A COMPARATIVE CONCEPTUAL GRAMMAR OF BELLA COOLA AND LUSHOOTSEED

by

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We accept this thesis as conforming
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ABSTRACT

Bella Coola and Lushootseed are two members of the Salishan family of Native American languages spoken in British Columbia and northern Washington State; Lushootseed is a part of the fairly numerous Coast-Salish branch of the family while Bella Coola, although spoken by a coastal culture, represents a phylogenetic isolate and is perhaps the oldest offshoot of the Salishan group (Kroeber 1991). Although these two languages have been previously treated as being highly divergent, a good degree of underlying similarity is revealed by the development of a unified framework for the description of their grammars in terms of the morphosyntactic and communicative strategies they employ in the expression of meaning.

The first section of the thesis is an enumeration and characterization of the lexical categories of the two languages, including the conceptual nature of verbs, nouns, and nominalized clauses. The second section outlines and compares their syntactic structures, including the canonical simple clause, various types of relative and relative-like clauses, and verbless sentences. The analysis of these last constructions shows how the thematic structure of the sentence (Halliday 1970) determines the speaker's choice of syntactic structures, with the most salient aspect of the event being accorded most-prominent (predicate) status. Also central to the discussion is the nature of deictics in these languages, which appear to function both as pronouns and the heads of nominals. Together with the thematic structure, the nature of deixis influences discourse, topic-selection, and other areas of the grammar such as the semantics of relativization and the propositional structure of NPs. In addition, attention is paid throughout the discussion to the on-going debate on certain controversial topics in Salishan—particularly those of predicate structure of verbless sentences (Kinkade 1983), noun/verb distinctions (Kinkade 1983, van Eijk & Hess 1986), and transitivity (Hess 1994)—and some effort is made to draw cross-linguistic parallels which are often lacking in the Salishan literature, which has hitherto favoured language-specific analyses and idiosyncratic terminology over the elucidation of more generalizable principles that govern a wide range of languages.

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Special thanks are also owed Dick Hudson—who has taken hours of his time to wonder with me at the syntactic peculiarities of Bella Coola and Lushootseed—and, of course, Igor Mel'čuk, whose wisdom, patience, and eagerness to walk me through the intricacies of his theory were instrumental in the genesis of this work.

Dedication

For Tatiana, whose love and skepticism
have kept it all in perspective.

1 Introduction

This work is an attempt at a partial comparative grammar of Bella Coola and Lushootseed—two members of the Salishan family of Native American languages spoken in British Columbia and northern Washington State. While Lushootseed is a part of the fairly numerous Coast-Salish branch of the family, Bella Coola—although spoken by a coastal culture—represents a phylogenetic isolate and is perhaps the oldest offshoot of the Salishan group (Kroeber 1991). Of the two, Bella Coola departs most significantly from the general pattern of Salishan languages, having been heavily influenced by the neighbouring Wakashan family, and up until now it has been described in very different terms from Lushootseed—which in its turn has been analyzed in a manner distinct from a number of it closer relatives. By attempting to develop a unified framework for the discussion of these two languages, I hope to shed light on some common underlying morphosyntactic and communicative strategies they employ in the expression of meaning. To the extent that this has been successful, it may be worthwhile to consider how well this unified treatment can be extended to other members of the group.

I will begin the discussion with an enumeration and characterization of the lexical categories of the two languages, including the nature of verbs, nouns, and nominalized clauses, the distinctive properties of which play an essential role in the syntax considered in the second part of the thesis. The issue of lexical category is a contentious one in Salishan studies, due in large part to the ability of these languages to assign syntactic roles to words with little apparent regard for the lexical category to which they belong. This has led a number of researchers (*e.g.* Kuipers 1968; Kinkade 1983; Jelinek 1993b) to propose that Salishan languages—and perhaps neighboring Chemakuan and Wakashan—are unique in not respecting the hitherto universal (Chomsky 1965) distinction between noun and verb. It will be argued in Section 2, however, that much of the motivation for the elimination of the noun/verb distinction stems from an overly structuralist approach to language and ignores the fundamental conceptual bases of lexical categories, which are used in the remainder of the section to characterize the lexical

inventory of Bella Coola and Lushootseed and to explicate a number of grammatical processes which generate the lexical units needed for the discussion of the syntax in Section 3. In this section, the principal clause structures of the two languages are analyzed and compared, including the canonical simple clause, various types of relative and relative-like clauses, and verbless sentences. The discussion of the simple clause includes an evaluation of the terms "subject" and "object", which have been avoided by the primary researchers on both Lushootseed (Hess) and Bella Coola (Davis & Saunders). Another problem that receives a great deal of attention in Section 3 is that of the verbless sentence. Salishan languages in general show a propensity for forming sentences with predicate nominals which, in the absence of a copula, surface as verbless sentences. While such sentences—with and without copula—are attested in a wide range of the world's languages, very little work has been done in examining their syntax, which in Lushootseed and Bella Coola will be shown to be intimately linked to what Halliday (1970) has dubbed the "thematic structure" of a sentence. Thematic structure is, in essence, the division of the sentence into "topic"—"what the sentence is about"—and comment or "rheme"—"what is being said about the topic"; in Bella Coola and Lushootseed, it is this structure that determines the speaker's syntactic choices, with the rhematic portion of the sentence—be it a verb or be it a noun—serving as the sentence predicate.

The remainder of Section 3 is dedicated to a direct comparison of the syntax of complex sentences in the two languages which—in spite of some superficial differences in distribution of sentence-types, word-order, and morphology—are shown to be highly similar in terms of their fundamental organization. This is particularly true of the structure of sentences in which embedded clauses play the roles of arguments of a verb or of modifiers of a noun. These sentences not only demonstrate a great degree of convergence in what structures are and are not permitted, but also provide important clues as to the nature of deictic elements in these languages. A great deal of controversy surrounds the status of determiners (of which deictics form a subclass) in natural language and this issue has sparked debate among linguists from a wide variety of the-

oretical persuasions. The key issue in this debate is the nature of the relationship between noun and determiner. The traditional analysis (Chomsky 1965; van Langendonck 1994) holds that in a noun – determiner string, it is the noun that is the head; recently, however, that view has been challenged and a number of researchers (Hudson 1984; Abney 1987) have proposed the opposite structure, with the determiner as the head—an analysis that has found much favour among Salishanists (*e.g.* Jelinek & Demers 1994; Davis & Matthewson 1995a). The facts of Bella Coola and Lushootseed seem not only to support this so-called "DP" (Determiner Phrase) analysis, but also tend to favour an even more radical proposal made by Kinkade (1983) that determiners function as the heads of dependent nominals in precisely the same way that a noun functions as the head with respect to a modifying element such as an adjective or relative clause. While it may be going too far to claim identity of DP and relative clause (as Kinkade seems to do), the fact remains that there is a high degree of structural, and hence (one would expect) semantic, convergence between the two.

While theoretical issues naturally play a role in the discussion here, the focus of this work is above all an elucidation of the data, and to facilitate this I have chosen to make use of two distinct but complementary syntactic frameworks—Mel'čuk's (1988) Meaning-Text Model (MTM) and Langacker's (1987, 1991) Cognitive Grammar (CG). Both of these theories depart significantly from the predominant theoretical framework in North American syntax, Government and Binding Theory (GB), although each in different ways. Unlike GB, which relies on notions of phrase-structure and constituency to generate linguistic structures, the MTM belongs to the tradition of dependency grammars, which represent the structure of the sentence in terms of the grammatical relations between words; the Meaning-Text Model, as its name implies, works on a principle of two-way mapping between meaning (semantics) and text (phonology) which passes through a series of intermediate stages in the syntax and morphology. As a "generative" grammar which seeks to characterizes "all and only" the grammatical sentences of a language, the MTM is largely descriptive in nature and as such is superbly suited to the identification and

analysis of syntactic structures, to which end it is employed in Section 3 below. Cognitive Grammar, on the other hand, does not lay claim to generativity but instead seeks to conceptualize the structure of language through imagery and appeal to general cognitive processes; CG works by building bipolar (semantic-phonological) compositional representations into which units of the sentence (all of which are considered to be meaningful) are combined. While not ideal for the description of language in terms of its structure, CG is eminently suited to revealing the conceptual bases of linguistic categories and forms and providing semantic explanations of sometimes impenetrable syntactic facts. What these two frameworks have in common—and what distinguishes them from structuralist approaches to language—is the belief that linguistic structure is in essence symbolic and that it is the semantic or conceptual content of an utterance that determines its surface form. This is what I refer to here as the "conceptual" approach to grammar.

My principle sources of data for this discussion have been (for Bella Coola) the published works of Davis & Saunders (in particular Davis & Saunders 1978, 1980, and 1984a) and Nater (1984) and (for Lushootseed) the work of Hess (especially Hess 1976, 1993b, and Hess & Hilbert 1976), including some unpublished texts which Dr. Hess has been kind enough to provide me. All examples are cited in their original sources with the exception of certain sentences attributed to Kroeber (1991), where these are used in the same context in which he has presented them; all examples taken from prepared texts are provided with a line number. Examples cited from Hess & Hilbert (1976) are also given with a volume number in upper case Roman numerals. While striving to remain faithful to the original sources, I have standardized the orthography of the data to that of the system used by Hess and by Bates *et al.* (1994) for the transcription of Lushootseed, which differs only in small respects from that adopted for Bella Coola by Davis & Saunders; this system conforms closely to the IPA conventions used widely among Americanists and should present no problems for the reader. In glossing data, however, my practice has been to choose the English gloss that best fits the meaning of the original sen-

tence not only in terms of "propositional" content, but also in terms of thematic—and, where possible—syntactic structure. On more than one occasion this has meant departing from the gloss provided in the original source. As far as terms go, I have tried to keep as closely as possible to the morphological terms used in the original sources, except where terminological distinctions have important consequences for the syntactic analysis (as in, for example, the term "passive" applied to Lushootseed); there are, however, more than a few places in the discussion of Bella Coola where marked discrepancies exist between the glosses of individual morphemes provided by Nater on the one hand and by Davis & Saunders on the other: where choice of terminology does not seem to be crucial, I have generally opted for the term whose meaning seems more transparent. In the discussion of the syntax, I have by and large abandoned existing terminology in favour of those terms for which I argue in this text, although in most cases this represents the re-introduction of familiar terms in place of unusual ones: previous discussions of Salish have favoured language-specific analyses and the use of idiosyncratic terminology over the elucidation of more generalizable principles that govern a wide range of languages. In departing from this tradition, I hope to have created a model for Bella Coola and Lushootseed more in line with the structural descriptions of other languages of the world.

2 Lexical Categories

As a first step in the grammatical description of Bella Coola and Lushootseed, it is necessary to define the basic lexical units whose combination and recombination form the basis of their syntax: unfortunately, the definition of lexical categories in Salishan languages is no mean feat. In this language family, traditional approaches to the lexicon based on the syntactic distribution of lexical items are frustrated by the lack of extensive morphological marking of lexical category and the ability of these languages to use any of various lexical categories to fill syntactic roles that, in Indo-European languages, are reserved for a specific class or classes of words. This unusual flexibility has led a number of researchers to make radical claims about the lexical inventory of Salish. Kinkade (1983), for instance, proposes that the lexicon be divided only into "predicates" and "particles" (words that can not be predicates), while Nater (1984) argues for a fundamental distinction in Bella Coola between "transitive" and "intransitive" roots. Both of these authors argue that the morphology and syntactic distribution of lexical items provides evidence only for these distinctions, leaving no role in the languages for the more traditional distinctions between "verb", "adjective", and "noun". Such extreme structuralism, however, begs the question of the fundamental underlying meaning of these traditional lexical categories—that is, by defining the class to which a word belongs solely on the basis of its syntactic distribution, the idea of lexical category loses any semantic or conceptual basis that it might have had. An alternative to this would be to approach the whole issue from the opposite direction and to begin by defining lexical category on just such a conceptual basis, then allowing these considerations to drive the syntax. As will become clear in the course of the discussion below, when applied to Lushootseed and Bella Coola this approach delivers some interesting results and shows the two languages not only to be more similar to each other than might have been hitherto supposed, but also reveals a great degree of coincidence between the syntactic patterning of our conceptually-defined lexical categories and that of their counterparts in a variety of languages.

In terms of theoretical approach, what is needed to define lexical categories on a conceptual basis is a framework which in some way equates the structural properties of a language—including its lexical categories—with its semantics. One such approach is Cognitive Grammar (Langacker 1987, 1991). Cognitive Grammar (CG) treats language as a product of the ordinary cognitive functions of the human mind, and it is founded on the notion that the grammatical forms and processes of language are fundamentally symbolic and meaningful. Because of this direct link between form and meaning, CG posits no independent levels of syntax or morphology, but instead treats the syntactic properties of language as a product of the combination of strictly bipolar linguistic units (morphemes), one pole representing the phonological characteristics of the unit and the other its semantic characteristics. The semantic pole of a morpheme represents a link between a conceptualization or idea in the speaker's mind and its counterpart in the real world and corresponds to the logician's idea of a predicate in that it serves to establish a (one to one) relationship between a morpheme's phonological pole and its referent. Langacker (1987, 1991) thus uses the term "predicate" to refer to the semantic pole of a single morpheme and "predication" to refer to the semantic pole of any expression—in the discussion that follows, however, I will extend the latter term to include the single morpheme as well and reserve the term "predicate" for use in its more common syntactic sense.[1] A predication will generally represent a class or "type" of entity (*e.g.* the semantic pole of "fish" represents the class of things which are felt to be sufficiently related to the prototypical fish) and all languages have processes whereby a "type" can be linked to a specific "instance" (that is, the type "fish" can be linked to a specific object which is thereby identified as an instance of the category "fish"). An instance of a type can be further specified via a process called "grounding" which serves to "establish the location" of an instance with respect to the "ground" of the utterance—"the speech event, its participants, and its immediate circumstances" (Langacker 1991: 548). For a

[1]The reader should be forewarned that the CG literature—and the work of Langacker in particular—is filled with a great many new terms and idiosyncratic uses of old ones. I have tried to keep this to a minimum here and make distinctions and definitions as clear as possible when these are likely to depart from the reader's expectations. Potentially confusing or unfamiliar terms are defined in the Glossary at the end of this work.

noun or nominal expression, grounding is usually accomplished by means of a determiner or deictic (in those languages that have them); for a clause, grounding is accomplished by the realization of tense, modality, or (in the case of Bella Coola and Lushootseed, which have neither) the full specification of all event-participants. Thus, the semantic pole of an object or event in itself constitutes the representation of a type ("fish" or "sitting") which can then be linked to a particular instance of that type ("guppy", "his sitting"); this instance can then be converted into a nominal ("that guppy") or a finite clause ("he sat") to form a grounded instance—an instance distinguished from all others and situated in time and/or space with respect to the knowledge of the speaker and hearer.

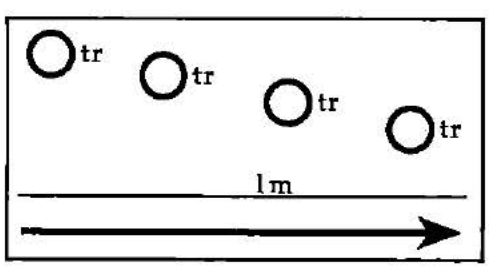
Another fundamental notion of Cognitive Grammar—and one that is of special relevance here—is the basic distinction it makes between "things" on the one hand and "relations" on the other. This conception is founded on what Langacker terms the "billiard-ball" model of the universe—the cognitive construal of the universe as consisting of discrete objects or "things", their relations (spatial, temporal, etc.) to one another, and their energetic interactions over time. Because the units of language in CG must reflect the basic cognitive organization of this view of the universe, the predications of individual morphemes must reflect one of the two basic categories—"things" (nouns) or "relations". Relational predications are further subdivided into atemporal (adjectives, adverbs, prepositions) and temporal relations (verbs). In terms of representation, the semantic pole of an object or "thing" is realized schematically as a plain circle; the representation of relational predications, on the other hand, is somewhat more complex as it necessarily involves at least two entities—a "thing" which serves as the clausal "figure" and some other entity whose relation to the clausal figure is the meaning of the predication. This is shown schematically in (1). The predication in (1)(a) is one which expresses the relation between an object—the clausal figure or "trajector" (tr)—and some other entity or "landmark" (lm) which is not itself a "thing"; entities which are not "things" that serve to characterize a trajector are referred to as "referential landmarks". Examples of this type of

(1) Semantic poles of relational predications

relational predication include colours (which represent the location of the trajector on the spectrum of colours—see (51)(a) in Section 2.3.1 below), other adjectives expressing size, age, quality, etc., and most adverbs. The predication in (b), on the other hand, expresses a relation between two objects, the trajector—who represents the principle focus of the expression—and the landmark, whose relationship to the trajector constitutes the meaning of the morpheme. The most common representative of this type of atemporal relation in English is a preposition such as "over" in "the canopy over the doorway" which serves to locate the trajector— "the canopy", realized in ordinary syntactic terms as the head of the NP—relative to the landmark ("the doorway", realized as the complement of the prepositional phrase (PP)). Atemporal relations may be even more complex than those represented in (1) and in principle there are no limits to the number of entities ("things" and "relations") that they may encompass (as in the English "between" which requires three figures or "among" which requires four or more).

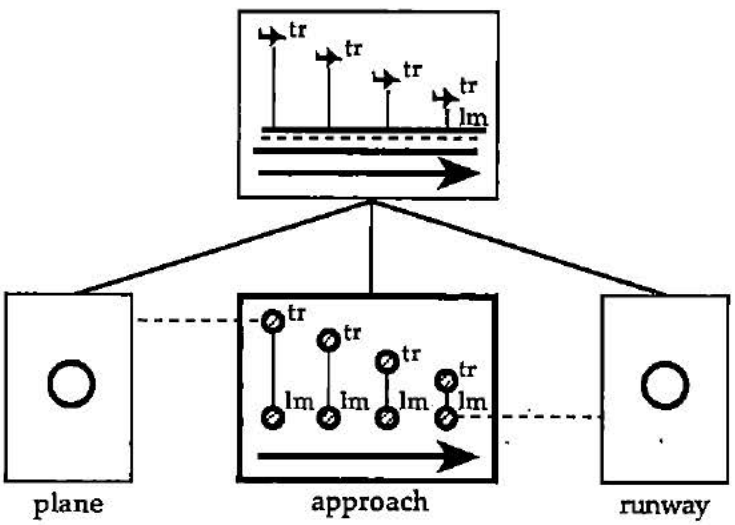
Like atemporal relations, a verb also expresses a relation between an object (its trajector) and some sort of landmark—verbs, however, are conceived of as temporal relations and so are generally represented as a series of component relations or states over time, as in (2), which represents the semantic pole of the verb "fall". Here the trajector is represented at various points in time (shown by the horizontal arrow) during its descent towards the landmark, which would

(2) Semantic pole of "fall"



be conceived of as some unspecified surface or point below the original position of the trajector.[2] Naturally, the landmark of a relational predication could just as easily be another object, as in the verb "to approach", where the changing position of the trajector is defined with respect to the object being approached. Grammatically, the trajector of a verb will be realized in a clause as the grammatical subject and the landmark (if it is a thing) will typically be realized as the direct object. This is illustrated in (3), which represents a partial "compositional" schema of the sentence "the plane approaches the runway".

(3) "the plane approaches the runway"



In this diagram, the schematic form of the verb "approach" is "elaborated" by the specification of the participants in an instance of "approaching"—in this case "plane" and "runway", which are represented as schematic "things" at the first (lower) level of composition. The participants are incorporated into the schematic form of the verb by being associated with specific elaboration-sites (the shaded circles) with which they are placed in one-to-one correspondence (indicated by the dashed lines). The result is the composite predication shown at the next highest level, which has incorporated the meaning of the two nominals into that of the verb.

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[2]Note that these particular characteristics of the landmark are not explicitly represented in the diagram beyond the fact that the notion of "below" is implied by its physical layout on the page. This is typical of representations in CG, which do not strive to be complete (or even unique) but instead are intended as graphic shorthand devices for the representation of key concepts in the context of a particular discussion.

In English, the next step in the composition of the event as a whole would be the specification of a particular and unique instance of "the plane approaching the runway" by grounding the clause in time and modality.

Note that in the diagram in (3) it is the meaning of the verb which incorporates the meanings of the two nominals, rather than the meaning of one of the nominals which incorporates that of the other two (which might happen in modifier constructions such as "the plane that is approaching the runway"). In technical terms, this means that in (3) the verb is the "profile determinant" (as indicated by the dark box which surrounds it in the first level of composition) and so it is the "profile" of the verb that takes precedence over the profiles of the other two predications. Consider the following set of English sentences:

(4) (a) The glass broke.
(b) A hammer broke the glass.
(c) A man broke the glass with a hammer.
(d) The glass was broken with a hammer.
(e) A hammer was used to break the glass.

Each of these sentences could be used to describe the same event—one in which a man picks up a hammer and smashes a glass with it—yet they all differ in the way in which they present the event in question by profiling it in different ways. Sentence (a), for instance, can be said to profile only the glass because no other participant is specified, whereas the profile of (b) includes both the glass and the instrument used to destroy it and (c) includes an additional participant, the wielder of the hammer. While the profile of (d) specifies the same number of participants as (b), the two sentences differ in the relative importance or "saliency" accorded these participants: the trajector (primary clausal figure) of (b) is the hammer, realized as the subject, whereas in (d) it is the glass. Similarly, (e) resembles (b) both in the participants involved and in their relative saliency, but (e) makes explicit the role of the hammer as an instrument, leaving open the possibility of elaborating the unprofiled agent (the man), whereas in (b) this is simply not possible. Differences in profiling and construal play a crucial role in Cognitive Grammar and figure prominently in many aspects of the discussion below.

2.1 Noun-Verb Distinctions

One of the more contentious issues in the study of Salish (and the neighbouring Wakashan and Chemakuan) has centred on the question of whether or not a fundamental distinction exists between the categories of verb and noun in these languages. While it is often assumed that such a distinction is a universal one (*e.g.* Chomsky 1965; Schachter 1985), a number of researchers (*e.g.* Kuipers 1968; Kinkade 1983; Jelinek & Demers 1994) have claimed that this generalization does not hold for the Salishan family as a whole, and specific assertions to this effect have been made about Bella Coola by Nater (1984). Lushootseed data is used by Kinkade (1983) to argue against noun-verb distinctions, although it is also used by van Eijk & Hess (1986) to demonstrate the existence of these categories, a position that seems to be finding some favour in a number of more recent works (*e.g.* Kroeber 1991; Mattina 1994; Demirdache & Matthewson 1994; Davis & Matthewson 1995a). The central and most prevalent argument for the lack of a noun-verb distinction in Salish and other languages of the Northwest has always been an essentially syntactic one, based on the ability of "nouns" and members of other "non-verbal" lexical categories in these languages to function as sentence predicates. Kinkade (1983) offers examples from a variety of Salishan languages, including:[3]

(5) Kalispel

(a) p̓oxút+s
father+3po
"[he is] his father"

(b) an+p̓oxút
2po+father
"[he is] your father"

(c) kʷ+in+p̓oxút
2s+1po+father
"you [are] my father"

Spokane

(d) ppátiqs ɬu skʷé+t+s
D name+[strative]+3po
"his name [was] Ppátiqs"

[3]Sentences in Salish are by and large predicate-initial. This is discussed in more detail in Section 3.1.

(e) nt̓əláne? łu? sx^{w}+k̓^{w}ú l+mn
D [agt]+do+[instrument]
"the helper [was] Nt̓əláne?"

(Kinkade 1983: 28 – 29)

This type of sentence is also well attested in Bella Coola and Lushootseed:

(6) Bella Coola

(a) man+c
father+1s
"I [am] a father"

(b) ?inu ti+man+c+tx
2s D+father+1po+D
"my father [is] you"

(Nater 1984: 33)

(c) ti+?imlk+tx ti+sp̓+is ci+xnas+cx
D+man+D D+hit+3s-3s D+woman+D
"the one the woman is hitting [is] the man"

(Davis & Saunders 1978: 39)

Lushootseed

(d) stubš čəd
man 1s
"I [am] a man"

(e) stubš
man
"[he is a] man"

(f) sbiaw ti ?uǰ^{w}
coyote D go
"the one who goes [is] Coyote"

(van Eijk & Hess 1986: 324)

In each of the sentences in (5) and (6), a nominal element serves as the sentence predicate, which Kinkade takes as evidence that these nouns are in some sense "verbal": given that there is no way to classify words as either nouns or verbs based on their ability to function as predicates, he goes on to argue, there is no syntactic criterion on which a noun-verb distinction can be made. Even if there were no syntactic evidence for the distinction, however, this is not evidence for the absence of the distinction itself, and much of the force of Kinkade's argument rests on the tacit equation that he makes between the terms "verb" and "predicate" (an equation made explicitly by van Eijk & Hess 1986), something which is far from clear cross-linguistically.

While English and most Indo-European languages restrict the role of predicate to verbs or to non-verbal elements dependent on a copula, the use of nouns and nominals by themselves as sentence predicates is well-attested in a wide variety of languages such as:

(7) Tagalog
(a) Mga guro sila
[plural] teacher 3p
"they [are] teachers"

(Schachter 1985: 7)

Arabic
(b) dool sawwa?ín wiíšíin
those drivers bad
"those [are] bad drivers"

(McGuirk 1986: 28)

Buriat (Mongolian)
(c) baabaj+mni aduušan, ežy+mni xonišonjum
father+1po horse•breeder mother+1po shepherd
"my father [is] a horse-breeder, my mother [is] a shepherd"

(Bertagaev & Tsydendambaev 1962: 55)

Nanay (Tungusic)
(d) ej naj aloosimdi
this man teacher
"this man [is] a teacher"

(Skorik 1968: 146)[4]

In all of these examples a noun (and to my knowledge no one has proposed that they are anything else) serves as an equative predicate in precisely the same sort of structure as that illustrated in Salish in (6) above. Thus, while Kinkade is correct in his assertion that nouns are predicative in Salishan, they are predicative in many other languages as well, many of which (*e.g.* Buriat and Nanay) have complex systems of verbal and nominal inflection which clearly distinguish the two classes (Skorik 1968).

In addition to the ability of nouns to function as predicates, another characteristic of Salish that has been made a great deal of is the relatively free application to both verbs and nouns of a number of morphological and grammatical elements which are highly specific to one or the other of these lexical categories in European languages. Kinkade (1983) points out that deictic

[4]The orthography of the previous two examples is uncertain, as they have been transcribed from a Cyrillic-based system into the standard English transcription for Russian.

elements—usually associated with nominals alone—can be applied to any word in a Salishan sentence, be it "verb" or "noun":

(8) Lushootseed

(a) ti?iɬ sqʷəbay? ti ?u+čala+t+əb ?ə ti?iɬ wiw̓su
D dog D [pnt]+chase+[caus]+[md] P D children
"the one the children chased [is] the dog"

(Hess 1993b: 128)

Upper Chehalis

(b) ?it wáɬ+ƛ̓aq+n tat ?ac+mə́lk̓ʷ+ɬ
D loosen+tie+3p D [stat]+wrap+[intransitive]
"he unwrapped the package"

(Kinkade 1983: 35)

As can be seen in (8)(a), the Lushootseed deictic elements *ti?iɬ* "that" and *ti* "the" may be applied both to words that we would expect on semantic grounds to belong to the class "noun"—*sqʷəbay?* "dog", which constitutes the sentence predicate—and to an expression which seems to be "verbal"—*?učalatəb ?ə ti?iɬ wiw̓su* "chased by the children". Similarly, in (b) the deictics *?it* "this" and *tat* "that" are applied to verb phrases, one of which functions as a complement and the other of which functions as a predicate, supporting Kinkade's argument that deictics do not serve, as they do in English, to distinguish the lexical category of their heads. This does not, however, mean that they do not in some sense serve to distinguish syntactic category—that is, that verbs (or, more accurately, verb phrases) bearing deictics are used to fill nominal roles in a sentence and are, in effect, treated *syntactically* as nominals.[5] In Lushootseed and Bella Coola, this hypothesis is supported in part by the pattern of distribution of the deictics themselves, which are almost invariably found associated with sentence-complements, but are found attached to predicates very rarely and only in those cases in which the predicate is open to interpretation as a predicate nominal; if the same pattern holds true in Chehalis, this would point to a gloss of the sentence in (b) along the lines of "the it-is-wrapped [is] the he-unwrapped-it" or, more idiomatically, "the wrapped up one [is] the one he unwrapped".[6] Thus, while the occurrence of deictic elements with both "verbs" and "nouns" does—like the use of

[5]This position will be given some further justification in section 3 below.
[6]Kinkade (1983: 30) himself offers a similar gloss of *?actáwɬ tit ?acmə́lk̓ʷɬ* "the wrapped up one is big".

nouns as predicates—argue for the flexibility of lexical categories with respect to the syntactic roles which they may fill in a sentence, it does not in itself necessitate the abolition of these lexical categories altogether.

Another common source of evidence for the unity of verb and noun in Salishan comes from the distribution of a number of "aspectual" affixes which seem to apply to members of both categories whereas—once again on the basis of comparison with more widely known languages—these might be expected to be restricted to verbs. It should be noted, however, that the same type of evidence is pressed into service by van Eijk & Hess (1986) to demonstrate the opposite view, that nouns and verbs can be classified (in Lillooet and Lushootseed) into distinct morphological categories on the basis of their ability to take certain aspectual prefixes. Even Kinkade (1983) concedes that the distribution of such affixes is to a very large degree semantically-driven and so is not a reliable indicator of lexical class, although this position begs the question of the conceptual basis of the lexical categories themselves, something alluded to by van Eijk & Hess with reference to both aspectual prefixes and, most significantly, possessive morphemes. As might be expected, if the category of noun is taken as referring to the semantic class of "person, place, or thing" (van Eijk & Hess 1986: 320), only nouns occur with possessive affixes,[7] whereas verbs that appear in association with these affixes must also bear a prefix, *s-*, most generally classified in Salishan languages as a "nominalizer". According to van Eijk & Hess, the net effect of this prefix is to "freeze" an action and create a new (nominal) lexical item whose reference is the action or event as a whole, conceived of atemporally (as opposed to being conceived of as a process over time). As will be discussed in the following section, the process of morphological nominalization is used to create both new lexical items (Lushootseed *ʔəɬəd* "eat" > *sʔəɬəd* "food"; Bella Coola *qʷilac* "crush berries" > *sqʷilac* "wine") and to create more complex deverbal nominals when these are required to fill certain syntactic roles in a sentence:

[7]This last appears not to hold for Bella Coola, which has fused the possessive and the intransitive-subject paradigms (see 2.4.3 below), although this can be treated as morphological syncretism.

(9) Lushootseed

(a) ti?iɬ bibščəb ?i ti?iɬ su?suq̓ʷa?+s, tətyika, ti?iɬ ɬu+d+s+hubtu+bicid
D mink and D yoounger•cousin+3po D [irr]+1po+np+tell•story+2s
"what I will tell you about [is] Little Mink and his younger cousin, Tetyika"
(Hess 1993b: 175, line 5)

Bella Coola

(b) ti+s+nap+is ci+xnas+cx
D+np+give+3s-3s D+woman+D
"what he gave the woman"
(Nater 1984: 102)

The fact that such a process exists at all is a good argument for the existence of a distinction between verb and noun, without which the function of the *s-* morpheme would not be clear.[8]

The final argument for a noun-verb distinction in Salish, and perhaps the most compelling one from a conceptual or cognitive point of view, is the semantic argument touched on briefly in the preceding paragraph in the context of van Eijk & Hess's (1986) interpretation of the function and distribution of possessives and the nominalizing suffix. In Salish, just as in English, those words that denote people, places, and things in the real world are by and large those that take possessive affixes, most commonly appear with deictic elements, and most commonly (but by no means always or exclusively) serve the syntactic role of complement to a predicate. Words denoting actions or states serve most often as predicate and (generally) do not take a deictic in this role, and they can be combined with affixes expressing certain kinds of aspect semantically related to the notions of process and duration. In Cognitive Grammar, this conceptual distinction between noun and verb is a fundamental one. CG lexical categories are defined in terms of the semantic content or profile of the predication in question, the primary distinction being made between those predications that represent "things"—"a region in some domain of conceptual space" (Langacker 1987: 494) that may refer to an object, person, place, etc.—and those which profile a relation between such things and thus constitute a superordinate category subsuming verbs, adjectives, adverbs, and so on. The fact that, as van Eijk & Hess (1986) point

[8]Kinkade (1983) analyzes *s-* in Upper Chehalis as a marker of "continuative aspect". While there may be certain semantic similarities between this aspectual notion and the notion of a process construed as an abstract entity (see Section 2.2.2), the fact that the application of *s-* in Lushootseed and Bella Coola also causes roots to pattern syntactically and morphologically as nouns argues against its interpretation as an aspect marker.

out, the boundaries of the classes identified by syntactic and morphological criteria coincide so closely with these semantic categories argues strongly for such a division: if class membership in either of the two categories were arbitrary, then we would expect far more cross-over than we actually see—yet as things stand, words which are nouns in most of the world's languages tend to fall into one group while those things that are verbs (and adjectives) fall into the other. From a structuralist point of view, it is certainly true that the absence of clear morphological marking of lexical category and the flexibility with which Salishan languages use these categories in various syntactic roles means that words and roots in isolation are often ambivalent as to which lexical category they belong to; however, the appropriate category for a given word becomes readily apparent when the admittedly sparse structural evidence is combined with semantic criteria, allowing us to make the familiar and (probably) universal category distinction between verb and noun.

2.2 Morphological Nominalizations

As noted above, one reason to suppose that a real distinction between the lexical categories of noun and verb exists in Bella Coola and Lushootseed is the existence in these languages of distinctive, morphologically-marked processes for the derivation of syntactically nominal elements from verbs. Cross-linguistically Langacker (1991) identifies three classes of nominalization, each of which is distinguished from the other according to the organizational level of the clause at which the nominalization process occurs. The first class, which will be referred to here as "lexical nominalization", involves only the verb stem, forming a lexical noun from a lexical verb (for example, the derivation of *explosion* from *explode*) and the nominalized word is considered, like any other noun, as a generic type rather than a specific instance of the entity represented by the predication. The second class, "factive nominalization", involves the nominalization of a verb (*sans* tense and modality) and its objects and attributes—excluding the subject—and as such represents not a type of event but an ungrounded instance (that is, a particular event or type of event which has not been located in "conceptual space" by the speaker with

respect to time, modality, and clausal profile); in English these are represented by the present participial or gerund phrase and in Russian by the *prichastie* (commonly translated as "participles"). This category is far more frequently and obviously attested in Lushootseed than in Bella Coola. The final class of nominalization creates a nominal element from an entire clause and constitutes a fully grounded instance referring to one specific event (or set of events) that has been fully located for the listener in conceptual space; this type of "sentential nominalization" is apparently absent from Lushootseed, but in Bella Coola it is a common method of forming subordinate clauses.

2.2.1 Lexical Nominalization

In both Bella Coola and Lushootseed, all morphological nominalizations, including lexical nominalizations, are realized by means of nominalizing prefixes—*s-* and *dəx*^{w}- in Lushootseed and *s-* and *si-* in Bella Coola. Because the *s*-prefix is more common and less-restricted in usage, I will focus on this morpheme, although the other nominalizers will be discussed briefly in Section 2.2.4. Consider these examples of lexical nominalizations formed with the *s*-prefix:

(10) Lushootseed

(a) s+ʔəɬəd "food"
np+eat
(Hess 1993b: 202)

(b) s+ɬilib "song"
np+sing
(Hess 1993b: 254)

(c) s+ʔuladx^{w} "salmon"
np+(to) fish
(Hess 1993b: 204)

Bella Coola

(d) s+q^{w}ilac+ɬ "juice, wine"
np+crush•berries+[perf]
(Nater 1984: 101)

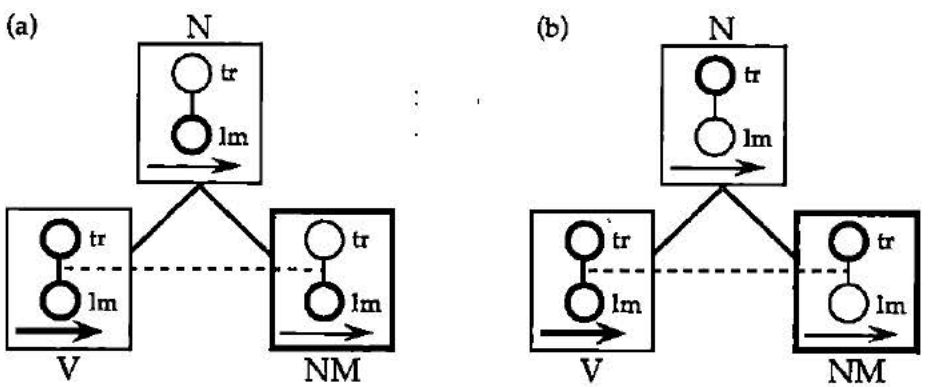
(e) s+ɬx^{w}ta "spittle"
np+spit
(Nater 1984: 101)

(f) s+aʎ̊a "canoe"
np+build•canoe

(Nater 1984: 101)

In each of these examples, a noun is derived from a verb representing a type, rather than an instance, of an event (*i.e.* "eating" in general as opposed to a specific instance of "eating") and thus derives a new lexical item ("food", not "what was eaten"). According to Langacker (1991), the English counterparts to the kind of nominalizations in (10) are derived through a process he calls "alternate profiling" whose compositional properties are shown in (11), illustrating the distinction between the two English nominalizing suffixes, *-ee* (shown in (a)) and *-er* (in (b)):

(11) English nominalizing morphemes



(adapted from Langacker 1991: 24)

In both cases illustrated, the verb (V) and nominalizing morpheme (NM) combine to form a noun (N). The profile of the verb stem is a process over time (the arrow) relating two participants, the subject or trajector (tr) and the direct object or landmark (lm). On the other hand, NM does not profile the temporal extension of the event, but profiles only one of the two participants. In (a) the nominalizing morpheme profiles only the landmark of the process (*i.e.* the nominalization represents the object, as in "interviewee") and in (b) the morpheme profiles the trajector (the subject, as in "interviewer"). Because NM is the profile determinant (shown by the heavy box around it), the profile of the composite structure (N) is the profile of NM—that is, a noun coresponding to one of the two participants profiled by the process illustrated in V.

In Bella Coola and Lushootseed, on the other hand, there is only one nominalizing morpheme used in ordinary lexical nominalizations, meaning that the profile of a deverbal noun is going to depend on the combinatorial properties of the stem to which it is attached. This is most easily expressed in terms of the valency of the stem involved. Valency is the number of arguments (actants) for which a verb subcategorizes (Trask 1993); in Bella Coola and Lushootseed, a verb with a valency of two (that is, which subcategorizes for two actants) may be either transitive—having a subject (trajector) and a direct object (landmark)—or intransitive, having a subject and an oblique object (which is unprofiled and, therefore, not a landmark), as in the following example from Lushootseed:

(12) (a) ʔu+ʔułəd tsi čačas ʔə ti bəsqʷ
[pnt]+eat Df child P D crab
"the girl ate crab"

(Hess 1993a: 38)

(b) s+ʔułəd
np+eat
"food"

(Hess 1993b: 202)

In (a) the object eaten—that is, the food—is realized as an oblique rather than a direct actant, requiring use of the preposition *ʔə*; in (b) it is the oblique actant that is profiled by the nominalization. Such actants are referred to as "peripheral" actants (see 3.1.1).[9] The same syntactic pattern holds for the stems in (10), all of which may form the predicates of sentences with a subject (the agent) and an oblique object which becomes the profile of the *s*-nominal. Note that in many cases the object has been semantically incorporated into the meaning of the stem; thus, *ʔaƛ̓a* "build a canoe" in Bella Coola includes the notion of what is built (which would be the direct object in English), as does the corresponding terms in Lushootseed, *p̓ayəq*. This is not unusual in either language, although it is interesting that such implicit objects may be realized overtly in a sentence, in which case they appear as oblique (peripheral) actants, as in

[9]The term "peripheral" is borrowed from Davis & Saunders (1984a), where it has much the same meaning as it has here, although the distinction for these writers is a semantic rather than a syntactic one.

(13) Bella Coola

(a) ʔaƛ̓a+yuks+aw x+a+s+aƛ̓+aw+c
build•canoe+[plural]+3p P+D+np+build•canoe+3p+D
"they were building their own canoes"
(Davis & Saunders 1980: 183, line 91)

Lushootseed

(b) ləcu+p̓ayeq ʔə ti?iɬ sdi?+dəxʷiɬ
[prog]+carve•canoe P D [rdp]+hunting•canoe
"[he] was carving out a hunting canoe"
(Hess 1993b: 177, line 34)

Instruments (realized in clauses as peripheral actants using the preposition *x*-) of some divalent stems in Bella Coola are also profiled by the *s*-nominalizer, as in

(14) (a) s+q̓ɬkʷ "tools"
np+fix [sth]

(b) s+lq̓ "mind, brains"
np+think [of sth]
(Nater 1984: 102)

For most transitive verbs in Bella Coola, however, the same pattern as intransitive divalent verbs is found, with the non-subject argument surfacing as the profile of the nominal, as in

(15) (a) s+knix "food"
np+eat

(b) s+kiċ̓ "laundry"
np+wash
(Nater 1984: 102)

Because transitive verbs in Lushootseed are derived from monovalent radical stems (see 2.3.1), divalent transitives in this language do not seem to undergo lexical nominalization, a "patient-profiling" nominal such as those illustrated in (15) being derivable from the radical itself. Nominalizations of trivalent verbs in both Bella Coola and Lushootseed, like the instrument-centred and divalent intransitive forms, profile the peripheral actant of the clause.

With the exception of Bella Coola transitive stems (which are in themselves somewhat exceptional—see Section 2.3.2), then, we seem to have a pattern whereby the profile of a lexical nominalization corresponds to a peripheral actant of the stem which has been nominalized. There are, of course, exceptions to this generalization. Consider the examples in (16):

(16) Lushootseed

(a) s+q̓ax^{w} "ice"
np+frozen
(Hess 1993b: 243)

(b) s+łaǰ+il "night"
np+dark+[trm][10]
(Hess 1993b: 234)

(c) s+əli? "soul"
np+alive
(Hess 1993b: 224)

Bella Coola

(d) s+ps "north-east blizzard"
np+hiss
(Nater 1984: 101)

(e) s+xum+aq^{w}s "tears"
np+stream+eye
(Nater 1984: 101)

(f) s+?usqa+lič̓ "smallpox"
np+come•out+skin
(Nater 1984: 101)

Stems such as *q̓ax^{w}* "frozen", *həli?* "alive" (Lushootseed), and *ps* "hiss(ing)" (Bella Coola) are monovalent (they are, in fact, not strictly speaking verbs, but radicals—see 2.3.1 below) and when nominalized by the *s*-prefix profile the only figure in their profile, their trajector or that thing which possesses the property that they delineate. Other monovalent expressions which are more clearly verbal are derived stems such as *łaǰil* "grow dark" (Lushootseed) and *?usqa+lič̓* "come out of skin" and these, too, profile their only argument when they are nominalized. Note, however, that in all of these cases the trajectors of the radicals—that is, "that which freezes", "that which grows dark", "that which comes out of the skin"—is not a definite agent or entity; in clauses, subjects of this type are often realized by null or expletive arguments in a wide variety of languages and in Cognitive Grammar this type of subject is often treated as an abstract setting in which the event occurs (Langacker 1991; Smith 1994). Because of the abstract nature of the trajector of these types of expression, words such as *łaǰil* might just as easily lend

[10][trm] = "transmutative", a morphological category having the meaning "to begin to be" (Mel'čuk 1994b).

themselves to an interpretation as "a darkening" or even "when it grows dark"; this type of shifting of a profile from one of the participants to the event or relation as whole is amply illustrated for nominalized clauses and will be discussed further below. For now it is enough to note that the abstract nature of the trajector of the words in (16) may well lead to their interpretation as nominalized event-types as opposed to event-participants.

In addition, Nater (1984) gives a number of nouns derived via *s*-nominalizations from words such as *ck*^{w} "heavy" (> *sck*^{w} "weight") which correspond to English adjectives; note that in such examples, the profile of the nominalization is the state described by the relational predication—that is, the nominal profiles the predication's referential landmark. Once again, because these "adjectival" radicals serve more to describe states than events *per se*,[11] their trajectors are difficult to construe outside of a specified instance or context, making the referential landmark the more informative choice for profiling. An English adjective like "big" can be applied to anything and does little to aid us in defining its trajector or imagining the type of event in which that trajector might have taken part; on the other hand, a more "verbal" radical such as the Lushootseed *ƛilib* "sing" or Bella Coola *ʔaX̌ʼa* "build a canoe" tells us quite a bit about the potential event participants and so its nominal interpretation is quite easily shifted to one of these.

In view of all of the possible construals of *s*-nominalizations, it might seem initially that there is not only one but several related meanings for this prefix. In CG, however, this does not require us to treat the *s*-prefix as a different morpheme in every case—instead, we can treat the various profiles of lexical nominalizations as the products of various "subschemas" of a more abstract nominalizer whose meaning includes the creation of a "thing" from a relational predication, but does not specify what aspect of the relation becomes the nominal profile. Which of the subschematic meanings of the *s*-prefix a listener will select in interpreting a lexical nominalization depends on the stem involved; aside from monovalent (radical) stems and Bella

[11]Although in CG states are treated as subtypes of events in which there is no change in the trajector-landmark relation over time.

Coola transitive radicals, *s*-nominalizations profile a verb's peripheral actant. This association between peripherality and the *s*-morpheme (noted for Bella Coola in Davis & Saunders 1984a) is an important one in both languages, and figures prominently in the discussion of the nominalization of clauses in the next section and in the syntactic distribution of morphological vs. syntactic nominalizations and relative clauses, which will be discussed in more detail throughout Section 3 below. *s-* is also used for other types of nominalizations which involve more than a mere shift in profile, and so the question of how best to represent the *s-* morpheme will be postponed until after the discussion of these categories.

2.2.2 Factive Nominalization

The second class of nominalization, factive nominalization, is virtually absent from Bella Coola (with one potential exception—see 3.2.1 below), whereas in Lushootseed it is one of the most distinctive features of the grammar. In CG, a factive nominalization is considered to have all the attributes of a clause except subject, tense, and modality, although at the same time sharing many of the syntactic and morphological properties of a noun. Such nominalizations are commonly referred to in Indo-European languages as "participles", a term that I will extend here to cover the analogous structures in Lushootseed.[12]

Consider the following "non-finite clauses":

(17) x̌ʷuƛ̓ p̓aƛ̓aƛ̓ ti?ə? d+s+?abyid
only worthless D 1po+np+give
"what I give [to him] is only junk"
(lit. "my given [to him] [is] only worthless")

(Hess 1993b: 185, line 14)

In (17) the grammatical subject of the nominalized clause, the giver, is represented by the first-person pronominal *d-* from the possessive paradigm (see 2.4.3), whereas in the next example,

[12]In the discussion of English grammar, a distinction is traditionally made between participles and gerunds, the former filling an attributive role in a sentence and the latter acting as a nominal (Trask 1993). Aside from the facts of their distribution, however, the two categories seem to be identical and most likely reflect two uses of the same type of lexical item. In Russian, the term "participle" is used to refer to the attributive usage of this class of nominalization, coinciding with the English usage, whereas in some discussions of Altaic languages such as Turkish (*e.g.* Comrie 1981) "participle" is used for both substantive and attributive roles; the term "gerund" is more often used in Altaic (Comrie 1981; Poppe 1970), Spanish (Solé & Solé 1977), and in traditional Russian grammars (*e.g.* Pulkina 1982) to refer to what are more accurately described as "verbal adverbs" for this reason I have chosen the term "participle" rather than "gerund" to use here.

(18) ʔu+šudx^{w} ti?iɬ s+əs+q̓^{w}u? ʔə ti?iɬ ʔiišəd+s ʔal ti?ə? hik^{w} č̓ʌ̓a?
[pnt]+see D np+[stat]+gather P D relatives+3po P D big stone
"[he] saw the gathering of his relatives by the big stone"
(Hess 1993b: 185, line 3)

the subject of the participial clause *səsq̓^{w}u?* "gathering" is an overt third-person NP, *ti?iɬ ʔiišəds* "his relatives", and is realized as a possessor, being marked by the preposition *ʔə*. (Compare this to the corresponding finite clause *ʔəsq̓^{w}u? ti?iɬ ʔiišəds* "his relatives are gathered", in which the subject is not set off by a preposition.) In this example the participle is marked for verbal aspect (*ʔəs-* "[stative]")). The next sentence,

(19) x̌^{w}uɬ p̓aʌ̓aʌ̓ ti?iɬ s+ʔabyid+s ti?iɬ č̓ʌ̓a?.
only worthless D np+give+3po D stone
"what he gives to Stone is only junk"
(lit. "his given Stone [is] only junk")
(Hess 1993b: 187, line 32)

shows an example of a participle, *s?ayid* "giving", with a third-person subject (represented by *-s*, the third-person possessive affix) and an overt object, *ti?iɬ č̓ʌ̓a?* "Stone" (an anthropomorphized boulder who is given worthless gifts by Coyote). On the other hand, (20)

(20) ǰu?il+əx^{w} ʔə ti?ə? ɬu+s+ʔələd ʔə tsi sʌ̓alqəb ʔə ti?ə? qa wiẇsu.
enjoy+now P D [irr]+np+eat P D*f* monster P D many children
"[he] enjoyed [the thought of] the monstress's eating the many children"
(Hess 1976: 657)

contains a participle, *s?ələd* "eating", with both an overt object—*ti?ə? qa wiẇsu* "these many children"—in an oblique relation to its predicate, and an overt subject—*tsi sʌ̓alqəb* "the monstress"—also marked by *ʔə*, in this case a mark of the possessive. Note that the participle in (20) carries general aspectual marking,[13] as does the example in (21):

(21) hay laǩ+du+b+əx^{w} ʔə ti?iɬ c̓iǩc̓iǩ
then remember+[Lo.c]+[md]+now P D fish-hawk
ti?iɬ tu+s+cut+t+əb+s ʔə ti?iɬ sčətx^{w}əd
D [past]+np+speak•to+[caus]+[md]+3po P D bear
"then fish hawk remembers what bear said to him"
(lit. "then his was-spoken-by-bear is remembered by fish hawk")
(Hess 1993b: 194, line 46)

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[13]In Lushootseed there are two classes of affixes that express aspect or aspect-like concepts. The first, to which the stative *ʔəs-* belongs, only appears on radicals or words derived from radicals (and so appears closer to the root than the nominalizing prefix *s-*); the second class, that of the past *tu-* in (21) and the irrealis *ɬu-* in (20), may be applied to both radicals and nouns. See Hess (1993b: 83ff) for details.

Here *tuscuttəb* "[past]+being spoken" has been passivized by the affixal combination *-t+əb*, deriving the grammatical subject of the participle (marked by the third-person possessive suffix) from the object of the verb *cut* "speak to".

The term "participle" is not one that is commonly used in the Salishan literature; however, the non-finite clauses in (17) – (21) bear close comparison with participial clauses in Altaic and Indo-European languages as enumerated in Comrie (1981) and Comrie & Thompson (1985). One particularly salient feature is the requirement that the grammatical subject be realized in the role of possessor. The same occurs in English sentences such as

(22) (a) I gave Mary a ball.
(b) my giving Mary a ball

English participles depart from the Lushootseed pattern in that they are able to take non-possessive subjects, which are (more or less) synonymous with possessive subjects, *e.g.* "John/John's giving Mary the ball". Interestingly, Comrie (1981) reports the same pattern in Tatar, as in

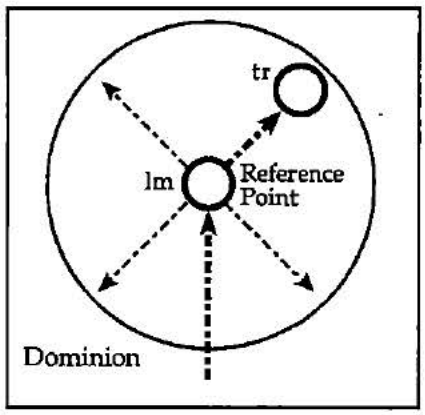
(23) (a) min kür+gän+ne bel+de
1s-[acc] see+[past part]+[acc] know+[past]
"he found out that I had seen"
(lit. "he knew me seeing")

(b) min+em kür+gän+em+ne bel+de
1s+[gen] see+[past part]+1po+[acc] know+[past]
"he found out that I had seen"
(lit. "he knew my seeing")

(Comrie 1981: 82)

Here the subject of a "verbal noun" is expressed either as an actant in the accusative case or as a possessor in the genitive. As suggested by Taylor (1994) for deverbal nouns in English, the use of the genitive/possessive to realize the subject in factive nominalizations can be linked to Langacker's (1991) "reference-point" analysis of the possessive construction. Under this analysis, the possessive is seen as a relational predication which profiles its landmark (the possessor) as a point of reference with which the trajector (the possessed) can be located in conceptual space and identified as the particular instance or instances of an entity to which the speaker is referring. This is illustrated in (24). The landmark of the possessive morpheme serves as a reference

(24) Possessive relation in CG



(adapted from Langacker 1991: 171)

point for the location of the trajector (also profiled) within its "dominion"; the dominion of an entity is defined as the set of objects which it can be used to locate, either in a spatial sense or in the abstract sense in which the reference point serves an indexical or deictic function.[14] The landmark or possessor can be construed as an intermediate point on the mental "pathway" through which the listener makes "contact" with the possessed entity (Langacker 1991); this path is also profiled in (24), as shown by the heavy dashed arrow.

According to Taylor (1994), the possessor of a deverbal noun in English may be identified with either the subject or object of the verb from which it is derived because these can be used to identify the particular instance of the entity designated by the possessed element; thus, "Harry" in "Harry's love" is used to single out a particular instance of "love" for the hearer's attention—that instance of "love" of which Harry is the protagonist. Whether or not the possessor refers to the subject or the object of the clause depends on the utility of the respective arguments for correctly identifying the entity being singled out by the speaker: while some deverbals (like "love") select inevitably for subjects and others select for the object ("fright"), many deverbals seem to allow for either interpretation, depending on the argument's "topicality" and its "informativity" (the precision with which it allows the hearer to pin-

[14]For a more detailed discussion of the notion of "dominion" and some of the ramifications it has for the semantics and pragmatics of possessive constructions, the reader is referred to Langacker (1991: 167 – 180).

point a specific event). The details of Taylor's argument are not directly relevant to the issue of factive nominalizations, in which the possessor always refers to the clausal subject, but these two criteria do seem to offer an explanation of why it is that possessor-subjects are selected for by participles—which retain more of their clausal properties than other deverbals (*cf.* Grimshaw's 1991 notion of "argument structure"). In clausal constructions, subjects are known to be highly topical cross-linguistically (Keenan 1976; Li & Thompson 1979; Givón 1979) and, in the case of Lushootseed and Bella Coola, subjects almost invariably correspond to discourse topics. Because of this topicality, subjects often serve the function of anchoring new information in discourse (see also Langacker (1991), where "topic" is defined in precisely these terms) and, thus, they serve as the reference-point against which new information can be located in the discourse space.[15] Objects are not available for this function, as they are included within the scope of the factive nominalization (and, hence, can not be used as a reference point for their own location).

Another feature of clauses that participles retain is marking for voice and aspect. English uses combinations of auxiliary verbs to do this, though it is nowhere near as expressive as Lushootseed in this respect. A better Indo-European parallel is found in Russian *prichastie*:

(25) (a) present active imperfective
mužčina, priglašajuschij druga na obed
man invite friend to lunch
"the man inviting a friend to lunch"

(b) present passive imperfective
mužčina, priglašaemyj drugom na obed
man invite friend to lunch
"the man being invited by a friend to lunch"

(c) past active imperfective
mužčina, priglašavschyi druga na obed
man invite friend to lunch
"the man who was inviting a friend to lunch"

(d) past passive imperfective
kniga, chitannaja mal'čikom
book read boy
"the book which was being read by the boy"

[15]This is discussed further in the context of deixis and the instantiation of types in the conclusion.

(e) past active perfective
mužčina, priglasivšii druga na obed
man invite friend to lunch
"the man who has invited a friend to lunch"

(f) past passive perfective
mužčina, priglašjonnyj drugom na obed
man invite friend to lunch
"the man who had been invited by a friend to lunch"

Russian participles can (and, in the past passive perfective, frequently do) serve as nominals and resemble factive nominalizations in terms of semantic and syntactic structure. Most often, however, they are used attributively and bear the morphological agreement features of adjectives, which serve to mark the participle's role as modifier of the noun corresponding to its grammatical subject. Lushootseed participles are also used attributively, as are nouns, as in

(26) (a) ti?ə? hik^{w} ?al?al
D big house
"this big house"

(Hess 1993b: 117)

(b) ti?ə? kiyuuq^{w}s stətudəq
D seagull slave
"these seagull-slaves"[16]

(Hess 1993b: 117)

(c) ti?ə? tu+s+əs+čəba?+s k^{w}ag^{w}ičəd
D [past]+np+[stat]+backpack+3po elk
"this elk he'd been backpacking"

(Hess 1993a: 142)

In sentences like (c), Lushootseed participles take on the function of the English relative clause; this is highly reminiscent of the situation in many Altaic languages, as in Uzbek

(27) men+iŋ yoz+gan xat+im
I+[gen] write+[past part] letter+1s
"the letter that I wrote"
(lit. "my having-written letter")

(Comrie 1981: 82)

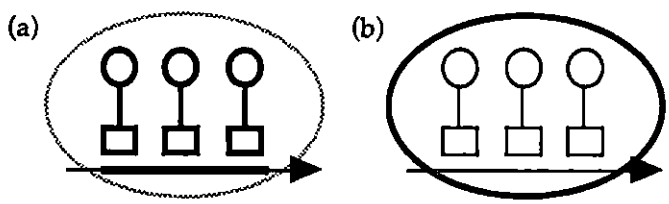
In Uzbek, as in related languages such as Mongolian, the participle is considered by grammarians to be a noun (Comrie 1981; Poppe 1970); in Lushootseed, the distributional properties of par-

[16]The plural meaning is gleaned from the context, as plural marking of nouns is optional in Lushootseed.

ticiples and their appearance in association with the possessive affixes (taken by van Eijk & Hess 1986 as a definitive marker of nouns) also argue strongly for their nominal status.

If Lushootseed participles are accepted as nominals, the question of how to describe the nominalization process arises; clearly, alternative profiling, as illustrated in (11) for English *-ee/-er*, is inadequate, as the factive nominalization does not simply profile a participant in a type of event (or relation), but rather profiles either a participant in an instance of an event type (as in (19)) or a specific event as a whole (as in (20)), construed as an abstract nominal. This is reminiscent of what Langacker (1991) terms the "conceptual reification" of a processual relation, represented in (28). The first part of the diagram shows the semantic pole of a verb, which is represented as a relational process between the trajector (the circle) and its landmark

(28) Conceptual reification of a verb



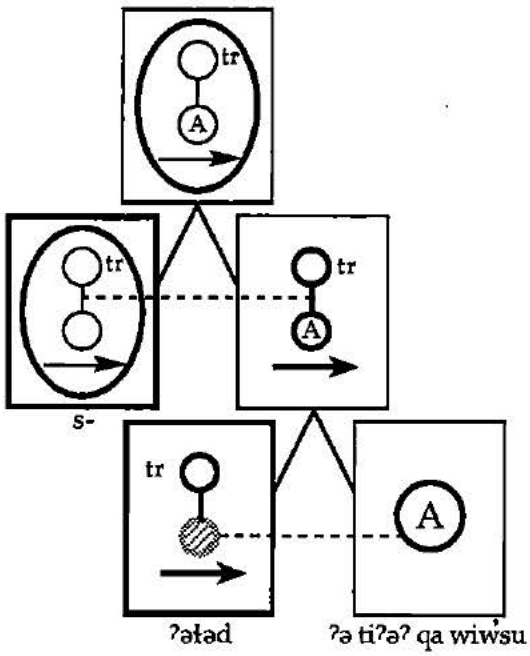
(Langacker 1991: 24)

(the rectangle) over time (the arrow); a verb is considered to be a sequential progression of component states—here represented by a sequence of three trajector-landmark pairs—which profiles a given segment of time over which the relation holds (shown by the thickened line overlying the arrow). These component states form an abstract region in conceptual space which is only latent in the verb (shown in (a) by a lightened ellipse), but which may be profiled in a representation such as that given of the factive nominalization in (b), where the profile is no longer a relation scanned sequentially over time (*i.e.* a verb) but a region containing a series of entities corresponding to the component states of a process—in other words, a noun.

In those cases where a participle represents an event as a whole, such as *łus?ələd ?ə tsi sx̌alqəb ?ə ti?ə? qa wiẃsu* "the monstress' (future) eating the many children" from (20), the nom-

inalization process can be represented as the compositional schema in (29), which shows successively the elaboration of the verb's peripheral actant and the additional of the *s*-prefix.

(29) Factive nominalization of *łus?ələd ?ə tsi sx̌alqəb ?ə ti?ə? qa wiw̓su*



Here at the initial level the verb stem *?ələd* "eat"—represented schematically by a single component state—is combined with its oblique object *ti?ə? qa wiw̓su* "the many children" (abbreviated by "A"); the cross-hatched elaboration-site (e-site) is an actant in the process,[17] as indicated by the dashed line (marking correspondence between the two entities). At the next level of composition, the nominalizing morpheme—once again, *s-*, just as it is in lexical nominalizations—is added, shifting the profile of the composite structure from the processual relation ("eating the children") to a region of conceptual space which refers to an instance of "eating the children". The final stages in the composition of the nominalization (not shown) would be the elaboration of the trajector (tr), accomplished by the addition of the possessor, *?ə tsi sx̌alqəb* "of the monstress". While a processual relation (a verb) is usually grounded in Lushootseed by this final elaboration of the subject, as a nominal the participle must be

[17]It is a peripheral actant—realized as a prepositional phrase, not shown here in the diagram—rather than a direct object, and so, as noted above, it is considered to be unprofiled.

grounded by the addition of a deictic, which creates a fully grounded instance of the eating—in other words, expressing a unique real-time instance of the process, an actual event which is identified or located in conceptual space.

It should be noted that the net effects of the *s-* morpheme in (29) and in the lexical nominalizations discussed in the previous section are somewhat different and require additional subschema of the *s*-morpheme has been selected.[18] The application of this subschema seems to apply in those cases where all of the event-participants have been specified.[19] In cases where all of the actants of the verb are not specified, the profile of the participle corresponds to an unrealized participant, although in all cases it is a peripheral actant which must be profiled: just as the subject is not an eligible target for profiling by the participle, neither is the direct object. Even when the direct object is not expressed, as in *ds?abyid* "my given [to Stone]" ("what I gave to Stone") from (17), the object's identity is unambiguous in discourse and would be represented in the syntactic structure, although it is elided in the surface form of the sentence. This is seen in cases where neither subject nor direct object are overt and the realization of a peripheral actant shifts the meaning of the nominalization to the event itself. Compare (19) to

(30) ǰu?il+əx^{w} ?ə ti?ə? s+?abyid ?ə ti sbiaw
enjoy+now P D np+give P D Coyote
"[he/she] enjoyed the giving of Coyote [to him/her]"
(Hess, personal communication)

Here the prepositional phrase *?ə ti sbiaw* serves the role of peripheral actant (the gift) and the participle seems to represent the event as a whole, indicating the presence of all of its actants. This requirement that the profile of the nominalization correspond to a peripheral actant seems to stem from the nature of a participle, which is by definition a nominalization whose scope includes the profiled objects of a verb; in Lushootseed, however, it seems that the profile of a stem includes only subject and direct object (the direct actants) and peripheral actants must be expressed overtly as a PP. In the absence of this overt expression, the identity of a periph-

[18]The issue of the CG representations of the schema and subschemas of *s-* will be left until Section 2.2.3.
[19]Note, however, that at the level of composition at which nominalization is applied, the subject has not as of yet been elaborated, suggesting that the subject (or trajector) element of a relational predication has a certain privileged status in the process of nominalization, something noted cross-linguistically by Keenan (1976).

eral actant is not included in the scope of the nominalization and thus becomes an eligible candidate for profiling by the participle itself.

2.2.3 Sentential Nominalization

In sentential nominalizations, the nominalizing morpheme is applied to a fully grounded instance of a relational process—that is, to a tensed verb (in languages that have tense) and its direct actant(s). In English and related languages, sentential "nominals" are not realized morphologically, but are created through the use of complementizers ("[that he walks in his sleep] drives her crazy"; "I see [that you have found your own way home]"), which allow a finite clause to serve a nominal (actantial) role in a sentence. In Bella Coola, however, clauses that serve as actants must be nominalized using the *s*-prefix, as in

(31) (a) p̓wi ti+s+puƛ̓+aylayx+aw
halibut D+np+(to)fish+[l.o.c.]+3p
"what they caught [is] a halibut"[20]

(Nater 1984: 102)

(b) wic ʔac wa+s+ʔałps+tu+m q^{w}aǰ^{w}
[idn] D D+np+eat+[caus]+3s-[pass] raven
"what Raven was fed [was] this"[21]

(Nater 1984: 102)

(c) ʔałnap+is+k^{w}+č̓ ta+qiiqtii+tǰ wa+s+k^{w}acta+tu+m
know+3s-3s+[qt]+[perf] D+baby+D D+np+name+[caus]+3s-[pass]
x+ti+man+ɬ
P+D+father+1p-po
"the baby knew what he had been named by our father"

(Davis & Saunders 1980: 108, line 121)

Here, the nominalized sentences function as actants of the predicate—the subject of a verbless sentence in (a) and (b) and as an object of a verb in (c)—and, like lexical nouns in analogous sentences, they are marked with deictic elements. The profile of the sentential nominalization corresponds to a peripheral actant of the nominalized verb (*e.g.* the oblique object of *puƛ̓* "to fish" in (31)(a)). Sentential nominalizations also serve as circonstantial clauses (Section 3.2.5):

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[20]The verb here *puƛ̓aylayx* "to fish" is intransitive, being closer to the English "to fish (for)", although it implies that the fishing was successful.

[21]The category of "identifier" is discussed in 2.4.3 below. The causative form of *ʔałps* "eat", which means "to feed", takes as its subject the one who feeds and as its object the one who is fed, the food being peripheral in the clause.

(32) (a) kamalax^{w}s s+ka+lip̓+cut+c
next•year np+[irr]+turn+[refl]+1s
"it [is] next year [when] I will come back"
(Nater 1984: 103)

(b) x̌̓iliwa+s s+ʔmt+s
quick+3s np+get•up+3s
"he [was] quick [as] he got up"
(Nater 1984: 104)

(c) ɬaws+ulmx+c̓ s+ʔałwlaa+ɬɬ+c
damp+ground+now np+rain+[past]+D
"the ground is damp, it having rained"
(Nater 1984: 105)

In (32) the profile of the nominalization corresponds to an event as a whole (or, in (b), to the temporal extension of that event) and acts as an adverbial modifier. Like adverbs and other sentence particles, such nominalizations are not usually marked with deictics. Sentential nominalizations also serve as sentential complements (3.2.4), as in

(33) (a) ʔanayk+c s+ka+x̌̓ap+c
want+1s np+[irr]+go+1s
"I want to go"
(Nater 1984: 104)

(b) ʔałnap+it s+ʔinus ti+ka+x̌̓ap
know+3s-3p np+2s D+[irr]+go
"they know that it is you who will go"
(lit. "they know that the going one [is] you")
(Nater 1984: 103)

Finally, sentential nominalizations, like Lushootseed participles, serve in roles corresponding to English oblique-centred relative clauses:

(34) ti+q̓lsx^{w}+tx ti+s+nap+is ti+x̌̓msta+tx ti+staltmx+tx
D+rope+D D+np+give+3s-3s D+person+D D+chief+D
"the rope that the person presents the chief with"
(Davis & Saunders 1984a: 218)

This sentence shows a sentential nominalization in a modifying relationship to a noun, the deictics on the relative clause being a result of the rule of deictic spreading (see 3.1.1).[22]

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[22] Just as in Lushootseed, Bella Coola can use simple nouns as modifiers in precisely the same manner that the sentential nominalization in (34) is used:

(i) (a) k̓x+ic ti+staltmx ti+ʔimlk+tx
see+3s-1s D+chief D+man+D
"I see the man [who is] chief"

Unlike Lushootseed participles, however, sentential nominalizations in Bella Coola are not obviously nominals except in those cases like (31) where they function as actants of a predicate by profiling event-participants and, possibly, (33) and (34), where their syntactic roles are at least ones that are commonly filled by a noun. Indeed, as Kroeber (1991) points out, in Bella Coola "the term 'nominalized' loses much of its meaning, since 'nominalized' clauses in fact display no distinctively nominal properties: one might almost as well simply label *s-* a subordinative prefix ..." (p. 59). Nevertheless, it is striking (as Kroeber himself goes on to point out) that it is the same morpheme (*s-*) which is used in lexical nominalization, in oblique-centred relative clauses, and in those cases where a sentence is required to fill a syntactic role usually filled by a noun or a lexical word; cross-linguistically, *s-* serves a nominalizing function in all Salishan languages and, as we have seen, in Lushootseed it is used to form participles. Thus, it is well worth asking whether we can attribute a single semantic representation to this morpheme that will allow a unified treatment of all the phenomena that have traditionally been lumped together under the heading of "nominalization".

According to Langacker (1991) the underlying distinction between factive and sentential nominalization lies at the compositional level at which the reifying process illustrated in (28) takes place; whether the resulting nominalization is factive or sentential depends entirely on the degree to which the relational entities appearing in the profiled region of conceptual space have been elaborated—that is, whether the target of nominalization consists of a non-finite verb and its objects, or a fully grounded instance of a verb and all of its actants. Applying this to the Bella Coola data, this means that instead of adding the nominalizing morpheme to the verb at the compositional level following the addition of the objects and preceding the addition of the subject, as in Lushootseed participles, Bella Coola sentential nominalizations add

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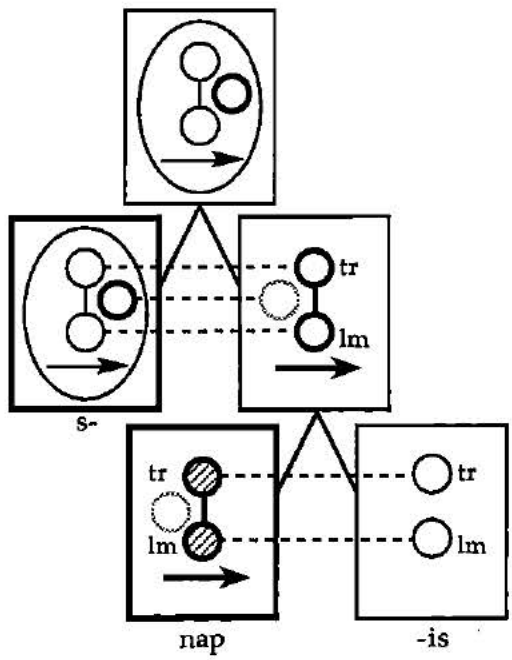
(b) *ƛ̓x+ic ti+ʔimlk ti+staltmx+tx
see+3s-1s D+chief D+man+D

(Davis & Saunders 1978: 41)

Note that, unlike other types of modifiers (which may either precede or follow their head), simple nominal modifier constructions are obligatorily head-final, almost certainly as a means of disambiguation. Davis & Saunders (1978) offer this as a further diagnostic of a noun-verb distinction in the language.

the nominalizer at the next level up from the subject, as in the composition of *snapis* "that he presented him (with)" from (34):

(35) Composition of *snapis*



In this diagram, the elaboration of both the landmark and trajector are carried out at the same level of composition by a single morpheme *-is* representing both the third-person transitive subject and the third-person transitive object of the verb (see Section 2.4.3). (Because *nap* "give" is trivalent, its representation includes one unprofiled, peripheral actant (dotted circle).) As Bella Coola verbs are not marked for tense, it is presumably the complete elaboration of the verb's profiled actants (and particularly the elaboration of the subject, which serves as a reference point for the event in discourse) that results in the grounding of an instance of a relational process. The application of the *s-* morpheme at the next level of composition thus results in a sentential nominalization. The fact that the realization of both subject and object is accomplished with a single portmanteau morpheme may allow us to explain the divergence of Bella Coola from Lushootseed (and other Salish languages): the fusion of historically separate subject and object markers makes it impossible to carry out factive nominalizations in this language because both subject and object are necessarily elaborated at the same level of composition in

transitive verbs. In the case of intransitive verbs, the convergence of intransitive subject and possessive morphemes (see 2.4.3) removes any morphological distinction between intransitive participles and intransitive sentential nominalizations, effectively eliminating the participle as a distinctive grammatical class from Bella Coola (with one potential exception—see 3.2.1).

Note, however, that the particular subschema of the nominalizing *s-* in (35) differs from that presented in the composition of the Lushootseed participle in (29). In the Lushootseed example the nominalizer shifts the profile of the nominalization to the event as a whole (all of the actants of the verb having been specified). In the Bella Coola sentential nominalization, just as in the Lushootseed participle in (19), the profile of the nominal is a peripheral actant of the verb and so the subschema of *s-* that applies is one that shifts the profile of the clause from the trajector-landmark relation to the formerly unprofiled actant (as shown by the heavy circle in the topmost level of (35)). The reified process itself forms the context in which the profiled actant (in (19) and (35), the gift) is identified (the nominalization representing a grounded instance—a specific gift exchanged in a specific context by specific people—rather than a type). This subschema, then, is crucially different from that seen in (29), in that it is applied in any case where a clause with an *unspecified* peripheral actant undergoes nominalization. In a pattern reminiscent of that observed above for lexical nominalizations, this subschema encompasses the third actant of trivalent verbs, the second actant of divalent intransitive verbs, and the instrument of many verbs representing actions that are felt to have inherent instruments (although Lushootseed prefers another prefix for instruments—see 2.2.4).

So far we have two subschemas of the *s*-nominalizer, one which profiles a peripheral actant and one which profiles an event. Returning for a moment to our examples in (31) – (34), we can see that the first of the two subschemas applies to the examples of sentential nominalizations used as actants (31) and as modifiers of a noun (34), while the second case seems to cover the sentential complements (33). The circonstantial uses of the *s*-clause, however, are a little more interesting. Consider the examples from (32) as well as the following:

(36) (a) ʔustxʷ+aw ʔula+suɬ+aw s+kɬ+s ti+snx+ɬayx
go•in+3p P+house+3po np+set+3s D+sun+D
"they go into their houses when the sun sets"

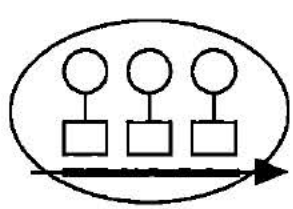
(b) ʔasʔuɬqnak+s ʔuɬ ti+qla+ɬayx wa+s+ʔasqupˀtn+ak+a+kʷ
take•pail+3s P D+water+D D+np+sound•drum+hand+3p+[qt]
"she took her pail to the water while the drums were sounding"

(c) ʔipˀ+aak+ɬ+ic ta+s+ʔilus+ɬ+cs
grab+hand+[perf]+3s-1s D+np+pass+[perf]+1s-3s
"I grabbed his hand as he went past me"

(Nater 1984: 102 – 104)

In each of these three examples, the nominalized clause represents a fully elaborated event with all of its actants and so we would expect the profile of the nominalization to be that of an event as a whole. In these sentences, however, the relationship of the nominalized clause to the matrix clause seems to be that of an adverbial expression—that is, an expression of temporal extension—indicating that what is profiled by the *s*-nominalization here is the time over which the event in the embedded clause took place. This profiled slice of time, then, is combined with the matrix clause, whose temporal extension it serves to define. This would require

(37) Profiling of adverbial clause



an additional subschema of the *s*-prefix, given in (37), which profiles the time over which the event takes place. Langacker (1991) offers a similar analysis of English expressions such as

(38) Working in the garden, I saw her go by.

Here the participial phrase—morphologically identical to a factive nominalization—serves to specify the time at which "I saw her go by" by identifying this time as being the same as (or some part of) the time during which "I" was "working in the garden". The major difference between the English pattern of participial adverb and the Bella Coola adverbial *s*-clause is that English (and many other Indo-European languages) seems to require that the trajector of

the subordinate clause be coreferential with the trajector of the main clause, whereas Bella Coola has no such restriction.

What is particularly interesting about Langacker's analysis is that he ties the idea of "subordination" of clauses to the type of shift in profile that we have seen effected by the Bella Coola *s*-prefix. According to Langacker, subordination of one clause to another means that, in effect, the profile of the subordinate clause is subsumed in some way by that of the matrix clause. The profile of the English sentence in (38), for example, is that of the event of seeing, the act of working having been reduced to additional information about the event in the matrix clause. Clearly, the *s*-prefix in Bella Coola and Lushootseed has precisely this function as well: by nominalizing clauses and thereby transforming events into abstract nouns that can serve as actants or modifiers, *s*- in effect subordinates the profile of the nominalized events to that of the matrix clause.[23] Thus, Kroeber's observation cited earlier that Bella Coola *s*- often functions like a subordinator can not only be extended to cover all cases of sentential nominalization in Bella Coola, but can be applied to Lushootseed as well, since—according to our analysis here—nominalization of a clause is, in fact, subordination. Of course, whether all cases of subordination in Bella Coola are nominalizations is another matter. It is certainly not out of line to suppose that adverbial and other types of adjuncts to a predicate might indeed be nominals—nouns can play this role in many languages (*e.g.* English "he knocked three times on the door") and many Bella Coola adverbs are derived from lexical nouns. Similarly, *s*-clauses that function as adverbials in one sentence may well surface in a more noun-like role in another. On

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[23]Interestingly, this subordinating function extends itself to verbless sentences as well. Because verbless sentences with third-person pronominal subjects are, in effect, one-word sentences consisting of a noun plus (optionally) agreement features, this may create the rather bizarre situation where the nominalizing prefix is (apparently) applied to a noun, as in

(i) paa+ic x+a+s+John
name+3s-1s P+D+np+John
"I will name him John"
(lit. "I will name him the one who is John")

(Nater 1984: 101)

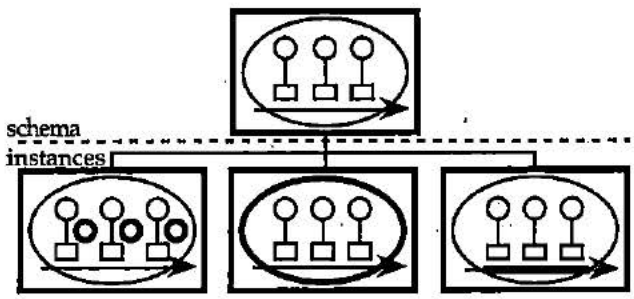
This approach to non-verbal elements bearing the nominalizing prefix offers a syntactic explanation of the observation made in Davis & Saunders (1984a) that the *s*-prefix is used to express "peripheral" information about an event: by subordinating the profile of the clause which it is applied to that of the matrix clause, the nominalizing morpheme is, in effect, marking peripherality.

the other hand, semantically it is not clear that the subschema in (37), which profiles a temporal extension, does indeed meet the criteria for noun-hood, although it certainly could be argued that *was?asqup̓tnakak*^{w} "while the drums were sounding" constitutes a reification of a time in the same way that a word like "day" (the time over which the sun passes from horizon to horizon) does. In any case, it is also unclear to what extent this is a meaningful question—for the purposes of our discussion, it is enough to note that the creation of adverbial clauses is another function of the nominalizing prefix.

Thus, it does seem—in spite of their sometimes limited nominal characteristics—that Bella Coola sentential nominalizations can be derived with the same morpheme that is used in Lushootseed factive nominalizations and that this morpheme is used in lexical nominalizations in both languages. In total there appear to be three major subschemas of the meaning of this prefix, one (applied to verbs and clauses) which profiles a peripheral participant in an event, a second (applicable to radicals and fully-elaborated clauses) which merely reifies an event or relation, and a third (in Bella Coola) which profiles the temporal extension of an event, thereby creating an adverbial.[24] The schematic meaning of the *s*-prefix—that is, what all of these meanings have in common—is the conceptual reification of an event to create a semantic "thing" which can then be manipulated by the syntax as a noun. This is represented in (39). The schematic relations between the various representations of the *s*-prefix allow us to posit a range of meanings for nominalizations realized by the same morpheme. Selection of the appropriate subschema can be accounted for by the degree to which the nominalized event has been elaborated and (in the case of the third subschema in Bella Coola) by syntactic environment. Whether or not the nominalization refers to a type of "thing" or event, to an instance of a "thing" or event, or to a grounded instance of a "thing" or event depends entirely on the scope of the nominalization (that is, the compositional level at which it is applied). The nominaliza-

[24]This is excluding the more "exceptional" cases of trajector-oriented nominalizations of radicals, the patient-oriented nominalizations of Bella Coola transitive stems discussed above, and a particular type of purpose clause found in Lushootseed, which will be discussed in Section 3.2.5.

(39) Schema for the *s*-nominalizing prefix



tion is lexical and refers to a type if it includes no participants, otherwise it must be interpreted as a factive (Lushootseed) or sentential (Bella Coola) nominalization.

As a final note, the last distinction drawn here between type and instance nominalization parallels closely that drawn by Grimshaw (1991) between the nominalization of words that have "event-structure" (and hence represent an actual event and must include actors, realized as arguments) and the nominalization of words which do not (and which therefore represent a type of event involving no specific actors). For instance, the deverbal nouns in (40)

(40) (a) The frequent expression of one's feelings is desirable.
(b) The constant assignment of unsolvable problems ...
(c) The instructor's examination of the papers ...

(Grimshaw 1991: 50 – 51)

have both event structure and argument structure (and, hence, obligatorily take *of*-phrase "objects"), whereas the same nouns in (41) do not.

(41) (a) The expression is desirable.
(b) The assignment is to be avoided.
(c) The examination took a long time.

(Grimshaw 1991: 50 – 51)

Grimshaw (1991: 49ff) argues that because the nominalizations in (40) have event structure, they must also have argument structure, a conclusion that is compatible with the data here, although from the point of view of a conceptually-based approach to grammatical processes, it seems more plausible to reduce this structural claim to a semantic one and propose that only those nominalizations that represent an event may meaningfully take the argument structure of the verb from which they are derived.

2.2.4 *dəx^{w}-* and *si-*

Although the discussion of morphological nominalization up to this point has been focused on the nominalizing prefix *s-*, Lushootseed and Bella Coola each have an additional nominalizer which, although not cognate in the two languages, serves a similar function in both. These prefixes are used in much the same way as *s-* to form lexical and factive/sentential nominalizations, the difference being that the profile of the nominal is an entity which is not subcategorized for by the predicate of the clause which has been nominalized (Davis & Saunders 1984a). In general, nominalizations formed with the second nominalizer profile an instrument, motive, or setting and in this sense they can be grouped together as a semantic class specifying "background" or "incidental" information about the profiled event. As the morphosyntax of the second prefix is in all other respects similar to that of *s-*, the following discussion will be limited to providing a few examples of the uses of the prefixes in each language and a few words about their CG representations.

The second nominalizer in Bella Coola is *si-*, which can form both lexical nominalizations

(42) (a) si+x̌^{w}ik+ak — "toy" (lit. "what one plays with in the hand")
np+play+hand

(b) si+q̓^{w}x̌^{w}m — "motor" (lit. "what makes a vehicle move")
np+move (a vehicle)

(c) si+qalx̌m — "spring" or "autumn" (lit. "root-digging time")
np+dig•roots

(Nater 1984: 107)

and sentential nominalizations.

(43) (a) ʔałquɬuus ti+si+k̓x+is
picture D+np+see+3s-3s
"[where] he saw it [was] a picture"

(b) ʔix̌q̓nɬalx+aw+c̓ ʔaɬ+cx si+tx+apsm+it
get•fed•up+3p+now P+her np+cut+side•of•neck+3s-3p
"they got fed up with her then, so they cut off her head"

(c) klkl ti+si+ʔałps+c
herring D+np+eat+1s
"what I am eating [is] a herring"

(Nater 1984: 106)

These clauses nominalized by the *si-* morpheme take the same pronominal endings as the corresponding matrix clause or *s-* nominalization would.[25]

The peripheral nominalizer in Lushootseed is *dəx^{w}-*. According to Hess (1993b), this prefix serves to indicate the notions of "means, place, time, or reason for an event or state" (p. 133)—all of which are otherwise shown by means of some type of adjunct or circonstantial element such as a PP.[26] Like *s-*, *dəx^{w}-* can be used to form factive nominalizations:

(44) (a) q^{w}ɬq^{w}ɬay? ti?iɬ <u>dəx^{w}+u+čala+d+s</u> ti?ə? sq^{w}əbay?
[rdp]+sticks D np+[pnt]+chase+[caus]+3po D dog
"it was with sticks that they chased the dog"
(Hess 1993b: 133)

(b) bəča+t+əb+əx^{w} ti?iɬ k̓^{w}aɬaq <u>dəx^{w}+?ibəš</u> ?ə ti?iɬ bibščəb
fall+[caus]+[md]+now D cattail•mat np+walk P D mink
?i ti?iɬ su?suq̓^{w}a?+s
and D younger•cousin+3po
"[s.o.] threw down a cattail mat for Mink and his younger cousin to walk on"
(Hess 1993b: 178, line 44)

(c) ?u+sax^{w}əb bibščəb g^{w}əl təd^{z}+il ?aɬ ti?iɬ <u>dəx^{w}+əs+təd^{z}+il+s</u>
[pnt]+jump mink and in•bed+[trm] P D np+[stat]+in•bed+[trm]+3po
"Mink jumps and gets into bed in his sleeping-place"
(Hilbert & Hess 1977: 23, line 94)

Just as in participles in *s-*, in the *dəx^{w}-* nominalizations in (44) a possessive is used to represent the clausal subject. *dəx^{w}-* is also used in lexical nominalizations, but it appears to be unusual in this type of construction, which is more often realized with the morpheme *səx^{w}-*.

(45) (a) səx^{w}+g^{w}əd+il "chair"
dp+sitting+[trm]

(b) səx^{w}+x̌uǩ^{w}+il+ali "refrigerator"
dp+cold+[trm]+[location]
(Hess & Hilbert 1976: II, 9)

Historically, this morpheme may have been a component of *dəx^{w}-*, which appears to have been derived from a combination of affixes (Hess, personal communication).

---

[25]Note that the verb in (c), *?aɬps*, is intransitive and requires the use of the *?aɬ* preposition (as opposed to *x-*, which marks an oblique object) to express the participant that is eaten, as in *?aɬpsc ?aɬ+tiklkl* "I am eating a herring" (Nater 1984: 106). leaving us with the odd diagnosis of a verb of eating which does not subcategorize for food.

[26]In a number of environments, particularly in forming instrument clauses, *s-* may optionally be used instead of *dəx^{w}-*. This is hardly surprising, given the rather fuzzy line which divides those elements that are subcategorized for by an verb and those which are closely associated with it either semantically or by convention.

As can be seen from the examples above, the actual meaning of the second nominalizer is highly variable; it can serve to profile the instrument or means by which an action is performed, the motivation for that action, or the time or location where the action takes place. In terms of developing a CG representation of the peripheral nominalizer, each of these meanings would have to be treated as separate and distinct profile-variants, each singling out a different aspect of the nominalized event. In (43)(a) and (44)(c), for example, the profile of the nominalization is the setting, whereas in (42)(b) and (44)(a) it is the instrument; (44)(b) profiles the motive for the action, (43)(b) profiles its consequences, and (42)(c) a time during which the action occurs. All of these variants, however, are related in that the information they specify is in some way "circonstantial" to the profiled event—that is, it represents information that in other syntactic environments might be realized as some form of adverbial or predicate-adjunct. In this way, all the uses of the second nominalizer can be considered as particular instances of a single highly schematic morpheme which has the effect of profiling any participant or relation which is not part of the ordinary construal of the profiled event; the difficulty of capturing such an abstract characterization in a diagram of the type that I have been using here for CG representations should be obvious and I will not attempt to do so. It should be pointed out, however, that this is not to be taken as an argument against the use of this criterion in the definition of morphemes in Cognitive Grammar. Just as the notion of peripherality plays an important role in a number of aspects of the grammar of our two languages, the notion of being "adjunct" or "circonstantial" in some way to the primary focus of the clause enters into the picture in the uses of the second nominalizer and, as vague or elusive as these concepts might seem, they are certainly viable notions in terms of the construal of an event in the mind of a speaker, who must make choices in terms of how an event is to be profiled and what information is most central, choices which must inevitably have consequences in the syntax and morphology.

2.3 Relational Predications: Verbs and Adjectives

As noted above, Cognitive Grammar makes a fundamental distinction between predications that designate an object or entity (nouns) and relational predications, which profile a relationship or interconnection between entities (Langacker 1987). Within the class of relational predicates, we can distinguish between temporal (verbs) and atemporal relations (adjectives).[27] In Lushootseed and Bella Coola, these two classes are intimately related, although in slightly different ways. In Lushootseed all relational predicates appear to be, in their basic form, atemporal (that is, what in English would be adjectival) and require the addition of suffixes—many of which increase the valency of the stem—in order to take on a truly verbal, temporal meaning; in Bella Coola, on the other hand, there is an underlying distinction between those relational predications that are inherently transitive temporal relations and those that form a class of intransitive atemporal radicals corresponding to the same class in Lushootseed. Because of this difference, the two languages will be dealt with separately in the sections that follow.

2.3.1 Lushootseed

Hess (1993c) defines the most basic descriptive unit of the Lushootseed verb to be the radical stem—that is, the stem with no accompanying affixes. Hess also notes that when these stems occur as sentence predicates, they typically express states (and are often accompanied by the stative prefix *as-*) or correspond to verbs of experience. With only a handful of exceptions, the profile of radical stems never includes more than a single participant which corresponds to the patient, theme, or goal of the corresponding transitive verb. Consider:

(46) (a) ʔu+pus čəd
[pnt]+be•hit•by•flying•object 1s
"I [am/was] struck (by a flying object)"

---

[27] Adverbs and adpositions are also characterized as types of atemporal relations; Langacker (1987: 243), however, does not recognize these as fundamentally distinct within the category of atemporal relations. Instead, they are to be considered as language-specific grammatical classes which are more readily distinguishable on the basis of their syntactics than on their semantics alone. Adverbs and prepositions in Bella Coola and Lushootseed resemble their English counterparts and so will not be dealt with in any great detail, although it should be noted that both adverbs and prepositions—when fully elaborated—may function as intransitive predicates in precisely the same way that adjectives do.

(b) ʔu+pusu+d čəd
[pnt]+be•hit•by•flying•object+[caus] 1s
"I pelted [him/her]"[28]

(c) ʔu+č̓axʷ čəd
[pnt]+be•struck 1s
"I [was] struck"

(d) ʔu+č̓axʷa+d čəd
[pnt]+be•struck+[caus] 1s
"I struck [him/her]"

(Hess & Hilbert 1976: II, 136)

In the (a) and (c) sentences, the radicals serve as monovalent intransitive predicates, and in (b) and (d) they act as a base for the addition of valency-increasing suffixes, which create transitive verbs. Radicals can also serve attributive roles in a sentence, as in

(47) ti?ə? ha?ɬ ʔu+k̓ʷik̓ʷəɬ qʷuʔ
D good [pnt]+trickle water
"this nice trickling water"

(Hess 1993a: 117)

Conversely, adjective-like words describing states or qualities are also candidates for the addition of verbalizing and valency-increasing suffixes, as in

(48) (a) hikʷ stubš
big man
"big man"

(b) ʔu+higʷ+il+əxʷ ti?iɬ x̌əč+s
[pnt]+big+[trm]+now D mind+3po
"his courage grew"

(Hess 1976: 191)

(c) x̌ʷuɬ čəxʷ ʔəs+higʷ+əd tə ad+ʔiišəd
only you [stat]+big+[caus] D 2po+people
"uphold your people"

(Bates *et al.* 1994: 109)

These also appear in copular sentences which are syntactically and morphologically identical to sentences such as those in (46) with a radical verbal stem as predicate,

(49) (a) bəqʷ stubš
fat man
"fat man"

[28]The stem-final /u/ in *ʔupusud* is part of the root, but is deleted word-finally and before many suffixes. A very large number of Lushootseed roots follow this pattern (not always with /u/, as in (d) below).

(b) həla?b+əx^{w} čəd bəq^{w}
really+now 1s fat
"I [am] really fat"

(Bates *et al.* 1994: 38)

These facts suggest that at the level of the radical there is no clear morphosyntactic distinction between verb and adjective, the only potential exceptions to this generalization being one or two inherently transitive stems and a handful of adjectives like *luƛ̓* "old" and *ha?ɬ* "good" which do not appear with the stative aspectual prefix (Hess, personal communication).

This potential conflation of the categories of verb and adjective fits well into a proposal made by Givón (1979) that the lexical class "adjective" does not represent a universal category, but rather a language-specific portion of the continuum of time-stability. This continuum runs from the active pole, depicting rapid change of state (verbs) through temporary states (verbs /adjectives) to permanent-inherent properties (adjectives/nouns) and objects and other things that do not change their identity over time or change it slowly (nouns). Givón notes that where languages vary is as to how the middle portion of the continuum is lexicalized. In some languages temporary states are typically realized as verbs (Krio, Topotha) while in others they are most often adjectives (English); other languages differ as to whether permanent-inherent states are usually adjectives (English, Bantu) or nouns (Walbiri). In Lushootseed, rather than the temporary states being classed as verbs, we have verbal radicals forming a morphologically uniform class with both the temporary and inherent-permanent adjectives. Interestingly, the radical stems that seem the best candidates for forming a distinctive class of adjective in Lushootseed—those that do not take the stative prefix—are those that lie at the high end of the permanent-inherent end of the spectrum and some of these (such as *luƛ̓* "old") are used regularly as nouns.

As noted above, in Cognitive Grammar both verbs and adjectives are seen as relational predications, the distinction being between those whose profile includes the concept of change or duration over time (verbs) and those which profile an atemporal relation (adjectives). Returning to Givón's continuum, we can see that languages differ as to whether words which

designate temporary states are treated as temporal (verbal) or atemporal (adjectival) relations. In languages that express tense in their verbal morphology, the distinction between temporal and atemporal relations is often made in the syntax by the appearance of a copula in predicate-adjective constructions. Compare, for example, the two Russian sentences in:

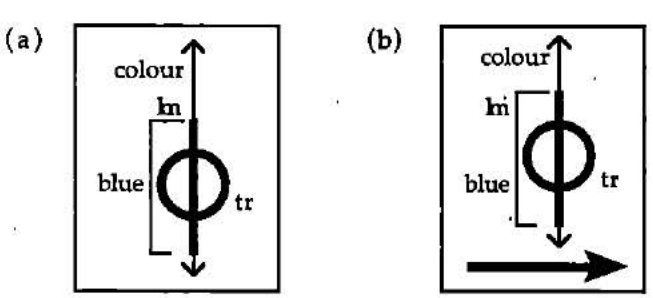
(50) (a) more by+l+o sinee
sea be+[past]+[neuter] blue
"the sea was blue"

(b) vo rži sine+l+i vasil'ki
in rye blue+[past]+[plural] cornflowers
"in the rye, the cornflowers were blue"

(Ožegov 1986: 623)

In sentence (a) the adjective *sinij* "blue" is construed as an atemporal relation, illustrated in (51)(a) below. Here *sinij* is seen as designating a region (lm) on the colour scale which corresponds to the speaker's conception of blue; however, being atemporal, it requires the addition of the copular form *bylo* to express the notion of tense; in contrast, the verb *sinet'* "be blue" profiles the same relation but includes the notion of duration and so can be inflected for tense, as in (50)(b), shown in (51)(b). In Lushootseed, however, tense is not marked in this way and there is no copula, leaving us no effective way in which to distinguish between monovalent intransitive verbs and adjectives: therefore, to the extent that it is a meaningful question, the present analysis will assume that the radical is indeed an atemporal—basically adjectival—relation which forms a copular sentence with its subject, a stand by no means at odds with the Lushootseed (and general Salishan) propensity for forming sentences with non-verbal predicates.

(51) Atemporal and temporal relations in Cognitive Grammar



2.3.2 Bella Coola

Although the term "radical" has not been previously applied in the literature on Bella Coola, this language, like Lushootseed, builds up words of a variety of lexical classes from unaffixed stems; as in the discussion above, the term radical will be used for those bare roots which represent relational predications. Nater (1984) divides radicals in Bella Coola into transitive and intransitive classes (the latter of which he extends to include nouns). Transitive radicals are similar to transitive verbs in Indo-European languages and seem to contain some notion of both temporal and transitive interaction between subject and object. Intransitive and transitive radicals are not morphologically distinguishable in uninflected form; transitives are identified by their ability to appear with affixes from the transitive pronominal paradigm:

(52) (a) k̓x+is ti+ʔimlk+tx ci+xnas+cx
see+3s-3s D+man+D D+woman+D
"the man sees the woman"

(b) sp̓+tis ti+ʔisimm̓ki+tx wa+wac̓+uk+sc
hit+3p-3s D+boy+D D+dog+[plural]+D
"the boy is hitting the dogs"

(Davis & Saunders 1978: 38)

Unlike Lushootseed radicals, these transitive radicals seem to have the same syntactic distribution as ordinary verbs and are precluded from acting as modifiers outside of a relative clause construction.

Intransitive radicals, on the other hand, seem to correspond to radicals in Lushootseed, forming a morphosyntactic category which subsumes both adjectives and intransitive verbs. As in Lushootseed, Bella Coola radicals which would be adjectival in English and other more familiar languages can take verbalizing suffixes:

(53) (a) caq̓^{w}+ø
straight+3s
"it [is] straight"

(b) ʔaɬ+caq̓^{w}+ø
[res]+straight+3s
"it has been straightened"

(c) caq̓ʷ+tu+c
straight+[caus]+3s-1s
"I straighten it"

(d) caq̓ʷ+ayx+ø
straight+[l.o.c.]+3s
"it has accidentally been straightened"

(e) caq̓ʷ+aynix+ic
straight+[l.o.c.]+3s-1s
"I accidentally straightened it"

(Saunders & Davis 1993: 273)

According to Nater (1984), the morphosyntactic properties of those radicals that correspond to English intransitive verbs and those that correspond to English adjectives are identical; as illustrated in (54) below, intransitive stems may be used both attributively and predicatively.

(54) (a) ta+ya ta+ʔimilk+ɬx̌
D+good D+man+D
"that good man"

(Nater 1984: 47)

(b) ya+ø ti+ʔilk+tx ti+s+ks+tu+s ti+q̓ʷx̌ʷmtimut
good+3s D+man+D D+np+fix+[caus]+3s-3s D+car
"the man is good at fixing cars"

(Davis & Saunder 1984a: 222)

(c) k̓x+ic ti+λ̓ap ti+λ̓msta+tx
see+3s-1s D+go D+person+D
"I see the person who is going"

(Davis & Saunders 1978: 40)

(d) λ̓ap+aw wa+λ̓msta+c
go+3p D+person+D
"the people are going"

(Davis & Saunders 1978: 38)

In the first of each pair of sentences in (54), an intransitive stem is used attributively (as an adjective) and in the second the same word is used as a sentence predicate. Note that neither the radical *ya*, corresponding to the English adjective "good" in (a), nor the radical *λ̓ap* "go" in (c) can take intransitive pronominal endings in this environment (Nater 1984), nor does *λ̓ap* require the addition of the *s*-prefix (or any other morpheme) to indicate its status as a modifier (*cf.* English "the *go/going person"). A transitive stem in a similar position, on the other hand, requires the syntactic realization of both subject and object and thus takes the form of a relative

clause (which bears pronominal affixation). Once again, as in Lushootseed, the absence of a copular verb and inflection for tense in Bella Coola leaves us with no effective means of differentiating between radicals representing temporal (verbal) and atemporal (adjectival) relations, and these will be treated here as in Lushootseed—as members of a single, conflated category of atemporal predications representing a portion of Givón's continuum of time-stability.

2.4 Other Categories

In addition to the major word classes described above, there are a number of other lexical categories that play various roles in the grammar of Lushootseed and Bella Coola. What follows is a brief enumeration of these classes and their grammatical functions, focusing on those properties most essential for understanding the analysis of the syntax in Section 3.

2.4.1 Prepositions

Lushootseed has a set of four prepositions, all based on the same root, given in (55).

(55) Lushootseed prepositions

ʔal	in, on, at, when
dx^{w}ʔal	toward, until, in order to, the reason for
tuɬʔal	from
liɬʔal	by way of, by means of, source, cause

(Hess 1993b: 105)

In addition, there is the morpheme ʔə, used to mark instrumental and other oblique NPs, which Hess (1993a; 1993b) classifies as a particle. Syntactically, ʔə behaves much like a case-marking preposition in that it is most often followed by an NP (noun + deictic) whose grammatical role is subcategorized for by the sentence predicate; it also serves to mark a possessive relationship between NPs and actantial relations between participles and overt NPs. Unlike the other prepositions here, however, it never appears as the head of a predicative (sentence-initial) PP and is apparently devoid of lexical meaning—properties not exclusive to but more typical of a particle. It seems most likely that ʔə is, in fact, some sort of hybrid of the two categories (having neither all nor exclusively the prototypical features of either); for the purposes of this

discussion I will refer to it as a preposition, mainly to bring the Lushootseed morpheme into line with the Bella Coola *x*, which more obviously falls into the preposition category.

As mentioned above, prepositions can serve predicative roles in sentences in Lushootseed when they serve as heads with respect to dependent nouns:

(56) dx^{w}ʔal tə hud tə s+x^{w}i̓ɬ+il ʔə tə biac
P D burning D np+fall+[trm] P D meat
"into the fire fell the meat"

(Kroeber 1991: 224)

It should be noted, however, that while the preposition *dx^{w}ʔal* itself is the syntactic predicate of constructions such as this (appearing as the top node in the D-tree and being the immediate governor of the subject, *tə sx^{w}i̓ɬil ʔə tə biac* "the falling of the meat"—see Section 3), semantically the import of a verbless sentence like this is to equate the identity of the subject with the PP as whole (*i.e.* to say something like "the falling of the meat [was] into the fire"). As discussed in Section 3.1.3.1, the predicate of a verbless sentence is ordinarily its rheme, and here the preposition and its complement combine to fill that function.

In Bella Coola, prepositional phrases are formed with one of four clitics; three of these are proclitics, and the remaining one is an enclitic (and so more strictly a post-position).

(57) Bella Coola adpositions

	static	dynamic
distal	ʔaɬ- "at"	ʔuɬ- "towards"
proximal	x- "via"	-xɬɬ "away from"

(adapted from Nater 1984: 48)

These clitics distinguish static/dynamic and distal/proximal. This gives contrasts such as

(58) (a) sp̓+iiǩ^{w}+is ta+ʔimlk+tx ta+wac̓+tx x+ta+stn
hit+head+3s-3s D+man+D D+dog+D P+D+stick
"the man hit the dog on the head with the stick (which he had in his hand)"

(b) sp̓+iiǩ^{w}+is ta+ʔimlk+tx ta+wac̓+tx ʔaɬ+ta+stn
hit+head+3s-3s D+man+D D+dog+D P+D+stick
"the man hit the dog on the head with the stick (that he picked up)"

(Nater 1984: 48)

(c) ʔałp+s ʔał+tu+qaaǎ+tx̌ʷ
eat+3s P+D+salmonberries+D
"he ate the salmonberries (which he found)"

(d) ʔałp+s x+tu+qaaǎ+tx̌ʷ
eat+3s P+D+salmonberries+D
"he ate the salmonberries (which he had)"

(Nater 1984: 50)

Note that Davis & Saunders (1975) relate the semantic categories of these prepositions conceptually to those of the deictics discussed in Section 2.4.4 below.

According to Kroeber (1991), Bella Coola differs from Lushootseed in not allowing prepositional phrases to serve predicative roles in the sentence. Instead, he argues, the nominals expressing the object of the preposition are used in locative expressions functioning as the sentence predicate, as in the following example he presents from Nater:

(59) (a) k̓x+is ʔał+ti+ʔałqułuus
see+3s-3s P+D+picture
"he saw it in a picture"

(b) ʔałqułuus ti+si+k̓x+is
picture D+np+see+3s-3s
"[where] he saw it [was] a picture"

(Nater 1984: 106)

The exception to this pattern, he notes, are temporal phrases, which appear as predicates in constructions such as

(60) ʔał+a+muus+aaǎ s+ʔał+ʔay+s x+tx̌ʷ
P+D+four+day np+[res]+thus+3s P+that
"it [was] four days [that] he was like that then"

(Kroeber 1991: 219)

The second clause here is a circonstantial clause (see 3.2.5), functioning essentially as some type of adjunct to the main predicate, which is intransitive and has no overt actants. Not only temporal prepositional phrases appear in this type of construction. A number of locative predicates appear in the texts in Davis & Saunders (1980), including the following:

(61) ʔul+a+ʔaǎɬ s+ƛ̓ap+tu+m ɬayx s+ka+ɬtnm+tu+m
P+D+upriver np+go+[caus]+[pass] this•one np+[irr]+go•up+[caus]+[md]
ʔał+ti+smt x+ta+nanmk̓ ta+ał+ǎapa+t+tx̌
P+D+mountain P+D+animal D+[res]+pack+[trans]+D

"it [was] upriver where this one was taken, where he was carried to a mountain by the animal that was packing him"

(Davis & Saunders 1980: 9, line 46)

In addition, I have found one potential (albeit rather opaque) example of a PP used as the predicate of a sentence with a DP-radical construction as the apparent subject:

(62) ʔaɬ+a+caay+kʷ+c̓ s+k̓ʷpst+ayx+liwa+s+kʷ+c̓ wa+c̓kta
P+D+all+[qt]+[perf] np+tidy•up+[l.o.c.]+[sem]+3s+[qt]+[perf] D+happen
"then the things that were happening seemed all to settle down"

(Davis & Saunders 1980: 93, line 53)

Although examples like (61) and (62) seem to belie Kroeber's observation, the use of prepositional phrases as sentence predicates does seem to be unusual; this may be due in large part to the great variety of intransitive stems expressing location in Bella Coola which may be used to form less marked constructions such as

(63) (a) ʔus+txʷ+nu ka+inu+s ci+sx+lx+likt+m+ck
[dir]+inside+2s [irr]+2s+3s D+bad+[inc]+completely+[md]+[idb]
"come inside if you are the one who got angry and ran away"[29]

(Davis & Saunders 1980: 104, line 88)

(b) ʔus+txʷ+tu+m x+tx̌ ʔaɬ+tx̌ʷ ʔuɬ+tu+suɬ+s+tx̌ʷ
[dir]+inside+[caus]+3s-[pass] P+3s P+then P+D+house+3po+D
"she was then taken inside his house"

(Davis & Saunders 1980: 131, line 38)

Sentences such as these, with an intransitive radical (a) or derived transitive verb (b), may have the advantage of a clearer communicative structure. In sentences which begin with a prepositional phrase, the rheme—as noted for Lushootseed above—is the prepositional phrase as a whole, the preposition-nominal dependency forming a conceptual unit, whereas what is actually rhematic in discourse may well be the nominal alone. For example, in the sentence in (59)(b), the rhematic element is "picture" (identifying where the topical element was seen), rather than the complex notion "in the picture", which may be (judging from the paucity of such sentences in the data) a conceptually or pragmatically unnatural selection of rheme.[30] It is also interesting to note that in examples such as that in (61), where prepositional phrases do occur

[29]This is the gloss provided ; however, the sentence doesn't seem to contain the notion "ran away".
[30]In English, of course, we can freely choose either variant: "A picture is where I saw it" / "In a picture is where I saw it". Note, however, that the second of the two has a somewhat more formal flavour to it and might seem less natural in conversation.

as sentence predicates, the focus of the speaker includes notions of spatial or temporal direction or motion and hence the semantic content of the preposition itself forms an integral part of the speaker's message. This is especially true of temporal expressions, which may help to explain why these are the most commonly attested form of prepositional predicate.

2.4.2 Adverbs

In Lushootseed there are two types of adverbial morphemes which Hess (1993b) refers to as "predicate adverbs" because they serve as modifiers of the sentence predicate; given the terminological choices I have made here, however, this term is unfortunate in that it is easily confused with the term "predicative", which has been used to designate those lexical items (some of which belong to the category of adverb) that can serve as predicates of sentences. To avoid confusion, I will refer to adverbial elements that may function as sentence predicates as "adverbs" and to those which can not as "adverbial particles". The latter set is given in (64):

(64) Lushootseed adverbial particles

cic̓^{w}/cay	very
c̓^{w}aqid	always
da?x^{w}/daw̓	just now
dəx^{w}	[?]
g^{w}a?x^{w}	eventually, soon
put	very much so, in a great way
tiləb	immediately, bluntly; right there
x̌^{w}əɬ ti	as though, like
x̌^{w}uƛ̓	just (that and nothing else)

(Hess 1993b: 114)

The second set, which may take a variety of roles in the sentence, including that of predicate, is given in (65). Many members of this second set such as *ha?ɬ* "good", *hik^{w}* "big", and *bək̓^{w}* "all" also belong to the class of radicals and may serve as modifiers of nouns and as bases for the formation of verbs.

When modifying a predicate, adverbs of either class appear sentence-initially and are followed by words which Hess (1993a) refers to as "particles"; these include subject pronominals

(65) Lushootseed adverbs

bək̓ʷ	all	hiqab	excessively, too (much)
cəɬuɬ	previously, in advance	x̌aɬ	also, too
cukʷ/cugʷ	only, uniquely	x̌ub	well; ought, should
day̓	only, uniquely, separate; foremost, especially; completely, all	tux̌ʷ	in contrast to the usual or expected
gʷəhaẇə	it seems	xʷɬub	ultimately, in fact
ha?kʷ/hagʷ	ago, long time	xʷi?	no, not
ha?ɬ	well, good	xʷu?ələ?	maybe, perhaps
(hə)la?ab	really, a lot	yaẇ	only if, not until
hikʷ	big, very		

(Hess 1993b: 115)

(2.4.3) and the interrogative particle *?u*. If there is more than one adverb, particles follow the first adverb, retaining sentence-second position.

(66) (a) cik̓ʷ ?əs+tagʷəxʷ ti?ə? qaẇqs
very [stat]+hungry D Raven
"Raven [is] very hungry"

(Hess 1993b: 114)

(b) cik̓ʷ čəd ?əxʷ?ux̌ʷəb
very 1s want•go
"I very [much] want to go"

(Hess 1993b: 115)

(c) day̓+əxʷ čəd cik̓ʷ ?əslaquil
indeed+now 1s very late
"indeed I [am] very late"

(Hess 1993b: 116)

Bella Coola adverbials are formed from various nominal expressions of time and location:

(67) (a) ?a?mɬanmii > ka?a?mɬanmiis
spring next spring
(b) malaxʷ > kamalaxʷs
year next year
(c) malaxʷ > tumalxʷa
year last year

(Nater 1984: 99 – 100)

When these expressions do not appear predicatively, they appear sentence-finally. Like Lushootseed, Bella Coola also has a set of adverbial particles which do not function as sentence predicates, although these generally occur at the end of a sentence; Nater lists only few, all of which denote direction.

(68) Bella Coola adverbial particles

ʔuuxnk	downwards
ʔuʎuk	upwards
tqʷnʎ	hither
txuli	this way, here
txula	that way, there
txʷnayaax	across the river

(Nater 1984: 134)

2.4.3 Pronominals, Possessives, and Agreement Features

Lushootseed makes use of two sets of pronominals and a set of clitics to represent subjects, and an additional set of suffixes for the expression of objects.[31]

(69) Lushootseed pronominals

	matrix subject	coordinate	subordinate	object
1s	čəd	čəda	-ad (-əd)	-bš/-c
2s	čəɬ	čɬa	-axʷ (-əxʷ)	-(bi)cid
1p	čəxʷ	čxʷa	-aɬi (-əɬi)	-buɬ
2p	čələp	čələpa	-aləp (-ələp)	-buɬəd
3s			-as (əs)	

The first three categories in the table are subject pronominals. The first is the ordinary set of pronominals used for subjects of matrix and relative clauses, while the second is used for subjects in the second of two coordinated clauses. The third set represents subjects in some types of circonstantial clause and is the only paradigm which includes a morpheme for the third person. The fourth set represents objects and these may occur with other pronominals, as in

(70) ɬu+ɬukʷ+tu+buɬəd čəɬ
[irr]+go•home+[caus]+2p 1p
"we will take you folks home"

(Hess 1993b: 54)

In addition to the above, Lushootseed also has a reflexive suffix, *-ut* (*cf.* Bella Coola *-cut* below) and a reciprocal suffix, *-agʷəl* "each other".

Possessives are represented by the affixes in (71), which are closely related to the pronominal series given in (69). Note that this paradigm lacks an affix for first person plural and

[31]The use of the terms "subject" and "object" will be discussed in Section 3.1.2 below.

(71) Lushootseed possessive affixes

	singular	plural
1	d-	(čəɬ)
2	ad-	-ləp
3	-s	

instead has substituted the corresponding subject pronominal, which appears following the possessed NP. Syntactically, the possessive relation may be marked in a number of ways, as in (72):

(72) (a) x̌ʷubt+s
paddle+3po
"his paddle"

(Hess 1993b: 77)

(b) x̌ʷubt+s ti hədli
paddle+3po D Henry
"Henry's paddle"

(Hess, personal communication)

(c) x̌ʷubt ʔə ti hədli
paddle P D Henry
"Henry's paddle"

(Hess 1993b: 77)

If the possessor is represented by a pronominal element, it takes the form of a suffix attached to the possessed (that is, the governing NP is marked in much the same way that a verb in another language might bear agreement features for a subject or object) as in (a); if the possessor NP is overt, it can be realized in one of two ways, either as (b), an overt NP cooccurring with the possessive suffix, or as (c), an NP adjoined to the possessed by the ʔə particle in exactly the same way that a peripheral actant would be adjoined to a VP. According to Kroeber (1991), the pattern in (b) represents an older, pan-Salishan pattern which may be in the process of giving way to the pattern in (c) in the language of the final speakers.

Both Lushootseed and Bella Coola have a set of independent predicative pronominals, used as objects of prepositions or as full predicates meaning "I am, you are, etc.". These are given in (73). Note that the Lushootseed independent pronominals, unlike the subject pronominals in (69), have a full set of third person forms. Lushootseed also has another independent pronomi-

(73) Independent pronominals

	singular		plural	
	Lushootseed	Bella Coola	Lushootseed	Bella Coola
1	ʔəca	ʔnc	dibəɬ	ɬmiɬ
2	dəgʷi	ʔiniu	gʷəlap(u)	ɬup
3	cədiɬ	tix/cix	caadiɬ	wix

nal, *diɬ*, which stands in for topical NPs or sentential or abstract topics, acting as a predicate nominal, as in the following example:

(74) diɬ dəxʷ+u+ɬasa+d čəɬ ti?ə? čƛ̓a
this np+[pnt]+pay+[caus] 1p-po D stone
"this [is] why we are paying Stone"

(Hess 1993b: 185, line 11)

Note, however, that *diɬ* also seems to serve in some sentences as a copular predicate, linking two overt NPs. The best interpretation of this sentence-type, which is communicatively marked, will have to await further study.

Nater classifies the third person predicative pronominals of Bella Coola in a separate class of words called "identifiers", which are similar to the predicative pronominals, but differ in that they can serve as copular verbs, linking two overt actants in a sentence, as in

(75) (a) tix ɬayx ti+manc
[idn] D D+father
"this is my father"

(b) tix+ɬ tx ʔac
[idn]+belonging•to 3s things
"these things are his"

(Nater 1984: 115)

Both predicative pronominals and pronominal identifiers may also take verbal suffixes such as the imperative-causative (rendering "let it be that ... !") or *-nix* "to think, consider" to create sentences such as *ʔinunixic ta Frank* "I thought you (*ʔinu*) were Frank".

In ordinary sentences, Bella Coola has an extremely complex system of pronominal suffixes consisting of separate paradigms for intranstive, transitive, passive, causative, and passive-causative constructions, most likely formed by the fusion of various permutations of Proto-Sal-

ish pronominal suffixes and passive/causative affixes. The exact nature of these suffixes—that is, whether they are to be treated as inflectional features or as incorporated pronouns—will be addressed in Section 3.1.2. For subjects of intransitive verbs, the paradigm in (76) is used.

(76) Bella Coola subject/possessor suffixes

	singular	plural
1	-c	-(i)ɬ
2	-nu	-(n)ap
3	-s	-(n)aw

(Davis & Saunders 1978: 63)

The third person singular suffix *-s* is usually omitted in main clauses and appears to be more or less obligatory in subordinate clauses, although its distribution is subject to considerable stylistic variation (Davis & Saunders 1978; Nater 1984); this paradigm is also used to express possession in the same way as the Lushootseed affixes in (71). For example,

(77) (a) staltmx+c
chief+1s
"I am chief"

(Davis & Saunders 1978: 63)

(b) ti+staltmx+c
D+chief+1s
"my chief"

(c) ti+staltmx+s Mary
D+chief+3s Mary
"Mary's chief"

(based on Nater 1984: 36)

These suffixes, like the archaic Lushootseed pattern, can cooccur with an NP, as in (c).

While Bella Coola differs from Lushootseed in its historical fusion of the possessive and intransitive-subject paradigms, there is an interesting comparison to be made between the use of the Bella Coola subject/possessor affixes in sentences like that in (77)(a) and the use of the possessive to express the subject of participles in Lushootseed (and other languages) discussed in 2.2.2 above. In these nominalizations, the possessive morpheme is used as a point of reference with which to locate or identify the nominalized event for the listener. The subject is generally

the discourse topic and the trajector (most prominent element) of the nominalized clause and is thus the most logical reference point with which to identify a particular event in discourse. In Bella Coola, this may help to explain, at least synchronically, how the collapse of the possessive and (intransitive) subject paradigms into a single set of morphemes was possible: under the reference point analysis, the two categories can be seen to be conceptually related subschemas of a more general semantic category with the deictic function of identifying one particular entity with respect to another.[32] When it is a "thing" that needs to be located, the morpheme is given its possessive interpretation, and if it is an event, the affix is given a subject interpretation by the hearer. Thus, the close association of subject and possessor in intransitives in Bella Coola, and in nominalizations in Lushootseed, English, and Altaic can be seen as the result of a close semantic link between the two concepts, rather than as the by-product of historical accident or abstract structural similarities.[33]

Bella Coola transitive verbs make use of the pronominal paradigms in (78) and (79). According to Nater (1984), the transitive endings are formed from the fusion of object+subject pronominal suffixes. Note, however, that the third person singular object marker in the causative paradigm has been reduced to zero; the first-person subject+second-person object suf-

(78) Bella Coola transitive suffixes.

	object					
subject	1s	2s	3s	1p	2p	3p
1s	–	-cinu*	-ic	–	-tułap*	-tic
2s	-cx^{w}	–	-ix^{w}	-tułx^{w}	–	-tix^{w}
3s	-cs	-ct†	-is	-tuɬs	-tap†	-tis
1p	–	-tułnu*	-iɬ	–	-tułap*	-tiɬ
2p	-cap	–	-ip	-tułp	–	-tip
3p	-cant	-ct†	-it	-tułt	-tap†	-tiɬ

(Davis & Saunders 1980: 252)

[32]There are many other languages in which subjecthood and possession are related; see, for example, Basakov (1971) on the common diachronic origins of possessives and personal pronouns in Altaic languages.

[33] See, for instance, Chomsky's (1970) account of subjects as specifiers of VP, corresponding to SPEC possessors of NP; this analysis could in many ways parallel that given here if the abstract structural position SPEC were to be interpreted as having some sort of conceptual content—in this case, a sort of indexical or deictic function, which is in fact suggested by the name given to the category.

(79) Bella Coola causative suffixes

	object					
subject	1s	2s	3s	1p	2p	3p
1s	–	-minu*	-c	–	-minap*	-tic
2s	-mx^{w}	–	-x^{w}	-mułx^{w}	–	-tix^{w}
3s	-ms	-mt†	-s	-muɬs	-mt†	-tis
1p	–	-muɬ-nu*	-ɬ	–	-muɬap*	-tiɬ
2p	-man(c-a)p	–	-p	-muɬp	–	-tip
3p	-mant	-tap†	-t	-muɬt	-tap†	-tit

(adapted from Davis & Saunder 1980: 253)[34]

fixes in both paradigms (marked with an asterisk) reverse the usual object-subject order of morphemes, while the third-person subject+second-person object markers (marked with a cross) are all passive suffixes (see (81) below). When subject and object reference coincide, the reflexive morpheme *-cut-* is used with the intransitive suffixes from (76). Bella Coola also has a pair of reciprocals, *-tmax^{w}/-nmax^{w}*—the first expressing control or intention and the second expressing inadvertence or lack of control.

The use of a passive in suffixes for second-person object/third-person subject seems to follow from a general principle of Bella Coola pragmatics that requires a second person to always be least peripheral in a clause, as in

(80) (a) (i) k̓x+ct x+ti+ʔimlk+tx
see+2s-3s P+D+man+D
"the man sees you"

(ii) *k̓x+ct ti+ʔimlk+tx
see+2s-3s D+man+D

(b) (i) k̓x+tap x+ti+ʔimlk+tx
see+2p-3s P+D+man+D
"the man sees you-all"

(ii) *k̓x+tap ti+ʔimlk+tx
see+2p-3s D+man+D

[34]Note that Davis & Saunders include the morpheme *-tu-* as part of the causative paradigms in both the active and the passive forms (thus, *-c* is given as *-tuc*); however, in all cases this morpheme is easily identified and separated from the pronominal suffixes, which are essentially the same in form as the non-causative endings. Nater (1984) gives the corresponding paradigms without this affix, which he analyzes as a causative. Given its obvious similarity to the Lushootseed causative *-tx^{w}* (~ *-tu-*), I have chosen to follow Nater in this regard.

(c) (i) k̓x+tap x+a+ʔimlk+sc
see+2p-3p P+D+man+D
"the men see you-all"

(ii) *k̓x+tap a+ʔimlk+sc
see+2p-3p D+man+D

(Davis & Saunders 1978: 63)

That pronominal suffixes used in these sentences are indeed passives is shown in the (i) examples by the obligatory realization of the third person actant as an oblique object, marked with the preposition *x-* . As noted above, this passive morpheme has completely replaced its active counterpart in the transitive paradigm. A similar phenomenon occurs in the formation of subject-centred relative clauses, which are passivized to promote second-person objects to subject position.[35] Along much the same lines, the first-person subject+second-person object transitive pronominal suffixes reverse the usual object-subject order of the morphemes, suggesting that at one time the second-person participant may have been accorded some kind of special status in this type of sentence as well.

The final pronominal paradigms are the passive and passive-causative suffixes:

(81) Bella Coola passive pronominal suffixes

	passive			passive-causative		
	1	2	3	1	2	3
singular	-tinic	-ct	-im	-minic	-mt	-m
plural	-tiniɬ	-tap	-tim	-miniɬ	-tap	-tim

(adapted from Davis & Saunder 1980: 252 – 253)

Passive and passive-causative verbs are intransitive and show only subject agreement.

2.4.4 Deixis

Both Lushootseed and Bella Coola make use of pre-nominal deictic elements. These elements typically have two forms, one unmarked for gender and another (formed by the insertion of the infix -s- after the initial consonant of the morpheme) indicating that the referent is female; in both languages this is often the only method of distinguishing male from female, and

[35]Forrest (1994) analyzes these facts as the remnants of an earlier system of "inverse" voice (Thompson 1989; Givón 1994) which may have been a feature of Proto-Salish.

(82) Lushootseed deictics

	distal	proximal	unique	non-contrastive	hypothetical/ remote
non-fem	ti?iɬ	ti?ə?	ti	tə	kʷi
fem	tsi?iɬ	tsi?ə?	tsi	tsə	kʷsi

(Hess 1993b: 97)

gender seems to be natural.[36] The Lushootseed deictic elements are given in (82). The distal and proximal forms may be used on their own as pronominals, and only these have reduplicated plural forms, *ti?i?iɬ* and *ti?i?ə?*, which are not obligatorily used in plural contexts. Deictics are used with all nouns, including participles and proper nouns. There is also a set of adverbial demonstratives (≈ English "here", "there"), which distinguish distal, proximal, and remote.

(83) Lushootseed adverbial demonstratives

	distal	proximal	remote
non-fem	tudi?/tadi?	di?a?	kʷədi
fem	ta?a?	ti?a?	–

(Hess 1993b: 99)

The deictic system of Bella Coola is even more involved. In addition to the "proximal indefinite" forms *ti-/ci-* which resemble the Lushootseed unique-reference deictics, Bella Coola has a large set of deictics consisting of proclitic-enclitic pairs. The paradigm for these elements distinguishes gender/number, distance, and demonstrative/non-demonstrative.[37] As the table shows, the enclitic makes the demonstrative/non-demonstrative distinction and the proclitic distinguishes proximal, middle, and distal; nouns which bear only the proclitic have an

[36]Nater states that Bella Coola does have grammatical gender and posits three classes—female, non-female, and neutral. The neutral class, however, has no forms of its own but instead alternates between feminine and non-feminine forms; furthermore, all of Nater's examples of this alternation seem to indicate that it is, in fact, a reflection of natural gender, as in *ti+skma* "bull moose" /*ci+skma* "cow moose". As Nater himself points out, membership in a given gender class is predictable on a semantic basis: the only example he gives of what might be purely grammatical gender is *ci+waac* "wristwatch". Thus, it seems preferable to follow Davis & Saunders and treat Bella Coola gender as a natural, feminine/non-feminine distinction. Hess (personal communication) notes that in Lushootseed the feminine deictic *tsi* is used occasionally with genderless objects (for example by men referring to their hunting canoes) and small animals. Note also that although the Lushootseed feminine deictic is pronounced [ci], it will be presented here in the standard Lushootseed orthography (tsi) which is used in the data to indicate the presence of the feminine infix.

[37]In addition to its locative meaning, the proximal/middle/distal distinction also distinguishes among objects on the basis of reality/familiarity/definiteness; see Davis & Saunders (1975a, 1975b) for an account of the semantics of Bella Coola deixis.

(84) Bella Coola deictic clitics

	proximal		middle		distal	
	demon	non-dem	demon	non-dem	demon	non-demon
non-fem	ti—ɬayx	ti—tx	ta—ɬaǰ	ta—ɬ	ta—tix	ta—tǰ
fem	ci—c̓ayx	ci—cx	ʔiɬ—ʔiɬayɬ	ʔiɬ—ɬ	ʔiɬ—cix	ʔiɬ—ʔiɬ
plural	wa—ʔac	wa—c	ta—ɬaǰʷ	ta—ɬ	ta—taǰ	ta—tǰʷ

(Davis & Saunders 1980: 254)

indefinite reading (approximately that of "a/an" in English). Abstract nouns appear with the proximal-plural proclitic *wa-*.

An important issue with respect to deictics, not only in Bella Coola and Lushootseed, but in Salish in general, has to do with their status as either the heads or complements of the nouns with which they appear. Determiners (which is the class that subsumes the deictics of Lushootseed and Bella Coola) have traditionally been considered as subordinate in some way to the nouns they are associated with—either as specifiers in phrase-structure grammars (Radford 1988) or as dependents in dependency grammars (Mel'čuk 1988). Some recent work, however, has centred on the proposal that determiners may in fact be the heads of the noun phrases (NPs) in which they occur (Abney 1987; Hudson 1984, 1990—for a critical appraisal of these proposals for English, see also van Langendonck 1994), and a number of quite common phenomena in Salishan languages have given rise to specific proposals for Determiner Phrases (DPs) in Straits Salish (Jelinek & Demers 1994) and Lillooet (Davis & Matthewson 1995b). Perhaps the most convincing structural evidence for a DP analysis in Bella Coola and Lushootseed is the phenomenon of syntactic nominalization (see Section 3.2.3 below), the formation of nominals from finite clauses with no morphological marking, as in the Lushootseed sentence

(85) put ƛ̓u+bə+ʔitut ti?iɬ ʔə(s+d)xʷ+pakʷ+ah+əb
only [hab]+[add]+sleep D [stat]+[dp]+lie+ass+[md]
"this He-Lies-With-His-Ass-In-The-Air would only sleep"
(Hess 1993b: 183, line 57)

This is also seen in some verbless sentences with nominal predicates (Section 3.1.3.1)

(86) Lushootseed

(a) sqʷəbay? ti ʔu+čala+t+əb ʔə ti?iɬ wiw̓su
dog D [pnt]+chase+[caus]+[md] P D children
"the one chased by the children [is] the dog"

(Hess 1993b: 127)

Bella Coola

(b) ti+ʔimlk+tx ti+sp̓+is ci+xnas+cx
D+man+D D+hit+3s-3s· D+woman+D
"the one the woman hit [is] the man"

(Davis & Saunders 1978: 39)

Structures such as these suggest that it is the appearance of the deictic which marks the status of the clause as a nominal and, in effect, licenses its appearance in a specific syntactic role, a property which is generally attributed to the phrasal head in constituency-based grammars.

In dependency theory, however, the properties of a head are not automatically inherited by its dependents and so the apparent "licensing" of one element in a given syntactic environment by its association with another is not necessarily proof of the direction of the dependent-head relation (although it may well be an indication thereof). In the Meaning-Text Model, syntactic dependency is established on the basis of the distribution or "passive valency" of wordforms (as opposed to the "active valency", which is the set of syntactic units that a wordform subcategorizes for). For a given syntactic unit **U** of a language, the passive surface-syntactic valency of **U** is defined by Mel'čuk (1988) as "the list of surface syntactic roles in which **U** can appear either as a dependent ... or as an absolute head (*i.e.*, an element that is dependent on nothing)" (p. 112). When considering the relation of two wordforms, $\mathbf{w_1}$ and $\mathbf{w_2}$, at the surface syntactic (SS) level, the direction of the dependency (that is, which of the two is the head and which is the dependent) can be established by one of two criteria, the relevant one for our purposes being Criterion B.I, which states that the surface-syntactic head of a "phrase w_1——w_2 is the wordform that determines the passive SS-valency of the phrase to a greater degree than the other wordform" (Mel'čuk 1988: 132).[38] In order to express this criterion in more rigorous terms, it is necessary to speak of the passive surface-syntactic valency of a lexeme **L** containing

[38]The notation w_1——w_2 indicates a dependency whose direction has yet to be determined.

(87) Criterion B.I (imposition of passive SS-valences)

IFF $\{VAL^{SS}_{pass}(L(w_1)——L(w_2)) = VAL^{SS}_{pass}(L(w_2))$

OR $VAL^{SS}_{pass}(L(w_1)——L(w_2)) \cap VAL^{SS}_{pass}(L(w_2)) >$

$VAL^{SS}_{pass}(L(w_1)——L(w_2)) \cap VAL^{SS}_{pass}(L(w_1))\}$

AND $VAL^{SS}_{pass}(L(w_1)——L(w_2)) \neq VAL^{SS}_{pass}(L(w_1))$

THEN wordform w_2 is the SS-governor of w_1—that is, $w_2 \rightarrow w_1$

(Mel'čuk 1988: 133)

a wordform w, or $VAL^{SS}_{pass}(L(w))$; the direction of the dependency $w_1——w_2$ is then decided by comparing $VAL^{SS}_{pass}(L(w_1))$, $VAL^{SS}_{pass}(L(w_2))$, and $VAL^{SS}_{pass}(L(w_1)——(L(w_2))$ according to the formulation of Criterion B.I given in (87). In plain language, this rule states that w_1 is a dependent of w_2 if the environments in which w_2 appears are a) the same environments in which the syntagm $w_1——w_2$ appears, or b) those environments in which the distribution of w_2 and $w_1——w_2$ coincide are numerically greater than those in which w_1 and $w_1——w_2$ coincide (as long as w_1 does not meet the first condition, in which case it is the surface-syntactic governor).

One of the clearest applications of this criterion comes in the case where one of the wordforms, w_2, occurs only in the context of the relation $w_1——w_2$, as is the case, for example, with prepositions in many languages, which occur only in association with NPs. The passive valency of a PP differs from that of an NP, meeting the second condition of B.I, while the fact that prepositions may occur only in the context of a PP means that the passive valency of the preposition is precisely that of the prepositional phrase. The same argument holds for most deictics in Bella Coola and Lushootseed. The Lushootseed deictics and the Bella Coola proclitics and non-demonstrative enclitics, like prepositions, appear only in the context of a nominal, making VAL^{SS}_{pass} (D) equal to VAL^{SS}_{pass} (D+nominal). By the same token, VAL^{SS}_{pass} (nominal) $\neq$ VAL^{SS}_{pass} (D+nominal), as there are two environments in which nominals regularly appear without a deictic marker. The first of these is as the predicate of a verbless sentence, although the fact that deictics may appear on some predicate nominals makes this a weak indicator of a differ-

ence in passive valency. The second environment where nominals appear without a determiner in the surface syntax is when they modify other nouns. This is clearest in Lushootseed:

(88) (a) ti?ə? kiyuuqʷs stətudəq
D seagull slaves
"these seagull slaves"

(Hess 1993b: 117)

(b) *ti?ə? ti?ə? kiyuuqʷs stətudəq
D D seagull slaves

In Bella Coola, however, the deictic proclitics do appear on nominals, as in

(89) k̓x+ic ti+staltmx ti+?imlk+tx
see+3s-1p D+chief D+man+D
"I see the man [who is] chief"

(Davis & Saunders 1978: 41)

Note, however, that they appear on other modifiers of nouns as well, as in

(90) (a) k̓x+ic ti+ya ti+?imlk+tx
see+3s-1s D+good D+man+D
"I see the good man"

(b) k̓x+ic ti+?imlk ti+ya+tx
see+3s-1s D+man D+good+D
"I see the good man"

(Davis & Saunders 1978: 40)

Here, as in all phrases consisting of a noun and modifiers, the proclitic is applied to the modifying element(s) as well as to the noun, although the enclitic appears only phrase-finally. The fact that the deictic proclitics must agree with one another, that they may appear associated with a relative clause construction (see 3.2.1 below),

(91) k̓x+it ti+?imlk ti+qup̓+cs+tx
see+3s-3p D+man D+hit+1s-3s+D
"they see the man who is hitting me"

(Davis & Saunders 1978: 46)

and that their spread is blocked by the appearance of another DP,

(92) (a) ?aɬk̓yuk+iɬ ti+?imlk ti+qup̓+t+tx ci+xnas+cx
know+3s-1p D+man D+hit+[part]+D D+woman+D
"we know the man who hit the woman"

(b) *ʔaɬḵyuk+iɬ ti+ʔimlk ti+qup̓+t ci+xnas+cx+tx

(c) *ʔaɬḵyuk+iɬ ti+ʔimlk ti+qup̓+t ci+xnas+tx

(d) *ʔaɬḵyuk+iɬ ti+ʔimlk+tx ti+qup̓+t ci+xnas+cx

(Davis & Saunders 1978: 50)

may indicate that this is best treated in terms of a rule of deictic spreading.[39] This rule would be applied in the morphology—meaning that at the level of surface syntax, the passive valency of the deictic-nominal string does not include the role of modifier of a noun and, therefore, the deictic can be treated as the surface syntactic governor under Criterion B.I.

There is, however, a small set of deictics in both languages that, in addition to their use as the heads of DPs, also appear independently as pronominals: these are the Bella Coola demonstrative enclitics and the Lushootseed demonstratives *tiʔiɬ* and *tiʔəʔ* (and their feminine counterparts). Because these appear on their own, it is not immediately obvious if they conform to Criterion B.I or not and it is necessary to enumerate more precisely the passive SS valences of the syntactic units we are comparing in order to determine if these deictics, too, act as syntactic governors.[40] This is done in the table in (93). From the table we can see that the intersection of the set of syntactic environments in which pronominally-used deictics occur (VAL^{SS}_{pass} (D_{pro})) and the set of environments where DPs occur (VAL^{SS}_{pass} (D+nominal))—the double-outlined box—is greater than that of DPs and bare nominals (VAL^{SS}_{pass} (nominal)) outlined in bold. This pattern conforms to the second condition of Criterion B.I given in (87). Once again, this is clearer

(93) Comparative VAL^{SS}_{pass} of deictics, DPs, and bare nominals

VAL^{SS}_{pass} (D_{pro})	VAL^{SS}_{pass} (D+nominal)	VAL^{SS}_{pass} (nominal)
actant of verb	actant of verb	—
object of preposition	object of preposition	—
predicate (Lush only)	predicate	predicate
—	adverbial	adverbial
—	—	nominal modifier

[39]These facts will be dealt with again later in Section 3.1.1, where they will be used to formulate a rule for deixis spreading in the context of our discussion of the syntax.

[40]The fact that these deictics are pronominals is in itself a point in favour of the DP analysis, and this argument has been applied to English and related languages (R. Hudson, personal communication).

in Lushootseed, where deictics can serve as sentence predicates, as in

(94) ti?ə? tə čʌ̓a
D D stone
"the stone [is] this [one]"

(Hess 1993b: 103)

Such a structure is not possible in Bella Coola, which employs the set of identifiers (see 2.4.3) for sentences of this type; this means that if Bella Coola adverbial *s*-clauses are included in the class of nominals, VAL $\overset{SS}{pass}(D_{pro})$ is (numerically) equal to VAL $\overset{SS}{pass}$(nominal). Even if this is the case, however, it would still be desirable to take the deictic as head, given that the same wordforms can be analyzed as heads when used as parts of deictic circumfixes. Not applying the DP analysis to pronominal deictics would also create a discrepancy between these deictics—which would be the dependents of the nominals with which they appear—and the others, which we have already shown to be the heads of their phrases.

2.5 Summary

The net result of the analysis presented in the preceding sections is an essentially two-way division of the major lexical categories of Bella Coola and Lushootseed, classifying them initially as predications profiling either entities (nouns and nominals) or relations between entities (verbs and adjectives). In the case of Bella Coola, relational predications can be further subdivided into temporal (transitive) and atemporal (intransitive) categories; in Lushootseed, the relational predications expressed by radicals are all atemporal and require the use of suffixation for the expression of unambiguously temporal relations, verbs being built up via various layers of affixation (see Beck 1995 for further discussion). In neither language does the lexical class of adjective form a distinctive morphosyntactic category. It should be noted that the lexical classes proposed here are considerably different from other proposals that have been made for Salishan languages (see in particular Kuipers 1968 and Kinkade 1983), which often make the initial division between predicates and non-predicates and then fail to differentiate any further "underlying" distinction (beyond valency) within the predicate category. Such analy-

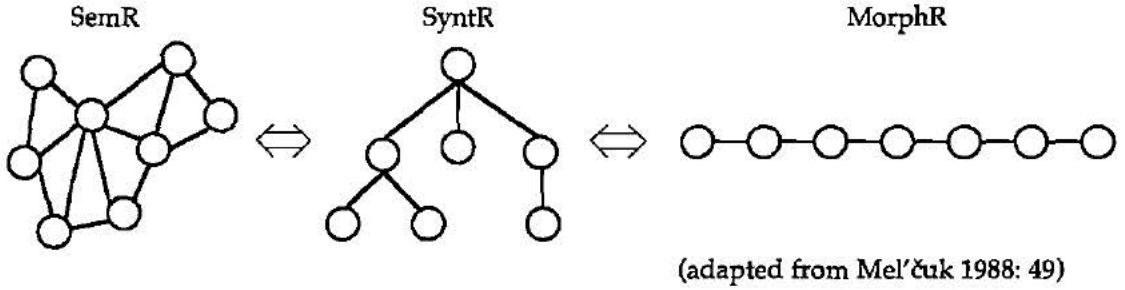
ses, however, run into a number of problems, including those outlined in van Eijk & Hess (1986) and in the discussion above. Even had they succeeded, however, these analyses remains inherently unsatisfying from the point of view of conceptual frameworks such as CG or the MTM, which seek to base the morphosyntactic properties of language on underlying semantic and conceptual content. Because of the pervasive structural ambivalence of Salishan roots with respect to their class membership, the construction of a straightforward syntax of these languages on purely structural grounds becomes a daunting task and often leads to analyses that paint these languages as much more exotic and mysterious than they really are. Alternatively, as will be argued in Section 3, allowing ourselves to make reference to the conceptual content of roots in order to identify their lexical category, as we have done here, both makes the task of describing the syntactic behaviour of these roots and their derivatives much simpler, and permits an analysis that brings Bella Coola and Lushootseed more in line with patterns observed by other researchers across the broad spectrum of human languages.

3 Clause Structure

For the purposes of discussing the structure and syntax of clauses in Lushootseed and Bella Coola, I will set aside (for the most part) the framework of Cognitive Grammar used up until now in favour of an approach which allows a more direct consideration of the syntactic characteristics of these two languages, namely the Meaning-Text Model (Zholkovskij & Mel'čuk 1965; Mel'čuk 1988). As noted in the introduction, this sudden shift of theoretical approach should not be taken to mean that the framework used in one section is incompatible with that used in the other, or that the insights achieved in the context of one theory are not attainable in the other: the implication is merely that one theory seems better suited for one type of discussion, while the other is better adapted for another. For the purposes at hand, the Meaning-Text Model (MTM) provides a more apt tool for describing syntactic structures and the conditions under which they are formed, and so it is the MTM that will serve as the theoretical framework for the bulk of the discussion that follows.

The Meaning-Text Model, first put forward in Moscow by Zholkovskij & Mel'čuk (1965), operates on the principle that language consists in a mapping from the content or meaning (semantics) of an utterance to its form or text (phonetics).[1] Intermediate between these poles—

(1) Representations at the Semantic, Syntactic, and Morphological levels



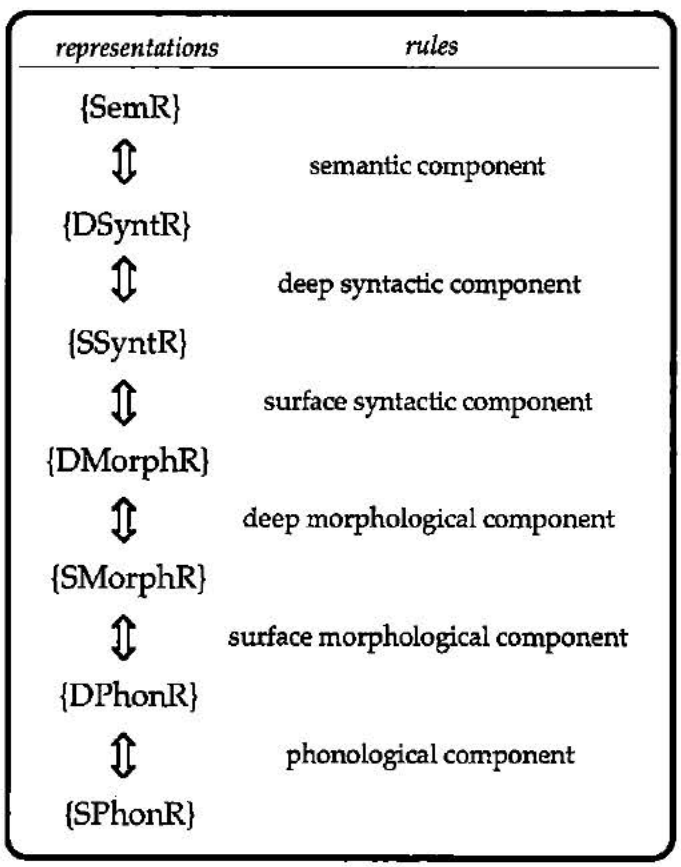
(adapted from Mel'čuk 1988: 49)

as illustrated in (1)—are two additional levels of representation, the syntactic and the morphological; these intermediate levels are formal devices which allow the mapping of content

[1]For further discussion of this principle and others lying behind the Meaning-Text approach to linguistics, the reader is referred to Mel'čuk (1988) and the references contained therein.

from the diffuse, unordered network of the Semantic Representation (SemR) through the tree-structures of the Syntactic Representation (SyntR) to the linear chain of morphemes of the Morphological Representation (MorphR) and, ultimately, the temporally-ordered string of phones of the Phonetic Representation (PhonR). In addition, each of the syntactic, morphological, and phonetic levels makes use of two stages, the deep and surface representations. This gives us a total of seven levels of representation, shown in the left column of the table in (2).[2]

(2) Representations and components of the MTM



(adapted from Mel'čuk 1988: 50)

The correspondence between levels, represented by a double-headed arrow, is achieved by a set of rules or components which serve to translate a representation at level *n* into the form of a representation at level *n*+1. Thus, for example, the surface syntactic component contains the rules

[2]Because of the formal devices used in each representation more than anything else, each level also has a Communicative, Anaphoric, and a Prosodic Representation. These have not been extensively formalized as of yet and will not enter into the discussion directly.

necessary for the mapping between a SSyntR—which takes the form of an unordered dependency tree whose nodes represent lexical items (see below)—and a DMorphR, which takes the form of an ordered chain of morphemes. Rules are written as "$n \leftrightarrow n{+}1 \mid \{w\}$", where "$n$" is a structural feature of a given level, "n+1" is the corresponding feature at the next level, and "w" is the conditions that dictate the application of the rule. Note that all rules in the MTM are intended to apply in either direction—that is, from n to n+1 (in the direction meaning > text) and from n+1 to n (text > meaning); they are also not to be interpreted as transformations, but instead constitute interpretive devices which establish equivalencies between the symbolic conventions of one level and those of another.[3]

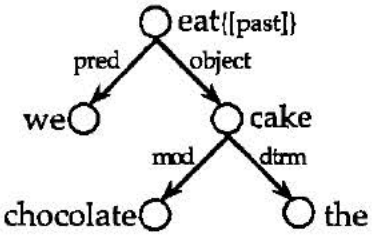
Because we are interested here in the syntax of our two languages, the most relevant levels of representation are the two syntactic levels, the DSyntR and the SSyntR. In terms of syntax, the MTM belongs to the school of dependency grammars (*e.g.* Tesnière 1959, various works of the Prague School, and, more recently, Hudson 1984, 1990), which operate on the principle of positing hierarchical relations between individual lexical items in a syntactic structure, as opposed to the essentially constituency-based approach used in more familiar phrase-structure grammars such as Government and Binding Theory or Head-driven Phrase Structure Grammar (Pollard & Sag 1994). The relations holding between elements in a syntactic structure are referred to as "dependencies" because they establish a hierarchical relation between two elements "X" and "Y" such that one of the two is seen as the governor or head of the other, this latter element being referred to as the "dependent". Dependency relations in the MTM are considered to be anti-symmetric, anti-reflexive, anti-transitive, and unidirectional, so that in a particular configuration of dependencies or a "dependency tree" (D-tree) each element has a single governor located higher than itself in that tree.[4] Consider, for instance, the D-tree diagramming the SSyntR of the English sentence "we ate the chocolate cake":

---

[3]For a more thorough discussion of the distinction, see Mel'čuk (1988).

[4] See, however, Hudson (1990, 1994) for a dissenting view which allows multiple and reflexive dependencies.

(3) SSyntR of "we ate the chocolate cake"



In the D-tree in (3), each element has a single syntactic governor except for the verb "eat" which occupies the top "node" in the dependency tree (indicated by a circle) and, hence, constitutes the sentence predicate. The elements here (and in any D-tree) are not considered to be linearly ordered: word-order is a feature of the DMorphR and is conditioned by SSynt relations and considerations of thematic structure. At the SSyntR, each node on the tree corresponds to a lexical item appearing in the surface form of the utterance and each dependency (indicated by an arrow) is labeled with a name referring to the type of grammatical relation holding between the elements. In this particular example, the four relations shown are: "predicative" (pred), the relation holding between a syntactic predicate and its subject; "objectival" (object) which holds between predicate and direct object; "modificative" (mod) which is the relation between a head and some modifying element such as an adjective; and "determinative" (dtrm) which holds between a noun and a determiner. Of the four, the first three are considered to be universal whereas the fourth, dtrm, holds only in those languages which have determiners: in principle, surface syntactic relations (SSyntRels) are language-specific, although in practice there is a high degree of commonality across a wide range of the world's languages.

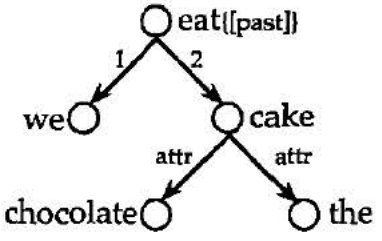
Unlike the SSyntR, the DSyntR makes use of a limited set of universal relations between head and dependent to label arcs in the D-tree. By way of illustration, compare the surface forms of the sentence illustrated in (3) and the parallel Lushootseed sentence,

(4) ʔu+ʔəɬəd tsi čačas ʔə ti bəsqʷ
[pnt]+eat Df child P D crab
"the girl ate crab"

(Hess 1993a: 38)

Unlike English *eat*, Lushootseed *ʔəɬəd* is intransitive and so introduces the thing eaten with the preposition *ʔə*, inserted into the SSyntR by a process in the deep syntactic component of the rules (which translates the DSyntR into the SSyntR), discussed more fully in 3.1.1 below.[5] The insertion of the preposition is occasioned by the lexical entry of the verb, which requires that this participant be realized in the (language-specific) "oblique" relation to its governor in the SSyntR. At the DSyntR, however, the object *ti bəsqʷ* "the crab" in (4) and "the cake" from the English sentence in (3) would stand in precisely the same relation to the sentence predicate. Consider the DSyntR of (3) given in (5).

(5) DSyntR of "we ate the chocolate cake"



In the DSyntR, each node corresponds to a "generalized lexeme" (a category consisting of "content" words and a few other items which are not relevant to our discussion here). It is in the DSyntR that items from the lexicon first appear and these are subscripted for all "meaning-bearing" morphological values such as the past tense in (5) (more precise terminological definitions are given in Mel'čuk 1988). Grammatical relations at this level are either actantial—that is, designate arguments of the verb—or correspond to one of the attributive, coordinative, or appendency relations. Of these four categories, we will only be concerned here with the attributive (attr) and the actantial relations. The attributive relation holds between a governor and all its modifiers. The actantial relations, on the other hand, hold between a predicate and all of the participants for which its lexical entry subcategorizes; these are referred to as its deep syntactic actants (DSyntAs). The number of such actants is referred to as its "valency". Actantial relations are numbered, rather than labeled, and each DSyntRel corresponds to the

[5]While this verb meaning "eat" is intransitive, there is a transitive synonym, *ləkʷəd*. Most Lushootseed verbs have a transitive (patient-oriented) and intransitive (agent-oriented) form derived from the same root.

particular SSyntRel dictated for it by the translative rules of the deep syntactic component and the requirements of the lexical entry of its governor. Further aspects of representations in the deep and surface syntax will be dealt with as they arise in the discussion.

3.1 Simple Sentences

In any discussion of the simple sentence (that is, the sentence with a single predicate) in Lushootseed and Bella Coola, one is immediately confronted with a number of interesting problems. The first is the tremendous flexibility which these languages show vis-à-vis the syntactic roles open to members of various lexical categories, which has led to a proliferation of unusual and often idiosyncratic terminology being employed in the description of the various parts of a sentence. This is especially true with respect to the terms "subject" and "object", which have been presupposed up until now and will be dealt with specifically in Section 3.1.2. The fact that both languages allow members of almost any lexical category to act as sentence predicates, coupled with the absence of a copular verb, further complicates matters by creating a wide variety of verbless sentences. While these sentences (enumerated and discussed in Section 3.1.3) appear exotic to speakers of English, they are, in fact, not unique cross-linguistically: verbless sentences, even those with nominal predicates and complex clausal subjects, are attested in a number of languages and language families other than Salishan, although this fact seems to have been overlooked both by Salishanists and by syntacticians, among whom there has been a serious lack of attention to the theoretical treatment of such structures. An attempt to deal with some of the issues raised by verbless sentences will be made below, as will an examination of their particular uses in the grammars of Lushootseed and Bella Coola.

3.1.1 The Canonical Clause

The structure of the canonical clause in Bella Coola and Lushootseed is well-described in grammatical terms in the principal sources on both languages, although the terminology used in these sources is not always the terminology that will be used here. Like other Salishan lan-

guages, Lushootseed and Bella Coola are basically predicate-initial, the unmarked sentence consisting of a verb followed immediately by its actants:

(6) Lushootseed
(a) ʔu+ʔəy̓dx^{w} čəd tsi č̓ač̓as
[pnt]+find 1s Df child
"I found the girl"

(Hess 1993b: 24)

Bella Coola
(b) k̓x+is ti+ʔimlk+tx ci+xnas+cx
see+3s-3s D+man+D D+woman+D
"the man sees the woman"

(Davis & Saunders 1978: 38)

In Bella Coola in particular this word order is rigidly followed, the leftmost NP which follows the verb—all other things being equal—representing the grammatical subject of the sentence, resulting in a VSO pattern. Word order in Lushootseed is more flexible and tends to be governed by pragmatic and rhematic factors that are far beyond the scope of the present discussion. Given that word-order in the MTM is a feature of the morphological level, it will not be dealt with here beyond those instances where it plays a role in our examination of the syntax.

In Lushootseed matters are complicated by some additional factors. As mentioned in Section 2.4.2 above, adverbial particles are sentence-initial and other particles such as pronominals and interrogatives (Section 3.1.3.2, fn. 29) are obligatorially sentence second, as in

(7) (a) hik^{w} čəx^{w} ʔu x̌̓u+x̌əɬ+qid
big 2s [int] [hab]+sick+head
"do you generally get severe headaches?"

(Hess 1993b: 115)

(b) ɬu+hik^{w} čəd stubš ɬu+lux̌̓+il+əd
[irr]+big 1s man [irr]+old+[trm]+1s
"I'm going to be a big man when I grow up"[6]

(Hess 1976: 191)

The second—and more pervasive—factor is that the language does not allow for the expression of two overt third-person NP actants unless one of these is realized as a prepositional phrase,

---

[6]Note that in both (7)(a) and (b) the radical *hik^{w}* "big" is a modifier of the sentence predicate and precedes its head, taking sentence-initial position, both when modifies a verb as in (a) or when modifies a noun as in (b). The sentence-second subject pronominal in both sentences separates the radical from its syntactic head.

as in the middle form ((8)(a)) or the passive, which is derived from a combination of a causative with the middle suffix as in (8)(b):

(8) (a) ʔu+gʷəc̓+əb ti luχ̓ ʔə ti sqəlalitut
[pnt]+look•for+[md] D old P D guardian•spirit
"the old man quested for a guardian spirit"

(Hess 1993b: 43)

(b) ʔu+gʷəc̓+t+əb ʔə ti c̓ac̓as tsi c̓ac̓as
[pnt]+look•for+[caus]+[md] P D child D*f* child
"the boy looked for the girl"[7]

(Hess 1993b: 44)

Outside of such constructions, a second third-person actant is obligatorially elided by a rule in the surface-syntactic component of the grammer, most likely a result of the absence of case-marking or rigid word-order requirements to differentiate the roles of third-person NPs in a clause. This results in sentences such as that in (9) with two fully recoverable semantic arguments but only one overt NP:

(9) ʔu+šuu+c ti?iɬ sq̓ʷəlaɬəd
[pnt]+see+[appl] D berry
"[Bear] looked at the berry"

(Hess 1993b: 193)

Which of the actants is elided is determined by whether the verbalizing suffix on the radical stem is agent- or patient-orienting; agent-orienting suffixes (such as *-m* "[middle]" in (8)(a)) create intransitive verbs, whereas patient-orienting suffixes (such as *-s* "[applicative]") transi-

---

[7]Hess (personal communication) does not accept the term "passive", particularly in the third person, as in

(i) ʔu+ʔəy̓+dxʷ ø ti sqʷəbayʔ
[pnt]+find+[l.o.c.] 3s D dog
"[he/she] found the dog"

(ii) ʔu+ʔəy̓+du+b ʔə ti c̓ac̓as ti sqʷəbayʔ
[pnt]+find+[l.o.c.]+[md] P D child D dog
"the boy found the dog"

(Hess 1993b: 29)

where the unrealized (elided) actant in (i) surfaces in the oblique position in (ii) and the overt NP appears to undergo no change in syntactic role. Under the analysis here, the finder (whose identity would be understood from discourse) in (i) is considered both to be subject and to be present in the syntax, and so does undergo demotion to oblique object in (ii), just as the direct object of (i) undergoes promotion, although this promotion receives no overt morphosyntactic marking beyond the change in verbal suffix (marking any non-oblique NP as the clausal subject). For further justification of the term "passive", see Beck (1995). Note also that, as Hess quite correctly points out, the pragmatic uses and thematic structure of the Lushootseed passive are completely different from those of its English counterpart (hence the active glosses); in discourse terms, the Lushootseed passive may fall into the functional category of "inverse" (Thompson 1989; Givón 1994). Jacobs (1994) offers such an analysis for the corresponding voice in Squamish based on statistical studies of topicality properties; it remains to be seen what the results of applying this method to Lushootseed would be.

tivize the radical and force the elision of the subject in favour of the direct object (unless the subject is a first- or second-person pronominal, as in (6)(a)). An interesting consequence of this is that it causes the trajector, the primary clausal figure, to be left aside in favour of the secondary clausal figure, the direct object. Given the highly topical nature of subjects in Lushootseed, this is not entirely surprising. As noted above, Langacker (1991) treats a topic as an entity with reference to which clausal participants in a given stretch of discourse are identified. Cross-linguistically, topics may be merely a general reference-point to which the clause as a whole is related, or they may be clausal participants themselves—most commonly subjects (Givón 1979; Li & Thompson 1976). In Lushootseed, there seems to be a pragmatic constraint that requires the discourse topic to be both a clausal participant and to be identified with the clausal subject. In (9) above, for example, the subject of the sentence, while not stated directly, is in context quite unambiguous, as the sentence occurs in a stretch of discourse in which the topic has been identified as "Bear". Once established as the discourse topic, "Bear" is held in the minds of the speaker and the listener as a reference-point for identifying the primary clausal figure, and hence the subject/trajector, in subsequent text. The subject is understood to be present without being realized in each and every sentence—resulting in a pattern in which the primary figure is often the one which receives the least overt expression, not unlike that found in more familiar null-subject languages like Chinese (Li & Thompson 1979), where the topical subject is left unrealized, to be filled in by context. This pattern will be explored further in Section 4.

This constraint on the realization of third-person actants in Lushootseed is of further significance in that it highlights an important theme that runs throughout the grammar of both Bella Coola and Lushootseed, that of the distinction between "direct" actants and "peripheral" ones, a distinction first introduced in Section 2.2.1 above. While Bella Coola does not have the same type of constraint against overt realization of actants that Lushootseed does, it is true that no Bella Coola clause admits more than two third-person NPs—that is, subject and direct object—unless the additional actants are introduced by prepositions:

(10) tx+is ti+ƛ̓msta+tx ti+q̓lsx^{w}+tx x+ti+tq̓ɬa+tx
cut+3s-3s D+person+D D+rope+D P+D+knife+D
"the person cut the rope with the knife"
(Davis & Saunders 1984a: 212)

In (10), the actant introduced by the preposition is considered to be "peripheral" in the sense that it is construed to be a less salient feature of the event as it is being described by the speaker than are the subject and object (Davis & Saunders 1984a); in Cognitive Grammar terms, the subject and object are said to be profiled, whereas the peripheral actant is not. Because the selection of which participants in an event are to be profiled is one of construal (see Langacker 1991 for further discussion), the actants that are peripheral in an utterance and those which are direct can be selected for by alternations in voice,

(11) (a) tx+im ti+q̓slsx^{w}+tx x+ti+ƛ̓msta+tx x+ti+tq̓ɬa+tx
cut+3s-[pass] D+rope+D P+D+person+D P+D+knife+D
"the rope was cut with the knife by the person"

(b) tx+a+ø ti+ƛ̓msta+tx x+ti+q̓slsx^{w}+tx x+ti+tq̓ɬa+tx
cut+[ap]+3s D+person+D P+D+rope+D P+D+knife+D
"the person cut through the rope with the knife"

(c) tx+amk+is ti+ƛ̓msta+tx x+ti+tq̓ɬa+tx ʔuɬ+ti+q̓slsx^{w}+tx
cut+[2/3]+3s-3s D+person+D P+D+knife+D P+D+rope+D
"the person used a knife to cut the rope"
(Davis & Saunders 1984a: 213 – 214)

In each of the above examples, the same event is described, but from a different perspective, emphasizing the role of certain actants and de-emphasizing the role of others (*cf.* the English examples given in (4), Section 2). Similar principles hold in Lushootseed, and in both languages the issue of construal and peripherality of clausal participants is closely bound to issues such as rhematicity and discourse structure, although detailed discussion of these aspects of the grammar will have to be left for the future. What is important to bear in mind for the moment is the crucial notion of "direct" versus "peripheral", this distinction having an important effect on the structure of sentences in both these languages, particularly in the formation of relative clauses (3.2.1) and the distribution of morphological nominalizations (3.2.2).

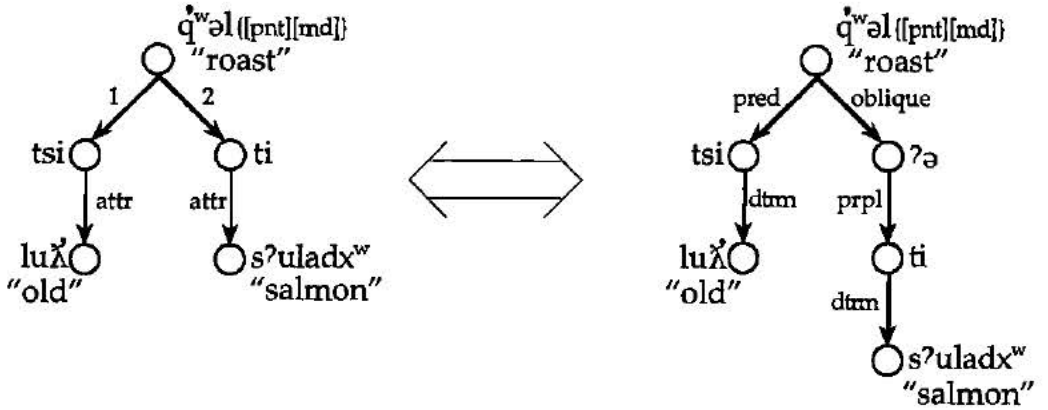
In terms of structural representation in the MTM, simple sentences in Lushootseed and Bella Coola can be represented using the standard dependency trees described above, although in one respect at least they show an interesting divergence from the English pattern illustrated above. Consider the correspondences between DSyntR and SSyntR of a simple sentence in Lushootseed,

(12) (a) ʔu+qʷəl+b tsi luʎ̓ ʔə ti sʔuladxʷ
[pnt]+ripe+[md] *Df* old P D salmon
"The old woman roasted the salmon"

(Hess 1993b: 43)

whose D-trees are given in (13).

(13) DSyntR and SSyntR of (12)



There are a couple of interesting features of the structure shown here. One of these is the insertion of the preposition *ʔə* as head of DSyntA 2 in the SSyntR. In the MTM, "structural" prepositions such as this are considered to be surface-syntactic expressions of DSynt relations and are determined by the lexical properties of the sentence predicate: in this case, the verb *qʷəlb* is intransitive, meaning that its second DSyntA must be realized in the "oblique" SSyntRel. The oblique relation requires a preposition (most often *ʔə* in Lushootseed, *x* in Bella Coola) and is expressed in the SSyntR by the structure: [verb] ○—oblique→○—prpl→○ [actant].

The second, and more striking, point of interest is the representation of the deictics, which —as discussed in Section 2.4.4—pattern in Lushootseed and Bella Coola as syntactic heads. This has some rather striking implications for the syntax of these languages in that it requires the treatment of the DP as an attributive relationship between a(n essentially) pronominal

element (the deictic) and an attributive element—in this case a noun, although DPs are also formed from adjectives, morphological nominalizations, and finite clauses, as in (Lushootseed)

(14) (a) ti?ə? luƛ̓
D old
"this old fellow"

(Bates *et al.* 1994: 139)

(b) ti?ə? d+s+?abyid
D 1po+np+give
"what I give [him]"

(Hess 1993b: 185, line 14)

(c) ti tu+k̓ʷiči+d čəd
D [past]+butcher+[caus] 1s
"what I butchered"

(Hess 1993a: 140)

The net effect of this approach is to set up the DP as a structural parallel to the noun-modifier structure which includes, among others, the relative clause (*cf.* the analyses of Kinkade 1983 and Jelinek & Demers 1994, which argue for the structural identity of DP and relative clause). This analysis will be pursued further below, in the context of some of the more complex syntactic structures involved. Note that for now the SSyntRel between deictic and nominal is represented as the standard "determinative" relation attributed in the MTM to determiners; this will be reconsidered in the conclusion, once the full range of structures covered by the DP have been analyzed.

Now, consider the following sentences in Bella Coola:

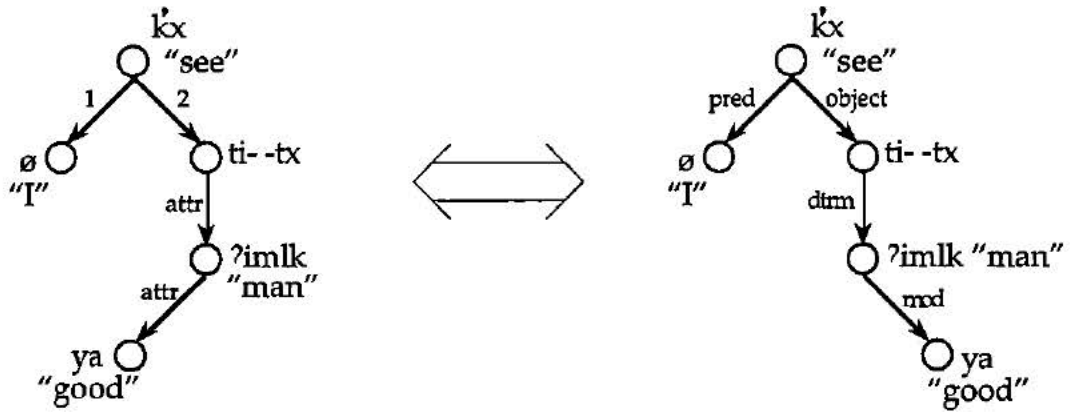
(15) (a) k̓x+ic ti+?imlk ti+ya+tx
see+3s-1s D+man D+good+D
"I see the good man"

(b) k̓x+ic ti+ya ti+?imlk+tx
see+3s-1s D+good D+man+D
"I see the good man"

(Davis & Saunders 1978: 40)

These can be represented by the D-trees in (16). The first thing to note about these structures is that they give rise to two synonymous texts, (a) and (b). As D-trees in no way indicate word-order, this is completely non-problematical in the MTM, and merely indicates that the "modificative" SSyntRel does not in itself, as it does in many languages such as English, determine

(16) DSyntR and SSyntR of (15)(a) and (b)



linear ordering in the DMorphR. The same holds true of some modifiers in Lushootseed as well, which can often either follow or precede their nominal head.

Also of interest in (16) is, once again, the role played by the deictics. In Bella Coola, deictic proclitics surface attached to all elements of an NP, while the deictic enclitic appears (if at all) only on the rightmost element in the phrase, be this element the phrasal head or a dependent. At the SSyntR, however, the deictics are still considered to be present only as heads of their associated nominals, just as in (13) above: deixis spreading is considered here to be a feature of the morphology (as are analogous things such as agreement marking for case, number, gender, etc., in other languages), inserted by rule in the surface syntactic component and thus first appearing in the DMorphR. The spreading rule must also account for a number of facts observed by Davis & Saunders (1978) about the distribution of deictics in complex sentences which have already been mentioned briefly above. These are illustrated in (17) and (18):

(17) (a) *k̓x+ic ti+ya ʔaɬ+ci+xnas+cx ti+ƛ̓msta+tx
see+3s-1s D+good P+D+woman+D D+person+D

(b) k̓x+ic ti+ya ti+ƛ̓msta+tx ʔaɬ+ci+xnas+cx
see+3s-1s D+good D+person+D P+D+woman+D
"I see the person [who is] good for the woman"

(Davis & Saunders 1978: 41)

While (15) showed that the ordering of nominal head and modifier is free (the enclitic attaching itself to the rightmost of the two), in (17) we see that a dependent of the modifier may not

intervene between the modifier and its head (and, hence, between the proclitic and the enclitic portions of the deictic), even if this requires that the dependent be separated from its governor by another element. In (18):

(18) (a) *ˀaɬk̓yuk+iɬ ti+ˀimlk ti+qup̓+t ci+xnas+cx+tx
know+3s-1p D+man D+punch+[part] D*f*+woman+D*f*+D

(b) *ˀaɬk̓yuk+iɬ ti+ˀimlk ti+qup̓+t ci+xnas+tx
know+3s-1p D+man D+punch+[part] D*f*+woman+D

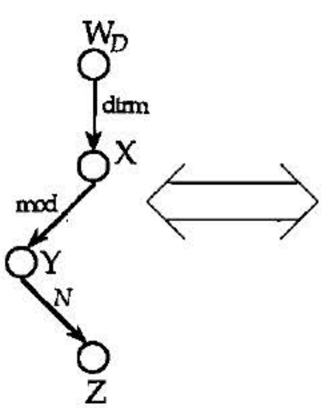
(c) *ˀaɬk̓yuk+iɬ ti+ˀimlk+tx ti+qup̓+t ci+xnas+cx
know+3s-1p D+man+D D+punch+[part] D*f*+woman+D*f*

(d) ˀaɬk̓yuk+iɬ ti+ˀimlk ti+qup̓+t+tx ci+xnas+cx
know+3s-1p D+man D+punch+[part]+D D*f*+woman+D*f*
"we know the man who punched the woman"

(Davis & Saunders 1978: 50)

we see that 1) a dependent of the modifier may not bear the enclitic portion of the deictic, either in association with its own deictic (a) or in place of it (b), and that 2) the enclitic (if present) must appear on the rightmost eligible element in the linearized NP, rather than specifically on the head. These facts can be accounted for by the surface-syntactic rule given in (19):

(19) Deixis spreading (Bella Coola)



$(W_{pro} + X) \ldots (W_{pro} + Y) + W_{en} + Z$

where W consists of Wpro and Wen (proclitic and enclitic); N is any SSyntRel.

What this rule does is condition the linearization of a sub-tree headed by a deictic. The symbols on the righthand side of the rule refer to fixed (+) or variable (…) word-order, and taken as a whole, the rule reads "for any subtree headed by a deictic (W), the corresponding string in the DMorphR will consist of pairings of the proclitic portion of W with the immediate dependent of W (*i.e.* X) and all of its modifiers; these pairs will be freely ordered with respect to one

another and the enclitic portion of W will be appended to the rightmost of them, followed by any dependents of Y". The net effect of this rule, beyond the spreading of the deictics themselves, is to ensure that dependents of a modifier are linearized to the right of the head-modifier string, which will be an important factor in our consideration of the nature of many complex sentence types in the discussion below.

3.1.2 Subject and Object

Despite the fact that the terms "subject" and "object" are expressly avoided by the primary researchers on both Lushootseed (Hess) and Bella Coola (Davis & Saunders),[8] many linguists feel that these categories—in particular that of "subject"—are universals of natural language (Keenan 1976; Perlmutter 1980; Mel'čuk 1988; Hudson 1990). This is particularly true in CG, where Langacker (1991) makes an explicit link between the notion of "subject" and that of "figure" in the figure/ground alignment of perceptual psychology, the clausal subject being the primary clausal figure or trajector (and, hence, the clausal counterpart to the trajector/figure of other predication types). In the MTM as well, "subject" is considered to be a fundamental syntactic role (Mel'čuk 1988) and plays an essential part in the analysis of phenomena such as passivization, voice, and ergativity. Unfortunately, even among those who advocate the universality of "subject", there is no agreement as to a universal definition: while the category may be active in all languages, the particular manner in which it manifests itself and the specific properties that it has in a given language can only be defined in terms of that language itself (Keenan 1976; Mel'čuk 1988). The extent of the consensus seems to be that the subject is, at the very least, "syntactically privileged" (Mel'čuk 1988: 161) in the sense of possessing some set of syntactic properties which (a) pertain (as a set) to no other clausal elements (Keenan 1976), (b) accord the subject the highest degree of clausal "salience" (Langacker 1991), and (c) make the subject "the argument to which the predication is attributed—that is, the primary syntactic argument of a sentence" (Bavin 1980: 2). In the context of a specific language, however, it

[8]Note, however, that Nater (1984) does make use of these terms.

remains to the linguist to determine which particular properties are diagnostic of the subject and to what extent this category plays a distinctive role in that language.[9]

To this end, a number of attempts have been made at setting out methodological procedures for identifying subjects, two of the best and most comprehensive being those of Keenan (1976) and Mel'čuk (1988). The first step in identifying the subject in a language, according to both researchers, is to identify a "basic sentence type" (Keenan 1976) and to enumerate the syntactic properties of the actants in such a clause in order to determine which of them has the greatest number of those properties typical of subjects cross-linguistically.[10] More complex sentence types may then be examined with an eye towards identifying which of the actants in these structures share the greatest number of properties with the subject of the basic sentence. For Mel'čuk, the basic sentence type is formed on the monovalent (intransitive) verb, whose single actant must correspond to the grammatical subject. In Lushootseed and Bella Coola, the actants of intransitive stems are represented by a specific set of pronominal elements:

(20) Bella Coola

(a) ksnmak+c
work+1s
"I work"

(b) ksnmak+iɬ
work+1p
"we work"

(c) ksnmak+nu
work+2s
"you work"

(d) ksnmak+ap
work+2p
"you folks work"

(e) ksnmak+s/ø
work+3s
"[he/she] works"

---

[9] *Cf.* Foley & van Valin (1984), who challenge the universality of "subject" and posit instead the notion of "pivot", which seems closely related (if not identical) to the characterizations of "subject" given here.

[10] The properties typical of subjects in natural languages have been enumerated many times by a variety of researchers; for the purposes of this discussion I will focus on those outlined by Keenan and Mel'čuk, and specifically those which can be applied in the discussion of Bella Coola and Lushootseed.

(f) ksnmak+aw
work+3p
"they work"

(Nater 1984: 36)

Lushootseed

(g) ʔu+ʔəƛ̓ čəd
[pnt]+come 1s
"I come"

(h) ʔu+ʔəƛ̓ čəɬ
[pnt]+come 1p
"we come"

(i) ʔu+ʔəƛ̓ čəxʷ
[pnt]+come 2s
"you come"

(j) ʔu+ʔəƛ̓ čələp
[pnt]+come 2p
"you folks come"

(k) ʔu+ʔəƛ̓ ø
[pnt]+come 3s/p
"[he/she/they] come"[11]

(Hess 1993b: 3 – 6)

Having established these pronominal elements as candidates for subjecthood, their syntactic properties can then be compared to those typical of subjects cross-linguistically, as can the syntactic properties of the full NPs with which they can be interchanged. This is quite straightforward for Lushootseed, where subject pronominals, their referents, and elided third-persons in corresponding syntactic roles have the following subject-like properties:

- non-deletability (Mel'čuk 1988): the referent of the subject can never be removed from the profile of the event. Note that this does not prohibit the elision of the subject (that is, its lack of overt realization):[12] in practice, Lushootseed subjects are more often

[11]The "ø" symbol here represents a gap left by elision in the surface-syntactic component of the grammar. rather than a structural element such as a zero pronoun (see Mel'čuk 1988, Chapter 8, for a discussion of syntactic or lexical zeros in Russian). In these constructions, the *absence* of a subject-marker seems to signal the third-person (plural or singular) identity of the subject, which is identified with the discourse topic and is—in context—unambiguous.

[12]Elision, the non-realization of an understood (and hence semantically present) participant should not be confused with deletion, which would remove the idea of that participant from the clause entirely. Compare, for example, the meaning of "this book has been sold ", which implies an unnamed seller who has been elided from the sentence, and "this book sells well", which profiles only the commercial transaction but in no way includes or implies a seller, the seller having been deleted in the semantics.

elided than not, but in every case the subject is understood from the context of the discourse and so is included by the speaker (and hearer) in the profile of the event.

- relativizability (Keenan 1976; Keenan & Comrie 1977; Mel'čuk 1988): the subject is a legitimate target for the formation of relative clauses, direct questions, negatives, etc. (these sentence types will be discussed below); in Lushootseed sentences with first- or second-person subjects, both subject and object are relativizable, but in sentences with third-person subjects, only the subject itself may be relativized (see 3.2.1 below).
- control of reflexivization (Mel'čuk 1988): the subject is the actor in a reflexive verb. Consider:

(21) (a) ʔu+ʔəɬ+tu+bš ø
[pnt]+eat+[caus]+1s 3s
"[he/she] feeds me"

(b) ʔu+ʔəɬ+tu+but čəd
[pnt]+eat+[caus]+[refl] 1s
"I feed myself"

(Hess 1993b: 55)

- topicality (Keenan 1976; Givón 1979; Li & Thompson 1979): subjects are highly topical cross-linguistically; in Lushootseed, the subject is almost invariably identified with the discourse topic and, if not, some form of marked clause-structure is usually invoked.
- switch reference (Keenan 1976): changes of subject in discourse often trigger the use of grammatical "switch reference" markers; in conservative Lushootseed style, the suffix *-ag"id* is added to a verb whose subject does not correspond to the discourse topic (Kinkade 1990; see Hess 1993b: 151 for an example, which is too lengthy to give here). Since this suffix does not change the discourse topic, but instead marks the subject as being non-topical, it may not be in a strict sense a switch-reference marker; nevertheless, it seems close enough in function to switch-reference that the substance of Keenan's criterion (that the identity of the subject with the discourse topic is often marked overtly in the grammar) can be extended to include this morpheme as well.

- passivization (Keenan 1976; Mel'čuk 1993): the subject is widely recognized to be the syntactic actant that is "demoted" to an oblique role via passivization, the "promoted" actant becoming the subject of the new sentence. Consider

(22) (a) ʔu+ʔəy̓+dxʷ čəd tsi čačas
[pnt]+find+[l.o.c.] 1s D*f* child
"I found the girl"

(Hess 1993a: 24)

(b) ʔu+ʔəy̓+du+b čəd ʔə ti čačas
[pnt]+find+[l.o.c.]+[md] 1s P D child
"the boy found me"

(Hess 1993a: 34)

In sentence (a) the subject pronominal *čəd* corresponds to the semantic role of agent, yet in (b) the pronominal represents the goal of the action, the agent/subject of (a) having been demoted to a peripheral role in the sentence.

- conjoinability (Keenan 1976): subjects are generally realizable as morphologically independent pronouns which can be conjoined with full NPs. The Lushootseed pronominals fit into this category quite nicely, being morphologically independent wordforms (clitics), which are sentence-second:

(23) (a) ʔəs+laqil čəd
[stat]+late 1s
"I [am] late"

(b) day̓+əxʷ čəd cikʷ ʔəs+laqil
indeed+now 1s very [stat]+late
"indeed, I am very late"

(Hess 1993b: 116)

In addition, they are also conjoinable with full NPs.

(24) lə+ʔibəš čəɬ ʔi tsə mali
[prog]+walk 1p and D Mary
"Mary and I are walking"

(Hess & Hilbert 1976: 141)

Object pronominals, on the other hand, are suffixes and may not be conjoined, conjunction of objects requiring their overt expression.

- subject of participles (Langacker 1991; Taylor 1994): when a clause undergoes factive nominalization, the subject is realized in the role of possessor; this is discussed for Lushootseed in Section 2.2.2 above. In addition to the argument arising from cross-linguistic comparison discussed above, the fact that for any given verb the possessor of the derived participle always refers to the same actant rather than varying pragmatically argues strongly for according that actant privileged syntactic status (*i.e.* subject).
- agentivity (Keenan 1976; Langacker 1991): subjects tend prototypically to be agents.[13]

In Bella Coola, on the other hand, the category of subject is a bit harder to establish. Unlike the Lushootseed pronominals, the Bella Coola pronominal elements are best treated as agreement features, as witnessed by their ability to cooccur with overt third person actants,

(25) (a) kuɬ+ank+iiǩʷ+s ti+smt+ɬayx
surface+side+top+3s D+mountain+D
"it is on the topside of this mountain"
(Davis & Saunders 1980: 69, line 100)

(b) slaǩ+aw wa+amat aɬ+tǩʷ
many+3p D+stay P+there
"the ones staying there [were] many"
(Davis & Saunders 1980: 181, line 70)

(c) ƛ̓x+is ti+ʔimlk+tx ci+xnas+cx
see+3s-3s D+man+D D+woman+D
"the man sees the woman"
(Saunders & Davis 1975b: 357)

With intransitive predicates taking third-person singular subjects, this pattern appears to be pragmatically governed, a zero suffix being the more common variant in matrix clauses (Davis & Saunders 1978; Nater 1984). In addition, the agreement-feature analysis also seems to follow from the fact that the pronominals for the transitive paradigms incorporate both of the non-oblique actants into a single suffixal morpheme (as opposed to representing analyzable and morphologically independent wordforms) and serve to mark the verb for the passive/active distinction as well. This leaves us either in the unenviable position of either having a complete

[13] See, however, Bavin (1980) and Mel'čuk (1988) on the pitfalls of using semantic roles to establish syntactic categories.

paradigm of pronouns which are syntactically and phonologically zero, being realized only by their triggering of agreement features on the verb, or of having to stipulate that the language has in fact no true pronouns at all.[14] In the latter case, all unrealized actants would have to be considered as being present in the SSyntR and then subsequently elided in the surface-syntactic component of the grammar by an ellipsis rule, much like the rule suggested for the elision of third-person subjects in Lushootseed. In terms of intransitive verbs, of course, this still allows us to identify the actant (overt or otherwise) that triggers intransitive agreement as the clausal subject (a primary indicator of subject-status in many languages; Keenan 1976), but because (unlike Lushootseed) the intransitive pronominal paradigm is distinct from the paradigm employed by transitive verbs, there is no direct way to identify which of the actants of a transitive clause corresponds to the (unmistakable) intransitive subject. Instead, it is once again necessary to examine those properties typical of subjects and to see which of these apply:

- leftmostness (Keenan 1976): according to Keenan, all other things being equal, the leftmost NP in a clause will typically be interpreted as the subject; in Bella Coola transitive clauses, the leftmost NP is that which corresponds (in most cases) to English and Lushootseed transitive subjects; the leftmost NP can also be identified as the subject on the basis of the remaining subject-properties listed below.
- passivization: in the Bella Coola passive, the demoted actant corresponds to the leftmost NP in active clauses with two overt direct actants,

(26) (a) nap+is ti+ƛ̓msta+tx ti+staltmx+tx x+ti+q̓lsx^{w}+tx
give+3s-3s D+person+D D+chief+D P+D+rope+D
"the person is giving the chief the rope"[15]
*"the chief is giving the person the rope"

(Davis & Saunders 1984a: 211)

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[14]From a historical-typological point of view this is a very interesting, although by no means unique, situation, and—given the common genetic origins of Bella Coola and Lushootseed (and the philological origins of the Bella Coola pronominals)—this seems to lend support to the type of diachronic cline of person agreement proposed by Givón (1979) and Hopper & Traugott (1993), whereby pronouns may become progressively more and more closely associated with their predicates, eventually becoming clitics (Lushootseed) and, finally, affixes which in turn begin to occur in conjunction with their overt referents, resulting in a pattern of verb-actant agreement. Bella Coola would appear to have just crossed over this final threshold.

[15]The direct object of the verb *nap* "give" in Bella Coola is the recipient, rather than the gift as it is in English. A more precise gloss might be "the person presents the chief with the rope".

(b) nap+im ti+staltmx+tx x+ti+ʔ̓msta+tx x+ti+q̓lsx^{w}+tx
give+3s-[pass] D+chief+D P+D+person+D P+D+rope+D
"the chief was given the rope by the person"
(Davis & Saunders 1984a: 213)

In (a), the leftmost NP is unambiguous in its role as the giver, although both the giver and the recipient trigger verb-actant agreement; in (b), however, we have an intransitive clause in which the verb agrees with only the recipient (the second NP in (a)), and the leftmost NP of (a) (the giver) is demoted to an oblique position, marked by the preposition *x-* and thus behaving like a subject undergoing passivization. Note also that Davis & Saunders (1984a) use the term "passive" for this structure, which in itself—according to most definitions (Trask 1993)—presupposes the category "subject".

- subject of participles: although the category of participle is not a particularly robust one in Bella Coola, there is one construction involving a wordform identified by Nater (1984) as a participle (see Section 3.2.1). This is found in relative-like constructions formed on a third-person singular subject with a third-person (singular or plural) object. Compare the following sentences with (26)(a) above:

(27) (a) ti+ʔ̓msta ti+nap+t ti+staltmx+tx x+ti+q̓lsx^{w}+tx
D+person D+give+[part] D+chief+D P+D+rope+D
"the person who gave the chief the rope"
*"the person to whom the chief gave the rope"

(b) ti+staltmx ti+nap+is ti+ʔ̓msta+tx x+ti+q̓lsx^{w}+tx
D+chief D+give+3s-3s D+person+D P+D+rope+D
"the chief whom the person gave the rope to"
*"the chief who gave the person the rope"
(Davis & Saunders 1978: 218)

In these constructions, the head of the participle in (a) is unambiguously the subject of the lower clause (the leftmost NP in (26)(a) above), while in (b) a relative clause headed by the object (second NP in (26)(a)) requires the full finite form of the verb.[16] This pattern is diagnostic of the participle in that when these are used attributively,

[16]Note that this pattern of relativization—which applies only in the third person—represents an exception to the Accessibility Hierarchy of Keenan & Comrie (1977) in that in Bella Coola a third person singular subject acting on a third person object is *not* accessible to relativization, requiring a participle instead, whereas the direct object—which is lower on the hierarchy—*is* accessible.

they generally serve to modify a noun corresponding to the grammatical subject of the nominalized clause.

- coreference (Keenan 1976; Mel'čuk 1988): subjects are the NPs most likely to be coreferential across clause boundaries; in Bella Coola, all other things being equal, the subjects of clauses in complex sentences are taken to be coreferential:

(28) (a) sp̓+iiǩʷ+is ti+ʔimlk+tx ti+nusʔuulǩ+tx ka+k̓x+is ti+nusʔuulǩ+tx
hit+head+3s-3s D+man+D D+thief+D [irr]+see+3s-3s D+thief+D
"the man$_1$ will hit the thief$_2$ when he$_1$ sees the thief $_2$"
*"the man$_1$ will hit the thief$_2$ when the thief $_2$ sees him$_1$"
(Davis & Saunders 1984b: 152)

(b) sp̓+iiǩʷ+is ti+ʔimlk+tx ti+nusʔuulǩ+tx ka+k̓x+is
hit+head+3s-3s D+man+D D+thief+D [irr]+see+3s-3s
"the man$_1$ will hit the thief$_2$ when he$_1$ sees him$_2$"
*"the man$_1$ will hit the thief$_2$ when he$_2$ sees him$_1$"
(Davis & Saunders 1984b: 153)

(c) sp̓+iiǩʷ+is ti+ʔimlk+tx ti+nusʔuulǩ+tx ka+k̓x+is ti+ʔimmlki+tx
hit+head+3s-3s D+man+D D+thief+D [irr]+see+3s-3s D+boy+D
"the man$_1$ will hit the thief$_2$ when he$_1$ sees the boy"
*"the man$_1$ will hit the thief$_2$ when he$_2$ sees the boy"
*"the man$_1$ will hit the thief$_2$ when the boy sees him$_1$ "
*"the man$_1$ will hit the thief$_2$ when the boy sees him$_2$
(Davis & Saunders 1984b: 154)

(d) sp̓+iiǩʷ+is ti+ʔimlk+tx ka+k̓x+im ti+nusʔuulǩ+tx x+tx
hit+head+3s-3s D+man+D [irr]+see+3s-[pass] D+thief+D P+3s
"he$_1$ will hit the man$_2$ if the thief$_1$ is seen by him$_2$"
*"the man$_1$ will hit him$_2$ if the thief$_2$ is seen by him$_1$"
(Davis & Saunders 1984b: 153)

In the first three examples above, the subject of the matrix clause controls the reference of the subject of the lower clause; in the fourth example, the elided subject of the matrix clause is identified with the overt subject of the lower clause. While this principle can be overridden by pragmatic factors (discrepancies in subject-verb agreement, full realization of NPs, use of prepositional phrases, pronominal elements marking gender, etc.), it is extremely robust and is described in detail in Davis & Saunders (1984b), although these authors—having avoided the term "subject"—are forced to state the principles of coreference in rather more abstruse terms.

In addition, certain properties apply to both transitive and intransitive subjects that tend to identify them as such:

- topicality: subjects in Bella Coola intransitive and transitive clauses are highly topical (Davis & Saunders 1978).
- agentivity: subjects in both clause types in Bella Coola are also prototypically agents, leading Davis & Saunders (1984a; 1984b) to coin the term "executor" to designate the most active (agent-like) participant in a clause.
- non-deletability: as in Lushootseed, the subject of the intransitive verb may be elided but never deleted; however, in transitive verbs, the same applies to the object, which triggers verb-agreement.
- relativizability: also like Lushootseed, both subjects and objects of transitives may be the target of relativization, interrogatives, and negatives, which once again fails to distinguish between transitive subject and transitive object.

Having made a case for the term "subject", we still have to consider the notion of "direct object". Unlike "subject", "direct object" has not received a great deal of attention in the literature as a potential linguistic universal, perhaps because the term has been rejected in GB theory (Trask 1993). Nevertheless, there are frameworks such as Lexical-Functional Grammar (Bresnan 1982) and Relational Grammar (Perlmutter 1980) in which the direct object is considered to be a universal category, and in CG Langacker defines the direct object as the secondary clausal figure (that is, the figure with the highest saliency after the subject). Cross-linguistically, this "secondary" status is realized in a number of different ways, including some sort of prominence in the linear order of sentence elements (generally the placement of the object in special proximity to the verb, as in English), special case-marking (most often accusative or absolutive), or even verb-object agreement. Typically, objects are also the patients/experiencers of transitive verbs, are obligatorily included in the profile of the clause, and in some languages may share some of the properties of grammatical subjects listed above. What these object-

characteristics have in common is the marking of the direct object as being less "oblique" or "peripheral" than other objects or participants in the sentence and thereby grouping it with the subject as being more "direct". This description fits exactly the distinction drawn here between "direct" and "peripheral" actants, the former appearing as DPs in the sentence and the latter requiring the use of a preposition to be realized. Consider the following transitive sentences:

(29) Lushootseed
(a) ʔu+ƛ̓uc̓u+d čəd ti sqigʷəc ʔə tiʔiɬ ƛ̓isəd
[pnt]+shoot+[caus] 1s D deer P D arrow
"I shot the deer with that arrow"

(Hess & Hilbert 1976: II, 131)

Bella Coola
(b) sp̓iix̌ʷ+is ti+ʔimlk+tx ti+nuʔuulx̌+tx ʔaɬ+ti+stn+tx
hit+3s-3s D+man+D D+thief+D P+D+stick+D
"the man hit the thief with the stick"

(Davis & Saunders 1984b: 151)

Given that (as argued above) the pronominal *čəd* "I" in (a) and the leftmost NP in (b) are subjects, then clearly there exists in both sentences a second participant, a patient, which is realized in a non-oblique manner in the clause (*cf.* the realization of the instrument as a PP in both sentences). In Bella Coola, the case for object-hood is even stronger in that the second NP induces verb-agreement; in Lushootseed, the second direct NP can also be represented by a special set of object suffixes, as in

(30) (a) ʔu+ʔəƛ̓+txʷ čəd ti c̓ac̓as
[pnt]+come+[caus] 1s D child
"I brought the boy"

(Hess 1993b: 5)

(b) ʔu+ʔəƛ̓+tu+b čəd ʔə tsi luƛ̓
[pnt]+come+[caus]+[md] 1s P D*f* old
"the old woman brought me"

(c) ʔu+ʔəƛ̓+tu+bš tsi luƛ̓
[pnt]+come+[caus]+1s D*f* old
"the old woman brought me"

(Hess 1993: 53)

These suffixes, however, are not independent wordforms and do not have any of the clitic (and, hence, subject) properties discussed for the likes of *čəd* above. This data set is also highly sig-

nificant in that it reveals the role of the second direct participant in passivization, as the introduction of the passivizing combination of suffixes in (b) causes the counterpart of the patient in (a) to become the subject, indicating that this patient is likely a direct object (although cross-linguistically the direct object is not the only actant promoted by passivization). The same holds true in the Bella Coola passive, as in the examples in (26) above.

All in all, then, it seems that there is some motivation in both languages for the terms "subject" and "object". While it is certainly true that there is an unusually close "fit" in Bella Coola and Lushootseed between the semantic structure of an utterance and the syntactic role that each participant in an event is assigned by the grammar, this fit is not one-hundred percent and so the invocation of a syntactic category—however frequently the reference of this category corresponds to semantic role—seems justified. Even if this were not the case, the use of "subject" and "object" is highly desirable from a typological perspective, in that it allows closer comparison of the grammatical processes of Bella Coola and Lushootseed with those of languages in which syntactic categories are perhaps not so closely aligned with the semantic roles they prototypically represent. In a conceptual approach to language, where syntax is taken to be a symbolic means of encoding an underlying semantic structure, the fact that Lushootseed and Bella Coola so consistently represent "agents" or "executors" as subject, and "patients" as object is interesting and highly significant, but in terms of explicating the grammatical devices used to express these roles, it is both useful and necessary to make reference to the syntactic categories with which they are typically encoded.

3.1.3 Verbless Sentences

As noted above, Salishan languages such as Bella Coola and Lushootseed—as well as the neighbouring Wakashan and Chemakuan languages—are noted for their propensity for forming sentences predicated on a non-verbal element. This areal phenomenon has been the basis for a number of claims that these languages are unique in not respecting a fundamental distinction between noun and verb. Although I have offered a number of arguments against that position, it

still remains to be seen what implications for the syntax of Lushootseed and Bella Coola follow from maintaining these lexical categories in the face of the high incidence of sentences predicated on something other than a verb. This investigation will be undertaken in the next section, beginning with a discussion of the forms, syntax, and semantics of simple verbless sentences and leading to an examination of their uses in the formation of Wh-questions and negatives.

3.1.3.1 Simple Verbless Sentences

The simple verbless sentence, like the simple canonical clause, is a construction with a single predicate which, in Bella Coola and Lushootseed, may be a member of any major lexical category other than a verb. This allows for sentences predicated on nouns, often with complex clausal subjects, as in

(31) Lushootseed

(a) s?uladx^{w} ti?iɬ
salmon D
"that [is] a salmon"

(Hess & Hilbert 1976: I, 7)

(b) sq^{w}əbay? ti?ə? s+u+g^{w}əč̓+əb+s
dog D np+[pnt]+look•for+[md]+3po
"the one [he/she] is looking for [is] the dog"
(lit. "his/her looked for [is] the dog")

(Hess 1993b: 108)

Bella Coola

(c) mna+ɬ
child+1p
"we [are] children"

(Nater 1984: 36)

(d) p̓^{w}i ti+s+puƛ̓+aylayx+aw
halibut D+np+(to)fish+[l.o.c.]+3p
"what they caught [is] a halibut"

(Nater 1984: 102)

Sentences predicated on words corresponding to English adjectives are also well-attested:

(32) Lushootseed

(a) lə+q̓əd čəd
[prog]+slow 1s
"I [am going] slow

(Bates *et al.*: 183)

Bella Coola
(b) ɬk̓ʷ+ø+tu ta+smɬk ta+k̓x+ic ʔala?awa
big+3s+indeed D+fish D+see+3s-1s across•the•street
"the fish that I saw across the street [was] indeed big"
(Davis & Saunders: 222)

Because such words represent atemporal relations, the sentences in (32) are considered to be verbless sentences, as are sentences formed on other radicals that look more like English verbs:

(33) Lushootseed
(a) ʔu+pus čəd
[pnt]+be•hit•by•flying•object 1s
"I [was] struck (by a flying object)"
(Hess & Hilbert 1976: II, 136)

Bella Coola
(b) plikm+ap
capsized+2p
"you folks [are] capsized"
(Nater 1984: 36)

Verbless sentences may also be predicated on other types of atemporal relation such as adverbs,

(34) Lushootseed
(a) tudiʔ tə dukʷibəɬ
way•over•there D Changer
"Changer [is] way over there"
(Hess 1993b: 103)

Bella Coola
(b) ƛ̓iliwa+ø s+ʔmt+s
fast+3s np+get•up+3s
"he [was] quick as he got up"
(Nater 1984: 37)

numerals,

(35) Lushootseed
(a) saliʔ tiʔəʔ sqʷigʷac
two D deer
"the deer [are] two"
(Hess 1993b: 103)

Bella Coola
(b) smaw+lic̓+ø ti+nup+c
one+skin+3s D+shirt+1s
"my shirt [is] one"[17]
(Nater 1984: 119)

[17]The exact role of the lexical suffix *-lic̓* "skin" here in not clear, although the addition to a predicate of a lexical suffix representing a body part or other item associated with it is a distinctive feature of Bella Coola.

and, in Lushootseed, prepositional phrases (see Section 2.4.1 for a discussion of these sentences).

As noted in Section 2.1, verbless sentences of the type illustrated above—particularly those with nominal predicates—are attested in a wide variety of the world's languages. One remarkable feature of the verbless sentence in Lushootseed and Bella Coola, however, is the way in which what is generally thought of as "verbal" morphology such as agreement features or pronominal clitics appears associated with a non-verbal predicate. This is quite obvious in Bella Coola, where all predicates bear intransitive subject agreement (as in (31) and (33)), and also surfaces in some Lushootseed subordinate clauses, which use a special series of subject-clitics (see Section 2.4.3), as in this example,

(36) haʔɬ ti sq̓ədᶻuʔ ʔə ti sƛ̓əƛ̓qʷiʔ gʷə+sq̓ədᶻuʔ+əs
good D hair P D bufflehead•drake [subj]+hair+3s
"the drake bufflehead's hair is pretty, if it is hair"

(Hess 1993b: 95)

This pattern is unusual, but it is not unique, being attested in divers languages such as Buriat,

(37) ferme daagša bi+b
farm manager 1s-[pro]+1s-[agr]
"the farm-manager [is] me"[18]

(Bertagaev & Tsydendambaev 1962: 58)

and Beja (a Semitic language of Sudan):

(38) (a) ti+kʷaa+t+oo+´k=t+u
D+sister+*f*+[gen]+2s=*f*+3s
"she [is] your sister"

(Hudson 1974: 126)

(b) wí+ʔaandà gʷaʔ+ee+n+è búun=u
[rel]+men drink+[part]+3p+[rel] coffee=3s
"what men drink [is] coffee"[19]

(Hudson 1974: 117)

This last example is of particular interest to us here, as it represents a sentence-type—a verbless copular construction with a clausal (in this case, participial) subject—which is well-attested in Lushootseed and (perhaps to a lesser extent) in Bella Coola. Compare (38)(b) with:

---

[18]The interlineal gloss here may not be complete vis-à-vis the case morphology of the nouns, as this information is not provided in the source; the first line is taken from a Cyrillic transcription of the original utterance.

[19]The equals sign is used here to mark the morphological boundaries of the pronominal clitic. Hudson analyzes these clitics as copular verbs, although beyond their use in this type of construction there seems to be nothing inherently verbal about them.

(39) Lushootseed

(a) s?uladx^{w} ti?ə? s+u+?ələd ?ə ti?iɬ pišpiš
salmon D np+[pnt]+eat P D cat
"what the cat eats [is] a salmon"

(Hess 1993b: 133)

Bella Coola

(b) ti+sx̌ax̌t+k^{w} ti+nu+yax^{w}+im+k^{w}+alu+c̓ aɬ+tx̌^{w}
D+cariboo+[qt] D+[agt]+call•to•do+3s-[pass]+[qt]+[att]+[perf] P+then
"the one they tried to call to do it then [was] the cariboo"[20]

(Davis & Saunders 1980: 90, line 33)

Such sentences are also attested in a wide variety of other languages such as Mongolian (Poppe 1970), Kalmyk, Even, Nanay, Ul'ch, Udeg, Aleut, Nivkh, and Ket (Skorik 1968).

An interesting feature of sentences like these (in Bella Coola and Lushootseed, at any rate) is the discourse pattern that conditions their distribution: in both languages the choice of which element of the sentence will function as predicate depends on the thematic structure of the utterance, rather than on the constraints imposed by lexical category. Simply put, any element that is strongly rhematic will become the sentence predicate, and the remainder of the clause will become its dependents. While there is no room to go into this pattern in great detail here, two illustrative Bella Coola question-and-answer frames are given in (40):[21]

(40) (a) ?alacix^{w}+ø+?iks ci+xnas+cx
do•what+3s+[int] D+woman+D
"what is the woman doing?"

(my sentence)

sp̓+is ci+xnas+cx ti+?imlk+tx
hit+3s-3s D+woman+D D+man+D
"the woman is hitting the man"

(Davis & Saunders 1978: 39)

(b) wa+ks ti+sp̓+is ci+xnas+cx
who+[int] D+hit+3s-3s D+woman+D
"who did the woman hit?"
(lit. "who [was] the one the woman hit?")

---

[20]"it" here refers to breaking through the earth to an underground river.

[21]Both of the frames are presented in Davis & Saunders (1978); however, no Bella Coola version of the question "what is she doing?" is offered (English is used in the text). Sentence (40)(a) is based on the question *?alacix^{w}?iks* "what is he doing?" given in Nater (1984: 116).

ti+ʔimlk+tx ti+sp̓+is ci+xnas+cx
D+man+D D+hit+3s-3s D+woman+D
"the one the woman hit [is] the man"

(Davis & Saunders 1978: 39)

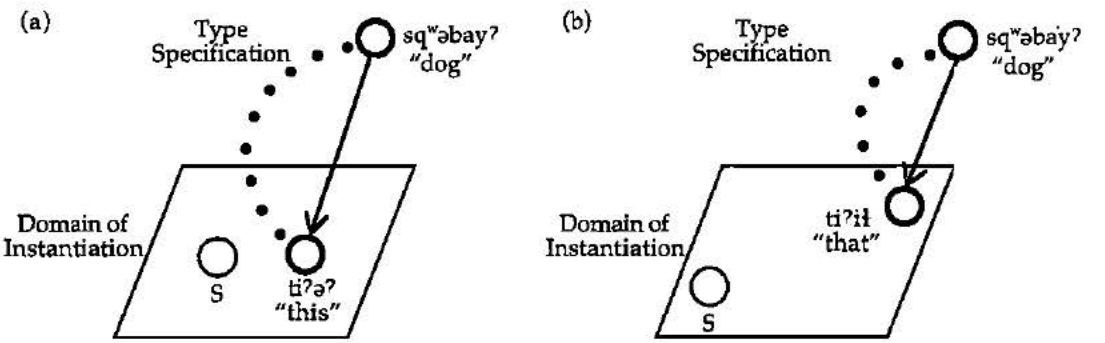
Here the question in (a) elicits a "narratively focused" sentence (that is, a sentence typical of a narrative sequence focused on the flow of events rather than on the introduction of a new participant). On the other hand, the question in (b) asks for the identity of a particular participant in an event and elicits a response in which that participant serves as the sentence predicate, the "residue" or topical information presented in the question appearing as the subject (not unexpectedly, given that subjects in Bella Coola are almost invariably topical). The same pattern also seems to hold for Lushootseed, where verbless sentences are often used to introduce new discourse topics and to shift topics in the course of a narrative (see Section 4 below).

What is interesting about this pattern for us here is that, in terms of thematic structure, sentences in Bella Coola and Lushootseed tend towards an equative configuration in which a rhematic predicate is equated with a topical subject.[22] This is especially clear in verbless sentences, which serve to establish an identity between two elements, one topical (the subject) and one rhematic (the predicate). In Cognitive Grammar, predicate nominals are treated as atemporal relations which identify a landmark (the predicate nominal itself) with a trajector (the clausal subject). Under this analysis, non-verbal predicates in Lushootseed and Bella Coola (many of which are inherently atemporal relations) make an established or presupposed discourse topic the trajector/subject of this type of relational predication, thus providing new information about the topic. Consider the diagram in (41), which represents the two Lushootseed sentences *sqʷəbayʔ tiʔəʔ* "this [is] a dog" and *sqʷəbayʔ tiʔiɬ* "that [is] a dog". This diagram shows the equation (dotted curve) of an abstract or generic type—"dog", which represents the class of all dogs—to a particular instance of that type which is identified with a pronominal deictic, establishing its identity through the establishment of its location.[23] The difference

[22] *Cf.* the proposal by Kinkade 1983, who argues that in Salish all overt complements—including overt subjects of verbal predicates—are, in fact, appositive adjuncts to the clause. See also Jelinek & Demers (1994).

[23] It should be noted that the term "location" in a discussion of deixis can have a variety of (language-specific) meanings (Anderson & Keenan 1985) which range over locations in physical, conceptual, or even dis-

(41) Predication of types



between (a) and (b) resides in the relative spatial locations of the type's instantiation (the dog in question) vis-à-vis the speaker (S): use of the deictic to point to a particular dog ties the reference of the type to a specific instantiation by equating it with already located in the domain of instantiation, distinguishing it from others of its class.[24] Because a predicate can also offer new information assumed to be shared (in most cases) by both speaker and hearer as information about a *type*, the verbless sentence may also serve the function of linking shared information about the domain of instantiation to generic (or presupposed) information possessed by the listener.[25] An example such as (31)(d)—*p'"i tispuƛ'aylayxaw* "what they caught [is] a halibut"—can thus be paraphrased as something like "we know that they caught something and you know what a halibut is, well, that something they caught is a halibut".

Probably because a great deal of discourse has to do with the linking of particular instances of objects to categories or properties, verbless sentences tend not to appear with a grounded predicate nominal (that is, nominal predicates tend not to be headed by deictics). This is not a logical necessity, however, and is by no means always the case. For example, the question in (40)(b)—*waks tisp'is cixnascx* "who did the woman hit?"—presupposes an event known both to

course space (*e.g.* "latter" vs. "former"). For a discussion of the parameters of deixis in Bella Coola, see Davis & Saunders (1975); most of their observations are also applicable to Lushootseed, although a more detailed comparative study than can be undertaken here would no doubt produce interesting results.

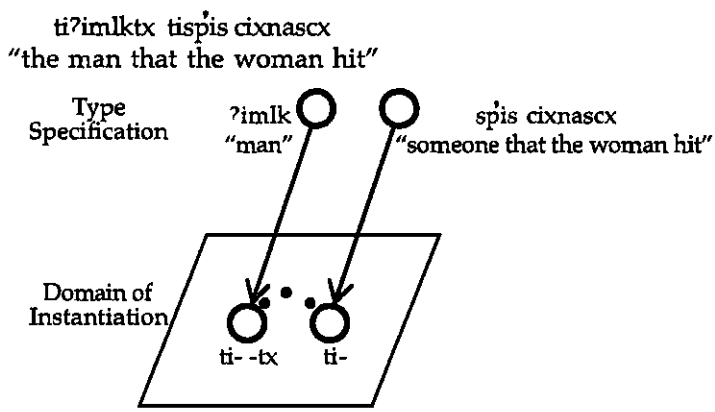
[24]The domain of instantiation can, roughly speaking, be defined as the mental model or "map" of conceptual space shared by speaker and listener in which elements of discourse are identified with elements which are known or can be seen, etc.

[25]In this sense verbless sentences (like sentences formed on a copula in languages that use them) have a certain deictic usage in that they serve to ground their predicate in the domain of instantiation in precisely the same way that a deictic (also a syntactic head) serves to ground an instance of the type defined by its nominal dependent. This parallel will be explored further in the conclusion.

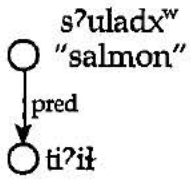
speaker and listener and elicits a response referring the questioner to a particular instance of "man" that is assumed by the speaker to be known (or knowable) to the questioner through its location in conceptual or discourse space. Consider (42). This diagram represents the identification (curved line) of two entities at specific locations in the domain of instantiation (relative to the speaker, who is not shown). As indicated in the question, the listener is aware that there exists some entity who meets the type specification "someone that the woman hit". In the response to the question, the speaker presupposes this entity (as well as its location in the domain of instantiation) and identifies it with a specific instance of the category "man" which he assumes to be known to the speaker. The paraphrase here would be along the lines of "you know that the woman hit someone and you know that man, well, that someone is that man". Seen in this light, the use of deictics in such constructions is very similar to the use of pronouns in that they represent (stand in for) the instantiation of a type named by a nominal; it should also be pointed out that the relation of correspondence (the arrow) between deictic and nominal in (41) resembles the relation of identification (*i.e.* the predicative relationship) that holds between pronominal deictic and predicate nominal in (42). These similarities will be explored further in Sections 3.2.3 and 4 below.

What is particularly interesting about this semantic approach to the verbless predication is the direct way that it is reflected in the syntax. In the MTM, a verbless sentence would be treated in the SSyntR as a D-tree with a non-verbal element governing a dependent in a predi-

(42) Predication of an instance



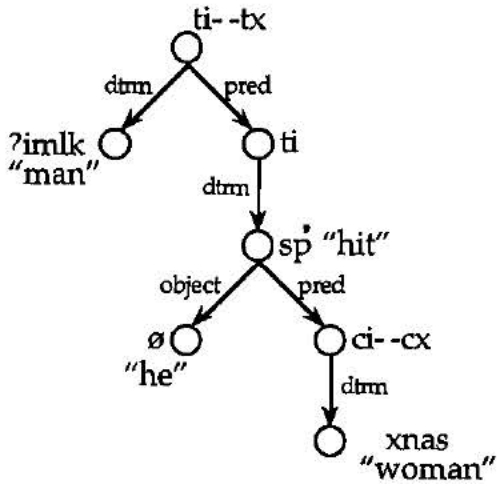
(43) SSyntR of (31)(a)



cative relation as in (43), which represents the sentence in (31)(a), *s?uladx^{w} ti?iɬ* "that [is] a salmon". Here the predicative relation between subject and predicate nominal corresponds semantically to the identification of instance with type illustrated in (41). While the role of the top node of the D-tree as a predicate is clear in communicative and semantic terms (that is, it is rhematic and it is what is being located for the listener in conceptual space), in syntactic terms the only distinguishing feature of a predicate (in the absence of lexical restrictions such as those in English) is its position at the top of a tree (or a subtree) as the governor of an actant.[26]

The SSyntR of the response in (40)(b), illustrated in (44), realizes the predicative relation in precisely the same manner as (43). While the structure appears somewhat counter-intuitive, the predicative relation between the two deictics here is a direct reflection of the equation of

(44) SSyntR of response in (40)(b)



[26]In the case of embedded verbless sentences, it is the configurational criterion rather than the semantic one that must be considered to be definitive. Note also that a predicate of any D-(sub)tree will be defined in the DSyntR, where relations are separated into actantial (DSyntRel 1 – 6) and non-actantial (attributive, appendency, and coordinative).

the two deictics in (41), giving the sentence a structure along the lines of "that one who the woman hits [is] that one who is a man".[27] Note also that the determinative relation that holds between the deictic heads and their dependents also has an exact counterpart in the correspondences drawn between the types and their instantiations in (42). In addition, this syntactic dependency also bears a close resemblance to the correspondence between a relational type and its instantiation (for example, the correspondence between an adjective and a nominal which it modifies), most commonly realized by the modificative SSyntRel. Some of the implications of these similarities, along with some of the syntactic features of trees such as that illustrated in (44), will be discussed in the section on syntactic nominalization (3.2.3) and in the conclusion.

3.1.3.2 Wh-Questions and Negation

One of the more interesting features of the syntax of Lushootseed and—to a lesser extent—Bella Coola is the use of the verbless sentence in the formation of communicatively marked structures such as Wh-interrogatives and a class of negative sentences that I will refer to as "existential negatives".[28] In Lushootseed Wh-questions, a verbless sentence takes an interrogative word such as *gʷat* "who" or *stab* "what" as its predicate and the predicate of the corresponding declarative appears as its subject, preceded by the hypothetical/remote deictic *kʷi*:

---

[27] *Cf.* Lawrence Nicodemus' glosses of Coeur D'Alene, cited by Kinkade 1983 and discussed in 3.2.3 below.

[28] Lushootseed yes/no questions place the interrogative particle *ʔu* after the predicate, first adverbial particle, or subject pronominal:

(i) ʔu+ɬuk̓ʷ+txʷ čələp ʔu ti čačas
[pnt]+go•home+[caus] 2p [int] D child
"do you folks take the boy home?"

(Hess 1993b: 6)

There is generally no other difference between question and declarative sentence. Similarly, Bella Coola uses the enclitic *-a* affixed to the predicate to indicate interrogation, often in combination with other clitics such as *ka* (irrealis) which may be affixed to nominal stems, meaning "any", as in

(ii) ʔaɬi+a ʔalaʔawxʷa ka+caacaws
exist+[int] here [irr]+church
"are there any churches here?"

(Nater 1984: 124)

While these sentence-types are interesting from the point of view of their morphology, syntactically they conform to the canonical clause-type outlined in 3.1.1 above and need not be discussed further.

(45) (a) ʔu+ʔəy̓+du+b ʔə ti sqʷəbayʔ ti c̓əc̓as
[pnt]+find+[l.o.c.]+[md] P D dog D child
"the dog found the boy"

(Hess 1993a: 29)

(b) gʷat kʷi ʔu+ʔəy̓+du+b ʔə ti sqʷəbayʔ
who D [pnt]+find+[l.o.c.]+[md] P D dog
"who did the dog find?"
(lit. "who [was] the one found by the dog?)

(Hess1993a: 128)

(c) ʔu+huy+yi+t+əb ʔə t(i) ad+bad ti?iɬ c̓əc̓as
[pnt]+make+[ben]+[caus]+[md] P D 2po+father D child
"your father made [it] for that boy"

(my sentence, based on (d))

(d) stab kʷi s+u+huy+yi+t+əb+s ʔə t(i) ad+bad
what D np+[pnt]+make+[ben]+[caus]+[md]+3po P D 2po+father
ti?iɬ c̓əc̓as
D child
"what is your father making for that boy?"[29]

(Hess 1993a: 137)

As in ordinary verbless sentences, the subject appears as either a syntactically (b) or morphologically (d) nominalized form, depending on whether or not the predicate corresponds to a direct or a peripheral actant of the subject-clause. Note, however, that only *gʷat* and *stab* may be the predicates of questions like (45)(b) with syntactic nominalizations as subjects; other Wh-words, by nature, ask for information about peripheral roles in the sentence. These are:

(46) Lushootseed Wh-words

ʔídigʷat	"say what"
k̓ʷid	"how many"
čad	"where"
ʔəx̌íd	"why" (Northern Lushootseed)
čal	"how, why" (Northern Lushootseed)
x̌id	"how, why" (Southern Lushootseed)
ʔiɬčád	"which"
pə(d)tab	"when"

(Kinkade 1994)

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[29]Note here the realization of the subject of the nominalized passive, *ti?iɬ c̓əc̓as* "the boy", follows the pattern of the possessive illustrated in (72)(b) in Section 2.4.3, the overt NP cooccurring with the possessive suffix *-s*. The persistence of this pattern in this particular environment (expressing the subject of a passive participle) may well stem from the potential ambiguity that might arise from using a prepositional phrase, *ʔə ti?iɬ c̓əc̓as*, which would be indistinguishable from the agent-phrase (also headed by *ʔə*).

In questions formed on these words, the subject clause is nominalized with the *s-* prefix, as in questions formed on peripheral actants (45)(d) and in sentences like

(47) ʔəs+čal+əxʷ kʷi łu+s+huy+s
[stat]+how+now D [irr]+np+manage+3po
"how will he manage?"

(Hess 1993a: 136)

This pattern of syntactic versus morphological nominalization will be dealt with further in the context of complex sentences (Section 3.2); Bella Coola patterns for forming Wh-questions, which are somewhat more complicated than those in Lushootseed, will be dealt with in the section on sentential complements (Section 3.2.4).

Lushootseed makes use of two patterns of negation. The first is the adverbial negative, which involves the placement of the negative adverb *xʷiʔ* in sentence-initial position, as in

(48) (a) xʷiʔ lə+pišpiš tiʔiɬ
[neg] [clitic]+cat D
"that [is] not a cat"

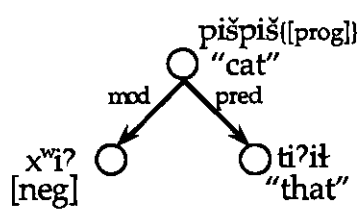
(Hess 1993b: 121)

(b) xʷiʔ čəd lə+ʔaciɬtalbixʷ
[neg] 1s [clitic]+Indian
"I [am] not an Indian"

(Kroeber 1991: 79)

The adverbial nature of the negative *xʷiʔ* is shown by the distribution of the overt subjects: in (a) the subject, *tiʔiɬ*, is an NP (or, more strictly speaking, a DP) and so directly follows the predicate, but in (b) the subject pronominal precedes the predicate in the presence of an adverb (see 2.4.2 above). This structure negates the identity of something and requires the affixation of the proclitic *lə-* (homophonous, but not synonymous, with the progressive prefix *lə-*) to the predicate or to any adverb following the negative (Hess 1993b). The effect is one of negating the sentence

(49) Adverbial negation in (48)(a)



predicate in much the same way as a negative does in more familiar Indo-European languages, and these sentences admit of the same type of structural representation, as in (49).

Negation in Bella Coola works much the same way, making use of the morpheme *ʔaǰʷ*.

(50) ʔaǰʷ ka+puɬ+c
[neg] [irr]+come+1s
"I will not come"

(Nater 1984: 122)

In forming the adverbial negative sentence, *ʔaǰʷ* is used as an adverb and is placed sentence-initially (an unusual place for an adverb in Bella Coola), the sentence predicate appearing with the irrealis *ka*. Like yes/no questions, this type of negation in both languages is merely a variation on the canonical simple sentence and need not be considered further here.

In Lushootseed, however, there is a more interesting type of negation—the existential negative. Like the adverbial negative, existential negation makes use of sentence-initial *xʷiʔ*, but here the negative adverb serves as the sentence predicate. The predicate of the corresponding declarative sentence is morphologically nominalized with *s-* and appears with the hypothetical deictic *kʷi* and subjunctive prefix *gʷə-*, as in

(51) (a) ʔu+ʔəɬəd čəxʷ
[pnt]+eat 2s
"you ate"

(my sentence, based on (b))

(b) xʷiʔ kʷi gʷ+ad+s+u+ʔəɬəd
[neg] D [subj]+2po+np+[pnt]+eat
"you did not eat"

(Hess 1993b: 125)

These sentences have the import of negating the existence or truth of the statement in its entirety. The same structure can be used to deny the existence of a thing or a type,

(52) xʷiʔ kʷi gʷə+pišpiš
[neg] D [subj]+cat
"there are no cats"

(Hess 1993b: 123)

as well as to negate the possession of something (or, more precisely, deny the existence of something in someone's possessive domain):

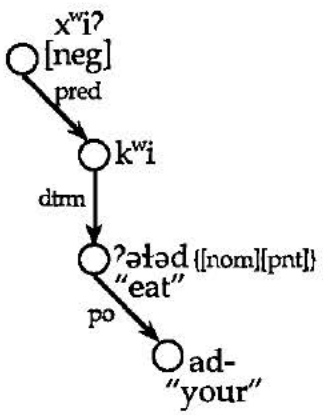
(53) xʷi? kʷi gʷə+d+pišpiš
[neg] D [subj]+1po+cat
"I don't have a cat"

(Hess 1993b: 123)

(*Cf.* the Russian possessive expressions of the form *u menja (net)* ... "there is (not) to me ...".) Structurally, these sentences are extremely interesting. Consider the SSyntR of (51)(b) in (54). Some features of the structure given here will be discussed in more detail in the section on morphological nominalizations below; for the moment it is enough to note that the predication based on the negative particle, which is not a direct actant of the subject clause, meets the distributional conditions for morphological nominalizations. The nominalization of the declarative sentence to form the clausal subject has two important effects. The first is to ensure that it is the negation itself which is rhematic in the sentence, while the statement that is negated is relegated to the role of topic—or, in other words, to the role of a proposition that is presupposed in discourse. This seems to coincide very well with a proposal made by Givón (1979) to the effect that the discourse function of a negative speech act is to deny a presupposition that has either been made by the listener or that has been held in discourse up until the point of utterance. If the affirmative statement is indeed presupposed knowledge—and therefore topical in nature—then the fact that the negative adverb (the only new or rhematic portion of the sentence) is the sentence predicate falls out from the same basic principles of rhematic organization that govern the formation of all other types of verbless sentence: it is the negation that carries the greater part of the communicative load and so it is the negative adverb that becomes the sentence predicate.

Another interesting feature of the structure in (54) is the way in which the syntax directly encodes the scope of the negative adverb. With the negative itself the sentence predicate, the grammar ensures that the meaning of the sentence as a whole is the negation of the entire subject-clause in much the same way that the logical operator of negation applies to a proposition in predicate calculus. Thus, sentence (51)(b) comes out in a literal gloss as "your eating [is] [neg]", which translates nicely into a logical statement ¬(eat(you)) whose bracketing reflects exactly

(54) Existential negation in sentence (51)(b)



the form of the D-tree given in (54).[30] This contrasts very strongly with languages like English, whose syntactic structure does not obviously or unambiguously reflect the semantic scope of negative elements. The "illogic" of English syntactic structure has lead to the creation of such elaborate systems as the LF of Government and Binding Theory in an attempt to mold the syntax of negation and other forms of quantification to the rules of formal logic. Given the rather transparent coding of negative quantification in Lushootseed, however, the utility of such an approach in this language is not immediately apparent: while some work has been done on the problems of quantification in other Salishan languages (*e.g.* Demirdache *et al.* 1994; Jelinek 1993a), this problem has not been addressed directly in Lushootseed and awaits further study.

According to Nater (1984) Bella Coola *ʔaǰʷ* also appears as a predicate in existential negatives such as,

(55) ʔaǰʷ ti+ka+ɬalas ʔala?ac
[neg] D+[irr]+boat here
"there is no boat here"

(Nater 1984: 123)

Note, however, that the use of these is restricted to the denial of the existence of objects and the negative adverb is not used to subordinate declarative predicates. This suggests that sentences such as (55) may not in fact be predicated on the negative itself, but may simply be verb-

[30]Compare the syntactic structure of the negative of identity in (49), where the negative adverb—like any other modifier—has scope over nothing in the D-tree, serving merely to qualify its head.

less sentences with predicate nominals in which *ʔaǰʷ* has been given its customary sentence-initial position—a structure which is also suggested by Nater's gloss (as shown), which includes the negative as a quantifier within the sentence predicate.

3.2 Complex Sentences

In traditional grammars, the term "complex sentence" is generally reserved for those sentences that contain one or more subordinate clauses (Trask 1993); given the propensity in Bella Coola and Lushootseed for nominalizing subordinate clauses in a wide range of contexts, however, it has been necessary here to extend the term to include those sentences in which the subordinate clause has undergone morphological nominalization, although strictly-speaking these could be analyzed as simple, rather than complex, sentences. In many respects the two languages here appear to differ greatly in the ways in which the various types of complex sentence are realized and yet in the discussion that follows it will be seen that, at the level of the syntax, both Bella Coola and Lushootseed show a high degree of convergence in the realizations and functions of subordinate clauses. This convergence is strongest in those sentence types in which the subordinate clause either modifies a nominal (as in a relative clause) or plays an actantial role in the sentence, and so these sentences will be discussed initially, followed by some more divergent patterns such as the Bella Coola sentential complement (barely attested in Lushootseed) and the rather broad category of adverbial or "circonstantial" clauses (Tesnière 1959). It is in the range and function of this latter category—commonly referred to as sentence adjuncts—that the languages differ most strikingly. Finally, it should be noted that for reasons of space, compound sentences and other sentence-types involving coordination of clauses will not be dealt with in the discussion that follows.

3.2.1 Relative Clauses

A relative clause (RC) construction in the MTM is analyzed as a nominal taking a full finite clause as its modifier; coreferential or redundant NPs are then deleted by a rule of EQUI-dele-

tion in the DSynt or SSynt component.[31] In both Lushootseed and Bella Coola, which lack a complementizer, RCs are formed by establishing a modificative SSyntRel between the nominal head and the predicate of the lower clause. In this way, RCs in Lushootseed and Bella Coola can be treated as identical in syntactic structure, although they appear more distinct than they are due to the rule of deictic spreading in Bella Coola and various language-specific restrictions on RC formation and distribution.

Where the two languages coincide most obviously is in the subject-centred RC:

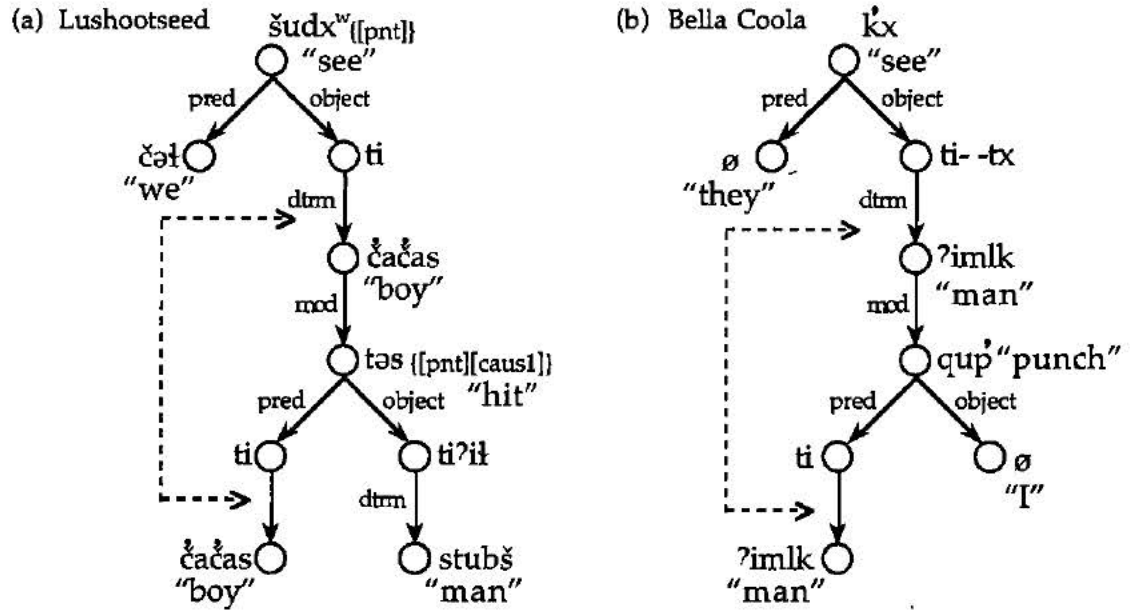
(56) Lushootseed
(a) ʔu+šu+dxʷ čəɬ ti čačas ʔu+təs+əd tiʔiɬ stubš
[pnt]+see+[l.o.c.] 1p D boy [pnt]+be•hit+[caus] D man
"we saw the boy [that] hit the man"
(Hess & Hilbert 1976: II, 125)

Bella Coola
(b) k̓x+it ti+ʔimlk ti+qup̓+cs+tx
see+3s-3p D+man D+punch+1s-3s+D
"they see the man who is punching me"
(Davis & Saunders 1978: 46)

In this construction Bella Coola and Lushootseed are similar in that the embedded relative clause is identical in form to a matrix clause, and in both languages the RC follows its nominal head. The major difference between the two examples is that in Lushootseed the relationship of the RC to its head is not marked overtly (the embedded clause having the same form as a matrix clause), whereas in Bella Coola the RC's status as modifier is marked by the appearance of the deictic clitics; this, however, can be analyzed as the result of the rule of deictic spreading, responsible for the propagation of the deictics associated with a nominal to all of its modificative dependents. As this rule takes effect at the morphological level, in the surface syntax the deictics would be present only as the heads of their respective nouns, making the Bella Coola SSyntR of (56)(b) identical to that of the Lushootseed example in (56)(a), as in (57). The coreferential NP triggers verb-agreement in Bella Coola and so must be present in the SSyntR (agreement features being a property of the morphological levels of representation).

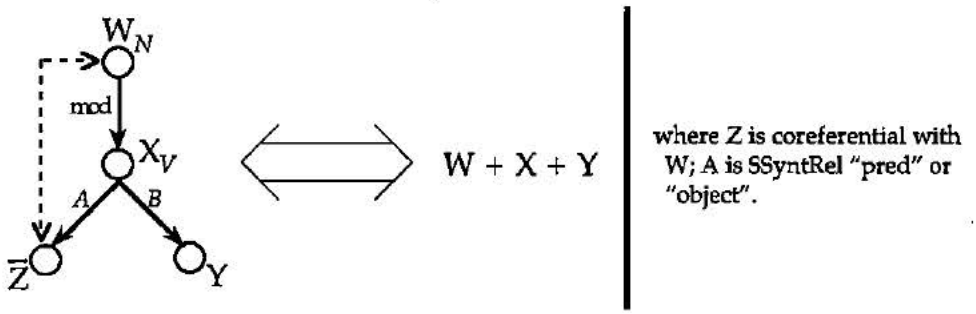
[31] Where in the rules EQUI deletion takes place depends on such things as agreement and other morphosyntactic features of RCs in a given language (Mel'čuk, personal communication).

(57) Subject-centred relative clauses



These would then be deleted in the surface syntactic component between the SSyntR and the DMorphR by the EQUI deletion rule presented in (58):

(58) EQUI deletion



This is a straightforward rule, stating simply that any direct actant of an RC which is coreferential with the head noun will be deleted in the DMorphR along with its dependents (the notation "$\bar{Z}$" indicating the sub-tree headed by "Z"). The rule in (58) as formulated includes the linear precedence of the nominal head. In Bella Coola, where there is verb agreement, the linear precedence of an RC with overt DP actants is ruled out by deictic spreading, which requires that all elements to which the deictic proclitic is attached be adjacent to one another.

This appears to leave the door open to RCs without overt actants preceding their heads, but the fact that these do not occur can be accounted for either by an extension of the "head-first" restriction by analogy or by appeal to some kind of "weight" constraint (*cf.* the English "heavy NP constraint") whereby full clauses are considered too "heavy" to precede their heads. In the case of Lushootseed, the precedence of head over modifying clause clearly has a pragmatic basis: if the head noun were to follow its dependent, it would be open to interpretation as an actant of the embedded clause and would lose its overt link to the matrix verb which—in the absence of morphological agreement—is indicated only by prosody and proximity.[32]

Bella Coola also forms object-centred relative clauses, such as

(59) ʔałk̓yuk+iɬ ti+ʔimlk ti+qup̓+ɬ+is ci+xnas+cx
know+3s-1p D+man D+punch+[perf]+3s-3s D+woman+D
"we know the man who the woman punched"
(Davis & Saunders 1978: 49)

which would have the same representation as the sentences in (57), except that the NP in the lower clause marked at SSyntR for EQUI deletion would be the object rather than the subject. In Lushootseed, on the other hand, object-centred relative clauses with third-person subjects do not occur; in cases where English would make use of an object-centred RC, Lushootseed uses a passive construction in the embedded clause, thereby avoiding the object-centred form, as in

(60) ʔu+šu+dxʷ čəd ti sqʷəbayʔ ʔu+c̓axʷa+t+əb ʔə ti ʔiɬ čac̓as
[pnt]+see+[l.o.c.] 1s D dog [pnt]+clubbed+[caus]+[md] P D boy
"I see the dog that the boy hit with a club"
(lit. "I see the dog that was hit with a club by the boy")
(Hess & Hilbert 1976: 124)

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[32]There is, however, at least one example in the data at my disposal of a derived intransitive (passive) RC preceding its head:

(i) x̓(u)+u+ləkʷ̓+əd tiʔəʔ x̓u+ɬčil+tu+b haʔɬ sʔuləd
[hab]+[pnt]+eat+[caus] D [hab]+arrive+[caus]+[md] good food
"she would eat the good food that was brought"
(Bates *et al.* 1994: 105)

Because the embedded clause has only a single direct actant—represented by its head—there is not the possibility of ambiguity that might have arisen with a transitive RC: the syntactic head can only be coreferential with the embedded subject. The interpretation of this structure as a syntactic nominalization (see Section 3.2.3) is ruled out as this would require the deictic *tiʔəʔ* to function as the head of RC; since the only possible role of the head of an intransitive RC is that of subject, this would make the deictic coreferential with the embedded subject *sʔələd* "food", which should trigger EQUI-Deletion. This is good evidence for the pragmatic nature of the head-initial RC constraint, which appears from (i) to be violable, circumstance permitting.

The passivization of the lower clause allows the formation of a subject-centred—rather than an object-centred—RC, creating a structure identical to that in (57). This is most likely a pragmatic constraint on the language, as there is no direct means other than the passive for marking the syntactic role of both of two third person NPs in a clause and so, if object-centred forms were used, they would be identical to subject-centred RCs in which the roles of the actants were reversed (that is, *ti sqʷəbay? ʔuc̓axʷad tiʔiɬ c̓ac̓as* could mean either "the dog that the boy hit" or "the dog that hit the boy"). Clauses with first- and second-person subjects do not undergo passivization when forming object-centred relative clauses (Hess, personal communication).

Like Lushootseed, Bella Coola also accords special status to certain types of RC with third-person subjects; in this language, however, there is a prohibition against third person singular *subject*-centred RCs with third-person objects. As discussed briefly in Section 3.1.2 above, relatives of this sort are realized using what Nater (1984) terms a "participle". Consider:

(61) (a) k̓x+ic ti+x̓msta ti+qup̓+ɬ+t+tx
see+3s-1s D+person D+punch+[perf]+[part]+D
"I see the person punching [him/her]"

(b) k̓x+ic ti+qup̓+ɬ+t ti+x̓msta+tx
see+3s-1s D+punch+[perf]+[part] D+person+D
"I see the one punching the person"
(Davis & Saunders 1978: 40)

(c) ʔaɬk̓yuk+iɬ ti+x̓msta ti+quu+xp̓+ɬ+tan+tx
know+3s-1p D+person D+[rdp]+punch+[perf]+[part]+D
"we know the person punching them"
(Davis & Saunders 1978: 46)

If Nater is correct in his assessment of the *-t/-tan* forms as participles, then these structures must be analyzed as factive nominalizations and treated as nominal modifiers. This would make sentences such as those in (61) parallel to this sentence from Buriat

(62) Badmin duu duula+x+ie šagna+ba+d
Badmin song sing+[part]+[acc] hear+[past]+3s
"he listened to Badmin singing a song"
(Bertagaev & Tsydendambaev 1962: 128)

where the subject of the participial phrase, Badmin, is realized as an unmarked (in this language, nominative) NP rather than a possessor. It should be noted, however, that there is

really very little evidence for the status of the *-t/-tan* forms as factive nominalizations. While it can be argued that the absence of the usual subject/object agreement features on the participle indicates that they are not full finite clauses, Davis & Saunders (1978; 1984a) analyze *-t* as an alternative form of agreement and treat Nater's participles as finite. In actual fact, there is very little to choose between the two interpretations of the data, although the agreement analysis does have the minor drawback that the order of the subject and object agreement features in the *-t/-tan* forms (which would be broken down as [/t/ "3s-subject" + /ø/ "3s-object"] and [/t/ "3s-subject" + /an/ "3p-object"]) reverses the usual object-subject order of agreement morphemes (a suffixal order which is predominant not only in this language but also cross-linguistically). In addition, it is not entirely desirable to have to postulate a whole new set of agreement features for such a restricted environment as long as there is some other quite natural and viable alternative, particularly when this alternative (factive nominalization) is attested in other related languages. For these reasons I will follow Nater's analysis here and treat the *-t/-tan* forms as the final remnants of a system of participles in the language, most likely conserved in this one environment as a means of disambiguating between subject- and object-centred relative constructions with third-person actants, which would otherwise be indistinguishable.

A final similarity in the patterns of relativization in the two languages that is not immediately obvious is that neither forms RCs on monovalent clauses. Instead, where an intransitive RC is required, the radical is used, forming a structure of the same type as the adjectival-attributive construction. This is most apparent in Bella Coola, where radical modifiers bear no subject agreement and, like adjectives, display variable word-order relative to their heads.

(63) (a) k̓x+ic ti+ya ti+ʔimlk+tx
see+3s-1s D+good D+man+D
"I see the good man"

(b) k̓x+ic ti+ʔimlk ti+ya+tx
see+3s-1s D+man D+good+D
"I see the good man"

(c) k̓x+ic ti+ƛ̓ap ti+ƛ̓msta+tx
see+3s-1s D+go D+person+D
"I see the person [who is] going"

(d) k̓x+ic ti+ƛ̓msta ti+ƛ̓ap+tx
see+3s-1s D+person D+go+D
"I see the person [who is] going"

(Davis & Saunders 1978: 40)

Relative clauses, on the other hand, do show full subject and object agreement and invariably follow the nominal element they modify.

Because Lushootseed does not show verb-agreement, the non-clausal status of intransitive modifiers is not evident syntactically except in that, as in Bella Coola, intransitive "clauses" acting as modifiers show variation in linear ordering with respect to their heads:

(64) (a) ti?ə? ?əs+ɬiq̓ʷil+abac stubš
D [stat]+sores+body man

(b) ti?ə? stubš ?əs+ɬiq̓ʷil+abac
D man [stat]+sores+body
"this covered-with-sores man"

(Hess 1993b: 117)

Once again (like Bella Coola) the same pattern is shown by other radicals which are more "adjectival" in nature, and it should be remembered that, lexically, intransitive radicals in Lushootseed are inherently atemporal (and, hence, non-verbal) in nature (see 2.3.1). Intransitive modifiers do, however, resemble RCs in that they may take on their own adverbials, as in

(65) Lushootseed
(a) ?əs+(h)aydx čəd tsi sladəy? ?əs+łałlil ?al ti?iɬ
[stat]+know 1s Df woman [stat]+live P there
"I know the woman living there"

(Hess 1993b: 145)

(b) kʷi gʷəɬ ?əs+ɬiq̓ʷil+abac bəda?
D belong [stat]+sores+body boy
"the boy belonging to Covered-with-Sores"

(Hess 1993a: 142)

Bella Coola
(c) k̓x+ic ti+ƛ̓msta ti+ƛ̓ap ?aɬ+ci+xnas+cx
see+3s-1s D+person D+go P+D+woman+D
"I see the person [who is] going with the woman"

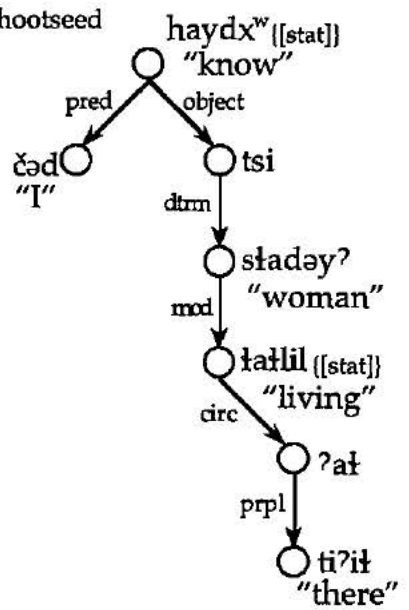
(Davis & Saunders 1978: 40)

(d) k̓x+ic ti+ƛ̓msta ti+ya ʔaɬ+ci+xnas+cx
see+3s-1s D+person D+good P+D+woman+D
"I see the person [who is] good for the woman"
(Davis & Saunders 1978: 41)

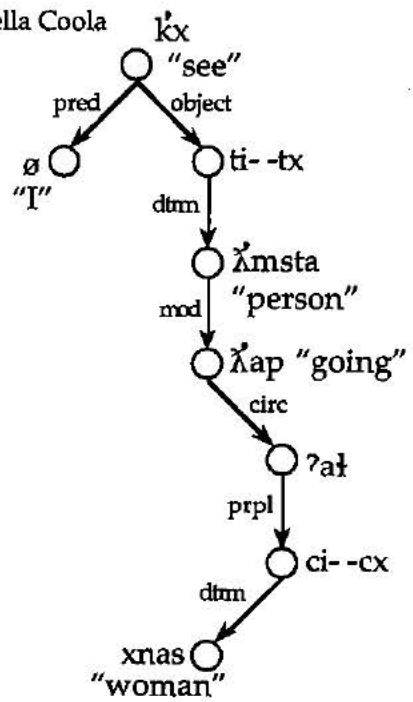
It should be noted, however, that in terms of the allowable word-order, the two languages differ slightly. In Lushootseed, a complex modifier of the type in (65)(b) is allowed to precede its head if it is felt not to be "too long" (Hess 1993b); in Bella Coola, on the other hand, complex modifiers must follow their heads. The variation in word-order observed in simple radical-modifier constructions is accounted for as long as the modificative dependency is not used as a criterion for establishing linear precedence in the SSynt component. Instead, linear precedence seems to be established by "weight" constraints in Lushootseed and, in Bella Coola, by deictic spreading, which requires all elements marked with the deictic proclitic to be together. Structurally, radical modifiers closely resemble their more complex RC cousins. Consider the D-trees for (65)(a) and (c), given in (66). These are the same structures as those in (57) above, except that the modifiers of the nominal objects are not full clauses and, thus, do not qualify as RCs.

(66) Radical modifiers

(a) Lushootseed



(b) Bella Coola



3.2.2 Morphological Nominalizations

One of the predominant sentence types in both Bella Coola and Lushootseed is that in which a morphologically nominalized clause—either a participle in Lushootseed or a sentential nominalization in Bella Coola—takes up a nominal role in a sentence (see Section 2.2). These nominals function in both languages in a variety of syntactic roles, including subject,

(67) Lushootseed
(a) x̌ʷuł̓ p̓aƛ̓aƛ̓ ti?ə? d+s+?abyid
only worthless D 1po+np+give
"what I give [him] [is] only junk"

(Hess 1993b: 185, line 14)

Bella Coola
(b) wix ?ac wa+s+?aɬps+tu+m q̓ʷax̌ʷ
[idn] D D+np+eat+[caus]+3s-[pass] Raven
"what Raven was fed [is] this"[33]

(Nater 1984: 102)

direct object,

(68) Lushootseed
(a) x̌ʷuł̓ čəd ɬu+lə+?ux̌ʷ+txʷ ti?ə? ɬ(u)+ad+s+?əɬ+txʷ
only 1s [irr]+[prog]+go+[caus] D [irr]+2po+np+eat+[caus]
"I will just deliver what you are going to feed [them]"

(Hess 1993b: 143)

Bella Coola
(b) k̓x+ic ti+s+nap+ix̌ʷ ti+snaax̌+tx
see+3s-1s D+np+give+3s-2s D+slave+D
"I see what you are giving to the slave"

(Davis & Saunders 1978: 40)

predicate,

(69) Lushootseed
(a) d+s+x̌aƛ̓ kʷi s+təxʷ+s t(ə) sulč
1po+np+want D np+buy+3po D drum
"his buying a drum [is] my desire"

(Kroeber 1991: 86)

Bella Coola
(b) s+k̓ʷaɬ+am+s+kʷ+tu+c̓ a+sulut+ac ?aɬ+tx̌ʷ
np+improve+[inc]+3s+[qt]+[cnf]+[perf] D+channel+D P+then
"then [it was] that channel began to improve"

(Davis & Saunders 1980: 197, line 51)

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[33]The lack of a determiner before *q̓ʷax̌ʷ* "raven" indicates it is being used as a proper name; Nater (1984) attributes this dropping of deictics before proper nouns to influence from English.

object of preposition,

(70) Lushootseed
(a) yəc+əb+ax^{w} ti luƛ̓ ʔə tiʔiɬ s+ɬal+il+tu+b+s+əx^{w}
tell+[md]+now D old P D np+on•shore+[trm]+[caus]+[md]+3po+now
"the old man told [s.o.] of their being brought ashore"
(Hess 1993b: 143)

Bella Coola
(b) wixɬɬ+tu+s+ʔak^{w}at+ic+tx̌^{w}
P+D+np+buy+3s-1s+D
"since my buying it"
(Nater 1984: 102)

and modifier of nouns,

(71) Lushootseed
(a) ʔu+pača+d tiʔiɬ stabig^{w}s s+ʔabyid+s
[pnt]+display+[caus] D goods np+give+3po
"he displayed the goods that he was giving [to s.o.]"
(Hess 1993b: 145)

Bella Coola
(b) k̓x+ic ti+snaaǎ ti+s+nap+ix+tx
see+3s-1s D+slave D+np+give+3s-2s+D
"I see the slave that you are giving him"
(Davis & Saunders 1978: 40)

This last type of nominalization is used in both languages in place of the oblique-centred RC.

Morphological nominalizations have already been analyzed as complex nominals in Section 2.2 and here they will be treated as lexical items inserted into the DSyntR just as nominal modifiers are inserted in sentences like:

(72) Lushootseed
(a) tiʔəʔ kiyuuq^{w}s stətudəq
D seagull slave
"these seagull-slaves"
(Hess 1993b: 117)

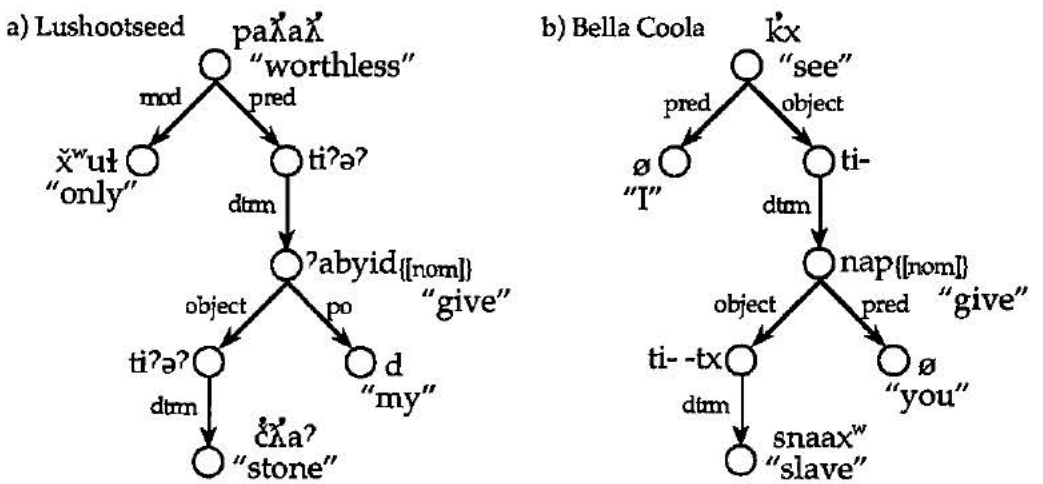
Bella Coola
(b) k̓x+ic ti+staltmx ti+ʔimlk+tx
see+3s-1s D+chief D+man+D
"I see the man [who is] chief"[34]
(Davis & Saunders 1978: 41)

[34]In Bella Coola, there is a distinction between the word-order of an ordinary nominal-modifier construction (head-final) and the same construction with a morphological nominalization, which is head-initial, patterning it with the RC. Even so, this can be explained in terms of the "weight" of a nominalized clause and/or the requirements of deictic spreading, plus the fact that the identity of the head in such a construction is unambiguous, the *s*-clause modifier being morphologically distinctive.

Aside from the conceptual analysis of the morphological nominalization as a lexical category, there are other considerations which lend some support to the analysis of these clauses as complex lexical items. The most important of these is the unified treatment of the s-nominalizer which we have been able to sustain up until. If we were to posit morphological nominalization as a function of the syntax, then this unified treatment would have to be abandoned (or at any rate would be less tenable) as it would, in effect, require two different functions for the prefix, one derivational (the creation of new lexical items) and one inflectional (the marking of clauses as being in a certain kind of subordinate relation to their heads).

In structural terms, what we are dealing with here is fairly simple. Consider (73), which shows the SSyntR of (67)(a) and (68)(b) above.[35] While these bear a close resemblance to the D-trees of RCs and radical modifiers given above, the distinguishing feature of structures such as these is that the embedded clause has been nominalized (and, in Lushootseed, the subject of the clause is realized as a possessor).

(73) SSyntR of (67)(a) and (68)(b)



Even though morphological nominalizations can be treated as lexical items, there are syntactic restrictions on their appearance. Consider:

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[35]As noted in 2.2.2 above, the Lushootseed sentence contains an elided actant, *ti?ə? čʔa?* "Stone", an anthropomorphized boulder who is the recipient of "my" (= Coyote's) gifts. This participant is considered to be present in the syntax, but removed by a rule of ellipsis in the surface-syntactic component.

(74) Lushootseed

(a) ʔu+šu+dxʷ čəɬ ti čač̓as ʔu+təs+əd ti?iɬ stubš
[pnt]+see+[l.o.c.] 1p D boy [pnt]+be•hit+[caus] D man
"we saw the boy [that] hit the man"
(Hess & Hilbert 1976: II, 125)

(b) tiləb ʔu+gʷəx̌+agʷil ti?əʔ tu+s+əs+čəbaʔ+s kʷagʷičəd
immediately [pnt]+loose+ds D [past]+np+[stat]+carry+3po elk
"immediately, the elk that he had been backpacking got loose"[36]
(Hess 1993a: 142)

Bella Coola

(c) k̓x+it ti+ʔimlk ti+qup̓+cs+tx
see+3s-3p D+man D+punch+1s-3s+D
"they see the man who is punching me"
(Davis & Saunders 1978: 46)

(d) k̓x+ic ti+snaax̌ ti+s+nap+ixʷ+tx
see+3s-1s D+slave D+np+give+3s-2s+D
"I see the slave you are giving him"
(Davis & Saunders 1978: 40)

In all four examples, full clauses are used to modify nouns, yet only in the (b) and (d) sentences are these clauses nominalized. The distinction between the two sentences in each pair lies in the fact that in the relative clauses the noun that is being modified is a direct actant of the predicate of the embedded clause—that is, it represents either the subject or the direct object. In the nominalized clauses, however, the modified noun represents a peripheral actant.[37] The upshot of this is that the use of morphological nominalizations as modifiers is restricted to those cases where the nominal being modified is coreferential with a peripheral actant of the nominalized clause. Similarly, morphological nominalizations appear only as subjects of sentences in which the predicate corresponds to a peripheral actant and, when used as the actant of a verb, the participant they represent is generally a peripheral actant of the nominalized clause (although, more in Lushootseed than Bella Coola, it can also profile an event as a

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[36]Note the word-order in this example, where the nominalized clause precedes its head. This distinguishes morphological nominalizations from RCs, which generally do not precede their heads, and groups them with radicals and other types of non-clausal modifiers. This head-final construction is not possible in Bella Coola, where word-order is crucial for establishing certain kinds of syntactic relations; the word-order variant of (d) below, *k̓xic tisnapixʷ tisnaax̌tx*, is glossed "I see what you gave to the slave", *snaax̌* "slave" being interpreted as the direct object of the embedded predicate rather than as the head of the nominalized clause.

[37] According to its gloss, sentence (74)(b) seems intuitively not to fit this pattern, as in English the notion of "carrying" intrinsically profiles an object; in Lushootseed, however, *čəbaʔ* seems to function more like the English expression "be loaded down (with)".

whole). As we have seen already, this pattern tying nominalization to peripherality is an important, and pervasive, feature of the grammar of both languages and plays an major role in a number of the syntactic processes discussed below.

3.2.3 Syntactic Nominalizations

In addition to the process of morphological nominalization discussed above, both Lushootseed and Bella Coola are able to create "syntactic" nominals by allowing finite clauses to take up nominal roles as dependents of a deictic and, hence, act as nouns in a clause while at the same time remaining unmarked morphologically. Such "nominalizations", which resemble "headless" relative clauses, are seen in two environments. The first, and more ordinary, is in the role of actant of a verb or object of a preposition. Consider these examples.

(75) Lushootseed

(a) ʔu+ləkʼʷ+əd čəɬ ti tu+kʼʷiči+d čəd
[pnt]+eat+[caus] 1p D [past]+butcher+[caus] 1s
"we ate what I butchered"

(Hess 1993a: 140)

(b) put ƛ̓u+bə+ʔitut ti ʔiɬ ʔə(s+d)xʷ+pakʷ+ah+əb
only [hab]+[add]+sleep D [stat]+[dp]+lie+ass+[md]
"this He-Lies-with-his-Ass-in-the-Air would only sleep"

(Hess 1993b: 183, line 57)

Bella Coola

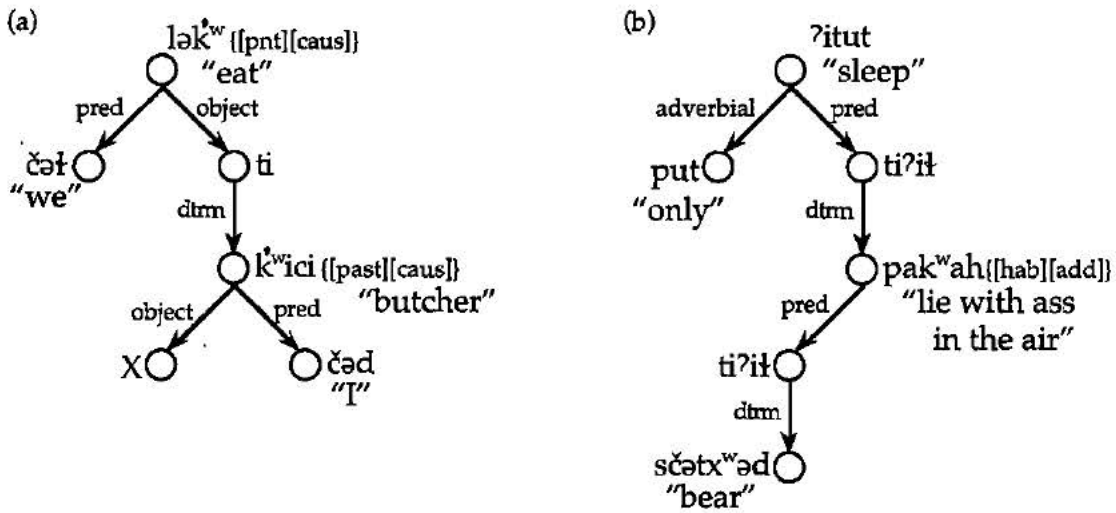
(c) nu+tuin+uc+ik+uus+kʷ+tu ʔiɬʔayɬ
[agt]+show+mouth+inside•container+flat•surface+[qt]+[cnf] that•one
ci+umat+ayx+s tu+knix+im+tx̌ʷ
D+destination+[l.o.c.]+3s D+eat+3s-[pass]+D
"The one who was carrying off their food was heard"
(lit. "the one that was carrying off that which is eaten made itself perceived [by gnawing] with its mouth inside the boxes [where the food was stored]")

(Davis & Saunders 1980: 62, line 41)

In (a), a finite clause stands in for the object of a verb (*ʔuləkʼʷəd* "eat [sth]"), as does the underlined clause in (c) (object of the embedded predicate *umatayxs* "[she] carries it off"); in (b) the finite clause acts as the subject of *ʔitut* "sleep". While being morphologically identical to a matrix clause, the "nominalization" in each profiles a missing actant of the embedded clause, either the object (as in (a)) or the subject (as in (b) and (c)). These sentences would have SSyntRs

as in (76), where the syntactically nominalized clauses are simply treated as dependents of the deictics that precede them:[38]

(76) Syntactic nominalizations in (75)(a) and (b)



The second environment where syntactic nominalization occurs regularly is in subjects of verbless sentences, as in (77):[39]

(77) Lushootseed

(a) sqʷəbayʔ ti ʔu+čala+t+əb ʔə tiʔiɬ wiẃsu
dog D [pnt]+chase+[caus]+[md] P D children
"what the children chased [is] the dog"

(b) wiẃsu ti ʔu+čala+d tiʔəʔ sqʷəbayʔ
children D [pnt]+chase+[caus] D dog
"the ones who chased the dog [are] the children"

(Hess 1993b: 127)

Bella Coola

(c) ti+staltmx ti+nap+is ti+x̌́msta+tx x+ti+q̓́lsxʷ+tx
D+chief D+give+3s-3s D+person+D P+D+rope+D
"the one the person gave the rope to [is] the chief"

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[38]In (76)(a), X is used to stand in for the identity of the animal that was butchered, which is not named by the speaker. The animal's identity would normally be understood from discourse, but is unknown in this case because the sentence is not in context in the source (Hess 1993a).

[39]The Bella Coola sentences here are glossed in the source as RC constructions rather than as verbless sentences; however, Davis & Saunders (1978: 39) state that such structures can be interpreted as sentences and give the example

(i) ti+ʔimlk+tx ti+sp̓+is ci+xnas+cx
D+man+D D+hit+3s-3s D+woman+D
"the one who the woman hit [is] the man"

(Davis & Saunders 1978: 39)

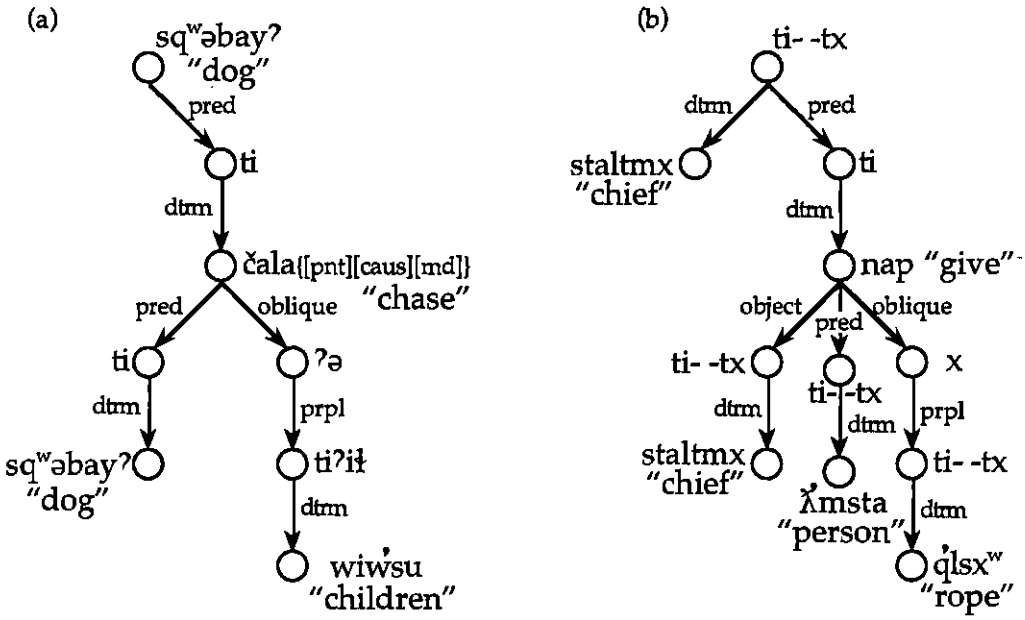
Nater (1984) also states that full sentences can be constructed in this way, but he gives no examples.

(d) ti+q̓lsx^{w} ti+nap+amk+is ti+x̌̓msta+tx
D+rope D+give+[2/3]+3s-3s D+person+D
"what the person gave [is] a rope"

(Davis & Saunders 1984a: 218 – 219)

In structural terms, these sentences have SSyntRs as in (78):

(78) Syntactic nominalization in verbless sentences ((76)(a) and (c))



In spite of the relative simplicity of the structures proposed in (76) and (78), an important issue that still needs to be resolved is the status of the DPs which appear in the embedded clauses in the syntactic structure but which are elided from the surface form of the sentences. Just as in a relative clause, redundant DPs do not surface in the text of an utterance but seem to be syntactically active (at least in Bella Coola, where they trigger verb agreement), which might indicate that they are removed in the SSynt component by the same (or a similar) rule of EQUI Deletion that applies to RCs. While there is no direct syntactic evidence for this, an analysis along these lines would allow us to explain the distribution of syntactic vs. morphological nominalizations in the same way we dealt with the RC vs. morphological nominalization question above. Just as RCs appear only where their heads correspond to a direct actant of the embedded clause, syntactic nominalizations also seem to appear only when the referent of the nominalization corresponds to the subject or object (*i.e.* a direct actant) of the embedded clause.

Compare the syntactic nominalizations from (77) above, given here in (79)(a) and (c), to (79)(b) and (d):

(79) Lushootseed

(a) wiẇsu ti ʔu+čala+d ti?ə? sqʷəbayʔ
children D [pnt]+chase+[caus] D dog
"the ones who chased the dog [are] the children"
(Hess 1993b: 127)

(b) qʷɬqʷɬayʔ ti?iɬ dəxʷ+u+čala+d+s ti?ə? sqʷəbayʔ
sticks D np+[pnt]+chase+[caus]+3po D dog
"what they chased the dogs with [is] sticks"
(Hess 1993b: 133)

Bella Coola

(c) ti+staltmx ti+nap+is ti+x̌̇msta+tx x+ti+q̇lsxʷ+tx
D+chief D+give+3s-3s D+person+D P+D+rope+D
"the one the person gave the rope to [is] the chief"

(d) ti+q̇lsxʷ+tx ti+s+nap+is ti+x̌̇msta+tx ti+staltmx+tx
D+rope+D D+np+give+3s-3s D+person+D D+chief+D
"what the person gives to the chief [is] the rope"
(Davis & Saunders 1984a: 218)

In the (a) and (c) sentences, the profile of the syntactic nominalization is that of one of its own profiled participants (the subject), while in (b) and (d) a peripheral actant of the lower clause is singled out for profiling and so a morphological nominalization is required. Thus, it may be possible to extend the rule of EQUI Deletion to cases where the profile of the syntactic nominalization is coreferential to one of its direct actants, although it is not clear how to write such a rule on structural terms as up until now EQUI has been triggered by coreference of a direct actant with nominal head of the clause within which it appears. In syntactic nominalizations, however, the governor of the clause is not a noun, but a deictic.

One interesting possibility in this regard falls out from the position held by proponents of the DP analysis in dependency grammar (*e.g.* Hudson 1984, 1990) that determiners are, in fact, pronouns. If we extend this analysis to syntactic nominalizations, these become subtypes of the relative clause headed by a pronominal deictic element. The EQUI Deletion rule can then be reformulated to include those instances where the deictic is coreferential with one of the direct actants of the embedded clause. There are a few minor drawbacks to this type of analysis. The

fact that any deictic, not just those which allow normal pronominal use, can head a syntactic nominalization in Lushootseed is problematical, as is the fact that in Bella Coola the deictic proclitics—which are not normally pronominal—are obligatory in syntactic nominalizations whereas the enclitics—which are pronouns—are often omitted. Nevertheless, the relative clause analysis does have the advantage of simplicity and of reducing the range of structures and rules needed to process the languages. It also provides an explanation of the fact that, in both Bella Coola and Lushootseed, it is the deictic that marks an NP for gender rather than the noun itself; while this is not in itself a remarkable or reliable indicator of the deictic's status as a pronoun, the fact that not only lexical nouns but also syntactic and morphological nominalizations may be marked for gender, as in the Lushootseed sentence in (80), is suggestive.[40]

(80) ʔə(s)+šuu+c tsiʔəʔ sładəyʔ ʔal tsi s+u+ƛ̓uk̓^{w}+tx^{w}+s
[stat]+see+[appl] D*f* woman P D*f* np+[pnt]+go•home+[caus]+3po
tiʔəʔ čačas
D child
"I see the woman taking the boy home"
(lit. "I look at the woman, at she who is the one taking the boy home")
(Hess, personal communication)

Here the feminine deictic, *tsi*, introduces the participle, agreeing in gender with the erstwhile subject, which is realized with the *-s* possessive suffix.

An additional advantage of treating deictic heads as pronouns is that this allows for a possible explanation of the origins of deictics when these head a clause. Such constructions have the appearance of being semantically anomalous in that deictics, which function as means of "grounding" or locating objects in conceptual space (Langacker 1991), should not properly apply to processual relations (verbs being grounded by things such as tense, modality, and—in Bella Coola and Lushootseed—their subjects). Alternatively, the analysis of the deictic as having a pronominal as well as a grounding function would allow these elements to stand in for a clausal participant and, in effect, to function as a nominal element heading a relative clause. To make

[40]See also the Bella Coola example in (75)(c). The nominalization *ciumatayxs* "she that carries off" bears the feminine deictic and so is understood to profile a female participant (in this case, the subject). This is particularly interesting because, in the context of the story in which it appears, this participant is never identified beyond the specification of her gender.

this clearer, let us compare the D-trees of the following sentences, the first from Bella Coola and the second from Lushootseed:

(81) (a) ʔałnap+til s+ƛ̓ap+aw wa+ʔimlkuk+sc
know+3s-1p np+go+3p D+men+D
"we know that the men are going"

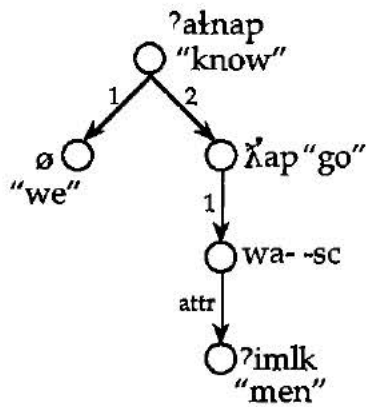
(Davis & Saunders 1978: 42)

(b) ʔu+ləḵ̓ʷ+əd čəɬ ti tu+ḵ̓ʷiči+d čəd
[pnt]+eat+[caus] 1p D [past]+butcher+[caus] 1s
"we ate [what] I butchered"

(Hess 1993a: 140)

The first sentence employs a structure identical to that used in the English gloss, that is, a sentential complement acting as a direct object; because what is known is the entire event "that the men are going", the complement of the verb must be the whole clause, rather than any of its actants. In the DSyntR, this would be represented as in (82).[41] In (81)(b), on the other hand,

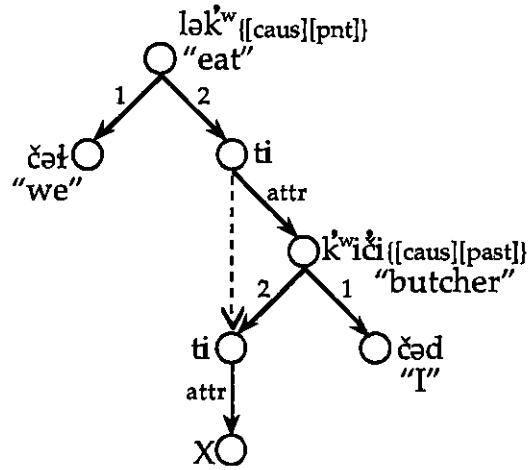
(82) DSyntR of (82)(a)



what is eaten is not the event as a whole ("that I butchered [sth]"), but instead it is the object of "my butchering", a thing rather than an event. This would seem to require a different DSyntR than that represented in (82), one in which the identity of the object of the matrix clause appears, as in (83). As above, "X" is used here to stand in for the identity of the animal that was butchered. In the surface syntactic component of the grammar, the coreferential elements would then trigger EQUI deletion, eliminating the object of the RC.

[41] The DSyntR rather than the SSyntR will be considered here because the SSyntRel which holds between a predicate and a sentential complement is different from that between predicate and object (see Section 3.2.4).

(83) DSyntR of (81)(b)



Finally, the pronoun analysis offers an interesting explanation of a fact mentioned by Kinkade (1983): according to Kinkade, Lawrence Nicodemus, a speaker of Coeur D'Alene (an Interior Salish language) who had some linguistic training, regularly glosses DPs as RCs, as in

(84) xes+iɬcə? xʷe cɨ?
good+flesh D deer
"they are good to eat those which are deer"
(Nicodemus 1975, cited in Kinkade 1983: 34)

Under the pronominal analysis of determiners, an even more literal gloss might be "the ones who are deer [are] good meat", the determiner *xʷe* serving as the head of a relative clause formed from the sentence "they are deer". While it is difficult to know how seriously to take such considerations, it should be pointed out that Kinkade's interpretation of Nicodemus (that all overt NP complements—which are obligatorily headed by determiners—are full clauses) has had a certain intuitive appeal among some Salishanists and has come to play a crucial role in some of the more modern theoretical work on these languages, particularly that of Jelinek (1993a; 1993b) and Jelinek & Demers (1994).

Whether they are properly analyzed as heading a modificative relation or not, it is certainly true that in Bella Coola and Lushootseed deictics may govern a wide range of elements, including nouns, morphological nominalizations, participles, finite clauses, and radicals. These last are of particular interest to us here because DPs with radical complements have the

appearance of syntactic nominals formed on intransitive clauses. Compare the examples in (76) above and the sentences in (85):

(85) Lushootseed
(a) sbiaw ti ʔuxʷ
coyote D go
"the one who goes [is] Coyote"

(van Eijk & Hess 1986: 324)

Bella Coola
(b) ti+ƛ̓ap
D+go
"[s.o.] who goes"

(Nater 1984: 52)

Like radicals which appear as modifiers of nominals, radicals that undergo syntactic nominalization are difficult to distinguish from finite clauses in a similar role. Indeed, in Lushootseed there is no evidence for a given intransitive's status as radical or clause beyond appeal to what we know about lexical categories, which seems to indicate that all bare radicals are atemporal and so would not represent clausal modifiers. In Bella Coola, it would appear that examples such as (85)(b), which do not show intransitive verb-subject agreement, can be used as evidence of the status of such constructions: indeed, Nater (1984) makes just such an argument, claiming that intransitive stems headed by radicals do not allow pronominal suffixation, as in

(86) *ti+ƛ̓ap+c
D+go+1s
"my one who goes"

(Nater 1984: 31, 55)

This would be very convenient for us here in that it would allow us to extend the parallel with RCs which, as noted in 3.2.1 above, also do not allow finite intransitive modifiers. Unfortunately, these appear to be well-attested in the texts in Davis & Saunders (1980) in sentences like

(87) scaɬɬ wa+umat+aw ʔaɬ+tx̌ʷ
Scaɬɬ D+get•to+3p P+D
"where they went to then [was] Scaɬɬ"

(Davis & Saunders 1980: 56 – 57, line 20)

It may be, however, that the predicates of embedded clauses such as this are, in fact, nouns which have been used as the basis for a verbless sentence, giving us an alternative gloss for (87)

as "their place-they-went-to then [was] Scaɬɬ".[42] This appears to be the position taken by Nater, who uses the ability to take the intransitive/possessive paradigm in this environment as a measure of nominal status. Given the number of instances of nominals such as (87) in the texts in Davis & Saunders (1980), it is not clear how successful this strategy would be, or what effect it would have on the distribution of items in the lexicon (however desirable it might be for the analysis here). This is a question, that, once again, will have to await future study.

3.2.4 Sentential Complements

This sentence type is well attested in only one of the two languages, Bella Coola, where it is used extensively and in a number of novel constructions that are most germanely dealt with in a special study of the language rather than in a comparative work such as this.[43] Here I will limit myself to a discussion of a few constructions which are of interest because of the contrast they offer with the corresponding structures in Lushootseed or because of the attention they have received in the literature. The Bella Coola sentential complement is a type of morphological nominalization, albeit one that reflects a distinct usage from those discussed above. As in English, Bella Coola has a number of verbs that seem to subcategorize for complements representing an event or a state of affairs, as in these examples with *ʔałnap* "know":

(88) (a) ʔałnap+il wa+ʔimlkuk+sc s+ƛ̓ap+aw
know+3p-1s D+men+D np+go+3p
"we know the men [and] that they are going"[44]

(b) ʔałnap+til s+ƛ̓ap+aw wa+ʔimlkuk+sc
know+3s-1p np+go+3p D+men+D
"we know that the men are going"

(c) ʔałnap+iɬ s+ƛ̓ap+aw
know+3p-1p np+go+3p
"we know them [and] that they are going"

---

[42]Nater (1990) defines *umat* as "place where one is taken/goes".
[43]See, for instance, Black (1994) for a discussion of some of the uses of *ʔay* "do, make, happen", which often appears as a predicate with a nominalized sentential complement expressing an action or event.
[44]*Cf. ʔałḱyukil waʔimlkuk waƛ̓apsc* "we know the men that are going"—radical modifier—or *ḱxic tiʔimlk tiqupc̓stx* "they see the man who is punching me"—relative clause.

(d) ʔałnap+tił s+ƛ̓ap+aw
know+3s-1p np+go+3p
"we know that they are going"

(Davis & Saunders 1978: 42 – 43)

According to Davis & Saunders (1978), the sentences here represent a contrast between sentences with a single sentential complement—(b) and (d)—and sentences with two coordinated complements—(a) and (c)—one sentential and one an ordinary NP (elided in the surface form of the utterance). Given the coreference of matrix object and embedded subject and the lack of overt coordination (usually marked by the conjunction *ʔi(n)* "and"), however, it seems more likely tto be an "object-raising" structure.[45] While English object-raising constructions involve raising out of non-finite clauses (*e.g.* "I expect him to be here on time"), languages such as Blackfoot (Frantz 1978) and Greek (Joseph 1978) allow raising out of finite clauses, as does Turkish:

(89) herkes ben+i sınıf+ım+ı geç+ti sanıyor
everyone 1s+[acc] class+1po+[acc] pass+[past] believe
"everyone believes me to have passed my class"

(Joseph 1978: 209)

The parallel is more obvious in Bella Coola structures with first- and second-person objects:

(90) ʔałnap+tułnu s+ƛ̓ap+nu
know+2s-1p np+go+2s
"we know you [and] that you are going"

(Davis & Saunders 1978: 43)

Here, the matrix verb agrees with the second-person singular object rather than the sentential complement (which in (88)(b) is seen to trigger third-person object agreement), a pattern typical of object-raising.[46]

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[45] I am indebted to Leslie Saxon for this observation.

[46] This situation leads to some ambiguity when the subject of the embedded clause is a third person, as in:

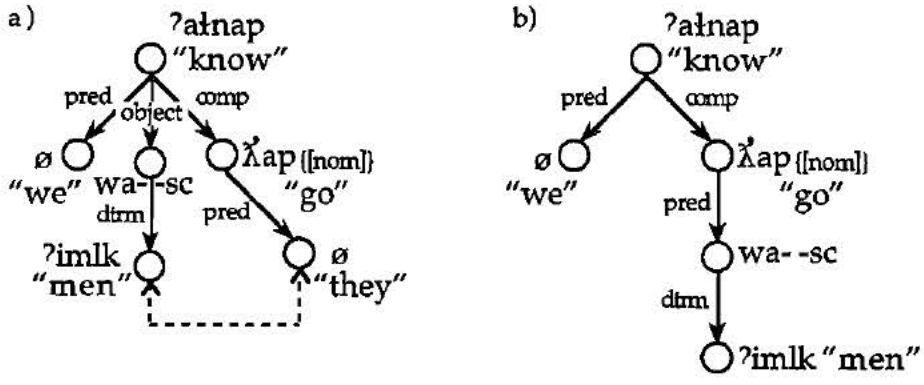
(i) ʔałnap+iɬ s+ƛ̓ap+s
know+3s-3s np+go+3s
"we know him [and] that he is going"
"we know that he is going"

(Davis & Saunders 1978: 56)

According to Davis & Saunders (1978), this sentence is amenable to either of the glosses given in (i).

Langacker (1994) has analyzed raising constructions as a means by which a speaker can make reference to a particular event by singling out a particular participant; for example, the English expression "we know that he is going" uses the profile of an event as the clausal landmark (the object of the verb), whereas the object-raising construction "we know him to be going" accords special prominence (landmark status) to the matrix object/embedded subject—the embedded clause in English being an ungrounded relational predication (in this case an infinitive). What this does, in effect, is reduce the saliency of the event involved—in technical terms, it subordinates its profile to that of the matrix clause—hence the appearance of the *s*-nominalizer in Bella Coola (see 2.2.3)—while raising the saliency of the participant. This analysis concords nicely with the structural features of the Bella Coola sentence, in which the embedded clause takes the same form as subordinate circonstantial clauses (Section 3.2.5)—a morphologically nominalized clause (usually) without a deictic. This would suggest a SSyntR for (88)(a) as in (91)(a), which is contrasted with (91)(b), illustrating the ordinary sentential complement in example (88)(b). Note that the SSyntRel "completitive" (comp) is used to express the relation between the sentence predicate and the sentential complement in order to

(91) Comparative structures of (88)(a) and (b)



allow for the distinctive syntactic characteristics of this kind of clause—the absence of the deictic associated with the "objective" SSyntRel and the apparent peripheral status of the subordinated clause vis-à-vis the predicate, as indicated by its realization as a morphological

nominalization. On the other hand, unless we posit an elided third-person object NP in sentences such as (91)(b), the "completitive" does differ from other circonstantial relations in that the nominalized clause triggers third-person object agreement. There appear to be no analogous structures in Lushootseed.

There are, however, three environments in Lushootseed which seem to allow for an ordinary sentential complement. These are jussive complements,

(92) (a) hili+d g^{w}ə+yaƛ̓ab+əs
tell+[caus] [subj]+get•water+3s.
"tell him to get water"

(b) ʔu+g^{w}ii+d čəd tiʔiɬ sq^{w}əb+q^{w}əbayʔ ɬu+ɬuk̓^{w}+əs
[pnt]+call+[caus] 1s D [rdp]+dog [irr]+return+3s
"I called the dogs home"

(Kroeber 1991: 74 – 75)

and embedded interrogatives and clauses expressing fears, as in

(93) (a) ɬabad g^{w}ə+čad+əs k^{w}i ɬu+ɬaɬlil čəɬ
guess [subj]+where+3s D [irr]+live 1p
"guess where we are going to live"

(b) x^{w}iʔ k^{w}i g^{w}ə+d+s+əs+(h)aydx^{w} g^{w}ə+stab+əs
[neg] D [subj]+1po+np+[stat]+know [subj]+what+3s
k^{w}i lə+g^{w}əƛ̓+əd
D [prog]+look•for+[caus]
"I don't know what he is looking for"[47]

(Hess 1993b: 141)

(c) t(u)+as+x̌əc čəd g^{w}ə+ɬičib+əd
[past]+[stat]+afraid 1s [subj]+swim+1s
"I was afraid to swim"

(Kroeber 1991: 77)

In all of these cases the subordinate clause is marked by the appearance of the subordinate subject suffixes (see 2.4.3). It should be pointed out, however, that whereas the clauses in (92) and (93)(a) and (b) seem to be fairly robust examples of complementation, (93)(c) may well be an example of a circonstantial clause (3.2.5), in which case its structural features are unremarkable. This hypothesis about (93)(c) is strengthened by the fact that it is formed on a radical,

[47]Hess (1993b) notes that the use of the subordinate pronominals in embedded interrogatives is disappearing and is considered to be elevated style; commonly such sentences are realized without pronominal affixation.

x̌əc "afraid", and as such should only be able to admit a subject as an actant, leaving the additional clause to play an attributive role in the syntactic structure. These considerations might militate for a reglossing of (93)(c) as "in the context of swimming, I was afraid", eliminating the need to treat this sentence as an example of a sentential complement.

Another Bella Coola sentence-type in which the sentential complement plays an important role is in the formation of certain Wh-questions. As discussed in Section 3.1.3.2, Lushootseed Wh-questions are verbless sentences predicated on interrogative words and take a nominalized clause as subject. In Bella Coola, interrogative words are also predicative, as in:

(94) (a) stam+ø+ks
what+3s+[int]
"what [is] it?"

(b) wa+nu+ks
who+2s+[int]
"who [are] you?"

(c) stam+ø+ks wa+ʔanayk+m+ix^{w} s+ka+qaax̌lam+ix^{w}
what+3s+[int] D+want+[md]+3s-2s np+[irr]+drink+3s-2s
"what do you want to drink?"
(lit. "that which you desire to drink [is] what?")
(Nater 1984: 103)

(d) stam+naw+ks ʔac s+smɬk+aw
what+3p+[int] 3p np+fish+3p
"what kind of fish are these?"
(lit. "as for the fish, they [are] what?")
(Nater 1984: 116)

(e) wika+ø+ks wa+ʔamat+nu s+ʔapsuɬ+nu
what•place+3s+[int] D+place+2s np+live+2s
"what place [is] your place where you live?"[48]
(Nater 1984: 104)

In each of the examples above, the interrogative shows subject agreement in the intransitive paradigm. In (a), (b), and (d) the subject is an elided actant, whereas in (c) and (e) the subject is complex and bears the deictic *wa-*, as we would expect with an abstract actant of any predicate.

[48]The sentential nominalization *s?apsuɬnu* is an example of a circonstantial clause (see 3.2.5), most likely modifying the predicate, rather than the subject, *?amat*. This type of structure is impossible to render exactly in an English gloss, although it would be similar to a topicalized question such as "As for your living, where is your place?"; circonstantials in Bella Coola often seem to represent a sentence topic as here or in the previous two examples. This will be touched on briefly again in Section 3.2.5.

In general it appears that this configuration—equivalent to that used in Lushootseed—holds when the interrogative corresponds to a direct actant of the subject clause.[49] However, Bella Coola deals with questions formed on peripheral actants in a different manner altogether: instead of a clausal subject, the interrogative takes a sentential complement, as in:

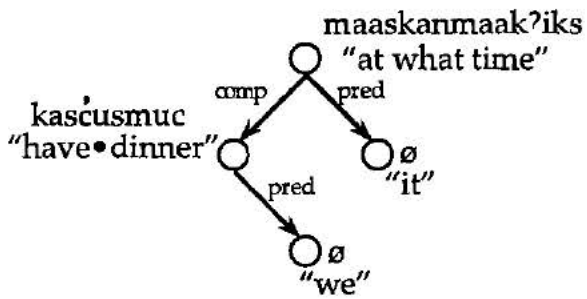
(95) (a) maaskanmaak?i+ø+ks s+ka+sc̓usmuc+iɬ
at•what•time+3s+[int] np+[irr]+eat•dinner+1p
"what time shall we have dinner?"

(b) maaskuɬ?i+ø+ks s+?aɬkult+c ?aɬ+?inu
how•much+3s+[int] np+owe+1s P+2s
"how much do I owe you?"[50]

(Nater 1984: 103)

This structure is far from transparent, mainly because of the lack of a subject or subject agreement (often ø in matrix clauses). The most obvious clue to the structure is the lack of deixis on the nominalized clause, a feature of the sentential complement. This suggests a SyntR for (95)(b) as in (96), which is more literal glossed as "it [is] at what time that we shall eat dinner?".[51]

(96) Interrogative complements



Interrogative words in Bella Coola, as indicated by the interlinear glosses in (94) above, are in fact formed (in most cases) by the addition of an enclitic *-ks* to stems that Nater classes with the identifiers (see 2.4.3 above). When the *-ks* is dropped, many of these stems combine

[49]Unfortunately, interrogatives are hardly discussed at all in Nater and are not dealt with in the published works of Davis & Saunders, and so it is difficult to provide all the relevant examples or to be as precise in making generalizations about syntactic patterns as might be desirable. A more detailed study of interrogative patterns, based on careful examinations of textual examples, will have to await further research.

[50]The English gloss of *?aɬkult* as "owe" is misleading, as the Bella Coola word is intransitive and the quantity owed is a peripheral actant. A better fit might be "For how much is it that I am indebted to you?".

[51]The nature of the subject of such sentences—represented as a zero pronoun in (96)—remains to be investigated, although it seems likely that it is either an expletive (*cf.* English "it" in "it is raining") or an elision of some notion such as "time" which might be complementary to the meaning of the predicative element.

with deictics to serve as indefinite expressions such as *tistam* "something", *tiwa* "someone", or *tipax*^{w} "sometime" (Nater 1984: 117), and some may function as English relative pronouns do in the reporting of indirect speech. A list of these elements is given in (97).

(97) Bella Coola indefinite/interrogative words

stam	"what"
wa	"who"
ka	"which"
wika	"where
ʔinutʔi	"say what?"
wa(l)ctu	"what is ... 's name"
maaskʔu	"how much"
maaskanmaakʔi	"at what time"
ʔastam	"where's"
ʔustam	"whither"
pax^{w}ʔu	"when"
ʔalacix^{w}ʔi	"how/why; what is he doing"
ʔałʔalacix^{w}ʔi	"how is he doing?"
kanmxʔi	"what is his nationality?"
wałʔi	"whose"
wikałɬʔu	"whence"

(Nater 1984)

Two of these roots—*wa* "who" and *ka* "which"—also play an important role in the syntax of another type of sentential complement that merits some attention. Consider the following:[52]

(98) (a) ʔałƛ̓yuk+iɬ s+wa+s ti+ya ti+ʔimlk+tx
know+3s-1p np+who+3s D+good D+man+D
"we know the man who is good"

(b) ʔałƛ̓yuk+iɬ s+wa+s ti+ƛ̓ap ti+ʔimlk+tx
know+3s-1p np+who+3s D+go D+man+D
"we know the man who is going"

(c) ʔałƛ̓yuk+iɬ s+wa+s ti+s+nap+ix^{w} ti+snaaǎ+tx
know+3s-1p np+who+3s D+np+give+3s-2s D+slave+D
"we know what you are giving to the slave"

(d) ʔałƛ̓yuk+iɬ s+ka+s ti+s+nap+ix^{w} ti+snaaǎ+tx
know+3s-1p np+[irr]+3s D+np+give+3s-2s D+slave+D
"we know which one you are giving to the slave"

(Davis & Saunders 1978: 41 – 42)

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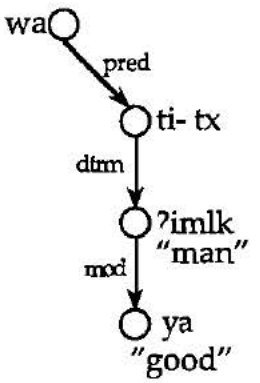
[52]In Davis & Saunders (1978), all of the examples that conform to this pattern are based on the verb *ʔałƛ̓yuk* "know". How (or if) this word contrasts in meaning or syntactics with *ʔałnap* is not clear, although the latter does not seem to appear with *swa-/ska*-constructions and *ʔałƛ̓yul* seems not to take other types of sentential complement, at least in the limited data at my disposal.

(e) ʔaɬk̓yuk+cant s+wa+c
know+1s-3p np+who+1s
"they know who I am"

(Davis & Saunders 1978: 60)

At first these structures appear rather impenetrable. The first difficulty comes in interpreting the syntactic role of the *wa-/ka-*, which appears to function as a relative pronoun, acting as the predicate nominal of an embedded verbless sentence. For (98)(a) this might look like (99).

(99) Embedded predicate of (98)(a)



While the non-interrogative use of *wa* and *ka* as matrix predicates seems to be ruled out (an indefinite predicate/rheme being communicatively anomalous), both seem to act as the predicates of embedded clauses (or, more precisely, of nominalized verbless sentences). Embedded interrogative clauses also follow this pattern, using the interrogative words as predicates:

(100) (a) kascayuɬ+cant s+wa+c
ask+1s-3p np+who+1s
"they asked me who I was"

(b) ʔaǩʷ ʔlq̓+anix+ic s+maask+lanxʷ+s ti+x̌msta+tx
[neg] guess+able+3s-1s np+how•many+years+3s D+person+D
"I can't guess how old that person is"

(Nater 1984: 117)

In addition to examples of the type illustrated above, Nater also gives a parallel sentence, using the identifier *cix* instead of *wa*:

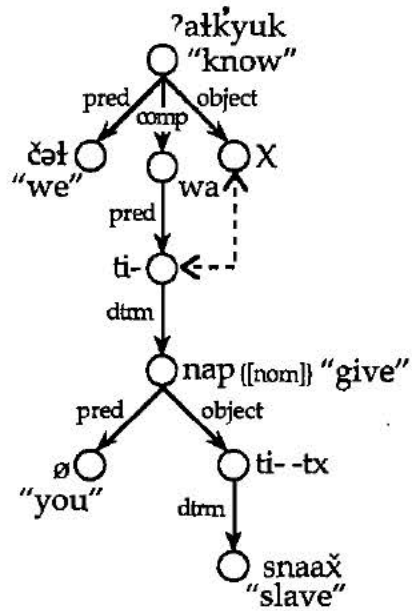
(101) k̓x+im+tǩ s+cix+s ʔiɬ
see+3s-[pass] np+[idn]+3s her
"now it was seen that it was her"

(Nater 1984: 103 – 104)

Given that identifiers can serve as copular verbs in both matrix and embedded clauses, the structure in (101) can be taken as structurally parallel to those in (98).

The second problematic feature of the sentences in (98) is that, judging by their glosses, they should be either relative clauses (as Davis & Saunders 1978 classify them) or syntactic nominalizations, but structurally they have none of the characteristics of either, completely lacking deictic marking. Based on syntactic characteristics, they resemble much more closely the object-raising constructions in (88). This is especially evident in (98)(e), where the matrix verb shows object-agreement with the embedded subject. By analyzing the *swa-/ska-* sentences as examples of object-raising, we get a gloss of (98)(c) as "we know it to be what you gave to the slave", a structure along the lines of (102), in which the complement—coreferential with the object—is a deictic governing a morphologically nominalized clause profiling the peripheral actant (the gift) of the embedded clause *napix*^{w} *tisnaaxtx* "you presented the slave [with it]".[53]

(102) *swa*-sentential complements



[53]Note that, as above, the identity of one of the event-participants (the gift—elided in the DMorphR) is represented in the SSyntR as an "X" as it is not recoverable in the context in which the data appears in the source.

3.2.5 Circonstantial Clauses

Unlike the other classifications of sentence types considered up until now, the group of circonstantial clauses (often referred to as adjuncts) is a deep syntactic rather than a surface syntactic one, encompassing all of those clauses which function as adverbials or circumstantials in the sentence—in other words, those clauses which stand in an attributive relation to a predicate-head in the DSyntR. At the surface syntactic level, however, circonstantial clauses can stand in a variety of SSyntRels to their heads and so do not form a uniform class of surface syntactic structures, either across the two languages in question or within the languages themselves. In Lushootseed, they are marked either by a morphological nominalization, a prepositional phrase, or fall into a structural category marked by the appearance of the subordinate subject pronominals (Section 2.4.3); in Bella Coola, on the other hand, sentential nominalizations without deixis are most commonly, though not exclusively, used. For the purposes of comparison, I will use Lushootseed as a point of departure for the discussion that follows, since of the two languages it displays the most structural diversity.

The first type of circonstantial is the conditional clause. Lushootseed uses the subordinate subject clitics—usually in conjunction with the subjunctive prefix *gʷə-* —to form conditionals. The subordinate status of the circonstantial clause is marked only in the form of the subject pronominal; otherwise, the clause appears exactly as a matrix clause, as in (103).

(103) (a) ṗaƛ̓aƛ̓ dxʷʔal dəgʷi gʷə+xʷəƛ̓šad+əd
worthless P 2s [subj]+break•a•leg+1s
"it doesn't matter to you if I break a leg"

(b) gʷə+tagʷ+š čəxʷ ʔu gʷ+abs+talə+həxʷ
[subj]+buy+[caus] 2s [int] [subj]+extend•hand+money+2s
"would you buy it if you had money?"

(Hess 1993b: 95)

In Bella Coola, virtually the same structure is used, the non-nominalized subordinate clause being preceded by the irrealis *ka*:

(104) (a) ʔakʷa+tx̌ ka+ya+s
buy+[imp] [irr]+good+3s
"buy it if it is good"

(b) ʔis+(s)laǰ+ɬ+c+alu ka+ʔax^{w} ka+sxliwa+ɬ+c
eat+much+[perf]+1s+[att] [irr]+[neg] [irr]+sick+[perf]+1s
"I would eat a lot if I didn't feel sick"[54]

(Nater 1984: 124)

Unlike Lushootseed, however, there appears to be no special subordinate clause marking. Interestingly, in Bella Coola sentences like,

(105) (a) ʔiḵaǰ^{w} ʔałnap+ic ka+tix+s ta+Art
[neg] know+3s-1s [irr]+[idn]+3s D+Art
"I don't know if that is Art"

(b) ḵyuk+tǰ ka+nuǰalk+mx+s
identify+[imp] [irr]+Bella•Coola+native+3s
"find out if he is a Bella Coola"

(Nater 1984: 124)

the same type of subordinate clause takes the place of a nominalized sentential complement. Note the appearance of third-person singular agreement (*-s*) on the identifier in (a): identifiers in matrix clauses do not generally show subject-agreement (Nater 1984), which may mean the appearance of the *-s* here is an indication of the subordinate status of the *ka*-clause (subordinate clauses not allowing the omission of third-person subject agreement). Sentences such as this represent the closest parallel that I can find to the Lushootseed pattern of circonstantial clause formation illustrated in (103).

The second type of Lushootseed circonstantial to be considered here is a temporal adverbial construction expressing a regular or habitual situation or relation between two events, most often glossed as "when X" or "whenever X".

(106) (a) ɬu+x^{w}aḵ^{w}+il čəd ƛ̓u+ɬ(u)+as+tag^{w}+əx^{w}+əd
[irr]+tired+[trm] 1s [hab]+[irr]+[stat]+hungry+1s
"I get tired whenever I am hungry"

(b) ɬuḵ^{w} ɬu+bə+sad+əs
go•home [irr]+[add]+dark+3s
"come home when it gets dark"

(Hess 1993b: 94 – 95)

Like the examples in (103), these sentences make use of the subordinate pronominal paradigm, and also show that, in this type of subordinate clause, the subject may or may not be coreferen-

[54]Note the iteration of the clitic *ka-* on both negative adverb and predicate, reminiscent of deictic spreading.

tial with that of the main clause (*cf.* (a) and (b)). The corresponding Bella Coola sentences also lack deixis, but are nominalized, the nominalization serving as an indicator of their subordination (the semantic basis for this is discussed in 2.2.3 above):

(107) (a) ʔustax^{w}+aw ʔula+suɬ+aw s+kɬ+s ti+snx̌+l̓ayx
go•in+3p P+house+3po np+set+3s D+sun+D
"they go into their house when the sun sets"

(b) ʔix̌q̓m+aw s+kstimut+aw
walk+3p np+work+3p
"they walk as they work"

(Nater 1984: 104)

Bella Coola uses the same pattern to handle regular adverbial clauses expressing the duration of a particular event or a particular circumstance in which that event occurred:

(108) (a) x̌̓iliwa+s s+ʔmt+s
quick+3s np+get•up+3s
"he [was] quick [as] he got up"

(Nater 1984: 104)

(b) kamalax̌^{w} s+ka+liq̓+cut+c
next•year np+[irr]+return+[refl]+1s
"[it is] next year when I will return"

(Nater 1984: 103)

Lushootseed, on the other hand, maintains the distinction between the two semantic types (habitual condition vs. temporal duration) by realizing the latter as a prepositional phrase whose complement is a nominalized clause:

(109) (a) ʔəs+x̌icil ti?iɬ č̓x̌a? ʔə ti?iɬ s+u+čala+d+s ti?iɬ sbiaw
[stat]+angry D stone P D np+[pnt]+chase+[caus]+3po D coyote
"Stone [was] angry as he chased Coyote"

(b) x̌^{w}ul̓ ləcu+ʔi?ɬad+əb ʔə ti?əʔ sq̓^{w}əlaɬəd ʔə ti?iɬ x̌̓u+s+q̓^{w}əl+s
only [s-p]+eat+[md] P D berry P D [hab]+np+ripe+3po
"he would just eat the berries as they ripened"

(Hess 1993b: 143)

Bella Coola also uses prepositions with certain types of temporal adverbials, such as:

(110) kič̓+liktn+aax̌apsm+tit+k^{w}+č̓ ʔuul+a+s+ʔal̓mn+aw+k^{w}
crooked+completely+3p-3p+[qt]+[perf] P+D+np+die+3p+[qt]
"they twisted their necks until they were dead"

(Davis & Saunders 1980: 50, line 75)

In Lushootseed, other types of circonstantials are also realized with prepositional phrases:

(111) (a) ləcu+ʔabyid čəɬ tiʔəʔ čƛ̓aʔ ʔə tiʔəʔ stabig^{w}s čəɬ
[s-p]+give 1p D stone P D treasure 1p-po
dx^{w}ʔal tiʔəʔ ɬu+s+ʔibeš čəɬ
P D [irr]+np+travel 1p-po
"we are giving our belongings to this stone because we are going on a trip"

(b) ʔu+ʔuǰ^{w}+c+əb ʔə tiʔiɬ stubš tsi sładəyʔ
[pnt]+go+[appl]+[md] P D man D*f* woman
dx^{w}ʔal k^{w}i g^{w}ə+s+ʔəɬdiluɬ+s
P D [subj]+np+take•to•dinner+3po
"the man went after the woman to take her to dinner"

(c) ʔəs+ǰaʔǰaʔtib čəd dx^{w}ʔal k^{w}i g^{w}ə+d+s+ɬaʔ
[stat]+hurry 1s P D [subj]+1po+np+arrive
"I'm in a hurry to get there"

(d) ʔəs+ǰiʔǰiʔ čəd dx^{w}ʔal ti d+s+u+bədčəbid tsiʔiɬ
[stat]+ashamed 1s P D 1po+np+[pnt]+lying D*f*
"I am ashamed of lying to her"

(e) tu+lil+c tuɬ̓ʔal k^{w}i bəkʲ^{w} tu+cəx^{w}+əs+hiwil
[past]+take+1s P D all [past]+[1po-np]+[stat]+go•ahead[55]
"he took me away from all that trouble I used to get into"
(Hess & Hilbert 1976: 116 – 117)

It should be noted, however, that Hess (1993b) provides a number of examples of clauses of the type illustrated in (111) that follow the Bella Coola pattern of a sentential nominalization (rather than a PP) serving as a circonstantial in clauses expressing purpose.[56] Consider:

(112) (a) ləcu+ʔabyid čəɬ tiʔəʔ čƛ̓aʔ ʔə tiʔəʔ stabig^{w}s čəɬ tiʔəʔ ɬu+s+ʔibeš čəɬ
[s-p]+give 1p D stone P D goods 1p-po D [irr]+np+travel 1p
"we are giving our belongings to this stone because we are going on a trip"

(b) ƛ̓u+ʔah+il+d əlg^{w}əʔ ɬu+dəx^{w}+ʔa(h)+s k^{w}i stab ɬu+s+ʔəɬəd+s
[hab]+exist+[trm]+[caus] plural [irr]+np+be+3po D sth [irr]+np+eat+3po
"they would put it away so there would be something for them to eat"
(Hess 1993b: 144)

Here, (112)(a) in particular appears to be an exact paraphrase of (111)(a) above: it is not clear what distinction, if any, exists between the two structures. Another interesting feature of these

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[55] *cəx^{w}*- is formed from *d*- "my" plus the nominalizer *dəx^{w}*-.

[56] Kroeber cites an example of a purpose clause using the subordinate subject suffixes,

(i) ɬu+x^{w}iʔ+əs tiləb lə+dˢiǰ
[irr]+[neg]+3s immediately [prog]+break
"so it does not break right away"
(Kroeber 1991: 80)

although this is only a sentence fragment and it is not clear what relations hold among the sentence elements.

sentences is that the clause in (112)(a) is introduced by a deictic, while that in (b) is not. This distinction appears to be more semantic than structural as the reference of (a) is a definite event whereas in (b) it is a hypothetical possibility whose circumstances and characteristics are unknown. While it is difficult to judge from the data at hand, this distinction appears be one of factivity (Kiparsky & Kiparsky 1970),[57] where the event in (a) is presupposed to be true and, hence, to have a specific reference, but (b), on the other hand, is not presupposed to be true (it might not happen or is in some way not completely defined) and so has no specific reference (*i.e.* location in the domain of instantiation).

One final type of circonstantial peculiar to Bella Coola merits some mention here, primarily because it receives a fair amount of attention in Davis & Saunders (1984a) and is well-illustrated in Nater (1984). This is the use of a circonstantial in sentences such as

(113) (a) ya ti+s+ʔałukʷala
good D+np+Indian•doctor
"he [is] good as an Indian doctor"
(lit. "[as for being] an Indian doctor, he [is] good")

(b) ya+yaak+c ti+s+nix+ic wa+sc̓laaχɬ
good+hand+1s D+np+saw+3s-1s D+lumber
"I [am] adroit at sawing lumber"

(Nater 1984: 103)

These examples become a little clearer when compared with the sentence in (114):

(114) ya+nu s+χ̓msta+nu
good+2s np+person+2s
"you [are] a good person"
(lit. "[as for] your being a person, you [are] good")

(Nater 1984: 104)

In this sentence, the subordinate clause—a nominalization of the verbless, equative sentence *χ̓mstanu* "you [are] a person"—is clearly a circonstantial, marked by the absence of a deictic. In effect, the role of the nominalized clause here is to define the conditions under which the subject—"you"—is felt to be good. By the same token, the examples in (113) can be analyzed as statements about the "goodness" of the sentence-subject in the context of the circumstances

[57]Not to be confused with the term "factive" as it is used in Section 2.2 above.

defined by the circonstantial clause.[58] The exact relation of the circonstantial to the main clause here is not immediately clear, although in (113), (114) and in the questions illustrated in (94)(d) and (e) above, it seems to resemble topicalized *wa*-marked NPs in Japanese, for example

(115) kyoo+wa asa+kara ame+ga futteimasu+ne
today+[topic] morning+since rain+[subject] rain+[prt]
"as for today, it has been raining since morning"

(Aray *et al.* 1981: 167)

Such topic constructions, attested in a variety of languages, seem to coincide with the circonstantial clause in providing "background" information about the event profiled by a speaker.

In terms of syntactic representation, then, we are dealing with a set of structures which are identical in the DSyntR (that is, identical in terms of universal syntactic relations) but which display a variety of forms in the SSyntR. The key to dealing with these structures would be to specify the appropriate rules in the DSynt component so that each sentence type receives the appropriate representation at the SSynt level; because of the complex and varied nature of the structures involved, a detailed elaboration of these rules—which would be quite distinct for each of the languages—is somewhat beyond the scope of this work. What is interesting about Lushootseed and Bella Coola is that the necessary rules would have to make reference to the semantic content of the clause in question rather than to structural features or lexical categories. Once again, as in so much of the grammar of these two languages, issues of construal and pragmatic effect can be seen to play a crucial role in determining syntactic structure.

3.3 Summary

In spite of a large number of superficial differences, it should be apparent from the discussion above that, in terms of the formation and distribution of syntactic structures, Bella Coola and Lushootseed show a high degree of convergence, particularly with regards the most frequent and least-marked sentence types. The simple sentence, with either verbal or non-verbal

[58]This analysis leaves open the question of the deictics, which also appear on some adverbial circonstantials (see (36), Section 2.2.3). It is probable that a semantic process similar to that in Lushootseed purpose clauses is at work here as well, but this will have to be left for future investigation.

predicate, is virtually identical in the two languages, having the same surface syntactic structure and making use of the same rheme-initial communicative pattern. In terms of complex sentences, the two languages are also highly similar, as can be seen in the table in (116), which summarizes the primary structural types outlined above:

(116) Summary of complex sentence-types in Bella Coola and Lushootseed

type	role	features	lexical category with same function	comments
relative clause	modifies noun	full clause	radical, noun	subject- and object-centred RCs only
sentential nominalization	actant	RC (full clause) headed by deictic	noun	seems not to be an admissible predicate in Lushootseed
morphological nominalization	modifier; actant; predicate	nominalized clause	noun	replaces oblique-centred RC; participle in Lushootseed, sentential in Bella Coola
sentential complement	actant	morphological nominalization	noun	infrequent in Lushootseed, used extensively in Bella Coola

The final category discussed in Section 3.2.5, the circonstantial clause, shows considerably more divergence, particularly as Lushootseed often makes use of a structure which is marked by a special set of subordinate pronominal suffixes that do not exist in Bella Coola. In the formation of Wh-questions and negatives as well, the two languages seem to differ somewhat. Both languages use interrogative words as predicates, but Lushootseed uniformly uses a nominalized form of the corresponding declarative sentence as subject of a question, whereas Bella Coola does so only rarely in Wh-questions—which more often use a sentential complement structure. Similarly, Lushootseed predicates a negative sentence on the negative adverb in virtually all environments, while Bella Coola appears not to predicate sentences on negatives, preferring the pattern of adverbial negation reserved in Lushootseed for negatives of identity. In other respects, however, the syntactic structures employed by the two languages seem virtually identical, the apparent divergence between them resulting mainly from differences in the surface syntactic component of the grammar and the requirements of their morphology.

4 Conclusion

As mentioned in the introduction, my main objective here has been to present some of the essential facts of Bella Coola and Lushootseed grammar and to cast them in such a light that the great similarities between them have become apparent. In terms of lexical categories, both languages have been shown to maintain a conceptual distinction between nouns on the one hand and relational predications—including verbs—on the other, and both languages have a sophisticated system for deriving complex nominals which serve to represent entire events or individuals whose identities are defined by their participation in those events. Both languages also coincide in their realization of intransitive stems as monovalent "radicals", a lexical category of atemporal relations which corresponds conceptually to the English adverb or adjective, but which in Bella Coola includes intransitive "verbs" as well. Lushootseed takes this pattern a step further. In this language, virtually all verb-forming roots are intransitive and atemporal: unambiguously temporal relations require the addition of verbal morphology such as transitivizers, middle suffixes, and causatives. This *de facto* conflation of the categories of verb and adjective seems to support both the contention made by Givón (1979) that adjectives do not represent a universal lexical category and the primary division in the lexicon proposed by Langacker (1987)—that between the conceptual categories of "thing" and "relation".

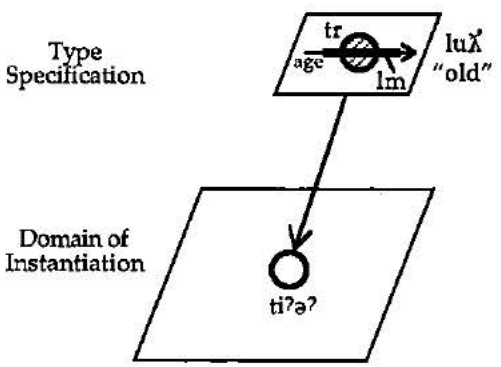
Perhaps the most interesting result of the above discussion has been the great similarity that has emerged between the deictic and the pronoun and between those structures headed by a deictic in the SSyntR and those structures, either modificative or predicative, that are headed by a noun or a nominal element. Deictics in these two languages seem not only to have their ordinary function of grounding "things", but also can be used pronominally to stand in for a clausal figure. Consider, for example, an expression based on a Lushootseed radical such as

(1) ti?ə? luʔ
D old
"this old fellow"

(Bates *et al.* 1994: 139)

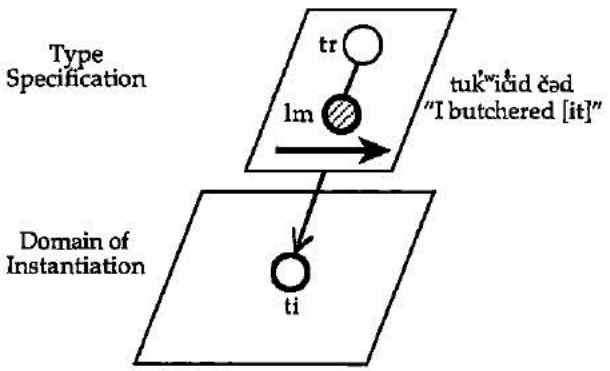
In such expressions the relational predication *luƛ̓* "old" serves to locate its trajector relative to a scale of age (*cf.* the predication "blue" illustrated in (51)(a), Section 2.3.1); in English the trajector of such a predication is generally elaborated by a noun, either a referential noun (as in "the old man") or some sort of syntactic dummy inserted to meet the constraints of the grammar ("the old one"). In Lushootseed, however, the possibility exists to elaborate the predication with a deictic element which, as a pronominal, can act simultaneously as the trajector and as a grounding element for the predication, in effect serving to locate a particular instantiation of the relation in question ("oldness") by locating an entity with that property in conceptual space for the listener. This is illustrated in (2). Precisely the same analysis can be applied to the cases of syntactic nominalization described in 3.2.3. Verbs as temporal relational predications

(2) Instantiation of type defined by an atemporal relation



contrast with finite clauses, which are temporal relational predications that have been grounded—in Bella Coola and Lushootseed, by the elaboration of all of their profiled actants. In the case of a syntactic nominalization, however, we have a clause—a relational predication—one of whose actants is elaborated by a deictic acting both pronominally and as a grounding element, as shown in (3), illustrating the Lushootseed syntactic nominalization *ti tuk̓ʷiɬ̓id čəd* "what I butchered" (see (82)(b), Section 3.2.3 above). Because the trajector of the clause is overtly realized, the cross-hatched elaboration site for the deictic is interpreted as being the clausal landmark, making the nominalization as a whole an instantiation of that participant

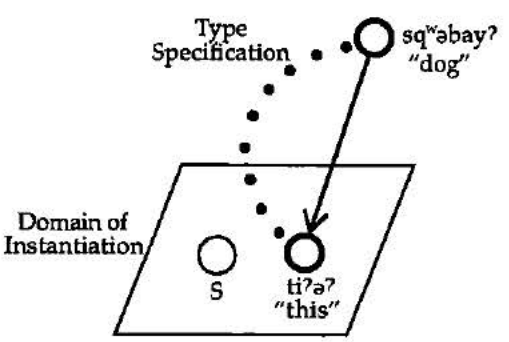
(3) Instantiation of a type defined by a temporal relation



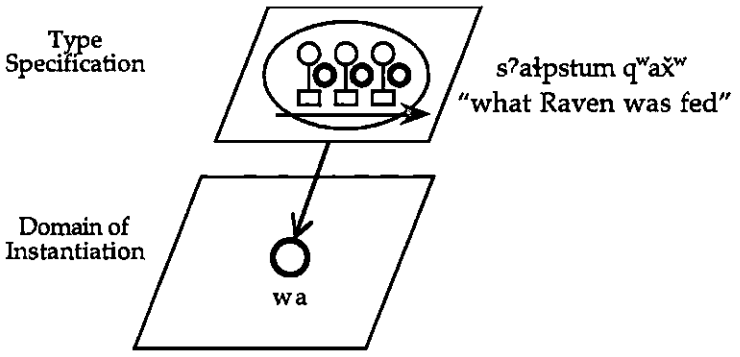
(that is, the nominalization represents the object of the clause). The deictic thus elaborates a clausal figure in the same way that a pronoun might, while at the same time grounding the type ("something such that I butchered it") in the domain of instantiation.

The case of morphological nominalizations can be handled in much the same manner, although the situation here is somewhat different in that the *s*-nominal is, in terms of lexical category, a noun and so the pattern of instantiation resembles more the predication of types found in verbless sentences, illustrated in Section 3.1.3.1 (41)(a) and reproduced here in (4) for convenience. Compare (4) with (5), representing the Bella Coola construction *wa+s?ałpstum q^{w}ax^{w}* "what Raven was fed" (given in (67)(b), Section 3.2.2). The deictic here functions in precisely the same manner that a deictic associated with an ordinary noun would, grounding a type by locating it in the domain of instantiation. Given the deictic's pronominal properties, however, the correspondence between type and instance in (5) becomes precisely that which we find

(4) Predication of types



(5) Instantiation of morphological nominalizations



in (4) and in ordinary noun-modifier relations, where the head noun serves as an instantiation of a type defined by its modifier, the reference of the deictic depending on which of the subschemas of the *s*-nominalizer (illustrated in (39), Section 2.2.3) applies. In this case, the food—an oblique object in this construction—is not realized in the clause, shifting the profile of the *s*-nominal to that of a peripheral actant.

Further comparison of the predication of types in (4) with the structures illustrated here in (2), (3), and (5) reveals some interesting parallels. The first thing to note is that, by dint of its grounding function, the deictic in all four cases stands in the same type-instance relation to some element. In terms of the semantics of this relationship, these structures carry the same propositional meaning: in each case the deictic—acting as a sort of pronoun—is identified as a member of a certain class of things. This fact might lead us to expect a similar convergence in syntactic structure, which is certainly the case of structures (2), (3), and (5), each of which appears in the SSyntR as a DP, a subtree in which the deictic is the head for its dependent type specification. In the case of the verbless sentence, however, we have the inverse of this pattern, with the type forming the top (predicative) node of the D-tree in the SSyntR and the instantiating deictic serving as its dependent. The key to understanding this difference lies in understanding the thematic structure of the verbless sentence. The communicative goal of the predication of a type is to provide new (rhematic) information about a topic—that is, about some entity (represented by the deictic) which has already been instantiated in conceptual or discourse space. Because of

the thematic structure of sentences in Bella Coola and Lushootseed, the rhematic nature of the type specification requires that it be realized as the top node in the D-tree and, hence, as sentence predicate. The DP examples, on the other hand, can not stand on their own as fully elaborated clauses and so have no thematic structure (or, whatever thematic structure they have is subordinated to that of the larger clause in which they appear), resulting in the inverse configuration where the deictic stands as the syntactic head: in the DP, the deictic bears the greater part of the communicative load, its primary purpose in these constructions being the identification of new locations in the domain of instantiation, rather than providing new (hence, rhematic) information about established ones.

Among the DPs, however, there may well be enough semantic and syntactic similarity to allow for an analysis of the SSyntRel between dependent and head as being the same in all three cases. Mel'čuk (1988) identifies three criteria which can be used to establish the equivalency of one SSyntRel with another, the most applicable for our purposes being Criterion C.II (p. 142). Stated informally, Criterion C.II says that, given two structures X$\overset{r}{\longrightarrow}$Y and Z$\overset{s}{\longrightarrow}$W (where "Y" and "W" stand for sub-trees of at least one element), the relation "r" can be said to be equivalent to "s" if the sub-trees "Y" and "W" are reciprocally substitutable. In the case at hand, each of our structures represents semantically a deictic element in the domain of instantiation standing in a type-instance relation to some element, either an atemporal relation (2), a temporal relation (3), or a "thing" (5), each of which would appear in the (surface) syntactic structure as a dependent. Each of these elements could also be governed by a noun, in which case—based on cross-linguistic comparison—the SSyntRel holding between the two would be a modificative one. Modification has the semantic import of establishing a particular thing (the noun) as being an instantiation of a type, either by establishing identity (noun modifying noun) or by designating the instantiation as a figure in some sort of relational predication. In terms of Criterion C.II, then, if we let "X" be any noun and "Z" be any deictic, "Y" and "W" can correspond to any of the three types of dependent represented in (2), (3), and (5) and can be

reciprocally interchanged one with the other without creating an ungrammatical structure. This would seem to indicate that the SSyntRel holding between a noun and a modifier-dependent and a deictic and its dependent in a DP is, in fact, one and the same.[1]

The need for grounding clausal participants by identifying them with some location in conceptual space relative to the speaker is a central preoccupation of the grammars of Lushootseed and Bella Coola, both of which have developed elaborate systems of deixis for precisely this purpose. As a final illustration of this principle, let us consider the most basic discourse pattern in these languages, illustrated by the following short Lushootseed text:

(6) (a) ti?iɬ bibščəb ?i ti?iɬ su?suq̓a?+s, tətyika,
D [rdp]+mink and D younger•cousin+3po Tetyika
ti?iɬ ɬu+d+s+yəhub+tu+bicid
D [irr]+1po+np+tell+[caus]+2s
"what I will tell you about [is] Little Mink and his younger cousin, Tetyika"

(b) hay, ?u+ɬi?ɬda(hə)b ti?iɬ bibščəb ?i ti?iɬ su?suq̓a?+s, tətyika
[intj] [pnt]+troll D [rdp]+mink and D younger•cousin Tetyika
"well then, Little Mink and his younger cousin, Tetyika, trolled [for fish]"

(c) ?u+ɬi?da(hə)b əg^{w}ə?
[pnt]+troll [plural]
"[they] trolled for fish"[2]

(d) huy, šu+dx^{w}+əx^{w} ti?iɬ čx^{w}əlu?
[intj] see+[l.o.c.]+now D whale
"well, [they] caught sight of Whale"

(e) huy, bapa+d+əx^{w} əlg^{w}ə?
[intj] annoyed+[caus]+now [plural]
"well, [they] annoyed [him]"

(f) bapa+d+əx^{w} əlg^{w}ə? ti?iɬ čx^{w}əlu?
annoyed+[caus]+now [plural] D whale
"[they] annoyed that whale"

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[1]There is, of course, a semantic difference between a DP and a noun-modifier construction (the DP grounds its dependent); this, however, results from the semantic content of the deictic itself, rather than from the relation that holds between governor and governed.

[2]Hess (1993b) says of the [plural] morpheme: "By means of this word speakers make explicit that a third person referent is plural whether as agent, patient, or possessor, *e.g.*, 'they', 'them', 'their(s)'" (p. 219). It is most likely not in itself a pronoun, however: it is not obligatorily sentence-second as are subject pronominals, nor does it have any of the other forms (such as subordinate or coordinative) that the pronouns do. In fact, it is not obligatory and can be left out when discourse makes the plural nature of the third person clear. It also cooccurs with the third-person subordinate clause pronoun *-as* and the possessive suffix *-s*. For the purposes of the discussion here it will be considered a "supplementary" morpheme, indicating that a third person actant (which in these sentences has been elided) is plural.

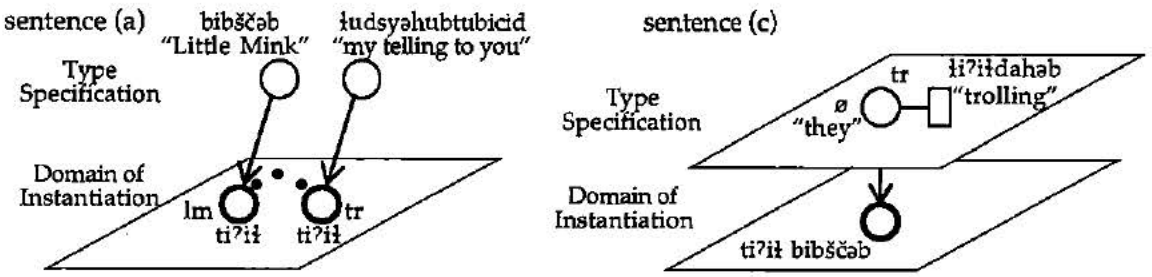
(g) huy, x^{w}ak̓^{w}i+s+əb+əx^{w} ʔə ti?iɬ čx^{w}əlu?
[intj] sick•of+[appl]+[md]+now P D whale
"well, [they] were gotten sick of by this whale"

(h) huy, bəq̓+t+əb+ax^{w} ʔə ti?iɬ čx^{w}əlu?
[intj] be•in•mouth+[caus]+[md] P D whale
"well, they were swallowed by this whale"

(i) ɬix^{w}[əɬ]dat ti?iɬ [s]+dəg^{w}abacil+əx^{w} əlg^{w}ə ʔə ti?iɬ čx^{w}əlu?
three•days D np+inside•small•space+now [plural] P D whale
"they [were] inside that whale for three days"
(lit. "the being inside of that whale [was] three days")
(Hess 1993b: 175 – 176, lines 5 – 13)

In this text, taken from the opening of a story about Little Mink and his cousin, Tetyika, who were swallowed by a whale, the speaker makes use of a careful strategy of grounding new, rhematic information firmly in already-established (*i.e.* topical) material that he has previously located for the speaker in discourse space. Naturally, when beginning a new story it is necessary to establish a topic on which the rest of the sentence can be built and to do this the storyteller will generally make use of one of a set of structurally-marked sentences, in this case a verbless, nominally-predicated sentence, (6)(a). (6)(a) links two type specifications ("my telling to you" and "Little Mink and his cousin") to two instances (the deictics) which are identified with one another, as in the verbless sentence illustrated in (42), Section 3.1.3.1, and here in (7)(a).

(7) Sentences (a) and (c)

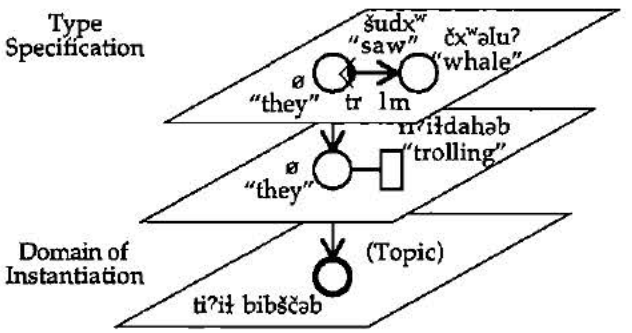


In the first structure, "Little Mink and his cousin" is rhematic, as shown by its realization as sentence predicate (lm); the story-telling, which is a shared activity of the speaker and listener, is considered more topical and, hence, the subject (tr) of (a). This sentence is identified by its structure as a topic-setting sentence, and so its rheme, "Little Mink and his cousin", is estab-

lished as discourse topic and becomes the point-of-reference in discourse-space on which all new information will be grounded. The storyteller can then link the established topic to the narrative by using it as the subject of sentence (b), thereby grounding the first event in the story, Little Mink and his cousin's going fishing. Thus, in (c) the subject of the sentence is unambiguously "Little Mink and his cousin" and it is they who serve to identify for the speaker the particular instance of "trolling" which is being discussed. This is illustrated in (7)(b).[3]

Next in sentence (d), a new participant, the whale, is introduced, but the discourse topic is still "Little Mink and his cousin", which is also the subject of the sentence: thus, the event—the sighting of the whale—is grounded in discourse relative to Little Mink, as in (8):

(8) Sentence (d)



Note that, once again due to considerations of graphic presentation, the diagram has been simplified and does not include the instantiation of "whale" by its deictic. The fact that this has happened, however, is illustrated by the structure of sentence (e). This sentence contains no overt actants and relies on the fact that both "Little Mink and his cousin" and "whale" have been previously located in the domain of instantiation to ground the new information, the (transitive) relational predication *bapad* "to annoy [s.o.]". The primary grounding function for this stretch of discourse, however, still remains with the topical "Little Mink and his cousin"

[3]Here I have eliminated sentence (b) from the diagram to make the link between the non-overt subject and the discourse topic clearer, a practice that I continue in the diagrams below. Note also that the diagrams in (7) actually illustrate the same sentences with a singular subject, Little Mink, rather than the plural subject in the texts. This is primarily for the sake of simplicity, as the problem of how coordinate structures should be represented in terms of grounding is a thorny one. While there is some psycholinguistic evidence (Gernsbacher 1990) that may indicate that coordinate structures are grounded by the first element in the coordination in English, it is not clear how robust this evidence is or if it is applicable cross-linguistically.

which is still the grammatical subject of the clause; a further indication of this may be the storyteller's feeling that a repetition of (e) is in order in (f), which makes overt the less topical participant, "whale". "Whale" also surfaces in overt form in (g) and (h), where new events are introduced, the event in each case being grounded in discourse by the elided subject, "Little Mink and his cousin".[4] Finally, in sentence (i), a change in topic is signaled by a marked structure, a verbless sentence predicated on "three days", the length of time that Little Mink and his cousin spent in the belly of the whale.[5]

Interestingly, when examined from this perspective, this discourse pattern bears a close resemblance to the model of language comprehension proposed by Gernsbacher (1990). Using experimental techniques for measuring the time required to process linguistic input in English, Gernsbacher proposes a three-phase model of how incoming linguistic information is organized into conceptual structures. The first phase in the process is termed "laying a foundation" and corresponds to the stage where the listener is processing completely new information (that is, information which contains no established discourse topic); information processing is slower in this phase, but once an appropriate foundation for the communication has been laid (via grounding participants in the domain of instantiation), subsequent information can be anchored to that foundation and is processed more rapidly. This is the "mapping" stage. Finally, when the structure is complete, the process of "shifting" occurs and a new topic is introduced, laying the foundation for a new discourse structure. These three stages seem to correspond very nicely to the pattern observed in (6), where the storyteller begins with a topic-marking structure to identify the figure on which the discourse is to be grounded (lays a foundation), narrates the next sequence of events with respect to that figure (maps the events onto the foundation), and then makes use of a second topic-shifting structure to signal the end of that particular episode (shifts

[4]Note also the use of the passive in these two sentences, which serves to maintain "Little Mink and his cousin" in subject position and, hence, maintain continuity of topic.

[5]In this particular story, the new topic is replaced in the following line by a third topic, Little Mink himself (who manages to trick the whale and kill him), "three days" being a rather limited theme for discussion. The dynamics of topic-shifting and the various patterns of discourse—most of which, naturally, are much more complex than the example cited here (although they all appear to be variations on this theme)—is an area for more detailed investigation.

to a new structure). Because of the rather transparent deictic nature of verbless sentences in establishing a direct identity between type and instantiation, they seem ideal candidates for the foundation-laying process. Making use of this structure in (6)(a), the storyteller establishes Little Mink and his cousin as discourse topics and then maintains them as topical, non-overt subjects, introducing new events and participants, while at the same time keeping the narrative firmly grounded on the communicative foundation he has set out, a foundation to which every sentence is linked both semantically (via the type-instantiation pattern illustrated in (7) and (8)) and grammatically (via the use of "Little Mink and his cousin" as the elided subject). While it is not always easy to establish clear connections between syntactic and psycholinguistic research, the parallels here are suggestive and certainly merit further investigation.[6]

Finally, a word about the theoretical frameworks used in this discussion is in order. Although the Meaning-Text Model and Cognitive Grammar differ in many fundamental respects, they do have in common the notion of the conceptual basis of language and linguistic processes; this has allowed me up until this point to use the two theories side by side—as distinct but complementary theoretical tools—virtually without commentary or cross-theoretical glossing. Each framework has an area in which it is stronger, and each has one in which it is weaker. One of the obstacles to the wider acceptance of Cognitive Grammar (aside from the fundamental challenge that it poses to most of the basic assumptions of structuralist and transformational-generative linguistics) is its dismissal of the issue of syntactic and morphological structure as part and parcel of its rejection of the Autonomy Thesis (Langacker 1991). While setting aside syntactic autonomy has opened the door to a conceptual approach to language in which grammar and grammatical processes can be considered fundamentally meaningful and symbolic, the complete elimination of structure has made it difficult to address many of the issues of how these meaningful symbolic units and processes are realized. Simply put, it is one thing to claim that a given structure has a given meaning or set of meanings, but it is still neces-

[6]See also Pu & Prideaux (1994) for a discussion of topic-setting structures in English and Chinese.

sary to be able to describe that structure in terms of its syntactics, morphology, and distribution. Consider, for example, the Lushootseed constraint on the realization of two overt NP direct actants discussed in Section 3.1.1. This constraint is more than likely a grammaticalization of a pragmatic constraint against the redundant realization of an understood discourse topic, underscored perhaps by the potential confusion that might have arisen between subject and object, given the lack of overt case marking. Nevertheless, while the dictates of the constraint require the elision of an NP from the surface form of a clause, at the semantic level the NP is still considered to be present and active—in fact, more often than not it is the clausal subject and so, in the semantic representation, it must be realized as the primary clausal figure (trajector). Short of introducing some sort of structural considerations, there seems to be no way to express the absence of these NPs in the surface form.[7] The same problem arises with considerations of word-order, the spread of agreement features and deixis, and the categorization of sentence types and various syntactic patterns whose common structural characteristics linguists have always felt (at least intuitively) to merit some form of taxonomic recognition.

While it is certainly true that many, if not all, of these problems are not insurmountable even within the confines of the CG formalisms, it is equally true that such solutions—however pleasing they may be to theoreticians—may simply be more trouble than they are worth to the practicing linguist in search of concise and powerful tools for the description of linguistic structures. And this is precisely what the MTM provides. As shown above, the MTM allows us to describe in direct terms the syntactic strategies employed by languages to encode various types of meaning and does so in a way that not only facilitates the comparison of structures with one another within a given language, but also permits straightforward and meaningful comparison of structures cross-linguistically, allowing the linguist to highlight their similarities and differences and to construct structural taxonomies and typologies of clause- and sentence-types.

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[7]One possibility would be to have the elision take place at the phonological pole of the predication. Nevertheless, the conditions for the application of the elision still need to be expressed in structural terms: their displacement to another part of the grammar—whatever it is called—does not address the basic problem.

Where the MTM is weaker, however, is in addressing the question of the structures' meanings. Although the MTM does base its syntactic structures squarely on semantic structures (and, hence, on meaning), the approach taken to the form of semantic representation in the theory is the postulation of semantic primitives (Mel'čuk 1989) in the sense of Leibnitz (or, more recently, Wierzbicka 1988), who essentially sought meaning in the subdivision of lexical items into increasingly smaller semantic units, with the ultimate goal of reducing these to a fixed inventory of semantic "atoms" which, when recombined, would be responsible for the full range of possible meanings in human language. Setting aside for the moment the metaphysical question of how desirable (or undesirable) such an approach might be in defining the conditions of human consciousness, its practical consequence is that the semantic structure of an utterance becomes a vast network of interconnected nodes and the simplest expression becomes a complex web of "semantemes" (semantic units—see Mel'čuk 1988, 1989) and the arcs between them. While these semantic representations do seem in principle capable of expressing the full range of subtleties and nuances of meaning found in the uses and construals of the words and expressions of human language, in practice they appear (at least to the inexperienced user) unwieldy and cumbersome. A further disadvantage of an approach based on semantic primitives is that often fundamental similarities between the meanings of different morphemes—or even different meanings of the same morpheme—are not immediately obvious, and processes such as metonymy or the metaphoric use of morphemes (in particular abstract morphemes) are not as transparent as they might be in an approach such as Cognitive Grammar. The advantage that Cognitive Grammar has in this regard is its reliance on visual imagery and metaphor. These are derived largely from the relationship it claims to cognitive and perceptual psychology, many of whose primitives—such as figure/ground organization, the prototype model of categorization, and the primacy of alternate profiling and construal of perceived events—have been incorporated into the theory (see Langacker 1987 for further discussion). In this respect the semantic structures of CG seem to have a greater claim to psychological reality (although the

extent of this claim remains to be tested) than those of the MTM, which—like the work of people like Chomsky—are based on predicate calculus and Enlightenment era Rationalism.

All of this, however, does leave the door open to a certain form of reconciliation. One possibility—the one that has been adopted informally here—is to use the theories in such a way that the strengths of one shore up the weaknesses of the other. The MTM relies on a foundation of semantic structure to build its syntax and CG is strongest in its characterization of semantic structures and the cognitive factors that underlie them. There seems, in principle, no reason that a Cognitive Grammar predication could not be used as the basis for a Meaning-Text dependency tree—which is essentially what I have done here, by inserting CG lexical categories into MTM syntactic structures. In the context of a more theoretically-oriented work, this practice might require a more rigorous examination of the relationship between the two approaches than I have attempted here and, no doubt, would have resulted in a re-evaluation of some of the formalisms used on both sides. In pragmatic terms, however, the uniting of the two theories in a common cause seems to have been a straightforward and natural one, and the results, it is to be hoped, speak for themselves.

List of Abbreviations

1	first person	md	middle
2	second person	mod	modificative
3	third person	neg	negative
2/3	2/3 permutative	nom	nominal
acc	accusative	NP	noun phrase
add	additive	np	nominalizing prefix
agr	agreement	P	preposition
agt	agent	PP	prepositional phrase
ap	antipassive	p	plural
appl	applicative	part	participle
att	attemptive	pass	passive
attr	attributive	perf	perfective
ben	benefactive/detrimental	pnt	punctual
caus	causative	po	possessive
circ	circumstantive	pred	predicative
cnf	confirmative	pro	pronoun
comp	completitive	prog	progressive
D	deictic	prpl	prepositional
dir	directional	prt	particle
DP	determiner phrase	qt	quotative
dp	derivational prefix	rdp	reduplication
ds	derivational suffix	refl	reflexive
dtrm	determinative	rel	relativizer
f	feminine	res	resultative
gen	genitive	s	singular
hab	habitual	s-p	stative-progressive
idb	inferential dubitative	s.o.	someone
idn	identifier	sem	semblative
imp	imperative	stat	stative
inc	inchoative	sth	something
int	interrogative	subj	subjunctive
intj	interjection	tr	trajector
irr	irrealis	trans	transitivizer
l.o.c.	lack of control	trm	transmutative
lm	landmark		

Where necessary, these terms are defined in the text.

Glossary

actant—in the MTM, a dependent of a predicate in the DSyntR which is subcategorized for by that predicate; roughly, the argument of a verb.

circonstantial—from the French *circonstant* (Tesnière 1959), originally any nominal element dependent on a verb but not an actant; extended here to cover clauses in the same role. Corresponds more or less to "adjunct" phrases/clauses in X-bar theory.

composition—in CG, the process by which the semantic poles of morphemes are combined to form complex predications.

conceptual space—in CG, a spatial metaphor for the mental model of the universe constructed by the speaker, similar in many ways to the "world" used in logic and semantics.

dependent—in the MTM, an element whose presence in a syntactic structure is determined by another element, as in the actant of a verb (whose lexical properties require/allow the presence of an actant).

direct actant—the subject or object of a verb.

domain of instantiation—in CG, "the domain in which the instances of a type are primarily thought of as being located and are distinguished from one another on the basis of their locations" (Langacker 1991: 547); roughly, the mental map on which items in discourse are located by the speaker and identified with "things" that are known, can be seen, or are presupposed to exist.

elaboration—in CG, the process by which figures of a predication are specified by their identification with particular objects or "things", as in the specification of the actants of a verb.

entity—in CG, any "thing" or relation that can be referred to.

figure—from perceptual psychology, any object or entity which stands out from its surroundings and is thus perceptually salient.

grounding—in CG, establishing the location of an instance with respect to "the speech event, its participants, and its immediate circumstances" (Langacker 1991: 548); "things" are grounded in the domain of instantiation, usually by means of deixis, whereas clauses are grounded in time via tense or modality—although in Lushootseed and Bella Coola, which have neither, grounding is accomplished by the complete elaboration of the event-participants, in particular the subject.

head—in the MTM, the syntactic governor of a dependent element, in other words, an element which determines the appearance of some other element in a D-tree.

instance—in CG, an example of a type.

instantiation—in CG, the process of "conceiving of a profiled entity as having a certain location in the domain of instantiation, thus constituting an instance distinct from other instances of the same type" (Langacker 1991: 549).

landmark—in CG. a secondary figure in a predication (= direct object in Lushootseed and Bella Coola transitive clauses).

peripheral actant—an actant of a verb which is not subject or direct object; realized in Bella Coola and Lushootseed as a prepositional phrase.

predicate—the top node of a dependency-tree.

predication—in CG, the semantic pole of an expression; here, the semantic pole of any morpheme or expression

profile—in CG, the entity that an expression designates; in a clause, the profile is that set of participants and relations that are included by the speaker in the utterance and which the expression is intended to designate. The profile of an event may vary depending on the way it is construed by a speaker and the speaker's communicative intent.

radical—an atemporal relation which constitutes a lexical category of intransitive stems in both Bella Coola and Lushootseed; these are bare roots which conflate the function of adjective, intransitive verb, and verb-forming stem.

reference point—in CG, any entity which is used to locate another in conceptual space.

relational predication—the semantic pole of any morpheme whose function is to express a relationship between entities, in particular between a "thing" and a relational landmark (as in adjectives of colour, monovalent intransitive verbs, etc.) or between two or more "things" (divalent verbs, locative prepositions, etc.).

rheme—that part of an utterance which is communicatively most salient in discourse; generally associated with "new" information or the gist of the speaker's message.

subschema—a particular, more specific, instance of an abstract schematic morpheme; for instance, "baseball", "basketball", and "football" are all subschemas of the more abstract category "ball". Note that the schematic "ball" is defined prototypically (*i.e.* in terms of a set of properties which are considered most typical of balls), but subschemas of the same category need not share all of the properties of the prototype (as footballs are not spherical, a property which is often considered definitive of the category "ball").

thing—in CG, "a region in some domain" (Langacker 1991: 555); more loosely, a discrete entity or object—including abstract objects, concepts, or reified events—as opposed to a relation.

topic—what a sentence is about, the presupposed or "given" information in discourse to which the new or "rhematic" information in a sentence is related.

trajector—the primary figure in a predication, the most salient entity; in a clause, the subject.

transitive verb—a verb which has two direct actants (subject and direct object).

type—a schematic class of entities which share a certain set of properties or are felt to be in close enough conformity to a prototype to be included together in the same class.

valency—the number of actants for which a verb or other element subcategorizes.

Bibiliography

Abney, S. (1987). *The English noun phrase in its sentential aspect.* Ph.D. dissertation, MIT.

Anderson, S.R., & Keenan, E. L. (1985). Deixis. In T. Shopen (Ed.), *Language typology and syntactic description, Volume III: Grammatical categories and the lexicon,* (259 – 308). Cambridge: Cambridge University Press.

Aray, M., Shibata, H., & Ezaki, J. K. (1981). *Lecciones prácticas de japonés.* (*Practical lessons in Japanese.*) Tokyo: Sociedad Hispánica del Japón.

Basakov, N. A. (1971). On the common origin of the categories of person and personal possession in the Altaic languages. In L. Ligetic (Ed.), *Researches in the Altaic languages,* (7 – 14). Budapest: Akadémia Kiadó.

Bates, D., Hess, T. M., & Hilbert, V. (1994). *Lushootseed dictionary.* Seattle: University of Washington Press.

Bavin, E. L. (1980). *On the grammatical notion, subject.* Ph.D. dissertation, State University of New York at Buffalo.

Beck, D. J. (1995). Transitivity and causation in Lushootseed morphology. In *Proceedings of the 11th Northwest Linguistics Conference.* Victoria: Linguistics Circle of the University of Victoria.

Bertagaev, T. A., & Tsydendambaev, T. B. (1962). *Grammatika Burjatskovo jazyka.* (*A grammar of Buriat.*) Moscow: Vostočnoj Literatury.

Black, D. (1994). Subject raising from tensed clauses: Evidence from Bella Coola *ʔay* constructions. *Working Papers of the Linguistics Circle of the University of Victoria 12,* 75 – 91.

Bresnan, J. (Ed.) (1982). *The mental representation of grammatical relations.* Cambridge, MA: MIT Press.

Boas, F. (Ed.) (1911). *Handbook of American Indian languages.* Washington, D.C.: Smithsonian Institution.

Chomsky, N. (1965). *Aspects of the theory of syntax.* Cambridge, MA: MIT Press.

Chomsky, N. (1970). Remarks on nominalization. In R. Jacobs & P. S. Rosenbaum (Eds.), *Readings in English transformational grammar.* Waltham, MA: Ginn & Co.

Comrie, B. (1981). *The languages of the Soviet Union.* Cambridge: Cambridge University Press.

Comrie, B. (1989). *Language universals and linguistic typology: Syntax and morphology, 2nd ed.* Oxford: Basil Blackwell.

Comrie, B., & Thompson, S. A. (1985). Lexical nominalization. In T. Shopen (Ed.), *Language typology and syntactic description, Volume III: Grammatical categories and the lexicon,* (349 – 398). Cambridge: Cambridge University Press.

Davis, H., & Matthewson, L. (1995a). Yet more on category-neutrality in Salish. Paper presented to the III UVic Salish Morphosyntax Workshop.

Davis, H., & Matthewson, L. (1995b). Ti7 time. Paper presented to the III UVic Salish Morphosyntax Workshop.

Davis, P. W., & Saunders, R. (1973). Lexical suffix copying in Bella Coola. *Glossa 7*, 231 – 52.

Davis, P. W., & Saunders, R. (1975). Bella Coola nominal deixis. *Language 51*, 845 – 58.

Davis, P. W., & Saunders, R. (1976a). Bella Coola deictic roots. *International Journal of American Linguistics 42*, 319 –30.

Davis, P. W., & Saunders, R. (1976b). The syntax of cause and effect in Bella Coola. *Glossa 10*, 155 – 74.

Davis, P. W., & Saunders, R. (1977). Bella Coola *"su"*. *International Journal of American Linguistics 43*, 211 – 7.

Davis, P. W., & Saunders, R. (1978). Bella Coola syntax. In E. Cook & J. Kaye (Eds.), *Linguistic studies of native Canada*, (37 – 65). Vancouver: UBC Press.

Davis, P. W., & Saunders, R. (1979). The expression of the cooperative principle in Bella Coola. In B. Efrat (Ed.), *The Victoria conference on Northwestern languages*, (33 – 61). Victoria, B.C.: British Columbia Provincial Museum.

Davis, P. W., & Saunders, R. (1980). *Bella Coola texts*. Victoria, B.C.: British Columbia Provincial Museum.

Davis, P. W., & Saunders, R. (1984a). Propositional organization: The *"s-"* and *"si-"* prefixes in Bella Coola. *International Journal of American Linguistics 50*, 208 – 31.

Davis, P. W., & Saunders, R. (1984b). An expression of co-reference in Bella Coola. In E.-D. Cook & D. B. Gerdts, *Syntax and semantics, Volume 16: The syntax of Native American languages*, (149 – 168). Orlando, FL: Academic Press.

Davis, P. W., & Saunders, R. (1986). Control and development in Bella Coola. *International Journal of American Linguistics 52*, 212 – 26.

Davis, P. W., & Saunders, R. (1989). Language and intelligence: The semantic unity of **-m-** in Bella Coola. *Lingua 78*, 113 – 158.

Demirdache, H., & Matthewson, L. (1994). On the universality of syntactic categories. Ms., University of British Columbia.

Demirdache, H., Gardiner, D., Jacobs, P., & Matthewson, L. (1994). The case for D-quantification in Salish: "All" in St'át'imcets, Squamish, and Secwepemctsín. In *Papers for the 29th International Conference on Salish and Neighboring Languages*, (145 – 203). Pablo, MT: Salish Kootenai College.

Foley, W. A., & van Valin, R. D., Jr. (1984). *Functional syntax and universal grammar*. Cambridge: Cambridge University Press.

Forrest, L. B. (1994). The de-transitive clauses in Bella Coola: Passive vs. inverse. In T. Givón (Ed.), *Voice and inversion*, (147 – 168). Philadelphia: John Benjamins.

Frantz, D. G. (1978). Copying from complements in Blackfoot. In E. Cook & J. Kaye (Eds.), *Linguistic studies of native Canada*, (89 – 109). Vancouver: UBC Press.

Gerdts, D. B. (1988). *Object and absolutive in Halkomelem Salish*. New York: Garland.

Gernsbacher, M.A. (1990). *Language comprehension as structure building*. Hillsdale, N.J.: Lawrence Erlbaum.

Giorgi, A., & Longobardi, G. (1991). *The syntax of noun phrases: Configuration, parameters, and empty categories*. Cambridge: Cambridge University Press.

Givón, T. (1979). *On understanding grammar*. New York: Academic Press.

Givón, T. (1984). *Syntax: A functional-typological introduction, Volume 1*. Amsterdam: John Benjamins.

Givón, T. (1989). *Mind, code, and context: Essays in pragmatics*. Hilldale, N.J.: Erlbaum.

Givón, T. (1994). The pragmatics of de-transitive voice: Functional and typological aspects of inversion. In T. Givón (Ed.), *Voice and inversion*, (3 – 44). Philadelphia: John Benjamins.

Grimshaw, J. (1991). *Argument structure*. Cambridge, Mass.: MIT Press.

Halliday, M. A. K. (1970). Language structure and language function. In J. Lyons (Ed.), *New horizons in linguistics*, (140 – 165). Aylesbury, U.K.: Penguin.

Hess, T. M. (1971). Prefix constituents with /x^{w}/. In J. E. Hoard & T. M. Hess (Eds.), *Studies in Northwest Indian Languages*, (43 – 69). Sacramento, CA: Sacramento Anthropological Society.

Hess, T. M. (1976). *Dictionary of Puget Salish*. Seattle: University of Washington Press.

Hess, T. M. (1993a). *Lushootseed reader with introductory grammar: Volume I—Four stories from Edward Sam*. Victoria, B.C.: Tulalip.

Hess, T. M. (1993b). *Lushootseed reader with introductory grammar: Volume I—Four stories from Edward Sam (revised edition)*. Victoria, B.C.: Tulalip.

Hess, T. M. (1993c). A schema for the presentation of Lushootseed verb stems. In A. Mattina & T. Montler (Eds.), *American Indian linguistics and ethnography in honor of Laurence C. Thompson*, (113 – 126). Missoula, MT: University of Montana.

Hess, T. M. (1994). Transitive verbs that aren't. Paper presented to the II UVic Salish Morphosyntax Workshop.

Hess, T. M., & Hilbert, V. (1976). *Lushootseed: An introduction, Books 1 and 2*. University of Washington: American Indian Studies.

Hilbert, V., & Hess, T. M. (1977). Lushootseed. In B. F. Carlson (Ed.), *Northwest Coast texts: Stealing light. International Journal of American Linguistics Native American texts series, Volume 2, Number 3,* (4 – 32). Chicago, IL: University of Chicago Press.

Hopper, P. J., & Traugott, E. C. (1993). *Grammaticalization*. Cambridge: Cambridge University Press.

Hudson, R. A. (1974). A structural sketch of Beja. *African Language Studies XV,* 111 – 142.

Hudson, R. A. (1984). *Word grammar*. Trowbridge, U.K.: Basil Blackwell.

Hudson, R. A. (1990). *English word grammar.* Oxford, U.K.: Basil Blackwell.

Hudson, R. A. (1994). Discontinuous phrases in dependency grammar. Ms., University College, London.

Hukari, T. (1976). Person in a Coast Salish language. *International Journal of American Linguistics 42,* 305 – 318.

Hukari, T. (1977). A comparison of attributive constructions in two Coast Salish languages. *Glossa 11,* 48 – 74.

Jacobs, P. (1994). The inverse in Squamish. In T. Givón (Ed.), *Voice and inversion,* (121 – 145). Philadelphia: John Benjamins.

Jacobsen, W. H. (1979). Noun and verb in Nootkan. In B. Efrat (Ed.), *The Victorian Conference on Northwestern Languages,* (83 – 153). Victoria, B.C.: British Columbia Provincial Museum.

Jelinek, E. (1993a). Languages without determiner quantification. Ms., University of Arizona.

Jelinek, E. (1993b). Prepositions in Straits Salish and the noun/verb question. Ms., University of Arizona.

Jelinek, E. (1994). Transitivity and voice in Lummi. Paper presented to the 29th International Conference on Salish and Neighbouring Languages. Pablo, MT: Salish Kootenai College.

Jelinek, E., & Demers, R. A. (1983). The agent hierarchy and voice in some Coast Salish languages. *International Journal of American Linguistics 49,* 167 – 85.

Jelinek, E., & Demers, R. A. (1994). Predicates and pronominal arguments in Straits Salish. *Language 70,* 697 – 736.

Joseph, B. D. (1978). *Morphology and universals in syntactic change: Evidence from medieval and modern Greek.* Bloomington, IN: Indiana University Linguistics Club.

Keenan, E. L. (1976). Towards a universal definition of "subject". In C. N. Li (Ed.), *Subject and topic,* (303 – 333). New York: Academic Press.

Keenan, E. L., & Comrie, B. (1977). Noun phrase accessibility and universal grammar. *Linguistic Inquiry 8,* 63 – 99.

Kinkade, M. D. (1983). Salishan evidence against the universality of "noun" and "verb". *Lingua 60*, 25 – 40.

Kinkade, M. D. (1990). Sorting out third persons in Salish discourse. *International Journal of American Linguistics 56*, 341 – 60.

Kinkade, M. D. (1994). Salish interrogatives. Paper presented to the II UVic Salish Morphosyntax Workshop.

Kiparksy, P., & Kiparsky, K. (1970). Fact. In M. Bierwisch & K. E. Heidolph (Eds.), *Progress in linguistics*, (143 – 173). The Hague: Mouton.

Kroeber, P. D. (1991). *Comparative syntax of subordination in Salish*. Ph.D. dissertation: University of Chicago.

Kuipers, A. H. (1968). The categories of verb-noun and transitive-intransitive in English and Squamish. *Lingua 21*, 610 – 626.

Langacker, R. W. (1987). *Foundations of Cognitive Grammar, Volume 1: Theoretical prerequisites*. Stanford: Stanford University Press.

Langacker, R. W. (1988). The nature of grammatical valence. In B. Rudzka-Ostyn (Ed.), *Topics in cognitive linguistics*, (91 – 126). Amsterdam: John Benjamins.

Langacker, R. W. (1991). *Foundations of Cognitive Grammar, Volume 2: Descriptive application*. Stanford: Stanford University Press.

Langacker, R. W. (1995). Raising and transparency. *Language 71*, 1 – 62.

Li, C. N., & Thompson, S. A. (1976). Subject and topic: A new typology of language. C. N. Li (Ed.), *Subject and topic*, (457 – 489). New York: Academic Press.

Li, C. N., & Thompson, S. A. (1979). Third-person pronouns and zero-anaphora in Chinese discourse. In T. Givón (Ed.), *Syntax and semantics, Volume 12: Discourse and syntax*, (311 – 335). New York: Academic Press.

Mattina, N. (1994). Argument structure of nouns, nominalizations, and denominals in Okanagan Salish. Paper presented to the II UVic Salish Morphosyntax Workshop.

McGuirk, R. H. (1986). *Colloquial Arabic of Egypt*. London: Routledge.

Mel'čuk, I. A. (1988). *Dependency syntax: Theory and practice*. Albany, NY: State University of New York Press.

Mel'čuk, I. A. (1989). Semantic primitives from the viewpoint of the Meaning-Text linguistic theory. *Quaderni de Semantica X*, 65 – 102.

Mel'čuk, I. A. (1993). The inflectional category of voice: Towards a more rigorous definition. In B. Comrie and M. Polinsky (Eds.), *Causatives and transitivity*, (1 – 46). Amsterdam: John Benjamins.

Mel'čuk, I. A. (1994a). Grammatical cases, basic verbal construction, and voice in Maasai: Towards a better analysis of the concepts. Ms., University of Montreal.

Mel'čuk, I. A. (1994b). *Cours de morphologie générale, Deuxième partie: Significations morphologiques*. Montreal: Les Presses de l'Universite de Montreal/CNRS.

Nater, H. F. (1977). *Stem list of the Bella Coola language*. Lisse, Belgium: Peter de Ridder.

Nater, H. F. (1984). *The Bella Coola language*. Ottawa: National Museum of Man.

Nater, H. F. (1990). *A concise Nuxalk – English dictionary*. Hull, Quebec: Canadian Museum of Civilization.

Newman, S. (1969a). Bella Coola grammatical processes and form classes. *International Journal of American Linguistics 35*, 175 – 9.

Newman, S. (1969b). Bella Coola paradigms. *International Journal of American Linguistics 35*, 299 – 306.

Newman, S. (1976). Salish and Bella Coola prefixes. *International Journal of American Linguistics 42*, 228 – 242.

Newman, S. (1977). The Salish independent pronoun system. *International Journal of American Linguistics 43*, 302 – 14.

Nichols, J. (1981). *Predicate nominals: A partial surface syntax of Russian*. Berkeley: University of California Press.

Nicodemus, L. (1975). *Snchitsu'umshtsn: The Coeur D'Alene language: A modern course*. Plummer, ID: The Coeur D'Alene Tribe.

Ožegov, S. I. (1986). *Slovar' russkovo jazyka*. (*Russian dictionary*.) Moscow: Russkij jazyk.

Perlmutter, D. (1980). Relational grammar. In E. Moravcsik & J. Worth (Eds.), *Syntax and semantics 13: Current approaches to syntax*, (195 – 230). New York: Academic Press.

Pollard, C., & Sag, I. (1994). *Head-driven phrase structure grammar*. Chicago: University of Chicago Press.

Poppe, N. (1970). *Mongolian language handbook*. Washington, D. C.: Center for Applied Linguistics.

Pu, M.-M., & Prideaux, G.D. (1994). Coding episode boundaries with marked structures: A cross-linguistic study. *Canadian Journal of Linguistics 39*, 283 – 296.

Pulkina, I. M. (1982). *Breve prontuario de la gramática rusa*. (*A concise reference grammar of Russian*.) Moscow: Russkij jazyk.

Radford, A. (1988). *Transformational grammar*. Cambridge: Cambridge University Press.

Rauh, G. (Ed.) (1983). *Essays on deixis*. Tübingen: Gunter Narr Verlag.

Sandmann, M. (1979). *Subject and predicate.* Heidelberg: Carl Winter Universitätsverlag.

Saunders, R., & Davis, P. W. (1975a). Internal syntax of lexical suffixes in Bella Coola. *International Journal of American Linguistics 41,* 106 – 13.

Saunders, R., & Davis, P. W. (1975b). Bella Coola referential suffixes. *International Journal of American Linguistics 41,* 355 – 68.

Saunders, R., & Davis, P. W. (1975c). Bella Coola lexical suffixes. *Anthropological Linguistics 17,* 154 – 189.

Saunders, R., & Davis, P. W. (1982). The control system of Bella Coola. *International Journal of American Linguistics 48,* 1 – 15.

Saunders, R., & Davis, P. W. (1993). Natural aspect in Bella Coola. In A. Mattina & T. Montler, *American Indian linguistics and ethnography in honor of Laurence C. Thompson,* (265 – 277). Missoula, MT: University of Montana.

Schachter, P. (1985). Parts-of-speech systems. In T. Shopen (Ed.), *Language typology and syntactic description, Volume I: Clause structure,* (3 – 61). Cambridge: Cambridge University Press.

Skorik, P. I. (1968). *Jazyki narodov S. S. S. R.: Tom V—Mongol'skie, Tunguso-mančžurskie i paleoaziatskie jazyki.* (*Languages of the peoples of the U.S.S.R.: Volume V—Mongolian, Tungus-Manchu and Paleo-asiatic languages.*) St. Petersburg: Nauka.

Smith, M. B. (1994). Agreement and iconicity in Russian impersonal constructions. *Cognitive Linguistics 5,* 5 – 56.

Solé, Y. R., & Solé, C. A. (1977). *Modern Spanish syntax: A study in contrast.* Lexington, MA: D.C. Heath.

Sunik, O. P. (1962). *Glagol v tunguso-mančžurskikh jazykakh.* (*The verb in Tungus-Manchu languages.*) Moscow: Academy of Sciences.

Taylor, J. (1994). "Subjective" and "objective" readings of possessor nominals. *Cognitive Linguistics 5,* 201 – 242.

Tesnière, L. (1959). *Eléments de syntaxe structurale.* Paris: Klincksieck.

Thompson, C. (1989). Pronouns and voice in Koyukon Athabaskan: A text-based study. *International Journal of American Linguistics 55,* 1 – 24.

Thompson, L. C. (1979). The control system: A major category in the grammar of Salishan languages. In B. Efrat (Ed.), *The Victoria conference on Northwestern languages,* (156 – 76). Victoria, B.C.: British Columbia Provincial Museum.

Trask, R. L. (1993). *A dictionary of grammatical terms in linguistics.* London: Routledge.

Tuggy, D. (1988). Náhuatl causative/applicatives in Cognitive Grammar. In B. Rudzka-Ostyn (Ed.), *Topics in cognitive linguistics,* (587 – 618). Amsterdam: John Benjamins.

van Eijk, J. P., & Hess, T. M. (1986). Noun and verb in Salishan. *Lingua 69*, 319 – 331.

van Langendonck, W. (1994). Determiners as heads? *Cognitive Linguistics* 5, 243 – 259.

Wierzbicka, A. (1988). *The semantics of grammar*. Amsterdam: John Benjamins.

Zholkovskij, A. K., & Mel'čuk, I. A. (1965). O vozmožnom metode i instrumentax semantičeskogo sinteza. (On a possible method and instruments for semantic synthesis.) *Naučno-texniče skaja informacija 6*, 23 – 28.

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(1995). Transitivity and causation in Lushootseed morphology. In *Proceedings of the 11th Northwest Linguistics Conference.* Victoria: Linguistics Circle of the University of Victoria.

(1994). A comparative grammar of Bella Coola and Lushootseed. In *Papers for the 29th International Conference on Salish and Neighboring Languages,* (1 – 31). Pablo, MT: Salish Kootenai College.

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