ASPECT AND CATEGORY IN OKANAGAN WORD FORMATION

by

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M.I.S., The University of Montana, 1987

THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
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Category and aspect in Okanagan word formation

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Aspect and Category in Okanagan Word Formation

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 The data come from field work conducted in 1992-1996 and the study of published and unpublished Okanagan texts.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

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

Chapter 3 contains a classification of bases in Okanagan. I describe four base classes which are ontologically defined. The bases in three of the four
classes encode either a temporal span or the potential to express a change of state. As a group these three classes denote prototypical situations. As situations, these bases have aspectual variants that are formed by the regular core of derivational rules. Bases in the fourth class denote atemporal entities. Unlike bases denoting situations, bases that denote entities do not form aspectual variants via derivation. In line with a major cross-linguistic pattern, Okanagan situations are grammatically coded as verbs, while entities are coded as nouns.

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

In Chapter 5, I review evidence that the form of a lexeme does not reliably classify it. Many key affixes serve multiple functions, and a single function may be marked by a variety of affixes, or no affix at all. The relatively poor fit between form and function in Okanagan word formation
suggests that base and stem classification is based on the speakers' knowledge of the ontological, semantic, aspectual, and categorial properties of bases and stems. This finding suggests that the Okanagan lexicon contains all the lexemes of the language, regardless of their morphological complexity. Furthermore, affixes do not have the status of lexemes, therefore they are not listed in the lexicon. Affixes are merely the formatives found in an autonomous morphological component that spells out the shape of a lexeme.

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

Fieldwork for this thesis was supported by the Melville and Elizabeth Jacobs Research Fund of the Whatcom Museum Society, and by a Graduate Fellowship and a President’s Research Fellowship, both from Simon Fraser University. I am grateful for this support that eased the burden of my research and tuition costs. The University of Montana provided me with an office in which to write during the summer of 1995; I thank Robert Hausmann, Chair of Linguistics at UM, for making the arrangements.

Thanks are due to all the members of my Committee, especially M. Dale Kinkade, Nancy Hedberg, and Donna Gerdts who guided me from the dissertation proposal through the defense. Donna Gerdts gave generously of her time, expertise, hospitality, and patience to see me through this project. I might not have finished without her encouragement and counsel during my moments of doubt. Charles Ulrich made many insightful comments on the penultimate draft of the thesis. Where my comma usage is correct, it is due to him. Anthony Mattina read early drafts, with particular attention to the Okanagan data. I am grateful to have had the benefit of his knowledge of Okanagan. All errors of detail and judgement are my own.

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.
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<tr>
<td>ABS</td>
<td>intransitive subject</td>
<td>LCS</td>
<td>Lexical Conceptual Structure</td>
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<td>anticausative</td>
<td>loc</td>
<td>locative</td>
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<td>lc</td>
<td>limited control</td>
<td>Vi</td>
<td>intransitive verb</td>
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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)\(^1\)

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

²In fact, morphological labels are frequently polysemous. I have developed my own morphological vocabulary for Okanagan, in an effort to follow as closely as possible the traditional Salishan labels.
following sections, I define the basic vocabulary (section 1.1.1), and give a
brief overview of the assumption of lexeme-based morphology as a model of
word formation (section 1.1.2.)

1.1.1 Definition of terms. Matthews (1972:22) first proposed the term
lexeme to denote the 'fundamental unit...of the lexicon', as abstract and dual
in nature as its terminological counterparts the phoneme and morpheme. The
lexeme is an abstraction of the common elements in sets of word like Latin
amo 'I love', amas 'you love', amavi 'I have loved', and amatur 's/he is
loved'. This abstract 'word' is captured in various lexicographic conventions
including the infinitive (Romance languages), the root (Sanskrit), and first
person singular present indicative (Latin and classical Greek) with the
understanding that many, if not all variants of the lexeme are suggested by one
form of the lexeme. However, the lexeme is not itself a form but rather

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

The lexeme, then, is a psychological entity; a full definition of it should
include psychological and grammatical elements. The lexeme is the semantic
core of a word, which means that it contains enough information to realize the
derivational and inflectional categories marked in a language. It is not itself
marked for all such categories in every realization, but it shares a core
meaning with each of its realizations. Although grammatical tests can serve to
distinguish lexemes from non-lexemes, it is often the case that we must rely on
speaker intuition and our theoretical assumptions to make the distinction. 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. Each base is related by word formation rules (*WFRs*)
to one or more *stems*. Stems are derived lexemes, or *derivates*, that are
semantic alternants of the base. Stems that are related to a single base are
*alternants*. The *WFRs* that produce stems from bases are derivational rules.
Stems may be inflected (via inflectional *WFRs*) to produce *grammatical words*.
The morphological material that marks a derivational or inflectional category is
referred to as a *formative*. Formatives in Okanagan are either affixes (including
reduplicative skeletons) or clitics.

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

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

5 There may also be evidence for morphologically-related ablaut (A. Mattina p.c.).
The relationships between bases, stems and grammatical words are depicted in (1) using the Okanagan base //\'\'a?\'a?\'a?// LOOK\_FOR s.t.

(Henceforth, bases are given in double slanted brackets and their glosses are in upper case letters.) Derivational formatives are indicated by ‘+’ boundaries; inflectional formatives are indicated by ‘-’ for affixes, and ‘.’ for clitics.

(1)

BASE //\'\'a?\'a?\'a?// LOOK\_FOR s.t.

---

Derivation

Stems \rightarrow Inflection \rightarrow Grammatical word:

\'\'a?\'a?\'a?+ám
look for s.t.

\'\'a?\'a?\'a?+nt-
look for s.t.

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

\'\'a?\'a?\'a?+st-
look for s.t.

\'\'a?\'a?\'a?+ít-
look for s.o.'s s.t.

\'\'a?\'a?\'a?+xít-
look for s.t. for s.o.

\'\'a?\'a?\'a?+á?
get looked for

\'\'a?\'a?\'a?+míx
look for s.t.

\'\'a?\'a?\'a?+ám
look for s.t.

\'\'a?\'a?\'a?+nt-
look for s.t.

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

\'\'a?\'a?\'a?+st-
look for s.t.

\'\'a?\'a?\'a?+ít-
look for s.o.'s s.t.

\'\'a?\'a?\'a?+xít-
look for s.t. for s.o.

\'\'a?\'a?\'a?+á?
get looked for

\'\'a?\'a?\'a?+míx
look for s.t.

---

kn\_\'\'a?\'a?\'a?ám
I looked for something.

\'\'a?\'a?\'a?nt-íx\" 
You looked for it.

\'\'a?\'a?\'a?nt-íx\" 
You managed to look for it.

c-\'\'a?\'a?\'a?st-íx\"
You were looking for it.

\'\'a?\'a?\'a?+ít- 
I looked for his s.t.

\'\'a?\'a?\'a?+xít-
I looked for it for someone.

kn\_\'\'a?\'a?\'a?ám
I was looked for.

kn\_sé€-\'\'a?\'a?míx
I am looking for it.
In the vocabulary of this thesis, derivation produces versions of the base (i.e. stems) while inflection produces versions of the stem (i.e. grammatical words). The relationships between bases, stems, and grammatical words are understood in the context of several assumptions of the lexeme-based morphological model I adopt here. I discuss these in the following section.

1.1.2 Assumptions of the morphological model. The data in (1) depict the semantico-syntactic connections between bases, stems, and grammatical words. It does not assume that semantico-syntactic features are isomorphic to phonological forms. Rather, the morphological spell-out of a lexeme (in any of its realizations) is essentially free of semantico-syntactic information. This conception of the relationship between morphological form and meaning is known as the Separation Hypothesis (Beard 1987, 1993, 1995, Aronoff 1994). The indirect relationship between form and meaning allows for the possibility of forms without meaning (empty morphs), forms with multiple meanings (polyfunctionality), and multiple forms with a single meaning (functional underspecification). Examples of these phenomena are not hard to find cross-linguistically (see Beard 1987, Aronoff 1992, Anderson 1992, and sources cited therein).  

---

English provides several examples of affixal polyfunctionality, e.g. the suffixes -ing, -s, and -en. Aronoff (1992) cites the example of the English perfect participle (as in *had eaten*) and passive participle (as in *was eaten*) which have the same form but are not semantically or syntactically related. He
The frequency of these phenomena in Okanagan (and other languages) suggests that there is an independent morphological component that is concerned with form alone, which works with the semantico-syntactic word formation component. 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.

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 inflectional 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.
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. Derivational rules affect the lexical representation of a base prior to insertion in phrase structure. They do this by altering either the lexical conceptual structure (LCS) (the semantic definition of a lexeme) or the lexical features (such as category and inherent aspect) of a lexeme. Lexical-derivational processes tend to show lexical gaps, sensitivity to narrow semantic constraints, reanalysis, and irregularity of expression.

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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 discussion). If by a paradigm we mean the set of forms that realize a set of functional categories, then a derivational phenomenon such as category conversion (e.g. V → N) is paradigmatic in the same way that tense is in English. That is, we expect that certain stems will be formed, even if those forms are suppletive.
inflection begins to explain why many of the affixal combinations that might exist in Okanagan never occur. This is because there are many fewer paradigms, and WFRs within them, than there are affixes.\footnote{Spencer (1991:181) cites the work of Fabb (1988) to illustrate the magnitude of the descriptive problem of co-occurrence restrictions among affixes. Fabb selected 43 commonly occurring 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.}

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.\footnote{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.} 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
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=us* ‘powerful’ and *mal=qn=ups* ‘(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.

¹³Not 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)

<table>
<thead>
<tr>
<th>Captive</th>
<th>Tell Indian fairytales</th>
<th>Gills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Siwt<em>k</em></td>
<td>Water</td>
<td>Stomach</td>
</tr>
<tr>
<td>Cptan‘</td>
<td>Eyelash</td>
<td>Think that one cannot dive into water</td>
</tr>
<tr>
<td>Ka?hIs</td>
<td>Three</td>
<td>Be under a curse</td>
</tr>
<tr>
<td>Skmxfst</td>
<td>Black bear</td>
<td>Cut off s.o.’s head</td>
</tr>
<tr>
<td>?a?usa?</td>
<td>Egg</td>
<td>In a little while</td>
</tr>
<tr>
<td>?ickn</td>
<td>S.o. play</td>
<td>Deaf</td>
</tr>
<tr>
<td>?ácaq?</td>
<td>S.o. go out</td>
<td>Waste s.o.’s time</td>
</tr>
<tr>
<td>Ny<em>p</em>ip</td>
<td>Always, still</td>
<td></td>
</tr>
</tbody>
</table>

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 xʷəłƛʷ'últ ‘alive’, c’iqc’qt ‘Engelmann spruce’, and c’q’aq’ ‘cry’. There are also ‘cranberry’ morphemes such as the putative roots in vkan+xít ‘help s.o.’, vcr’t=ups ‘fisher’, vlm=ilxʷ ‘another people, tribe’. 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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14Roots 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 described 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.\(^{15}\)

\(^{15}\)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) \(\sqrt{\lambda' a}\)

<table>
<thead>
<tr>
<th>Stem</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\lambda' a + nt)</td>
<td>fetch s.t.</td>
</tr>
<tr>
<td>(\lambda' a + \lambda' a + nt)</td>
<td>look for s.t.</td>
</tr>
<tr>
<td>(k + \lambda' a + \lambda' a = ina)</td>
<td>look over, across s.t.</td>
</tr>
<tr>
<td>(\lambda' a = sq\tilde{x}a)</td>
<td>get a horse</td>
</tr>
<tr>
<td>(\lambda' a \lambda' a = us)</td>
<td>open-eyed</td>
</tr>
<tr>
<td>(k + \lambda' a = t\tilde{p}la + nt)</td>
<td>cause problems for s.o.</td>
</tr>
<tr>
<td>(n + \lambda' a = s = i\tilde{w}s + nt)</td>
<td>look for s.t.</td>
</tr>
<tr>
<td>(\lambda' a + \lambda' a = us + mn + nt)</td>
<td>look for s.t.</td>
</tr>
<tr>
<td>(\lambda' a + \lambda' a + min + nt)</td>
<td>look for s.t.</td>
</tr>
<tr>
<td>(k' \tilde{d} + \lambda' a + nt)</td>
<td>be jealous of s.o.</td>
</tr>
<tr>
<td>(n + \lambda' a + \lambda' a + us + tn)</td>
<td>eyesight</td>
</tr>
<tr>
<td>(s + \lambda' a + \tilde{c}inm)</td>
<td>deer</td>
</tr>
<tr>
<td>(\lambda' a + \lambda' a + min)</td>
<td>detector</td>
</tr>
<tr>
<td>(k + \lambda' a + n\tilde{c}ut + (t)n)</td>
<td>a seeker, searcher</td>
</tr>
<tr>
<td>(s + \lambda' a + mix + a'?x)</td>
<td>a keeper, one who keeps</td>
</tr>
</tbody>
</table>

It is difficult to establish any essential meaning for the root \(\sqrt{\lambda' a}\) 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 *nativiry* 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 \(s + \tilde{x}' a^2 = cin + m\) ‘deer’ and \(k + \tilde{x}' a^2 = t\tilde{t}pl a + nt\) ‘cause problems for s.o.’ in a morpheme-based analysis?

\(^{16}\)In Okanagan, roots occur with affixes that are said to either ‘transitivize’ or ‘intransitivize’ the root. Intuitively, the generalization that suggests itself is that roots are unmarked for transitivity. To my knowledge, no other work in Salish has pursued this possibility.
Consider their putative internal structure. In (5), I gloss each morpheme in these two words by analogy with other occurrences of the morphemes.

(5)  

a. \( s + k'\text{a}\text{?}-\text{cín} + m \)  
nominalizer-\( /\text{fetch}=\text{mouth}-\text{middle}() \)  
‘deer’

b. \( k + k'\text{a}\text{?}-\text{ipla}\text{?} + nt \)  
person-\( /\text{fetch}=\text{handle}-\text{transitive} \)  
‘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.
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) $\sqrt{\text{t’k}’w}$

<table>
<thead>
<tr>
<th>Root</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>t’k’w+nt</td>
<td>put s.t. down</td>
</tr>
<tr>
<td>t’k’w=iw’s+nt</td>
<td>put s.t. in the middle</td>
</tr>
<tr>
<td>t’k’w=w’s=ıksînt+nt</td>
<td>carry s.t in one’s arms</td>
</tr>
<tr>
<td>k’i+t’k’w+nt</td>
<td>place s.t. on</td>
</tr>
<tr>
<td>k+t’k’w=ına?q+nt</td>
<td>put s.t. on top</td>
</tr>
<tr>
<td>k’i+t’k’w+nt</td>
<td>put s.t. under</td>
</tr>
<tr>
<td>k’i+t’k’w=ıtk’w+nt</td>
<td>float s.t.</td>
</tr>
<tr>
<td>n+t’k’w=ıkn+nt</td>
<td>put s.t. on one’s back</td>
</tr>
<tr>
<td>k+t’k’w=ıw’s+nt</td>
<td>put s.o. (on a horse)</td>
</tr>
<tr>
<td>n+t’k’w=ki’?=sqáxa?=saddle a horse</td>
<td></td>
</tr>
<tr>
<td>n+t’k’w=flı</td>
<td>be pregnant</td>
</tr>
<tr>
<td>s+t’k’w=ılp</td>
<td>mattress</td>
</tr>
<tr>
<td>s+t’+t’k’w=ıla’p</td>
<td>pillow, cushion</td>
</tr>
<tr>
<td>n+t’k’w= mın</td>
<td>coffin</td>
</tr>
<tr>
<td>s+n+t’+t’k’w+ ncút+(t)n</td>
<td>cot</td>
</tr>
<tr>
<td>n+t’k’w=ki’?=sqáxa?=tın</td>
<td>saddle</td>
</tr>
</tbody>
</table>
The view that roots and affixes are morphemes requires us to be able to state very precisely the meaning of a root and the meaning or function of an affix (Spencer 1991). The data above show that the meaning of a root changes with its context. This means that roots do not meet the condition that a lexeme be a context-free vocabulary item. The context-bound nature of a root cannot be explained by appealing to the semantic contribution that affixes make to a word. Affixes in Okanagan are frequently polyfunctional, or make no apparent semantic contribution to a word. For example, the prefix s- appears on some derived nouns and therefore is in some cases associated with a nominalizing
WFR. However, s- seems superfluous on other stems where another nominalizing suffix appears.

(10) a. s+qiy’s nom+dream
    dream

b. s+tx+mín nom+comb\(_v\)+nom
    comb

c. nik’+mn cut\(_v\)+nom
    knife

d. s+n+t’la?=w+x+tn nom+loc+rip\(_v\)=land+nom
    plow

e. sp’-qin+tn hit=head+nom
    threshing machine

If affixes can be semantically empty, as the s- appears to be in (10b) and (10d), then they are even more context-sensitive than roots.\(^{19}\)

Even when an affix appears to have a lexical meaning, the meaning differs in unpredictable ways from stem to stem. The suffix -tn commonly occurs on nouns that are instruments (e.g. (10d) and (10e)) but its meaning in (11) and (12) is idiosyncratic.

(11) [k’w’l’+ncut+(t)n] Creator

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

\(^{19}\)Beard (1987) argues that one of the key differences, in principle, between lexemes and affixal morphemes is that affixal morphemes can be phonologically null, but lexemes never are.
In fact, (11) and (12) also illustrate the idiosyncratic use of another affix, the suffix -(n)cút. This suffix marks predicates as reflexive, as part of a regular derivational rule.

(13) \( kn \, \text{xcmn} + (n)cút \quad \text{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 \( k\, \text{w} \, l' \, \text{ncun} \) and \( k't \, \text{cun} \). 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, -\( \text{min} \) and -\( \text{mist} \). The data he provides demonstrate how difficult it is to maintain a correspondence between the form of an affix and a single, putative function. Mattina concludes that ‘the internal structure of the base is irrelevant’ (p.228). I note that Hébert 1982a was unable to distinguish a class of roots that could combine with -\( \text{min} \), a fact which reinforces A. Mattina’s view that

[-\( \text{min} \)] is a derivational affix that attaches to certain bases, not to others. All such derived -\( \text{min} \) bases are lexical entries.

\(^{21}\)Okanagan has subgrammatical means of word formation (such as backformation, blending, reanalysis, and folk etymologizing). I will not describe these idiosyncratic, sporadic phenomena here.
strictly compositional account such as that required by the root-and-affix model has also to answer why if $s+pq=\text{mix}$ is analyzed as 'nominalizer-white-creature' or 'nominalizer-it is being white', $spqm\text{ix}$ refers to a swan and not a snowshoe hare or weasel in winter. Note also that $pq+I=qin$ might be analyzable as 'white-on-head', but $pq\text{lgin}$ refers only to the bald eagle, and not to white-haired people or seagulls. In the case of the root $t'k^{\wedge}w$, we might ask why $n+t'k^{\wedge}w+\text{min}$ is something (of a particular shape and dimension) one lies in for the purpose of burial, and not any instance of 'something one lies in'. In short, these words have the denotational integrity that we associate with lexemes. Roots and affixes have meanings by virtue of their place in a word, contrary to what we would expect if they were lexical items. Lexemes, by contrast, are typically context-free signs that show a high degree of sound-meaning correspondence, whatever their putative internal constituency.

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

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 criteria in lexeme classification.

Despite the lexem-3-based approach, my classification draws on the insights of other Salishanists. For example, B. Carlson (1972) and A. Mattina (1973) assert that bases rather than roots are at the heart of the word formation systems of Spokane and Colville-Okanagan, respectively. Outside of Southern Interior Salish, Hess (1993) has concluded that the stem and not the root is ‘the basic descriptive unit of [the Lushootseed] verb’. 22 In lexeme classification, I follow the lead of Vogt (1940), Nater (1984), Kroeber (1988), Gerdts (1991a, 1996), and Saunders and Davis (1993) who have found aspectual classes in

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22 Other Salishanists may hold this view of word formation, but have not published on this topic. In reading the extant grammars and dictionaries, I find references to stems, bases, and words, as well as to roots and affixes. However, analysts are rarely explicit about the sense of these terms.
Salish languages that constrain word formation. Vogt explicitly relates the aspectual classes he finds in Kalispel to category distinctions. I was also influenced by Thompson's work on protagonist control, and the recurrent references to it across the Salishan family. By building upon the observations of other Salishanists, I hope to advance our understanding of the nature of derivation, inflection, and the lexicon in one Salish language.

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

In Chapter 4, I take up the question of whether Okanagan has more than one lexical category. While it has been claimed that Salish languages
generally lack the grammatical effects that support the noun/verb distinction in other languages (Kuipers 1968, Kinkade 1983, Jelinek and Demers 1982, 1994), I demonstrate that there are grammatical distinctions between nouns and verbs in Okanagan. I also describe the status of nominalizations and adjectives with respect to the ways in which category is expressed in Okanagan. I demonstrate how bases carry aspectual features as well as category features. The category features of a base are largely predictable from the aspectual features of a base.

In Chapter 5, I review the evidence that demonstrates that speakers of Okanagan cannot rely purely on the form of stems and affixes to classify bases and stems. I illustrate six arrangements of form, meaning, and lexico-syntactic properties that are attested by the data in this thesis. These six form-function classes show that form and function are not typically implied in Okanagan. This finding supports the adoption of the Separation Hypothesis in particular, and lexeme-base morphology in general for the study of Okanagan word formation. I briefly review the major derivational and inflectional classes of Okanagan before I discuss the direction of future research in this vein.
Chapter 2. An overview of Okanagan

2.0 Introduction. In this overview of Okanagan, I discuss the points of syntax and morphology that are relevant to the remainder of the thesis. The phonemes of the language appear in Appendix I, with brief phonological notes. Fuller treatments of the phonology are to be found in Watkins 1970 and Mattina 1973.1 My discussion of the syntax and morphology benefits from data and analysis presented in Hébert 1982a, 1982b, 1983 and in Mattina 1973, 1982, 1985, 1993a, 1993b, and 1994. In the first three sections of this chapter, I discuss basic sentence types (section 2.1), transitive syntax and inflection (section 2.1.1), and the major grammatical relations (section 2.1.2). Next, I describe the structure of Okanagan words, with particular attention to the distinction between inflection and derivation. I conclude the chapter with an inventory of a group of derivational word formation rules that are crucial to the description of base classes (Chapter 3) and inflectional classes.

2.1 Okanagan sentences and clauses. The simplest Okanagan sentence consists of a single, predicative grammatical word. In connected discourse,

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1I 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. ‘acənt-is iʔ səŋktc’a’sqáxaʔ
tie-3sERG art horse
He tied the horse.

b. wəhám iʔ kəkəw’ápaʔ
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- skʷˈst]NP
Teresa 1sPOSS name.
Teresa is my name.

b. [ixnʔ]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

²Abbreviations 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.
³A. 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. Thus the verbal predicate in (1a) is inflected as a transitive verb, while the predicate in (1b) shows intransitive inflection. (I describe transitivity in section 2.1.1, and inflection in section 2.2.1). While the transitive/intransitive distinction is salient in the inflectional system of Okanagan, my point in conflating transitives and intransitives in this discussion is to highlight the basic syntactic contrast between verbally-headed clauses and equational clauses.

Verbally headed clauses and equational clauses both function as main and subordinate clauses. Typically a subordinate clause is indicated by a subordinating particle. However, these particles may be omitted under circumstances that I do not yet understand. The data in (3a) and (4a) exemplify verbal clauses and equational clauses as subordinate clauses, respectively. The data in (3b) and (4b) exemplify them with null marking. (The subordinating

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

(3) a. way’ t’i xast t k’ořx’flst -əm
   prt prt good sb throw_away -1pERG
   It’s better that we do away with him. COD151

   b. way’ miyst -s t incá
   prt know -3sERG cs I
   He’ll know
   k’w i- s k’úl’stəm
   2sOBJ 1sGEN asp- send
   (that) I sent you. GW610

(4) a. kn c- t’xətmíst afi
    1sABS asp- careful sb
    ix? s?fh -tət
    dpr food 1pPOSS
    I was careful because it was our food.

   b. ac- myst -ín ix? sqlaw’
    asp- know -1sERG dpr money
    I know it’s money.

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

(5) lut k”u xlfnt -x’w
    neg 1sOBJ call 2sERG
    You didn’t call me.

5Remaining abbreviations are: prr = particle; GEN = genitive subject; asp = aspect; cs = case marker.
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. kʷmiʔ xʷuy
suddenly go
He went suddenly.

b. kʷmiʔ kiʔ xʷuy
suddenly comp go
It was suddenly that he went.

c. *xʷuy kʷmiʔ

Neither modal particles nor adverbs can stand alone as predicates.

Word order in Okanagan verbal clauses is typically predicate initial.

This order conforms to the word order found in other Salish languages (Kroeber 1991:26). In elicitation contexts, speakers report that an argument NP can occur in initial position, as in (9).

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

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

This apparent freedom of word order is also found in possessed NPs, as in (10)
and (11).

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

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

However, there are word order constraints with respect to adverbs (exemplified above in (7)) and in other constituent types (Chapter 4). Therefore Okanagan cannot be said to show free word order.

2.1.1 Transitivity. Transitivity of the Salish clause has long been equated with the presence of one of a set of suffixes on the clause head. In Okanagan these suffixes are: -nt, -st, -xt, -tt, -nít, -nůt, and -núst (A. Mattina 1982, 1994). However, it is more accurate to say that the

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

(i). xəʔ’p+núnt -xʷ finish+lc -2sERG
    You managed to finish it.

(ii). xəʔ’p+nú(nt) -n finish+lc 1sERG
    I managed to finish it.
transitivity of a clause is indicated by the inflectional class of the clause head. (I describe these classes below.) In terms of their form, the heads of transitive clauses have subject and object person markers from the ergative or genitive person marking sets. 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.

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Several other Interior languages have a transitive suffix -min, but in Okanagan this suffix is found on transitive and intransitive verb stems. I use the terms *person marker* and *person marking* to refer to the marking of person, number, and grammatical function on heads. On verbs, person, number, and grammatical function are typically marked by a portmanteau formative in a single inflectional paradigm.
Figure 1. Person marking paradigms.

I. Ergative Paradigm

i. Ergative (Subject)
1. -(í)n  -(í)m
2. -(í)xʷ  -(í)p
3. -(í)s/-m  -(í)s-lx/-m-lx

ii. Object

<table>
<thead>
<tr>
<th></th>
<th>with -nt</th>
<th>with -tt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>kʷuø</td>
<td>kʷuø</td>
</tr>
<tr>
<td>2</td>
<td>-s</td>
<td>-(úl)m</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>-1x</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>with -st</th>
<th>with -x(f)t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>kʷuø</td>
<td>kʷuø</td>
</tr>
<tr>
<td>2</td>
<td>-(ú)m</td>
<td>-(ú)m</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

II. Absolutive Paradigm

1. kⁿ  1p. kʷuø
2. kʷ  2p. pø
3. 0   3p. (-lx)

III. Genitive Paradigm

i. Genitive (Subject)
1. in-  1p. -tät
2. an-  2p. -omp
3. -s   3p. -s-lx

ii. Object
1. kʷuø  1p. kʷuø
2. kʷø   2p. pø
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 -nūnt, -nūtt, and -nūst are the same as those for -nt, -tt, and -st, respectively. Third person singular object markers are phonologically null. The third person singular intransitive subject marker is also phonologically null. The third person plural suffix -lx can refer to subjects or objects, depending on the predicate type (A. Mattina 1985).

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

(11) kʷu₃ ac+n� -íxʷ
1sOBJ tie(Trans) 2sERG
You tied me up.

(12) ac+n� -íxʷ iʔ snkʻcʼaʔsqá̂xaʔ
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-  uac+t+ım  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? pəptwínaxʷ
     see(Trans)  1sERG  art  old lady
     I saw the old lady.

(15)  kʷu_  a-  ks-  uacám
     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

^8The 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 wîk+nt-âm
2 wik+nt-xʷ wîk+nt-ōp
3 wik-s wîk-s-əlx

(17) 1sub ḫ'aʔ+nt-în ḫ'aʔ+nt-îm
2 ḫ'aʔ+nt-îxʷ ḫ'aʔ+nt-îp
3 ḫ'aʔ+nt-îs ḫ'aʔ+nt-îs-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-wîk+əm ks-wîk+nt+əm
2 a-ks-wîk+əm ks-wîk+nt+əp
3 ks-wîk+əm-s ks-wîk+əm-s-əlx

The other transitive suffixes are present in all persons in both realis and irrealis mood (e.g. ḫʷu-ʕac+ɨt+iʃ ‘He tied it for me’; ḫʷu-ɑ-ks-ʕac+ɨt-ɨm ‘You tied something of mine’). What the data in (14)-(18) show is that the -nt suffix

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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 + əl/. 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). 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"aj"il+st -om iʔ kəwāp -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.

\[\text{view (Anderson 1992:225).}\]

In A. Mattina 1994, this suffix is labeled switched passive subject. As I argue here, I am not convinced that these predicates are syntactically intransitive.
Therefore, the Unsub predicate like that in (19) might have either a null intransitive subject marker, or a null transitive object marker. Case marking of the agent NP suggests that Unsub predicates head transitive clauses. The agent NP of both canonical and Unsub transitives is preceded by the case marker \( t \) (cs). Compare (19) with (20).

(20) \( \text{cu} \quad -s \quad i? \quad t \quad \chi'\alpha\chi\alpha\chi'\chi'\chi'p \quad -s \)

\( \text{say(Trans)} \quad 3s\text{ERG} \quad \text{art} \quad \text{cs} \quad \text{elders} \quad 3s\text{POSS} \)

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 \( y\text{was} V'd \text{(by x)} \). In my view, Unsub predicates are basically active, and therefore I do not use the label \textit{passive} for them.\(^{11}\)

In sum, there are three non-canonical transitive stem types: 1) transitives in irrealsis 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 \textit{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 \textit{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. A notionally intransitive predicate may have one of two types of lexical conceptual structures. 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. The three

---

12By 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.

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

14This 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). ñlap kʷ km’am t. mus sq’ilips
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 axáʔ iʔ ttw’it
get_to(Trans) 3pERG dpr art boy
They got to the boy.

(22)  **Simple intransitive**

    s- cxʷuy -s iʔ pəptwínaxʷ
asp- come(Intr) 3sGEN art woman
The old woman came closer.

(23)  **Generic object intransitive**

    way’ p k’xʷup iʔ t越发 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)  **(I saw my house.)**

    *knʔ wikm (iʔ) t越发 in- cítxʷ
1sABS see(Intr) art cm 1sPOSS house

distinct from the generic object intransitive.
The argument NPs of simple intransitives and transitives can be possessed.15

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

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

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

15Perhaps 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

<table>
<thead>
<tr>
<th>in focus</th>
<th>activated</th>
<th>familiar</th>
<th>uniquely identifiable</th>
<th>referential</th>
<th>type identifiable</th>
</tr>
</thead>
<tbody>
<tr>
<td>it</td>
<td>{that }</td>
<td>that N</td>
<td>the N</td>
<td>indf. this N</td>
<td>a N</td>
</tr>
<tr>
<td>{this }</td>
<td>this \ N</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

(27) \( \text{k'ul} \quad \text{wik} \quad -s \quad \text{Mári} \)

1sOBJ see(Trans) -3sERG Mary

Mary saw me.

(28) \( \text{p'íc'}+\text{nt} \quad -x^* \quad i? \quad \text{pus} \)

pinch(Trans) -2sERG art cat

You pinched the cat.

(29) \( \text{t'ux't} \quad i? \quad \text{sənktc'aʔsqáx̣aʔ} \)

fly(Intr) art horse

The horse flew.

\(^{16}\)Cognates of t in the Northern Interior are sometimes referred to as the oblique marker. Okanagan, Columbian (Kinkade p.c), and Montana Salish (Thomason and Everett 1993) use t to mark other grammatical functions beside oblique. I discuss the many functions of t in Okanagan in Chapter 4.
NPs that are not cross-referenced on the predicate are not direct arguments. They are t-marked, as in (30) and (31).

(30)  kn_  ník’m  i?  t  sp’íc’ən
      1sABS  cut(Intr)  art  cs  rope
I cut a rope.

(31)  kn_  c’wak  i?  t  t’íc’mən
      1sABS  get burnt  art  cs  iron
I got burnt by the iron.

Case marking is not a completely reliable means of identifying the grammatical relation of an NP. That is, there are case marking patterns for certain predicate types that do not conform to the core pattern. For example, third person subjects of canonical and underspecified subject transitives are expressed as t-marked NPs. The person markers and transitive suffixes of these transitive predicates indicate that these NPs are not oblique (see examples (19)-(20)). Case marking does not follow the core pattern with a second predicate type, also transitive. With predicates that include the transitive suffix -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 2.2.2.3). 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. The theme is frequently expressed in an NP, as in (32).

(32) ćac+žt -ės iŋ kəw̃ap -s
      tie(pos)   3sErg     art horse 3sPOSS
      He tied his, horse for him. 

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

(33) iŋ kəw̃ap -s iŋ ćac+žt -ės
     art horse 3sPOSS sb tie(pos) 3sERG
     His horse is what he tied for him.

(34) in- q’aŋḷán iŋ ćac+nt -ĩn
     1sPOSS shoe sb tie(Trans) 1sERG
     My shoe is what I tied.

(35) ü-anwil kiŋ kʷu ICMP kʷən+nűnt -xʷ
     you sb 1sOBJ grab(Trans) 2sERG
     It’s you who managed to get me. GW373

17The 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.

18POSS is an abbreviation for possessor person, an inflectional category of nouns. -kəw̃ap ‘horse’ is the bound alternant of səŋktc’aʔsq̃áʔaʔ ‘horse’ with possessive markers.
Oblique NPs cannot be extracted.

(36) $i\,sqltmix^*\,ki\,\,?uk"t$
    art  man  sb  crawl(Intr)
    It's the man who crawled.

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 possessinals, datives take ergative subject and object person markers. The notional theme can be expressed only as an NP.

(39) $^6ac+xít\,-s\,i\,\,sànkłe'a?sqáxa?$
    tie(dat)  3sErg  art  cs  horse
    He tied the horse for him.

Possessionals and datives differ formally in that the theme NP of the dative is
t-marked, while the theme NP of a possessional is plain. 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) iʔ  sønk-əq’á_qáʔ  iʔ  ḥac+xft  -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.
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.\textsuperscript{20} A base plus any derivation-
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 morphologically-
simply 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 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. √malixa? + s + √x̣ąqʷ =əlqs +əm

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

---

21 A full inventory of base formatives in Okanagan would include the
affixes that mark diminutive, plural, locative, and directional notions, as well
as lexical affixes. Okanagan has many more affixes than I describe here; it
remains to be seen which of the remaining ones act strictly as base formatives,
and which are markers of a synchronic WFR. I discuss the reanalysis of stem
formatives as base formatives in Chapter 5.
Figure 2. Formative order in the verb stem.

<table>
<thead>
<tr>
<th>grammatical word</th>
<th>stem</th>
<th>base</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inf prfx/ cltc</td>
<td>(Drf)</td>
<td>(Bsf)</td>
</tr>
</tbody>
</table>

e.g.

(a) k′ət + √qaw + cn + iʔst + m -s k′əʔ?awcnʔstms '3s mistakes 3s'

(b) n + √q’aʔ + iıș + nt -x” nq’aʔııșnx” '2s worries 3s'

(c) k”_ kɬ+ s + √qəlt + mix” k”_kəqəltmx” '2s has husband'

(d) k”u_ √q*aʔ + q”aʔm + ncút k”_q’aʔq’aʔmncút '1p practice'

(e) k”_ √t’ux”t k”_t’ux”t '2s flew'

(f) √qitaq √qitaq '3s slept'
Derivational WFRs that involve reduplication or infixation typically target the phonological root, the phonological core of the word as in example (d) in Figure 2. Okanagan inflectional markers are a mix of clitics, prefixes, and suffixes. Predicates can have inflectional markers both before and after the stem, depending on the categories marked on the stem. For example, the stem in form (d) in Figure 2 can have two inflectional prefixes. It is shown in (d) with a person marker only. If the stem *qʷaʔ+qʷaʔmncút* is inflected for irrealis mood, the irrealis marker *ks-* and the subject marker *i(n)-* precede the predicate, as in *i-ks-qʷaʔqʷaʔmncút* 'I will practice'. As a stem with reflexive meaning, however, this stem never has an inflectional suffix or a second person marker. Other stems allow up to three markers before the stem as in *kʷu-ʔa-ks-wikom* '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.
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). \(k^w_u\)\(_1\)SABS \(\text{an-}\)\(_4\) \(\text{tktmilx}^w\)\(_{11}\) 1sABS 2sPOSS wife I am your wife.

(ii). \(k^w_u\)\(_1\)SABS \(\text{tktmilx}^w\)\(_{11}\) -s \(\text{-s}\) 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. 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.

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, aboslut-ive, genitive, and predicate nominal paradigms. The ergative and genitive paradigms mark subject and object persons (A. Mattina 1982, 1993a). The absolutive and the predicate nominal paradigms mark subject person only. (see also Figure 1, section 2.1.1). Nouns in either predicate or non-predicate function may inflect for possessor person. The possessor person markers are given in (42).

(42) 1 in- -tət
2 an- -əmp
3 -s -s-1x

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. 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).

(43) i- s- x*uy
    1sGEN asp go
    I went/ my going

(44) in- q’ay’mín
    1sPOSS paper
    my paper/ *I paper

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

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

25 Under the Separation Hypothesis (section 1.1.2), the formal identity of possessive and genitive markers is an example of affixal polyfunctionality.
26 in- and an- are i- and a- respectively before s and stem-initial t of kin terms.
the contrast between realis and irrealis mood. The transitive class of stems can inflect either as ergative-realistic (45) or genitive-irrealis (46).

The marker of irrealis mood is \(ks\)-.

\[(45) \quad k^\wedge u \quad x^\wedge a l x^\wedge a l t + st \quad -fx^\wedge
\]
\[1sOBJ \quad save(Trans) \quad 2sERG
\]
You saved me.

\[(46) \quad k^\wedge u \quad a- \quad ks- \quad x^\wedge a l x^\wedge a l t + st + am
\]
\[1sOBJ \quad 2sGEN \quad irr \quad save(Trans)
\]
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

---

27All 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 *intransitive* in the Salish literature (e.g. Thompson and Thompson 1992, Gerdts 1988, Thomason and Everett 1993).
viewpoint or intentions at the time.\textsuperscript{28} Okanagan exhibits the cross-linguistically-

1

ly common distinction between perfective and imperfective aspect (Comrie 1976).\textsuperscript{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 \textit{púti?} ‘continuously’.\textsuperscript{30}

\\textsuperscript{28}Smith (1991) writes of this circumstance:

...Speakers choose aspec
tual 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 aspec
tual meaning of a sentence reflects the decision

d 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).

\textsuperscript{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.

\textsuperscript{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 aspec
tual marker.

They can be modified with \textit{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). \textit{púti?} \textit{n̄alt} \hspace{1cm} (ii). *\textit{púti?} \textit{x̄uy}
Speakers typically translate *pútiʔ with English still, as in (49b).

(49) a. wík -n iʔ p’úk*laʔ
    see 1sERG art ball
I saw the ball.

b. *pútiʔ wík -n iʔ p’úk*laʔ
    still see 1sERG art ball
(I still saw the ball.)

There are two kinds of perfectives in Okanagan, the simple perfective (perf) and the perfect (prft). The perfect indicates ‘the continuing present relevance of a past situation’ (Comrie 1976:52). The simple perfective marker is phonologically null, as in (49a). The perfect marker is ksc-. The perfective is illustrated in (50).

(50) a. kn ksc- wík t sp’álaʔ
    1sABS prft see cs monster
I have seen a monster.

b. *pútiʔ kn ksc- wík t sp’álaʔ
    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
It’s still sunk.

still go
He still goes.
They are listed and informally defined in (51)-(54). The formative for each aspectual type is in boldface.

(51)  \textit{continuous} (cont): A situation in progress.
\begin{verbatim}
e.g.  ixf?  sœc-  évqa?+x
dpr  cont  going\_out
That one is going out.
\end{verbatim}

(52)  \textit{perfect continuous} (pcont): A situation in progress with present relevance.
\begin{verbatim}
e.g.  s-  tœr'q+mîx
pcont  dancing
He has been dancing
\end{verbatim}

(53)  \textit{prospective}: A situation in progress with future relevance. (The irrealis prefix \textit{ks}- is added to the continuative stem type (section 2.2.2.9))
\begin{verbatim}
e.g.  kg<  ks-  x*ùy+a?x
1ABS  irr  go
I'm going/ going to go.
\end{verbatim}

\begin{footnotesize}
\begin{itemize}
\item[\footnotesize{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.
\item[\footnotesize{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.
\end{itemize}
\end{footnotesize}
(54) *habitual, customary* (cust): a situation that is viewed as characteristic of a whole period rather than of a moment (Comrie 1976).

\[
\begin{align*}
\text{e.g.} & \quad \text{k'"u}_\text{c} \quad \text{ac-} \quad \text{p'ic'} + \text{st} \quad -s \\
\text{1sOBJ} & \quad \text{cust} \quad \text{pinch} \quad 3\text{sERG}
\end{align*}
\]

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) \[
\begin{align*}
\text{kn}_\text{c} & \quad \text{c-} \quad \text{?ay}\text{"t} \\
\text{1sABS} & \quad \text{cust} \quad \text{tire} \\
\text{1sABS} & \quad \text{ta?} \quad \text{c-} \quad \text{ma?yám}
\end{align*}
\]

I tire when I tell stories./*I am customarily tired when I tell stories.

(ii) \[
\begin{align*}
\text{kn}_\text{c} & \quad \text{?ay}\text{"t} \\
\text{1sABS} & \quad \text{tired}
\end{align*}
\]

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

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

(55) way’ ixf? s- paʔpaʔ’ink -s axáʔ iʔ ttw’it 
    prt dpr neut feel_bad 3sGEN dpr art boy 
The boy felt bad/ started to feel bad.

(56) s- c’q*aq* -s ixf? 
    neut cry 3sGEN dpr 
He started to cry,

    náxəmł lut ixf? 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 iʔ sqilx* 
    manı?–many come and always cust know 3sERG art people 
They kept coming and the Indian people knew all along

    iʔ s- t’acx*úy -s iʔ sámaʔ 
    sb neut arrive 3sGEN art whiteman 
    that the White people were coming/had come. EC:4

(58) i- s- k’əʔám iʔ kʷəkʷ’it iʔ tkʰmilx* 
    1sGEN neut fetch art golden art woman 
He sent me to get the Golden Woman. GW333
Predicates with neutral aspect can be interpreted as inceptives, but perfectives cannot be interpreted as inceptives. The (unmarked) predicate in (59) is perfective.

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

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

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

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34Speakers 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. Kroéber (1991:122) reports that in Thompson Salish the cognate construction is a nominalized clause which is translatable as ‘and then...’. Okanagan clauses in neutral aspect may be hard to elicit in isolation because of their connective role in a stretch of discourse.
irrealis mood or neutral aspect. In realis mood, transitives may show perfective, imperfective, or neutral aspect. The class of intransitive predicates can be inflected with either the absolutive person marking set in perfective or imperfective aspect, or with the genitive person marking set in neutral aspect. In both realis and irrealis mood, intransitives may show perfective or imperfective aspect. These inflectional patterns are charted in (60).

(60)

<table>
<thead>
<tr>
<th>Inflectional Class</th>
<th>Mood</th>
<th>Aspect</th>
<th>Person paradigm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transitive</td>
<td>realis</td>
<td>perfective</td>
<td>Ergative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>imperfective</td>
<td></td>
</tr>
<tr>
<td></td>
<td>irrealis</td>
<td>perfective</td>
<td>Genitive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>neutral</td>
<td></td>
</tr>
<tr>
<td>Intransitive</td>
<td>realis</td>
<td>perfective</td>
<td>Absolutive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>imperfective</td>
<td></td>
</tr>
<tr>
<td></td>
<td>irrealis</td>
<td>perfective</td>
<td>Genitive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>imperfective neutral</td>
<td></td>
</tr>
</tbody>
</table>

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 \textit{plakat} ‘cry’ and \textit{zaplakat} ‘burst into tears’. In German, the verbs \textit{lagen} ‘read’ and \textit{erlagen} ‘read through’ have been described as Aktionsart alternations (Binnick 1991).\textsuperscript{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 \textit{stem aspect} also marks agent \textit{modality}. Bybee (1985) observes that agent modality ‘imposes lexical condi-

\textsuperscript{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.\textsuperscript{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.\textsuperscript{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

\footnotesize
\begin{itemize}
\item \textsuperscript{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).
\item \textsuperscript{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 \texttt{-st} as marking ‘customary stems’. Hébert (1982b) argues that Nicola Valley Okanagan \texttt{-st} and \texttt{-nt} are aspectual variants rather than control variants. Doak (1993) finds \texttt{-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 \texttt{-nu} 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).
\end{itemize}
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, θ
open transitional     -st
possessional         -t
ative                -x(ít)
reflexive            -(n)cút
middle               -(V)m
reciprocal           -(n)wíxʷ
causative            -st
continuative         -(mf)x, -(mf)x-a⁹x
anticausative        -p, -ʔ-, -wílx, -(V)C₂ rdp.
limited control      -núnt, núst, -nút
desiderative         (n-)...-fls
static               -t, CVC rdp., -scút, -úṭ, -ímń

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

38Mourelatos (1981) argues that the distinction between English achievements (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)  
\[ \text{pi} \text{xtnt} \rightarrow \text{hunt(ctr)} \]  
\[ -x^w \rightarrow -2sERG \]  
\[ i? \text{skmxist} \rightarrow \text{art bear} \]  
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.
//tx^uymin// | tx*uymn + (n)t- go meet s.o.
//caxk'iks// | caxk'iks + nt- hand out s.t.
//nmol'xa?cin// | nmol'xa?cin + (n)t- lie about s.o.
//cq^ Bệnh q^ Bệnh scînman\ | cq^ Bệnh q^ Bệnh scînman + (n)t- beg for s.t.
//?wín// | ?wín + (n)t- leave s.o. behind
//?ayx^tmín// | ?ayx^tmín(n)t- tire of s.o.

Not all closed transitional stems include the suffix -nt. The closed transitional stems in (64) have the suffix -st.

(64)  
\[ //pulst// \rightarrow \text{pul + st-} \rightarrow \text{beat s.o. up} \]  
\[ //k^ulst// \rightarrow \text{k^ul + st-} \rightarrow \text{send s.o.} \]  
\[ //wi^?// \rightarrow \text{wi^? + st-} \rightarrow \text{finish s.t.} \]  
\[ //q^lq^fl// \rightarrow q^lq^fl + st- \rightarrow \text{talk to s.o.} \]  
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 customary sentential aspect as do other stems with -st that I describe as open transitionals (see following section). Synchronically, the closed transitional stems in (64) are simply morphologically irregular.39 40

2.2.2.2 Open transitionals. A second kind of stem aspect WFR creates open transitional stems (otr). Open transitionals are very similar to closed transitions. They encode two participants and they name an event that has a result or outcome. The open transitional, however, focuses on the internal temporal constituency of the event. It is inherently imperfective or durative. This stem type is always inflected with the customary sentential aspect (section 2.2.1.2). The stem formative for open transitionals is -st. (The customary prefix is ac-). The contrast between closed and open transitionals is illustrated in (65) and (66).

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

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


40Note 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'iix -n i? sλ'a?c'ínm
    hunt(ctr) 1sERG art deer
    I hunted the deer.

    b. ac- p'iix+st -n i? sλ'a?c'ínm
    cust hunt(otr) 1sERG art deer
    I usually hunt deer.

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

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

(67) a. k*u_ λ'a?λ'a?+nt -is
    1sOBJ look_for(ctr) 3sERG
    He looked for me.

    b. k*u_ λ'a?λ'a?+lt -is i- sq"sq"sf?
    1sOBJ look_for(pos) 3sERG 1sPOSS children
He looked for my children.

(68)  a.  ma’’  -n  i’?  laprít
      break(ctr)  1sERG  art  bridle
      I broke the bridle.

       b.  ma’’++t  -s  -n  an-  laprít
      break(pos)  2sOBJ  1sERG  2sPOSS  bridle
      I broke your bridle.

(69)  a.  nxl’iks  -n  i’?  sn+iipna’?
      pass_around(ctr)  1sERG  art  cigars
      I passed around the cigars.

       b.  nxl’ikst++t  -n  i’?  sn+iipna’?  -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 possessinals, as in (70).

(70)  x’ic++t  -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 //naq’’m// STEAL and //ma’’// BREAK reference a loss of possession, while bases such as //x’ic’// GIVE and //k’’ul’// MAKE reference a gain of possession. The WFR that produces possessional stems does not assign benefactive or malefactive interpretations to its output.
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)).

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

---

42 Closely related in form are predicates containing the suffix -tliQt. 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) \[ \text{kʷu̍̊́} \text{nikʷ+xt} \quad -xʷ \quad i? \quad t̓ \quad síp'i? \]
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 \(/w̱ik/\) SEE, \(w̱ikt/-\) ‘see s.t. for s.o.’ was rejected by speakers. Other bases, such as \(/q̱im/\) EAT and \(/q̱am/\) SWALLOW do not have dative derivates (i.e. \(*q̱itm/-\) ‘eat for s.o.’ and \(*q̱amxit/-\) ‘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 \(-min\). This suffix has cognates in all the Interior Salish languages (see especially descriptions of \(-min\) in Kinkade 1980, Thompson and Thompson 1980, Kuipers 1992, and L. Thomason 1994). The distribution of Okanagan \(-min\) is idiosyncratic and not parallel to that reported for other

\(^{43}\)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. 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.

The contrast in meaning between datives and possessionals is brought out by the data in (76)-(80).

(76) a. nc’iw+.lt -mɔlx nʔitnąn -səlx
wash(pos) Unsubp dishes 3pPOSS
She washed their dishes.

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

45Okanagan -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). kx’u_k?ukx’t-m(n)+(nt)-s
  ?ukx’t
  tx’ist-mn+(n)t-m
  x’ist
  səp’-mī(n)+(nt)-n
  səp’+nt-ís
  yr-mín+(n)t-x”
  ir+nt-ín
  He crawled towards me.
  He crawled.
  They walked towards someone.
  He walked.
  I batted it away.
  He batted it.
  You pushed it.
  I rolled (coiled) it.

(ii). kn_xc-mn+(n)cut
  kn_xac
  kpulx-m(n)+(nt)-n
  kn pulx
  I got myself ready.
  I am ready.
  I camped with him.
  I camped

This suffix may be polyfunctional, with one or more of its functions being stem aspect marking. I do not pursue this possibility here. There is one dative stem that might be analyzed as containing -mín (reduced to -m): naq’”mxił-‘steal s.t. for s.o.’. I analyze this form as being derived from the base //naq”m// STEAL.
b. nc'íw'+xt -n i? t n?ídntn
wash(dat) 1sERG art cs dishes
I washed some dishes for them.

(77) a. way' k"i(n)+tt -s -ən a- sk'əɁpá?x
prt grab(pos) 2sOBJ 1sERG 2sPOSS advice
I'll take your advice.

b. k"ní+xt -əm i? t k̕nt'ək"mín -s
grab(dat) 1pERG art cs coffin 3sPOSS
We'll get him a coffin.

(78) a. k"aʔk"aʔ+tt -ín
chew(pos) 1sERG
I chewed it up on him.

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

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

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

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

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

Okanagan datives encode a transfer of possession that is beneficial to an
animate recipient. Possessionals do not typically encode a transfer. Unlike
closed and open transitionals, datives and possessionals logically imply a third participant. With datives, the third, or theme participant is the generic entity that is transferred. With possessionals, the theme is the possessee of the internal argument.

2.2.2.5 Reflexives. A working definition of the notion reflexive is that the external argument is coreferential with the internal argument, as in Chris cut himself. Most bases that form closed transitionals also form stems with this reflexive meaning. Reflexive stems (ref) encode an outcome that is the result of an intentional act by the external argument. The formatives that mark reflexive stem aspect are -(n)cút or -(s)cút.

(81)  
\begin{align*}
\text{kn}_{\text{n}_a}k' + ncút & \quad \text{I cut myself.} \\
\text{kn}_{\text{t}x} + ncút & \quad \text{I combed myself.} \\
\text{kn}_{\text{k}^w}a? + ncút & \quad \text{I bit myself.} \\
\text{kn}_{\text{t}'}k^w + ncút & \quad \text{I laid myself down.} \\
\text{kn}_{\text{qcpm}} + ncút & \quad \text{I shrank (myself) away.} \\
\text{kn}_{\text{xnam}} + scút & \quad \text{I hurt myself.} \\
\text{kn}_{\text{pal}} + scút & \quad \text{I killed myself.} \\
\text{kn}_{\text{nuslx}} + scút & \quad \text{I lifted myself up.}
\end{align*}

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. 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).

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 puente 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)  

<table>
<thead>
<tr>
<th>Stem</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>nτʔʔp-ncút</td>
<td>run</td>
</tr>
<tr>
<td>xʷʔtʰp-ncút</td>
<td>run away</td>
</tr>
<tr>
<td>ḧxʷʔxʷ-ncút</td>
<td>breathe</td>
</tr>
<tr>
<td>kʔʔm-ncút</td>
<td>get closer to s.t.</td>
</tr>
<tr>
<td>ʷʔʔy-ncút</td>
<td>laugh</td>
</tr>
<tr>
<td>wəlq(n)-ncút</td>
<td>recover (one's health)</td>
</tr>
<tr>
<td>siym-scút</td>
<td>do one's best</td>
</tr>
<tr>
<td>ʷʔʔp-ncút</td>
<td>be the loser</td>
</tr>
<tr>
<td>nqʷʔʔls-ncút</td>
<td>be cranky</td>
</tr>
<tr>
<td>kwk-scút</td>
<td>be lucky</td>
</tr>
<tr>
<td>kʰʔx-ncút</td>
<td>be in a hurry</td>
</tr>
<tr>
<td>nʔʔx-ncút</td>
<td>be loud</td>
</tr>
<tr>
<td>kʰʔwiʔnaʔ-ncút</td>
<td>be prepared</td>
</tr>
<tr>
<td>sqʷʔʔn̥m-scút</td>
<td>be pitiful</td>
</tr>
<tr>
<td>cʔʔm-scút</td>
<td>be hard to get</td>
</tr>
<tr>
<td>xʔʔim-scút</td>
<td>be at the limit</td>
</tr>
<tr>
<td>ʔʔxʔʔ-ncút</td>
<td>be quickminded</td>
</tr>
<tr>
<td>səlʔʔ-ncút</td>
<td>be high class</td>
</tr>
</tbody>
</table>

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

This ordering of suffixes demonstrates that -(n)čút and -(s)čút 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)  

<table>
<thead>
<tr>
<th>Stem</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>kʷʔʔy-ncút-mn+(n)t-</td>
<td>laugh at s.o.</td>
</tr>
<tr>
<td>kʔʔmplaʔ-ncút-mn+nt-</td>
<td>call s.o. a relative</td>
</tr>
<tr>
<td>ntʔʔnaʔ-scút+xt-</td>
<td>dispute s.o.'s words to s.o.</td>
</tr>
</tbody>
</table>

There are also nouns that include -(n)čút or -(s)čút. I analyze these suffixes as base formatives in these forms also.
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 -(k')n~. In (85), I contrast middle stems with reflexives.

(84) scuw-ncút a person in training
kʷʷal'cn-čút-(t)n a cook
kʷʷal'-ncút-(t)n Creator
sx-čút a companion
kʷaʔaʔ-ncút-(t)n a searcher, seeker

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

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

(85) kn̓tx+ám I combed./ I am combed.
kn̓tx+ncút I combed myself.

48Middle 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.
The difference between reflexive stem aspect and middle stem aspect is that in the latter, the outcome of the reflexive act is emphasized. In reflexives, the act and its outcome are equally prominent. The middle WFR applies to a much smaller class of base types than does the reflexive WFR. The bases that form middles are limited to those that denote acts of grooming or dressing.

(86)  

a. //kc’aw’íw’s// HAVE A WASHED FACE  
kn_kc’aw’íw’s+m  
I washed my face.

b. //?aq’+// SCRAPE s.t.  
kn_?aq’+m  
I shaved.

c. //?ip’// WIPE s.t.  
kn_?ip’+m  
I wiped my face.

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

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

f. //k’ilstn// SWEATBATH  
kn_k’ilstn+m  
I took a sweatbath.
Bases that are not related to grooming or dressing do not form middle stems.

(87) a. //\text{k'a?ka?}'// LOOK\_FOR s.t.
    kn\_{\text{k'a?ka?}-\text{am}}
    *I looked for myself.

b. //\text{nik}'// CUT s.t.
    k* _nik'əm
    *You cut yourself.

Many stems that do not have middle stem aspect end in -(V)m in Okanagan. These include the default stem of many verbs. For example, some bases form a default stem that is formally identical to their middle derivate.

The base //\text{tx/} COMB is an example of this type of base.

(88) a. kn\_ txam
    lsABS comb(mid)
    I combed/am combed.

b. kn\_ txam
    lsABS comb
    I combed something.

There are also bases ending in -(V)m that denote expressive bodily acts, such as those in (89).

(89) \text{n\text{t}ak'\text{t}ak't\text{ám} } s.o. sobs
    \text{nc'ípc'əpsəm} s.o. blinks his eyes (shut)
    \text{k'át'qnəm} s.o. raises his head
    \text{k'ax'əm} s.o. yells
    \text{wəhám} s.t. barks
    \text{x'iwəm} s.o. whistles
    \text{k'ram} s.o. swims

While the bases in (89) have the semantics of middles, they do not appear to
be derived from simpler, non-middle forms. I conclude that -(V)m is a synchronically significant derivational suffix in some stems, and that it is lexicalized in many others.

2.2.2.7 Reciprocals. The WFR that forms stems indicating reciprocity of action uses the suffixes -(n)wíx" and -twíx". 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. k"u_ pəlst+wíx"
   1pABS kill(rec)
We will kill one another. COD229

b. k"u_ c- wk+twíx" əl sk'láx"
   1pABS cust see(rec) in evening
We see each other in the evening. COD230

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

d. k"u_  nsəx"na?mn+(n)wíx"
   1pABS understand(rec)
Let's understand one another. COD229

e. *k"u_ p’y’q+nwíx"
   1pABS cook(rec)
??We cook each other.
Like the reflexive suffixes, reciprocal suffixes often precede stem aspect suffixes. In this position, they are base formatives, as in (90).

\[(90) \quad \text{n?olqs-nwíx}\text{*-m+}(nt)\text{-s-əlx} \quad \text{They fight over something.} \\
\text{c’apq’mn-(n)wíx}\text{*+st-s-əlx} \quad \text{They glue it together.} \\
\text{c’a-cn-(n)wíx}\text{*+st-x\text{*} a-snsíswxn} \quad \text{Tie your socks together.} \\
\text{k’nk\text{*}nks-nwíx}\text{*-mn+nt-əp} \quad \text{You(pl) hold him on either side.}
\]

2.2.2.8 Causatives. The causative WFR creates a stem that encodes two participants, one of which, the external argument, is directly or indirectly responsible for the action or condition of the internal argument. The formative on stems with causative stem aspect is consistently -st.⁴⁹ Unlike the stem aspects described in sections 2.2.2.1-2.2.2.7, causatives (caus) are formed from bases that do not inherently encode an act with an outcome. Examples of stems in causative stem aspect appear in (91).

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⁴⁹ The suffix -st is also found in open transitionals and in some closed transitionals (sections 2.2.2.1 and 2.2.2.2).
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 -(mix)a?x, the other is -(mil)x. (The long form of each affix is found with phonologically weak bases). The continuative stem that ends in -(mix)a?x 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 -(mil)x. The continuous and perfect continuous sentential aspect prefixes are s.çc- and s-, respectively. Stems in continuative stem aspect, in each of their three sentential aspects, are illustrated in (92)-(94).50

50A. Mattina 1993a sets up the aspectual circumfixes /ks-...(mix)a?x/ ‘future progressive’ and /s.çc-...-(mil)x/ ‘perfect’. I analyze these constructions as containing inflectional aspect prefixes (e.g. ks- and s.çc-) that attach to stems
(92) Prospective (a) strong (b) weak

a. kn₁\textunderscore k-
   ks-
   nik’+a?x
   1sABS   irr   cut(con)
   I am going to cut (something).

b. kn   ks-
   λ’a?λ’a?+míx
   1sABS   irr   look_for(con)
   I am going to look for (something).

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

a. kn₁\textunderscore sāc-
   nik’+x
   1sABS   cont   cut(con)
   I am cutting (something).

b. kn₁\textunderscore sāc-
   λ’a?λ’a?+míx
   1sABS   cont   look_for(con)
   I am looking for (something).

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

a. kn₁\textunderscore s-
   x’úy+ x
   1sABS   pcont   go(con)
   I’m going.

b. kn₁\textunderscore s-
   k’əwp+míx
   1sABS   pcont   silent(con)
   I am silent.

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

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

that contain derivational suffixes -(míx)a?x or -(mí)x. I classify -(míx)a?x and
-(mí)x as derivational suffixes on the grounds that they cannot co-occur with
other stem aspect formatives. Therefore, they are not like inflectional sentential
aspect markers, which occur with a variety of stem aspect types. Furthermore,
all sentential aspect markers are prefixal, and my analysis maintains this
general pattern.
up to the change. Anticausatives encode a single participant, the external argument, who is a notional patient. There are a number of formatives associated with the anticausative WFR. They include the suffixes -(V)p, -(t)wilx, and a reduplicative suffix that targets the second consonant of the phonological root of a base. I refer to this formative as -(V)C₂ 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. kn₁₆ k'qk't'+áp
     1sABS separate(ac)
     I got cut off/separated.

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

\(^{51}\)The distribution of the formatives may be determined at least partly on phonological grounds. Comparative evidence suggests that -p and -ʔ- 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 occurring less commonly than the suffix. Infixed forms are less numerous than suffixed ones in the Okanagan corpus.

\(^{52}\)The tradition is to treat these formatives as separate morphemes. However, it is clear that stems with these formatives are basically similar in their aspect, category, thematic structure, and argument structure. I discuss these properties in more detail in Chapter 3.
(96) a. ta?li? uìt cëⁿ+áp
really sb stock(ac)
It’s really stocked up.

b. cëⁿ+nt -ín i? t ē sc’ítən
stock(ctr) 1sERG art cs food
I stocked it with food.

(97) a. ck’+ák’ i? sqlaw’
count(ac) art money
The money is counted.

b. ck’+nt -ísalx
count(ctr) 3pERG
They counted it.

(98) a. ⁷ac+ác i? snk′c′a?sqáxa?
tie(ac) art horse
The horse got tied up.

b. ⁷ac+nt -ís i? sic’m
tie(ctr) 3sERG art blanket
He tied up the blanket.

(99) a. kn̆ tq’lá+ʔ+x"n̆
1sABS hook(ac)
I got hooked (on something like a nail).

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

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

b. p’íxʷ+nt
shine(ctr-imperative)
Shine it.
Multiple anticausative formatives do not usually occur in a single stem. Rarely, a base will have more than one anticausative, as in the doublet 'amáp and 'am'ám '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) a. \( kn_\_ \) \( \ddot{x}_{a}st+wflx \)
    \[ \text{IsABS} \]
    \[ \text{good(ac)} \]
    I got better.

(102) a. \( ixf? \) \( s\ddot{a}lx"a\ddot{a}+twflx \)
    \[ \text{dpr} \]
    \[ \text{big(ac)} \]
    It’s gotten big.

b. \( ixf? \) \( s\ddot{a}lx"a\ddot{a} \)
    \[ \text{dpr} \]
    \[ \text{big(sta)} \]
    It’s big.

(103) \( kn_\_ \) \( n\ddot{k}'+\ddot{a}k' \)
    \[ \text{IsABS} \]
    \[ \text{cut(ac)} \]
    \[ \text{i}\ddot{a} \]
    \[ \text{art} \]
    \[ \text{cs} \]
    \[ \text{knife} \]

---

53 As with other stem formatives, sometime anticausative formatives occur inside the base, where they have been lexicalized. For example, the stem \( nk'a?s\ddot{a}ls \) seems analyzable as having the anticausative marker -?- in it. However, the stem means ‘be angry’ not ‘become angry’. To say that someone became angry, the form is \( nk'a?s\ddot{a}ls+wflx \). Thus, only the suffix -\( wflx \) produces the canonical anticausative meaning. This ‘double’ marking of a notion is familiar from English words like reduplication and reiterate. It supports my contention that form and function are not consistently mutually implied.
I got cut with a knife.

\[(104) \text{t'am+áp i? t}_s\text{ españax}^w\]
\[\text{thaw(ac) art cs sun}\]
It was thawed by the sun.

\[(105) t'i p'+?+áx^w i? t\text{ nc'ík'w̃ntn}\]
\[\text{ev shine(ac) art cs lamp}\]
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 \(-núni\), \(-nús\), and \(-nút\), 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.

\[(106) \text{ a. n̥al+nt } -ín\]
\[\text{sink(ctr) IsERG}\]
I sank it.
b.  n⁵al' + núnt  -xʷ
    sink(lc-ctr)  2sERG
You managed to sink it.

(107) a.  ac-  n⁵al+st  -ín
    cust  sink(otr)  1sERG
I usually sink it.

b.  ac-  n⁵al' + núst  -xʷ
    cust  sink(lc-otr)  2sERG
You could (usually) sink it.

(108) a.  n⁵al ' + t  -ín  i?  ḫkap  -s
    sink(pos)  1sERG  art  bucket  3sPOSS
I sank his bucket on him.

b.  n⁵al' + nút  -xʷ
    sink(lc-pos)  2sERG
You managed to sink something of his.

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

(109)  kn_n+xʷuy+īls  I want to go.
      kʷ_n+palx+īls  You want to camp.
      kn_n+ʻaynst+īls  I feel like laughing.
      kn_nak‘m+īls  I want to cut (something).
      kn_n+pək‘m+īls  I want to hunt (something).
      kn_n+pəc‘m+īls  I want to pinch (something).
      kn_sŐst+īls  I want to drink.
      kʷ_ mat+īls  You want to sit.
The formative \((n+)...+ils\) 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 \((n+)...+ils\) in these contexts as a base formative. Examples of \((n+)...+ils\) as a base formative appear in (110).

\[(110) \quad n-k'a^2s-ils \quad \text{be angry, cranky} \\
\quad n-st-ils \quad \text{think} \\
\quad kt-fl's \quad \text{stomach bursts} \\
\quad n-q'a^9-ils \quad \text{the matter, business} \\
\quad k'4amt-ils+nt- \quad \text{sit in front of someone} \\
\quad n-ac'nt-ils \quad \text{be preoccupied} \\
\quad k'4twn-ils-mist \quad \text{lack confidence} \\
\quad q'sasp-ils-mn+(n)t- \quad \text{wait for someone a long time} \\
\quad tkcx-ils \quad \text{be hurting, suffering} \\
\quad npút-als \quad \text{be satisfied} \]

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*).

---

\(^{54}\)Historically and comparatively, \(-ils\) is analyzable as a lexical suffix that refers to feelings or internal states.
(111) Statives with -t

- n̂al+t sunk
- sal’+t lost
- k’iy+t cold
- suy’+t chilly
- c’a+t cold
- k’al+t warm
- c’ak’+t stiff
- n̂as+t heavy
- qi+t wakened

(112) Statives with root reduplication and -t

- dita+t straight, honest
- k’rk’ri+t golden
- cičx+t very hot
- c’wc’aw+t hard to peel
- qmqa+m+t be laying about

(113) Statives with -scút

- x?im+scút be at the limit
- k’op’om+scút be disgusted w/oneself
- q’n’om+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.
The frequency of the suffix -t and root reduplication in these statives that are not derived from active bases suggests that -t and root reduplication are historically important stative formatives. However, because there is an imperfect correspondence between -t and/or root reduplication and stative meaning, I am uncertain about the synchronic productivity of stative formation with these markers. The pairs of stems in (115) and (116) do not show active (e.g. (a)) versus stative (e.g (b)) semantics, even though the stems in the (b) examples have -t or root reduplication.

| (114)         |  |  |  |
|---------------|  |  |  |
| λ’aťt         | fast | (*λ’ať) |
| x”upt         | tired | (*x”up) |
| qalt          | raw | (*qal) |
| sľx”a?        | big |
| c’uy          | dark |
| piq           | white |
| kəka?liʔ      | slow |
| x*əlx*ált     | alive, healthy | (*x*əlx*ált, *x*əl) |
| q”əmq”ám      | excellent, beautiful | (*q”əmq”ám, *q”ám) |
| pľaťt         | thick | (*pľať) |
| pa?páʔt       | generous | (*pa?páʔ, *paʔ) |
| q”n’q”án’t    | be hard up, pitiful | (*q”n’q”án, *q”án) |
| k”usk”st      | frisky | (*k”usk”s, *k”us) |
| ŝáʔxaʔ        | sacred |

A subtype of stative stems is the *characteristic* stem, described in A.
Mattina 1993b. The formatives -imn and -ūt are found in stems denoting habitual or repeated behaviors that characterize an individual. A. Mattina notes that -ūt occurs in stems in which the root is reduplicated. The suffix -imn occurs in stems in which the root is not reduplicated. I exemplify these in (117) and (118).

(117) qʷəłqʷəlt+ūt talks all the time, likes to t ilk
*qʷəlt+imn

(118) ?ən'+imn eats all the time, likes to eat
*?ən'+imn+ūt

Like other statives, stems with -ūt and -imn tend not to be found in continuous aspect (e.g. kn səc+ʔax+imn+x ‘He’s being a sleeper’), but may be possible with other stems, e.g. kn səc+ʔəl't+ūt+x ‘I’m being a real talker’. In general, statives tend to be aspectually ambiguous, which is one of their typological characteristics.

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

2.2.2.15 Stem aspect and inflectional classes. Stem aspects correspond to the inflectional classes transitive and intransitive as shown in (119).

(119) **Transitive**  **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 absolutive paradigm. However, the genitive person marking paradigm is used for either stem type when the stem is in irrealis mood or neutral aspect.

Because neither inflectional nor derivational markers exhaustively distinguish transitive stems from intransitive stems, the two inflectional classes must be distinguished on the basis of the meaning of the stem. Thus, properties of
lexical conceptual structure (LCS) play an important role in determining the inflectional class of a stem. I give LCS representations for most of these stems types in section 3.4.

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

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

(120)

<table>
<thead>
<tr>
<th>Formative</th>
<th>Verb</th>
<th>Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>s-</td>
<td>'ayxʷ' t 'tired'</td>
<td>s+'ayxʷ' t 'fatigue'</td>
</tr>
<tr>
<td>-tn</td>
<td>nt'əkʷ'kiʔsą̱xʔaʔ 'mount'</td>
<td>nt'əkʷ'kiʔsą̱xʔaʔ+tn 'saddle'</td>
</tr>
<tr>
<td>-mín</td>
<td>q'yam 'write s.t.'</td>
<td>q'y'+mín 'writing tool'</td>
</tr>
<tr>
<td>sxʷ-</td>
<td>kʷ̣ul'm 'make, do'</td>
<td>kʷ̣ul'm+sxʷ 'worker'</td>
</tr>
<tr>
<td>/redup.</td>
<td>c'lam 'stand s.t. up'</td>
<td>c'1+c'al 'timber'</td>
</tr>
</tbody>
</table>
In addition, some lexical affixes appear to nominalize a verb base.  

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

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

(i). a. \(\text{sap}^{'}=\text{qin}\) ‘hit on the head’  
hit=head  
b. \(\text{sap}^{'}=\text{ilsxn}\) ‘hit on the forehead’  
hit=forehead  
c. \(\text{sap}^{'}=\text{aqs}\) ‘hit on the nose’  
hit=nose  
d. \(\text{k}^{\prime}\text{x}^{\prime}\text{ak}^{'}=\text{qin}\) ‘take (hat) off of head’  
pull_off=head

Yet more often, the apparent meanings of lexical affixes are lost through lexicalization. For example, the lexical suffix =\(\text{us}\) refers transparently to ‘eye’ in many words (e.g. \(\text{t}^{\prime}\text{xw}^{\prime}\text{xw}^{'}=\text{us}\) (dry-eye) ‘dry eyes’), ‘face’ in others (e.g. \(\text{p}^{\prime}\text{y}=\text{us}\) (wrinkled-face) ‘wrinkled face’. In other cases, the ‘meaning’ of =\(\text{us}\) is not clear.

(ii). a. \(\text{sy-sy}=\text{us}\) ‘powerful’  
?=\(\text{us}\)  
b. \(\text{kl-xn}=\text{us}\) ‘sunset low on the horizon’  
on-low(?)=\(\text{us}\)  
c. \(\text{k}^{\prime}\text{a}^{\prime}=\text{us}\) ‘look around’  
fetch/look(?)=\(\text{us}\)

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 \(\text{sap}^{'}\) plus the lexical affix that often means ‘mouth’, \(=\text{cin}\). However, the form is not *\(\text{sap}^{'}=\text{cin}\) but \(\text{sap}^{'}=\text{atx}^{\prime}\text{w}^{\prime}\) (hit=mouth/throat/neck) or \(\text{sap}^{'}\text{p}^{'}=\text{aws}=\text{qn}\) (hit=middle=head). The form for ‘hit in the face’ is \(\text{sap}^{'}\text{p}^{'}=\text{w}^{\prime}\text{s}=\text{us}\) (hit=middle=face). (The doubling of \(p^{'}\) is unexplained in the last two examples.)
(121) a. pak\textsuperscript{?}=\textit{fp} bitter cherry \\
\quad ?=\textit{fp} \\
b. cq'=\textit{fp} Douglas fir \\
\quad ?=\textit{fp} \\
c. p\textsuperscript{p}ax\textsuperscript{p}o\textsuperscript{p}ax\textsuperscript{p}=\textit{fp} grey willow \\
\quad (spread?)=\textit{fp}

Other plant names show no lexical suffix, and still others have a lexical suffix other than \textit{(i)}\textit{fp}, as in (122).

(122) a. cur all willowherb COD10 \\
b. swiya fern COD188 \\
c. snc'i'c'q=p=\textit{na}\textsuperscript{?} dwarf or creeping juniper COD17 \\
d. wswas=xn=qn lupine COD228 \\
e. st'ik'(l)=\textit{lq}\textsuperscript{w} 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 \textit{kt}- and \textit{ta'?x\textsuperscript{w}-}t-, respectively.\textsuperscript{56} Denominals are exemplified in (123).

\textsuperscript{56}\textit{ta'?x\textsuperscript{w}-} requires what A. Mattina (1987) calls a ‘compound connector’, the segment -\textit{tf}. 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.
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).\footnote{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).} 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.\footnote{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. I describe each of these base aspects in section 3.3. I give

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.

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 aspctual classes as ‘of no use to aspctual 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 aspctual classes organize the word formation component and/or lexicon of a language, those classes are pertinent to aspctual 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, $[\pm E]$ and $[\pm C]$. The feature $[\pm E]$ stands for the ability of a base to encode a situation that 'takes time'. The feature $[\pm C]$ stands for the relevance of a base to the notion 'change of state'. I describe both of these features in more detail below. Using these features, I define Transitions, Processes, and States (section 3.3). The classification by binary features yields a fourth base aspectual class that I refer to as Entities. Entities, which have negative feature values for both $[E]$ and $[C]$, contrast with situations, which have at least one positive feature value for $[E]$ and $[C]$. As in other languages, the aspectual contrast between Entities and situations parallels the grammatical distinction between nouns and verbs.

3.1 Eventhood. Okanagan distinguishes between situations that encode 'internal temporal constituency' (Comrie 1976:3) and those that do not. I refer to those situations that encode internal temporal constituency as events. Events 'take time', though that time may be long (durative), incalculably short (momentary), or unbounded (atelic). They have internal constituency in the sense that they have a beginning, middle, and end, any one of which can be emphasized in a related linguistic expression. I represent bases that encode events as having the feature $[+E]$; those bases that do not encode an event
have the feature [-E]. I use two tests to determine if a base is an event or not.

The first test involves compounds with wiʔs- ‘done’.\(^4\) wiʔs- compounding creates stems that are aspectually terminative.\(^5\) The salient feature of the event is its termination or ‘finished-ness’; however, the beginning and middle stages of the event are implied by the emphasis on termination. Examples of bases that compound with wiʔs- appear in (2).

(2)

\[
\begin{align*}
//tx// & \text{COMB} & \text{kn}_\text{wiʔs-txám} & \text{I finished combing s.t.} \\
//cʕawlx// & \text{BATHE} & \text{kʷ}_\text{wiʔs-cʕawlx} & \text{You are done bathing.} \\
//qʔey’// & \text{WRITE} & \text{wiʔs-q’y’ám} & \text{He got done writing s.t.} \\
//tqmin’// & \text{PUT DOWN} & \text{wiʔs-tqmin’ams} & \text{He already threw it down.} \\
//m’ayaʔ// & \text{SHOW} & \text{kn}_\text{wiʔs-m’ayaʔm} & \text{I’m done showing it.} \\
//p’ic’// & \text{PINCH} & \text{kn}_\text{wiʔs-p’ic’əm} & \text{I already pinched s.t.} \\
//tkʷl-íws// & \text{MOUNT} & \text{p}_\text{wiʔs-tkʷl-íw’s} & \text{You (pl.) are already mounted.} \\
//ʔitx// & \text{SLEEP} & \text{kn}_\text{wiʔs-ʔitx} & \text{I’ve already slept.} \\
//ʔacqáʔ// & \text{COME_OUT} & \text{wiʔs-ʔacqáʔ} & \text{He’s already left.} \\
//ʔukʷt// & \text{CRAWL} & \text{kn}_\text{wiʔs-ʔukʷt} & \text{I finished crawling.} \\
//tr’qptic’ut// & \text{RUN} & \text{wiʔs-tr’qptic’ut} & \text{He’s finished running.} \\
//ntik’tik’tám// & \text{SOB} & \text{wiʔs-nṭak’tik’tám} & \text{He’s done sobbing.}
\end{align*}
\]

There are many bases that do not compound with wiʔs-. Examples of

\(^4\) 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-+acmntín ‘I finished tying it’; *s-+acmntín). 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)

\[
\begin{align*}
\text{\small\\text{\textipa{x*upt}}//\text{\textipa{WEAK}}} & \quad *\text{\small wi?s-x*upt} & \text{\small (done being weak)} \\
\text{\small\\text{\textipa{piq}}//\text{\textipa{WHITE}}} & \quad *\text{\small wi?s-piq} & \text{\small (done being white)} \\
\text{\small\\text{\textipa{ckiw’t}}//\text{\textipa{SKINNY}}} & \quad *\text{\small wi?s-ckiw’t} & \text{\small (done being skinny)} \\
\text{\small\\text{\textipa{xast}}//\text{\textipa{GOOD}}} & \quad *\text{\small wi?s-xast} & \text{\small (done being good)} \\
\text{\small\\text{\textipa{~ax*t}}//\text{\textipa{FAST}}} & \quad *\text{\small wi?s-~ax*t} & \text{\small (done being fast)} \\
\text{\small\\text{\textipa{p’uy}}//\text{\textipa{WRINKLED}}} & \quad *\text{\small wi?s-p’uy} & \text{\small (done being wrinkled)} \\
\text{\small\\text{\textipa{k’astl}}//\text{\textipa{BAD}}} & \quad *\text{\small wi?s-k’astl} & \text{\small (done being bad)} \\
\text{\small\\text{\textipa{citx*x}}//\text{\textipa{HOUSE}}} & \quad *\text{\small wi?s-citx*x} & \text{\small (done being a house)} \\
\text{\small\\text{\textipa{yámx*x’a?}}//\text{\textipa{WOVEN BASKET}}} & \quad *\text{\small wi?s-yámx*x’a?} & \text{\small (done being a woven basket)} \\
\text{\small\\text{\textipa{~awit+h}}//\text{\textipa{ROAD}}} & \quad *\text{\small wi?s-~awit+h} & \text{\small (done being a road)} \\
\text{\small\\text{\textipa{sp’ic’n}}//\text{\textipa{ROPE}}} & \quad *\text{\small wi?s-sp’ic’n} & \text{\small (done being a rope)} \\
\text{\small\\text{\textipa{~iX’xn}}//\text{\textipa{TROUSERS}}} & \quad *\text{\small wi?s-~iX’xn} & \text{\small (done being trousers)} \\
\text{\small\\text{\textipa{tkilmilx*x}}//\text{\textipa{WOMAN}}} & \quad *\text{\small wi?s-tkilmilx*x} & \text{\small (done being a woman)}
\end{align*}
\]

A second test for eventhood picks out the same set of bases as wi?s-
does. This test involves the compatibility of a base with the higher predicate

\[qtnunt- \text{‘be able to’}. qtnunt- \text{selects an irrealis complement clause that is}
\]
headed by a base that encodes an event. I refer to these as abilitative
constructions.

(4) \[qtnu(nt) \ -n \ \ddagger \ i- \ \text{ks-} \ \text{piXm}
\`
able\` 1sERGsub sb 1sGEN irr hunt
\]
I was able to hunt.

(5) \[lut \ qtnu(nt) \ -n \ i- \ \text{ks-} \ \text{ktmút}
\`
\neg\` able 1sERG 1sGEN irr sit\_there
\]
I never could sit there.
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. Bases that lack internal temporal structure fail in the abilitative construction.

6B. 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 qft-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 q̣nú(nt) -s \text{\lgl neg able} \text{3sERG} sb \text{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 \([\pm E]\) 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

\begin{align*}
\text{k\text{n}_wi\text{s}-\text{limt}} & \quad \text{I’m done being happy.} \\
\text{lut q\text{̣nú}(nt)-n} & \quad \text{I wasn’t able to be/stay happy.}
\end{align*}

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
example, *nk'wpīls* ‘lonesome’ is like *limt* in that it is interpretable as denoting a temporary phase. By contrast, states such as *paḫpāt* ‘smart’ and *šwupt* ‘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?š*-s, but in their *anticausative* (ac) alternant, they do combine with *wi?š*-s.

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

(12)  //šast// GOOD
   a. *wi?š-šast* finished being good
   b. *wi?š-[šast+wilx] finished getting better

(13)  //c’uy// DARK
   a. *wi?š-c’uy* finished being dark

(14)  //c’nc’cant// TIGHT
   a. *wi?š-c’nc’can+t* finished being tight
   b. *wi?š-[c’n?+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??*- 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 \([\pm C]\) 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 3.4.7, 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. \kn_p’ic’+ae\ I got pinched.
//ft’at’// WET \t+?+ft’at’ ix$,?\ That got wet.
//ck’”am// STIFF \ck’”+âp i? sip’i?\ The hide got stiff.
//ta?q// DIRTY \ta?q+âp ix$,?\ That one got dirty.
//nik’// CUT s.t \kn_nik’+ak’\ I got cut.
//c’i1’// SHADY \c’i1’+l’\ It’s shaded.
//c’uy// DARK \c’+?+uy\ It got dark.
//n”as// HEAVY \kn_n+?+as\ I’m getting heavy.
//nwis// HIGH \nw+?+as i? t’ux”t\ The plane lifted up.
//p’uy// WRINKLED \p’+?+uy ix$,?\ It’s wrinkled.
//sf1x*a// BIG \sflx*a?+twflx\ It’s getting big.
//c’nc*tânt// TIGHT \c’nc*tânt+wflx\ 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’îlx// JUMP UP
//?itx// SLEEP //k’tx’yust// GO UNDER A SHELTER
//x*ist// WALK //x*uyl// GO
//c’q’aq”// CRY //p’lak’// TURN BACK
//mut// SIT //kxan// GO ALONG
//q”a?q”’imt// BELCH //pulx// CAMP
A second test for the feature value of \[\pm C\] is the ability of a base to form limited control predicates (section 2.2.2.11). The limited control WFR creates a derivate that encodes an agent who succeeds in producing a change of state with difficulty or accidentally. All the bases in (15) and those in (17) form limited control stems.\(^8\)

\begin{align*}
(17) & \text{//p'ic\textquotesingle//PINCH} & k'\text{u}_- p'ic'c' + n'\text{nt} & -x' \\
& & 1sOBJ \text{pinch(lc)} & 2sERG \\
& & \text{You managed to pinch me.} \\
(18) & \text{//t\textquotesingle at\textquotesingle// WET} & t\text{at\textquotesingle t} + n\text{ú(nt)} & -n \\
& & \text{wet(lc)} & 1sERG \\
& & \text{I managed to get it wet.} \\
(19) & \text{//k'a?\textquotesingle// FETCH} & k'a?a? + n\text{ú(nt)} & -n \\
& & \text{fetch(lc)} & 1sERG \\
& & \text{I managed to fetch it.} \\
(20) & \text{//k'xwp\textquotesingle// BEAT s.o.} & k'x\text{w}xwp + n\text{ú(nt)} & -n \\
& & \text{beat(lc)} & 1sERG \\
& & \text{I managed to beat him (at a contest).} \\
(21) & \text{//piq\textquotesingle// WHITE} & pq\text{aq} + n\text{ú(nt)} & -n \\
& & \text{white(lc)} & 1sERG \\
& & \text{I got it white.}
\end{align*}

---

\(^8\)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 \textit{piq} ‘white’ is \textit{pa\textquotesingle ãq} ‘turned white, bleached’. The limited control stem is \textit{pq\text{aq}n\text{ú}nt-} ‘whiten s.t.’ not \textit{*pa\textquotesingle ãq\text{aq}n\text{ú}nt-}. Therefore, anticausative formation and limited control formation are two distinct tests for the feature \[\pm C\].
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 \([\pm E]\) and \([\pm C]\), 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. //c'ac/ TIE_UP s.t. //k'a'/ FETCH s.t. //k bottles//CLOSE s.t. //tqmin// LAY_DOWN s.t.

ii. \([+E, -C]\) e.g. //t'ux*tl// FLY //x*ist// WALK //n*itx// SLEEP //x*uy// GO //u*k*l// CRAWL

iii. \([-E, +C]\) e.g. //x*ypt// WEAK, INFIRM //aynt// TIRED //piq// WHITE //silx*a?// BIG //q*amq*omt// EXCELLENT

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. 

iv. [-E, -C]  

- e.g. 
  - //yámχ̓aʔ// WOVEN BASKET  
  - //sn̓kłčaʔsqáxʔaʔ// HORSE  
  - //t̓kap// BUCKET  
  - //nik̓m̓n// KNIFE  
  - //kiláwnaʔ// male GRIZZLY BEAR
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.\textsuperscript{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.\textsuperscript{10} I give his
definitions of the three situation types and his structural representation for each
type in (25)-(27).\textsuperscript{11}

\textsuperscript{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.

\textsuperscript{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.

\textsuperscript{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’.
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)

\[
\text{T} \\
\text{E}_1 \quad \text{E}_2
\]

Process (P): a sequence of events identifying the same semantic expression.

structural representation:

\[
\text{P} \\
\text{e}_1 \quad \ldots \quad \text{e}_n
\]

State (S): a single event which is evaluated relative to no other event.

structural representation:

\[
\text{S} \\
\text{e}
\]

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 

\[ [+E, +C] \text{ and } [+E, -C] \] 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. 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.

(28)  

<table>
<thead>
<tr>
<th>Class</th>
<th>Features</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>i.</td>
<td>[+E, +C]</td>
<td>Transitions</td>
</tr>
<tr>
<td>ii.</td>
<td>[+E, -C]</td>
<td>Processes</td>
</tr>
<tr>
<td>iii.</td>
<td>[-E, +C]</td>
<td>States</td>
</tr>
<tr>
<td>iv.</td>
<td>[-E, -C]</td>
<td>Entities</td>
</tr>
</tbody>
</table>

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

---

12The 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.

13I 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:

\[(29) \text{close:} \quad \text{cause}([\text{act}(x,y)], \text{become}([\text{closed}(y)]))\]

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*. Pustejovsky uses a level he calls LCS' to depict the partitioned LCS.\(^{14}\) The & indicates simultaneity of expressions. The *cause* operator is derived from the agentive (act) predicate within the initial subpredicate of the LCS.

\[(30)\]

\[
\begin{array}{c}
\text{ES:} \\
\text{LCS':} \\
\text{LCS:} \\
\end{array}
\]

\[
\begin{array}{c}
T \\
P \\
S \\
[\text{closed}(\text{door})] \\
[\text{act}(\text{John,door}) \& \neg \text{closed}(\text{door})] \\
\text{cause}([\text{act}(\text{John,door})], \text{become}([\text{closed}(\text{door})])) \\
\end{array}
\]

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.
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.)

¹⁶Not 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.
Stem aspect | Transitions | Processes | States | Entities
---|---|---|---|---
closed transitional | + | * | # | *
open transitional | + | * | # | *
possessional | + | * | # | *
dative | + | * | * | *
reflexive | + | * | # | *
limited control | + | * | + | *
anticausative | + | * | + | *
causative | * | + | + | *
e.g. | //p'ic'// | //c'q"aq"// | //piq// | //p'ña?//
PINCH | CRY | WHITE | BASKET

Transitions form all of the diagnostic stem aspects except causative.

Processes form only causatives. States form causatives and at least one other stem aspect that is formed by Transitions also. States are therefore the most difficult to identify; no single form demonstrates that a base is a State. Rather, a State shows a general pattern of stem aspect derivation that crosses into the Transition paradigm and the Process paradigm. This mutability is the defining characteristic of the State type. In the following sections, I describe each base type according to its stem aspect subparadigm.

3.4.1 Transitions. The set of stems that may be derived from a Transition base via stem aspect WFRs is illustrated in Table 1. with the base //p'ic'// PINCH, SQUEEZE.
Table 1. Transition Paradigm

\[
\begin{array}{ll}
  \text{//p'ic'//} & \text{PINCH s.t.} \\
  \text{default} & kn_\_ \quad \text{p'ic'm} \\
  & 1sABS \quad \text{pinch(Intr)} \\
  & \text{I pinched (something).} \\
  \text{closed transitional} & \text{p'ic'+nt} \quad -x^w \\
  & \text{pinch(ctr)} \quad 2\text{ERG} \\
  & \text{You pinched it.} \\
  \text{open transitional} & \text{ac-} \quad \text{p'ic'+st} \quad -x^w \\
  & \text{cust-} \quad \text{pinch(otr)} \quad 2\text{ERG} \\
  & \text{You usually pinch it.} \\
  \text{possessional} & k"u_\_ \quad \text{p'ic'+nt} \quad -x^w \\
  & 1sOBJ \quad \text{pinch(pos)} \quad 2\text{ERG} \\
  & \text{You pinched my \(\_\_\_\).} \\
  \text{dative} & k"u_\_ \quad \text{p'ic'+xt} \quad -x^w \\
  & 1sOBJ \quad \text{pinch(dat)} \quad 2\text{ERG} \\
  & \text{You pinched it for me.} \\
  \text{reflexive} & kn_\_ \quad \text{p'oc'+nt} \quad -n \\
  & 1sABS \quad \text{pinch(ref)} \quad 1s\text{ERG} \\
  & \text{I pinched myself.} \\
  \text{limited control} & \text{p'oc'+ntu(nt)} \quad -n \\
  & \text{pinch(llc)} \quad 1s\text{ERG} \\
  & \text{I managed to pinch it.} \\
  \text{anticausative} & \text{p'ic'+oc'} \\
  & \text{pinch(oc)} \\
  & \text{It's (been) pinched.} \\
  \text{causative} & * \\
\end{array}
\]

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 //ºac'// LOOK_AT. Sporadic reanalysis of a stem form can also block or eclipse stem alternants. As an example, A. Mattina (1993a:209) reports that the base //cun// TELL has both the closed transitional stem cu(n)(nt)- ‘someone tells someone’ and the possessional stem alternant cu(n)tt- ‘someone tell someone’s relative’. The possessional stem form is commonly understood with the meaning of a transitional, as in k’u cütt-s ‘He told me’. The latter use of the possessional stem form is a ‘fancying up’ or hypercorrection of k’u 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 //piš// HUNT (game) does not have a reflexive alternant *požncút (‘hunt myself’). Also, morphologically complex Transitions tend to have fewer stem alternants than simple bases. Bases such as
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)

\[
\begin{array}{ll}
\text{/tqen/m//RUN\_OVER s.t.} & \text{kn\textsubscript{qac}c+n\textsubscript{m}} \quad \text{I got run over.} \\
\text{/k'\textsubscript{nk}"\textsubscript{l}\.ip//CLOSE s.t.} & \text{k'\textsubscript{nk}"\lambda' + \lambda' + \text{ip}} \quad \text{It got closed.} \\
\text{/cq'min// THROW s.t.} & \text{kn\textsubscript{cq}' + q' + min} \quad \text{I got hit (by s.t. thrown).} \\
\text{/c'\textsubscript{lx}w'//SCRATCH s.t.} & \text{kn\textsubscript{c'l} + l + \text{xiw'}} \quad \text{I got scratched (clawed).} \\
\text{/kliq'na?//BURY s.t.} & \text{way' kliq' + q' + na?} \quad \text{It got buried.}
\end{array}
\]

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: \textit{nca}?\textsubscript{qst}\textsubscript{mtn}-m ‘s.o. elbowed him/he got elbowed’; \textit{na}?\textsubscript{k"}\textsubscript{cin(n)}-\textsubscript{t}-m ‘s.o. took him food/he was taken food’. 
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, \([P,S]\), 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).

(35) \[\text{knik'm} \quad i? \quad t \quad \text{sl'ip}\]  
\(1s\text{ABS} \quad \text{cut(Intr)} \quad \text{art} \quad \text{cs} \quad \text{wood}\)

I cut some wood.

The LCS of a default Transition is as follows:

(36) \text{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 neutra; 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 *püti?*, I test for similar sensitivity to internal object type in Okanagan (38).

(38) *püti? kʷaʔkʷaʔ-nt-ís iʔ apl. Still, he ate the/an apple.
    *püti? kʷaʔkʷaʔ-nt-ís iʔ smikʷt. Still, he ate snow.
    *püti? kʷaʔkʷaʔ-ám iʔ t apl. Still, he ate some apple/apples.
    *püti? kʷaʔkʷaʔ-ám t smikʷʷt. Still, he ate some snow.

The data in (38) suggest that the type (i.e. count or mass) of the internal argument does not affect the aspect of the predicate. The predicates in (38) are all perfective regardless of the kind of internal argument. Nor is it the case that the internal argument of such stems is more or less affected than in the default Transition. Finnish, for example uses case marking to indicate relative affectedness. In (39), partitive case marks the internal argument as less
drastically affected than when it is marked with accusative case, as in (40)


(39) metsästääjä ampui vahingossa lehmää
    hunter shot accident_in cow-PART
    The hunter shot (at) a cow by accident.

(40) metsästääjä 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) ma°+nt -ís i° ʰkáp
    break(ctr) 3sERG  art bucket
    He broke the bucket.

(42) ac- ma°+st -ís i° ʰkáp
    cust break(otr) 3sERG  art bucket
    He always breaks the bucket.

(43) cəm’ kn_ ma°’ám i° t_ ʰkap
    might 1sABS break(Intr) art cs bucket
    I might break a bucket.

(44) k’*paxml+i
    think_about(ctr) 1sERG
    I thought about it.

(45) stim’ a? c- k’*paxml+st -íx”?
    what art cust think_about(otr) 2sERG
    What did you (usually) think about?
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).

\[
(47) \text{LCS: cause([act}(x,y),(own}(z,y))]}, \text{become Q}(y))
\]

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).
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.

\[(48)\]

\[
\begin{array}{c}
\makecell{P} \\
\makecell{\text{ES:} \ T} \\
\makecell{\text{LCS}: [\text{act}(x,y) \& \neg Q(y)] \ [Q(y)]} \\
\text{LCS: cause([\text{act}(x,y), (\text{own}(z,y))], \text{become}([Q(y)]))}
\end{array}
\]

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.

\[(49)\]

\[
\begin{array}{l}
\text{a. } k^\text{\textasciitilde}u_\text{\textasciitilde} \lambda a^\text{\textasciitilde}a^\text{\textasciitilde} + nt \ -is \\
1sOBJ \ \text{look\_for}(\text{ctr}) \ 3sERG \\
\text{He looked for me.}
\end{array}
\]

\[
\begin{array}{l}
\text{b. } k^\text{\textasciitilde}u_\text{\textasciitilde} \lambda a^\text{\textasciitilde}a^\text{\textasciitilde} + t \ -is \\
1sOBJ \ \text{look\_for}(\text{pos}) \ 3sERG \\
\text{He looked for something of mine.}
\end{array}
\]

\[(50)\]

\[
\begin{array}{l}
\text{a. } \text{ma}^\text{\textasciitilde} + (nt) \ -n \ i? \ \text{laprit} \\
\text{break}(\text{ctr}) \ 1sERG \ \text{art} \ \text{bridle} \\
\text{I broke the bridle.}
\end{array}
\]

\[
\begin{array}{l}
\text{b. } \text{ma}^\text{\textasciitilde} + t \ -s \ -n \ an- \ \text{laprit} \\
\text{break}(\text{pos}) \ 2sOBJ \ 1sERG \ 2sPOSS \ \text{bridle} \\
\text{I broke your bridle.}
\end{array}
\]

\[^{19}\text{Recall that possessional stems are inflected for subject and object persons; the subject is the notional agent and the object is the notional possessor. The theme argument is expressed as a possessed NP. The marking of grammatical relations on possessionals suggests that Okanagan has a thematic hierarchy that ranks themes lower than agents and possessors.}\]
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: \(\text{cause}([\text{act}(x, y) \land \neg (\text{have}(z, y))], \text{become}([\text{have}(z, y)]))\)

In (52), the notion of transfer is conveyed by the subevent \(\text{have}(z, y)\), which is simultaneous with the \(\text{act}(x, y)\) 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:

\[(53)\]

\[
\begin{align*}
\text{ES:} & \quad P \quad S \\
\text{LCS':} & \quad [\text{act}(x, y) \land \neg \text{have}(z, y)] \quad [\text{have}(z, y)] \\
\text{LCS:} & \quad \text{cause}([\text{act}(x, y) \land \neg \text{have}(z, y)], \text{become}([\text{have}(z, y)]))
\end{align*}
\]
The LCS in (53) differs from that of the possessional LCS (see (48)) as follows: \textit{own}(z,y) is a condition of the \textit{act}(x,y) event, but it is not a simultaneous event in which an opposition is relevant. There is no change in the \textit{own} pre-condition of a possessional, as there is in the \textit{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. \textit{*kw+xt \-s \-s} \\
1sOBJ \hspace{1em} eat(pers) \hspace{1em} 3sERG  \\
(He ate for me.)

b. \textit{kw+xt \-s \-s} \\
1sOBJ \hspace{1em} eat(pos) \hspace{1em} 3sERG  \\
He ate it up on me.

(55) a. \textit{*wik+xt \-m \-n} \\
see(dat) \hspace{1em} 2sOBJ \hspace{1em} 1sERG  \\
(I saw for you.)

b. \textit{wik+\textit{t} \-s \-n} \\
see(pos) \hspace{1em} 2sOBJ \hspace{1em} 1sERG  \\
I saw something of yours.

Further, dative stems do not contrast with a dative limited control stem. Recall that transitionals and possessionals have a related stem type that encodes an agent with limited control over his/her act (section 2.2.2.11). In (56), a closed
transitional is contrasted with its limited control counterpart; in (57) a possessional stem is contrasted with its limited control counterpart.

(56) a. k'"k'qin + (n)t -ixw i? tkilwilxw remove_hat(ctr) 2sERG art woman 
You took the hat off the woman. COD63 (lit. You dehattted the woman.)

b. k'"k'qin + (n)unt -xw remove_hat(lc) 2sERG 
You managed to take her hat off. (lit. You managed to dehat her.)

(57) a. k'"k'i +lt -ixw i? q'acqen -s remove_hat(pos) 2sERG art hat 3sPOSS 
You remove her hat. COD63

b. k'"k'q +nutt -xw remove_hat(lc) 2sERG 
You managed to remove her hat.

Datives do not have a limited control counterpart.

(58) a. c'ac +xít -s -n tie(dat) 2sOBJ 1sERG 
I tied it up for you.

b. *c'ac +núxt-
(manage to tie something for someone)

(59) a. k'u_ x"ic' +xt -xw 1sOBJ give(dat) 2sERG 
You gave me something.

b. *x"ac' +núxt-
(manage to give someone something)

The dative agent must be in control of his/her actions in order to bring about
the result. This focus on the kind and manner of the agent is also revealed in
the lack of emphasis datives place on the recipient. Despite the fact that a
transfer of possession is conceptually and aspectually salient in datives, final
possession is not relevant. In fact, the entity that is transferred (the theme
argument) cannot be expressed as a possessed object.\textsuperscript{20} Datives contrast with
possessionals in this respect: dative themes cannot be possessed, and
possessional themes must be possessed.\textsuperscript{21} The possessed theme in (61) makes
the sentence ungrammatical.

\begin{align*}
(60) & \text{npus+xt} & -n & \text{i}' & \text{t} & \text{?a?úsa}\text{?}
\text{boil(dat)} & 1\text{sERG} & \text{art} & \text{cm} & \text{eggs} \\
& \text{I boiled him some eggs.} \\

(61) & *\text{npus+xt} & -n & \text{i}' & \text{t} & \text{?a?úsa}\text{?} & -s
\text{boil(dat)} & 1\text{sERG} & \text{art} & \text{cm} & \text{eggs} & 3\text{sPOSS} \\

(62) & \text{npus+ít} & -n & \text{i}' & \text{?a?úsa}\text{?} & -s
\text{boil(pos)} & 1\text{sERG} & \text{art} & \text{eggs} & 3\text{sPOSS} \\
& \text{I boiled his eggs.} \\
\end{align*}

In sum, the dative event entails a successful, usually benefactive,

\textsuperscript{20}The theme argument of a dative predicate may take the possessive
prefixes in unrealized mood (Chapter 4), as in \textit{Vm?ic'xt-m-n l_ak(?)-sqláw} ‘I
gave you what will be your money’. Unrealized possession contrasts here with
actual possession, with a grammatical consequence.

\textsuperscript{21}As I pointed out in section 2.2, this contrast is related to referentiality.
The dative theme is usually translated as a partitive ‘some X’, while the
possessional theme is referential.
transfer of a possession or service in which the external argument intends and controls the transfer. Datives express this agent modality via conditions on the (x) variable. They express the notion of ‘transfer’ in LCS. Like transitionals and possessionals, datives predicate an outcome.

3.4.1.5 Reflexives. Reflexives encode an agent modality and a condition on the internal argument. The agent must control or intend his actions (see section 2.2.2.5). This explains why speakers do not use reflexive stems to translate English expressions (with non-intentional readings) of *I burned myself* or *The child cut himself*. Rather, the non-agentive anticausative stem better expresses the accidental interpretation of the English reflexive.

(63) a.  
\[ k_\_ n_\text{āk’} + n_\text{cút} \]  
\[ l_\text{sABS} \text{cut(ref)} \]  
I cut myself (on purpose).

b.  
\[ k_\_ n_\text{īk’} + ɔk’ \]  
\[ l_\text{sABS} \text{cut(ac)} \]  
I got cut (by accident).

(64) a.  
\[ 4_\text{at’} + n_\text{cút} \]  
\[ i’ \text{uuxtít} \]  
\[ \text{wet(ref)} \text{art infant} \]  
The baby wet himself.

b.  
\[ \text{way’ } 4+?+ ɔ_\text{at’} \]  
\[ \text{prt wet(ac)} \]  
He got wet (by accident).

The external argument of a reflexive must refer to an animate agent capable of
intending and/or performing an act.\textsuperscript{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.

\begin{enumerate}
    \item[(65) a.] \text{\textit{k}^{*}nn+(n)únt -x^{w}}
        \begin{tabular}{ll}
            \text{take(\textit{lc})} & \text{2sERG} \\
        \end{tabular}
        \text{You managed to take it.}
    \item[(65) b.] \text{\textit{k}^{*}i+(n)nt -x^{w}}
        \begin{tabular}{ll}
            \text{take(\textit{ctr})} & \text{2sERG} \\
        \end{tabular}
        \text{You took it.}
\end{enumerate}

\textsuperscript{22} Anthropomorphized inanimates and animals may be subjects of reflexives.
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 anomalous. 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

\(^{23}\)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 -\(n\). The second consists formally of the root followed by ‘a \(-\text{VC}_2\) copy of a typical CVC(c) root’ (p.5). Carlson refers to the reduplicative suffix as marking ‘out-of-control’ (OC) (following Carlson and Thompson 1982). The forms with OC reduplication express the idea that the agent is not in control of his action, and therefore the result of the event arises by accident. Thus Spokane has a formal contrast between two success transitives; one expresses successful accomplishment (abbreviated below as SUCCESS in (i) while the other expresses an accidental accomplishment (ii)).

(i). \(\text{\textit{\textcopyright{\textcopyright}}}-\text{\textcopyright{\textcopyright}}\text{-\textcopyright{\textcopyright}}\text{-\textcopyright{\textcopyright}}\text{-en}\) (ii). \(\text{\textit{\textcopyright{\textcopyright}}}-\text{\textcopyright{\textcopyright}}\text{-\textcopyright{\textcopyright}}\text{-\textcopyright{\textcopyright}}\text{-en}\)

stab(success) 1sERG  stab(OC+success) 1sERG

I managed to stab him. I mngd. to stab him by accident.
control stems, the notion of limited control is a derived feature of the stem.

There are two subtypes of limited control stems. First is the limited control transitional, in which the internal argument must be referential (section 2.2.2.1 and 2.2.2.2). The second is the limited control possessional, in which the internal argument must be a referential and a possessor (section 2.2.2.3). Both of these subtypes express limited agent control in addition to referential internal arguments. These conditions are not relevant to ES, and limited control transitionals and limited control possessionals have the same ES as their non-limited control counterparts (see (34) and (48) above).  

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

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.

Limited control stems are formally interesting because they appear to be built on anticausative stems. That is, the form of a resultative often includes a reduplication of the root’s second consonant and the resultative suffix -núnt or - nútt, e.g. /p’x+x+k’w+nú(nt)-n/ ‘I managed to crumble it’. Moreover, there is something of the anticausative semantics in limited control stems that is reflected in translations such as ‘someone managed to get something crumbled’. However, limited control stems differ clearly at LCS, and in their thematic and syntactic properties, from the anticausative.
LCS. All changes of state have some conceivable stimulus. I express this in the anticausative LCS with an operator by means of: (66).

(66) LCS: become([[Q(y)]] by means of x)

The by means of operator accounts for the (oblique) agentive or instrumental phrase that may accompany an anticausative stem (see also section 2.2.2.10).

(67) tqác+c+na? i? ě atumopfl
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)

\[
\begin{array}{c}
\text{ES:} \\
\text{T} \\
\text{P} \\
\text{S} \\
\text{LCS':} \\
\text{[-Q(y)]} \\
\text{[Q(y)]} \\
\text{LCS:} \quad \text{become([[Q(y)]] by means of x)}
\end{array}
\]

The key difference between anticausatives and all of the stem types discussed above lies in their non-agentive first subpredicate at LCS. This property in LCS has implications for the argument structure of the anticausative stem type, but the ES of anticausatives is that of a Transition.

3.4.1.8 Causatives. Transitions do not have a stem aspect alternant
with causative aspect. The incompatibility of Transition bases with causative stem aspect arises from the particular ES of the causative aspect. Pustejovsky illustrates the ‘causative process’ as follows with the English expression *Mary pushed the cart.*

(69)

\[
\begin{array}{c}
\text{ES:} \\
\begin{tikzpicture}
\node (e1) at (0,0) {$e_1$};
\node (e2) at (1,0) {$e_2$};
\node (p) at (0.5,1) {$P$};
\draw (e1) -- (p);
\draw (e2) -- (p);
\end{tikzpicture}
\end{array}
\]

\[\text{LCS}^*: \ [\text{act}(\text{Mary, cart})] \ & [\text{move}(\text{cart})] \]

\[\text{LCS: cause([act(Mary, cart)], [move(cart)])}\]

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)  
\[*k^uw_\_, \quad p'ic'+st \quad -x^* \]
\[1sOBJ \quad \text{pinch(cause)} \quad 2sERG \]
\[(\text{You made me pinch it.})\]
Transitions are not inherently incompatible with the concept of one participant forcing a second to perform an act. Transitions appear in the periphrastic causative construction with *nlk'ɛɾ* - or *nlk'mniki* - ‘force someone to do something’.

Causatives have the same argument structure as transitionals, and their internal arguments must be referential. These properties are sufficient to place causatives and transitionals in the same inflectional class. However, in terms of event structure, causatives are distinct from transitionals. Causatives encode an agentive act that does not result in a change of state; Transitions encode an agentive act that does result in a change of state. This difference underscores the primitive contrast between Transitions and Processes in Okanagan (see also section 3.4.2).

3.4.2 Processes. Bases with the features [+E,-C] express events conceived of as internally homogenous, with arbitrary endpoints. More
formally, a Process base expresses a sequence of events where if the semantic expression $P^i$ identified with $P$ is true at an interval $I$, then $P^i$ 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

<table>
<thead>
<tr>
<th></th>
<th>kn_</th>
<th>c‘q“aq“</th>
</tr>
</thead>
<tbody>
<tr>
<td>default</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>lsABS</td>
<td>cry</td>
</tr>
<tr>
<td></td>
<td>I cried</td>
<td></td>
</tr>
<tr>
<td>closed transitional</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>open transitional</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>possessional</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>dative</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>reflexive</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>limited control</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>anticausative</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>causative</td>
<td>c‘q“q“+st   -in</td>
<td></td>
</tr>
<tr>
<td></td>
<td>cry(caus)   1sERG</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I made someone cry.</td>
<td></td>
</tr>
</tbody>
</table>

Process bases undergo only the causative WFR of the diagnostic stem
aspect WFRs. Transitionals (open and closed), possessinals, 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:

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.

²⁵Recall that the cause operator is derived from the agentive subpredicate act at LCS (Pustejovsky 1991).
obligation, or s/he allows a process to occur through a failure of will or duty.

In defining causative constructions cross-linguistically, Comrie (1981) distinguishes between the true causative (as in I made the vase fall) and the permissive (as in, I let the vase fall). Comrie gives an example of the ambiguous role of the agent in a Georgian causative (given here as (72)), which is semantically comparable to the Okanagan causative, exemplified in (73).

(72) Mama švil-s ceril-s a-cer-in-eb-s
father son-dative letter-accusative write 3s
Father makes/helps/lets his son write the letter. (Comrie 1981:164)

(73) ?uk"t+st -n i? ?uxtlt
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) k"u_ siw’stm(n)+st -x*
1sOBJ water_(caus) 2sERG
You gave (granted) me a drink.

(75) k"u_ a- ks- q\^a?m\^nj\^wfx*+stm
1sOBJ 2sGEN irr introduce( caus) (You must/should) Introduce us.

(76) c’em k’mip+st -x” a- 4\^lq\^aqca?
might be late( caus) 2sERG 2sPOSS older brothers
You’ll be too late for your brothers. GW488
I put the children to bed.

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).

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. Compare the ambiguity of the limited

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26 Comrie (1981) states that the true causative and the permissive causative are alike in that ‘the realization of the effect is, at least partially, within the control of the causer/permitter’ (p.164).

27 Kuipers (1992) describes the Shuswap limited control cognates -nwetns and -nwens as expressing ‘on the one hand ability, on the other hand non-intention’. He goes on to describe these suffixes in a way that characterizes Okanagan causatives as well:

The semantic ambiguity as such is comparable (though
control transitional in (80) with the ambiguity of the causative in (73), above.

(80) ha ləq'q'+nùnt -xʷ iʔ píqsən
interg bury(lc) 2sERG art coins

Did you (finally) manage to bury the coins? or
Did you accidentally manage to bury the coins?

The ambiguous control of the agent of the causative process may explain why

there is no limited control causative in Okanagan: (81).

(81) //t'uxʷt// FLY *t'əxʷ+t+nùst -n
fly( caus) 1sERG
(I managed to make it fly.)

Like the limited control stem, the causative stem encodes an agent whose

control over the event is ambiguous. Causative and limited control stems differ

in that they encode distinct Event Structures. This is possible because agent

modality is irrelevant to Event Structure.

Of the three base types, Transitions, Processes, and States, Processes

are the only type that do not have anticausative alternants. None of the

expected anticausative stem forms are possible with a Process base. The forms

in (82) and (83) were rejected by speakers.

(82) //t'uxʷt// FLY + ac → (It got flown.)
*t'uxʷt
*t'əxʷtwlxl
*t'uxʷxʷt
*t'əxʷ( t)āp

(83) //pulx// BED_DOWN + ac → (He got bedded down.)
*p'ulxl
*pəlxwțixl
(83) //pulx// BED\_DOWN + ac \rightarrow (He \ got \ bedded \ down.)

*plux
*plwflx
*pullx
*plx\¡p

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 encoded.
3.4.3 States. The class of States in Okanagan is semantically parallel to English adjectives in that they name attributes, properties, or kinds. Unlike Processes and Transitions, they do not inherently encode an agentive subpredicate at LCS. This property translates into an ES that lacks internal temporal constituency. States are relevant to the temporal modifications available through some stem aspect WFRs, but they lack dynamism. The distinctive property of States is that they encode the semantic operator be at

---

\[\text{28} \] 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 //my//) and love (Ok //xminl//) are Transition bases in Okanagan.

\[\text{29} \] Recall that the notion State as I use it here is an ontological primitive. I assume, following Smith 1991, that certain concepts are formed without language and may be 'covert' in language. Miller and Fellbaum 1991:210 observe that in English, "the basic semantic relation among adjectives is antonymy", or paired oppositions. By contrast, nouns and verbs are not typically related by antonymy (i.e. dog and cat are not opposites, but different kinds of entities). Testing of the semantic networks of Okanagan speakers might reveal patterns similar to those that Miller and Fellbaum found in English speakers. This would support the idea that there are conceptual distinctions that underly the grammatical categories adjective, noun, and verb. An important difference between Okanagan and English is that adjectival notions (i.e. properties and physical states) are grammaticized as verbs, rather than as adjectives, in Okanagan.
LCS. This operator is derived from the non-agentive first subpredicate of LCS, as in (84).

(84) LCS: be([Q(x)])

Because States are conceptualized as subject to change and development, they have stem aspect alternants that encode change of state. However, not all States have all of the stem aspects that encode change of state. Some States form all of the diagnostic stem aspects except the dative; others form only a few. The first type is illustrated with the base //Vat'// WET in Table 3.

---

30 Occasionally, a State base that forms a closed transitional will also have the formal and aspectual equivalent of the default transitional stem, as in kn_\text{\textasciitilde}cat'\text{\textasciitilde}m ‘I wet something’. Speakers disagree about the grammaticality of these formations, which are rare in the first place. This suggests that they may be backformations that are interpretable, but not acceptable to all.
Table 3. State Paradigm

//‡at'// WET

<table>
<thead>
<tr>
<th>Derivational Type</th>
<th>Base Form</th>
<th>Category</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>closed transitional</td>
<td>‡at' + nt</td>
<td>-ín</td>
<td>I wet something.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>wet(ctr)</td>
<td>1sERG</td>
</tr>
<tr>
<td>open transitional</td>
<td>ac-</td>
<td>‡at' + st</td>
<td>-ín</td>
</tr>
<tr>
<td></td>
<td>cust</td>
<td>wet(otr)</td>
<td>1sERG</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I usually wet it.</td>
</tr>
<tr>
<td>possessional</td>
<td>‡at' + it</td>
<td>-ín</td>
<td>I wet someone's ______.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>wet(pos)</td>
<td>1sERG</td>
</tr>
<tr>
<td>dative</td>
<td></td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>reflexive</td>
<td>‡at' + ncút</td>
<td></td>
<td>He (an infant) wet himself.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>wet(ref)</td>
<td></td>
</tr>
<tr>
<td>limited control</td>
<td>‡at't' + nú(nt)</td>
<td>-n</td>
<td>I managed to wet it.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>wet(lc)</td>
<td>1sERG</td>
</tr>
<tr>
<td>anticausative</td>
<td>‡ + ? + ‡at'</td>
<td></td>
<td>It got wet.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>wet(ac)</td>
<td></td>
</tr>
<tr>
<td>causative</td>
<td>‡at' + st</td>
<td>-fxw</td>
<td>You let it get wet.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>wet(caus)</td>
<td>2sERG</td>
</tr>
</tbody>
</table>

Only a few State bases have all the derivates that //‡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

<table>
<thead>
<tr>
<th>Paradigm</th>
<th>Example 1</th>
<th>Example 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>default</td>
<td>(t'i) piq ev white</td>
<td>It's white.</td>
</tr>
<tr>
<td>closed transitional</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>open transitional</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>possessional</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>dative</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>reflexive</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>limited control</td>
<td>pəq+ núnt -xʷ white(1c) 2sERG</td>
<td>You managed to get it white.</td>
</tr>
<tr>
<td>anticausative</td>
<td>p+ʔ+aq white(ac)</td>
<td>It turned white.</td>
</tr>
<tr>
<td>causative</td>
<td>pq+st -ín white(caus) 1sERG</td>
<td>I made it white.</td>
</tr>
</tbody>
</table>

There is a widespread ambiguity in the aspectual interpretation of States that makes them difficult to identify. G. Carlson's (1977) distinction between
stage-level and individual-level predicates provides one explanation for the aspectual ambiguity of States. As Carlson observes, ‘stages aren’t things that simply are; they are more akin to things that happen’ (1977:448). Thus a stage-level interpretation of the argument of a stative predicate will result in a process reading of the predicate. In their basic, individual level reading, States are recognized by speakers as situations in which no one ‘does anything’. In addition, the more a State is perceived as beyond the control of its argument, the less likely it is to have a process interpretation. For example, the States //q’alt// RAW and //sflxʷaʔ// 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 //xal// 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 //xal// 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.
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.)
The features and subparadigms discussed in this chapter give a broad view of the kinds of constraints and classes Okanagan speakers must observe when forming words. By themselves, however, aspectuo-modal properties are not sufficient to explain all of the major word formation constraints in the language. Two stems may belong to the same aspectual class in terms of their ES, but belong to different inflectional classes because of other lexical properties. This means that the criteria for stem formation differ from those of grammatical word formation. Inflectional classes are conditioned by the distinction between transitive and intransitive stem types.

Transitive stems encode a referential internal argument at LCS; all other events are are coded in intransitive stems. The transitive/intransitive distinction does not control the derivational possibilities of a base; in fact, argument structure is a property of stems
only. All bases that refer to situations have transitive and intransitive stem alternants.

Only ontological distinctions, revealed by the three derivational paradigms, serve to classify such lexemes in the derivational classes Transitions, Processes, and States.
Chapter 4. Lexeme category

4.0 Introduction. As demonstrated in the previous chapter, the notion situation type is an important one in the description of Okanagan word formation. The conceptual complement of the situation is the notion entity; it too, is instantiated in the constraints on word formation in Okanagan. The ontological distinction between situations and entities is grammaticized in Okanagan as a contrast between verbs and nouns. Situations are encoded as verbs, while entities are encoded as nouns. A number of analysts have argued that this pattern of grammaticization is universal and reflects the conceptual basis of language (e.g. Davidson 1980, Givón 1979, 1984, Hopper and Thompson 1980, 1984, Jackendoff 1983, Langacker 1987, Schachter 1985, and Frawley 1993). Frawley 1993 makes a cross-linguistic generalization as follows:

Change is associated with temporality, and temporality and change therefore motivate the categoriality of verbs, just as atemporality and persistence motivate the categoriality of nouns (p. 142).

Frawley also notes that verbs define a relatively temporal relation in conceptual space. Nouns encode relatively atemporal regions in semantic or conceptual space. The most salient property of situations/verbs is a temporal relation or scale. This temporality is exploited conceptually and linguistically;
the result is what we recognize as the aspectual categories of a language. By contrast, the most salient property of entities/nouns is spatial or conceptual extent, in which temporal relations (and hence aspectual categories) are of little or no relevance. Thus it is that languages encode aspectual categories in the verbal system, and few, if any, mark these categories in their nominal systems.¹

Cross-linguistically, the differences between nouns and verbs are often subtle; however, if we assume that the noun/verb distinction arises from a universal, conceptual distinction between entities and situations, then the grammatical differences between nouns and verbs do not need to be elaborate. The data in this chapter reveal both the subtlety and strength of the noun/verb contrast in Okanagan. In test after test, Okanagan provides evidence against the claim that Salish languages generally lack the noun/verb contrast.² I refer to the recent literature describing the lack of a noun/verb contrast as supporting

¹Tense/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.

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. 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

3For example, Kuipers 1968 and Jelinek and Demers 1982 argue this point with respect to the Coast Salish languages, Squamish and Lummi, respectively.

4Kinkade 1983 presents evidence against the noun/verb distinction in a number of Salish languages. Despite his legitimate concern that a noun/verb contrast in Salish might be a eurocentric illusion, he allows that evidence of a noun/verb distinction would come from the inflectional, syntactic and semantic domains. This is precisely the kind of data that has come to light in Okanagan, and in other Salish languages, in the years since Kinkade 1983.
A number of Salishanists have argued against the single class hypothesis with respect to individual Salish languages (Hébert 1983, Hess and Van Eijk 1985, N. Mattina 1994, Davis and Matthewson 1995, Demirdache and Matthewson 1995, Beck 1995). Many of the extant descriptive grammars assume that there are noun and verb lexical categories, without further discussion (e.g. Van Eijk 1985, Kuipers 1974, Vogt 1940). Given this literature, I conclude that Okanagan is not alone among Salish languages in distinguishing nouns from verbs, although the tests may differ from language to language. In this chapter, I indicate the categorial class of Okanagan lexemes using the feature \([\pm V]\). This feature belongs to the matrix that identifies base classes. Like the features for base aspect described in Chapter 3, the category feature \([\pm V]\) 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

\begin{tabular}{ll}
1 & i(n)- \\
2 & a(n)- \\
3 & s
\end{tabular}

-\tau\text{t}

-\text{amp}

-s\text{-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). (\textit{in}- and \textit{an}- are realized as \textit{i}- and \textit{a}-, respectively, before \textit{s} and stem-initial \textit{t} of kin terms.)

\begin{tabular}{ll}
\text{possessed nominals} & \text{genitive subject} \\
(2) & \text{\textit{i}-} \\
(3) & \text{\textit{a}-} \\
(4) & \text{\textit{in}-}
\end{tabular}

^5I write these inflectional markers as affixes, although historically they were probably clitics (Kinkade, p.c.).
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 $k^t-$ and a possessive affix, as shown in (5). $^6$ ($k^t-$ is realized as $k-$ before $s$ and $t$.)

---

$^6$Translations of the NPs in (5) usually are of the form 'someone's N-to-be' (e.g., $ikt$-$citx$ 'my house-to-be'). This type of translation gives the impression that the noun has inceptive or inchoative aspect. My translation is awkward English, but it is more representative of the modality expressed in unrealized possession.
(5)  a.  a-  k£-    p'ína?  
   2s    UnPOSS   basket  
   your basket (lit. ‘yet-to-be-your basket’)

b.  i-  k£-    cít*x*  
   1s    UnPoss   house  
   my house (lit. ‘yet-to-be-my basket’)

c.  k-    slaňt  -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)  k°u_  các+xít  -x*  i?  tč  snkšc’a?sqá’xa?  
   1sOBJ  tie(dat)  2sERG  art  cs  horse  
   You tied a horse for me.
If the theme NP is possessed, a possessional verb must be used to express this idea, as in (8).

(8) kwaču ac+xt -ix 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) kwaču ac+xt -ix kawáp
    1sOBJ tie(dat) 2sERG UnPOSS horse
    art cs 1s UnPOSS horse
You tied the horse (that will be mine) for me.

Possessional verbs accept theme NPs in either realized or unrealized modes.

Compare (8) with (10).

(10) kwaču ac+xt -ix kawáp
    1sOBJ tie(pos) 2sERG 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.

Verbs do not inflect for unrealized possession. Speakers report that the
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 \( k\text{-} \) is the formative associated with this WFR. The output of the rule is an intransitive verb that inflects with intransitive (ABS) person markers. \( (k\text{-} \) is realized as \( k\text{-} \) before \( s \) and \( t\text{.} \)

\[
\begin{align*}
(12) \quad & a. \quad k\text{n}_\text{-} \quad k\text{-}p'\text{in}a? \\
& 1\text{sABS} \quad \text{have-basket} \\
& \text{I have a basket.} \\
& b. \quad k^* \quad k\text{-}c\text{it}x^* \\
& 2\text{sABS} \quad \text{have-house} \\
& \text{You have a house.}
\end{align*}
\]
Third person forms of this derived verb type allow existential readings, as in (13) and (14).

(13) ašt? k+s psáya? axá? a̱l ṭəmxûla?x
  dpr have-foolish_ones dpr on earth
There are no good people here on earth. GW851

(14) ili? k+səxître mərim u̻ atuí nakⁿa? k+t+mrimstn
  dpr have-doctor conj dpr neg have-medicine
There was a doctor there, but he didn’t have medicine. GW623

Verbs cannot undergo the ‘have-something’ WFR. Speakers report that the forms in (15) are not interpretable.

(15) a. *kn̄. k+t+x uy
    1sABS have-go

b. *kn̄. k+t+limt
    1sABS have-happy

c. k̄. k+t+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 t usually occurs between taʔxʷ and the noun stem. It is not present if the noun stem begins with s.)
(16) way' q’"ay’ás ta?q’x’+sqláw’,
     well black-one got-money

     uɬ ta?q’x’+t+cítx’  iʔ  sš’îlmən
     and got-house art devil

The Black Man got the money and the Devil got the house. COD209

(17) kʷ  ta?q’x’+seki’úl’
2sABS got-work
You got a job.

(18) aʔiʔ  k’lal i-  sš’îlwiʔ,
because dead 1sPOSS husband

     uɬ axáʔ  knʔ  ta?q’x’+t+nq’"íctn
     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) iʔiʔ  uɬ mat náƛ̓əmtɬ  ta?q’x’+t+xwifɬ
     then perhaps got-road
Maybe they have roads there. COD208

(20) ta?q’x’+t+t’əx’twis
     got-airplanes
They had airplanes.

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

(21) a.  *knʔ  ta?q’x’+t+x’úy
      1sABS get-go

    b.  *kʷ  ta?q’x’+t+limt
      2sABS get-happy
4.2.3 Category conversion. Some nouns are homophonous with a verb stem whose meaning is closely related to the noun. I analyze these as cases of category conversion, a phenomenon that involves affixless category change.

Cross-linguistically, category conversion is widespread when the direction of derivation is N → V, but rare in V → N derivation. Hopper and Thompson (1984:745) observe that 'languages tend to have special nominalizing morphology, but no special productive verbalizing morphology'. This 'apparently universal generalization' holds for Okanagan. 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 homophous nominal counterparts (shown in their possessed forms, (b) examples).

7Hopper 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.
Evidence that the stems in the (a) forms of (22)-(27) are verbs comes from the fact that these stems form other verbal stem types, including closed
transitionals.

(28) \( q^\text{acqn} + (n) t -x^w \)
    hat(ctr) 2sERG
    You put a hat on him.

(29) lasmišt + (nt) -n
    shirt(ctr) 1sERG
    I put a shirt on him.

They also may inflect for customary aspect, as in (30) and (31).

(30) \( kn_\_ c- q^\text{acqn} \)
    1sABS cust hat\(_v\)
    I have a hat on.

(31) \( kn_\_ c- lasmišt \)
    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. \( *kn_\_ p^\text{ína}?m \)
    1sABS basket(mid)
    (I am basketed.)

b. \( *p^\text{ína}? + nt -x^w \)
    basket(ctr) 2sERG
    (You basketed him.)

c. \( *c- p^\text{ína}? \)
    cust basket
    (It’s being a basket./It’s basketed.)
The data in (22) through (31) suggest that there are nominal and verbal stems if the nominal refers to an item of clothing or grooming. That is, there are homophonous noun-verb pairs in Okanagan that are like English noun-verb pairs for *golf, hike, edge, toast, dress* and *shower*, except that the Okanagan noun-verb pairs are restricted to a small semantic domain. Within this limited domain (items of clothing and grooming), N → V is accomplished without verbalizing morphology, as predicted by Hopper and Thompson 1984. Category change in the direction of V → N is consistently marked by a number
of affixes. (I discuss \( V \rightarrow N \) 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 \( ixt? \) ‘that’ or \( axd? \) ‘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).

(35)  
\[
\text{kw} \cdot \quad \text{sn}\hat{o}\text{ma}\hat{t}
\]  
\(2s\text{ABS} \quad \text{grandson}
\]  
You are a grandson.

(36)  
\[
\text{kw} \cdot \quad \text{in-}
\]  
\(2s\text{ABS} \quad 1s\text{POSS} \quad \text{female’s mother}
\]  
You are my mother.

---

8The 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 \( k\vec{x}_0\text{incitx} \) ‘you are my house’ or \( kn\vec{x}_0\text{cix} \) ‘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). 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.

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.


It is standard to assume that the terms predicate and verb, just like argument and noun are not synonymous. Some of the earliest arguments for and against the single class hypothesis were based on the opposite assumption, that anything used as a predicate was basically (i.e. lexically) verbal. In Okanagan, there are formal differences between nouns in predicate function and verbal predicates, so that the noun/verb contrast is more than definitional.
However, there are three ways that PNs differ morphosyntactically from 
verbally-headed intransitive clauses (Vi’s).

First, the person marking paradigm used with PN’s is distinct from that 
used to inflect the verb in Vi clauses. In PNs, the first and second subject 
persons are marked by the proclitics shown in (37).

(37) 1          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~    suknain~x
    1sSub  Okanagan
    I am (an) Okanagan.

(39) k~u~    1?iw    -s
    1sSub    father  3sPOSS
    I am his father.

The first singular absolutive person marker is kn~ only.

(40) a. kn~    ?itx
     1sABS    sleep
     I slept.

b. *k~u~    ?itx

Third subject is indicated differently in PN’s and Vi’s. In the Vi, the 
absolutive subject marker is 0, as in (41). A PN with third subject is expressed 
with an overt deictic pronoun as in (42) and (43).
(41) ?itx
    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. ixP 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) anwi 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
sentential aspects. The aspects in which PNs can be found are shown in (46).

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

(46) a. \[\text{knt} \text{ kn}\_ \text{knf}\_ \text{mn} \] (future)
1sABS fut knife
I will be a knife.

b. \[\text{knt} \text{ kn}\_ \text{knf}\_ \text{mn} + \text{a}\_\text{x} \] (prospective)
1sABS irr knife(con)
I am going to be a knife.

(47) a. \[\text{i} \text{ kn}\_ \text{knf}\_ \text{t} \] (future)
1sGEN irr fly
I will fly.

b. \[\text{k} \text{ kn}\_ \text{knf}\_ \text{t} + \text{a}\_\text{x} \] (prospective)
2sABS irr fly(con)
You are about to fly.

c. \[\text{k} \text{ kn}\_ \text{knf}\_ \text{t} + \text{a}\_\text{x} \] (perfect continuous)
2sABS pcont fly(con)
You are flying.

d. \[\text{k} \text{ kn}\_ \text{knf}\_ \text{t} + \text{a}\_\text{x} \] (continuous)
2sABS cont fly(con)
You are flying.

e. \[\text{knt} \text{ kn}\_ \text{knf}\_ \text{t} \] (perfect)
1sABS pft fly
I have flown.

f. \[\text{knt} \text{ knf}\_ \text{t} \] (perfective)
2sABS fly
You flew.

g. \[\text{i} \text{ kn}\_ \text{knf}\_ \text{t} \] (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 *\texttt{kn\textunderscore ks(s)qltmix\textasciitilde a?x} ‘I am going to be a man’ in favor of (48).

(48) \texttt{kn\textunderscore \textasciitilde ks\textasciitilde qltmx\textasciitilde wilx\textasciitilde a?x}
\texttt{1sABS \textasciitilde irr become\textunderscore man(con)}
I am going to become a man.

In (48), the stem \texttt{qltmix\textasciitilde wilx} is an intransitive verb, in anticausative stem aspect. It is inflected for prospective (sentential) aspect. As an intransitive verb in prospective aspect, it cannot express a possessor argument, as shown in (49).

(49) \texttt{*kn\textunderscore a\textasciitilde ks\textasciitilde qltmx\textasciitilde wilx\textasciitilde a?x}
\texttt{1sABS 2sPOSS \textasciitilde irr become\textunderscore man(con)}
(I am going to be your man.)

In the PN construction, both a subject and possessor are possible in future aspect.

(50) \texttt{k\textasciitilde u\textasciitilde a\textasciitilde k\textasciitilde \textasciitilde c\textasciitilde x\textasciitilde}
\texttt{1sSub 2sPOSS \textasciitilde fut house}
I will be your house.

To express prospective aspect with respect to the notion of manhood, the speakers preferred the Vi construction to the PN construction. Where prospective aspect is possible with predicate nominals, it seems that the
speakers can generalize the notion 'future' to two constructions, and they accept, if not produce, both. Despite the sporadic borrowing of prospective aspect from the verbal paradigm, PNs do not form any other aspect from the sentential aspect paradigm. This would be an arbitrary distributional difference if PNs were not distinct from Vi’s.

The third way in which PNs and Vi’s differ is in the morphological realization of future meaning. The prefix that marks future in a PN is $kt$-. A Vi in future has the irrealis prefix $ks$-.\textsuperscript{11} The distinctiveness of the two WFRs that involve $kt$- 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 $t$ (51b). If the base begins in $t$, $ks$- is realized as $ks$- (51c).

\begin{equation}
\begin{align*}
(51) \quad & a. \quad k^\wedge \quad i- \quad k(s)- \quad s\text{íwm} \\
& \quad 2\text{sOBJ} \quad 1\text{sGEN} \quad \text{irr} \quad \text{ask} \\
& \quad \text{I will ask you.} \\

& b. \quad k^{\wedge} \quad k(s)- \quad t- \quad x^\wedge \text{úy}+a?x \\
& \quad 1\text{sABS} \quad \text{irr} \quad \text{back} \quad \text{go(con)} \\
& \quad \text{I am going back (home).} \\

& c. \quad k^\wedge \quad i- \quad ks- \quad tw\text{ínom} \\
& \quad 2\text{sOBJ} \quad 1\text{sGEN} \quad \text{irr} \quad \text{leave} \\
& \quad \text{I am going to leave you.}
\end{align*}
\end{equation}

By contrast, $kt$- is $k$- before any $s$ and $t$. This is illustrated in (52).

\textsuperscript{11}ks- also occurs in transitive clauses (section 2.1.1).
Because ks- and kt- 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. kt- ‘future’ occurs with only with nouns (53), while ks- ‘irrealis’ occurs with verbs (54).12

(53) a. k\textasciitilde\textasciitilde kt- x\textasciitilde\textasciitilde\textasciitilde aylx
   2sSub fut fox
   You will be fox.

b. *k\textasciitilde\textasciitilde ks-x\textasciitilde\textasciitilde aylx

(54) a. a- ks- c\textasciitilde\textasciitilde\textasciitilde apc\textasciitilde\textasciitilde\textasciitilde psom
   2sGEN irr close\_eyes

---

12Speakers 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’ ax\textasciitilde\textasciitilde a- ks- on\textasciitilde\textasciitilde\textasciitilde a?m\textasciitilde\textasciitilde\textasciitilde m\textasciitilde\textasciitilde\textasciitilde
   prt dpr 2sPOSS irr seat
   This will be your seat.

(ii) way’ ax\textasciitilde\textasciitilde a- kt- on\textasciitilde\textasciitilde\textasciitilde a?m\textasciitilde\textasciitilde\textasciitilde m\textasciitilde\textasciitilde\textasciitilde
   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 kt- are in complementary distribution.
You will close your eyes.

b.  *a-kt-c’ec’ipsəm

Finally, *kt- ‘future’ is morphophonologically, distributionally, and functionally related to kt- ‘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 *kt- developed from the meaning of the kt- that marks unrealized possession on nominals. The meaning difference between future and unrealized possession pivots on 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 *kt- 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 t i- kt- cix
    see  IsERG  cs  ls  UnPOSS  house
    I saw the yet-to-be-mine house.

    b.  *wik -n t kt-cix
(56) a. k\textsuperscript{\textdegree}u\textsubscript{\textdegree} a- k\textdiaeresis fut ylmix\textasciitilde om
1sSub 2sPOSS fut chief
I will be your chief.

b. k\textsuperscript{\textdegree}u\textsubscript{\textdegree} k\textdiaeresis fut ylmix\textasciitilde om
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.\textsuperscript{13} t marks a

\textsuperscript{13}A few other proclitics serve both prepositional and complementizing functions, e.g. k\textasciitildeal 'to, toward, from, because' and al ‘in, at, while’. t alone is consistently a preposition. One verb, c\textasciitilde\textasciitildexi\textasciitilde 'do like' or 'seem as if' requires t before its complement. The complement may be verbal, as in (i).

(i) way' ki\textdegree c\textasciitilde\textasciitildexi\textasciitilde t\textsubscript{\textdegree} ant'a\textasciitilde ils
prt when seem come_to_one's_senses
That's when he came to himself. COD222
variety of grammatical and semantic categories. It indicates grammatical function (see also section 2.1.2) and a several of semantic case roles. It is also used to mark emphatic transitive subject NPs. As a marker of grammatical case, t cliticizes to nominals in these functions: transitive subject (57)-(58), dative theme (59), and intransitive generic object (60).

(57) lut t'ə ks- m'i?+nú't -səlx
    neg ev irr know(lc) 3pERG
    i? t n?əlnaʔsqlíxʷtn
    art cs maneater
The maneater won’t know the difference. GW897

(58) way’ myp+nú -s t incá k*úlstm -ən
    prt know(lc) 3sERG cs I send 1sERG
He’ll know I sent you. GW141

(59) k*ni+xt -m
    grab(dat) 1pERG
    i? t kə- ənt’kʷmín -s
    art cs UnPOSS coffin 3s
We’ll get him his coffin. COD56

(60) kn̓ wikm i? t sək’aʔcinəm
    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).  

(61)  
\[
\begin{array}{llllllll}
\text{axá} & \text{k'w} & \text{ks-} & \text{tók'tok'ótax} \\
\text{dpr} & \text{1pABS} & \text{irr} & \text{travel(con)} \\
\text{i?} & \text{t} & \text{tamx'úla'x} \\
\text{art} & \text{prep} & \text{world} \\
\end{array}
\]

We are going to travel around the country/world. GW5

(62)  
\[
\begin{array}{lllllll}
\text{sap'nt} & \text{-is} & \text{i?} & \text{qax'sqáxa'tn} \\
\text{club(ctr)} & \text{3sERG} & \text{art prep whip} \\
\end{array}
\]

He clubbed him with a whip. GW34

(63)  
\[
\begin{array}{llllllllll}
\text{kn} & \text{sac-} & \text{húy+x} & \text{i?} & \text{sk'iwalx} \\
\text{1sABS} & \text{cont} & \text{tired(con)} & \text{art prep old_age} \\
\end{array}
\]

I am tired out from old age. GW37

(64)  
\[
\begin{array}{llllllllllll}
\text{ta} & \text{nta'mink} & \text{i?} & \text{stk'másq'at} & \text{ki?} & \text{x'uy} \\
\text{prep next} & \text{art prep sky} & \text{sb go} \\
\end{array}
\]

Right (along) next to the sky he went. GW273

(65)  
\[
\begin{array}{lllllllllll}
\text{way' yáyáát} & \text{k'ul' -lx} & \text{t} & \text{sqilx'} \\
\text{prt all turn_into 3pABS prep humans} \\
\end{array}
\]

They all turned into humans. COD61

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

---

14Factitive complements of *t* occur only with the verb *k'ul* 'turn into N'.

morphology, e.g. verbal person marking, sentential aspect, or stem aspect.\textsuperscript{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.

\begin{verbatim}
(66) k^u_ ?e@msqáxa?m -səlx axá? i?
    1sOBJ feed(ctr) 3pERG dpr art
    t  i- təqáqca?
    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).

\begin{verbatim}
(67) siwstm+st -m -əlx axá?
    drink(caus) Unsub 3pOBJ dpr
    i? t  k"ək"rif i? t  tk'imilx"art cs golden art cs woman
The Golden Woman gave them drinks. GW655

(68) way` nix` t  k"ək"yina? i? t  sqláw`
    prt also cs a little art cs money
    x"ic`+xt -x`
give(dat) 2sERG
\end{verbatim}

\textsuperscript{15}Only nominalized verbs may follow \(t\). Nominalizations are describe in section 4.7.
Also a little money give him. GW23

(69) caʔkʷ axáʔ iʔ t otmxʷúlaʔxʷ
perhaps dpr art cs ground

uʕ wayʔ ks- nʔúcx+nt -m
and prt irr track(ctr) 1pERG

iʔ t sxʷúytn -s
art prep tracks 3sPOSS

iʔ t snkč’aʔsqáxaʔ
art prep horse

If [it had gone] along the ground, we could follow him by the horse’s tracks. GW680

This repetition of * t within an NP follows a pattern known cross-linguistically as *case agreement* (Gerdts 1991b). Case agreement identifies the modifier-head as a constituent, whether the subconstituent structure is adjective-noun ((67) and (68)) or possessor-noun (69).

A second property of *t* that suggests that it 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, *l’amasc’mqín* does not mean ‘it’s a computer’. Rather, *t* serves a verbal head by linking nominals to the verb phrase. This arrangement between an argument-taking head (capable of assigning thematic roles) and a preposition is
familiar from many other languages.

4.3.3 Modified nouns. Nouns may be modified by a verb functioning as an adjective. The verb typically follows the determiner, and is adjacent to the noun. The data in (70), from texts, illustrate the construction.

(70) a. $i?\,\mathsf{xaxa}\, i?\,\mathsf{skok}\,\mathsf{ak}\,$
   art sacred art animals
   sacred animals EC165

   b. axax?\, c'ant
   dpr  look(imp)
   $i?\,\mathsf{suknaqin}\, \mathsf{n}\mathsf{ak}\,\mathsf{cw}\mathsf{ilxtan}\, \mathsf{ixx}\,$
   art Okanagan villages dpr
   Look at the Okanagan villages here and there. EC30

c. ks- ecx+a?x k"uk\,a i? sqilx
   irr  arrive_(con) strange art people
   Strange people are going to arrive. EC6

d. i? k'ol sqilx\, s\mathsf{onm}'a?m\,\mathsf{ay}'a\,tn k\,\mathsf{ul}'nt -x
   art toward Indian education work(ctr) 2sERG
   You work towards Indian(-style) education. EC13

e. way'\, ixx?\, mat i? sqlx\,a?\, siw\,l\,k
   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. Other word orders are ungrammatical, as illustrated in (71) and (72).

\footnote{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.}
The big eagle flew.

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.

The word order restriction emphasizes that the verbal element in an adjective-noun collocation is not functioning as an intransitive predicate.\(^\text{17}\)

\(^\text{17}\)A predicative State lexeme is frequently introduced by the evidential particle \(t'i\). Compare the evidential, predicative construction in (i) with the attributive construction in (ii).
Rather, it has an attributive function that is typical of adjectives. Adjective-verb collocations are impossible, as shown in (75).\footnote{Matthewson and Demirdache (1995) discuss a similar finding in Lillooet Salish.}

\begin{align*}
(75) & \quad \text{a. } *\text{sílxʷa? } t'\text{uxʷt iʔ mlqnums} \\
& \quad \text{(Big fly is the golden eagle)}
\end{align*}

(i) \quad t'i piq iʔ kawáp-s \\
his horse is white

(ii) \quad iʔ piq iʔ kawáp-s \\
his white horse

State lexemes are adjective-like in that they can be used referentially as well as attributively. They may be used as a referring expression when the State is characteristic of an individual, at least sufficiently so that it identifies a referent in the discourse.

(iii) \quad wik-n iʔ piq \\
I saw the white one.

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

(iv) \quad iʔ ḥʷupt iʔ snktc'aʔsqáxʔa? \quad \text{a tired horse} \\
*\quad iʔ ḥʷaptwílxʷ iʔ snktc'aʔsqáxʔa? \quad \text{(a getting tired horse)} \\
*\quad iʔ ḥʷapt +st-im iʔ snktc'aʔsqáxʔa? \quad \text{(a made-tired horse)} \\
*\quad sāc-ḥʷupt-x iʔ snktc'aʔsáxʔa? \quad \text{(a tiring horse)} \\
*\quad in-ḥʷupt iʔ snktc'aʔsqáxʔa? \quad \text{(my tired horse)}
b.  *ńsk*q'^a? q-flq*flsts i? k"ul'ncûtn19
   (Sacred spoke the creator)

Modified nouns also show case agreement (section 4.3.2) with their modifier, as in (76).

(76) t'i  t'ip  i?  t_i  sîlx"a?  i?  t_i  siw'i k"   
   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?)  t_i  sîlx"a?  t_i  t'ux"t
   art prep big_v prep fly_v

   b. *(i?)  t_i  t'ux"t  t_i  mîq^nups
      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

---

19The correct way to express the sense of this utterance appears in (i).

(i) q'*elc"il'+st -s i? k"ul'ncûtn
   speak(ctr) 3sERG art Creator

   uî  t'i  nsk?q'^a?
   and ev sacred
   The creator spoke and it was sacred.

In (i), the stative predicate nsk?q'^a? 'accret' heads its own VP.
temporal-modal phenomena that I refer to as base, stem and sentential aspect (section 3.0). Base aspect refers to the ontological classification of lexemes as situations or entities. In Okanagan, ontological entities are coded in the grammar as nouns. Situations are coded as verbs. Furthermore, all situations/verbs have stem aspect derivates, and these inflect for sentential aspect. Nouns do not participate in either stem aspect derivation or sentential aspect inflection. In section 4.4.3, I examine the evidence for a stem aspect referred to in the literature as 'distributive aspect'. This aspectual category has been described as evidence that aspectual categories apply equally to nouns and verbs in Salish (Jelinek and Demers 1984). In Okanagan, however, distributive aspect is strictly a verbal category.

4.4.1 Sentential aspect. Verbs inflect for sentential aspect (section 2.2.1.2); nouns do not. All verb bases occur in all sentential aspects, regardless of the base type. I show the sentential aspects with a Process base in (78), and with a Transition base in (79). A noun base is ill-formed in every sentential aspect type (80).²⁰

²⁰As noted in section 4.3.1, some nouns are acceptable in prospective aspect in the predicate nominal construction. All speakers were able to interpret this form, but only some said they would use it.
(78)

<table>
<thead>
<tr>
<th>Sentential aspect</th>
<th>Process base: //x uy// GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>perfective</td>
<td>kn_x uy</td>
</tr>
<tr>
<td>perfect</td>
<td>kn_k-x uy</td>
</tr>
<tr>
<td>continuous</td>
<td>kn_s故宫-x uy+a?x</td>
</tr>
<tr>
<td>immediate continuous</td>
<td>kn_s-x uy+x</td>
</tr>
<tr>
<td>prospective</td>
<td>kn_k-s-x uy+a?x</td>
</tr>
<tr>
<td>customary</td>
<td>kn_ac-x uy</td>
</tr>
<tr>
<td>future</td>
<td>i-ks-x uy</td>
</tr>
<tr>
<td>neutral</td>
<td>i-s-x uy</td>
</tr>
</tbody>
</table>

I went.

I have gone.

I am going.

I am going now.

I am about to go.

I usually go.

I will go.

I went/I am going/to go.

(79)

<table>
<thead>
<tr>
<th>Sentential aspect</th>
<th>Transition base: //ac// TIE</th>
</tr>
</thead>
<tbody>
<tr>
<td>perfective</td>
<td>kn_故宫-acá</td>
</tr>
<tr>
<td>perfect</td>
<td>kn_ksc-故宫-acá</td>
</tr>
<tr>
<td>continuous</td>
<td>kn_s故宫-ac+míxa?x</td>
</tr>
<tr>
<td>immediate continuous</td>
<td>kn_s-ac+míx</td>
</tr>
<tr>
<td>prospective</td>
<td>kn_k-s-ac+míxa?x</td>
</tr>
<tr>
<td>customary</td>
<td>ac-acst-in</td>
</tr>
<tr>
<td>future</td>
<td>i-ks-acá</td>
</tr>
<tr>
<td>neutral</td>
<td>i-s-故宫ác</td>
</tr>
</tbody>
</table>

I tied something.

I have tied something.

I am tying something.

I am tying something now.

I am going to tie something.

I usually tie it.

I will tie it.

I tied/am tying/tie something.
**Sentential aspect**

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Noun base: //p'ína?// BASKET</th>
</tr>
</thead>
<tbody>
<tr>
<td>perfective</td>
<td>*p'ína?</td>
</tr>
<tr>
<td>perfect</td>
<td>*kn_ksc-p'ína?</td>
</tr>
<tr>
<td>continuous</td>
<td>*ks_sac-p'ína?+a?x</td>
</tr>
<tr>
<td>immediate continuous</td>
<td>*kn_s-p'ína?+x</td>
</tr>
<tr>
<td>prospective</td>
<td>*kn_ac-p'ína?+a?x</td>
</tr>
<tr>
<td>customary (tr)</td>
<td>*ac-p'ína?(+st)</td>
</tr>
<tr>
<td>customary (itr)</td>
<td>*kn_ac-p'ína?</td>
</tr>
<tr>
<td>future</td>
<td>*i-ks-p'ína?</td>
</tr>
<tr>
<td>neutral</td>
<td>*i-s-p'ína?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Example</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>*It was a basket.</td>
<td>*p'ína?</td>
</tr>
<tr>
<td>*I have been a basket.</td>
<td>*kn_ksc-p'ína?</td>
</tr>
<tr>
<td>*I am basketting it.</td>
<td>*ks_sac-p'ína?+a?x</td>
</tr>
<tr>
<td>*I am basketting it now.</td>
<td>*kn_s-p'ína?+x</td>
</tr>
<tr>
<td>*I am going to basket.</td>
<td>*kn_ac-p'ína?+a?x</td>
</tr>
<tr>
<td>*Someone usually baskets.</td>
<td>*ac-p'ína?(+st)</td>
</tr>
<tr>
<td>*I am basketted.</td>
<td>*kn_ac-p'ína?</td>
</tr>
<tr>
<td>*I will basket.</td>
<td>*i-ks-p'ína?</td>
</tr>
<tr>
<td>*I baskетted./*I am basketting./*I basket.</td>
<td>*i-s-p'ína?</td>
</tr>
</tbody>
</table>

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)  u† way’ p_ ks- k+sqáw’+a?x
   and  prt  2pABS irr- have_money(con)
   You are going to get money. GW18

(82)  lut pɔn’kín’ ks- ks+way’ -s
   neg  ever  irr  have_end  3sGEN
   There will never be an end. EC147

(83)  kn_ sac- ta?x”+sqáw’+a?x
   1sABS  cont  get_money(con)
   I am getting some money.
He is going to get meat.

Nouns do not inflect for sentential aspect. This is plainly seen when a noun is inflected for the nominal category \textit{unrealized possession}, as in (85).

(85) \begin{align*}
\text{a. } & *a- \quad \text{ks-} \quad \text{kl-} \quad \text{p’ína}^? \\
& \text{2sPOSS} \quad \text{irr} \quad \text{UnPOSS} \quad \text{basket} \\
\text{b. } & *a- \quad \text{ks-} \quad \text{kl-} \quad \text{p’ína}^? \\
& \text{2sPOSS} \quad \text{irr} \quad \text{UnPOSS} \quad \text{basket} \\
\text{c. } & *kn\_ \quad \text{ksc-} \quad \text{kl-} \quad \text{tsísnca}^? \\
& \text{1sABS} \quad \text{prft} \quad \text{UnPOSS} \quad \text{older brother} \\
\text{d. } & *kn\_ \quad \text{soc-} \quad \text{kl-} \quad \text{sníq”ítun+a’x} \\
& \text{1sABS} \quad \text{con} \quad \text{UnPOSS} \quad \text{bed(con)}
\end{align*}

\textbf{4.4.2 Stem aspect.} Stem aspect derivation alters the temporal and modal features of the base lexeme. All verbs have at least a few of the stem aspect derivates listed in (86), but nouns have none (see also section 3.4).

(86) \begin{itemize}
\item closed transitional
\item open transitional
\item possessional
\item dative
\item reflexive
\item middle
\item reciprocal
\item continuative
\item desiderative
\item limited control
\item anticausative
\item causative
\item stative
\end{itemize}
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.)
Intransitive stems with distributive aspect are interpreted as actions performed by more than one participant.

However, distributed aspect via C₁VC₂ reduplication is not fully productive among transitive and intransitive verb stems. Speakers rejected many verb stems with distributive aspect/C₁VC₂ reduplication. Examples of rejected forms appear in (89).²²

---

²¹ The plurality of the object argument does not have to be expressed in the person marker. The plural object marker -ałx is optional.

²² The examples in this list may be possible words, which speakers might coin as needed in a particular discourse. However, the speakers’ negative reactions to them suggest that they are not lexicalized.
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).
The data in (90) show that distributive notions marked by \( C_1 VC_2 \) 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 \( C_1 VC_2 \) reduplication. For example, \( c'w'c'iw'sm \) and \( c'iw'sm \) mean 'wash one’s eyes' and \( c'ac'alx \) and \( c'alx \) both mean 'bathe'. Two speakers observed that both kinds of washing implied repeated motions (i.e. of dipping water over the face and body), yet the reduplicated and unreduplicated forms are free alternates. Moreover, the lexemes \( k'ram \) ‘swim’ and \( t'q'w'am \) ‘sew’
also express repeated actions, yet these lexemes do not have reduplicated alternates. In sum, it is not possible to predict when a verb stem will have a distributive counterpart marked by $C_1VC_2$ reduplication and when it will not. This indicates that distributive aspect is not an inflectional category in Okanagan.

When $C_1VC_2$ reduplication is found in noun stems, it is typically lexicalized in the stem and does not express distributive aspect. Many noun stems with $C_1VC_2$ reduplication lack unreduplicated counterparts that would indicate a derivational relationship between distributed and non-distributed lexemes (91).

(91)  Noun stem

<table>
<thead>
<tr>
<th>Noun stem</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>naʔʷ + nəʔʷ</td>
<td>wife</td>
</tr>
<tr>
<td>nəʔʷ + nəʔʷiʔ'ʔs</td>
<td>couple</td>
</tr>
<tr>
<td>c’iʔq + cq’t</td>
<td>Engelmann spruce</td>
</tr>
<tr>
<td>c’ixʷ + c’xʷ</td>
<td>fish hawk</td>
</tr>
<tr>
<td>wap + wpxn</td>
<td>lynx</td>
</tr>
<tr>
<td>ct’әkʷʷ + t’әkʷʷ</td>
<td>nest</td>
</tr>
<tr>
<td>skʷr + k”rʔca</td>
<td>tomato</td>
</tr>
<tr>
<td>k’x + k’xap</td>
<td>old man</td>
</tr>
<tr>
<td>nəʔəs + ʃəstətkʷ</td>
<td>watercress</td>
</tr>
</tbody>
</table>

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 North 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.\footnote{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.}

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
positive and negative command forms. 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. \(   \text{x'^uy} \)  \\
    2sABS  go  \\
    I went.

b. \(   \text{x'^uy} -x \)  \\
    go Imp(s)  \\
    Go!

c. \(   \text{x'^uy} -wi \)  \\
    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)).

(93) a. \(   \text{p'k'nt} -i \)  \\
    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.
(94) a. \(\text{pθk}'+\text{nt}\)

peel(ctr)

Peel it!

b. \(\text{k}'\text{u}_\circ \text{x}'\text{ic}'+\text{xt}\)

1sOBJ give(dat)

Give it to me!

(95) a. \(\text{pi}'\text{k}'+\text{nt} -\text{s}\)

peel(ctr) 3sERG

He peeled it.

b. \(\text{k}'\text{u}_\circ \text{x}'\text{ic}'+\text{xt} -\text{x}^\text{w}\)

1sOBJ give(dat) 2sERG

You gave it to me.

The negative command contains two elements, first the negative particle \(\text{lut} \) 'not' followed by a verb inflected for irrealis mood. Subject marking is from the genitive paradigm.

(96) a. \(\text{lut} \text{k}'\text{u}_\circ \text{a-} \text{ks-} \text{p}'\text{ic}'\text{m}\)

neg 1sOBJ 2sGEN irr pinch

Don’t pinch me.

b. \(\text{lut} \text{a-} \text{ks-} \text{náq}'\text{w}'+\text{tm}\)

neg 2sGEN irr steal(pos)

Don’t steal someone’s something.

\(^{26}\text{Recall that possessional verbs require a referential, possessed theme, the possessor of which is coded as the grammatical object. This example means ‘Fold it!’ where ‘it’ refers to some referent that belongs to the referent of the first person singular person marker.}\)
Only some State bases form positive second person commands, as in (98).

(98) a. lut a- ks- k’ast
gen 2sGEN  irr  bad
Don’t be bad.

b. *lut a- ks- k’iy’t
neg 2sGEN  irr  cold
(Don’t be cold.)

All States have derivates that form negative commands, as in (99) and (100).

(99) lut a- ks- k’iy’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 //ťkap// BUCKET.

(101) Ńkap  ‘bucket’


<table>
<thead>
<tr>
<th>Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Ńkáp-x</td>
<td>singular intransitive</td>
</tr>
<tr>
<td>*Ńkáp-wi</td>
<td>plural intransitive</td>
</tr>
<tr>
<td>*Ńkápt</td>
<td>singular transitive</td>
</tr>
<tr>
<td>*Ńkápnt-i</td>
<td>plural transitive</td>
</tr>
<tr>
<td>*lút a-ks-Ńkáp</td>
<td>negative intransitive</td>
</tr>
<tr>
<td>*lút a-ks-Ńkápm</td>
<td>negative transitive</td>
</tr>
<tr>
<td>*lút a-ks-[*anticausative]</td>
<td>negative anticausative</td>
</tr>
<tr>
<td>*lút a-ks+Ńkáp+stm</td>
<td>negative causative</td>
</tr>
</tbody>
</table>

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.  sq∂ltmíx\textsuperscript{w} \textsubscript{N} (a) man

   b.  *sq∂ltmíx\textsuperscript{w}-x
        Be a man!

(103)  a.  qəltm\textsuperscript{x}scút\textsubscript{y}
        He is acting like a man.

   b.  qəltm\textsuperscript{x}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).
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.

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.

(104) way’ k’u_ k’əq’əy’+ət -ix’
prt 1sOBJ write_down(pos) 2sERG

Write down what I tell you. GW49

(105) lut t’əx’ c- my+st -in
neg prt ev cust know(otr) 1sERG

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’əmnifs+nt -x’ axá’ i? pəptwínax’
dpr mislead(ctr) 2sERG dpr art old_lady

You’ll mislead the old lady. GW71

(107) k’u_ ənəmsqá’xəm -səlx axá’
1sOBJ feed(ctr) 3pERG dpr

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

(i) cəc+nt -in in- q’a?xán
tie(ctr) 1sERG 1sPOSS shoe
I tied my shoe.

(ii) cə+ət -is an- q’a?xán
tie(pos) 3sERG 2sPOSS shoe
He tied your shoe.

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

$^{27}$The determiner $i^?$ is deleted if the head noun is inflected for first or second singular possessor, as in (i) and (ii).
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) $i{x}_7$ ut $k^w_s$ $n^6acúsm$ $s$
But 2sOBJ neut trap 3sGEN

ks- pilst -$o_m$ $s$
irr kill(ctr) 2sOBJ 3sERG

But she traps you to kill you. GW503

(109) $c-$ my+$st$ -$i_p$ $k_n$ ylmíx*$o_m$

cust know(otr) 2pERG 1sSub chief

You know that I am the boss. COD104

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

(110) way' $i{x}_7$ $västmí+(nt)$ $s$
ptc dpr enjoy(ctr) 3sERG

$i'$ $s-$ $k^w_{$a_l$}$ $s$
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 $t$ (111) and $mi$ (112). The do not cooccur with $i'$. $mi$ consistently has future or conditional overtones.
(111) a. pok wiski may nq'elúusas f ng'awi'lum
might sicken if lonely
He might get sick if he's lonesome. GW814

b. knsk'inx t f iksns'āqcnux*
I'm afraid that I'll be late

     kom' f iksns'ip
     or that I'll get lost
I was afraid that I'd be late or that I'd get lost. GW516

c. ksmynintam f kscx'akx'=ált
We'll find out if she's alive
We will find out if she is alive. COD78

(112) a. nínw'i? put nk'wspínk pút apná? sxolx'=ált
probably just one year to this day

     mi k'u_tcyá'p
     that we come back
It'll be one year to the day when we will come back. GW459

b. cäm' t'i k'=malmf= x mi k'miptam
maybe if you dawdle then it gets late
If you fool around (then) you'll be late. GW489

c. k'=nis k'=alk'ák', mi kn=x'at'at'pnumt,
You are gone then I'll jump up

     mi k'alkílstən, nka'cñkántən,
     then I will chase you catch up with you

     mi ixif? k'u_s'at'πtəns i? tl' asítwcan
     then we'll eat the groceries
When you are gone a little ways, I will jump up, I will chase you, catch up with you, and we will eat the groceries that you got. EC142
Only clauses headed by verbs occur following $t$ and $mi$. 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. This is because nouns basically lack

---

28 There are other subordinating particles including $ki$, $atu$, $al$ and $k'al$. (The last two also function as prepositions). I do not discuss them because I am less familiar with them, and because subordination in general in Okanagan deserves a detailed treatment that I cannot yet give.

29 Equational clauses (NP=NP) may serve as subordinate clauses. When they do, there is no overt complementizer, as in (i).

(i) ac- my+st -ín ixí sənʔickstn
cust know(otr) 1sERG dpr toy
I know that it is a toy.

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

(ii) cniːc xʷʔit $t$ ac-ʔítən
he alot sb cust eat

$$ aʔf \quad (ixí?) \quad sqəltmíxʷ $$

because dpr man

He eats alot because he is a man.

(iii) knʔ c- t'xətmíst aʔf ixíʔ sʔtín -tət
1sABS cust careful because dpr food 1pPOSS
I was careful because it was our food.

(iv) cniːc ac- c'q"áqʷ aʔf s- nxʷəyíl's
he cust cry because neut go(des)

He is crying because he wants to go along.

These are formally parallel to subordinate reason clauses headed by verbs.
propositional force. Nouns in isolation do not assert a proposition. They are not a possible response to the question *sac'kinx*, 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’ ixî’?  
what dpr  
What is that?  

b. Answer  
axá?  "xâx?úla?x*  
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? sânc’úla?x* púti? alá?  
here art fruit_trees still here  
The fruit trees are still here. EC97

(115) ili? ki? i? cêt-chief -sêlx  
there sb art house 3pPOSS  
That’s where their houses were. EC150

Only verbs have predicative force in isolation, either as a command (see (94) above) or as a simple declarative clause (116).

(116) xlak  
whirl  
It whirls.

These are formally parallel to subordinate reason clauses headed by verbs.
4.7 Nominalized verbs. Like many other languages, Okanagan has a means of nominalizing predications to encode an event as an individual ‘object of discourse’ (Jelinek and Demers 1982). However, it is important to recognize that Okanagan has both lexical nominalizations and propositional nominalizations. In a lexical nominalization, a noun is formed from a verb to create a new lexeme. Lexical nominalization always involves an overt formative. The prefix s- is a common marker of lexical nominalization. I give several examples in (117) (see also section 2.2.2.16).

(117) Verb       Noun stem
    t'ik'əl       feed     s- t'ik'əl      grub30
    c'ałat     cold(sta) s- c'ałat        cold weather
    c'ak"'     bloom(ac) s- c'ak"'      flower
    q'iy'       dream    s- q'iy'       dream
    nɨk'ək'     cut(ac)   s- nɨk'ək'     wound

Two suffixes, -mát and -tn, and a prefix, ə-st- 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.
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)  
<table>
<thead>
<tr>
<th>Verb</th>
<th>Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 𝑡𝑤’𝗮־mination pierce</td>
<td>𝑡𝑤’—min</td>
</tr>
<tr>
<td>𝑥ʷaac’/*m grind</td>
<td>𝑥ʷaac’—mn</td>
</tr>
<tr>
<td>b. 𝑥ʷic’laʔxʷm cut_grain</td>
<td>𝑥ʷic’laʔxʷ—tn</td>
</tr>
<tr>
<td>nt’kʷkiʔsqáʔaʔm saddle_horse</td>
<td>nt’kʷkiʔsqáʔaʔ—tn</td>
</tr>
<tr>
<td>c. kʷúl’om make, do</td>
<td>sxʷ+kʷúl’om</td>
</tr>
<tr>
<td>m’aʔm’áyaʔm teach</td>
<td>sxʷ+m’aʔm’áyaʔm</td>
</tr>
</tbody>
</table>

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

31 Beck (1995) defines factive nominalizations in Lushootseed Salish in terms of the Cognitive Grammar framework, but settles on referring to them as ‘participles’. ‘Factive’ may prove not to be the best label for the cognate construction in Okanagan, but it is necessary to distinguish terminologically between lexical V → N derivation and the event → entity phenomenon as described by Hopper and Thompson.
Factive nominalization in Okanagan involves the prefix *sc-*, which added to verb stems names an event taken as an entity. Examples, with the relevant nominalizations in brackets, follow.

(121) kmatəm [kʷ i- sc- my+ɪtɪm]
certainly 2sOBJ 1sGEN fact know(pos)

ixf? way’ ixf? 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) tal$i? in- əxast [i- sc- ?itx]
really 1sPOSS good 1sGEN fact sleep

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

(123) axá? [i- sc- nq’aʔlsl]
dpr 1sGEN fact worry

This is my business. GW331

(124) uť haʔ wniixʷ haʔ ixf?
and interr true interr dpr

[a- sc- qʷəqʷlt]
2sGEN fact talk

1 [a- sc- q’ay
in 2sGEN fact write

Is it true what you wrote in your letter? GW189

---

32 The prefix that forms factive nominalizations may be further analyzable as *s-c-*. The *s* of the prefix may be the (fossilized) neutral aspect marker. I discuss the form of the prefix presently.
and then discuss 3pABS

prt in fact learn 3pGEN

then say 3pABS

get_accustomed_to 1pERG

fact storytell 1sGEN

That’s where I stopped in my storytelling.

We are looking for what will be our work. GW114
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? t-ac sc- sc- k"ul' -tətj]
  art cs perf fact work 1pGEN
  (What we had done)

Like nouns, factive nominalizations cannot stand alone as main clauses. Rather, they occur only in argument positions.\(^{33}\) The form of the factive nominalizer sc- and the fact that it precludes other aspectual prefixes suggests the sc- either derives historically from an aspectual prefix (or combination of s- ‘neutral’ and (a)c- ‘customary’), or that it is, synchronically, an aspectual prefix. I am inclined to think that sc- is basically an aspectual prefix for two reasons. First, it is completely productive over the set of verb bases, like other sentential aspect markers. Second, forms with sc- require subject person marking, like all verbs in any aspect. Therefore, while the term nominalization

---

\(^{33}\)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.

The term nominalization is used in much of the Salish literature to refer to clauses like the lower clause in (130).

(130) nič'íp c- mist -íś i? sqilxʷ always cust know(otr) 3sERG art people

i? [s- t'cxʷúy -s i? sámə?] 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 -xʷ what art see(ctr) 2sERG
What was it that you saw?

(ii) cawt -s i? sqilxʷ deads 3sPOSS art people

i? c- múskstəm art cust risk_taking
People must take chances. (lit. People's actions are for risk-taking.)

(iii) ixʔ t'ik'l+nt -s -ən dpr feed(ctr) 2sOBJ 1sERG
This is what I am feeding you. GW17

Kroeber (1991:184) describes the clauses that follow the determiner as headless relative clauses.
The nominalized verb is \( t'ct'uxuy \) ‘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).\(^3^5\) 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 \( t. \)^{3^6}

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\(^{3^5}\) 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.

\(^{3^6}\) The following example from the *Golden Woman* (Mattina 1985) illustrates with a single verb base the contrast between neutral aspect (line (i)), perfective aspect (lines (ii-iv)), and a factive nominalization (line (v)).

(i) \( ixf \) \( s- \) q'y'am -s;  
dpr neut write 3sGEN  
He started writing;

(ii) q'y'am i? k'al ylmix"om  
write art prep chief  
he wrote to the chief.

(iii) q'y'am,  
write  
He wrote,
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) \[\text{wi'aw'\text{nt} -s}\]  
\[
\text{done\_write(ctr) 3sERG}
\]
\[
\text{he got done writing}
\]

(v) \[\text{i? sc- q'ay'-s}\]  
\[
\text{art fact write 3sGEN}
\]
\[
\text{what he was writing,}
\]

(vi) \[\text{u? ixf? pa?p'nl-s, nlo"nt-ís, k'nt'lip-s,}\]
\[
\text{and he folded it, he put it in an envelope, sealed it,}
\]
\[
\text{GW174-75.}
\]
(132) a. tq+nt -fn in- qpqíntn
    touch(ctr) 1sERG 1sPOSS hair
    I touched my hair.

b. tq+nt -fn qpqíntn
    touch(ctr) 1sERG art hair
    I touched the hair.

Cross-linguistically, factive nominalizations form a middle ground between 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 simply 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 stm-. 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.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Nouns</th>
<th>Verbs</th>
<th>F. Nominalz.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. possessive inflection</td>
<td>+</td>
<td>-</td>
<td>n/a</td>
</tr>
<tr>
<td>2. 'have s.t.' verbs</td>
<td>+</td>
<td>-</td>
<td>n/a</td>
</tr>
<tr>
<td>3. 'get s.t.' verbs</td>
<td>+</td>
<td>-</td>
<td>n/a</td>
</tr>
<tr>
<td>4. category conversion</td>
<td>+</td>
<td>-</td>
<td>n/a</td>
</tr>
<tr>
<td>5. predicate nominals</td>
<td>+</td>
<td>-</td>
<td>n/a</td>
</tr>
<tr>
<td>6. prepositional objects</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>7. modified by adjective</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8. sentential aspect</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>9. stem aspect</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>10. distributive aspect</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>11. imperative formation</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>12. main clause head</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>13. subordinate clause head</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>14. nominalization</td>
<td>-</td>
<td>+</td>
<td>n/a</td>
</tr>
<tr>
<td>15. illocutionary force</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
</tbody>
</table>

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 \[\pm E\] and \[\pm C\] to define broad lexical classes for the purposes of word formation and other grammatical phenomena. In the
assignment of the aspectual features \([\pm E]\) and \([\pm C]\) (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, \([\pm E], [\pm C], \text{and } [\pm V]\). 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)

<table>
<thead>
<tr>
<th></th>
<th>Realized</th>
<th>Not realized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transitions</td>
<td>([+E, +C, +V])</td>
<td>([+E, +C, -V])</td>
</tr>
<tr>
<td>Processes</td>
<td>([+E, -C, +V])</td>
<td>([+E, -C, -V])</td>
</tr>
<tr>
<td>States</td>
<td>([-E, +C, +V])</td>
<td>([-E, +C, -V])</td>
</tr>
<tr>
<td>Entities</td>
<td>([-E, -C, -V])</td>
<td>([-E, -C, +V])</td>
</tr>
</tbody>
</table>

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 i are limited to noun phrases (section 4.3.2). Second, only nouns can be modified by an adjective (section 4.3.3).

Verbs, by contrast, do not participate in any of the constructions just
listed. Instead, they inflect for stem aspect and sentential aspect. They also appear to show distributive aspect, which is a kind of stem aspect. In addition, verbs can be used in imperative mood. Okanagan has a number of derivational processes that change verbs into nouns. Unlike N → V rules, WFRs of the V → N type always add an overt derivational formative to the input stem.

Verbs typically function as the head of main and subordinate clauses. Clauses headed by verbs may function as arguments, but these are recognizable by their special morphology or their syntactic frame. Factive nominalization refers to an event taken as an entity. They share properties of both nouns and verbs. For example, they lack the aspectual range of clauses in neutral aspect, but, like nouns, they can be the object of the preposition t.

Isolated phenomena seem to support the single class hypothesis in 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.
5.1 Form and function classes in Okanagan. In this thesis I have addressed some problems of classification that are of a general interest in the field of Salishan studies, and of particular concern in the study of word formation in Okanagan. Various classificatory schemes have been proposed in the literature, none of which seem suitably descriptive or explanatory for Okanagan. In the process of developing a classificatory scheme for Okanagan, I found that certain problems of classification could be dealt with only by broadening my view of the possible relationships between form and function in grammar. Rather than assume, for example, that roots and affixes have forms that correspond to a single function (wherever they may occur in a word), I easily found data to support the view that there are multiple arrangements of form and function. That is, in order to maintain that form and function correspond biuniquely in the morpheme, I would have had a list of irregular forms larger than the regular ones. In adopting some of the assumptions of lexeme-based morphology, I had the experience described by Hess 1993, who wrote of Lushootseed verb stems:

> Once the correct criteria for stem identification were realized, large classes of stems fairly leapt out of the data; whereas before there seemed to be no stem class larger than one member. (1993:114)

While the 'correct criteria' for Lushootseed stem classification are somewhat
different from those I have described for Okanagan, my classification, like Hess', does not depend upon the canonical Salishan (C)CVC(C) root. Rather, I classify lexemes, regardless of their shape, using two key assumptions: 1) lexemes are the fundamental unit of the lexicon and, 2) the relationship between form and function in morphology is indirect. The first assumption means that we allow for a linguistic primitive, the lexeme, that may never be satisfactorily defined. Like its abstract counterparts the phoneme and the morpheme, the lexeme is valuable if, by adopting it, we find significant, cross-linguistically recurrent patterns in the data. However difficult it may be to define, the lexeme often tacitly plays a role in morpheme-based analysis, and it is a concept that continues to be of interest to theoretical morphologists.

The second assumption--that form and function are mapped to one another from semi-autonomous components--is perhaps the more radical of the two, although it continues to interest theoretical morphologists (Beard 1995 and sources cited therein). Under this assumption, which is now referred to as the Separation Hypothesis, the core task of morphology is to map form to semantic and syntactic function, independently of lexical derivation and inflection. This separation of affixation (or other formal changes) from the cycles of derivation and inflection allows for a variety of arrangements between form, meaning, and lexico-syntactic properties. The Separation Hypothesis allows for a
biunique relationship between form and semantico-syntactic function, but other mappings are not only possible but expected. In the list in (1), I state the various arrangements of form, meaning, and lexico-syntactic properties (abbreviated as *syntactics*) that the Separation Hypothesis predicts.

(1)  
I. Morphological formatives with both the semantics and syntactics of a morphological category  
II. Morphological formatives with the semantics but not the syntactics of a morphological category  
III. Morphological formatives without semantic or syntactic function  
IV. Morphological formatives with more than one semantic or syntactic function  
V. Semantic or syntactic function marked by more than one morphological formative  
VI. Semantic or syntactic function marked by no morphological formative

For convenience, I refer to the arrangements of form and function listed in (1) as *form-function classes* I-VI. Although morpheme-based morphology would lead us to concentrate on the phenomenon where form and semantico-syntactic function are mutually implied (i.e. form-function class I), Okanagan amplly 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 type \([P,S]_T\).

(2)

<table>
<thead>
<tr>
<th>Suffix</th>
<th>Meaning</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>-nt</td>
<td>closed transitional</td>
<td>2.2.2.1</td>
</tr>
<tr>
<td>-tt</td>
<td>possessional</td>
<td>2.2.2.3</td>
</tr>
<tr>
<td>-núnt</td>
<td>limited control closed transitional</td>
<td>2.2.2.11</td>
</tr>
<tr>
<td>-nútt</td>
<td>limited control possessional</td>
<td>2.2.2.11</td>
</tr>
</tbody>
</table>

I have not found any stems or grammatical words where these derivational suffixes indicate anything other than the semantic and inflectional class of the predicate as I have described it.

Cross-linguistic evidence suggests that a one-to-one correspondence between sound and semantico-syntactic meaning is in some psychological sense 'ideal'. Therefore it would be surprising if Okanagan did not have some formatives that consistently mark a single semantico-syntactic function.

5.1.2 Form-function class II. Okanagan makes broad use of form-function class II phenomena. The formatives in bold-face in the (b) examples of (3)-(11) occur in stems where their semantic features are part of the meaning of the lexeme. Their usual syntactic features, discernible from other stems such as those in the (a) examples, are not expressed in the (b) examples.
(3) -(n)cúť ‘reflexive’
   a. a-s-c-əlk’+m+əncúť  You forced yourself here.  COD11
   b. k̓a*əy+ncúť+m+nt-əlx  He laughed at them. COD10

(4) -(n)wíxʷ ‘reciprocal’
   a. k̓u_əpəlst+wíxʷ  We kill one another. COD229
   b. qʷəm+nwíxʷ+st-məlx  Someone introduced them.

(5) -tn ‘location, instrument’
   a. n+k+ʔomt-íw’s+tn  saddle horse
   b. ƛəq’+t+mrím+st+(t)n-m  Someone paid for a cure. COD102

(6) -mín ‘instrument, location’
   a. t+qʷí+mín  barbecuing stick COD100
   b. s+k+təw’+mín+tn  pole for a spear COD86

(7) n-...-íls ‘desiderative’
   a. kn_n+xʷy+íls  I want to go.
   b. n+kʷəʔ+íls+ncúť  She started to fret. COD10

(8) -t ‘stative’
   a. k‘axʷ+t  It’s dead.
   b. limləm-; t  thank you
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, `nkʷwə́lscút `to fret’ may have the etymological sense of ‘chew self’s feelings’. While we can imagine a connection between *feelings* and *desiderative*...
aspect, there is no grammatical expression of desiderative aspect in *nkʷəʔlsncút. Clearly, fluent speakers can assign meanings to some base formatives in some words by analogy with other forms, i.e. through redundancy rules rather than through synchronically active WFRs (Aronoff 1976). I maintain that no thoroughly predictive rules can be stated over base formatives, since they may be arranged by surface analogy, metaphoric extensions, or other non-grammatical means. ¹

It is important to note that the difference between a formative with both the semantics and syntactics of a function and a formative with only the semantics of a function is not always a matter of a formative’s absolute position in a word (see examples (6b) and (8b)). A speaker knows by the aspectual type of the base whether the formative is marking both semantic and syntactic function. Process bases, for example, never take the suffix -(n)cút as a derivational formative (e.g. *knʔitx+(n)cút ‘I sleep myself’), but only as a base formative, as in cʷəʔy+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 -

¹This 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 -f-. -s- occurs in the terminative construction with wiʔs-, in which the base //wy'// DONE is joined to Transition or Process verb bases (section 3.1).

(13) wiʔ+s+əlk'+fw's+m He got done tying something.

-f- joins the formative taʔxʷ- to noun bases to form verbs of the ‘get-something’ types (section 4.2.2).

(14) kn_əaʔxʷ+t+cɪtxʷ I got a house.

A. Mattina (1987, 1994) refers to -m- as a stem-formative. This may be the -m- that is occasionally found in desiderative stems, as in (15a).

(15) a. kn_n+paƛ+m+fls I want to hunt.

b. kn_n+xʷy+fls I want to go.

It also occurs in many stative bases that end in -(s)cút, e.g. qʷəm'+m+scút ‘be pitiful’ and siy+m+scút ‘be at one’s best’.

One also finds spurious reduplications or inserted segments that arise from folk etymology, reanalysis, or misperception. Though presumably sporadic, these empty morphs can extend beyond a single form, and affect a small lexical domain, as in the case of stems having to do with hitting. The stems in (16) are agentive transitionals, while those in (17) are anticausative.

(16) a. kn_sp’am I hit something.

b. sp’nt-fn I hit it.

c. k+sp’=ic’aʔ-n I hit it on the body.

d. k+sp’=ús-n I hit him in the eye.
In (17), the anticausative formative -(V)C₂ reduplication indicates that the subject is a patient, rather than agent. Yet one etymologically-related stem has -(V)C₂ reduplication even though the stem meaning is transitional, not anticausative.

(18) sp’+ap’=q(n)+nt-xʷ You hit it on the head.

The lexicalized reduplication in (18) is also found in the nominal derived from (18) with the nominalizer -tn.

(19) sp’ap’=qn+tn salmon club

We would expect a salmon club to be ‘something one hits (salmon) with’ rather than ‘something one gets hit with’. The reduplication of the final root consonant is inherited from the input verb, and it does not contribute semantically or syntactically to the noun stem.

5.1.4 Form-function class IV. There are also many-to-one relationships between form and function in Okanagan. Some formatives serve more than one semantico-syntactic function. An example of this phenomenon is the suffix -st. This suffix is found at the right edge of open transitional stems (section 2.2.2.2) (the stem is bracketed).
I usually select it.  

Stems like that in (20) have these characteristics: 1) they are transitive, 2) they have the Event Structure \([P,S]_T\), and 3) they are the input stems for the imperfective counterparts of closed transitionals. A stem must have \(-st\) to have these properties. However, there is a second semantico-syntactic function of \(-st\). In other stems, \(-st\) is the formative used to form causative stems, as in (21).

(21)  
\(t'ux^*t+st\)  
\(-n\)  
\(fly(caus)\)  
\(1sERG\)  
I made it fly.

Open transitional stems always carry the customary sentential aspect prefix \((a)c-\), as in (20). The causative stem occurs in either perfective aspect, as in (21), or customary aspect, as in (22).

(22) \(ac-\)  
\(t'ux^*t+st\)  
\(-n\)  
\(cust\)  
\(fly(caus)\)  
\(1sERG\)  
I usually fly.

Differences in form between open transitionals and causatives are neutralized when both are in customary aspect. However, it is clear that the two functions are separate because they are expressed in two different stem aspect paradigms. The open transitional regularly has a closed transitional counterpart (with the suffix \(-nt\) (23). The causative stem does not have a closed transitional
counterpart (24).

(23) \( kəm'kəm' + nt \) -\( in \)  
\( (ctr) \) 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 2.2.2.6) and the default stem aspect of Transition bases (section 3.4.1.1). The prefix \( k\text{-} \) marks \( N \rightarrow V \) 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:
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 accommodated by lexical and inflectional paradigms that constrain word formation.

5.1.5 Form-function class V. Even where a formative conveys both the semantics and syntactics of a function, that function may also be expressed through other formatives. The various morphological expressions of anticausative stem aspect are a good example of this. Recall that the formatives of the anticausative stem include -(V)C₂ reduplication, the suffixes -(V)p and -(t)witw", the infix -ʔ-, or ∅. This range of formative types and shapes cannot
be explained phonologically. However, this set of affixes is united by a common function, which we might not fully recognize if form were the only criterion for identifying a morphological category. Two other semantico-syntactic functions that utilize more than one formative are transitional stem aspect (-nt, -st, 0), and stative stem aspect (-t, -(n)cút, -(s)cút, -üř, and -ümn).

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 0 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.\textsuperscript{2} Lexemes, therefore, are stored in the lexicon, regardless of their internal structure.\textsuperscript{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.

\textbf{5.2 Lexeme classes in Okanagan.} I refer to underived lexemes as \textit{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

\textsuperscript{2}Pustejovsky 1995 distinguishes \textit{contrastive ambiguity} or 'the essentially arbitrary association of multiple senses with a single word' from \textit{complementary polysemy}. Complementary polysemy occurs when two words have logically-related senses, as with \textit{lamb} in \textit{The lamb is running in the field} and \textit{John ate lamb for breakfast} (Pustejovsky 1995:31, example (16)). It is my impression that Okanagan has far less complementary polysemy than does English.

\textsuperscript{3}I am not sure if inflected forms, i.e. grammatical words are stored in the Okanagan lexicon. I leave this issue for future research.
binary features $[±E]$ and $[±C]$. Four feature matrices were possible based on these features, and all four were realized, indicating four base classes that I labeled as follows:

(26) $[+E, +C]$ Transitions  
$[+E, -C]$ Processes  
$[-E, +C]$ States  
$[-E, -C]$ Entities

Because, cross-linguistically, relevance to time and/or change is the property of prototypical situations, I proposed that Transitions, Processes, and States are subtypes of situations in Okanagan. Entities contrast with situations in not coding temporal information or change. The labels for the situation subtypes come from Pustejovsky's 1991 typology of situations. Pustejovsky posits three prototypical Event Structures that are projected from a wide variety of lexical conceptual structures. The Event Structure prototypes are given in (27).

(27) 

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).
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)).
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.
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. On the other hand, the Unaccusative Hypothesis is too broad in that it predicts three argument structure classes (unergative, unaccusative, and transitive), while Okanagan has only two, transitive and intransitive.

Okanagan’s non-conformity with respect to the Unaccusative Hypothesis will not surprise some linguists who have questioned the viability of the Unaccusative Hypothesis in the first place (e.g. Van Valin 1987, Grimshaw

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4 Problems with the Unaccusative Hypothesis have surfaced in other Salish languages. Gerdts 1991a finds that the class of putative unaccusatives in Halkomelem consists of three subclasses determined by aspectual criteria. Thomason et al. 1994 do not find support for the Unaccusative Hypothesis in Montana Salish.
1987 and sources therein). Actually, the problem with the Unaccusative Hypothesis may be a general problem for all lexical classifications that are based primarily on syntactic classes. Pinker (1989) argues that children do not acquire argument structure alternations from syntactic evidence alone. For example, in order to learn that *give* has two argument realizations (*Give Mary the book; Give the book to Mary*), but that *donate* has only one (*Donate the book to the library; *Donate the library the book*), children must generalize on the basis of non-syntactic evidence, else the argument structure possibilities of *donate* would change in a single linguistic generation. Levin and Rappaport (1988) question the learnability of the unergative/unaccusative distinction in English given the 'rather paltry' overt evidence to which a child might be exposed. Levin and Rappaport conclude that more sophisticated lexicosemantic characterizations of verbs can explain the insights of the Unaccusative Hypothesis as well as the regularities in lexical representation across the lexicon. Clearly, we need more detailed lexico-semantic descriptions among the Salish languages, regardless of their theoretical implications.

When we combine the empirical and theoretical problems of syntactic classification with the evident mismatches between form and function in morphology, the natural place to look for explanation is in the lexicon. In this lexeme-based treatment of word formation, I have rejected the idea that the
lexicon is 'a list of basic irregularities' (Bloomfield 1933). Rather, I have taken the position that the lexicon is full of important lexicosemantic regularities, including patterns within lexical conceptual structure and in the mapping of LCS to Event Structure. As both a database and projector of syntax, the lexicon can be conceived of as the store of both idiosyncratic and generative and lexical semantic knowledge. Because the information in the lexicon is expressed through morphology, it is important to understand the interface between the lexicon and the morphological component.

In this thesis, I have focused on the lexico-semantic properties of a handful of derivational and inflectional categories, with reference to the formatives that express them. There are four major areas that I have left for future research that bear on the central proposals of this thesis. First, I have left untouched the description of how morphology interacts with phonology. Given my assumptions, I trust that the morphophonological interface will not contravene the morpholexical proposals I have made. I am hopeful, in fact, that morphophonological details will support my contention that bases lack internal morphological structure.5

Second, this thesis lacks discussion of the historical dimensions of Okanagan word formation, except to exclude them. This is not an oversight so

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5Black (1996) provides morphophonological evidence that bases lack internal morphological structure in Spokane Salish.
much as it is part of my plan not to confuse etymology with predictive word formation rules. Nevertheless, I assume that historical research is critical to understanding the sources of mixed paradigms, paradigmatic syncretism, homophony, semantic shifts, reanalyses, and other morphological phenomena that have attracted attention in the Salish literature.

Third, each of my lexeme-based proposals needs to be studied from a comparative perspective. There is a significant database for comparative study within the Southern Interior Salish group; for some of the Southern Interior languages there are still fieldwork possibilities. Because my assumptions differ slightly from those of others working on SI languages, it is not possible to quickly peruse a dictionary or grammar and draw comparative conclusions. Slow and objective work is needed to discover, for example, if some SI lexicons are organized on the basis of canonical (C)CVC(C) root morphemes, or if inflectional classes are organized differently from language to language. I expect to find differences in the semantic details of the morphological categories from language to language. These would not in themselves cast doubt on my analysis of Okanagan. However, the Salish literature reveals how hotly contested is the noun/verb distinction across the family, and we may eventually be persuaded that the noun/verb distinction does not exist in some members (Jelinek 1995). The question of just how much languages differ
within the family or subgroup will have to be addressed after we have very
detailed descriptions of most of the Salish languages.

Finally, the fourth area of research that bears on word formation is
child language acquisition and psycholinguistic research. Certainly the errors
and developmental patterns of children learning Okanagan would provide clues
to the nature of word formation in Okanagan. Unfortunately, there are no
children that I know of who are learning Okanagan in a natural context. We
have to hope that current language revitalization programs will eventually
result in child learners; until then, nothing in this area can be done. Direct
experimentation with adult Okanagan speakers is more probable, although I do
not know of any such studies having been carried out yet for any Salish
language. The question of what is stored in the lexicon and how it is stored
could be addressed by psycholinguistic experiments. It would also be relevant
to know if the degree of rote processing among Salish speakers differs from
what has been described for speakers of other languages (Bybee 1987). We can
proceed in our study of morphology either as lexeme- or morpheme-based, but
it would be helpful to see if psycholinguistic experimentation would support
one view over the other.

It may be that only through psycholinguistic research will we gain a
window onto what a word is in Okanagan. In my fieldwork, I frequently tried
to string morphemes together into complex words. I often heard the comment, "You could say that, but that's not a word." Could all Okanagan words be, then, just the sum of their parts? I have contended here that they are not. However, there is much to be done, both language-specifically and cross-linguistically, to find out 'what's in a word'. In my view, developing an answer to the question 'What's in a word?' is a crucial part of a larger effort to represent the particular genius of Okanagan, while there are still speakers to guide the way.
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Appendix I. The phonemic inventory of Okanagan

Consonants:

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>LD</th>
<th>LA</th>
<th>LA</th>
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<td>glottalized</td>
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</tr>
</tbody>
</table>

[B=bilabial, LD=laminodental, LA=laminoalveolar, V=velar, U=uvular, L=laryngeal]

Okanagan stops are voiceless, occurring 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.