷúla?xʷ
    art   prep world
We are going to travel around the country/world. GW5

(62) səp'nt   -fs   i?   ꞁ   qəxʷsqáxa?tn
    club(ctr) 3sERG art prep whip
He clubbed him with a whip. GW34

(63) kn‿   səc-   húy+x   i?   ꞁ   sk'íwalx
    1sABS cont   tired(con)   art prep old_age
I am tired out from old age. GW37

(64) ta‿   nta?mínk i?   ꞁ   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'   ꞁ   sqilxʷ
    prt   all   turn_into prep humans
               -lx
               3pABS
They all turned into humans. COD61

The proclitic *t* does not cliticize to stems that contain verbal

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[14]Factitive complements of *t* occur only with the verb *kʷul'* 'turn into N'.

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
                                       house

(56) a. kʷu-   a-   kɬ-   ylmixʷam
         1sSub   2sPOSS   fut   chief
         I will be your chief.

     b. kʷu-   kɬ-   ylmixʷam
         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

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[13] A few other proclitics serve both prepositional and complementizing functions, e.g. *k'ɬ* 'to, toward, from, because' and *əɬ* 'in, at, while', *t* alone is consistently a preposition. One verb, *c'ʔit* 'do like' or 'seem as if' requires *t* before its complement. The complement may be verbal, as in (i).

(i) way'   kiʔ   c'ʔit   ɬ   ant'aʔlls
     prt   when   seem   come to one's senses
     That's when he came to himself. COD222

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. ʔ   x̌áʔx̌aʔ   ʔ   skəkʕákaʔ
          art   sacred   art   animals
          sacred animals   EC165

      b. axáʔ   ʕant
          dpr   look(imp)

          ʔ   suknaqínx   nək'ʷcwílxtən   ixíʔ
          art   Okanagan   villages   dpr
          Look at the Okanagan villages here and there. EC30

      c. ks-   ckícx+aʔx   k'ʷúk'ʷa   ʔ   sqilx̌ʷ
          irr   arrive_(con) strange   art   people
          Strange people are going to arrive. EC6

      d. ʔ   k'əl   sqilx̌ʷ sənm'aʔm'áy'aʔtn   k'ʷul'nt   -x̌ʷ
          art   toward Indian education   work(ctr)   2sERG
          You work towards Indian(-style) education. EC13

      e. way'   ixíʔ   mət   ʔ   sílx̌aʔ   siwɬk'ʷ
          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).

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[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.

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(71) a. ʔ   sílx̌aʔ   ʔ   mlqnups   t'ux̌ʷt
          art   big   art   eagle   flew
          The big eagle flew.

      b. *ʔ mlqnups ʔ sílx̌aʔ t'ux̌ʷt

(72) a. k'ʷul'+xt   -n   ɬ   sílx̌aʔ   ʔ   citx̌ʷ
          make(dat)   1sERG   cs   big   cs   house
          I made him a big house.

      b. *k'ʷul'xtn ɬcitx̌ʷ ɬsílx̌aʔ

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. ʔ   kəkawáp   wəhám
          art   dog   bark
          The dog barked.

      b. wəhám ʔ kəkawáp

(74) a. ɬ   k'ʷək'ʷyína   ʔ   ɬ   sqlaw'
          cs   little   art   cs   money

          x̌ʷic'+xt   -x̌ʷ
          give(dat)   2sERG
          Give him a little money. GW23

      b. x̌ʷic'xtx̌ʷ ɬk'ʷək'ʷyína ʔ ɬsqlaw'

The word order restriction emphasizes that the verbal element in an

adjective-noun collocation is not functioning as an intransitive predicate.[17]

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[17] A predicative State lexeme is frequently introduced by the evidential particle ʔ'i. Compare the evidential, predicative construction in (i) with the attributive construction in (ii).

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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) kʷuʔ ʔəłmsqáxaʔm -səlx axaʔ iʔ
      1sOBJ feed(ctr) 3pERG dpr art

      t   i-   təłqáqcaʔ?
      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 axaʔ
      drink(caus) Unsub 3pOBJ dpr

      iʔ t kʷəkʷrit iʔ t tkłmilxʷ
      art cs golden art cs woman
      The Golden Woman gave them drinks. GW655

(68) wayʔ nixʷ t kʷʔakʷyinaʔ iʔ t sqláwʔ
      prt also cs a little art cs money

      xʷicʔ+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) caʔkʷ axaʔ iʔ t tamxʷtilaʔxʷ
      perhaps dpr art cs ground

      uł wayʔ axaʔ iʔ ks- nʔúcx+nł -m
      and prt dpr art irr track(ctr) 1pERG

      iʔ t sxʷúyn -s
      art prep tracks 3sPOSS

      iʔ t snkłcʔaʔsqáxaʔ
      art cs 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* (Gerdis 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, *t sanasc'məłn* 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

(78)

Process base: //xʷuy// GO

Sentential aspect		
perfective	kn‿xʷuy	I went.
perfect	kn‿ksc-xʷuy	I have gone.
continuous	kn‿sac-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 go.
future	i-ks-xʷúy	I will go.
neutral	i-s-xʷúy	I went/I am going/I go.

(79)

Transition base: //ʕac// TIE

Sentential aspect		
perfective	kn‿ʕacám	I tied something.
perfect	kn‿ksc-ʕacám	I have tied something.
continuous	kn‿sac-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.

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.

Rather, it has an attributive function that is typical of adjectives. Adjective-verb collocations are impossible, as shown in (75).[18]

(75) a. *sílx"a? t'ux"ł i? mlqnups
         (Big fly is the golden eagle)

(i) t'i piq i? kəwáp-s   (ii) i? piq i? kəwáp-s
     his horse is white   his white horse

(iii) wik-n i? piq
      I saw the white one.

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.

In both attributive and referential function, the State lexeme shows neither stem nor sentential aspect. It cannot be inflected for verbal person-marking.

(iv) i? x̌"upt i? snkɬc'a?sqáx̌a?   a tired horse
      *i? x̌"əpiwíłx" i? snkɬc'a?sqáx̌a?   (a getting tired horse)
      *i? x̌"əpt+st-ím i? snkɬc'a?sqáx̌a?   (a made-tired horse)
      *i? sac-x̌"upt-x i? snkɬc'a?sqáx̌a?   (a tiring horse)
      *i? in-x̌"upt i? snkɬc'a?sqáx̌a?   (my tired horse)

[18]Matthewson and Demirdache (1995) discuss a similar finding in Lillooet Salish.

b. *x̌á?x̌a? q"əlq"ísts i? k"ul'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   ɬip   i?   ʕ   sílx"a?   i?   ʕ   síw̓łk"
      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?)   ʕ   sílx"a?   ʕ   t'ux"ł
         art   prep   big_V   prep fly_V

     b. *(i?)   ʕ   t'ux"ł   ʕ   mlqnups
         art   prep   fly_V   prep eagle_N

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

[19]The correct way to express the sense of this utterance appears in (i).
(i) q"əlq"íl'+sł -s   i?   k"ul'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? 'sacred' heads its own VP.

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. kʷʼəl+kʷʷil'+nt   -xʷ²¹
     (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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²¹The plurality of the object argument does not have to be expressed in the person marker. The plural object marker -əlx is optional.

²²The 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.

(80)

Sentential aspect	Noun base: //p'ina?// BASKET	
perfective	*p'ina?	*It was a basket.
perfect	*kn̩_ksc-p'ina?	*I have been a basket.
continuous	*kn̩_sǝc-p'ina?+a?x	*I am basketting it.
immediate continuous	*kn̩_s-p'ina?+x	*I am basketting it now.
prospective	*kn̩_ks-p'ina?+a?x	*I am going to basket.
customary (tr)	*ac-p'ina?(+st)	*Someone usually baskets.
customary (itr)	*kn̩_ǝc-p'ina?	*I am basketted.
future	*i-ks-p'ina?	*I will basket.
neutral	*i-s-p'ina?	*I basketted./*I am basketting./*I am 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'   ʕ_   ks-   k+sqláw'+a?x
     and   prt   2pABS irr-   have-money(con)
     You are going to get money. GW18

(82) lut   pǝn'kin'   ks-   ks+way'
     neg   ever   irr   have_end
     There will never be an end. EC147

(83) kn̩_   sǝc-   ta?x"+sqláw'+a?x
     1sABS   cont   get_money(con)
     I am getting some money.

(84) ks-   ta?x"+stíq"+a?x
     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'ina?
        2sPOSS   irr   UnPOSS   basket

     b. *a-   ks-   kɬ-   p'ina?
        2sPOSS   irr   UnPOSS   basket

     c. *kn̩_   ksc-   kɬ-   ɬsisnca?
        1sABS   prft   UnPOSS   older brother

     d. *kn̩_   sǝc-   kɬ-   sníq"útn+a?x
        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 derives 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

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+nax̌ʷ	wife
nx̌ʷ+nx̌ʷiw's	couple
c'iq+cq't	Engelmann spruce
c'ix̌ʷ+c'x̌ʷ	fish hawk
wap+wpxn	lynx
ct'ək'ʷ+t'ák'ʷ	nest
sk̓ʷr+k̓ʷri?ca	tomato
ƛ'x̌+ƛ'x̌up	old man
nx̌əs+x̌astáik̓ʷ	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

[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.

(89)

Reduplicated form	Unreduplicated form	meaning
*ḱc+ḱíc+nt	ḱicnt-	get to s.o.
*t'x̌ʷ+t'úx̌ʷt	t'úx̌ʷt	fly
*x̌'x̌+x̌'ax̌t	x̌'ax̌t	fast
*x̌ʷp+x̌ʷupt	x̌ʷupt	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
ʕacʔacnt-	tangle s.t. up	ʕac+nt-	tie s.t up
m'ym'iy'ám	report news	m'y'ʔ+nt-	tell, teach s.t.
tak'tak'ʷʔut	(pl.) travel	tkʷʔut	(pl.) walk
ncw'cw'cín(n)t-	repeat s.t.	ncw'cín+(n)t	repeat s.t.
x̌ʷa'ʔx̌ʷa'ʔcin	talk too much	x̌ʷa'ʔcin	talk alot
lq'ʷlq'ʷlw's	s.t. breaks in two	lqʷ'nt-	break off s.t.
t'q'ʷt'a'q'ʷcin	holler	t'q'ʷcin	holler
limlimt	thank you	limt	be glad,happy
cixčxt	very hot	cix̌	hot

(90)b.

kan'+kn'ám	bucher s.t.
kck'ʷck'ʷna?	pull_ears of s.o.
cnłak'łak'łám	sob
c'n'c'um'nt-	suck on s.t.
kca?ca?ałqʷm	knock on a door
pa?pá?t	generous
łaq'ʷłq'ʷt	huge
ma?má?t	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 cʷacʷálx and cʷálx 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'rum 'swim' and t'qʷ'am 'sew'

(97) a. lut   a-   ks-   x"úy
        neg   2sGEN   irr   go
        Don't go.

    b. lut   a-   ks-   nc'ípc'apsəm
        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.

(98) 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 //+kap// BUCKET.

(101) +kap   'bucket'   Imperative form

      *+káp-x   singular intransitive
      *+káp-wi   plural intransitive
      *+kápnt   singular transitive
      *+kápnt-i   plural transitive
      *lut a-ks-+káp   negative intransitive
      *lut a-ks-+kápm   negative transitive
      *lut a-ks-[*anticausative]   negative anticausative
      *lut a-ks-+káp+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.   sqəltmíx"*_N
          (a) man

     b.   *sqəltmíx"-x
          Be a man!

(103) a.   qəltmx"scút_V
          He is acting like a man.

     b.   qəltmx"scút   -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).

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. kʷ̰ 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. pƛ̓'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. kʷṵ pa?pin'+ɬt -i
    1sOBJ fold(pos) Imp(p)
    Fold it![26]

(94) a. pƛ̓'+nt
    peel(ctr)
    Peel it!

  b. kʷṵ xʔic'+xt
    1sOBJ give(dat)
    Give it to me!

(95) a. piʔʎ'+nt -s
    peel(ctr) 3sERG
    He peeled it.

  b. kʷṵ xʔic'+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 kʷṵ a- ks- p'íc'm
    neg 1sOBJ 2sGEN irr pinch
    Don't pinch me.

  b. lut a- ks- náq'ʷ+łm
    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.

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

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[28]There are other subordinating particles including kiʔ, atʔ, əł and kʼəł. (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   ixł   sən?ickstn
     cust   know(otr)   1sERG   dpr   toy
     I know that it is a toy.

Furthermore, an equational clause may follow the subordinator atł 'because'. In this context, the deictic pronoun of the equational clause is optional.

(ii)   cniłc   x"ʔit   ł   ac-   ʔiłən
     he   alot   sb   cust   eat
         atł   (ixłʔ) sqəłtmíx"
         because   dpr   man
     He eats alot because he is a man.

(iii)   kn   c-   tʼxətmíst   atł   ixłʔ   sʔiłn   -tət
     1sABS   cust   careful   because   dpr   food   1pPOSS
     I was careful because it was our food.

(iv)   cniłc   əc-   cʼqʷáqʷ   atł   s-   nx"ayíls
     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.

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(111) a.   pna? cmay   nqʼəltúsəs   ł   nkʼəwpłís
        might   sicken   if   lonely
     He might get sick if he's lonesome. GW814

b.   kn_skʼint   ł   iksnkʷaʔcnúxʷ
    I'm afraid   that   I'll be late
      kam'   ł   iksnslʼíp
      or   that   I'll get lost
  I was afraid that I'd be late or that I'd get lost. GW516

c.   ksnypnúntəm   ł   kscxʷəlxʷálts
    We'll find out   if   she's alive
  We will find out if she is alive. COD78

(112) a.   nʼínʼwʼiʔ   put   nkʷʷəspintk   put apnáʔ sxəlxʕált
        probably   just   one year   to this day
         mi   kʷu_lcyáʕp
         that   we come back
  It'll be one year to the day when we will come back. GW459

b.   cəmʼ tʼi   kʷ_məlmł-x   mi   ƛʼmípstəm
    maybe if   you dawdle   then   it gets late
  If you fool around (then) you'll be late. GW489

c.   kʷ_nis   kʷ əlkʷákʷ,   mi   kn_xʷətʼətʼpnúmt,
    You   are gone   then   I'll jump up
      mi   kalkłstən,   nkəcnłkantsən,
      then   I will chase you   catch up with you
      mi ixłʔ   kʷu_sʔatʔiłəns   iʔ tlʼ astłwcən
      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

(104) way' k"u⌣ k'ʷəłq'əy'+łt -ix̌ʷ
      prt   1sOBJ write_down(pos) 2sERG

      axá? i?   q"əłq"i+st   -m   -ən
      dpr   sb   tell(ctr)   2sOBJ 1sERG

Write down what I tell you. GW449

(105) lut t'əx̌ʷ t'ə c-   -in
      neg prt   ev   cust my+st 1sERG

      al k"inx ki? tak"k"a?ił?st -alx
      at when   rel travel know(otr) 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 i?.[27] The determiner is followed

by the case marker t if it is required by the syntax.

(106) axá? ncəq'əmiłs+nt -x̌ʷ   axá? i?   pəpłwinax̌ʷ
      dpr   mislead(ctr)   2sERG dpr   art old_lady

You'll mislead the old lady. GW71

(107) k"u⌣   ʔəłnəmsqáx̌a?m -səlx   axá?
      1sOBJ feed(ctr)   3pERG   dpr

[27]The determiner i? is deleted if the head noun is inflected for first or
second singular possessor, as in (i) and (ii).

(i) ʔac+nt   -in   in-   q'a?x̌án
     tie(ctr) 1sERG 1sPOSS shoe
     I tied my shoe.

(ii) ʔa+łt   -is   an-   q'a?x̌án
     tie(pos) 3sERG 2sPOSS shoe
     He tied your shoe.

The determiner is absent under other circumstances that I do not fully
understand.

      i?   t⌣   i-   łəłqáqca?
      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) ix̌i? uł k"u⌣   s-   n̓ʕacism -s
      But   2sOBJ neut trap   3sGEN

      ks- púłst   -əm   -s
      irr kill(ctr) 2sOBJ 3sERG

But she traps you to kill you. GW503

Also, the determiner i? serves as a subordinating particle (e.g. in (110).

(109) c-   my+st   -ip   kn⌣ ylmix̌ʷəm
      cust know(otr) 2pERG 1sSub chief

You know that I am the boss. COD104

(110) way' ix̌i? x̌əstmí+(nt)   -s
      ptc   dpr   enjoy(ctr)   3sERG

      i? s-   k"ʷal   -s
      sb neut warm(ac)   3sGEN

He really liked (how) he was getting warm

The multiple functions of i? 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 ł (111) and mi (112). The do not cooccur

with i?. mi consistently has future or conditional overtones.

(118)

	Verb		Noun	
a.	ɬw'am	pierce	ɬw'-min	spear
	x̌ʷaq'm	grind	x̌ʷaq'-mn	grinder
b.	x̌'ic'la?x̌ʷm	cut_grain	x̌'ic'la?x̌ʷ-tn	grain cutter
	nt'k'ʷki?sqáx̌a?m	saddle_horse	nt'k'ʷki?sqáx̌a?-tn	saddle
c.	k'ʷúl'ən	make, do	sx̌ʷ+k'ʷúl'əm	worker
	m'a?m'áya?m	teach	sx̌ʷ+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)
$nc'a?r=qin_V$ have a headache
$səp'əp'áp-qn_V$ get hit on the head
$ɬac'=qin+nt_V$ hit on the head
$k'ʷλ'=qn_V$ take off one's hat
$lʕʷ=qin+nt_V$ put the lid on s.t.
$mac'=qin+m_V$ oil one's hair
$q'ʷac=qn_N$ hat
$ya'p=qin_N$ crowd, lots
$pλ'=qin_N$ mushroom
$c'ə?si=qin_N$ head
$s+sp'=qin_N$ wheat
$s+ta'án=qin_N$ fur hat
$qp=qin+tn_N$ hair
$nc'əcq'=qin+tn_N$ hammer

While nouns often contain nominalizing morphology, noun bases do not undergo nominalization. The forms in (120) are ill-formed.

(120) a.   *s-   q'ʷac=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.

propositional force. Nouns in isolation do not assert a proposition. They are not a possible response to the question *sac̓?k̓mx*, 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' ixi??
                    what dpr
                    What is that?

     b. Answer   axá? x̌ax̌?úla?x̌ʷ
                   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) alá? i? sənc'úila?x̌ʷ púti? alá?
     here art fruit_trees still here
     The fruit trees are still here. EC97

(115) iłí? ki? i? cəlcix̌ʷ -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 2.2.16).

(117)

Verb		Noun stem		
t'ik'əl	feed	s-	t'ik'əl	grub[30]
c'att	cold(sta)	s-	c'att	cold weather
c'?ak'ʷ	bloom(ac)	s-	c'?ak'ʷ	flower
q'iy'	dream	s-	q'iy'	dream
niR'ak'	cut(ac)	s-	niR'ak'	wound

Two suffixes, *-min* and *-tn*, and a prefix, *sx*ʷ- are nominalizers, as in the examples in (118).

---

[30] Speakers consistently translate *st'ik'əl* as 'grub'. Hazel Burke clarified this as food that is packed for travel, i.e. a bagged lunch or supper.

(128) wi?skłsalxit -əm -s i? c̓ paptwínax"
done_set(dat) 2sOBJ 3sERG art cs old lady
i? c̓ a- k- sc- ?ilən
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) *[i? c̓ ksc- sc- k"ul' -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 (ə)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*

---

[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) nic̓"íp c- mist -ís i? sqilx"
always cust know(otr) 3sERG art people
i? [s- t'cx"úy -s i? sáma?]
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' i? wik+nt -x"
what art see(ctr) 2sERG
What was it that you saw?

(ii) cawt -s i? sqilx"
deads 3sPOSS art people
i? c- muskkstem
art cust risk_taking
People must take chances. (lit. People's actions are for risk-taking.)

(iii) ixi? 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.

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) kmaɬm   [kʷ~   i-   sc-   my+ɬtm]
      certainly   2sOBJ 1sGEN   fact   know(pos)
      certainly

      ixʔ   way'   ixʔ   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) taɬʔ   in-   ẋast   [i-   sc-   ʔitx]
      really 1sPOSS   good   1sGEN   fact   sleep]

'I slept well. (lit. My sleep was very good.)'

(123) axaʔ   [i-   sc-   nqʼaʔɬs]
      dpr   1sGEN   fact   worry

'This is my business. GW331'

(124) uɬ   haʔ   wnixʷ   haʔ   ixʔ
      and   interr   true   interr   dpr

      [a-   sc-   qʷəlqʷilt]
      2sGEN   fact   talk

      i   [a-   sc-   qʼay
      in   2sGEN   fact   write

Is it true what you wrote in your letter? GW189

_____

³²The 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) maɬ   ixʔ   m'ayʔncút   -əlx
      and then   discuss   3pABS

      t'axʷ   əl   [sc-   mypnwíɬən   -səlx];
      prt   in   fact   learn   3pGEN

      way'   uɬ   cút   -əlx:
      then   say   3pABS

      ks-   qʷaʔmíkstm+nt   -am
      irr   get_accustomed_to   1pERG

      iʔ   [sc-   m'im'yaʔncút   -təɬ],
      art   fact   learn   1pGEN

      iʔ   [sc-   kʷul'   -təɬ]
      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) ixʔ   kʷa   iɬʔ   kn̓   ʎʼáp
      dpr   prt   there   1sABS   stop

      iʔ   ɬ   [i-   sc-   capñkʷɬ]
      art   cs   1sGEN   fact   storytell

That's where I stopped in my storytelling.

(127) way'   t'axʷ   kʷuɬ   sac-   ʎʼaʔʎʼaʔ+mixaʔx
      prt   prt   1pABS   cont   look_for(con)

      iʔ   ɬ   [k   sc-   kʷul'   -təɬ]
      art   cs   ir   fact   work   1pGEN

We are looking for what will be our work. GW114

(132) a.   tq-|nt   -in   in-   qpqíntn
            touch(ctr)   1sERG   1sPOSS   hair
            I touched my hair.

       b.   tq+nt   -in   i?   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 sx"-. 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

The nominalized verb is *t'cx*uy* '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]

[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 the contrast between neutral aspect (line (i)), perfective aspect (lines (ii-iv)), and a factive nominalization (line (v)).

(i)   ixí?   s-   q'y'ám   -s;

      dpr   neut   write   3sGEN

      He started writing;

(ii)   q'y'ám   i?   k'al   ylmix*am

      write   art   prep   chief

      he wrote to the chief.

(iii)   q'y'ám,

      write

      He wrote,

---

(131)   *k"u,   sac-   ƛ'a?ƛ'a?+míxa?x

      1pABS   cont   look_for(con)

      i?   ⱡ   s-   k'"ul'   -tat

      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)   wí?sq'y'+nt   -ís

      done_write(ctr)   3sERG

      he got done writing

(v)   i?   sc-   q'ay'   -s

      art   fact   write   3sGEN

      what he was writing,

(vi)   uⱡ ixí? pa?pin-i?s, nla?°"nt-ís, k'ᵂint'ⱡíp-s,

      and he folded it, he put it in an envelope, sealed it,

      GW174-75.

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.

[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.

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

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 illustrate 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)
-lt	possessional	(section 2.2.2.3)
-núnt	limited control closed transitional	(section 2.2.2.11)
-núlt	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.

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

aspect, there is no grammatical expression of desiderative aspect in

nkʷʼəʔtsncút. 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. **knʟʔix+(n)cút* 'I sleep myself'), but only as a

base formative, as in *cʷʼəy+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 //wyʼ// DONE is joined to Transition or Process verb bases (section 3.1).

(13) wiʔ+s+alkʼ+iwʼs+m   He got done tying something.

-*ɬ*- joins the formative *taʔxʷ*- to noun bases to form verbs of the 'get-

something' types (section 4.2.2).

(14) knʟtaʔxʷ+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.   knʟn+paX̌+m+fls   I want to hunt.

      b.   knʟn+xʷy+fls   I want to go.

It also occurs in many stative bases that end in -*(s)cút*, e.g. *čʼəmʼ+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.   knʟspʼam   I hit something.

      b.   spʼnt-fn   I hit it.

      c.   k+spʼ=ícʼaʔ-n   I hit it on the body.

      d.   k+spʼ=ús-n   I hit him in the eye.

(3) -(n)cút 'reflexive'

   a. ʔ-s-c-əlk'+m+**əncút**   You forced yourself here. COD11

   b. kʷ'ʷəy+**ncút**+m+nt-alx   He laughed at them. COD10

(4) -(n)wíxʷ 'reciprocal'

   a. kʷʼu̓pəlst+**wíxʷ**   We kill one another. COD229

   b. qʷa̓ʔm+**nwíxʷ**+st-məlx   Someone introduced them.

(5) -tn 'location, instrument'

   a. n+k+ʔəmt=íw's+tn   saddle horse

   b. x̌əq'+ɬ+mrím+st+(t)n-m   Someone paid for a cure. COD102

(6) -mín 'instrument, location'

   a. t+qʷ'l+mín   barbecuing stick COD100

   b. s+k+ɬw'+mín+tn   pole for a spear COD86

(7) n-...-fls 'desiderative'

   a. kn‿n+x'y+fls   I want to go.

   b. n+kʷ'ə?+ɬs+ncút   She started to fret. COD10

(8) -ɬ 'stative'

   a. λ'ax'+ɬ   It's dead.

   b. limləm+ɬ   thank you

(9) -(V)C₂ reduplication 'anticausative'

   a. kn‿wík+ək   I got seen (caught).

   b. s+c'ik'+ak'=lá?xʷ   forest fire, burned land COD171

(10) -?- 'anticausative'

   a. p'+?+uy   It got wrinkled.

   b. c'a?+c'a+?+x+úɬ   bashful COD20

(11) C₁VC₂- reduplication 'distributive'

   a. c-ƛ'w+ƛ'aw   They (lights) are out.

   b. s+ən+ta?+ɬ+wɬ+wlím+in   blacksmith's shop

(12) -x(l)t 'dative'

   a. c'ək+xɬ-s   He counted it for him.

   b. kʷ'n+xt+wíxʷ+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, *nkʷ'ʔɬsncút* 'to fret' may have the etymological sense of 'chew self's feelings'. While we can imagine a connection between *feelings* and *desiderative*

counterpart (24).

(23) kaɩn'kom'+nt   -ɩn
(ctr)   1sERG
I selected one.

(24) *t'ux"t+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 2.2.6) 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. kʷɩ̱   1pABS, 1s/pOBJ, 1sSub (predicate nominal)

b. ∅   3sABS, 3sOBJ

c. all GEN subject markers   all POSS 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 $-(V)C_2$ reduplication, the suffixes *-(V)p* and

-(t)wilx", the infix *-ʔ-*, or ∅. This range of formative types and shapes cannot

(17) a. kn‿sp'áp' I got hit.
 b. kn‿sp'p'‿aǎn I got hit on the arm.
 c. kn‿sp'p'=w's‿us I got hit on the face.
 d. kn‿sp'p'=qin-xn I got hit on the knee.

in (17), the anticausative formative -(V)C$_2$ reduplication indicates that the subject is a patient, rather than agent. Yet one etymologically-related stem has -(V)C$_2$ 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]   -in   1sERG
   cust   (otr)
   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'uxʷt+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'uxʷt+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
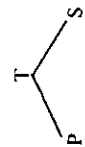
binary features [±E] and [±C]. Four feature matrices were possible based on these features, and all four were realized, indicating four base classes that I labeled as follows:

(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)

```
        T                  P              S
      /   \              / \             |
     P     S          e₁...eₙ            e
```
$$\text{(27)}\quad T: P\ S \qquad P: e_1 \ldots e_n \qquad S: e$$

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).

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, -út, and -tmn*).

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 constituency and relevance to change. I represented these properties with the

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[2]Pustejovsky 1995 distinguishes *contrastive ambiguity* or 'the essentially arbitrary association 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.

(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.

(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.

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

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; *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.

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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	
glottalized	p'	t'	c'	ƛ'	k'	k'ʷ	q'	q'ʷ	ʔ
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.