

FUNCTIONAL FORMS-FORMAL FUNCTIONS: AN ACCOUNT OF COEUR D'ALENE CLAUSE
STRUCTURE

by

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DEDICATION

For Takae, Dorothy, Tom, and Gladys

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LIST OF SYMBOLS AND ABBREVIATIONS

abs	absolute		prox	proximate	
acc	accusative		rel	relational	-min/-mn
aug	augmentative		rdp	reduplication	
C	C reduplication		sg	singular	
con	connective	‡, hi‡	s.t.	something	
cont	continuative	y'c-, -mš	sub	subordinator	
count	counter		t	transitive	-t
ct	causative	-st(u)	term	terminative	cmi?
cust	customary	?εc-	unrlz	unrealized	čε?
cvc	CVC reduplication		?ε	?ε	?ε ³
dat	dative	-tu‡t	vc	VC reduplication	
det _()	determiner	x ^w ε (1), ‡ε (2), cε (3)	√	root	
devel	developmental	-iš	-	morpheme boundary	
deic	deictic		=	lexical suffix	
dim	diminutive	C ₁ -	—	intransitive subject person marker	
dt	directive transitivizer	-nt	< >	compound indicator	
erg	ergative			indicates gloss of reduplicated element	
ε?		-ε? ¹	**	incomplete analysis	
fut	future	čε‡	.	exaggeration (vowel lengthening)	
g	genitive				
hab	habitual	-ul			
imp	imperative	-š, ul, -wl			
inv	involuntary	-p			
irr	irrealis	nε?			
intr	interrogative	ni			
int	intentional	s-			
inchoat	inchoative	-.?			
indef	indefinite	-šεš, -mš			
loc	locative				
m		-m ²			
ncr	noncontrol resultive	-nun/-C ₂			
neg	negative	lu‡			
nom	nominative				
nte	nontopic ergative	-m/t			
pl	plural	-ilš			
fposs	future possibility	cmi?			

¹ "This suffix ... is difficult to classify. It is used especially with kin-terms and names for persons ... It is part of certain verbs also."
Reichard (1938:621)

² The exact nature of this morpheme is not clear. The functions of this morpheme include indicating: middle constructions; continuative; a patient subject or an agent subject depending on root type; detransitivization. It is also used in causative constructions (cf. Doak 1997:79).

³ Doak (1997) labels this morpheme "oblique." However, the oblique is homophonous with an indefinite determiner that is also glossed "oblique" by Doak (214-15). Throughout I label both ?ε, and provide discussion where clarity demands.

ABSTRACT

Coeur d'Alene, also known as Sñchitsu'umshtsn, is a Southern Interior Salishan language no longer learned by children. Descriptive work on the language has been carried out since the early nineteenth-century (Tiet 1904 through 1909 in Boaz and Tiet 1930; Reichard 1927-29, 1938, 1939; Doak 1997); however, a formal account of the basic clause structure of this polysynthetic language has until now not been proposed. This thesis presents such a formal analysis within the Minimalist Program (Chomsky 1995, 1998, 2000, 2001a, 2001b; Lasnik 1999a, 1999b, 2000; among others), employing the tenets of Distributed Morphology (Halle and Marantz 1993; Harley and Noyer 1999; among others). Demonstrating that an analysis of person marking morphemes as bound pronouns (Jelinek 1984) is more "economical" in terms of Chomsky's (1995:367) Elementary Principles of Economy, the thesis goes on to account for the phenomena of lexical affixation (Carlson 1990; Kinkade 1998; Gerds 2003; among others), in Coeur d'Alene as incorporation. Appealing to Hale and Keyser's (2002) theory of conflation as Head-movement (Harley 2004), an approach to incorporation is proposed which captures Chomsky's (1995) claim that head-movement is phonological while at the same time illustrating that lexical affixes in Coeur d'Alene serve as incorporated arguments. The thesis concludes with an articulation of the left periphery (material above ν P here), based on the strict ordering of a series of mood, adverbial, modal, and aspectual particles. It is shown that this articulation in Coeur d'Alene patterns with Cinque's (1999) proposed universal hierarchy of functional and adverbial heads. In this way, the basic clause structure of Coeur d'Alene is formally presented.

CHAPTER 1

INTRODUCTION

1. Introduction

One of the most influential claims in linguistic theory over the past 50 years has been that while some languages seem quite different, they are actually far more similar than one might assume. That is, given a language like German and a language like Chinese, one might guess that they do not have a great deal in common. For example, in Chinese there are a number of sounds not found in German, a variety of tones for example. In German, when a sentence is uttered it must have a subject. In Chinese on the other hand, the subject and object can seemingly be omitted freely. However, German and Chinese do have elements such as ‘nouns’ and ‘verbs’, and these elements do combine to form complete utterances, or sentences, in both languages. One of the goals of linguistic inquiry is to understand how elements such as ‘nouns’ and ‘verbs’ are combined to create these utterances and sentences. This is where the claim that all languages are actually quite similar comes in.

Recognizing these seemingly basic similarities across languages linguists have hypothesized that although languages seem different at the level of an utterance or sentence, underlyingly they are created from the same innate elements and employ the same innate mechanism(s) to organize those elements into utterances. That is, although German and Chinese sound quite different, they are comprised of the same basic elements, ‘nouns’ and ‘verbs’ etc., and they both employ the same mechanism(s) to organize those elements into comprehensible utterances or sentences.

The primary goal of this dissertation is to look at a language that is on the surface quite different from the vast majority of languages previously studied, in this case a polysynthetic language, specifically Coeur d'Alene (Salish/Idaho USA). Polysynthetic languages are most notable for the fact that one 'word' of such a language is often translated into a complete English sentence. For example the Coeur d'Alene 'word' *nic'k'úpšícēs* can be translated as the English sentence, 'He cut wood for me'. If the claim is that utterances in any given language are built from the same innate pieces by the same innate mechanism(s), then even though on the surface a polysynthetic language is uttered as a single 'word', and an equivalent utterance in a language like English requires several words, it should be possible to demonstrate that both are quite similar at some basic level. This is exactly what this dissertation hopes to demonstrate.

In the remainder of this introduction, the goals of this dissertation will be elaborated, this will be done in Section 2. Further, in Section 3 the primary theoretical considerations employed in this dissertation will be presented. Finally, in Section 4, a general outline of the dissertation is presented.

2. Goals of dissertation

The purpose of this dissertation is three-fold. The first goal is to present a formal account of the basic clause structure of Coeur d'Alene. This includes identifying the functional projections within the basic clause structure of Coeur d'Alene in terms of Cinque's (1999) proposed universal hierarchy of functional projections and Rizzi's (1997a) Split CP hypothesis. To my knowledge there has not yet been a formal account of basic clause structure in Coeur d'Alene, and neither has there been a proposal put forward regarding the hierarchy of functional projections in this language. This dissertation provides a unique organization of data and analysis not previously available for typological and

cross family comparison, thus adding to our broader understanding of the intricacies of a specific language, and how those intricacies compare with the vast number of languages of the world.

Second, it is a goal of this dissertation to test the long-standing claim that although languages may seem radically different on the surface, underlyingly they are the same. It is argued in this dissertation that Coeur d'Alene (Salishan/Idaho USA), a polysynthetic language, adheres to the same underlying mechanisms postulated for the typologically quite different English. Employing the primary tenets of the Minimalist Program (Chomsky 1995, 1998, 2000, 2001a, 2001b; Lasnik 1999a, 1999b, 2000; among others) within the Principles and Parameters approach to morphology and syntax, it is demonstrated that the same theoretical claims applied to typologically divergent languages can account for a range of specific phenomena in Coeur d'Alene. In addition, it is demonstrated that inquiry into specific phenomena in Coeur d'Alene can add insight into various syntactic and morphological phenomena attested cross-linguistically. In this way, evidence is brought to the fore, which brings us closer to an understanding of how knowledge of language is stored in the mind.

The third goal of this dissertation is to bring Coeur d'Alene and the Salishan work of Gladys Reichard to a wider audience. Coeur d'Alene, like all endangered languages of the world, is invaluable to the scientific endeavors of the linguistic community at large, and to the community of speakers and potential speakers that hope to use Coeur d'Alene to express themselves and their culture. It is hoped that the fascinating phenomena seen in the data of this dissertation will inspire others to begin or continue work on less familiar and endangered languages. It is also hoped this dissertation will highlight the value of heritage materials, such as those of Gladys Reichard, Tom Miyal, and Dorothy Nicodemus used here, and thus inspire others to begin to work with such resources. Too

often these materials are left languishing in archives, garages, offices, in homes, and numerous other places and are themselves at great risk of loss, just as the languages they record are in great danger of being lost forever.

Along with this goal is the push to present a general research program for Coeur d'Alene. In the summers of 1927 and 1929, at the behest of Franz Boas, Gladys Reichard came to Coeur d'Alene country to record the language. She collected approximately forty-eight texts. At this time two projects are underway to develop a corpus of Coeur d'Alene, comprised primarily of the Reichard texts, which will provide thousands of examples of data for linguistic research and revitalization efforts.⁴ It is hoped that the constructions and elements analyzed in this dissertation will serve as a possible starting point for future formal inquiry of Coeur d'Alene, and serve as further motivation to complete the two corpora projects.

As mentioned, the heritage materials of Gladys Reichard, Dorothy Nicodemus, and Tom Miyal, in the form of unpublished manuscripts of the narratives of Nicodemus and Miyal recorded by Reichard (1927-29), were used in this dissertation. Of the some 48 narratives, nine were used. These nine narratives were morpho-syntactically and morpho-phonologically analyzed by the current author for their use here. The narratives used in this dissertation, along with the abbreviations employed to denote them are presented here:

⁴ Currently one project underway, funded by NSF and directed by Ivy Doak, is working to digitally archive the Reichard manuscripts and other Coeur d'Alene material as well as create an online dictionary. Another project underway by the current author and Man's Hulden is the development of a morphological parser designed for Navajo based on a computational system (developed by Hulden) that will be able to exploit the digitally archived Reichard manuscripts to create a variety of morphological corpora.

<i>Boy takes food</i>	(btf) ⁵
<i>Calling his kind (Dorothy)</i> ⁶	(chkd)
<i>Calling his kind (Tom)</i>	(chkt)
<i>Coyote imitates Magpie</i>	(cim)
<i>Coyote overpowers sun securing sun disc</i>	(cosssd)
<i>Coyote steals son's wife</i>	(cssw)
<i>Lynx</i>	(L)
<i>Man caught in fire coral</i>	(mcfc)
<i>War between Blackfeet and Coeur d'Alene</i>	(wbc)

In addition to these nine narratives, other works of Reichard used in this dissertation include: Reichard's 1938 grammar, her 1939 partial stem list, and her 1947 English translations of Coeur d'Alene narratives. Other data comes from Nicodemus' (1975) Coeur d'Alene dictionaries, and Doak's 1997 description of grammatical relations in Coeur d'Alene. Further data was arrived at in consultation with Salishan scholars Anthony Mattina and Ivy Doak, and the Coeur d'Alene Director of Language Programs Raymond Brinkman.

Before moving forward a brief introduction to Coeur d'Alene is perhaps necessary. Coeur d'Alene is a language no longer learned by children. It is a Southern Interior Salishan language. There has been descriptive work carried out on Coeur d'Alene (see references above and references therein), but to the author's knowledge, no formal account of Coeur d'Alene phenomena has been presented. Coeur d'Alene is spoken by a few elderly speakers on the reservation near Plummer, Idaho. Like many of the language communities of the Americas, speakers of Coeur d'Alene suffered greatly as a result of the imperialism of European powers and the western expansion of the US prior to the

⁵ The letters in parentheses represent the abbreviations employed before line numbers in the data. A form like *btf34* would indicate line 34 of the narrative *Boy Takes Food*.

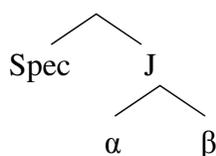
⁶ The name here and in the following narrative refer to Reichard's informants.

twentieth century. In the twentieth century, Coeur d'Alene continued to demise as a result of the pressures brought on by the dominant culture. Today there are revitalization efforts underway, efforts that include developing corpora from the unpublished Reichard (1927-29) manuscripts.

3. Theoretical considerations

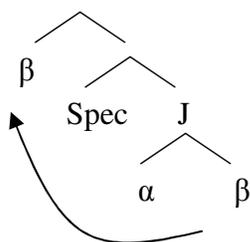
These data were analyzed within the framework of the Minimalist Program. This program is extensively laid out in Chomsky (1993, 1994, 1995, 2000, 2001a, 2001b). The general tenets of the Minimalist program employed in this dissertation are those of *Merge and Move, Features, Agree, and Economy*. Merge and Move are two recursive operations within the computational system. Merge is the simplest such operation which takes a pair of syntactic objects, α and β , and forms a more complex object J from α and β . In short, Merge combines a head with its complement which then projects and merges with a specifier as in (1).

(1)



Move takes a copy of an existing element in the structure and places ('re-Merges') this copy in a c-commanding position in the structure.

(2)



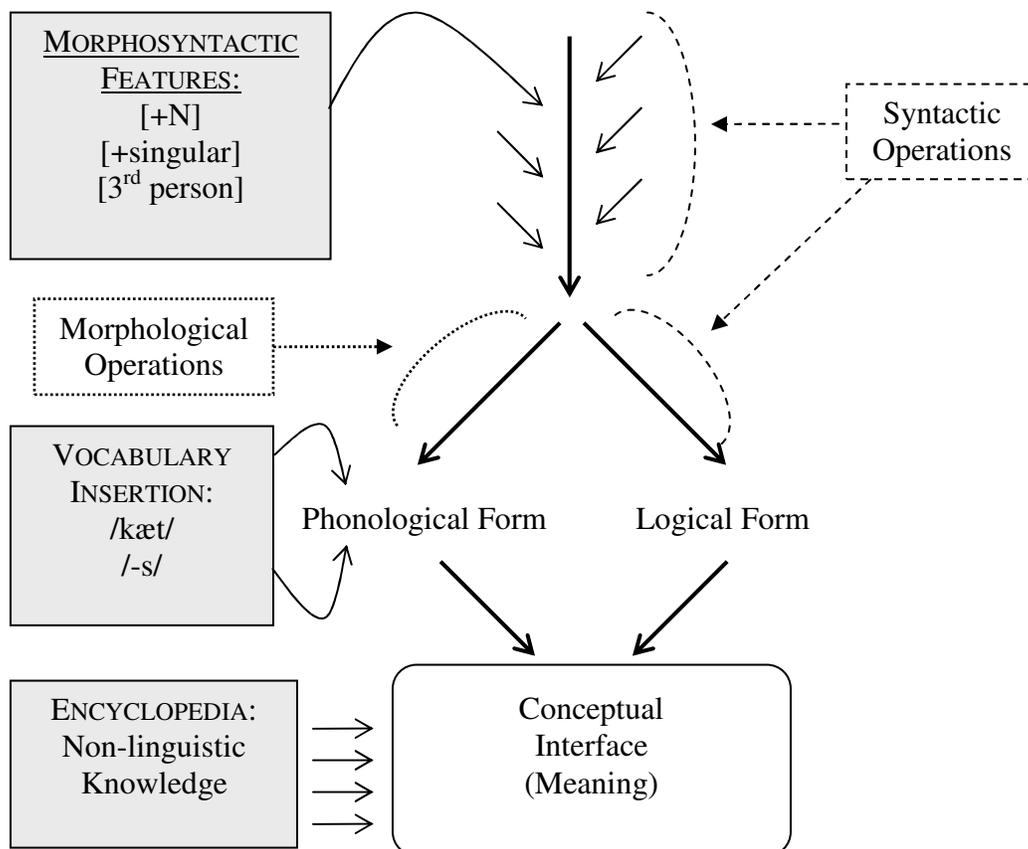
Features are construed as either *interpretable* or *uninterpretable*. The need to allow grammatical convergence through eliminating uninterpretable features motivates the vast majority of syntactic operations within the Minimalist Program. Convergence occurs when an uninterpretable feature F of a Head H, a *probe*, is deleted in a matching relationship with a c-commanded element, the Head of an XP, a *goal*, with matching interpretable features. This relation between the probe and goal is an *Agree* relation. The derivation of a sentence is further subject to general conditions of *Economy*. Chomsky 1995 states this as follows:

(3) Elementary Principles of Economy

- a. Add optional α to numeration only if it has an effect at the interface.
- b. At each stage of a derivation, apply the most economical operation that leads to convergence. (367)

Many of the other notable theoretical considerations employed in this dissertation are derived from Distributed Morphology (Halle and Marantz 1993; Harley and Noyer 1999; among others). Distributed Morphology is a late-insertion, piece-based theory of grammar. The architecture of the grammar, still of the Y-type, separates the lexicon into three separate components; a set of morphosyntactic features manipulated by syntactic operations, a set of vocabulary items corresponding to phonological content, and an encyclopedia that gives semantic interpretation for vocabulary items in contexts. The basic idea of Distributed Morphology (DM) is that *Lexical items* consist of feature bundles comprising semantic, phonological, and formal features. Further, under this view, insertion of phonological content of these bundles occurs post-syntactically. In this way morphemes are subject to a distinct morphosyntactic description, representing a *root* plus any material attached / added to it, and a distinct morphophonological description. This model is diagramed below.

(4) O'Donnell's (2004) DM Model



The three main principles of DM that govern the morphological component are: *late insertion*, *underspecification*, and *syntactic hierarchical structure all the way down*. *Late insertion* is the anti-Lexicalist position according to which syntactic categories are abstract and contain no phonological content. It is after syntax that phonological material is inserted into terminal nodes through vocabulary items. *Syntactic hierarchical structure all the way down* proposes that there is no principled distinction between the structures seen in syntax and morphology: The units in both, consisting of terminal nodes and their content, are discrete. Terminal nodes that are realized as a part of a single morphophonological word are not the result of a combination operation in pre-lexical component, but are rather composed and linearized by the syntactic mechanism itself.

4. General outline of the dissertation

The dissertation is divided into the following chapters. In Chapter 2 an overview of Coeur d'Alene morphosyntax is provided in order that those unfamiliar with Coeur d'Alene will be able to navigate the remaining chapters with little difficulty and a fuller understanding of the complexities of Coeur d'Alene grammar. In Chapter 3 arguments for treating person marking morphemes as bound pronouns (Jelinek 1984; Bhat 2004) rather than as agreement morphology, with arguments being realized as *pro* (Baker 1996) are presented. It is claimed that a bound pronoun analysis is preferred in light of various complications that arise for an agreement analysis regarding Economy, learnability, typological considerations, and cross-linguistic evidence that analysis of arguments as *pro* are in general problematic. Further, a grammaticalization account of the diachronic origins of bound pronouns is presented and then rejected, and an alternate account of cross-family variation in terms of argument realization is presented.

In Chapter 4, an account of Lexical Affixes and noun incorporation phenomena in Coeur d'Alene are presented. It is argued that employing Hale and Keyser's (2002) *Conflation* operator as head-movement (Harley 2004) is the most optimal analysis for the noun incorporating facts of Coeur d'Alene. It is further argued that such an analysis is preferable to that of Baker, Aranovich, and Golluscio's (2004) analysis of incorporation that maintains traditional head-movement, contra Chomsky (1995), and proposes a family of constraints along with a special deletion mechanism within narrow syntax. Cross-linguistic implications of a Conflation-type analysis are also presented. In addition, the traditional view of Lexical Affix diachronic origin is re-evaluated in terms of Heath's 1998 *Hermit Crab* hypothesis of grammaticalization.

Chapter 5 provides an account of various particles and proposes a hierarchy of functional heads within the Coeur d'Alene clause. This hierarchy is compared with

Cinque's 1999 proposed universal hierarchy of functional heads. In addition a comparison of Rizzi's 1997a Split CP hypothesis and Cinque's hierarchy, in light of the Coeur d'Alene data, is presented. In the final chapter, Chapter 6, concluding remarks are presented along with discussion of areas that will be fruitful for future inquiry into the nature of Coeur d'Alene clause structure and our understanding of language in general.

CHAPTER 2

AN OVERVIEW OF COEUR D'ALENE MORPHOSYNTAX

1. Introduction

In this chapter I present an overview of Coeur d'Alene (henceforth Cr), discussing the morphosyntax of the *basic clause structure*.⁷ In this discussion, I consider the basic clause to comprise a *predicate* inflected for *aspect* and *person marking morphemes* (*person and number*). Further, this predicate may be accompanied by *mood particles*, *temporal particles*, and *determiner phrases*, or some combination of these. It should be noted that the following discussion benefits greatly from Doak (1997). In the first section of this chapter I introduce what Doak (1997:50) considers the "basic sentence structure" of Cr, which includes a discussion of the *person marking* morphemes. This is followed in Section 2 by a discussion of *sentential aspect*, *stem aspect*, and *mood*. Section 3 introduces a minimal number of *particles*. In the transitive examples in these sections the *-st(u)* causative transitivizer (ct) and the *-nt* directive transitivizer (dt) are employed (cf. section 4 below). Next, in Section 4, I describe the *transitivizer* paradigm. Finally, in Section 5, I present a brief discussion of *determiner phrases*. Concluding remarks appear in Section 6.

1.1. Basic sentence structure

The basic Cr predicate is composed of the simple root and person marking morphemes, with no marking for tense, aspect, or mode. Here "root" is used in the tradition of the

⁷ The phonemic inventory of Cr appears in the Appendix, with brief comments. A complete description of Cr phonological phenomena can be found in Reichard 1938, and a sketch of important phonological phenomena can be found in Doak 1997. Other significant work on Cr phonology includes Doak 1992, Sloat 1966, 1968, 1972 and 1980.

d. Example transitive (*root + transitivity + object + subject*)¹²

c'úw'cɛlm

√c'uw' -nt -si -s

hit -dt -2acc -3erg

'He hit you.'

(Doak 1997:58)

Next we turn to a discussion of person marking morphemes.

1.2. Person marking

There are four person marking paradigms in Cr. These are the intransitive subject paradigm, transitive subject paradigm, transitive object paradigm and genitive paradigm. Cr employs both nominative/accusative and ergative/absolutive in its case marking system.¹³ There is also a set of what Reichard (1938:554.174) identifies as "independent pronouns," and what Doak (1997:72) describes as "predicative pronouns." Doak (1997:72) argues that these forms are unanalyzable roots with intransitive person marking morphemes. Person marking morphemes are mandatory in all constructions. In the discussion that follows, I first present the intransitive person marking morphemes followed by the transitive set. Next I introduce the genitive pronominals, and finally I present the "person predicates."

1.2.1 Intransitive person markers

The simple intransitive is comprised of a root or stem¹⁴ preceded by a subject marking morpheme. It should be noted that the third person plural *-i/s* occurs in both transitive and

¹² In her examples, Doak (1997) places a hyphen, '-', between the *-n* and the *-t* of transitivity morphemes. In the examples throughout I do not follow this pattern; I follow the notation of A. Mattina (cf. for example 1982).

¹³ In the description of person marking morphemes I follow Doak (1997). Doak (1997:76-78) suggests that the Cr person marking system may have been at one time a split system, but evolved to a system with a full set of transitive subjects marked ergative rather than simply those that complement the absolutive (third person only).

¹⁴ "Stem" here refers to a root plus any derivational morphology such as locatives, directionals, or lexical affixes or prefixes. Later this term will be used slightly differently (cf. Chapter 4).

intransitive constructions. Further, *-ilš* is only used where clarity requires a distinction. That is, when discourse does not make clear which, subject or object, is plural. These morphemes are listed in Table 1.

Table 1: Intransitive subject marking morphemes

	<i>Singular</i>	<i>Plural</i>	
1 nom	čn _◌	č _◌	
2 nom	k ^w u _◌	k ^w up _◌	
3 abs ¹⁵	∅ _◌	∅ _◌	-ilš

Examples taken from Doak (1997) using the root *g^wič* 'to see' illustrate these person marking forms.

(6) *Intransitive person marking morphemes*

čn g ^w ič	'I saw.'	
k ^w u g ^w ič	'You saw.'	
∅ g ^w ič	'He saw.'	
č g ^w ič	'We saw.'	
k ^w up g ^w ič	'You folks saw.'	
∅ g ^w ič -ilš ¹⁶	'They saw.'	(Doak 1997:53-54)

In the following discussion of transitive person marking morphemes it should be noted that the transitive person marking morphemes follow the root and transitivizing morphology.

¹⁵ There is no means that I am aware of to determine where the null 3abs morpheme appears, therefore, I represent the morpheme along with the overt morphemes of the given paradigm as is tradition in the Salishan literature (cf. Doak 1997 among others).

¹⁶ Here the null morpheme is indicated by ∅. Doak (1997) does not include the null morpheme in her glosses after introducing the morpheme for reason of economy. Throughout they are included and added to the examples taken from Doak.

1.2.2 Transitive person markers

Basic transitive constructions comprise a root or stem followed by one of a given number of transitivizing morphemes (discussed below in section 4), then the *object morphemes* and *subject morphemes* in that order. Table 2 presents the transitive object morphemes. It is important to note that the plural *-ilš* occurs in the transitive paradigm as noted above.

Table 2: Transitive object morphemes

	<i>Singular</i>	<i>Plural</i>	
1 acc	-sɛ(l)/mɛ(l)	-ɛl(i)	
2 acc	-si/-mi	-ulm(i)	
3 abs	-∅	-∅	-ilš

Before providing examples of the different object morphology, it should be noted there is a set of transitive subject person marking morphemes which Doak (1997) identifies as the *nontopic ergative* (nte). This set of subject morphemes appears in transitive constructions in which the ergative form, in many discourse constructions, is replaced with *-m* or *-t* (60). Table 3 lists the morphemes in this paradigm; note again that the plural morpheme *-ilš* may also occur with this paradigm when clarity demands.

Table 3: Nontopic ergative person marking morphemes

	<i>Singular</i>	<i>Plural</i>	
1 nte	-m	-t	
2 nte	-t	-t	
3 nte	-m	-m	-ilš

Doak provides a full account of the nontopic ergative paradigm, arguing that it does not represent passive morphology, but rather, a demotion of topic, the subject, from first topic to second topic. I refer the reader to Doak for a full account of the nontopic ergative paradigm.

The alternate forms identified in the first person singular accusative and second person singular accusative, *-sɛ(l)/mɛ(l)* and *-si/-mi* respectively, are selected on the basis of the given transitivizer of the predicate: those with *m* primarily occur with the *-st(u)* causative transitivizer, while those with *s* occur with the other transitivizers. The following examples from Doak (1997) illustrate:

- (7) a. púlustmɛlm
 √pulut -st(u) -mɛl -m
 kill -ct -1acc -nte
 'I got killed.'
- b. púlustmit
 √pulut -st(u) -mi -t
 kill -ct -2acc -nte
 'You got killed.'
- c. c'úw'ncɛlm
 √c'uw' -nt -sɛl -m
 hit -dt -1acc -nte
 'I got hit.'
- d. c'úw'ncis
 √c'uw' -nt -si -s
 hit -dt -2acc -3erg
 'He hit you.'

(Doak 1997:57-58)

The "l" in *-sɛ(l)/mɛ(l)* occurs before the second person plural ergative *-p* and the nontopic ergative (nte) *-m*.

The transitive subject person marking morphemes are presented here in Table 4.

Table 4: Transitive subject person marking morphemes

	<i>Singular</i>	<i>Plural</i>	
1 erg	-n	-(mε)t	
2 erg	-x ^w	-p	
3 erg	-s	-s	-ilš
n _{te}	-m/-t	-t/-m	

Again, the third person plural marking morpheme *-ilš* appears where clarity demands. Plural marking *-ilš* may appear only once in a clause, and discourse disambiguates whether it is the subject or object that is plural, or both, in transitive constructions. In the following example (8), any of the three glosses are possible renderings of the construction.

- (8) ʔácqʔəmstusilš
 √ʔacqεʔ -m -st(u) -∅ -s -ilš
 go.out -m -ct -3abs -3erg -pl
 'He took them out./ 'They took it out./ 'They took them out.'
(Doak 1997:59)

At this point it should be mentioned that there is a suffix *-šesš*, which Doak (1997) labels the *indefinite* (65). In Cr there is a person hierarchy that makes it impossible to express a second person agent, singular or plural, acting upon a first person plural patient in transitive constructions. Instead, the indefinite *-šesš* is attached to an intransitive root or stem inflected with the second person nominative subject. This is illustrated in (9). In (9a) and (9c) the constraint imposed by the person hierarchy can be illustrated. In (9b) and (9d) *-šesš* is illustrated. In (9a) and (9c) the *lone -t transitivizer* (section 4 below) is used.

- (9) a. *√g^wič -t -εli -x^w
 see -t -1pacc -2s_{erg}
 'You see us.'

- b. $k^w u g^w i\check{c} \underline{\check{s}\check{e}\check{s}}$
 $k^w u _ \check{v} g^w i\check{c} \underline{-\check{s}\check{e}\check{s}}$
 2nom see -indef
 'You see us.'
- c. $* \check{v} g^w i\check{c} -t -\check{e}l\check{i} \quad -p$
 see -t -1pacc -2perg
 'You folks see us.'
- d. $k^w u p g^w i\check{c} \underline{\check{s}\check{e}\check{s}}^{17}$
 $k^w u p _ \check{v} g^w i\check{c} \underline{-\check{s}\check{e}\check{s}}$
 2nom see -indef
 'You folks see us.'

(Doak 1997:65-66)

It is important to note that (9b) and (9d) do not employ transitive morphology and that they do employ the intransitive nominal morphemes. Although $-\check{s}\check{e}\check{s}$ does refer to an additional participant, Doak (1997) notes that it would be "misleading to call $-\check{s}\check{e}\check{s}$ an "object" suffix (67). However, she provides no further analysis of the morpheme. Compelling though it may be, this morpheme will not be addressed further in the dissertation, other than to provide an example of its presence in transitive constructions. It will be left to future inquiries to account for the indefinite constructions illustrated here. The transitive object-subject combinations are presented in Table 5. Recall that, the object morpheme precedes the subject morpheme in the verbal morphology.

¹⁷ Doak (1997) glosses the second person nominal with a hyphen '-', $k^w u -p$, for reasons of economy the hyphen is not included here.

Table 5: Transitive object-subject combinations (Doak 1997:68 modified)

obj \ subj	1s	2s	3	1p	2p	nte
1s	-	-sε -x ^w	-sε -s	-	-sεl -p	-sεl -m
	-	-mε -x ^w	-mε -s	-	-mεl -p	-mεl -m
2s	-sn	-	-si -s	-si -t	-	-si -t
	-mn	-	-mn -s	-mi -t	-	-mi -t
3	-∅ -n	-∅ -x ^w	-∅ -s	-∅ -mεt	-∅ -p	-∅ -m
1p	-	*	-εli -s	-	*	-εli -t
2p	-ulm -n	-	-ulm -s	-ulmi -t	-	-ulmi -t

Next we turn to a brief discussion of the genitive person marking morphemes.

1.2.3 Genitive person markers

The genitive person markers are used to indicate predicates of possession and indicate second participants in a given set of detransitized constructions. In the discussion that follows only genitive constructions of the predicate possessive type will be addressed. All genitive morphemes are suffixes with the exception of the first and second person singular morphemes, which are prefixes. The genitive morphemes appear in Table 6 below.

Table 6: Genitive person marking morphemes

	<i>Singular</i>	<i>Plural</i>	
1 g	hn-	-εt	
2 g	in-	-mp	
3 g	-s	-s	-ilš

Examples of the genitive morphemes follow in (10).

- (10) a. histí?
hn-√stí?
 1g- thing
 'It's mine.'
- b. istí?
in-√stí?
 2g- thing
 'It's yours.'
- c. stí?s
 √stí? **-s**
 thing -3g
 'It's his/hers.'
- d. stí?silš
 √stí? **-s -ilš**
 thing -3g -3pl
 'It's theirs.'
- e. stí?et
 √stí? **-et**
 thing -1pg
 'It's ours.'
- d. stí?mp
 √stí? **-mp**
 thing -2pg
 'It's yours (pl).'

(Doak 1997:69-71)

When the possessed item is other than third person, a nominative subject occurs with the genitive predicate. Doak (1997) notes that this suggests that possessive constructions always include a pronominal subject, in the cases where the possessed is

third absolutive, as in (10) above, the null morpheme should be assumed to be present (72). The following example (11) illustrates the nominative and genitive combination.

- (11) a. k^winpípe?
 k^wu_{2nom} hn-√pipε?
 2nom₂ 1g- father
 'You are my father.'
- b. čismíy'εms
 čn_{1nom} s-√miy'm -s
 1nom₁ nom- woman -3g
 'I am his wife.'

(Doak 1997:71-72)

Now we turn to the predicate pronominals.

1.2.4 Predicate pronouns

The following predicate pronouns (12) can stand alone as predicates or may be employed as *emphatic adjuncts*. The constructions that follow are comprised of the nominative morphemes and unanalyzable roots (Doak 1997:72-74).

- (12) Predicate pronouns in Cr
- a. čn ?εng^wt 'I/me.'
- b. k^wu ?εng^wt 'You.'
- c. Ø cεnil 'He/him.'
- d. č lipust 'We/us.'
- e. k^wup lipust 'You folks/All of you.'
- f. Ø cənil =ilš 'They/them.'

(Doak 1997:72-73)

In (f) the plural morpheme *-ilš* is used. Now we turn to a brief discussion of aspect and mood in Cr.

2. Sentential aspect, stem aspect, and mood

In this section I describe the three aspects, identified as *sentential aspect*, two identified as *stem aspect* and one *mood* morpheme discussed. Here N. Mattina's (1996) term *stem aspect* is employed, which parallels with what others have referred to as *aktionsart* or *lexical aspect* (cf. Comrie 1976; Binnick 1991 for example). While the theoretical approach of this dissertation does not follow N. Mattina's Lexicalist approach, the facts of the morphemes described here parallel those of their cognates in Okanagan as described by N. Mattina. It should be noted that aspect is more complex in Cr than presented here, and that a full analysis of aspect is beyond the scope of the present dissertation. However, I refer the reader to N. Mattina 1996 for a thorough account of aspect in a Southern Interior Salishan language (Okanagan).

It is worth noting that N. Mattina's (1996) "properties of base, stem, and sentential aspect in Okanagan" appear to parallel those of Coeur d'Alene (104). The qualities are listed here, with the caveat that base aspect will not be addressed and that future inquiry will be necessary to determine to what degree these generalizations hold in Coeur d'Alene. In terms of the morphemes discussed here, the generalizations appear to hold, but future research will be necessary to determine the exact nature of the aspect system in Cr.

Table 7: N. Mattina's properties of aspect (1996:104 modified)¹⁸

<i>base aspect</i>	primitive situation type, inherent, ontological, prototypical
<i>stem aspect</i>	derivational, serves to focus a temporal phase or modality
<i>sentential aspect</i>	inflectional, sets the situation in a temporal frame in sequence with other situations in the discourse

The discussion will begin with an overview of sentential aspect.

2.1. Sentential aspect

The three sentential aspects are: *completive* indicated by a null morpheme, *customary* indicated by the prefix *ʔεc-*, and *continuous* indicated by the *y'c-* prefix morpheme. In the examples that follow the aspect morpheme is underlined.

(13) *completive* null \emptyset : A situation has ended¹⁹

- a. čn_┘ \emptyset -vmílx^w
 1s.nom_┘ comp- smoke
 'I smoked.' (Doak 1997:83)

- b. g^wnítce^x
 \emptyset -vg^wnit -t -sε -x^w
 comp- call -t -1acc -2erg
 'You called me.' (Doak 1997:119)

¹⁸ N. Mattina (1996:103 f1) notes that her base, stem, and sentential aspect are the same categories as Binnick's (1991) Aristotelian aspect, aktionsart, and aspect proper, respectively.

¹⁹ There is no evidence suggesting that the null morpheme appears to the left or right of the root, however, I assume it patterns with the overt morphemes that align to the left of the root.

(14) *customary* ?εC-: A situation that is viewed as characteristic of a whole period rather than of a moment (Comrie 1976).

a. čʔεC'k'w'ul'
 č ?εC-√k'w'ul
 1p.nom cust- work
 'We work.' (Doak 1997:85)

b. ʔεčεšncit²⁰
?εC-√čεš -nt -si -t
 cust- accompany -dt -2acc -1p.erg
 'We go with you.' (Doak 1997:115)

(15) *continuative* y'C-: A situation in progress.

a. čiʔcg'w'ičəm
 čn y'C-√g'w'ič
 1snom cont- see
 'I am seeing.' (Doak 1997:106)

b. Does not occur on transitive stems (Doak 1997:44)²¹

Having presented the sentential aspect morphology we turn next to stem aspect.

2.2. Stem aspect

There are two significant morphemes that are glossed as *stem aspect*. Here what is referred to as stem aspect parallels the notion of aktionsart or lexical aspect (c.f. Binnick 1991 for a comparison of aktionsart and lexical aspect). Comrie (1976:6 f 4) makes the distinction between aspect and aktionsart as one of grammaticalization vs. lexicalization (sentential aspect vs. aktionsart respectively). Within the DM framework the derivational

²⁰ Doak (1997:115.116) glosses the object, -t, in this construction as '1erg'. The morpheme that corresponds to '1erg' however is -n. I take this to be a typographical error and list the gloss as '1p.erg'.

²¹ Doak notes that she has recently acquired "examples of the continuative occurring with transitive stems; however, they are usually in subordinate clauses (one speaker seemed able to use this construction in main clauses)" (pc).

morphemes associated with lexicalization in N. Mattina (1996) are considered part of the syntactic mechanism that builds clauses and stems/words.

Unlike the sentential aspect morphemes, the stem aspect morphemes are affixes that attach to the right edge of the root, with the exception of one morpheme, the *inchoative* infix *-ʔ*, discussed below. These morphemes parallel their Okanagan cognates in function and form.

(16) *stative -t*: indicating that "x has the quality y."

∅_{3abs} √xεs **-t**
 3abs₃ be.good -stat
 'He is good.'
 (Doak 1997:44 modified)

(17) *inchoative -p and -ʔ* : indicates a change of state without reference to the act leading up to the change.²²

- a. čn_{1sn} √p'ic' **-p**²³
 1sn₁ push -inch/inv
 'I started to push (it).'
- b. miipnúntəm
 √mii **-p** -nun -(n)t²⁴ -∅ -m ...
 discover -inv/inch -ncr -(d)t -3abs -nte
 '... it was discovered ...'
 (Reichard 19927-29: cosssd022)

²² N. Mattina (1996:87) refers to this morpheme and morphemes of this type as *anticausatives*, I use Doak's (1997) term, though the morphemes are cognate. Doak (1997:44) refers to the *-p* morpheme as the *involuntary/inchoative*.

²³ Doak (1997:44) records čn_{1sn} √p'ic' -p as čn_{1n} √p'ic' -p with an extra "n" before the root. I consider this a typographical error.

²⁴ It is not clear if this is the *-nt* or *-t* transitive as nasal reduction occurs when two nasals are adjacent in Cr. The '()' parenthesis indicate the unknown status of the 'n' element. It should be remembered that the two morphemes appear to be alternate forms of one another.

(19) *immediate future* $k''n\epsilon?$ 'soon'

$k''n\epsilon?$ kuppul'nək''t'áqεney'
 $k''n\epsilon?$ k''up_ √g''εł_√nεk''it'aqni'
 imfut 2p.nom be.group_one.sack.full.of.meat
 'You will soon each have one sack full of meat.'

(Reichard 1927-29:cssw243)

Doak (1997) identifies two other "immediate future" particles related to $k''n\epsilon?$

$k''k''n''i'y'ε?$ and $k''uk''i'ʔ?$ (187). These forms may appear in conjunction with the future intentional $č\epsilonł$.

(20) $k''k''n''i'y'ε$ $č\epsilonł$ k''usci'ʔitn
 $k''k''n''i'y'ε$ $č\epsilonł$ k''u_ s- ci- √ʔitn
 imfut fut 2nom int- first- eat
 'Soon you are going to eat first.'

(Doak 1997:187)

The *future intentional* $č\epsilonł$ indicates *future intentional*, *permissive*, *mild request*

(Reichard 1938:666-67). It occurs before the predicate in intransitive (21a) and transitive (21b) constructions. In transitive constructions it is restricted to subordinate structures.

(21) a. $č\epsilonł$ k''uχamínč
 $č\epsilonł$ k''u_ √χamínč
 fut 2nom love
 'You are going to be loved.'

(Doak 1997:194)

b. lut hε $č\epsilonł$ s'úsntx'' x''ε isqíl'tmx''
 lut hε $č\epsilonł$ s- √s'u's -nt-∅ -x'' x''ε in- s- √qíl'tmx''
 neg sub fut int- lose -dt -3abs -3erg det₁ 2g- nom- man
 'Don't lose your man.'

(Doak 1997:198)

In chapter 5 these future particles will be discussed in greater detail. As Comrie (1976:2 f2) notes, the future tense in many languages has modal as well as tense value. It

may be the case that the immediate future morphemes $k''n\varepsilon?$, $k''k''n''i'y'\varepsilon?$ and $k''uk''i'?$ are temporal adverbials (Cinque 1999) which pattern with the as yet discussed *discourse/narrative adverbial* morphemes *hoi* and *k''um'* both glossed 'then' and 'and/then' when together. These particles will be discussed in greater detail in chapter 5, where the following particles will be analyzed.

Table 8: Particles analyzed in Chapter 5

TYPE	PARTICLE	
Temporal Adverbial	$k''n\varepsilon?$	'soon' <i>immediate future</i> (Doak 1997:186)
	$k''k''n''i'y'\varepsilon?$	'soon' <i>immediate future</i> (Doak 1997:187)
	$k''uk''i'?$	'soon' <i>immediate future</i> (Doak 1997:187)
Sentential Adverbial	<i>hoi</i>	'and' / 'then' <i>discourse/narrative adverbial</i>
	<i>k''um'</i>	'and' / 'then' <i>discourse/narrative adverbial</i>
Mood	$n\varepsilon?$	<i>irrealis</i> (Reichard 1938:669.777; Doak 1997:188)
Modal	$\check{c}\varepsilon?$	<i>future intentional, permissive, mild request</i> (Reichard 1938:666-67)
	$\check{c}\varepsilon?$	<i>ought, obligation</i> (Reichard 1938:669.780)
	$cmi?$	<i>was to be but isn't, possibility</i> (Reichard 1939:104)
Aspectual	$cmi?$	'used to' <i>terminative</i> (Doak 1997:49)
	$pin\check{c}$	'always' <i>habitual</i> (Doak 1997:49)

4. Transitivity morphemes

There are six transitivity suffixes that occur following the stem and preceding the object. The structure of the transitivity morphemes is presented in (22).

(22)Transitive structure

	-t		
	-nt		
<i>stem</i>	-st(u)	<i>object</i>	<i>subject</i>
	-t		
	-š(ɨ)t		
	-tútt		

It will be noticed that the transitive paradigm includes the segment *-t* in each of the morphemes. Cognates in other Salishan languages also include this segment. While some scholars segment this as a morpheme (e.g. Carlson 1972; Thompson and Thompson 1992) others do not (e.g. A. Mattina 1973, 2001; Kuipers 1974). Here I follow A. Mattina and Kuipers for reasons of notational simplicity. The specific function of each transitivizer is addressed below with examples.

4.1. The lone *-t* and directive *-nt* transitivizers

The *lone -t* (t) and directive transitivizer *-nt* (dt) are the most commonly used in Cr. Doak (1997) suggests that these two are alternate forms of one another with the lone *-t* appearing on a limited number of roots (115). The person markers, which follow these forms, are the same in function and form: object patients and subject agents. These transitivizers indicate most often that the subject is an agent in control of his or her actions. Examples follow, (23) with *-nt* (dt) followed by (24) *-t* (t). In (23e) an example of the indefinite morpheme *-šɛš* is presented.

(23)a. níčntmɛt
 ʋnič **-nt** -∅ -mɛt
 cut **-dt** -3abs -1perg
 'We cut it.'

(Doak 1997:114)

- b. q^wíc'ntp
 √q^wíc' -nt -∅ -p
 fill -dt -3abs -2perg
 'You folks filled it up.' (Doak 1997:114)
- c. t'ápncεs
 √t'ap -nt -sε -s
 shoot -dt -1acc -3erg
 'He shot me.' (Doak 1997:114)
- d. nε? xət'ncn
 nε? √xət' -nt -si -n
 irr gnaw -dt -2acc -1erg
 'I will gnaw you.' (Doak 1997:114)
- e. mε^wšěšmnc²⁵
 √mε^w -šěš -m(i) -nt -∅ -s
 break -indef -rel -dt -3abs -3erg
 'He broke something for someone.' (Doak 1997:66-67)
- (24) a. čítəm
 √čit -t -∅ -m
 give -t -3abs -nte
 'He was given it.' (Reichard 1927-29:cssw259)
- b. hoi ułčiséx^wc
 hoi uł- či- √sεx^w -t -∅ -s
 then back- loc- carry.on.back -t -3abs -3erg
 'Then he carried it back on his back.' (Reichard 1927-29:cssw106)

Now the discussion turns to the causative transitivizer.

²⁵ Reichard (1938:626, 565) provides the same example with the gloss "He broke it (someone else's property)." She provides three other examples; these and Doak's one example provided above are the only examples available regarding this construction that I am aware of. As mentioned above, this morpheme will not be analyzed further.

4.2. Causative transitivizer *-st(u)* (ct)

The causative transitivizer *-st(u)* (ct) has three primary functions. It can indicate causative constructions, customary aspect, or topical object constructions. Here I follow Doak (1997:124) and use the label "causative" for all three functions throughout this dissertation. As mentioned in 1.2.2, the unique set of *M*-initial objects for first and second person singular replace the *S*-initial morphemes when the construction is with an *-st(u)* causative transitivizer. The following examples illustrate the *-st(u)* transitivizer.

(25) a. ʔεk^wústmn
 √ʔεk^wun **-st(u)** -mi -n
 say -ct -2acc -1erg
 'I told you.' (Doak 1997:126)

b. čicx^wúystmεs
 čic-√x^wuy **-st(u)** -mεl -s
 dir- go -ct -1acc -3erg
 'He took me there.' (Doak 1997:125-26)

It will not be attempted in this dissertation to address the many functions of the causative transitivizer *-st(u)*. Future work on aspect should lead to a better understanding of the exact nature and function of this complex morpheme.

4.3. Applicative transitivizers

There are three applicative transitivizers in Cr. These morphemes introduce a third participant to the argument structure of the sentence. Further, they alter the role of the morphosyntactic object. That is to say, the participant represented by the object person marking morpheme (absolutive/accusative) serves as a possessor or dative with the possessor applicative transitivizer *-#* (pra) and as a beneficiary or dative with the benefactive transitivizer *-š(i)t* (bt). There is a third, much less frequent, applicative *-tú#t*. I

have found no examples of this morpheme in the analyzed Reichard (1927-29) manuscripts. Each applicative is introduced with examples below. It should be noted that Cr marks only two arguments on the predicate via agreement person marking morphemes, any third argument must be gleaned from context or discourse, or be added in the form of an overt DP adjunct.

4.3.1 Possessor applicative *-#t*

In transitive constructions with the possessor applicative *-#t* (pra), the object marking on the predicate indicates the possessor, rather than the possessed. The following example (26) illustrates. In (26a) only two arguments are indicated on the predicate. In (26b) the case is the same, only two arguments indicated on the predicate, but the construction carries reference to a third item, the *thing being filled*. In (26b) the ergative marks the subject as expected, however, the object accusative refers not to the patient, but to the possessor of the patient.

(26) a. q^wíc'sn
 √q^wíc' -st(u) -∅ -n
 fill -ct -3abs -1erg
 'I filled it.'

b. q^wíctcn
 √q^wíc' -#t -si -n
 fill -pra -2acc -1erg
 'I filled it for you.'

(Doak 1997:144)

To further exemplify that it is the possessor that is marked on the predicate and the possessed that is not, a construction with an adjunct DP is given (27), where the DP is underlined.

- (27) kʷɬtɛlɛt ɬɛ yələmɣumɛt
 √kʷin -ɬt -ɛli -t ɬɛ √ymixʷm -ɛt
 take -pra -1p.acc -nte det₃ chief -1pg
 'Our chief was taken from us.'
 ['We were taken from (it was) our chief. '] (Doak 1997:146)

In some cases *-ɬt* (pra) serves to indicate a dative construction. In these cases the role of the object shifts to dative. In the following example the accusative morpheme in the directive transitive (*-nt*) represents the object patient (28a), and the accusative morpheme in the applicative transitive (*-ɬt*) represents the object goal (28b).

- (28) a. kʷnɛʔ cún'cun'm'ɛy'ntɛlis
 kʷnɛʔ √cunmɛy+cvc -nt -ɛlis -s
 soon teach +rdp<aug> -dt -1pacc -3erg
 'He will teach us.'
- b. kʷnɛʔ cún'cun'm'ɛy'ɬtɛlis
 kʷnɛʔ √cunmɛy+cvc -ɬt -ɛlis -s
 soon teach +rdp<aug> -pra -1pacc -3erg
 'He will show us [how to do it].'
 ('He will teach x to us.') (Doak 1997:149)

4.3.2 Benefactive applicative *-š(i)t*

In constructions with the benefactive applicative *-š(i)t*, the argument indicated by the ergative is the agent and that by the accusative/absolutive the beneficiary. This fact can be illustrated with the following comparison of a simple transitive construction (29a) and the benefactive (29b).

- (29) a. g^winícɛs
 √g^win -t -sɛ -s
 ask.for -t -1acc -3erg
 'He invited me.'
- b. g^winíšicɛs
 √g^wint -šit -sɛ -s
 ask.for -bt -1acc -3erg
 'He begged something for me.' (Doak 1997:153)

The benefactive applicative may also function to render objects recipients. The following example illustrates.

- (30) a. m'i?m?šícɛlp
 √m'ɛy+cvc -šit -sɛl -p
 report +rdp_{<aug>} -bt -1acc -2perg
 'You folks told me a story.'
- b. nk^wínšicn
 √nk^win -šit -si -n
 sing -bt -2acc -1erg
 'I sang to you.' (Doak 1997:156)

4.3.3 Dative -tuft

As noted, this morpheme is extremely rare. It patterns with the applicative in that it serves to introduce another participant into the clause structure. Doak (1997) notes that the exact role of the third person is difficult to assess, as she has only a handful of examples each with the third person or nontopic ergative person marking morphemes (157). Examples follow in (31). In (31a) a simple directive transitive construction with *-nt* (dt) is contrasted with the dative *-tuft* (dat) in (31b).

- (31) a. ʔac'ǰnc
 √ʔac'ǰ -nt -∅ -s
 look.at -dt -3abs -3erg
 'He looked at it.' (Doak 1997:158)
- b. ʔac'ǰtułc
 √ʔac'ǰ -tułt -∅ -s
 look.at -dat -3abs -3erg
 'He looked at it for him.' (Doak 1997:159-60)

In the next set of examples the dative *-tułt* (32b) is contrasted with the benefactive *-š(i)t* (32a).

- (32) a. támšic
 √tam -šit -∅ -s
 scorch -bt -3abs -3erg
 'He burned it for him/somebody. '
- b. támtułc
 √tam -tułt -∅ -s
 scorch -dat -3abs -3erg
 'He burned it for somebody. ' (Doak 1997:159)

Once all the Reichard (1927-1929) manuscripts have been completely analyzed, more forms of *-tułt* may be attested, allowing for greater understanding of this applicative morpheme. Next, determiner phrases will be addressed.

5. Determiner phrases

What I refer to here as *determiner phrases* Doak (1997:214) refers to as *adjuncts*, following Jelinek (1984 et series; Baker 1996). I use the term *determiner phrase* because these structures are headed by a determiner, however, it should be noted that they are considered adjuncts throughout this dissertation as Doak claims. Doak maintains that

these determiner phrases are optional structures used to more fully specify the referents of pronominal arguments of the predicate, or used to introduce additional participants not indicated by the pronominal arguments, or serving the function of prepositional phrases (214). Unlike other Salishan languages (cf. Jelinek and Demers 1994:721; N. Mattina 1996:31 f4), it is not uncommon to find sentences that include two or more adjuncts or adjoined clauses with unique reference in Cr.

These determiner phrases can be headed by one of three determiners in Cr; $x^w\varepsilon$ (det₁), $c\varepsilon$ (det₂), $t\varepsilon$ (det₃). Doak (1997) captures the difference between the three morphemes by suggesting that a distinction between the three is based on distance: $x^w\varepsilon$ is near, $t\varepsilon$ is far; and $c\varepsilon$ is somewhere in between (215). Determiner phrases may also appear without one of the three determiners when referring to a proper name only, though proper names may also appear with a determiner as the examples below illustrate.

Determiner phrases are composed of a determiner followed by a fully inflected predicate as in the intransitive construction in (33a) (where the predicate is preceded by the discourse adverbial *hoi*), and transitive construction (33b). In all examples the determiner phrase is underlined.

- (33) a. hoi x^w ist $t\varepsilon$ sməyiw
 hoi \emptyset $\sqrt{x^w}$ ist $t\varepsilon$ smyiw
 then 3abs went det₃ Coyote
 'Then Coyote went.' (lit. 'Then he went, the Coyote.')

(Reichard 1927-29:cssw11)

- b. $n\varepsilon?$ k^w intx^w $x^w\varepsilon$ slip'
 $n\varepsilon?$ $\sqrt{k^w}$ in -(n)t \emptyset -x^w $x^w\varepsilon$ \sqrt{slip}'
 irr take -(n)t \emptyset -2erg det₁ wood
 'Then you take a stick.' (lit. 'You take it, the stick.')

(Reichard 1927-29:cssw71a)

In (36) an example of a topicalized DP in an intransitive construction is given.

- (36) **ʔε** **sqiltč** č'əč'én'ε?
ʔε **√sqiltč** c₁+Vč'én' -ε?
det₃ meat rdp_{<dim>}+object.lies -ε?
 'The body, it was small.' (Reichard 1927-29:cssw141)

As mentioned, these determiner phrases will be assumed to be adjuncts throughout the dissertation.

Finally, Doak (1997:214-215) notes that there is a determiner “homophonous with the oblique” **ʔε**. Doak notes elsewhere that predicates following this morpheme **ʔε** indicate indefinite ergatives and absolutives (223), indefinite inanimate objects and animate non-topic ergative subjects (232), and patients (241). Doak labels this morpheme as “oblique” despite the apparent differences between its function and its homophonous counterpart the true oblique. Doak claims there is no evidence that the two morphemes are not the same (283:fn83). However, she does suggest that the oblique **ʔε** is preceded by one of the previously mentioned determiners and that the determiner **ʔε** is not preceded by other determiners in transitive constructions (219,315). In intransitive constructions Doak treats all instances **ʔε** of as being oblique. In short, these morphemes deserve further scrutiny to determine their true nature. Such an undertaking will not be part of this dissertation. However, these morphemes will simply be glossed ‘**ʔε**’ throughout rather than “obl” or “oblique” as Doak glosses them. Where clarity demands discussion of the morphemes to determine if the phonological form **ʔε** represents a true oblique or an indefinite determiner, discussion will be presented.

6. Summary

In this chapter, I have briefly described Cr clause structure. It has been shown that syntactically intransitive constructions are minimally comprised of a subject marking morpheme, and a root. Syntactically transitive constructions are minimally comprised of a root, transitivizing morpheme, object marking morpheme, and subject marking morpheme. Optionally, both intransitive and transitive clauses may include, aspect marking morphology, a limited set of tense marking particles, mood particles, determiner phrase(s), or any combination of these. In the next chapter a formal account of the basic clause structure is proposed.

CHAPTER 3

CR BASIC CLAUSE STRUCTURE: A FORMAL ACCOUNT

1. Introduction

The goal of this chapter is to present an analysis of the basic clause structure of transitive and intransitive constructions in Coeur d'Alene (henceforth Cr), and provide a formal account of the surface structure morpheme ordering. The basic clause structure is illustrated for the intransitive and transitive clause, (14) above.

- (37) a. intransitive
 čʔcgʷič
 č- ʔεc- √gʷič
 1pnom- cust- work
subject- aspect- root
 'We work.' (Doak 1997:85)
- b. transitive
 ʔεčεšncit
 ʔεc- √čεš -nt -si -t
 cust- accompany -dt -2acc -1p.erg
aspect- root transitivizer object subject
 'We go with you.' (Doak 1997:115)

The independent phrasal elements (DP) that Doak (1997) treats as adjuncts, and which may serve as what Kiss (1995:7) has described as notional subjects and/or notional objects, will not be discussed. Throughout this chapter it will be assumed that these DPs are not generated in argument positions as Doak suggests. In this way Cr is non-configurational in the sense of Baker (2001) and DP subjects and objects are adjuncts.

In the first half of this chapter it will be argued that the person marking morphemes in Cr are not agreement morphemes (Kroeger 1996; among others), but rather bound pronouns in the sense of Jelinek 1984. It will be demonstrated that an account of bound pronouns is preferable to a radical pro drop account (Baker 1996) as it provides a more elegant and simplified account of the Cr grammar. Further, Hale and Keyser's (2002) *Conflation* as head-movement (Harley 2004) will be employed in the analysis to maintain Chomsky's (1995) claim that head-movement is phonological in nature.

In the second part of this chapter it will be argued that the bound pronouns are independent ϕ -pronouns (Déchaine and Wiltschko 2002) generated in argument positions. Further, a possible diachronic account of the bound pronouns will be presented exploiting Speas' (2004) notion of lexicalized agreement. A diachronic argument that agreement morphemes were grammaticalized, in the terms of Newmeyer (1998), and thus "upgraded" to bound pronouns historically will be considered. However, this diachronic origin of bound pronouns will be rejected. It will instead be claimed that cross-family variation can be accounted for if it is assumed that bound pronouns have been the norm diachronically.

Before moving forward, a few notes regarding terminology are necessary. What has been thus far identified as 'agreement morphology', or 'person marking morphemes', in Cr will be referred to as 'bound pronouns' in anticipation of the conclusion of the argument. Despite the leading nature of the terminology, no commonly used phrase for such markers is neutral with respect to an analysis. Before my argument is established, however, my use of the term should not be taken as presupposing the analysis. Also, while many authors acknowledge Jelinek's origination of an analysis of agreement morphology as base generated in argument positions (cf. Doak 1997; Butt 2001; Hale

2000; Haugen 2004, 2006; among others), and others do not (cf. Vainikka and Levy 1999; among others), it will be assumed that these analyses capture Jelinek's (1984, 2004, 2006; Jelinek and Demers 1994) claim that previously analyzed agreement morphemes (e.g. previously analyzed as AGR-heads, etc.), are *bound pronouns* in a number of languages. For clarity, when referring to such works the term 'bound pronouns' will be employed to refer to any such agreement element, whether referred to as *incorporated pronouns* (Haugen; Butt), *pronouns* (Doak; Jelinek; Jelinek and Demers), *bound pronouns* (Bhat 2004), or as *functioning as pronouns* (Vainikka and Levy 1999).²⁶ It should also be noted that no claims regarding Jelinek's Pronominal Argument Parameter will be made in the following discussion, as Jelinek's parameter is a macro-parameter, which involves other considerations beyond argument structure (cf. Jelinek 2006 for discussion). However, key elements of the Pronominal Argument Parameter, specifically a ban on DPs in argument position, will be addressed in terms of micro-parametric variation.

Further, in the discussion involving what has been traditionally termed *pro drop*, the terms *null argument(s)*, *null subject(s)*, and *null object(s)* will be used. In recent years there has been much debate as to what constitutes a null argument (cf. §3.3.1 and references therein), and these terms will be employed for clarity. In the case of *radical pro drop*, the term used for languages such as Chinese and Japanese, which allow nearly all arguments to be dropped, the term *radical argument drop* will be used instead.

The chapter is organized as follows. In Section 2 Hale and Keyser's (2002) Conflation is introduced as the mechanism by which head-movement is instantiated in a

²⁶ It should be noted that the term bound pronoun is employed to capture the generalization that pronouns in these discussions are somehow bound. It should not be construed as a term that attempts to capture the syntactic mechanism involved in the various discussions noted in the references here. That is, it should be recognized that while an incorporated pronoun is in a sense "bound", the syntactic operations and outcomes that constitute the "binding" are different and lead to different results especially in terms of morpheme ordering.

Minimalist syntactic framework (Harley 2004). In Section 3 two potential analysis of Cr clause structure are presented, a bound pronoun analysis and a radical argument drop analysis. Section 3 will further present various arguments against the radical argument account. Section 4 presents a brief interim summary, and Section 5 presents the claim that bound pronouns in Cr are φ -pronouns (Déchaine and Wiltschko 2002). In Section 6 a potential diachronic genesis of bound pronouns is presented and then rejected, and finally, concluding remarks are found in Section 7.

2. Conflation

Hale and Keyser (2002) define Conflation as:

(38) *Conflation*

Conflation consists in the process of copying the p[honological]-signature of the complement into the p-signature of the head, where the latter is "defective." (63)

Hale and Keyser define a p-signature, or *p-sig*, as potentially being defective in one of two ways. A defective p-sig can be either a head with no phonological content, that is the p-sig is empty containing no phonological features, or it may be specified that the head is an affix (63). It is important to note that Hale and Keyser make a distinction between "null" morphemes, such as in the case of *pro* or PRO, which have non-defective phonological features, and "phonologically empty" morphemes that have defective phonological features. The difference is that a "null" morpheme, like *pro*, is comprised of a p-sig that is not defective, while the "phonological empty" morpheme will comprise a p-sig in need of phonological content.

Hale and Keyser argue that Conflation operates in tandem with Merge. They say:

We would like to take seriously the idea that Conflation is a concomitant of Merge, the operation which is fundamental in defining the projection of syntax from the lexicon (Chomsky 1995) ... To say that Conflation is a concomitant of Merge is to say that it is in some intimate manner bound up with Merge, that is a part of Merge in some sense. (60-61)

For Hale and Keyser Conflation occurs at Merge, and is the process of transferring phonological material from a phonologically complete complement to a phonologically defective head. That is, Conflation is the process of a head X merging with a complement Y (where Y is a maximal projection) whose label contains all the features of Y^0 including phonological features, or its p-sig. If X's p-sig is defective, at Merge Y's p-sig is conflated into X's. This allows X to now be pronounced with Y's phonological features. It is important to note that this feature does not motivate movement of the head, rather it motivates transfer of only the p-sig in the Hale and Keyser formalism at Merge. As Harley (2004) notes, this is crucially different from discussions of the Head-movement Constraint and triggers for head-movement that appeal to [\pm affix] feature as a trigger for movement (5 fn5). The key assumptions of Hale and Keyser's Conflation can be summarized as follows:

(39) Conflation: Key Assumptions

- a. A label of any constituent has ALL the features of the head, including some representation of a phonological matrix, (the 'p-sig' of the head).
- b. Conflation occurs when a constituent α is merged with a sister head β whose p-sig is 'defective'. The p-sig of α is merged into the p-sig of β .
- c. For economy reasons, the conflated p-sig only will be pronounced once, in its uppermost position.

(Harley 2004:3)

Harley (2004) proposes that Conflation is the mechanism with which 'head-

1995:321, 2001a 37; and Harley 2004 for discussion). Throughout the remainder of this dissertation head-movement will be construed as Conflation as outlined here.

Next we turn to two competing analysis of Cr basic clause structure.

3. Null arguments and bound pronouns

In this section two competing analysis of Cr clause structure will be presented. In Section 3.1 the bound pronoun analysis, adopted in this dissertation, is presented. In Section 3.2 a radical argument drop (Baker 1996; among others: cf. Neeleman and Szendrői 2005, 2006 for discussion of radical pro drop) analysis is presented. In Section 3.3 it is argued that licensing and identification, learnability, and typological considerations suggest the bound pronoun analysis is preferable to a radical argument drop analysis.

3.1. Bound pronoun analysis

Following Jelinek (1984; Bhat 2004), a bound pronoun analysis is presented here.

Assuming that bound pronouns are base generated in argument position, a rather straightforward account of the facts emerges. Given the transitive construction in (42a), (37b) above, the following tree (42b) illustrates the derivation outlined in (43).

- (42) a. Cr basic transitive construction
- | | | | | |
|-------------------|-----|-------|---------|--|
| ?εčēšncit | | | | |
| ?εc- √čēš | -nt | -si | -t | |
| cust- accompany | -dt | -2acc | -1p.erg | |
| 'We go with you.' | | | | |

- ʔεc-čɛš-nt*. Then, the whole constituent, a projection of ASP, is labeled with the p-sig of its head, *ʔεc-čɛš-nt*.
- f. The ASPP merges with an element from numeration, a null T head. Neither p-sig is defective, and no conflation occurs. The T projects and is labeled with the p-sig of its head.²⁸
 - g. The subject checks case via agree with the T head, as the probe/goal relationship cannot be satisfied by any element above the subject, and attaches to the verb-word sitting in Asp^o (a process of cliticization).

In this way we capture the facts of the surface morpheme order in the basic clause structure of Cr rather straightforwardly, without deviation from the tenets of the Minimalist Program of Chomsky (1995, 2000, 2001a, 2001b). For reason of space, intransitive and ditransitive²⁹ constructions will not be discussed here, but to see that the generalizations hold see Chapter 4 for examples of intransitive and ditransitive constructions under the above analysis. In the next section we see that a radical argument drop analysis raises numerous thorny theoretical issues that the present analysis is able to sidestep entirely.

3.2. Radical argument drop analysis

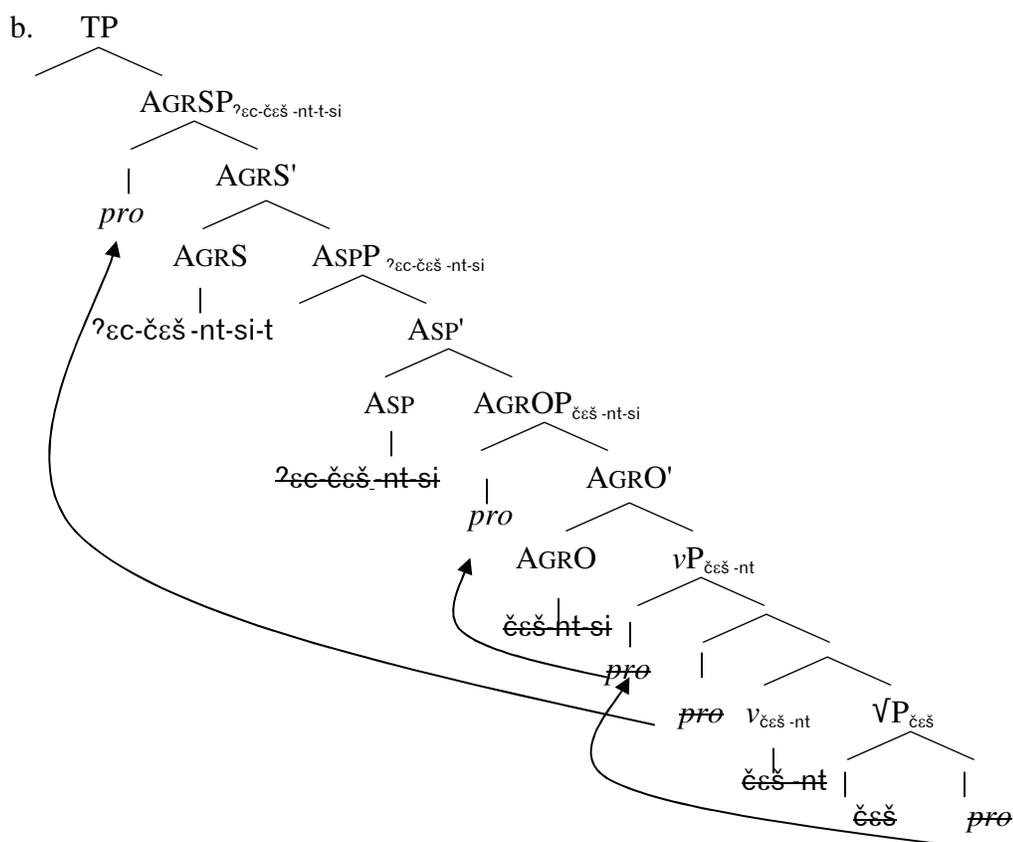
Under an analysis which characterizes the bound pronouns as agreement morphology (generated perhaps as AGR-heads and agreeing with null pronouns base-generated in argument position), Cr fits the descriptive generalization for radical argument drop in that with the exception of the first and second person intransitive constructions, all arguments are dropped. That is, under such an analysis *pro* or the first or second person clitics would be the only elements base generated in argument position. In this way it fits with

²⁸ In Chapter 5 it is demonstrated that a series of particles occur between AspP and TP, providing evidence that the predicate does not raise above ASPP.

²⁹ Here I use the term "ditransitive" for reasons of economy to refer to the applicative and benefactive constructions in Cr.

Chinese, Japanese, and other languages described as radical argument drop languages (Neeleman and Szendrői 2005, 2006 and references therein). This was illustrated in Chapter 2 in the discussion of bound pronouns (person marking morphemes). Given the transitive construction in (44a) and the corresponding tree in (44b), (42) above, the derivations outlined in (45) would represent a plausible instantiation of the radical argument drop analysis for Cr.

- (44) a. transitive
 ?εčēšncit
 ?εC-√čēš -nt -si -t
 cust- accompany -dt -2acc -1p.erg
 'We go with you.'



- (45) a. The root $\check{c}\acute{e}\check{s}$ 'accompany' merges with its complement the *pro* object.

Neither p-sig is defective, no conflation occurs. The \sqrt{P} is labeled with the p-sig of its head, $\check{c}\varepsilon\check{s}$.

- b. The \sqrt{P} labeled $\check{c}\varepsilon\check{s}$ merges with an element from the numeration, the v head *-nt* 'directive transitive' which has a defective p-sig and conflation occurs. The p-sig of \sqrt{P} , $\check{c}\varepsilon\check{s}$, is copied into the defective p-sig of v , giving $\check{c}\varepsilon\check{s}\text{-nt}$. The vP is labeled with the p-sig of its head, $\check{c}\varepsilon\check{s}\text{-nt}$.
- c. The v labeled $\check{c}\varepsilon\check{s}\text{-nt}$ merges with the subject, *pro*. Neither p-sig is defective, so no conflation occurs.
- d. The object *pro* raises to a second specifier position of v to check accusative case features. Neither p-sig is deficient. The whole constituent is labeled with the p-sig of the head v , $\check{c}\varepsilon\check{s}\text{-nt}$.
- e. The vP $\check{c}\varepsilon\check{s}\text{-nt}$ merges with an element from numeration, the AGRO head, *-si*, '2acc', which has a defective p-sig and conflation occurs. The p-sig of vP , $\check{c}\varepsilon\check{s}\text{-nt}$, is copied into the defective p-sig of AGRO, giving $\check{c}\varepsilon\check{s}\text{-nt-si}$. The AGROP is labeled with the p-sig of its head, $\check{c}\varepsilon\check{s}\text{-nt-si}$.
- f. The AGROP $\check{c}\varepsilon\check{s}\text{-nt-si}$ merges with an element from numeration, the ASP head $\text{?}\varepsilon\text{c-}$, 'customary'. This element's p-sig is defective, and conflation occurs. The p-sig of the AGROP, $\check{c}\varepsilon\check{s}\text{-nt-si}$, is copied into the defective p-sig of ASP, giving $\text{?}\varepsilon\text{c-}\check{c}\varepsilon\check{s}\text{-nt-t}$. Then, the whole constituent, a projection of ASP, is labeled with the p-sig of its head, $\text{?}\varepsilon\text{c-}\check{c}\varepsilon\check{s}\text{-nt-si}$.
- g. The ASPP merges with an element from numeration, the AGRS head *-t*, '1erg'. This element has a defective p-sig, and conflation occurs. The p-sig of AspP, $\text{?}\varepsilon\text{c-}\check{c}\varepsilon\check{s}\text{-nt-si}$, is copied into the defective p-sig of AGRS, giving $\text{?}\varepsilon\text{c-}\check{c}\varepsilon\check{s}\text{-nt-si-t}$. AGRS projects and is labeled with the p-sig of its head, $\text{?}\varepsilon\text{c-}\check{c}\varepsilon\check{s}\text{-nt-si-tc}$.
- h. The AGRSP merges with an element from numeration, a null T head. Neither p-sig is defective, and no conflation occurs. The T projects and is labeled with the p-sig of its head.³⁰

Problems with the tree in (43b) can be divided into two parts: theoretical and empirical.

Empirically, there is no evidence that movement of the predicate occurs above ASPP (cf.

³⁰ For brevity I do not include mention of the subject and object *pro* raising to SpecAgrP, see Holmberg (2005) for an analysis of *pro* movement within the Minimalist Program. Holmberg argues that within a Minimalist analysis *pro* must transfer agreement features to the agreement morphemes, not vice-versa as previously argued (see Jaigli and Safir (1989) among others).

Chapter 5 for discussion of particle heads which appear higher in the structure than the predicate), thus a reformulation of the AGRPs in the functional structure, taking the facts outlined in Chapter 5 into consideration, would be necessary for any radical argument drop analysis. Again, since this is not the analysis adopted here no such reformulation will be proposed.

Theoretically, comparing the trees in (42b) and (44b), and the derivations that derive them, it can be seen that the bound pronoun theory is a much better fit with Chomsky's 1994 *Elementary Principles of Economy*.

(46) Elementary Principles of Economy

- a. Add optional α to numeration only if it has an effect at the interface.
- b. At each stage of a derivation, apply the most economical operation that leads to convergence. (367)

Under the radical argument drop theory, *pro* and AGRP combined serve to perform the same functions as the bound pronouns in the bound pronoun analysis. Further, in post 1995-Minimalism, AGRPs are considered to be unmotivated.

In the next section, it will be argued that the radical argument drop analysis poses a number of complications that do not arise under the bound pronoun analysis.

3.3. Bound pronouns over radical argument drop

In this section it will be argued that the radical argument drop account becomes problematic when considerations regarding the following are taken into account: (1) the exact nature of the null arguments (are they *pro*?, elided NPs?, empty nouns/, etc.); (2) licensing conditions and identification; (3) learnability; and (4) cross-linguistic typological facts. Each of these will be addressed separately in this section.

3.3.1 Null argument in Cr: What are they?

For any argument that treats bound pronouns in Cr as agreement morphology, null arguments in the following constructions must be fully identified in terms of features, function, and the lack of phonological content.

- (47) a. intransitive 3rd person constructions (assuming 1st and 2nd person intransitive person marking morphemes are clitics base generated in argument positions)
- b. transitive 1st, 2nd, and 3rd person constructions
- c. ditransitive 1st, 2nd, and 3rd person constructions
- e. 1st, 2nd, and 3rd person genitive constructions

It is simply not enough to claim that *pro* is generated in argument positions (Baker 1996; Davis and Matthewson 2003 for Salish), as cross-linguistically this has been a problematic claim. When the precise nature of the *pro* proposal is investigated, wildly varying proposals result. For example, Zushi 2003 (among others) claims that Japanese null arguments are *pro*, while this claim is countered by Oku (1998), Saito (2003), Sato (2006), and Sato and Ginsburg (forthcoming) (and reference therein) with the claim that the null arguments are recycled arguments. Further, Huang 1984 argues that null objects are variables in Chinese, while Neeleman and Szendrői 2005 make the claim that they are null pronouns. In addition, as Satterfield 2003 notes, contra Rizzi 1997b, "*pro* Catalan equal *pro* Italian, equals *pro* cross-linguistically" is not the case, *pro* is invariant cross-linguistically (225). In addition, it has been argued that *pro* does not exist (Panagiotidis 2003). In (48) various labels that have been employed to describe null arguments are listed, though the list is not exhaustive by any means.

(48) accounts of null arguments cross-linguistically

- a. *pros* with various content (Alexiadou and Anagnostopoulou 1997; Zushi 2003 (proposes three types of *pro* with different syntactic features); among others)
- b. variables (Huang 1984)
- c. empty nouns (Panagiotidis 2003)
- d. null pronouns in terms of Chomsky 1982; Rizzi 1986; Holmberg 2005³¹
- e. recycled arguments (Oku 1998, Saito 2003, Sato 2006 and references therein; Sato and Ginsburg forthcoming)
- f. bare NPs (Hoji 1998; Tomioka 2003)

Consequently, it seems clear that any proposal which can be implemented without invoking such a problematic concept is to be preferred over a proposal which requires it. In short, the radical argument drop analysis is challenged by a need to identify the null arguments in terms of syntactic features. This problem does not arise for the bound pronoun analysis. Further, it would be necessary for any radical argument drop analysis to account for null 3rd person agreement morphology as well as null arguments.³² This additional problem regarding null agreement does not arise in the bound pronoun analysis.

Another problem for the radical argument analysis is the issue of how null arguments are licensed and how null arguments are identified in terms of reference. This issue is addressed in the next section.

3.3.2 *Licensing and identification considerations*

Over the past twenty-plus years there have been a number of claims regarding the licensing of null arguments and the recovery of a null argument's identity, or reference. Some of the claims put forth in the Generative tradition are listed in (49). It should be

³¹ Cf. Holmberg 2005 for a general discussion of how the three differ.

³² Baker 2002 provides an account of null 3rd person agreement, however, it crucially relies on his macro parameter, the Polysynthesis Parameter.

noted that many of the claims put forth regarding null arguments have focused on null subjects only, this is indicated by simply stating "null subjects" rather than "null arguments."

- (49) a. null subjects occur in languages with uniform agreement paradigms (Jaegli and Safir 1989; Speas 1993, 2004; among others - but cf. Neeleman and Szendrői 2005, 2006; Vainikka and Levy 1999; Ackeman and Neeleman 2006; Butt 2001; Haegeman and Ihsane 2001 among others for arguments against this claim)
- b. agglutinating languages allow radical argument drop (Neeleman and Szendrői 2005, 2006)
- c. EPP features on T license null arguments (Zushi 2003; cf. Silva-Villar 1998 for a similar analysis involving the licensing of multiple specifiers of C)
- d. Radical argument drop occurs in languages with bare NP arguments (Tomioka 2003: cf. Neeleman and Szendrői 2005, 2006 for arguments against and Zushi 2003 for further discussion of)
- c. null arguments occur in languages where AGR can be base generated in argument positions (Jelinek 1984; Doak 1997; Vainikka and Levy 1999; Butt 2001; Hale 2000; among others)
- d. null arguments occur in languages without overt expletives (cf. Silva-Villar 1998 for discussion and arguments against, also Vainikka and Levy 1999; Haegeman and Ihsane 2001; Holmberg and Nikanne 2002; Holmberg 2005; among others for arguments against)

The following typological considerations illustrate that many, in fact all of the generalizations that are reflected in (49) do not hold cross-linguistically.

Table 9: Some cross-linguistic facts regarding null arguments³³

	UAGR	EXPLTV	AGGLUT	FUSN
Afrk (-)	✓	○	○	○
Chn (s,o)	✓	–	✓	–
BEngl (rs)	–	✓	–	✓
Cr (s,o)	✓	–	–	✓
EMD (rs)	–	○	○	○
Finn (s)	✓	✓	✓	–
Frn (ro)	–	○	○	○
Galac (s)	○	✓	○	○
Gale (s)	○	✓	○	○
Heb (rs,o)	–	✓	○	○
Ice (s)	✓	✓	○	○
Ital (s,ro)	✓	○	–	✓
Jpn (s,o)	✓	○	✓	–
Krn (s,o)	○	○	✓	–
BPort(s,o?)	✓	○	–	✓
EPort (s)	✓	✓	–	✓
Occit (s)	○	✓	○	○
Rus (-)	✓	○	○	○
Sist (s)	○	✓	○	○
Swd (-)	✓	✓	–	✓

○ = not identified here, ✓ = language has property, – = language doesn't have property (-) = doesn't allow null arguments; (s,o) = allows null subject and object; (s) = allows null subject; (o) = allows null object; (r) = restricted; UAGR = uniform agreement

³³ *LANGUAGES AND SOURCES:* Afrk = Afrikaans (Neeleman & Szendrői 2005); Chn = Chinese (Huang 1984; Zushi 2003; Neeleman & Szendrői 2005 – NOTE Zushi and Neeleman and Szendrői analyze null objects differently than Huang 1984); BEngl = British English (Haegeman and Ihsane 2001); Cr = Coeur d'Alene (here I consider the 1st and 2nd person clitics fusional); EMD = Early Modern Dutch (Ackeman and Neeleman 2006); Finn = Finnish (Holmberg 2002, 2005; Neeleman & Szendrői 2005); Frn = French (Rizzi 1997b); Galac = Galacian (Raposo & Uriagereka 1990; Rizzi 1997b); Gale = Galegan (Silva-Villar 1998); Heb = Hebrew (Rizzi 1997b; Vainikka and Levy 1999 – note Rizzi analyzes Hebrew as having *pro* and Vainikka and Levy analyze Hebrew as having bound pronouns); Ice = Icelandic (Rizzi 1997b:277; Silva-Villar 1997:250 – NOTE Roberts 1997:153 presents Icelandic as not a pro drop language); Ital = Italian (Rizzi 1986, 1997b; Zushi 2003; Neeleman & Szendrői 2005- NOTE Italian object pro limited to specific construction where an overt pronoun is not possible – cf. Rizzi 1986 for details); Krn = Korean (Neeleman & Szendrői 2005); Occit = Occitan (Silva-Villar 1998); BPort = Brazilian Portuguese (Rohrbacker 1994; Vainikka & Levy 1999 – NOTE Huang 1984: 541 analyzes BPort pro drop similar as similar to Chinese – William Alexander (pc) notes that BPort is no longer a pro drop language); EPort = European Portuguese (Rohrbacker 1994 Speas 1994; Vainikka & Levy 1999; Silva-Villar 1998); Rus = Russian (Speas 1994; Vainikka & Levy 1999); Sist = Sisternian (Silva-Villar 1998); Swd = Swedish (Speas 1994; Neeleman & Szendrői 2005; Hulden pc)

paradigm; EXPLTV = expletive (overt); AGGLUT = agglutinating case or number etc; Fusn = fusional for case

In short, if an appeal to the radical argument drop analysis were made in Cr, the licensing and identification of the null arguments, and null third person agreement morphology, would have to be accounted for-Not an easy task as Table 9 and (47) illustrate. This issue is not as problematic for the bound pronoun analysis proposed, as the discussion of learnability and typological considerations illustrate next.

3.3.3. Learnability considerations

Under the radical null argument analysis Cr children would have to learn a hybrid system of argument marking, while under the bound pronoun analysis children learning Cr as a first language would learn a unified system of argument marking. In what follows, it is argued that the unified system of the bound pronoun analysis is preferable in terms of learnability and Occam's Razor, given the known facts.

3.3.3.1 Null argument analysis: The hybrid system

Under the radical null argument analysis learners must come to terms with two divergent systems of argument structure, clitics and agreement, and acquire null arguments as well as null agreement.³⁴ Recall that DPs and NPs are understood to be optional adjuncts and never occur in argument position. Thus, in intransitive constructions the learner must learn mandatory overt first and second person clitics and a mandatory null third person clitic, in addition to mandatory null agreement morphology in the first second and third person as in (50).^{35,36} The learner must learn which affixes are arguments and which are

³⁴ For reasons of economy the non-topic ergative and imperative paradigm and the third person plural agreement affix *-i/s* will not be discussed; however, this will not affect the analysis presented.

³⁵ It is assumed following Speas (1994, 2006) and Vainikka and Levy (1999) that AGR must be licensed in intransitive constructions in a radical argument drop analysis, even though there is no phonological evidence for its existence.

agreement.

(50) a. subject intransitive clitics

	singular	plural
1 st	čn	č
2 nd	k ^w u	k ^w up
3 rd	∅	∅

b. intransitive agreement

	singular	plural
1 st	∅	∅
2 nd	∅	∅
3 rd	∅	∅

In the case of transitive and ditransitive constructions the learner must come to terms with mandatory null arguments, represented here as null pronouns, and mandatory overt first and second person agreement morphology and mandatory null third person agreement morphology as in (51).

(51) a. object trans/ditrans pronouns

	singular	plural
1 st	∅	∅
2 nd	∅	∅
3 rd	∅	∅

b. trans/ditrans agreement

	singular	plural
1 st	-sɛ(l)/mɛ(l)	-ɛl(i)
2 nd	-si/-mi	-ulm(i)
3 rd	-∅	-∅

In the case of genitive constructions the learner must acquire mandatory null arguments, again represented by null pronouns, and mandatory overt first, second, and third person agreement morphology as in (52).

(52) a. genitive pronouns

	singular	plural
1 st	∅	∅
2 nd	∅	∅
3 rd	∅	∅

b. genitive agreement

	singular	plural
1 st	hn-	-ɛt
2 nd	in-	-mp
3 rd	-s	-s

³⁶ Another possibility would be to analyze the first and second clitics as agreement morphology. However, see Davis (2000) for remarks on Proto-Salish subject inflection and potential problems for such an analysis.

In conclusion, under the hybrid system of the radical argument drop analysis the learner has a number of tasks, not the least of which is distinguishing between agreement morphology and clitics in intransitive constructions. What the child must learn is outlined in (53).

(53) The hybrid system: What must be learned

- (i) distinction between agreement and first and second person clitics
- (ii) first and second person clitics overt in intransitive constructions
- (iii) third person clitics null in intransitive constructions
- (iv) agreement morphology null in intransitive constructions
- (v) all arguments null in transitive, ditransitive, and genitive constructions
- (vi) third person agreement null in transitive and ditransitive constructions
- (vii) third person agreement overt in genitive constructions

Next the unified system is presented and it is argued that it supports the claim that the bound pronoun analysis is preferable in terms of minimality.

3.3.3.2 Bound pronoun analysis: The unified system

Under the unified system the learner is presented with what appears to be a much simpler task: learning three distinct pronoun paradigms. Under this analysis the learner need not distinguish between agreement and clitics, nor learn a variety of null arguments. The unified system requires the learner to simply learn that third person arguments are null in all cases but the genitive, as illustrated in (54).

(54) (i) intransitive

	singular	plural
1 st	čn	č
2 nd	k ^w u	k ^w up
3 rd	∅	∅

(ii) transitive / ditransitive

	singular	plural
1 st	-sɛ(l)/mɛ(l)	-ɛl(i)
2 nd	-si/-mi	-ulm(i)
3 rd	-∅	-∅

(iii) genitive

	singular	plural
1 st	hn-	-ɛt
2 nd	in-	-mp
3 rd	-s	-s

Assuming the Cue based model of parameter setting (Lightfoot 1997a, 1997b; Dresher 1999, 2003a, 2003b), the unified system would be quite preferable over the hybrid system. Under the unified system i, ii, and iii in (55) could be the cues for the setting of a potential parameter for null 3rd person or the accessing of an element available in UG, a null pronoun, via a principle. That is, it may not be a ‘parameter’, but rather a null morpheme in the given cell provided by UG that is accessed via the necessary “cue(s).”

(55) Cues for null third person

- i. mandatory pronouns would be the cue that pronouns must be in argument positions
- ii. DP and NP subjects and objects never occur in argument positions, a further cue that pronouns are arguments
- iii. no overt phonological arguments necessary in third person intransitive, transitive and ditransitive constructions, the cue that the morpheme is null

Under the hybrid system the learner would need a number of cues to arrive at the proper argument paradigms. The conclusions arrived at are stated in (56).

(56) Conclusion:

- Learnability considerations suggests bound pronoun analysis (unified system) preferable to radical argument drop analysis (hybrid system)
- Occam's Razor, given the known facts, would lead one to choose a single system (bound pronouns) over a system that requires multiple systems (radical argument drop)

Finally, we turn to typological considerations and how the two analyses position Cr in terms of other languages of the world typologically.

3.4. Bound pronouns vs. agreement: Some typological considerations

In the discussion above regarding generative claims about licensing and identification of null arguments, it was demonstrated that none of the typological generalizations held entirely. However, Neeleman and Szendrői's 2005, 2006 claim that agglutinating languages allow radical pro drop has the greatest coverage cross-linguistically (as discussed below). Neeleman and Szendrői (2006) employed the *World Atlas of Language Structure* (Haspelmath, Dryer, Gill, and Comrie 2005) and were able to search hundreds of languages for counter examples to their claim.³⁷ In that search they found only ten languages that raised potential challenges to their generalizations (46). However, they arrived at analyses of these ten languages that supported their claims (cf. 46-51 for discussion). In short, the typological generalization arrived at by Neeleman and Szendrői are the strongest to date regarding radical argument drop. If the radical argument drop analysis is correct, it would be expected that Cr would fit the typological generalizations arrived at by Neeleman and Szendrői. As will be demonstrated, this is not the case. On the other hand, under the bound pronoun analysis Cr fits rather straightforwardly into the typology of Neeleman and Szendrői.

Neeleman and Szendrői (2005, 2006) argue that languages like Japanese which have *agglutinating* case (individual case marking morphemes such as *-ga* 'nominative' and *-o* 'accusative'), that attaches to pronouns and other arguments, allow radical argument drop. Languages such as English which have *fusional* case (*he* vs. *him* etc.), allow either no argument drop or allow context sensitive argument drop (such as in

³⁷ In fact, of the dozens of languages they analyzed prior to the search of the *World Atlas of Language Structure*, only one language was identified as not fitting within their typological generalizations, Finnish.

Italian). For languages like Chinese which allow radical argument drop but are indifferent to case marking (case is not marked), other agglutinating elements such as number place it typologically with Japanese. Neeleman and Szendrői's generalizations are illustrated in (57).

(57) Neeleman & Szendrői 2005:98 Typology³⁸

<i>PROPERTIES OF THE PRONOMINAL PARADIGM</i>				
	<i>AGGLUTINATING CASE</i>	<i>INVARIANT FOR CASE</i>		<i>FUSIONAL CASE</i>
		agglutinating for number, etc	invariant or fusional for number, etc	
<i>RADICAL PRO DROP</i>	Japanese Korean Burmese Assamese Hindi/Urdu Turkish	<i>Chinese</i> <i>Kokota</i> <i>Cheke Holo</i>		
<i>NO RADICAL PRO DROP</i>				Italian Pashto Greek BEnglish
			Papiamentu Tok Pisin Jamaican Creole	Afrikaans Swedish Dutch

CONTEXT SENSITIVE PRO DROP

NO PRO DROP

Not only does the typology account for a great number of languages, it also clearly distinguishes Chinese- and Japanese-type argument drop from Italian- and Greek-type argument drop. Further, allowing for different motivations for argument drop cross-linguistically allows for the conflicting accounts of argument drop seen above in §3.3.1 and §3.3.2. In short, analyses such as that of Neeleman and Szendrői (2005, 2006) allow for a clear distinction between languages capable of dropping nearly every argument (Chinese, Japanese etc.) and languages that are far more restrictive in allowing

³⁸ The typology has been modified to reflect Haegeman and Ihanse's 2001 claims regarding British English.

arguments to be dropped, “context sensitive” (Spanish, Greek, Hebrew, British English, etc.). Yet, Neeleman and Szendrői do not place restrictions on accounts of context sensitive argument drop, allowing for argument drop to be analyzed as deriving from similar or dissimilar grammatical mechanisms between any given context sensitive language. For example, a claim that Hebrew and Standard Finnish argument drop are derived from the same grammatical mechanisms (Vainikka and Levy 1999), would not conflict with Neeleman and Szendrői's claims. Having presented the generalizations arrived at by Neeleman and Szendrői we turn to Cr.

Under the radical argument drop analysis the typology does not hold. Under such an analysis the first and second person clitics, fusional for case, as they do not include any agglutinative case marking yet phonologically indicate case, would predict that Cr should not be a radical argument drop language (languages with fusional case do not have radical argument drop). However, as the data in Chapter 2 illustrates Cr drops nearly every single argument, Cr would thus not fit within Neeleman and Szendrői's (2005, 2006) typology of argument drop languages. That is, languages that can drop the vast majority, if not all, arguments must have agglutinating properties that Cr does not have.

Under the bound pronoun analysis Cr would fit naturally into the typology. The bound pronouns, being fusional for case, would lead one to assume that argument drop would be restricted (languages with fusional case have restricted argument drop). As the third person is the only null argument under this analysis, argument drop would indeed be restricted (similar to object drop in Italian see Rizzi (1986) for discussion). Thus, under the bound pronoun analysis Cr fits within the typological coverage of Neeleman and Szendrői (2005, 2006). In short, the bound pronoun analysis is once again preferable to the radical argument drop analysis, this time in terms of typological characteristics.

4. Interim summary

It has been argued that a bound pronoun analysis of arguments in Cr is preferable to a radical argument drop analysis. It has been claimed that any account involving *pro* would be problematic as there appears to be no clear consensus cross-linguistically what *pro* is exactly. Further, it has been argued that licensing conditions and recoverability of the null arguments is also complicated by a lack of cross-linguistic consensus regarding the exact nature of these two phenomena. In terms of learnability it has also been claimed that the hybrid system of the radical null argument analysis poses a number of challenges to the learner that the unified system of the bound pronoun analysis avoids.

In addition, in terms of typological characterizations it was shown that the bound pronoun analysis fits with the typological generalizations arrived at by Neeleman and Szendrői (2005, 2006). Under the radical argument drop analysis, Cr would not fit within these typological generalizations. It was further noted that the radical argument drop analysis requires more syntactic elements in numeration and extra derivations not necessary under the bound pronoun analysis, in line with Chomsky's (1995) economy conditions. In short, it has been argued that the bound pronoun analysis is the best analysis given the two. Next, we turn to a claim that bound pronouns in Cr are φ -pronouns in terms of Déchaine and Wiltschko (2002).

5. Bound pronouns as ϕ -pronouns³⁹

In this section the notion of ϕ -pronouns is introduced. Section 5.1 presents the basic tenets of Déchaine and Wiltschko's (2002) proposal. Section 5.2 presents Déchaine and Wiltschko's Halkomelem (Salishan/Central Coast) data and analysis of DP-pronouns. Section 5.3 presents their Shuswap (Salishan/Northern Interior) data and analysis with a re-analysis of the data that strengthens their claims regarding ϕ -pronouns. Section 5.4 presents data from Cr and further analysis arguing that the bound pronouns in Cr are ϕ -pronouns, and that the null third person is a null ϕ -pronoun.⁴⁰ While the data in the following discussion focuses on Salishan languages, Déchaine and Wiltschko's original claims include analysis of English and French, supporting their claim that the notion of "pronoun is not a primitive" cross-linguistically.

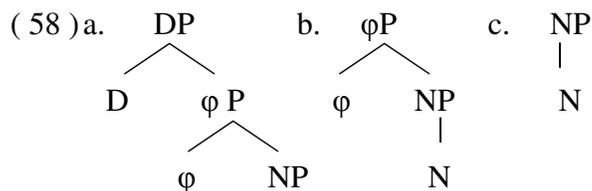
5.1. The basic tenets of Déchaine and Wiltschko (2002)

Déchaine and Wiltschko (2002:409) argue that the notion "pronoun" is not a primitive and that there are at least three types of pronouns: *pronoun-DP*, *pronoun- ϕ P* and *pronoun-NP*.⁴¹ For Déchaine and Wiltschko each pronoun type has a distinct categorical status which can be illustrated in (58) below.

³⁹ Throughout this section I present the data as it appears in its original source in cases where DéChaine and Wiltschko (2002) present a slight variation of the original form. In general this is simply the addition of a null morpheme indicated in the original not present in Déchaine and Wiltschko's (2002) representation of the data. I do however indicate where the data appears in Déchaine and Wiltschko (2002) along with where it appears in the original source.

⁴⁰ Cf. Holmberg 2005 for discussion of Déchaine and Wiltschko's (2002) ϕ -pronouns as null arguments, specifically *pro*.

⁴¹ This is similar in many ways to Zushi's (2003) claim that there are three types of *pro*: DP-*pro*, Num-*pro*, and NP-*pro*.



(Déchaine and Wiltschko 2002:410)

Déchaine and Wiltschko provide the following summary of the categorical status of these pronominals (410).

Table 10: Nominal proform typology

	Pro-DP	Pro- φ P	Pro-NP
Internal Syntax	D syntax; morphologically complex	neither D syntax nor N syntax	N syntax
Distribution	argument	argument or predicate	predicate
Semantics	definite	---	constant
Binding-theoretic status	R-expression	variable	---

Déchaine and Wiltschko (2002:419) argue that not all argument expressions are DPs, contra Longobardi (1994). However, they do agree with Longobardi's claim that DPs must be arguments (59a) and that NPs must be predicates (59b). Their claim departs from Longobardi in that their φ P can be an argument or a predicate. The claim is then that not all arguments are DPs (59c) and not all nominal predicates are NPs (59d).

- (59) a. DP: Argument
 b. NP: Predicate
 c. Argument: DP, φ P
 d. Nominal predicate: NP, φ P

What concerns us here is Déchaine and Wiltschko's analysis of DP-pronouns and φ P-pronouns, I refer the reader to Déchaine and Wiltschko for greater explication of their NP-pronoun proposal.

5.2. DP-Pronouns: The Halkomelem (Salishan/Central Coast) data

Déchaine and Wiltschko (2002) argue that DP-pronouns have the syntax of determiner phrases, are restricted to argument positions, and function as R-expressions (410). To illustrate the properties of DP-pronouns Déchaine and Wiltschko provide the following analysis of Halkomelem (411).

Halkomelem is a head-marking language. In addition to pronominal clitics and affixes, Halkomelem has a set of independent emphatic pronouns. These pronouns are listed in Table 11.

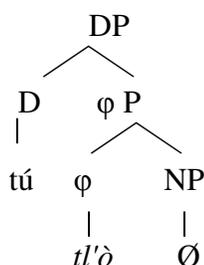
Table 11: Halkomelem independent pronouns (Déchaine and Wiltschko 2002:412)

Singular	Plural
1 <i>te</i> - 'élthe (DET-1SG) <i>te-á'lthe</i> (DET-1SG.EMPH)	<i>te-lhlímelh</i> (DET-1PL)
2 <i>te-léwe</i> (DET-2SG)	<i>te-lhwélep</i> (DET-2PL)
3 <i>tú-tl'ò</i> (DET-3SG)	<i>tu-tl'ó:lem</i> (DET-3PL) <i>thu-tl'ó:lem</i> (DET.FEM-3PL) <i>yu- tl'ó:lem</i> (DET.PL-3PL)

Déchaine and Wiltschko (2002) argue that the Halkomelem data shows all the properties of full DPs. According to Déchaine and Wiltschko, independent pronouns in

Halkomelem are morphosyntactically complex and comprise a determiner *tú* and a ϕ -pronoun, in the example (60) the ϕ -pronoun is *tl'ò* (3SG) (412).

(60) Halkomelem Pro-DP Structure (Déchaine and Wiltschko 2002:412)



Galloway (1993) identifies the non-determiner element *tl'ò* and the other ϕ -elements in Table 11 above as independent pronouns (verbal), that are "used by themselves to answer such questions as: 'Who's there?', 'Who made this?' or 'Who wants to go?'" (171-72). Further, these ϕ -pronouns are used in sentences where the ϕ -pronoun is in its, to use Déchaine and Wiltschko's (2002:413) term, *predicative* form. The following illustrates.⁴²

(61) [*tl'ò*]_{PRED}-cha te Bill kw'e may-th-óme
 3sg -FUT DET Bill comp help-TRANS-2SG.OBJ
 'It will be Bill that helps you.'

(Galloway 1993:172 in Déchaine and Wiltschko 2002:413)

Déchaine and Wiltschko note that the DP-pronouns cannot appear in what they describe as predicative position (62).

⁴² Here, and elsewhere where data is Halkomelem or Shuswap, I use DéChaine and Wiltschko's (2002) symbols and abbreviations: 1 = 1st person, 2 = 2nd person, 3 = 3rd person, AGR = agreement, ARG = argument, CONJ = conjunction, COMP = complementizer, DEIC = deictic, DET = determiner, EXCL = exclusive, EMPH = emphatic, FUT = future, OBJ = object, OBL = oblique, REDUP = reduplicative, SG = singular, SUBJ = subject, TRANS = transitivizer. The abbreviation SO was not identified in DéChaine and Wiltschko (2002) nor was I able to locate it in Galloway (1993), where the same abbreviation is employed.

Table 12: Shuswap independent pronouns

(adapted from Kuipers 1974, Lai 1998 in Déchaine and Wiltschko 2002:414)

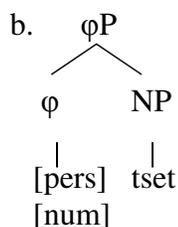
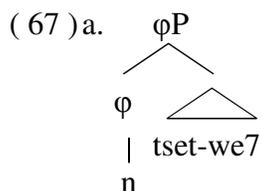
Singular	Plural
1 n-tset-we7 (1SG-EMPH-DIEC)	wll-enwi7-kt (PL-EMPH-1PL) wll-enwi7-s-kucw (PL-EMPH-3-2EXCL)
2 7-enwi7 (2SG-EMPH)	wll-enwi-mp (PL-EMPH-2PL)
3 newi7-s (EMPH-3)	wll-enwi7-s (PL-EMPH-3)

Déchaine and Wiltschko identify these pronouns as ϕ -pronouns and provide the following structure to illustrate their composition.



I propose a re-analysis of (66) based on the fact that Kuipers (1974:43) identifies the person marking morphemes in Table 4 as comprising the possessive morpheme paradigm is presented in (67b). In a re-analysis of (66), the person marking morphemes are the ϕ -head, as would be expected by Déchaine & Wiltschko's (2002:410) claim that the ϕ -head has ϕ -features, person, number, possibly gender and no other content, and their analysis of the Halkomelem data above. Further, it is suggested that the emphatic element is a predicate perhaps in NP.⁴⁵ In the case of the first singular a deictic affix attaches to the NP. This can be illustrated in (67) where (67a) illustrates the reanalysis of (66) and (67b) illustrates the reanalysis in general terms for the entire paradigm in Table 12.

⁴⁵ Here I suggest the predicate is nominal. I do not dismiss the possibility that the predicate may be verbal, in which case the structure would comprise a ϕ P with a verbal XP sister.



Such a re-analysis would not change Déchaine and Wiltschko's claims. On the contrary, it would seem that it strengthens their claims and demonstrates that Shuswap emphatic pronouns, like Halkomelem emphatic pronouns, are morphosyntactically complex.

Déchaine and Wiltschko (2002) demonstrate that ϕ P-pronouns do not have NP syntax (425). This can be seen if we compare (68a) and (68b), where (68a) illustrates a grammatical category N construction.

- (68) a. Yirí7 te [sqélemcw]_N l wí.w.k-t-sem-s
 DEIC OBL man COMP see(REDUP)-TRANS-1SG.OBJ-3SG.SUBJ
 'That's the man that saw me.'
 (Lai 1998:41.39a in Déchaine and Wiltschko 2002:415)

- b. *Yirí7 te [newi7-s]_N l wí.w.k-t-sem-s
 DEIC OBL EMPH-3 COMP see(REDUP)-TRANS-1SG.OBJ-3SG.SUBJ
 'That's the man that saw me.'
 (Lai 1998:41.39b in Déchaine and Wiltschko 2002:415)

Déchaine and Wiltschko (2002) argue that ϕ P-pronouns do not have DP syntax in Shuswap. Their claim is that if ϕ P-pronouns in Shuswap had DP-pronoun status it would be expected that they could not be modified by a determiner as in (69a). Specifically, they

argue that the position filled by the ϕ P-pronoun in (69a) is comparable to that of (69b) where Déchaine and Wiltschko argue that *John* is an NP (415).

- (69) a. [Wí.w.k-t-Ø-en]_{PRED} [re n-tséts-we7]_{ARG}
 see(REDUP)-TRANS-3SG.OBJ-1SG.SUBJ DET 1SG-EMPH-DIEC
 'I saw him.'
 (Lai 1998:28.10 in Déchaine and Wiltschko 2002:415)

- b. [Wík-t-Ø-s]_{PRED} [re John]_{ARG}⁴⁶
 see-TRANS-3SG.OBJ-1SG.SUBJ DET John
 'I saw John.'
 (Lai 1998:28.11 in Déchaine and Wiltschko 2002:415)

Déchaine and Wiltschko conclude that Shuswap ϕ -pronouns are neither NPs nor DPs. However, Déchaine and Wiltschko demonstrate that they can function as what they describe as arguments (70) and predicates (71).

- (70) a. [Wí.w.k-t-Ø-en]_{PRED} [newí7-s]_{ARG}
 see(REDUP)-TRANS-3SG.OBJ-1SG.SUBJ EMPH-3
 'I saw HIM.'
 (Lai 1998:28.13 in Déchaine and Wiltschko 2002:416)

- b. [Newí7-s]_{ARG} [Wík-t-Ø-s]_{PRED} [Mary]_{ARG}
 EMPH-3 see-TRANS-3SG.OBJ-3SG.SUBJ Mary
 'HE saw Mary.'
 (Lai 1998:28.11 in Déchaine and Wiltschko 2002:416)

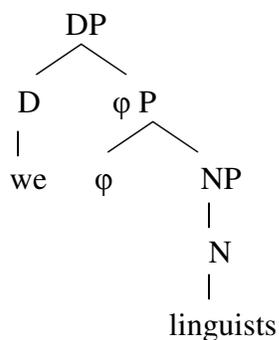
⁴⁶ It is not clear if R-expressions such as *John* are considered NPs or DPs in Shuswap. It is the case that some languages, such as Italian and German, may allow a Det⁰ to be sister to a DP (Longobardi 1994). This appears to be the case in Cr where an R-expression such as *John* may appear with or without a Det⁰ in what have been analyzed as DPs in topic positions (Doak 1997:257). The lack of clarity here will not affect the following analysis of Cr.

can be accounted for if 1st and 2nd person plural pronouns are analyzed as DPs⁴⁷ and 3rd person plural are analyzed as ϕ Ps. This can be illustrated in (73) and (74).

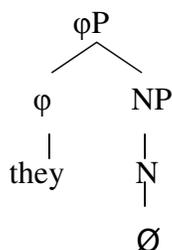
- (73) a. *we* linguists *us* linguists
 b. *you* linguists *you* linguists
 c. **they* linguists **them* linguists

(Déchaine and Wiltschko (2002:421))

- (74) a. DP Structure: 1st and 2nd Person



⁴⁷ In their discussion, Déchaine and Wiltschko (2002) refer to these pronouns as DPs, however, in their analysis these are D° , this does not have implications for the analysis here.

b. φ P Structure: 3rd Person⁴⁸

(Déchaine and Wiltschko (2002:421))

Déchaine and Wiltschko go on to demonstrate how this analysis holds for the pronominals discussed despite dialect variation. Now we turn to Cr.

5.4. Coeur d'Alene (Salishan/S. Interior) emphatic pronominals

Coeur d'Alene is similar to Shuswap in that arguments marked on the verb have been described as clitics or agreement affixes (bound pronouns). As described below, full DP arguments are optional and the independent emphatic pronouns pattern with φ -pronouns. Doak (1997) identifies the following pronouns in Table 13 as being emphatic or stand alone predicates. Further, she argues that they are constructed as "intransitive predicates with nominative pronouns and unanalyzable roots that are nowhere else" (72). The "nominative pronouns" in Table 13 are the intransitive bound pronouns in Cr.

⁴⁸ Déchaine and Wiltschko (2002:422) give no clear indication as to why "they" does not allow for a complement NP. They argue that in at least some dialects pronouns can be broken down into a D element and a φ -element:

- a. [D *th*-e]
- b. [D *th*-[φ is]] [D *th*-[φ ese]] [D *th*-[φ at]] [D *th*-[φ ose]]
- c. [D *th*-[φ em]]

This, they suggest, is the reason for the acceptability in some dialects of "them linguists." However, they provide no explanation as to why "they linguists" is ungrammatical. I assume that English must have some parametric variation that disallows this construction, a lone φ -element with a NP complement. Another possibility would be that "they," like many third person pronouns cross linguistically (Bhat 2004), is not a "true pronoun" in the sense that first and second person are, and that it is a deictic element which may have restrictions on its complement. It will be left to future research to determine the exact nature of this phenomenon.

Table 13: Coeur d'Alene Emphatic Pronouns

Singular	Plural
1 čn-ʔεng ^w t (1sg-emph)	č-lípust (1pl-emph)
2 k ^w u-ʔεng ^w t (2sg-emph)	k ^w up-lipust (2PL-EMPH)
3 Ø-cεnil (3-emph)	Ø-cənil-ilš (3-emph-pl)

It is important to note that the φ -elements in the Cr emphatic pronouns (the bound pronouns) pattern not with the possessive bound pronouns, as in Shuswap, but rather with the intransitive bound pronouns as mentioned above. Cr has a separate set of possessive bound pronouns (the genitive bound pronoun set). While there are few examples in the data, these emphatic pronouns follow the Shuswap pronouns in matching Déchaine and Wiltschko's (2002) requirements of φ -pronouns, as illustrated below where the relevant forms are in bold italics and underlined and the φ -pronouns are all marked *Ip-emph* or *Is-emph*:⁴⁹

i. They can follow determiners:

(75)	kum'	x ^w ε	tεč	ləkút	ta
	k ^w um'	x ^w ε	tεč	lεk ^w ut	tε
	then	det ₁	dir	at.a.distance	det ₃
	apstq ^w il'kup		ci?t	<u>x^wε čilípust</u>	
	εpt-	stq ^w il'k ^w up	ci?t	<u>x^wε č-ʋlipusts</u>	
	there.is	fire	there	<u>det₁ Ip-emph</u>	

'At a distance there was a fire, which was ours.'

(Reichard 1927-29:cssw204)

⁴⁹ In (76) and (77) phonological reduction of the emphatic element occurs.

ii. They can be bound outside their local domain (here by *Coyote*):

(76) hoi εk^wn tε *sməyíw* hoi *čənʔé* ʃεl
 hoi εk^wn tε *smyiw* hoi *čn-Vʔeng^wt* ʃεl
 then say det₃ *Coyote_i* then *1s-emph_i* also

čən'é čεy'əʃís
 čn-ʔeng^wt čεʃsaʃil -s
 1s-emph will.do -3g

'Coyote_i said, "I_i too, I, this will be my doing. "'

(Reichard 1927-29:cim53a)

iii. They can be what Déchaine and Wiltschko (2002) refer to as arguments:

(77) *čənʔé* ul'ck^wístəm
 [čn-ʔeng^wt]_{ARG} [uʔy'ck^win -st(u) -∅ -m]_{PRED}
 1s-emph holding.back -ct -3.obj -nte.subj
 'I will be the one to hold him back.'

(Reichard 1927-29:cosd149)

Thus, the structure of Coeur d'Alene predicative / emphatic pronouns can be illustrated as in (78).⁵⁰

(78) $\begin{array}{c} \varphi P \\ \swarrow \quad \searrow \\ \varphi \quad \quad NP \\ | \quad \quad | \\ [pers] \quad ?eng^w t \\ [num] \end{array}$

At this point the evidence demonstrates that the φ -elements in Table 13 in the predicative / emphatic pronominal paradigm, in fact φ -heads in the sense of Déchaine and Wiltschko's (2002) analysis. As these φ -heads are the same morphemes as the

⁵⁰ Here Déchaine and Wiltschko's (2002) formalism is followed; however an alternate structure may be possible, where the emphatic element *?eng^wt* is analyzed as being verbal. Such a distinction is not necessary, though future inquiry should resolve this issue shedding further light on the nature of Cr emphatic pronominals.

intransitive bound pronouns, it is also concluded that the intransitive bound pronouns are φ -heads. It will further be assumed that this analysis can be extended to the transitive subject and object bound pronouns as well.

It is not clear from Déchaine and Wiltschko's (2002) analysis if the φ -heads they discuss are in fact bound pronominals or perhaps φ -agreement morphemes. In their analysis they refer to the whole complex pronoun as the φ -pronoun. However, Déchaine and Wiltschko (2002:432) present the possibility of an analysis of these elements as agreement with their discussion of Mojave and Plains Cree where they label elements as φ^0 -agreement, however they do not use this notation with the data discussed. This should not affect the claim that the Cr bound pronouns are φ -heads. In the case of the null 3rd person, it will be assumed that it is a null φ -pronoun (cf. Holmberg 2005 for an analysis of *pro* as a null φ -pronoun). In this way the bound pronouns are accounted for in terms of syntactic content, including the null 3rd person.

Next we turn to an account of bound pronouns having their diachronic origins in agreement elements. However, this analysis will be rejected on the grounds that it returns us to the set of problems discussed in Section 3 above regarding an argument system comprised of first and second person intransitive clitics, null subjects and objects in all other constructions, and various null agreement markers. An alternate analysis in which bound pronouns have been the historical norm will be presented. It will be demonstrated that this analysis provides a way to account for the cross-family differences regarding argument structure noted especially in Davis and Matthewson (2003).

6. Bound pronouns: Possible diachronic antecedents

In this section, it will be argued that bound pronouns may have their diachronic antecedents in agreement morphology. The starting point will be the notion that there are two types of agreement morphology: *strong* and *weak* (Chomsky 1989; Jaeggli and Safir 1989; Alexiadou and Anagnostopoulou 1998; Zushi 2003; Speas 2004; among others).

It has been claimed that this distinction is crucial in any analysis of argument-drop in languages that include overt agreement morphology (cf. preceding references). In essence, the claim is that strong agreement licenses argument-drop in many languages, while weak agreement does not. Importantly, Alexiadou and Anagnostopoulou (1998:521) and Speas (2004:5) adopt Rohrbacher's (1993) *Full Paradigm* criterion to distinguish strong agreement from weak.

(79) Rohrbacher's Full Paradigm

INFL is a referential category with lexically listed affixes in exactly those languages where regular Subject-verb agreement minimally distinctively marks all referential INFL-features such that:

- a. In at least one number and one tense, the person features [1st] and [2nd] are distinctively marked
- b. In at least one person one tense, the number feature [singular] is distinctively marked. (1994:118)

A paradigm meeting the description in (79) is what Rohrbacher calls a "Full Paradigm." Agreement morphemes comprising such a paradigm each have individual lexical entries according to Rohrbacher (1994).⁵¹ Speas (2004) states this in terms of *Rohrbacher's Generalization*.

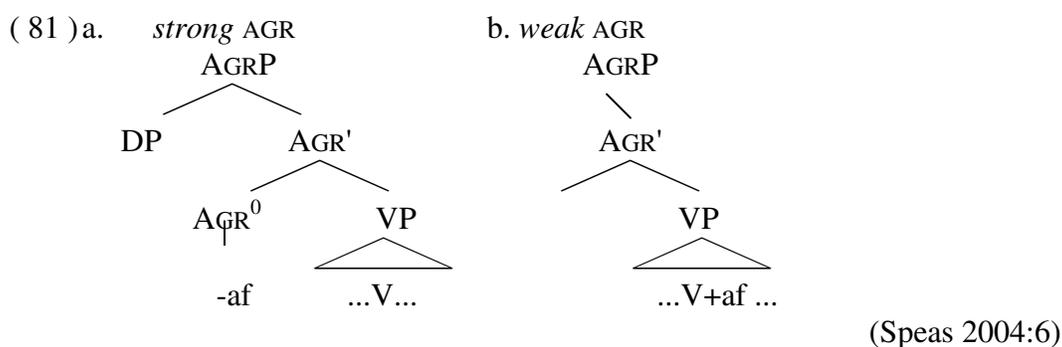
⁵¹ Here the discussion is couched within a lexicalist framework. The distinction would have to be syntactic within the DM framework. One possibility is that what is identified as "strong" agreement here has syntactic features which require the morpheme to be present at narrow syntax if present in numeration, while "weak" agreement would be akin to Embick and Noyer's (2005) "ornamental" morphology, that is a

(80) Rohrbacher's Generalization

"Strong" morphemes have individual lexical entries

"Weak" morphemes do not have individual lexical entries. (6)

For Speas (2004), strong agreement is generated as a functional head, an AGR head which projects an AGR-phrase, while weak AGR is generated within the VP-shell (6). This can be seen in (81).



Later, Speas (2004:39) amends Rohrbacher's Generalization by stating that "the agreement affixes may be listed as independent lexical entries, but they are not necessarily so listed" (emphasis Speas). This allows Speas to postulate two types of strong agreement: lexicalized strong agreement (Type A) and non-lexicalized strong agreement (Type B). Speas can then account for the differences between languages such as Spanish which have strong agreement (Type A) and allow null arguments, and languages like Yiddish which also have strong agreement (Type B) but do not allow null arguments. In Type A languages a specifier is not required in AGRP at spellout because the lexicalized ϕ -features satisfy all derivations up to that point. However, Speas does not eliminate *pro* in such constructions, because it is still needed to absorb θ -roles and check case (at LF in the case of Italian for example). In cases where Type B strong agreement

disassociated morpheme (Halle and Marantz (1993)) inserted after narrow syntax in the morphological component of the grammar.

occurs a DP must raise to the specifier position of AGRP. Weak agreement does not project as a lexical head and is thus confined to generation in the VP-shell.

Assuming that bound pronouns are diachronically related to agreement, and that DPs and NPs were adjuncts at the time as they are today, the historical "agreement morphology" could be considered lexicalized if we accept Speas' (2004) claims. That is, historically agreement in Cr would have satisfied *Rohrbacher's Full Paradigm*. In the next section it will be shown how assuming Speas' analysis would lead to the development of bound pronouns in Cr.

6.1. Grammaticalization

In this section, it will be claimed that in the case of Cr, the lexicalization of the agreement morphemes would have led to the bound pronouns, and that such a process would be interpreted as a type of *grammaticalization*. 'Grammaticalization' here is not meant as a predictive theory of grammaticalization in the sense of Heine (1990, 1993; Heine, Claudi, and Hünemeyer 1991) here; rather, it is meant in terms of Newmeyer (1998) who assumes that grammaticalization is epiphenomenal, or "nothing more than a label for the conjunction of certain types of independently occurring linguistic changes" (237), here *reanalysis* and *lexicalization*. Further, it is assumed that grammaticalization does not unfold in component parts along a cline culminating in some form of "complete grammaticalization" as Heine might suggest. That is, it is not assumed that once steps toward grammaticalization begin, other steps will inevitably follow suit (251). While it is the case that grammaticalization is generally assumed to be unidirectional (Heine and Kuteva 2002; Bybee, Perkins, and Pagliuca 1994), *lexical units can be grammaticized but grammatical units cannot be lexicalized*, there are a number of exceptions to the unidirectionality principle (Heine and Kuteva 2002:5; Newmeyer 1998:263; cf. especially

Lightfoot 2005 for discussion of a distinction between grammaticalization and lexicalization and the unidirectional principle). It is the exceptions discussed in Newmeyer and elsewhere that lead to a preference for the analysis put forth by Newmeyer.

Newmeyer (1998:263-78) provides several counter-examples to the unidirectionality principle. Of interest to us here are the cases in which inflectional affixes (268-69) or clitics become pronouns (270-72). Citing Janda (1980, 1981), Newmeyer provides an example of an affix upgrading to pronoun status from Old English which had a rich case system (268). Old English included a genitive suffix *-(e)s* which was "upgraded" to a full free morpheme, the pronoun *his*, thus indicating that the reanalysis from clitic to free independent pronominal word had been completed. Citing Bybee, Perkins and Pagliuca (1994), Newmeyer presents another example of agreement morphology upgrading to full lexical status this time, in Irish. Newmeyer shows that in Irish, the first person plural suffix *-mid/-muid* has become an independent pronoun (268).

In regards to clitic upgrading to full pronouns Newmeyer (1998) states, "the upgrading of clitic pronouns to full lexical pronouns seems to have happened repeatedly" (270). Another example of agreement morphology upgrading to the status of pronoun is illustrated again by historical developments of English. Newmeyer, citing Kroch, Myhill, and Pintzuk (1982), provides examples of how the enclitics of English underwent decliticization after 1550 to become the free pronouns "*thou*", "*he*", and "*ye*" (270). Newmeyer notes that in the sixteenth century inverted subject pronouns such as those in (82) were enclitics attached to the verb (270):

- (82) a. Where dwellyth she?
 b. Why bewaylest thou thus soor, O Pelargus?

(Newmeyer 1998:270)

The spelling of the earlier period revealed their clitic status, in which the pronoun was represented orthographically as one unit with the verb:

- (83) a. *hastow* for 'hast thou'
 b. *wiltow* for 'wilt thou'
 c. *wille* for 'will he'

(Newmeyer 1998:270)

Later, *not* appears for the first time between the inverted main verb and the pronoun rather than occurring after the subject (Newmeyer 1998:271).

Newmeyer (1998) goes on to present examples of upgrading to pronominals from Ilokano, Estonian, and a number other languages. In short, the analysis of Cr agreement morphemes upgrading to pronouns patterns with linguistic variation cross-linguistically. It is a case of reanalysis without semantic change or phonetic reduction (252).

Such a reanalysis of agreement morphemes to bound pronouns would have produced a simpler Cr grammar (see contrast between number of primitives needed in the agreement analysis and bound pronoun analysis above). This analysis would also account for the apparent differences within the Salishan family regarding differences in argument structure between languages like Cr and Lummi and St'át'imcets (Davis and Matthewson 2003), full reanalysis, in terms of bound pronouns, having occurred in Cr and Lummi but not St'át'imcets. Other differences would be that Lummi is a Pronominal Argument language as outlined by Jelinek (2004, 2006), while Cr would have the core feature of a Pronominal Argument language, bound pronouns, but would differ in other respects,

notably incorporation.⁵² St'át'imcets on the other hand, as analyzed by Davis and Matthewson, would not have the core characteristic, bound pronouns, of the Pronominal Argument Parameter.

The problem with this analysis is that it brings back the thorny issues of Section 3 above that the bound pronoun analysis avoids. A simpler solution, and one that can also account for the differences between Cr, Lummi, and St'át'imcets, would be that the bound pronouns do not have their diachronic origin in distinct agreement morphology. A number of languages have been identified as having bound pronouns as arguments generated in argument position (see references above in Section 1 and references therein). Therefore, it is not unreasonable to assume that UG provides bound pronouns as an option for any given language and its argument deriving mechanisms. In the case of Salishan languages, the situation has not been fully investigated to the author's knowledge beyond Lummi, Cr, and St'át'imcets. However, the evidence suggests rather clearly that bound pronouns are arguments in these three Salishan languages.

The case for Lummi has been made by Jelinek as has the case for Cr above. The case for St'át'imcets rests on the assumption by Davis and Matthewson that “the existence of morphologically unregistered objects pose intractable problems” for the Pronominal Argument Hypothesis (94). Davis and Matthewson identify what they refer to as “quasi-objects,” which do not appear to be traditional adjuncts, but rather DP arguments. Crucially, these “quasi-objects” appear in a very limited number of very specific environments. Elsewhere, the pattern of bound pronouns appears as described for Cr above in general. While a complete analysis of St'át'imcets is beyond the scope of the current discussion, it can be claimed, based on the discussion provided by Davis and

⁵² See Haugen (2004) for illuminating discussion on the setting of macro-parameters such as the Pronominal Argument Parameter, in various stages across a language family.

Matthewson, that the difference lies at the micro-parametric level on the various nodes that license these DP arguments. Davis and Matthewson's claims are that limited constructions in St'át'imcets that allow for DP arguments, contra the tenets of the Pronominal Argument claims, renders St'át'imcets a non-Pronominal Argument language. This view is based on the notion that a parameter must apply to every relevant node. However, if one views parametric variation as applying at the individual node level, rather than as applying to every node in exactly the same way, St'át'imcets can be seen as satisfying the tenets of a Pronominal Argument language in the majority of syntactic constructions in terms of bound pronouns.

The claim here is that the nodes that license quasi-objects in very restricted environments in St'át'imcets have a different parametric setting than the remaining nodes which license bound pronouns and ban DP arguments elsewhere. In this way St'át'imcets is similar to Hebrew as described by Vainikka and Levy (1999). In Hebrew DPs are banned in first and second person subject positions, but allowed in third person constructions. Under the analysis presented here, these facts represent parametric difference between the nodes that license third person DP arguments and the nodes that disallow DP arguments in first and second person constructions in Hebrew. The same can be said of the facts regarding null objects in Italian as described by Rizzi (1986). In Italian null object pronouns *must* occur in very specific constructions. In such constructions overt pronouns are not acceptable. Again, this suggests a micro-parameter at the node level. Recognizing that parametric variation is at the node level can account for the differences seen between Cr and Lummi, and St'át'imcets. Also, it allows the avoidance of the issues discussed in 3 above. In this way the claims made in 3 above are maintained and the differences between the three Salishan languages are accounted for.

Future inquiries into the nature of this phenomena may support Pensalfini's (2004) claim that languages of the type identified as non-configurational⁵³ (such as Cr) may have restrictions on the type of referential features that are allowed in argument position. In the case of Cr, it is the case that there is a ban on DPs in argument positions. Thus, Cr clearly fits with one element of Jelinek's (2004, 2006) macro-parameter: DPs are not allowed in argument positions, rather bound pronouns, ϕ -pronouns here, fill the argument positions.⁵⁴

7. Conclusions

In this chapter it has been argued that an analysis of bound pronouns is preferable to an analysis of radical argument drop in Cr, based on considerations regarding the identification of the syntactic features of null arguments, recoverability and licensing of null arguments, learnability, and typological facts. Further, it has been shown that the bound pronoun analysis arrives at the proper surface morpheme order with fewer syntactic elements and derivations. In addition, it has been argued that bound pronouns are ϕ -pronouns in terms of Déchaine and Wiltschko (2002). As for null arguments, it was claimed that the only null argument was the third person pronoun and that this pronoun was a null ϕ -pronoun that was accounted for under the Cue based model of parameter setting (Lightfoot 1997a, 1997b; Dresher 1999, 2003a, 2003b).

Further, it has been demonstrated that employing Hale and Keyser's (2002) Conflation as head-movement (Harley 2004) allows Chomsky's notion of

⁵³ Here “non-configurational” refers to the fact that full DPs are not base generated in argument positions.

⁵⁴ Under Vainikka and Levy's 1999 analysis of Hebrew and Standard Finnish, the same claim might be made. Vainikka and Levy claim that agreement morphology in first and second person constructions function as arguments. It may be the case that a micro-parameter setting bans DPs in just those constructions, requiring bound pronouns, ϕ -pronouns.

head-movement as phonological in nature to be maintained. The analysis of basic clause structure in Cr arrived at, (37) above, can be restated here as (84).

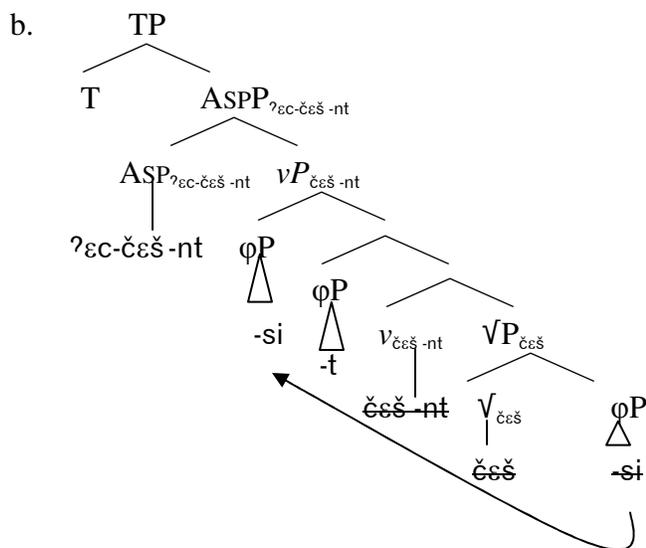
(84) a. Cr basic transitive construction

?εčēšncit

?εc-√čēš -nt -si -t

cust- accompany -dt -2acc -1p.erg

'We go with you.'



Thus the basic clause structure for Cr is arrived at. In the next chapter we turn to a discussion of Lexical Affixes and incorporation in Cr.

CHAPTER 4
LEXICAL AFFIXES

1. Introduction

In this chapter an account of *lexical affixes* in Coeur d'Alene is presented that builds on the earlier work of Salishan scholars (Sapir 1911; Saunders and Davis 1975; Hagège 1978, 1980; Carlson 1990; Kinkade 1998; Gerdtz 1998, 2003; Wiltschko 2006 among others). Lexical affixes comprise a closed class of bound morphemes which productively add semantic content to the verb in the Salishan family of languages. An example from Coeur d'Alene (henceforth Cr) follows, where the lexical suffix in (85) is preceded by the equal symbol "=" and is in bold and underlined:

(85) a. g^wεy'cn
 ∅- √g^wεy'**=cin**
 3abs- finish=**mouth**
 'He finished eating.' (Doak 1997:289)

b. g^wεy'stus
 g^wεy' -st(u) -∅ -s
 finish -ct -3abs -3erg
 'He finished it.' (Nicodemus 1975)

In this chapter it will be argued that lexical affixes in Cr are *n* heads which incorporate into roots, where incorporation is a result of Hale and Keyser's (2002) *Conflation*. It will be further argued that the analysis presented is preferable to Baker, Aranovich, and Golluscio's (2004) account of incorporation on the grounds that it requires fewer parameters and no special deletion mechanism. Further, a Conflation

analysis maintains Chomsky's (1994) claim that head-movement is phonological (though not postsyntactic in nature), as Harley (2004) demonstrates.

The chapter is structured as follows. After an introduction to lexical affixes and a review of historical claims regarding their diachronic origins in Section 2, Section 3 presents the claim that lexical affixes are *n* heads. This is followed by the formal analysis of lexical affixes and stem+stem incorporation in Cr in Section 4. In Section 5 are concluding remarks.

2. Lexical Affixes in Cr

In this section lexical affixes (henceforth LAs) will be briefly introduced in terms of how they are identified and their general semantics. LAs will then be compared to stem compounding and incorporation processes in Cr, illustrating that the two are distinct and involve different morphemes. Next, the possibility that LAs derived historically from compounding will be briefly discussed. Finally, the functions of Cr LAs will be introduced. First, an introduction to the concept of LAs is presented.

Kinkade (1998) notes that lexical affixes have at various times been referred to as "verbal affixes that refer to nouns" (Sapir 1911:251), "field suffixes" (Vogt 1940:58), and "somatic suffixes" (Kuipers 1974:59). It was Kinkade (1963:352) who first referred to such forms as "lexical suffixes," which is the term used by Salishan scholars today.

Kinkade (1998) defines lexical suffixes as:

[A] group of suffixes found in Salish, Chemakuan, and Wakashan which have semantic content analogous to specific nouns, but lack phonological similarity. In this sense, they are unlike what are usually perceived as derivational affixes, which more often have little concrete meaning, rather serving to identify lexical classes. (266)

Mithun (1997:357) further identifies languages in Eskimoan and Tsimishian as having similar morphemes. Fleck 2006 identifies what he considers LAs in Matses, a Panoan language spoken in the Amazonian Peru and Brazil. Holmes and Hinchliffe (2003:534) present a recent productive phenomenon in Swedish where nominalized roots work in much the same way as prefixes and suffixes. In short, the phenomenon does not appear to be an areal phenomenon as Kinkade's description might suggest.

Salishan languages have roughly 100 lexical suffixes on average (Gerdt 1998:95, 2003:346). Reichard (1938) identifies some 80 suffixes in Cr which she refers to as “nominal” (601-603). These nominal suffixes denote body parts (*hand, foot, stomach, nose*), basic physical/environmental concepts (*ground, plant, vegetation, water, fire*), and human/relational terms (*offspring, people, person*). A number of these suffixes, especially the body-part suffixes, extend to take on locative meanings.⁵⁵

Gerdt (2003) notes that lexical affixes bear little or no phonological similarity to free standing nouns. Wiltschko (2006) also notes that “lexical suffixes are not transparently related to free standing nouns ...”(3). In Cr, however, a small subset of lexical affixes may share much of, and in one case all, the phonological features of their stem counterparts.⁵⁶ In Table 14 we see examples of lexical suffixes that do not match the phonological content of their apparent counterparts, while Table 15 presents the limited set of lexical affixes that share some of the phonological material of their counterpart.

⁵⁵ It has also been noted in the references above that in many cases lexical affixes function in much the same way as classifiers.

⁵⁶ Wiltschko (2006), among others, makes a distinction between 'lexical affixes' on the one hand and 'nominal' counterparts on the other. Here, following Mithun (1997) I make a distinction between 'lexical affixes' and *stems*, where I consider *stem* to mean a categorized root in the sense of Distributed Morphology where an uncategorized root becomes categorized in a complement relationship with a categorizing head (*n, v, a, etc.*).

Table 14: Lexical affixes with no phonological similarity to free forms in Coeur d'Alene

<i>lexical suffix (bound)</i>		<i>free</i>	
a. = <i>asq'it</i>	'day, sky, atmosphere'	<i>atcsɛt'qəʔ</i>	'day'
b. = <i>ilg^wɛ</i>	'stomach, heart'	<i>itspu's</i>	'heart'
c. = <i>gwil</i>	'hallow object, abdomen, wagon, canoe'	<i>t'ɛdɛʔ</i>	'canoe'
d. = <i>isq^wɛl</i>	'fish'	<i>qi'x^wəlc</i>	'fish'
e. = <i>ins</i>	'tooth'	<i>xɛlɛx^w</i>	'tooth'
f. = <i>isčn</i>	'horn, hairline'	= <i>č'iʔ</i>	'antler, horn'

Table 15: Lexical affixes with similar phonological content to free forms in Coeur d'Alene

<i>lexical suffix (bound)</i>		<i>free</i>	
g. = <i>tx^wɛʔ</i>	'camas'	<i>ɛtx^wɛʔ</i>	'camas'
h. = <i>sčint</i>	'people'	<i>čint</i>	'Indian'
i. = <i>ɛsčičɛʔ</i>	'horse'	<i>ɛsčičɛʔ</i>	'horse'
j. = <i>iptix^wctc</i>	'tongue, tongue-shaped'	<i>tix^wctc</i>	'tongue'
k. = <i>iln</i>	'food, pertaining to food'	<i>iln</i>	'eat'
l. = <i>k^wɛʔ</i> (= <i>itk^wɛʔ</i>)	'water, liquid'	<i>sik^wɛʔ</i> (<i>ik^wɛʔ</i>)	'water'
m. = <i>us</i>	'eye, face, orifice through which light shines, fire'	<i>tus</i>	'face, water'

LAs differ in a number of ways to their stem counterparts, they: (1) often have a number of different semantic extensions compared to their stem counterparts; (2) never themselves serve as phonological words or as the bases for phonological words; and (3) constitute a relatively closed class of items. LAs may appear with roots in nominals or in predicates (the LA follows the “=” symbol):

(86)LAs in nominals

- a. s-√q^wéy=**uʔ**
 nom- purple =**pendant**
 'grape'

(Reichard 1938:616.503)

- b. s-√^wé|=**gwil**
 nom- dip =**hollow.object**
 'fishnet' (Reichard 1938:614.492)

(87) LAs in predicates

- a. g^wéy'cn
 Ø- √^wg^wéy'=**cin**
 3abs- finish=**mouth**
 'He finished eating.' (Doak 1997:289)
- b. hng^wáy'qn
 Ø- hn- √^wg^wéy'=**qn**
 3abs- loc- finish =**head**
 'He finished growing.' (Doak 1997:289)

Many scholars (Carlson 1990; Kinkade 1998; Gerdts 1998; Mithun 1997; among others) have noticed that lexical affixation resembles nominal compounding ((86) above) and noun incorporation ((87) above) in Salishan languages. In the next section nominal compounding and incorporation in Cr will be compared to lexical affixation to illustrate that the two are distinct, but have similarities.

2.1. Stem+stem vs. LAs: The differences

Like all Salishan languages (Kinkade 1998), Cr has both productive lexical affixation and nominal compounding and incorporation. Doak (1997) notes that the process of combining LAs in Cr with stems resembles the process of compounding and incorporation of stems in Cr (288). The primary difference between the two operations is that an LA shows no signs of derivation (such as the presence of the nominalizing *s*-morpheme), or connective elements (such as the *-ɛʔ*-connective or its reduced form *-ɛ-* or *-a-*). The following examples illustrate these differences. In (88a) and (88b) we see what is referred to as “compounding” in the Salish literature (Kinkade 1998; Carlson 1990;

Doak 1997; Mithun 1997; among others)⁵⁷. It is crucially characterized by the nominalizing prefix *s-* and the connective *-εʔ-*. In (89a) and (89b) we see LAs adjoining directly to roots with no intervening morphology necessary or possible, in contrast to the stem+stem forms in (88).

(88) word compounding in Cr

- a. g^wiy'asqεy'm
 Ø- √g^wεy'-εʔ-s-√qεy' -m
 3abs- finish-conn-nom-write -m
 'He finished writing.'

- b. čng^wiy'εsk^wú'l'
 čn- √g^wεy'-εʔ-s-√k^wul
 1nom- finish -conn-nom-make
 'I finished working.'

(Doak 1997:289)

(89) lexical affixation in Cr

- a. g^wεy'cn
 Ø- √g^wεy' =cn
 3abs- finish =mouth
 'He finished eating.'

- b. hng^wáy'qn
 Ø- hn- √g^wεy' =qn
 3abs- loc- finish =head
 'He finished growing.'

(Doak 1997:289)

Kinkade (1998:11) provides the following examples, taken from Reichard (1938), which further illustrates the differences between the two types of constructions. In (90a) we see the connective *-εʔ-*, the nominalizing morpheme *s-*, and the root √čint which Doak

⁵⁷ As Mithun 1997 notes, in the Salishan literature "compound" refers to what is recognized in other languages as both nominal compounds (noun + noun) and noun incorporation (verb+noun) (365).

(1998:299.560) glosses as 'Indian'. In (90b) we see the lexical affix =*sčint* 'people'. Below (§2.2) it will be proposed that the *s-* in (90b) is a phonological remnant of the nominalizing process that remained when the complex stem *sčint* (*s+√čint*) 'Indian' was reanalyzed as a bound morpheme =*sčint* 'people'. That *s-* in such examples is a phonological remnant of the nominalizing process is a claim used in Kinkade (1998) and Carlson (1990) to further establish a link between compounding and lexical affixation diachronically.

(90) a. $\sqrt{g^w \varepsilon n - \cancel{t} - s - \sqrt{čint}}$ -š (one word)
 summon-**conn-nom**-Indian -sg.imp
 'Call the people!'

b. Ø- $\sqrt{t'ap} = sčint$
 3abs- shoot =people
 'He shot somebody/something.' (lit. 'He people-shot.')

(Reichard 1938:617.505)

The conclusion drawn from such data is that LA attachment is distinct from nominal stem incorporation, as Sapir (1911), Hagège (1978), Carlson (1990), Kinkade (1998) (among others) have noted. The merging of LAs and stems does not include categorization and compounding morphology and therefore is assumed to be a different process than stem compounding, or perhaps more precisely different from incorporation. The limited set of forms represented by (90b) that appear to include the nominalizing morpheme *s-*, will be accounted for in the following discussion.

2.2. LAs historically

It has been argued by Kinkade (1998), Carlson (1990), Mithun (1997), and Gerdts (1998) (among others), that lexical affixes have their diachronic origin in nominal compounding, a view commonly held among Salishan scholars. Mithun states:

The precursors of the Salishan lexical prefixes and suffixes first bonded phonologically to their hosts in compounds, at a time when they still retained their status as roots. At this point, they lost specific referentiality and case roles. Abstraction and extension of meaning occurred afterward over a considerable period of time. (369)

LAs as a group show effects of grammaticalization, with apparent meanings that are more general and abstract than their stem counterparts, phonological reduction from identified stem cognates, and reduction in form (affixes rather than stems). These are features widely identified as characteristic of grammaticalization (cf. Bybee, Perkins & Pagliuca 1994:9-26; Heine & Kuteva 2002:4; Newmeyer 1998:248; among others). It thus has been the claim that LA affixes derive from stem incorporation through a process of grammaticalization for most who have worked on LAs, such as Carlson, Kinkade, Mithun, and Gerdts (among others).

This would explain the similarities seen in Table 15 above repeated here as Table 16. More specifically, this provides a rather straightforward account for the *s* of *=ščint*, a phonological remnant from nominal incorporation.

Table 16: Lexical affixes with similar phonological content to free forms in Coeur d'Alene

<i>lexical suffix (bound)</i>	<i>free</i>
g. = $t\chi^w\varepsilon?$ 'camas'	$\varepsilon t\chi^w\varepsilon?$ 'camas'
h. = $s\check{c}int$ 'people'	$\check{c}int$ 'Indian'
i. = $\varepsilon s\check{c}i\check{c}\varepsilon?$ 'horse'	$\varepsilon s\check{c}i\check{c}\varepsilon?$ 'horse'
j. = $ip\check{t}ix^wctc$ 'tongue, tongue-shaped'	tix^wctc 'tongue'
k. = iln 'food, pertaining to food'	$i\check{t}n$ 'eat'
l. = $k^w\varepsilon?$ (= $itk^w\varepsilon?$) 'water, liquid'	$sik^w\varepsilon?$ ($ik^w\varepsilon?$) 'water'
m. = us 'eye, face, orifice through which light shines, fire'	tus 'face, water'

As noted, the view presented is widely held among Salishanists and those who have worked with this phenomenon. It represents what I consider the "traditional" view of the diachronic origin of LAs. This can be illustrated in the following example. In (90a) above, repeated here as (91), we saw a compound construction with the relevant compounding morphology: categorizing (nominal) s - and connective $-\varepsilon t$.

- (91) $\sqrt{g^w\varepsilon n-\varepsilon t-s-\check{c}int}$ $-\check{s}$
 summon-**conn-nom**-Indian -sg.imp
 'Call the people!'

For one generation of speakers this is the construction employed. For the next generation of speakers the combination:

- (92) $-\varepsilon t-s-\check{c}int$
-conn-nom-Indian

is reanalyzed as a single bound morpheme. In (93b) we see remnants of the nominalizing morphology, namely s . Mithun (1997), Carlson, (1990), and Kinkade (1998) (among others), assume the connective remnant ε , as t is reduced before s in Cr, would have been included in the reanalysis process and that (93a) would have been the original LA

from which today's *=sčint* can be traced back to. This assumption is based on the fact that throughout the family a number of LAs still contain remnants of the connecting morpheme *-εt*, though they still exhibit elements of phonological reduction, usually loss of the vowel. Therefore, it would be natural, based on the phonological rules just mentioned, to assume that the original form (unattested) of (90b), repeated here as (93b), would have been (93a) for the first generation of speakers to exploit this form as an LA, and only reduced to (93b) in later generations.

- (93) a. Ø- √t'ap = εsčint
 3abs- shoot =people
 'He shot somebody/something.' (lit. 'He people-shot.')
- unattested*
- b Ø- √t'ap = sčint
 3abs- shoot =people
 'He shot somebody/something.' (lit. 'He people-shot.')

If the language had other LAs at the time of *=sčint*'s entry into the grammar, the particular generation of speakers employing *=sčint* for the first time would be exploiting a category already present in the Cr grammar. The assumption would be that LAs would have been serving the same functions as they do currently, and that the speakers that added *=sčint* to the category of LAs would have done so to add an element that has the particular semantics encoded in *=sčint*. The new morpheme would then allow for constructions of the type in (93), which differ from that in (91) in the type of information conveyed.

If on the other hand *=sčint* represented, hypothetically, the first LA to enter the language, then the generation to first employ it would be exploiting a category underlyingly available in UG, but not yet exploited by the Cr grammar. The fact that items that resemble LAs have been attested in a variety of the world's language families,

and in geographically diverse regions, suggests rather strongly that UG provides such a category. The case of Swedish, in particular, offers great potential to research the just described phenomenon as it appears that a subset of the current speaking population is beginning to exploit this process in a way that might be nearly exactly as it may have occurred in Cr.⁵⁸ This summarizes the traditional view of LAs being derived from a grammaticalization process involving compounds. There is however another possibility, in contrast to the traditional view, worth considering.

Heath (1998) proposes what he refers to as "hermit crab" grammaticalization. Heath defines this process as follows:⁵⁹

A grammatical affix undergoing phonetic erosion is sometimes abruptly replaced by a conveniently available lexical stem with which it shares one or more phonological segments. The new affix has the phonological shape of the old independent stem, but acquires the basic grammatical function of the old affix, though it may also bring in a portion of the stem's own morphological and semantic idiosyncrasies. (728)

Under the hermit crab approach, LAs would have been a category of morphemes not derived from nominal incorporation, but that exploited nominal incorporation to acquire new phonological material. That is, in the traditional view incorporated nominals became LAs through a process of grammaticalization and lexicalization that resulted in the creation of an entirely new morpheme.⁶⁰ Under the hermit crab view, after an existing

⁵⁸ The similarities are striking in that Swedish employs a series of fogemorphemes, one in particular *s*, that is mandatory (with the exception of in specific phonological environments), in compound constructions with two, three or more nominals. Preliminary investigation suggests that in cases where an LA appears as the second element of a tri-nominal compound, the mandatory fogemorpheme, *s* in this case, does not appear (M. Hulden pc 28/6/06). This suggests that the morpheme, generally assumed to be free, is actually functioning as an affix. Future inquiry should reveal whether or not these may serve as arguments or classifiers as argued here for Cr.

⁵⁹ For an analysis of the Hermit Crab account of grammaticalization with in the Minimalist Program see Hill 2003.

⁶⁰ Cf. Lightfoot 2005 for discussion of grammaticalization and lexicalization along the lines presented here.

LA lost a certain amount of phonological material, for whatever reason, the phonological material, and possibly some semantic and morphological idiosyncrasies, of a phonologically similar incorporated noun were reanalyzed as the LA.⁶¹ This means that the LA that has the semantic content "people" and is presently realized phonologically as =*sčint*, at a previous time may have been realized by very different phonological material that became so reduced that material from the incorporated =*sčint* replaced it.⁶² So in the case of =*sčint*, (93a) would not have been the original LA, but rather a pre-existing LA with some phonological element(s) similar to =*sčint*, perhaps =*čn*. If this were the case, then we would expect (94a) to, hypothetically, be the underlying morpheme which "took" phonological material from the construction in (94b) (-*εt-s-√čint* or *εsčint*) to produce (94c). Thus, (94c) reduced phonologically to give us present day (94d).

- (94) a. Ø- √t'ap =čn
 3abs- shoot =people
 'He shot somebody/something.' (lit. 'He people-shot.')
- unattested*
- b. √g^wεn-~~εt-s~~-√čint -š
 summon-**conn-nom**-Indian -sgimp
 Call the people!
- c. Ø- √t'ap =εsčint
 3abs- shoot =people
 'He shot somebody/something.'

⁶¹ It is not clear from Heath's discussion if the Hermit Crab hypothesis would allow the co-existence of a morpheme X that has taken phonological material from morpheme Y after the process had taken place. If this were the case, then the Hermit Crab approach would be potentially valid here, if not, it would be problematic for such an analysis of the Cr data.

⁶² The comparative method could shed some light on this issue, however, there are number of challenges to such an approach. One such challenge is that in some languages within the family it is not always the case that the same compound construction was reanalyzed as the same lexical affix in terms of family wide cognates. This should not deter such future inquiry however.

d Ø- √t'ap = sčint
 3abs- shoot =people
 'He shot somebody/something.'

Under the hermit crab view, one generation of speakers simply added new phonological material to a grammatical element that existed in the speech of a previous generation of Salishan speakers. This contrasts with the traditional view that some generation of speakers first initiated the use of a universal category available to all learners of languages but not previously employed by Salishan speakers. If the Hermit Crab analysis were correct, it would represent a purely grammatical process in the terms of Lightfoot (2005). If the traditional view were correct it would illustrate the apparent convergence of grammaticalization and lexicalization as discussed in Lightfoot. It may also be the case that at different times in the history of Salish both may have been correct.

Kuipers (2002) identifies 56 proto-LAs for Salish. Of these 56 he links 18 to proto-roots. Of course the remaining 38 may have links to roots in proto-proto-Salishan or they may be original LAs not derived from incorporation. Attempting to determine which account is accurate is beyond the scope of this chapter. However, this will not affect the analysis that follows. The two potential analyses have been presented to acknowledge the two possible interpretations of the data.

2.3. LAs in context

Up to this point it has been suggested that what Salishanists refer to as compounding and lexical affixation resembles what is commonly identified as noun incorporation in other languages (cf. esp. Mithun 1997:365).⁶³ In the following discussion

⁶³ Mithun (1997:365) notes that LAs, like incorporated nouns, carry no inflectional morphology for definiteness, number, or case, and do not serve to specify "core" arguments of the clause. Further, like incorporated nouns they may occur with independent nominals referring to the same kind of entity they evoke, they are used to derive new lexical items, to manipulate the selection of core arguments, and show a

this comparison will be strengthened by considering the nature of the data. We saw above in (86) that LAs can occur in nominal constructions and in (87) that LAs can occur in verbal constructions. There seems to be no restriction on individual LAs in terms of being confined to combine to form only nominal constructions (nominalizer+V+LA) or only verbal constructions. That is, LAs appear freely in nominal or verbal constructions as the following example using =*us* 'face' illustrates. In (95a) we see =*us* in a nominal construction and in (95b) we see =*us* in a verbal construction.

- (95) a. ... √mεc' =**us** -s ...⁶⁴
 grease =**face** -3g
 '... my face.grease ...'
- b. ... čn- ut- √dík^w =**us** -m ...
 1 nom- again- turn =**face** -m
 '...I will turn back...'
- (Doak 1997:291)⁶⁵

LAs may also appear in constructions with multiple LAs. Reichard (1938) identifies 17 "compound suffixes" (624-625). In the following examples, we can see how LAs contribute to meaning when multiple LAs appear together.

In (96) the first suffix =/*š*'curved motion', indicates the manner of action while the second suffix =/*k^wε*'water', indicates the goal of motion or destination:

- (96) ntú?s^wilšk^wε? x^wε čatqεε?
 hn- √tu?x^w =**ilš** =**k^wε** x^wε čat√qεε?
 loc- jump =curved.motion =water det₁ lake
 'He jumped in the lake.'
- (Doak 1997:292)

preponderance of items pertaining to body parts, among other similarities, each of these characteristics being derived in Mithun (1984).

⁶⁴ It should be noted that Reichard identifies √mεc' 'grease' as a verb stem (1939:94).

⁶⁵ For reasons of space the first line of each example is omitted here.

- (100) t'ápnc x^wε šæmn's x^wε Don
 √t'ap -nt -Ø -s x^wε √šæmɛn -s x^wε Don
 shoot -dt -3abs -3erg det₁ enemy -3g det₁ don
 'Don shot his enemy.' (Doak 1997:295-96)

Next we see an intransitive construction, indicated by the lack of any transitivity morphology, with an LA filling the theme role in the verbal argument structure and an adjunct which shares reference with the null third-absolutive subject. Note it is the determiner phrase *x^wε Don* which shares reference with the *3abs-* subject.

- (101) t'ápɫc'ε? x^wε Don
 Ø- √t'ap=iɫc'ε? x^wε Don
 3abs- shoot=body det₁ Don
 'Don shot somebody/something.' (Doak 1997:296)

Finally we see the same construction as (101) with an additional adjunct, *?ε šæmɛn'* 'his enemy (indefinite)'⁶⁶ in (102a) and *x^wε šæmɛn'* 'his enemy (definite)' in (102b), indicating the classificatory nature of LAs. In the example that follows, as the subject is third person absolutive, the determiner adjunct *x^wε Don* shares reference with the subject, and the adjunct *?ε √šæmɛn'*, which indicates the indefinite patient, shares reference with the LA *=iɫc'ε?*.

- (102)a. t'ápɫc'ε? ?ε šæmɛn' x^wε Don
 Ø- √t'ap=iɫc'ε? ?ε √šæmɛn' x^wε Don
 3abs- shoot=body ?ε enemy det₁ Don
 'Don shot his enemy.' (Doak 1997:296)

⁶⁶ Recall Doak (1997:214-15) notes, "[a] determiner homophonous with the oblique may be used without another determiner as an indication of indefiniteness." I assume the *?ε* used here, while labeled *obl* 'oblique' by Doak is the indefinite determiner.

- b. t'áplc'ε? x^wε šεμεη' x^wε Don
 Ø- √t'ap=ič'ε? x^wε √šεμεη' x^wε Don
 3abs- shoot=body det₁ enemy det₁ Don
 'His enemy shot Don.'
 'Don shot his enemy.' (Doak 1997:297fn107)⁶⁷

In (102) we also see that adjuncts in constructions with LAs demonstrate the same relationships in terms of reference with LAs: ?ε DP adjuncts sharing reference with indefinite patients, and *det*_{1,2,3} DP, x^wε here, adjuncts causing ambiguity. Further, in (102a) we see clearly that the ?ε DP defines the subset of bodies that Don shot, with the LA expressing the superset in similar fashion to classifiers.

Finally we see that LAs may appear in constructions with their stem counterparts. In the first example we see the LA is linked to the adjunct.

- (103) čn šεpəpítx^w x^wε hncεtx^w
 čn- √šip+C₂ =ilx^w x^wε hn- √cεtx^w
 1nom finish+ncr =house det₁ 1g- house
 'I finished building my house.' (Doak 1998:299)

In the second example the adjunct is linked to the subject, and not the LA, so it is the Indian that is doing the shooting.

- (104) t'apsčent x^wε sčint
 Ø- √t'ap=sčint x^wε s- √čint
 3abs- shoot=people det₁ nom- Indian
 'An Indian shot somebody/something.' (lit. 'An Indian people-shot.')
- (Doak 1998:299.560)

⁶⁷ Doak notes here that the informant identified this construction as “ambiguous” without providing a gloss. I assume “ambiguous” here is in terms of who is shooting whom. As discussed in Chapter 1, adjuncts are non-configurational and lead to such ambiguities.

Doak (1997) notes that LAs "carry semantic roles equivalent to a variety of obliques such as locative and instrument" and that they serve as classifiers (308). We have seen LAs "carry[ing] semantic roles" of instrument, goal of motion, theme, LAs as classifiers, and expressing manner. We also saw that LAs parallel incorporated stems in Cr, as in all Salishan languages, in their distribution, but lack the morphological elements associated with stem incorporation. It was thus concluded that they were separate phenomena. Another important parallel that was noted was that between adjuncts that refer to indefinite arguments and adjuncts that refer to definite arguments. Specifically, we saw that adjuncts that share reference with LAs may take the same form as those that share reference with arguments of indefinite transitive constructions, the indefinite determiner $\text{?}\varepsilon$, and the definite determiners. Finally, it should be noted that LAs seem to function in a manner similar to incorporated nominals cross-linguistically, especially if filling theme or goal of motion roles.

This has led Gerds (2003) to argue that lexical suffixes "function exactly like incorporated nouns," they can "internalize a core argument such as theme or causee" and thus affect core argument structure in Halkomelem (355).⁶⁸ In the analysis that follows it will be assumed that Cr LAs function in the same way as in Halkomelem, "exactly like incorporated nouns." In the analysis that follows it will be seen that LAs not only function similar to incorporated nouns, but make use of the same mechanisms that incorporation constructions employ.

Before moving to the formal analysis of LAs, it should be noted that while it has been seen that LAs appear adjacent to the stem, there are a limited number of

⁶⁸ For a slightly different view of LAs see Wiltschko's (2006) discussion of Halkomelem LAs. Wiltschko identifies LAs as defective nominal roots. Such an analysis seems problematic, since LAs never function in any of the ways that roots do. Wiltschko (2006) argues that LAs in Halkomelem are deficient "nominal roots." This raises a number of questions beyond the scope of the present discussion; however, it seems rather problematic to assume that a root can be inherently categorized, i.e. nominal here.

constructions in most Salishan languages where an intervening morpheme, generally a non-control resultative or involuntary morpheme, appears between the LA and the stem. These forms are rare in the data and little discussed in the literature. They will not be addressed here, and are left to future research.

3. LAs: Little *n*

Here it will be argued, based on the facts described above, that LAs are *n* heads (“light nouns”) in argument position that incorporate into the selecting predicate. It is thus concluded that that LAs are not roots because:

1. LAs often have a number of different semantic extensions compared to roots, which have a richer, more fixed semantic core.
2. LAs never serve as phonological words, unlike roots
3. LAs never serve as the base for phonological words, as roots do
4. LAs never appear alone with nominalizing or verbalizing morphology, as roots do
5. LAs never appear as the sole non-D-element within a DP, as roots do
6. LAs constitute a relatively closed class of items, unlike roots
7. They do not appear alone with possessive marking, unlike roots

Also, LAs are not ϕ -heads:

1. The plural affix *-/š* does not refer to them in intransitive or transitive constructions, as it may do with ϕ -heads⁶⁹

Finally, they are not D heads as they cannot take a stem as their complement.

⁶⁹ Doak, in (Doak and Mattina 1997), argues the plural affix *-/š* co-references the “genitive pronominals” and “subject and object” pronominals, ϕ Ps (342).

The conclusion is that LAs are *n* heads that lack any higher functional categorization such as φ .

4. Formal analysis of LAs

In this section a formal account of LAs will be presented. It will be assumed, based on the facts of the data seen above, that lexical affixation is a process of incorporation as described in Mithun (1984), Baker (1988 et series), Rosen (1989) among others.

However unlike Mithun and Rosen, but similar to Baker, it will be assumed that lexical affixation is a purely syntactic operation, not a lexical operation in line with the tenets of Distributed Morphology. That is, LAs adjoin to stems in narrow syntax via an incorporation operation. Unlike Baker, Aranovich, and Golluscio (2004) however, it will be argued, following Harley (2004), that head-movement, here incorporation, in narrow syntax is accomplished by Hale and Keyser's (2002 esp. Ch. 3) *Conflation* mechanism. As Harley notes, Conflation accounts for the constraints on head-movement-like phenomena while maintaining Chomsky's (1995) proposal that head-movement is 'phonological' in nature.

In the next section a brief review of Hale and Keyser's (2002) Conflation is presented which includes discussion of Harley's (2004) discussion of Conflation and head-movement. This is followed by an analysis of Cr LAs. Next we will return to the issue of similarity between LAs and *stem+stem* incorporation in Cr as described above in 1. Finally, it is shown that this account of the data and of incorporation is to be preferred to a Baker et al-style (2004) approach to incorporation.

- (108) a. $N_{\text{wahr-}}$ merges with $V_{\text{ake'}}$.
- b. Because $V_{\text{ake'}}$ has a 'defective' p-sig, the p-sig of $N_{\text{wahr-}}$ conflates into the p-sig of $V_{\text{ake'}}$.
- c. The head, now with the p-sig $V_{\text{wahrake'}}$, projects (i.e. is used for a label) giving the set $\{V_{\text{wahrake'}}, \{V_{\text{wahrake'}}, N_{\text{wahr-}}\}\}$, which can be illustrated in the following tree:
- ```

 graph TD
 A[V_wahrake'] --- B[V_wahrake' wahrake']
 A --- C[N_wahr-]

```
- d. For economy reasons (because  $V_{\text{wahrake'}}$  is pronounced),  $N_{\text{wahr-}}$  is not pronounced.

One more notion regarding Conflation must be presented before moving onto the analysis of LAs in Cr. Harley (2004:8) proposes the following constraint on Conflation.

( 109 ) Conflation Economy:

*Conflation must occur as early as possible.* That is, a [+affix] p-sig *must* copy the p-sig of its sister during Merge: it cannot 'wait' to copy some later available p-sig in a later Merge.

Finally, Harley notes that in order to trigger incorporation of an object, it has to be assumed that V is assigned a [+affix]<sup>70</sup> feature as it enters the numeration. She assumes that this is generally possible for roots in English (7). The same will be assumed here for roots in Cr, that they may be assigned a [+affix] feature indicating a defective p-sig. Now we turn the analysis of LAs.

#### 4.2. LAs: An incorporation account

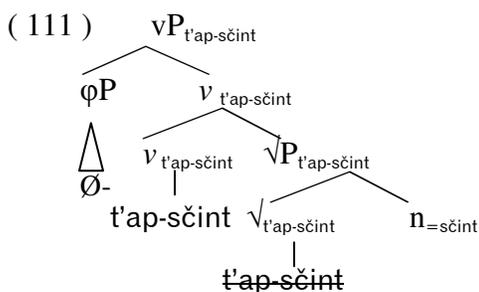
Taking as our starting point Hale and Keyser's (2002) Conflation, we can account for LAs rather straight forwardly. Given a construction like (104) above repeated here as

<sup>70</sup> Again, for notational simplicity heads with defective p-sigs will be identified [+affix], however, it should be noted that it is assumed that this feature only triggers the transfer of a p-sig under merge. No movement (Copy and Rmerge) is triggered.

(110), we see how Conflation works in Cr.

- (110) t'apsčɛnt x<sup>w</sup>ɛ sčint  
 Ø- √t'ap=**sčint** x<sup>w</sup>ɛ s- **√čint**  
 3abs- shoot=**people** det<sub>1</sub> nom- **Indian**  
 'An Indian shot somebody/something.' (lit. 'An Indian people-shot.')
- (Doak 1998:299.560)

Suppressing the adjunct and material above vP for simplicity, we have the basic structure in (111) for (110). The steps relevant to deriving the tree in (111) are detailed in (112).



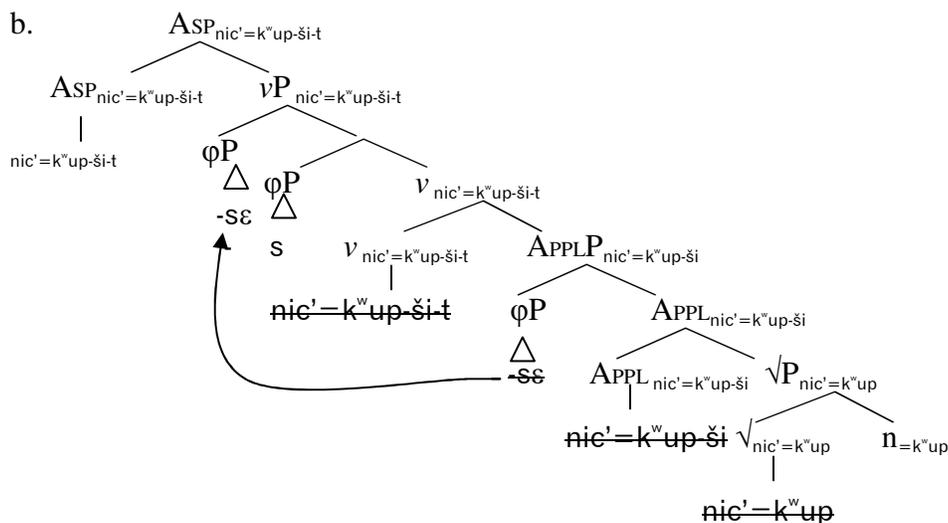
- (112) a. The root *t'ap* 'shoot' merges with its complement the LA *=sčint* 'people'. The *root's* p-sig is defective, and conflation occurs. The p-sig of the LA, *=sčint* is copied into the defective p-sig of the root. The  $\sqrt{P}$  is labeled with the p-sig of its head, *t'ap-sčint*.
- b. The  $\sqrt{P}$  labeled *t'ap-sčint* merges with an element from the numeration, the *v* which has a defective p-sig and conflation occurs. The p-sig of  $\sqrt{P}$ , *t'ap-sčint*, is copied into the defective p-sig of *v*, giving *t'ap-sčint*. Then the whole constituent, a projection of *v*, is labeled with the p-sig of its head, *t'ap-sčint*.
- c. The *v* labeled *t'ap-sčint* merges with the subject, a null third absolutive  $\phi$ -head. Neither p-sig is defective, so no copying occurs. The whole constituent is labeled with the p-sig of the head *v*, *t'ap-sčint*.

Following Déchaine and Wiltschko (2002), as *n*'s, it is assumed that LAs lack any functional level that would assign person, number or gender,  $\phi$ -features. This lack of a functional level with  $\phi$ -features allows an LA to appear in an intransitive construction,

like (110) above, because there is no  $\phi$ -feature agreement requirement for the LA to satisfy, assuming that agreement is required of  $\phi$ -heads only. Baker et. al. (2004) argue, "[i]n such constructions the verb can only agree with the subject, so it is inflected like an intransitive verb" (154). This allows LAs to saturate the object of a transitive argument root in an intransitive construction, as in full noun-incorporation.

The applicative construction above in (99), here (113), further illustrates, again silently suppressing the functional categories above ASP, as there is no further movement of the morphemes under discussion beyond ASP as discussed in Chapter 3.<sup>71</sup> The derivation for the tree in (113b) is presented in (114).

- (113) a.  $\text{nic}^{\text{w}}\text{úpsic}\epsilon\text{s}$   
 $\emptyset$ -  $\sqrt{\text{nic}^{\text{w}}\text{up}}$  -šit -sε -s  
 comp- cut =wood -bt -lacc -3erg  
 'He cut me some wood (for me).' (Doak 1997:307)



<sup>71</sup> McGinnis (1998) and Pylkkanen (2002) claim that the Applicative head is inserted between the  $v^0$  which introduces the external argument and the  $V^0$  which represents the core ('root') meaning of the verb and introduces the internal argument, if any. The same account is adopted by Harley, Tubino-Blanco and Haugen (2006) for Hiaki Applicative constructions.

- ( 114 ) a. The root *nic'* 'cut' merges with its complement the LA *=k<sup>w</sup>up* 'wood'. The *root*'s p-sig is defective, and conflation occurs. The p-sig of the LA, *=k<sup>w</sup>up* is copied into the defective p-sig of the root. The  $\sqrt{P}$  is labeled with the p-sig of its head, *nic'=k<sup>w</sup>up*.
- b. The  $\sqrt{P}$  labeled *nic'=k<sup>w</sup>up* merges with an element from the numeration, [+benefactive] APPL which has a defective p-sig and conflation occurs. The p-sig of  $\sqrt{P}$ , *nic'=k<sup>w</sup>up*, is copied into the defective p-sig of APPL, giving *nic'=k<sup>w</sup>up-š*i**. Then the whole constituent, a projection of  $\nu$ , is labeled with the p-sig of its head, *nic'=k<sup>w</sup>up-š*i**. Here we note that the APPL head is realized to the right of the phonological material in  $\sqrt{P}$ . The assumption here is that there are two types of affixes: those with defective p-sigs and those without (the bound pronouns for example). Affixes with defective p-sigs phonologically align with conflated phonological material in accord with their morphological affixal feature ([ $\pm$ prefix]). The APPLP is labeled with the p-sig of its head, *nic'=k<sup>w</sup>up-š*i**.
- c. The APPL labeled *nic'=k<sup>w</sup>up-š*i** merges with the APPL object argument, first person accusative. Neither p-sig is defective, so no copying occurs. Then, the whole constituent, a projection of APPL, is labeled with the p-sig of the head APPL, *nic'=k<sup>w</sup>up-š*i**.
- d. The APPLP labeled *nic'=k<sup>w</sup>up-š*i** merges with an element from the numeration, a [+transitive]  $\nu$ , *-t*. This element's p-sig is defective, and conflation occurs. The p-sig of the APPLP, *nic'=k<sup>w</sup>up-š*i**, is copied into the defective p-sig of  $\nu$ , giving *nic'=k<sup>w</sup>up-š*i*-t*. Then, the whole constituent, a projection of  $\nu$ , is labeled with the p-sig of the head  $\nu$ , *nic'=k<sup>w</sup>up-š*i*-t*.
- e. The  $\nu$  labeled *nic'=k<sup>w</sup>up-š*i*-t* merges with the subject  $\phi$ P, third person ergative. Neither p-sig is defective, so no copying occurs. Then, the whole constituent, a projection of  $\nu$ , is labeled with the p-sig of the head  $\nu$ , *nic'=k<sup>w</sup>up-š*i*-t*.
- f. The direct object raises out to the specifier position of  $\nu$ P to check case.
- g. The  $\nu$ P labeled *nic'=k<sup>w</sup>up-š*i*-t* merges with an element from the numeration, a [+completive] Asp,  $\emptyset$ -. This element's p-sig is defective, and conflation occurs. The p-sig of the  $\nu$ P, *nic'=k<sup>w</sup>up-š*i*-t*, is copied into the defective p-sig of Asp, giving *nic'=k<sup>w</sup>up-š*i*-t*. Then, the whole constituent, a projection of Asp, is labeled with the p-sig of  $\nu$ P, *nic'=k<sup>w</sup>up-š*i*-t*.

In this way we can account for the distribution of LAs and their syntactic construction. No case of instrumental lexical affixation was accounted for. However, analysis of such constructions would be the same, except that the incorporating LA in such constructions would function as a modifier of the root to which it joins.

We also see that this analysis has advantages over Baker-style (1988, 1996; Baker et al 2004) Incorporation in that head-movement is purely a phonological operation here, rather than the movement of an entire syntactic head (see Chomsky 1995:321, 2001a:37; and Harley 2004 for discussion of problems with the latter). In the next section it will be argued further that the account presented here is preferable to Baker et al (2004) on additional grounds.

#### **4.3. Baker, Aranovich, and Golluscio (2004)**

Baker et al (2004) point out that polysynthetic languages, like Cr, treat the phonological realization of agreement morphology differently cross-linguistically in constructions with incorporated nouns. The following examples taken from Baker et al illustrate such phenomena. Languages like Mapudungun (115) and Chukchee (116) do not allow agreement with incorporated nouns. The incorporated Mapudungun example (115a) contrasts with the unincorporated example (115b) in that in (115a) agreement morphology with the incorporated noun would render the construction illicit. In (115b) we see that the agreement morphology sharing reference with the free standing DP is necessary. In (115a) subject morphology is required but object agreement morphology is forbidden. In (115b) both object and subject agreement are required.<sup>72</sup>

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<sup>72</sup> Here abbreviations from Baker et al (2004) are employed. They note (139):

The abbreviations used in our glosses include: ABS: absolutive, ADJ: adjectival suffix, APPL: applicative, ASP: aspect, BEN: benefactive applicative, CAUS: causative, CIS: cislocative, CL: (noun) class marker, COLL: collective, COMP: complementizer, COND: conditional, DS: dative subject, DUP: duplicative, ERG: ergative, FACT: factual mood, FEM: feminine, FOC: focus particle, FUT: future, HAB: habitual,

- ( 115 ) a. Ngilla-waka-(\*fi)-n  
 buy-cow-(\*30)-IND.1sS  
 ‘I bought a cow.’
- b. Ngilla-fi-ñ ti waka  
 buy-30-ind.1S the cow  
 ‘I bought the cow.’

(Smeets 1989:421 in Baker et al 2005:141)

In the next example (116a) we see a construction without an incorporated noun. In this Chukchee example the data contains the transitive suffix *nin*. In (116b) we see this transitive morphology is not present in the construction with the incorporated noun.

- ( 116 ) a. ətləg-e mətqə-mət kawkaw-ək kili-*nin*  
 father-ERG butter-ABS bread-LOC spread-3sS/3sO  
 ‘The father spread the butter on the bread.’
- b. ətləg-ən kawkaw-ək mətqə-kili-g'e  
 father-ABS bread-LOC butter-spread-3sS  
 ‘The father spread the butter on the bread.’

(Baker et al 2004:153)

Languages like Mapudungun (115) and Chukchee (116) can be contrasted with languages like Southern Tiwa which allows object agreement morphology in constructions with the incorporated nominal. In (117a) we see that when a noun is

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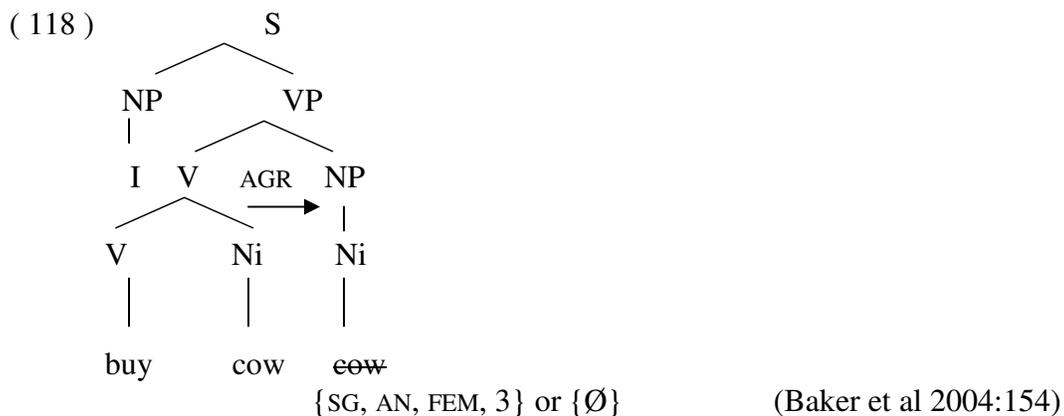
IMP: imperative, IND: indicative, INDEF: indefinite, INSTR: instrumental, INV: inverse voice, LOC: locative, NE: prenominal particle (Mohawk), NEG: negation, NOM: nominative, NOML: nominalizer, NP: nonpast, NSF: noun suffix, PART: participle, partitive, PI: past imperfective, PL: plural, POSS: possessor, PP: past perfective, PRES: present, PROG: progressive, PRT: particle, PUNC: punctual aspect, RE: repetitive, REFL: reflexive, REP: reportative, SG: singular, STAT: stative, SUBORD: subordinate, VBLR: verbalizer, \_: epenthetic vowel. Glosses for agreement markers include: 3O: 3rd person object agreement; 1sS: 1st person singular subject agreement; 3sS: 3rd singular subject agreement; 3dS: 3rd dual subject agreement; 3pS: 3rd plural subject agreement; AO, BO, CO, and CS: object and subject agreement for particular number/gender combinations (Southern Tiwa); ZpS: zoic plural subject agreement (Mohawk). Agreement is a complex matter in all the languages discussed, and the complexities vary from language to language in ways we cannot go into here. See the cited sources for details.

incorporated there is no change in the agreement morphology when compared to a non-incorporated construction (117b).

- ( 117 ) a. Ti-seuan-mu-ban  
 1sS/AO-man-see-past  
 ‘I saw the/a man.’
- b. Seuan-ide ti-mu-ban  
 man-sg 1sS/AO-see-past  
 ‘I saw the/a man.’

(Allen, Gardiner, & Frantz 1984 in Baker et al 2004:141)

To account for these apparent differences, Baker et al (2004) propose a deletion mechanism that not only deletes the phonological features of the lower copy after movement, but also, in some languages, deletes the person, number, and gender features (PNG or  $\phi$ -features). In languages like Mapudungun and Chukchee, the  $\phi$ -features of the copy left in object position after incorporation are deleted along with the phonological features. Since there are no  $\phi$ -features on the copy in the object position, the verb does not need to agree with the incorporated nominal in object position. In short, the verb only needs to agree with the nominal in subject position. In languages like Southern Tiwa on the other hand, only the phonological features of the copy in object position are deleted, leaving behind  $\phi$ -features. In such languages the verb must agree with the  $\phi$ -features in the object position, so it is inflected transitively (153-54). In this way Baker et al account for the differences in the two types of languages. This can be illustrated in the following tree taken from Baker et al.



Baker et al (2004) go on to present a third type of language, Mohawk. Mohawk seems to share features of both types of languages previously discussed: the verb does not have to agree with the incorporated object, but it must show object agreement of some kind. In (119) we see the incorporated direct object is third person neuter, the incorporated version (119a) has the same agreement morphology as the unincorporated version (119b).

- (119) a. Sak **ra**-[a]tya'tawi-tsher-a-nuhwe'-s  
 Salk MsS/(NsO)-dress-NOML-Ø-like-HAB  
 'Sak likes the dress.'
- b. Sak **ra**-nuhwe's            ne atya'tawi  
 Sak MsS/(NsO)-like-HAB NE dress  
 'Sak likes the dress.'
- (Baker et al 2004:156)

In this example Mohawk appears to pattern with Southern Tiwa. However, Baker et al note that the third neuter object in Mohawk happens to be a "Ø" form, and so (119a) is also compatible with treating Mohawk like Mapudungun and Chukchee (156). They go on to provide the following evidence to illustrate that Mohawk represents a third type of language.

( 120 ) a. Sak **ra-wir-a-nuhwe'-s**  
 Sak MsS/(NsO)-baby-Ø-like-hab  
 'Sak likes babies.'

b. Sak **shako-nuhwe'-s** ne owira'a  
 Sak MsS/FsO-like-hab ne baby  
 'Sak likes babies.'

(Baker et al 2004:156)

As Baker et al (2004) note, the agreement morphology in (120a) and (120b) differ, but the agreement of (120a) is the same as (119a). The conclusion is that verbs in Mohawk agree with direct objects in constructions with incorporated direct objects, only the  $\phi$ -features of such objects are the default  $\phi$ -features of the language. In the case of Mohawk then, the phonological material is deleted, but only the marked values of the  $\phi$ -features are deleted, leaving behind just the default  $\phi$ -features (156). Thus they arrive at the following typology, proposing a "family of parameters" to account for the cross-linguistic differences based on the facts presented and also on agreement facts related to WH-traces:

( 121 ) The deletion procedure which applies to copies of moved elements

- (i) preserve the PNG features [= $\phi$ -features] of the copy, *or*  
 (NI-traces in Southern Tiwa, Mayali)
- (ii) delete the marked values of the PNG features of the copy, *or*  
 (NI-traces in Mohawk)
- (iii) eliminate PNG features entirely.  
 (NI-traces in Mapudungun, Nahuatl, Chuckchee)

(Baker et al 2004:156)

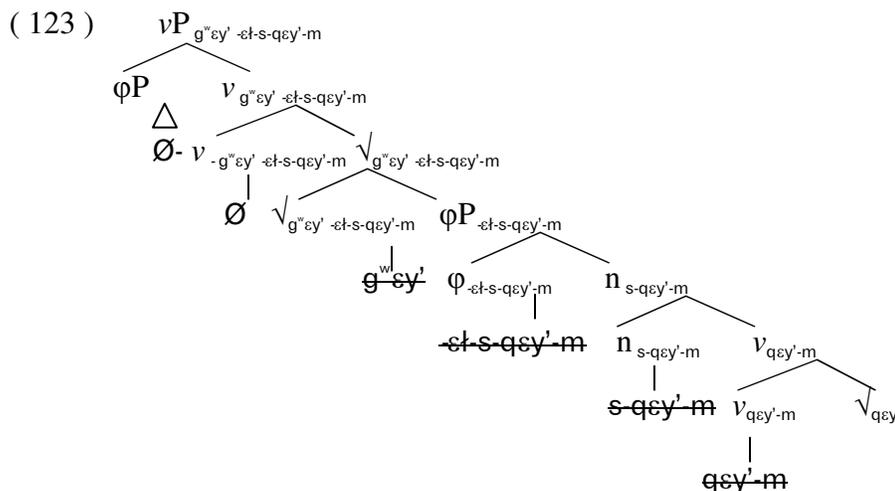
Next we turn to an account of *stem+stem* incorporation in Cr to illustrate how a Conflation account of incorporation is to be preferred over the Baker et al (2004) analysis.

#### 4.4. Stem+stem incorporation in Cr

In this section a preliminary account of *stem+stem* incorporation, as described in §1 above, will be put forth. Recall that the primary distinction between LA incorporation and stem+stem incorporation was the presence of connecting morphology, *-εʔ-*, and categorizing morphology such as the nominalizing *s-*, both absent in LA incorporation. Given (88a), repeated here as (122):

- (122) g<sup>w</sup>iy'asqεy'm  
 Ø- √g<sup>w</sup>εy'-εʔ-s-√qεy' -m  
 3abs- finish-conn-nom-write -m  
 'He finished writing.'

It is proposed that the connective *-εʔ-* is actually a φ-head, as it is the next functional layer within the DP, unspecified for person, number or agreement, thus allowing incorporation into a stem. The following tree in (123) illustrates with the relevant steps to derive the tree in (124).



- ( 124 ) a. The  $v$  *nic'* -*m* (middle) merges with its complement the root  $\sqrt{q\epsilon y'}$  'write'. The  $v$ 's p-sig is defective, and conflation occurs. The p-sig of the root,  $\sqrt{q\epsilon y'}$  is copied into the defective p-sig of the  $v$ , giving  $q\epsilon y'-m$ . The  $v$  is labeled with the p-sig of its head,  $q\epsilon y'-m$ .
- b. The  $v$  labeled  $q\epsilon y'-m$  merges with an element from the numeration, the nominalizer *s-*, which has a defective p-sig and conflation occurs. The p-sig  $q\epsilon y'-m$  is copied into the defective p-sig of the  $n$ , giving  $s-q\epsilon y'-m$ . The  $n$  is labeled with the p-sig of its head,  $s-q\epsilon y'-m$ .
- c. The  $n$  labeled  $s-q\epsilon y'-m$  merges with an element from the numeration, the  $\phi$ -head *- $\epsilon t$* , which has a defective p-sig and conflation occurs. The p-sig  $s-q\epsilon y'-m$  is copied into the defective p-sig of  $\phi$ , giving  $-\epsilon t-s-q\epsilon y'-m$ . The  $\phi$ P is labeled with the p-sig of its head,  $-\epsilon t-s-q\epsilon y'-m$ .
- d. The  $\phi$ P labeled  $-\epsilon t-s-q\epsilon y'-m$  merges with an element from the numeration, the root  $\sqrt{g''\epsilon y'}$  'finish', which has a defective p-sig and conflation occurs. The p-sig  $-\epsilon t-s-q\epsilon y'-m$  is copied into the defective p-sig of the root, giving  $\sqrt{g''\epsilon y'-\epsilon t-s-q\epsilon y'-m}$ . The root is labeled with the p-sig of its head,  $\sqrt{g''\epsilon y'-\epsilon t-s-q\epsilon y'-m}$ .
- e. The root labeled  $\sqrt{g''\epsilon y'-\epsilon t-s-q\epsilon y'-m}$  merges with an element from the numeration,  $v$ , which has a defective p-sig and conflation occurs. The p-sig of  $\sqrt{g''\epsilon y'-\epsilon t-s-q\epsilon y'-m}$  is copied into the defective p-sig of the  $v$ , giving  $\sqrt{g''\epsilon y'-\epsilon t-s-q\epsilon y'-m}$ . The  $v$  is labeled with the p-sig of its head,  $\sqrt{g''\epsilon y'-\epsilon t-s-q\epsilon y'-m}$ .
- d. The  $v$  labeled  $\sqrt{g''\epsilon y'-\epsilon t-s-q\epsilon y'-m}$  merges with an element from the numeration, the third absolutive subject,  $\emptyset$ . Neither p-sig is defective so no copying occurs. The whole  $v$ P is labeled with the p-sig of its head,  $\sqrt{g''\epsilon y'-\epsilon t-s-q\epsilon y'-m}$ .

In this way we account for such constructions in Cr. As mentioned above, it is assumed that the  $\phi$ -head *- $\epsilon t$*  is unspecified for  $\phi$ -features. In Cr therefore, the  $\phi$ P is not required to agree with the verb, and thus need not raise to specifier of  $v$  to check features, and incorporation is possible.<sup>73</sup> Next we turn to a comparison of Baker et al's (2004)

<sup>73</sup> It should be noted that Reichard (1938) provides a few examples of nominal incorporation which do not include the connecting morpheme *- $\epsilon t$* . Each of these constructions is with the root  $\sqrt{c\epsilon t}$  'hunt', a root that cannot "stand on its own" (Doak 1997:287), and  $y\epsilon?$  'procure by hunting' which Reichard (1938) notes,

analysis and the Conflation analysis of incorporation.

#### 4.5. Conflation over feature deletion

Baker et al 2004 propose the typology in (121) above, repeated here as (125), to account for the morphological differences seen in the Southern Tiwa, Mohawk, Mapudungun, and Chuckchee in regards to object incorporation.

( 125 ) The deletion procedure which applies to copies of moved elements

- (i) preserve the PNG features [=φ-features] of the copy, *or*  
(NI-traces in Southern Tiwa, Mayali)
- (ii) delete the marked values of the PNG features of the copy, *or*  
(NI-traces in Mohawk)
- (iii) eliminate PNG features entirely.  
(NI-traces in Mapudungun, Nahuatl, Chuckchee)

(Baker et al 2004:156)

They propose a family of parameters, and a special deletion mechanism (126) the result of "several possible parameter settings" (156 fn22) to account for the differences in (i), (ii), and (iii) in (125).

( 126 ) Baker et al's special deletion mechanism

- (i) deletes all φ-features, *or*
- (ii) deletes only marked values of φ-features, *or*
- (iii) deletes no φ-features

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"incorporates any of the animal names and seems quite free" (642). In the case on  $\sqrt{ce}\acute{t}$  'hunt', the connective may be present, lost for phonological reasons, or the root may actually be  $\sqrt{ce}$ , with the  $\acute{t}$  element being the remaining phonological content of  $-\acute{e}\acute{t}$ ,  $\acute{e}$  having been reduced. Since this root never "stands on its own" we can't be sure, but it does seem reasonable to put it aside as it is not a standard root, it cannot stand on its own. In the case of  $y\acute{e}?$  'procure by hunting', it is a bit more challenging to make the case that the connective is present, or that it is an exceptional case. It may be the case that  $-\acute{e}\acute{t}$  has a phonologically null counter part in Cr, or that  $y\acute{e}?$  has special properties that allow it to combine without the relevant functional category. The exact nature of  $y\acute{e}?$  incorporation will have to be left for future research, but it will be assumed that the generalizations presented for noun-incorporation in Cr otherwise hold.

Further, Baker et al fail to capture Chomsky's claim that head-movement is phonological in nature. A Hale and Keyser (2002) Conflation analysis of incorporation, as seen above in (§4.4), maintains Chomsky's claim and does not require a special deletion mechanism and the requisite parameters Baker et al (2004) propose to constrain it. The crucial differences are illustrated in (127).

| ( 127 )     | syntactic<br>head-<br>movement | special deletion<br>mechanism | head-movement<br>phonological |
|-------------|--------------------------------|-------------------------------|-------------------------------|
| Baker et al | yes                            | yes                           | no                            |
| Conflation  | no                             | no                            | yes                           |

Under a Conflation analysis Baker et al's (2004) typology can be described as follows:

( 128 ) Baker et al incorporation typology redux

- (i) NI constructions function like non-incorporating structures in terms of agreement, verb agrees, full features, *or* (NI-traces in Southern Tiwa, Mayali)
- (ii) In NI constructions verb requires agreement marking, but agreement necessarily default, *or* (NI-traces in Mohawk)
- (iii) NI constructions do not function like non-incorporating structures, do not require agreement, (no features). (NI-traces in Mapudungun, Nahuatl, Chuckchee)

From this perspective it seems we need only account for the facts of type (ii) languages and type (iii) languages, as nothing out of the ordinary seems to be occurring in type (i) languages. That is, the object is incorporating in all three types of languages, but in type (i) the syntax is doing nothing out of the ordinary, the only variation is between conflation and no conflation. In languages of type (ii) and type (iii) the difference is between no agreement and default agreement. If this were the case, we

would only need two parameters to account for the facts discussed so far. The first parameter would distinguish between type (i) languages, the Southern Tiwa type, and type (ii) and (iii) languages, Mohawk type and Mapudungun type, respectively.

( 129 ) Parameter 1: *Incorporation Variance Parameter*

- a. Languages that incorporate show no agreement variation between constructions with incorporation and constructions without incorporation: full features are always present, *or* (Southern Tiwa, Mayali)
- b. Languages that incorporate show agreement variation between constructions with incorporation and constructions without: no or default features are realized in constructions with incorporation. (Mohawk, Mapudungun, Nahuatl, Chuckchee)

This would account for the differences found between type (i) languages and the other two types, type (ii) and (iii) languages. A second parameter would be required to make a distinction between type (ii) and type (iii) languages.

( 130 ) Parameter 2: *Incorporated  $\phi$  Parameter*

- a. Languages that incorporate and show agreement variation between constructions with incorporation and constructions without: default features are realized in constructions with incorporation. (Mohawk)
- b. Languages that incorporate and show agreement variation between constructions with incorporation and constructions without: no features are realized in constructions with incorporation. (Mapudungun, Nahuatl, Chuckchee)

Cr would appear to be similar to Mohawk in that default agreement features, unspecified in Cr, are required in cases of incorporation. On the other hand, it has been argued that LAs have no functional layer providing agreement features, thus incorporation of LAs

would be similar to Mapudungun incorporation. Cr would appear to have both type (ii) and type (iii) incorporation seen in (127) above: Type (ii) for incorporated nominalized roots and type (iii) for LAs. However, if we assume the traditional view of LA diachronic origin, LAs deriving from stem+stem incorporation, it would be the case that LAs would have default agreement features. That is, though reanalyzed as bound morphemes the  $\phi$ -features of the connecting element *-εʔ*, would remain in the reanalyzed element: the lexical affix. This would account for the fact that LAs, *n*-heads, incorporate. It would also explain why no other *n*-heads or elements may incorporate without the connective *-εʔ*, and the relevant  $\phi$ -features. Thus, it would indeed be the case that default agreement features, i.e. unspecified  $\phi$ -features, are required in all case of incorporation in Cr. In this way we see that Cr would be a type (ii) incorporating language.

This analysis makes it possible to account for the facts seen above with fewer parameters and fewer grammatical mechanisms (i.e. special deletion elements). It also maintains the notion that head-movement is phonological in nature. Naturally, at this point the parameters proposed must remain hypothetical pending future research involving a variety of incorporating languages. That is, it must be demonstrated that the claims here do indeed hold in the languages under discussion other than Cr.

## 5. Conclusion

This chapter has argued for a formal account of lexical affixation as incorporation that takes place within narrow syntax. It has been argued that LAs are *n*-heads, which do not serve to categorize roots, but rather incorporate into roots. Also, that the incorporation facts of Cr, both LA and stem+stem, can be accounted for without deviation from Chomsky's (1995) claim that head-movement is phonological in nature by employing Hale and Keyser's (2002) Conflation, as Harley (2004) demonstrates. Further, it has been

argued that this account of incorporation can be extended to incorporation in other languages such as Mapudungun, Mohawk, and Southern Tiwa, which all exhibit different agreement properties. This analysis requires fewer parameters and grammatical mechanisms than Baker et al (2004), and is thus preferable. However, it will be necessary for future research on languages such as Mapudungun, Mohawk, and Southern Tiwa, among other such languages, to confirm these claims.

## CHAPTER 5

### ELEVEN PARTICLES IN COEUR D'ALENE: SOME THEORETICAL CONSIDERATIONS

#### 1. Introduction

In this chapter eleven particles will be presented and analyzed in an attempt to arrive at a preliminary account of functional projections in the Coeur d'Alene clause. The goal of the chapter is to propose a hierarchy of clausal functional projections in Coeur d'Alene, in the spirit of Cinque (1999). The chapter further compares the formalism of Cinque with that of Rizzi's (1997a) Split CP hypothesis. The claim arrived at is that Cr data fits well with both a Cinque- and Rizzi-style analysis in terms of the particles discussed. The chapter relies on the English glosses and descriptions of data found in Reichard (1927-29; 1938) and Doak (1997).<sup>74</sup> The particles to be discussed are presented in Table 17.

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<sup>74</sup> It should be noted that the conclusions drawn in this chapter must be considered preliminary, pending the complete analysis of all the Reichard (1927-29) manuscripts and future inquiry.

**Table 17:** Coeur d'Alene particles

| TYPE                               | PARTICLE            |                                                                            |
|------------------------------------|---------------------|----------------------------------------------------------------------------|
| Temporal Adverbial                 | <i>kʷnɛʔ</i>        | 'soon' <i>immediate future</i> (Doak 1997:186) <sup>75</sup>               |
|                                    | <i>kʷkʷnʹiʹyʹɛʔ</i> | 'soon' <i>immediate future</i> (Doak 1997:187)                             |
|                                    | <i>kʷukʷiʔ</i>      | 'soon' <i>immediate future</i> (Doak 1997:187)                             |
| Sentential Adverbial <sup>76</sup> | <i>hoi</i>          | 'and' / 'then' <i>discourse/narrative adverbial</i>                        |
|                                    | <i>kʷumʹ</i>        | 'and' / 'then' <i>discourse/narrative adverbial</i>                        |
| Mood                               | <i>nɛʔ</i>          | <i>irrealis</i> (Reichard 1938:669.777; Doak 1997:188)                     |
| Modal                              | <i>čɛʔ</i>          | <i>future intentional, permissive, mild request</i> (Reichard 1938:666-67) |
|                                    | <i>čɛʔ</i>          | <i>ought, obligation</i> (Reichard 1938:669.780)                           |
|                                    | <i>cmiʔ</i>         | <i>was to be but isn't, possibility</i> (Reichard 1939:104)                |
| Aspectual                          | <i>cmiʔ</i>         | 'used to' <i>terminative</i> (Doak 1997:49)                                |
|                                    | <i>pinč</i>         | 'always' <i>habitual</i> (Doak 1997:49)                                    |

Based on the strict ordering of morphemes found in the data, it will be argued that the above particles reveal a hierarchy of clausal functional projections in Coeur d'Alene (henceforth Cr). Further, it will be shown that the structural ordering of the particles discussed parallels that proposed by Cinque (1999) for a universal hierarchy of functional projections, with minor modifications.

The chapter is organized as follows. In Section 2 the temporal adverbial particles and sentential adverbial particles will be presented and analyzed. The three modal particles are analyzed in Section 3 along with the irrealis. In Section 4, aspect morphology will be revisited and the two aspectual particles will be discussed. The interrogative particle is presented in Section 5. Section 6 presents an alternative analysis

<sup>75</sup> The exact difference between these morphemes is not clear.

<sup>76</sup> *hoi* and *kʷumʹ* should not be confused with standard conjunctions, these are adverbials anchored to speech time (Cinque 1999:12). Further, it should be noted that they not only occur in narratives but are frequently employed in discourse (Brinkman pc).

of the irrealis and interrogative particles in terms of Rizzi's (1997a) split CP hypothesis. Finally, in Section 7 concluding remarks are presented.

## 2. Temporal and sentential adverbial particles

As noted in Chapter 1, Cr does not indicate tense with overt morphology other than in the form of temporal adverbial particles and modal particles that indicate future events. A given clause in Cr is considered past or present, when no future marking is present, depending on discourse context (Doak 1997:43). Cr employs three temporal adverbial particles, *k<sup>w</sup>nε?*, *k<sup>w</sup>k<sup>w</sup>n<sup>w</sup>i'y'ε?*, and *k<sup>w</sup>uk<sup>w</sup>i?!*, to indicate immediate future, each of which may occur with the future Modal *čε!*. As noted by Comrie (1976) and Palmer (2001), it is not uncommon for languages that do not employ overt tense morphology to encode temporal notions via modals and adverbial particles. Cr also employs what Cinque (1999:12-23) identifies as "sentential adverbials" anchored to speech or narrative time, the Cr particles *hoi* and *k<sup>w</sup>um'*, both glossed 'and' and 'then'. First, an analysis of the temporal adverbial particles is presented followed by a discussion of the sentential adverbial particles.

### 2.1. Temporal adverbial particles: *k<sup>w</sup>nε?*, *k<sup>w</sup>k<sup>w</sup>n<sup>w</sup>i'y'ε?*, and *k<sup>w</sup>uk<sup>w</sup>i?!*

Doak (1997) notes that Cr has a number of ways in which to indicate future events. Among these are the use of the temporal adverbial particles *k<sup>w</sup>nε?*, *k<sup>w</sup>k<sup>w</sup>n<sup>w</sup>i'y'ε?*, and *k<sup>w</sup>uk<sup>w</sup>i?!*, to indicate immediate future. Doak notes that *k<sup>w</sup>k<sup>w</sup>n<sup>w</sup>i'y'ε?*, and *k<sup>w</sup>uk<sup>w</sup>i?!* are related to *k<sup>w</sup>nε?* and are used in similar environments (187). They are all three glossed as immediate future, 'soon'. Further, it should be noted that these adverbial particles differ in their semantic content from the irrealis morpheme *nε?* which indicates a hypothetical situation, in that the immediate future morphemes indicate a specific action to be taken







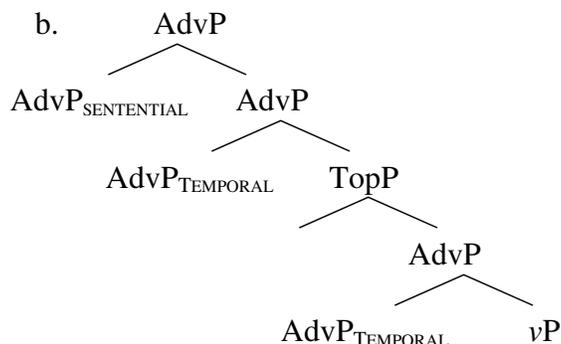
- ( 136 )    hoi k<sup>w</sup>um' tɛ yəlmix<sup>w</sup>um ɛk<sup>w</sup>n  
               hoi k<sup>w</sup>um' tɛ    ylmix<sup>w</sup>m    Ø- √ɛk<sup>w</sup>n  
               and then det<sub>3</sub> Chief        3abs- say  
               ‘And then, Chief, he said ...’

Thus we see that temporal adverbial particles may appear in "higher" adverbial positions and "lower" positions, (132) above, and that sentential adverbial particles may appear in "higher" adverbial positions as well. As sentential adverbial particles may appear together above a topicalized element (134), and may appear above a temporal adverbial particles (135), it is assumed that Cr has three adverbial positions, two higher and one lower. In the case of Cr, sentential adverbs appear in the topmost adverbial position while temporal adverbs occupy the next two adverbial positions (this is illustrated in (137) below).<sup>80</sup> This parallels Cinque's (1999) claim that adverbials may appear in a higher or lower position within the clause. Thus a preliminary hierarchy can be proposed to reflect these facts in (137a). These facts are summarized in (137b), where the highest adverbial positions can be filled by either sentential adverbs (135) and the lower positions by temporal adverbial particles (132). It should be noted that Cinque provides no position for topics in his articulated structure; it is included here, and throughout in a location that accords with the known facts of the Cr clause.

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<sup>80</sup> Cinque 1999 does not provide a position for sentential adverbials anchored to speech time in the languages he analyzes as they appear to be much freer than the Cr forms (12-13). As the Cr forms seem restricted, an adverbial head is posited here as their host.

( 137 ) a. *adverbial > adverbial > topic > adverbial > vP*



Next we turn to distribution of the modal particles to further expand the functional hierarchy of the Cr clause.

### 3. Modals: *čes?*, *cmi?*, and *čes?*

In the discussion that follows it will be demonstrated that there is a fixed order between adverbial particles and modals. It will also be demonstrated that *čes?* and *cmi?* further demonstrate a fixed order of functional categories within the Cr clause. It should be noted that while three modals will be discussed, there are potentially others in the language that will not be addressed here and left to future research.

#### 3.1. *čes?*: future intentional, permissive, mild request

Reichard (1938) notes that *čes?* indicates future permissive, future mild request, and future commands (666-667). It may also indicate future intentional, and when doing so often occurs with the intentional morpheme *s-* (666). It is these deontic senses of the term that require the modal analysis, rather than a simple future tense analysis. The fact that *čes?* appears after the irrealis *ne?* and temporal adverbial particles, and before aspect morphology, suggest that *čes?* is located between TP and ASPP. The following examples illustrate.



the higher ADVP and the *čɛʔ* MODP. Thus, the preliminary hierarchy in (137) can be expanded as in (143a) and illustrated structurally in (143b). First, however, we can show that the irrealis is lower in the structure than the topic with the following middle construction where the topic phrase, *ʔɛ smaʔiʔčn'* 'Grizzly Bear', appears before the irrealis.

( 142 ) topic, *ʔɛ smaʔiʔčn'*, before irrealis *nɛʔ*

hoi ʔɛ smaʔiʔčn' nɛʔ čəŋg<sup>w</sup>ənítəm

hoi ʔɛ smaʔiʔčn' nɛʔ čn- √g<sup>w</sup>nit -m

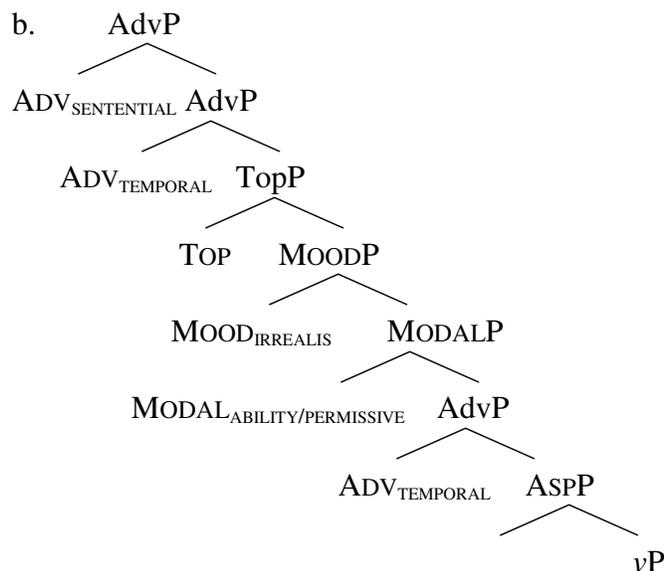
then det<sub>3</sub> Grizzly.bear irr 1sg.nom- call -mdl

'Then, Grizzly Bear, I should call.'

(Reichard 1927-29:chkt21)

Now the preliminary hierarchy can be presented with the irrealis included as a mood element. However, it should be noted that it is not clear exactly where the "lower" adverbial position is located in the structure. It will be assumed, pending future inquiry, that the lower adverbial is located above the ASPP and above the resting place of the pronominal arguments, and below MODP. As this is tentative it will be indicated by the "≥" symbol.

( 143 ) a. *adverbial* > *adverbial* > *topic* > *mood<sub>irrealis</sub>* > *modal<sub>ability/permissive</sub>* ≥ *adverbial* ≥ *aspect* > vP



Next we turn to a discussion of the other two modal elements, *čɛʔ* and *cmiʔ*.

### 3.2. *čɛʔ* and *cmiʔ*: ought and possibility

Reichard (1938) provides an account of both *čɛʔ* and *cmiʔ*. *čɛʔ* is described as indicating a sense of obligation (669), *cmiʔ* indicates possibility or "intention to carry out" but failure to carry out (670). This *cmiʔ* is quite similar in meaning with what Doak (1997) identifies as the aspectual particle *cmiʔ*. The difference seems to be that the modal indicates a level of possibility that the aspect morpheme does not. I treat these as separate morphemes here, I do not rule out the possibility that they may be the same morpheme however.

There are no examples of *cmiʔ* and *čɛʔ* co-occurring with the morphemes discussed above with the exception of one example in which *cmiʔ* appears with *čɛʔ*. This is illustrated in (144).<sup>82</sup>

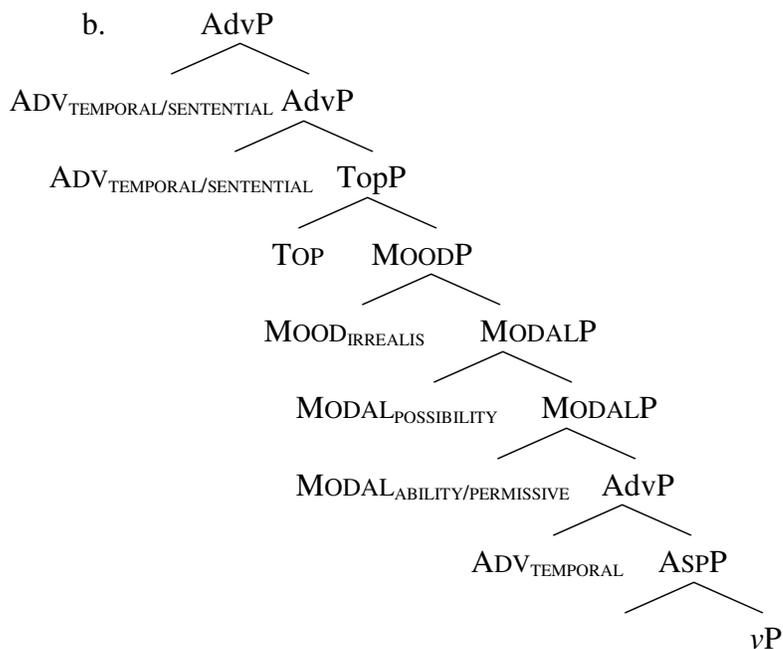
<sup>82</sup> Doak (pc) notes that this example Reichard (1938) took from the story of Rabbit and Jackrabbit, and is not a complete sentence. She notes that this example has *xʷijəʔ* preceding in the story, and is translated by Reichard (1927-29) as "that which I was going to feed you with"; Doak claims the "but now I won't" is at best contextual. Future research regarding this morpheme should clarify its exact nature.

- ( 144 )    *cmi?*    *čɛʔ* 'ɛmcən  
               *cmi?*    *čɛʔ* √ɛm -t -si -n  
               fposs fut share -t -2acc -1er  
               'I was going to share it with you but now I won't.'

(Reichard 1938:667.763)

That *cmi?* and *čɛʔ* can appear together suggests that there are two modal positions. It will be assumed that there are two modal heads, (though again, this assumption is subject to future inquiry) one which hosts *čɛʔ* and one which hosts *cmi?*. The proposed hierarchy can be stated as (145), noting that there is no clear indication of where *čɛʔ* 'ought' fits in the structure. Thus, for the time being, *čɛʔ* 'ought' will not be included in the preliminary hierarchy of functional categories.

- ( 145 )a.    *adverbial* > *adverbial* > *topic* > *mood<sub>irrealis</sub>* > *modal<sub>possibility</sub>* >  
                   *modal<sub>ability/permisive</sub>* ≥ *adverbial* ≥ *aspect* > vP



Next we turn to an account of the aspectual particles.

#### 4. Aspectual particles: *cmi?* and *pinč*

Before *cmi?* and *pinč* are addressed, a brief review of the aspectual morphology in Cr is in order. As noted in Chapter 1, there are three aspect affixes which appear within the predicate. These are the default *completive*, a null morpheme 'Ø'; the *customary* *?εc-*; and the *continuative* *y'c-*. Examples follow.

( 146 ) *completive* null [Ø]: A situation has ended

- a. čn- Ø- √mílχ<sup>w</sup>  
 1s.nom- comp- smoke  
 'I smoked.'

(Doak 1997:83)

- b. Ø- √g<sup>w</sup>nit -t -sε -x<sup>w</sup>  
 comp- call -t -1acc -2erg  
 ‘You called me.’ (Doak 1997:119)

( 147 ) *customary* ?εc-:A situation that is viewed as characteristic of a whole period rather than of a moment.

- a. č- ?εc- √k<sup>w</sup>ul  
 1p.nom cust- work  
 ‘We work.’ (Doak 1997:85)

- b. ?εc- √čēš -nt -si -t  
 cust- accompany -dt 2p.acc -1p.erg  
 ‘We go with you folks.’ (Doak 1997:115)

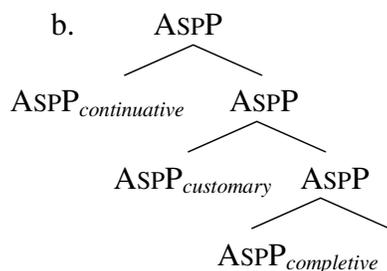
( 148 ) *continuative* y’c-:A situation in progress

- a. čn- y’c- √g<sup>w</sup>íc  
 1s.nom cust- see  
 ‘I am seeing.’ (Doak 1997:106)

- b. Does not occur on transitive stems<sup>83</sup> (Doak 1997:106)

Cinque (1999) proposes the following hierarchy for *continuative*, *customary*, and *completive*.

( 149 ) a. *aspect*<sub>continuative</sub> > *aspect*<sub>customary</sub> > *aspect*<sub>completive</sub>



<sup>83</sup> Doak notes that she has “examples of the continuative occurring with transitive stems; however, they are usually in subordinate clauses (one speaker seemed able to use this construction in main clauses)” (pc).

There is no evidence for this structure in Cr, however, there is no evidence that this does not exist in Cr either. For clarity the continuative, customary, and completive will all be assumed to be located in one ASP node. Further, since they never appear together, it will be assumed that they are generated as ASP-heads in that same structure. The fact that these morphemes may be internally ordered in terms of Cinque's (1999) hierarchy will be indicated with the "≥" symbol as follows.

(150) a.  $aspect_{continuative} \geq aspect_{customary} \geq aspect_{completive} > vP$

b.

$$\begin{array}{c} \text{ASPP} \\ \diagdown \quad \diagup \\ \text{ASPP}_{continuative \geq customary \geq completive} \quad vP \end{array}$$

Turning to the aspect particles we see that the habitual *pintč* 'always', follows the sentential adverbial particles and precedes the continuative aspect.<sup>84</sup>

(151) hoi k<sup>w</sup>um' pintč icc'u?umš  
 hoi k<sup>w</sup>um' pintč y'c- √c'u?m -š  
 and then always cont- cry -cont  
 'And then, he is always crying.' (Reichard 1927-29:cssd070)

In the following example we see that the terminative *cmi?* appears before the customary *?εc-*.

(152) cmi? ?εc- √g<sup>w</sup>ič -st(u) -∅ -n  
 term cust- see -ct -3abs -1erg  
 'I used to see it.' (Doak 1997:49 modified)<sup>85</sup>

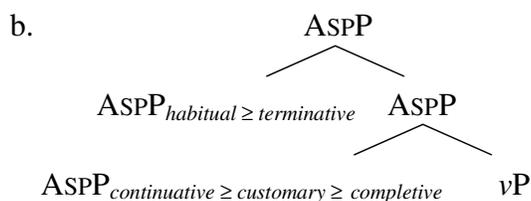
Thus it can be concluded that the two aspect particles *pintč* and *cmi?* appear

<sup>84</sup> Doak (1997) labels -š as a continuative element that appears in some constructions with the *y'c-* continuative creating a continuative antipassive (46,106). Interesting as this structure is, a full analysis of -š will be left to future research. Doak notes that she has recently been analyzing this -š as part of an -*m+*š morpheme, rather than analyzing them as two separate morphemes (pc).

<sup>85</sup> Doak (1997:49) does not provide the morpheme by morpheme analysis for this example.

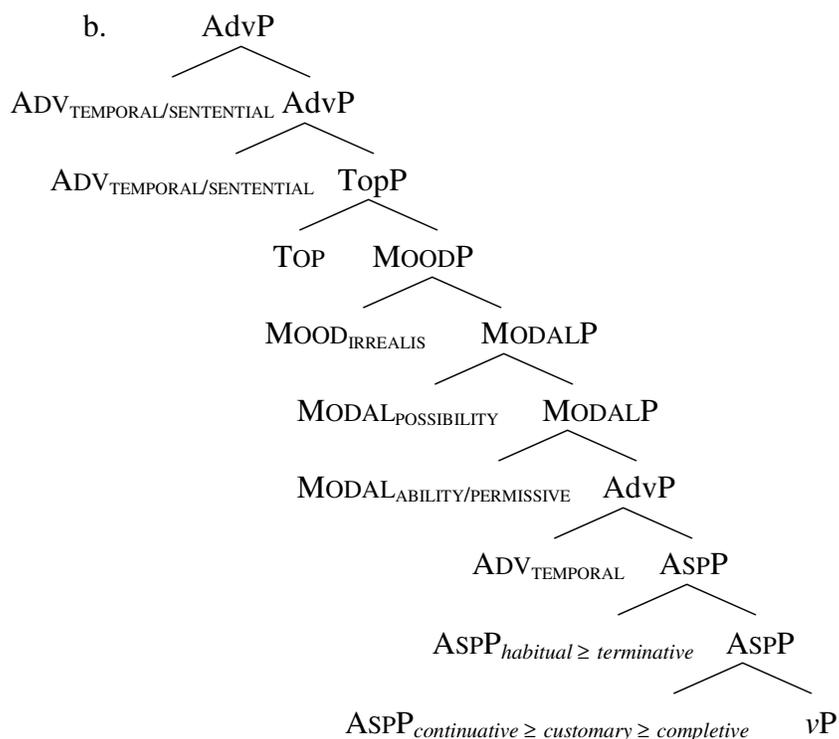
higher in the structure than the aspect affixes, customary  $ʔεc-$ , continuative  $y'c-$ , and completive  $∅-$ . Further, it has been shown that the aspect particle *pintč* appears below the sentential adverbial particles. The preliminary conclusion is that there are at least two ASP nodes, one for the particles *pintč* and *cmiʔ*, and the other for the affix customary  $ʔεc$ , continuative  $y'c-$ , and completive  $∅-$ . Again we see that it cannot be demonstrated that the Cr data conforms exactly to Cinque's (1999) universal hierarchy. Cinque argues that habitual aspect precedes terminative aspect, but here we have no evidence for this in Cr. However, Cinque places habitual aspect and terminative aspect above continuative, durative (customary), and completive which is consistent with what we have seen in Cr. Therefore employing " $\geq$ " to indicate potential ordering, (150) can be expanded to (153). In (153a) the tentativeness of the morpheme hierarchy is illustrated by placing the two aspect particles *pintč* and *cmiʔ* under a single node, and the aspect affixes customary  $ʔεc$ , continuative  $y'c-$ , and completive  $∅-$  under a separate single node.

(153) a.  $aspect_{habitual} \geq aspect_{terminative} > aspect_{continuative} \geq aspect_{customary} \geq aspect_{completive} > vP$



There is no direct evidence for the exact position of realization for the aspect particles *pintč* and *cmiʔ* in terms of the other particles discussed above, other than below the sentential adverbial particles *hoi* and *k<sup>w</sup>um'*. Therefore, they will be tentatively placed in the structure in the position predicted by Cinque's (1999) universal hierarchy. Thus, (145) can be restated as (154), where (154a) indicates the possible hierarchy in terms of Cinque 1999 for each morpheme and (154b) reflects what is known from the data.

- (154) a. *adverbial* > *adverbial* > *topic* > *mood<sub>irrealis</sub>* > *modal<sub>possibility</sub>* >  
*modal<sub>ability/permissive</sub>* ≥ *adverbial* ≥ *aspect<sub>habitual</sub>* ≥ *aspect<sub>terminative</sub>* >  
*aspect<sub>continuative</sub>* ≥ *aspect<sub>customary</sub>* ≥ *aspect<sub>completive</sub>* > *vP*



Having arrived at a preliminary account of the adverbial particles (both temporal and sentential), the mood particle, the modals, and finally the aspect particles, we turn to a discussion of the interrogative and Cinque's  $\text{MOOD}_{\text{SPEECH ACT}}$ .

## 5. Interrogative *ni*

Reichard (1938) notes the interrogative "stands first in a sentence" (682). She further notes that it is often used rhetorically. When it appears preceding the negative *lut*, an answer of "yes" is expected and when it appears before the sentential adverbial particle *k<sup>w</sup>um'*, the answer "no" is expected (668). Following examples illustrate.

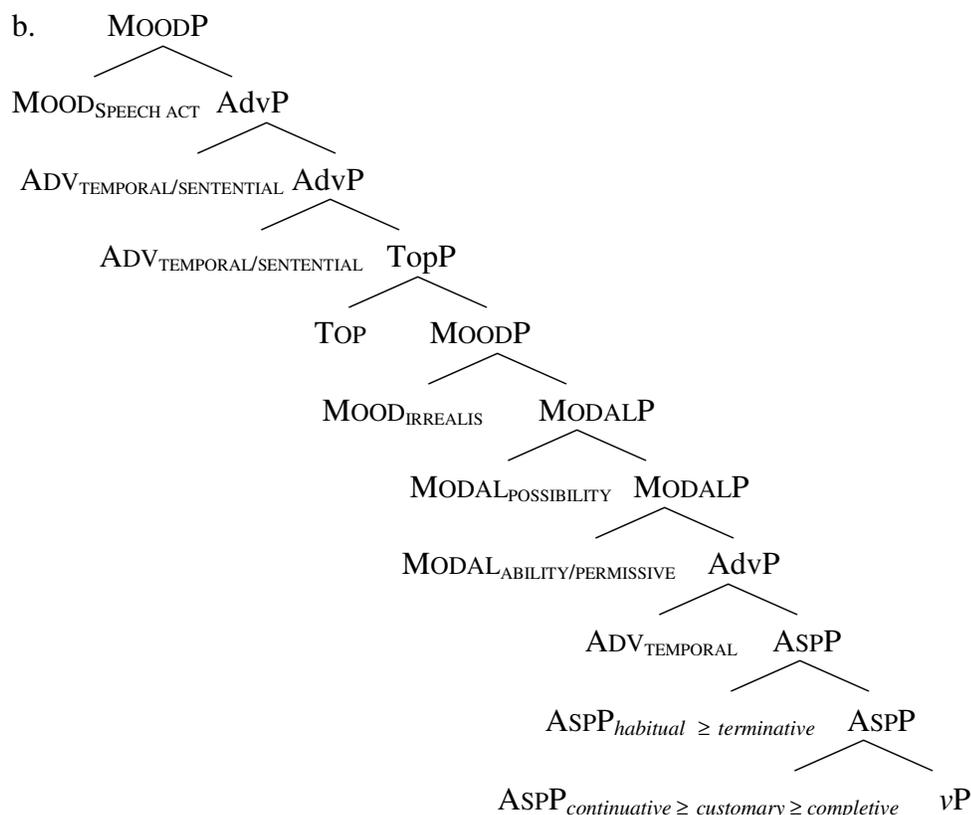
(155) ni x<sup>w</sup>árəš  
 ni Ø- √x<sup>w</sup>ar -iš  
 intr 3abs- be.very.long.time -devel  
 'Hasn't it been a long time ...' (Reichard 1927-29:cssw165)

(156) ni k<sup>w</sup>um' čəsne?k<sup>w</sup>ú  
 ni k<sup>w</sup>um' čn- s- √nε?k<sup>w</sup>un  
 intr then 1s.nom int- think  
 'Was I to know.' (Reichard 1927-29:L99)

(157) ni lut čε y'čsənmiyípsən  
 ni lut čεł s- čs- hn- miy =ip -st(u)-Ø -n  
 intr neg fut int- loc- loc- know =behind -ct -3abs -1sg.erg  
 'Am I not to know what it is coming from behind?' (Reichard 1927-29:cssw22)

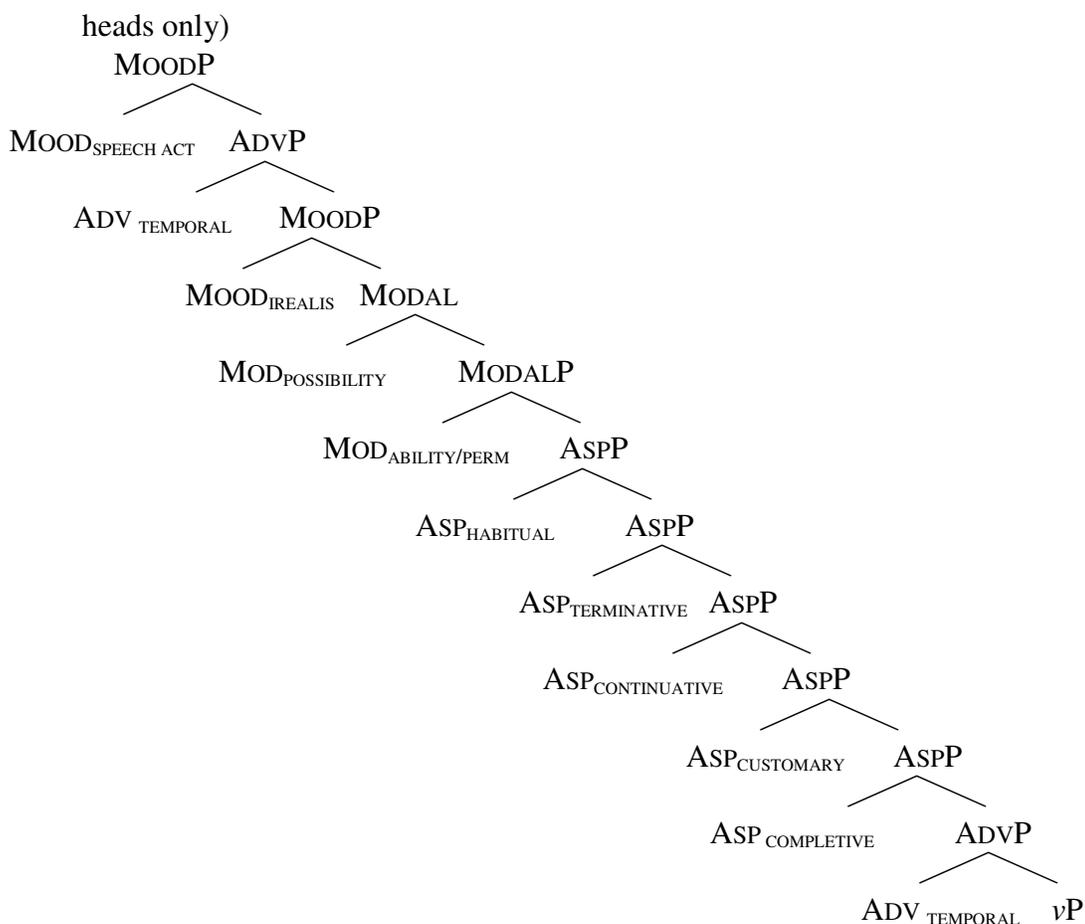
Cinque (1999) argues that interrogatives, which are speech act mood elements under Bybee's (1985) typological system, are speech act mood under his own system also (53). This places interrogatives at the leftmost edge of the clause in Cinque's hierarchy (130). Thus, (154) can be restated as (158), where (158a) indicates the possible hierarchy in terms of Cinque 1999 for each morpheme and (158b) reflects what is known from the data regarding these particle heads.

- (158) a. *mood<sub>speech act</sub>* > *adverbial* > *adverbial* > *topic* > *mood<sub>irrealis</sub>* > *modal<sub>possibility</sub>* >  
*modal<sub>ability/permissive</sub>* ≥ *adverbial* ≥ *aspect<sub>habitual</sub>* ≥ *aspect<sub>terminative</sub>* >  
*aspect<sub>continuative</sub>* ≥ *aspect<sub>customary</sub>* ≥ *aspect<sub>completive</sub>* > *vP*



Comparing (158b) with (159), we see the Cr facts parallel Cinque's (1999) structure quite closely, the differences being that a head position has been posited for the sentential adverbials in Cr which does not appear in Cinque's formulism. Further, a topic position has been included for Cr; where as, Cinque (225 fn25) acknowledges a topic position within CP along the lines of Rizzi (1997a) but does not include it in his hierarchy of functional projections. Also, the ASP heads have been collapsed into one note pending further inquiry in Cr.

( 159 ) Cinque's 1999 Universal hierarchy of clausal functional heads (with relevant



It should be noted that a tense position has not been indicated. Cinque (1999) posits three tense positions, tense *past* immediately above tense *future*, both immediately above mood irrealis, and a third tense position, tense *anterior*, immediately above aspect terminative. As Cr does not indicate tense overtly in a tense node, and since discourse factors determine the past or present nature of a clause, any generalization regarding tense is rather speculative. However, since it is assumed tense enters an Agree relationship with the subject of a clause in order to check case (cf. Chapter 3), it is assumed that Cr minimally has a tense position near the mood irrealis position. Thus, a

hierarchy of functional and adverbial heads in the Cr clause is arrived at based on the ordering of particles identified in Table 17 above, repeated here as Table 18.

**Table 18:** Coeur d'Alene particles

| TYPE                 | PARTICLE                                           |                                                                            |
|----------------------|----------------------------------------------------|----------------------------------------------------------------------------|
| Temporal Adverbial   | <i>k<sup>w</sup>nε?</i>                            | 'soon' <i>immediate future</i> (Doak 1997:186)                             |
|                      | <i>k<sup>w</sup>k<sup>w</sup>n<sup>i</sup>y'ε?</i> | 'soon' <i>immediate future</i> (Doak 1997:187)                             |
|                      | <i>k<sup>w</sup>uk<sup>w</sup>i?</i>               | 'soon' <i>immediate future</i> (Doak 1997:187)                             |
| Sentential Adverbial | <i>hoi</i>                                         | 'and' / 'then' <i>discourse/narrative adverbial</i>                        |
|                      | <i>k<sup>w</sup>um'</i>                            | 'and' / 'then' <i>discourse/narrative adverbial</i>                        |
| Mood                 | <i>nε?</i>                                         | <i>irrealis</i> (Reichard 1938:669.777; Doak 1997:188)                     |
| Modal                | <i>čɛł</i>                                         | <i>future intentional, permissive, mild request</i> (Reichard 1938:666-67) |
|                      | <i>čɛ?</i>                                         | <i>ought, obligation</i> (Reichard 1938:669.780)                           |
|                      | <i>cmi?</i>                                        | <i>was to be but isn't, possibility</i> (Reichard 1939:104)                |
| Aspectual            | <i>cmi?</i>                                        | 'used to' <i>terminative</i> (Doak 1997:49)                                |
|                      | <i>pinč</i>                                        | 'always' <i>habitual</i> (Doak 1997:49)                                    |

Next we turn to a brief discussion of how the irrealis and interrogative may fit into Rizzi's (1997a) split CP.

## 6. Rizzi's split CP

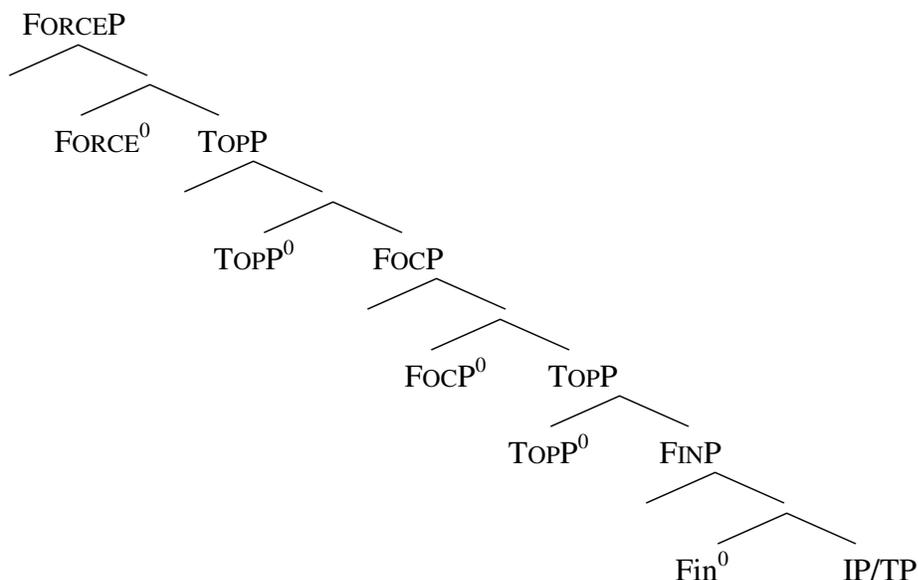
Rizzi (1997a) analyzes the structural representation of the CP as comprising independent non-V-related material, unlike that in IP. That is, Rizzi claims that the inflectional properties which C reflects are not encoded in the form of verbal morphology. Rizzi identifies this complementizer layer as being typically headed by a free functional morpheme, and hosting various operator elements such as interrogative and relative pronouns, focalized elements etc., and topics. Importantly, Rizzi articulates the Force-Finiteness system within CP.

Rizzi (1997a) proposes that CP is the "interface between a propositional content (expressed by IP/TP) and the superordinate structure (a higher clause, or possibly, the articulation of discourse)" (283). Thus, the CP encodes two types of information:

- i. that oriented toward the supra-ordinate structure (governing clause or discourse), "Force" (Chomsky's (1995) term) which expresses the fact that a sentence is a question, a declarative, an exclamative, a relative, a comparative, or adverbial of a certain type etc. (283).
- ii. that oriented toward the propositional content (expressed by IP or VP), "Finiteness" which allows C to express a distinction related to tense but as Rizzi states it, "more rudimentary than tense and other inflectional specifications" (284). The core IP/TP-related characteristics that the complementizer system expresses are finiteness. The specification for finiteness within the C system selects an IP/TP system with the familiar characteristics of finiteness: mood distinctions, subject agreement licensing nominative case, etc. (283).

More specifically, Rizzi argues that finite forms manifest irrealis/realis distinctions in a  $\text{Fin}^0$  (284). Further he posits a head,  $\text{Force}^0$ , within the complementizer "space," which marks the illocutionary force of the sentence, which is distinct from, and higher than, the other heads in C. In short, the irrealis  $n\epsilon?$  appears to pattern with what Rizzi describes as a  $\text{FinP}$  element, as it encodes an irrealis/realis distinction, and the interrogative  $n/$  appears to qualify as a  $\text{ForceP}$  head in Rizzi's articulated structure. Rizzi's articulated CP structure is illustrated in (160).

( 160 ) Rizzi's (1997a:297) articulated CP



Benincá (2001) reanalyzes Rizzi's (1997a) data and proposes an alternate structure to that in (160), where the lower TopP is raised above the FocP giving the following hierarchy of elements within the CP.

( 161 ) Force > Topic > Topic > Focus > Finiteness > Infl/Tense

Watanabe (2004) arrives at a similar hierarchy for Ancient Japanese.

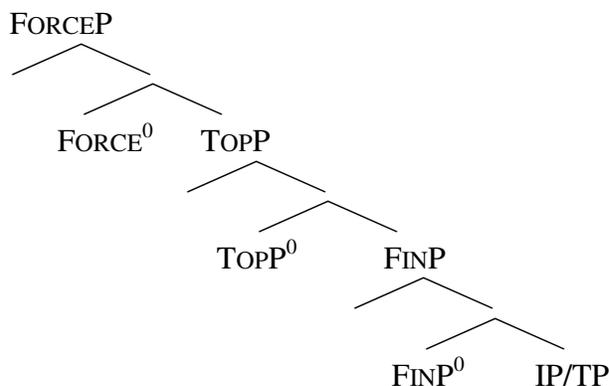
( 162 ) Force > Topic > Focus > Finiteness > Infl/Tense

Although Watanabe (2004) argues for only one Topic Phrase, he does argue that there are two specifiers in the Topic Phrase. This would account for the differences between (161) and (162), the difference being that under Benincá's analysis, Italian has two Topic heads adjacent to one another, and Watanabe proposes that Ancient Japanese had one Topic head with two Topic specifiers.

Above it was shown in (142) that Cr has one topic position between the irrealis *nε?* and the interrogative *ni*. Assuming *nε?* to be a Finite head and *ni* to be a Force head, Cr

would appear to demonstrate a similar structure to Rizzi's (1997a) split CP framework, modified by Benincá (2001). This can be illustrated in (163).<sup>86</sup>

( 163 ) Cr "split CP"



The facts presented above seem to be well on the way to supporting Rizzi's (1997a) claim of an articulated structure as seen in (161). However, it is not possible to ascertain if the facts support Rizzi's claims over Cinque's (1999) claims, or if the two analyses are just notational variants on one another, as far as the Cr data is concerned. Cinque claims that his Mood<sup>0</sup><sub>speech act</sub>, the interrogative *ni* here, is a different element than Rizzi's Force<sup>0</sup>, although exactly how different is not clarified (84). Further, Cinque's Mood<sup>0</sup><sub>irrealis</sub> appears lower than any Tense head in the structure, whereas, Rizzi's Fin<sup>0</sup>, which encodes irrealis, appears above any Tense head. As Cr has no overt morphological element indicating a Tense head, it is not clear if the irrealis *ne?* is higher or lower than Tense<sup>0</sup>. Further, Cinque suggests that Rizzi's account may be on the right track, especially in terms of Topic and Focus positions, but that the CP has more elements

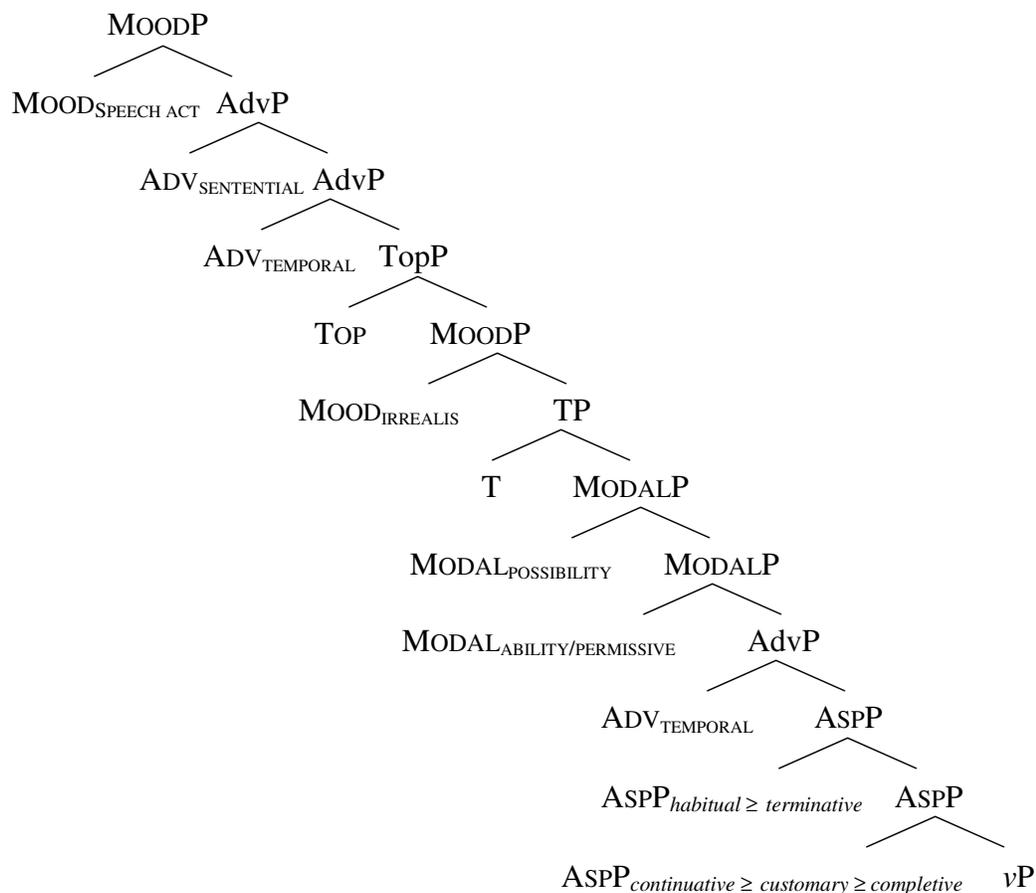
<sup>86</sup> Doak (1997) presents Cr as a Pronominal Argument Language, and thus under the Pronominal Argument Parameter of Jelinek (2004), it would be assumed that the predicate is located in a Focus position within the CP. Whether or not the predicate is indeed in a Focus position will have to be determined by future research. However, that the predicate remains below MODP suggests no raising occurs. That is, under Jelinek's hypothesis the entire VP raises to a specifier position of FOCF.

cross-linguistically than Rizzi suggests (225 fn25). In short, the facts neither entirely support, nor contradict either of the distinct structures proposed by Rizzi and Cinque.

## **7. Conclusions**

It has been argued that the strict ordering of particles discussed above reveal a hierarchy of adverbial and functional heads within the Cr clause. Further, the ordering parallels that of the universal hierarchy proposed for adverbial and functional heads cross-linguistically by Cinque (1999). The structure (158b) is presented again here as (164).

( 164 ) *Proposed hierarchy of adverbial and functional heads in Cr*



It has further been argued that the data regarding the irrealis *neʔ* and interrogative *ni* tentatively fit within both a Cinque-type (1999) and Rizzi-type (1997a) analysis. The conclusion to be drawn from this is that the generalizations that Cinque and Rizzi propose are on the right track, and that further attempts at applying those generalizations cross-linguistically will yield a better understanding of both, as well as improve our understanding of universal clause structure.

Finally, while a number of particles were addressed in this chapter, there are a few, perhaps five, identified by Reichard that have not been discussed and that may fit within either the mood, modal, or aspect categories. More data regarding these forms,

and those discussed above, will surely add to the understanding of Cr adverbial and functional heads, as well as expand on the generalizations presented here.

CHAPTER 6  
CONCLUSIONS

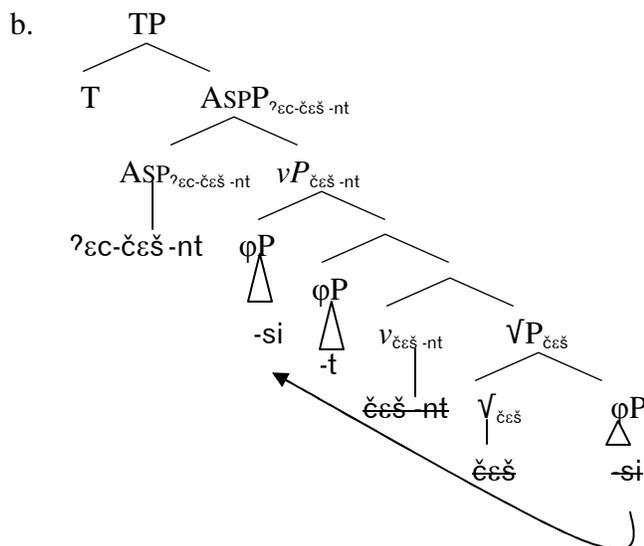
### 1. Introduction

In the first part of this chapter a brief recapitulation of the previous chapters will be presented. This will be followed by suggestions for future inquiry.

### 2. Recapitulation

In Chapter 3, considering aspectual elements, transitivity elements, the root, and bound pronouns, as the core elements of the basic clause in Coeur d'Alene, it was claimed that given an example like (165a), (42a) above, the tree in (165b), (42b) above, could be derivationally accounted for in (166), (43) above, employing the tenets of the Minimalist Program.

|            |                     |              |       |         |
|------------|---------------------|--------------|-------|---------|
| ( 165 ) a. | Cr basic transitive | construction |       |         |
|            | ʔεč̥εš̥ncit         |              |       |         |
|            | ʔεc- √č̥εš̥         | -nt          | -si   | -t      |
|            | cust- accompany     | -dt          | -2acc | -1p.erg |
|            | 'We go with you.'   |              |       |         |



- ( 166 ) a. The root *česť* 'accompany' merges with its complement the  $\phi$ P object *-si* '2acc'. Neither p-sig is defective, no conflation occurs. The  $\sqrt{P}$  is labeled with the p-sig of its head, *česť*.
- b. The  $\sqrt{P}$  labeled *česť* merges with an element from the numeration, the *v* head *-nt* 'directive transitive' which has a defective p-sig and conflation occurs. The p-sig of  $\sqrt{P}$ , *česť*, is copied into the defective p-sig of *v*, giving *česť-nt*. Here we note that the *v* head is realized to the right of the phonological material in  $\sqrt{P}$ . The assumption here is that there are two types of affixes: those with defective p-sigs and those without (the bound pronouns for example). Affixes with defective p-sigs phonologically align with conflated phonological material in accord with their morphological affix feature ([ $\pm$ prefix]). The *vP* is labeled with the p-sig of its head, *česť-nt*.
- c. The *v* labeled *česť-nt* merges with the subject, *-t*, a '1p.erg'  $\phi$ -head. Neither p-sig is defective, so no conflation occurs.
- d. The object *-si* raises to a second specifier position of *v*, to check case. Neither p-sig is deficient. The whole constituent is labeled with the p-sig of the head *v*, *česť-nt*.
- e. The *vP* *česť-nt* merges with an element from numeration, the ASP head *?εC-*, 'customary'. This element's p-sig is defective, and conflation occurs. The p-sig of the *vP*, *česť-nt*, is copied into the defective p-sig of ASP, giving *?εC-česť-nt*. Then, the whole constituent, a projection of ASP, is labeled with

- the p-sig of its head, *ʔεc-čɛš-nt*.
- f. The ASPP merges with an element from numeration, a null T head. Neither p-sig is defective, and no conflation occurs. The T projects and is labeled with the p-sig of its head.
  - g. The subject checks case via agree with the T head.

It was demonstrated that such an analysis was preferable to a radical argument drop analysis (of the Baker 1996 type), on the grounds that such an analysis was more *economical*, in the sense of Chomsky (1995:367). In addition, it was shown that a bound pronoun analysis (Jelinek 1984; Bhat 2004) placed Coeur d'Alene (henceforth Cr) as a language that fit within Neeleman and Szendrői's 2005, 2006 typological generalizations of argument drop languages, whereas the radical argument drop account would place Cr outside the generalizations of the typology. Further, given the unified system of pronominals under the bound pronoun analysis, it was demonstrated that the bound pronoun analysis presented far fewer learnability challenges than the hybrid system of argument structure of the radical argument drop analysis. An appeal to Occam's Razor further strengthened the claim that the unified system of argument structure of the bound pronoun analysis was preferable to the hybrid system of the radical argument analysis.

It was further shown, that an analysis of bound pronouns as  $\varphi$ -pronouns fit with Déchaine and Wiltschko's 2002  $\varphi$ -pronoun proposal. This, and an appeal to the Cue based model of parameters (Lightfoot 1997a, 1997b; Dresher 1999, 2003a, 2003b), led to an account of the null third person arguments. Finally, under Newmeyer's (1998) account of grammaticalization, an account of Cr bound pronoun diachronic origins in agreement morphology was presented and rejected. Instead, it was argued that an analysis of bound pronouns as not having their diachronic origins in independent agreement morphology provided a better account of cross-linguistic variation within the Salishan family.

In the following chapter, Chapter 4, an account of lexical affixes in Cr was presented along with an account of incorporation in Cr. It was shown that lexical affixation is not an areal phenomenon as might be assumed, but that in fact it appears in a variety of languages in a variety of geographical locations across the globe. Appealing to the Hermit Crab hypothesis of grammaticalization (Heath 1998), it was shown that Cr lexical affixation might not have its diachronic origins in incorporation as argued. However, after consideration of the proto-Salish facts regarding lexical affixes and the incorporation facts of stem+stem incorporation, it was claimed that the traditional view of lexical affixation in Cr, and Salish in general, as being diachronically rooted in incorporation was on the right track. The conclusion arrived at in terms of lexical affixes was that they can serve as arguments as, Gerds 2003 claimed for Halkomelem, and that lexical affixes in Cr are *n*-heads.

This chapter also demonstrated that a view of head-movement as Conflation (Hale and Keyser 2002), as proposed by Harley (2004), could account for the facts of Cr lexical affix and stem+stem incorporation while maintaining Chomsky's 1995 notion of head-movement being phonological in nature. In addition, it was shown that a conflation analysis of incorporation was preferable to a Baker-style (1988, 1996; Baker, Aranovich, and Golluscio 2004) analysis. In particular, it was shown that the conflation analysis required no special deletion mechanism and the family of parameters necessary to manage it, along with other incorporation facts, as proposed by Baker, Aranovich, and Golluscio (2004). Instead, two parameters were proposed to account for incorporation and the various realizations of verbal morphology that accompany incorporation cross-linguistically. Analyzing incorporation as a narrow syntax operation further demonstrated the advantages of a Distributed Morphology account over a lexical account such as Rosen (1989).

In Chapter 5 a series of particles listed here in Table 19 were analyzed to determine the hierarchy of function projections in the Cr clause.

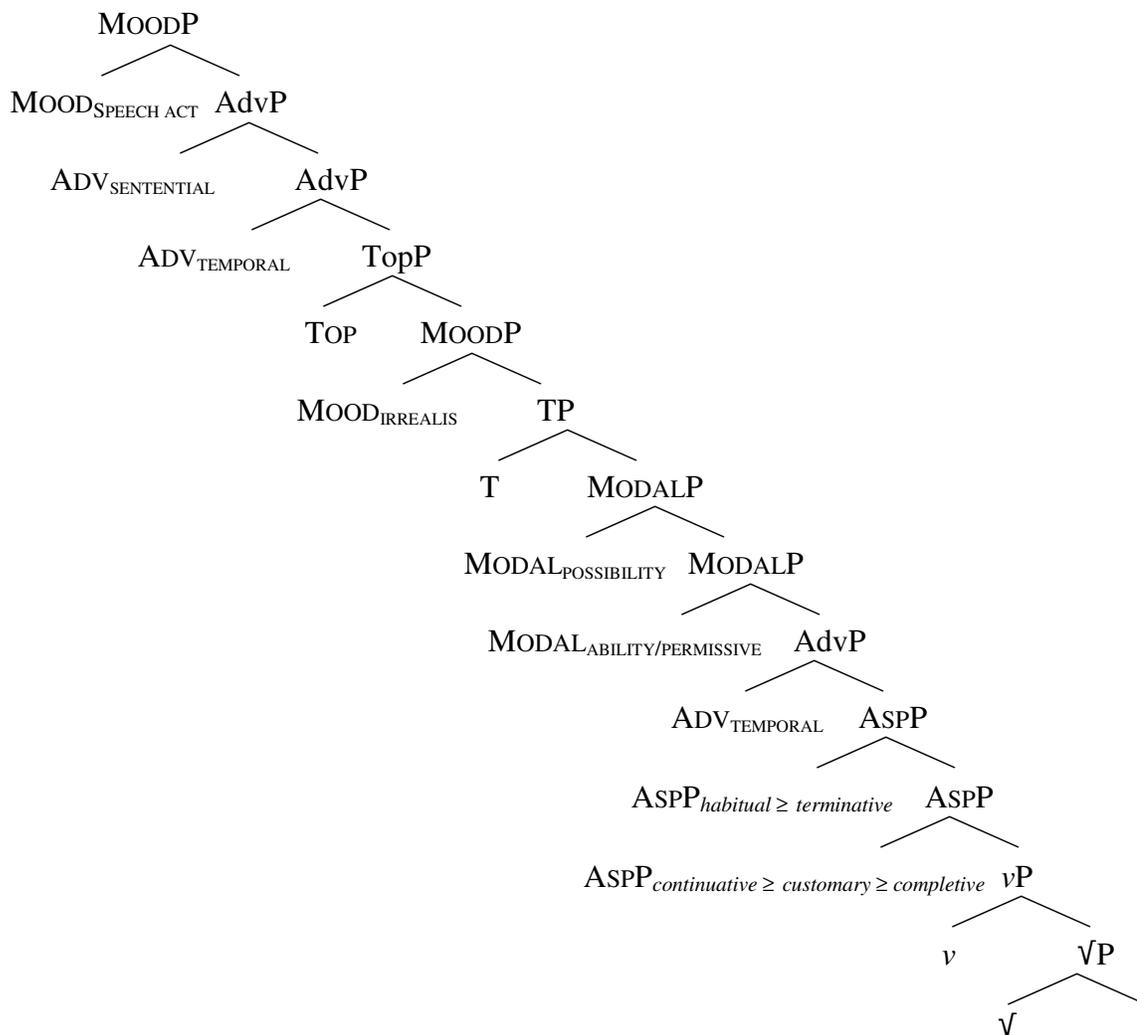
**Table 19:** Coeur d'Alene particles

| TYPE                 | PARTICLE                                                      |                                                                            |
|----------------------|---------------------------------------------------------------|----------------------------------------------------------------------------|
| Temporal Adverbial   | <i>k<sup>w</sup>nε?</i>                                       | ‘soon’ <i>immediate future</i> (Doak 1997:186)                             |
|                      | <i>k<sup>w</sup>k<sup>w</sup>n<sup>i</sup>y<sup>i</sup>ε?</i> | ‘soon’ <i>immediate future</i> (Doak 1997:187)                             |
|                      | <i>k<sup>w</sup>uk<sup>w</sup>i?</i>                          | ‘soon’ <i>immediate future</i> (Doak 1997:187)                             |
| Sentential Adverbial | <i>hoi</i>                                                    | ‘and’ / ‘then’ <i>discourse/narrative adverbial</i>                        |
|                      | <i>k<sup>w</sup>um’</i>                                       | ‘and’ / ‘then’ <i>discourse/narrative adverbial</i>                        |
| Mood                 | <i>nε?</i>                                                    | <i>irrealis</i> (Reichard 1938:669.777; Doak 1997:188)                     |
| Modal                | <i>čɛł</i>                                                    | <i>future intentional, permissive, mild request</i> (Reichard 1938:666-67) |
|                      | <i>čɛ?</i>                                                    | <i>ought, obligation</i> (Reichard 1938:669.780)                           |
|                      | <i>cmi?</i>                                                   | <i>was to be but isn’t, possibility</i> (Reichard 1939:104)                |
| Aspectual            | <i>cmi?</i>                                                   | ‘used to’ <i>terminative</i> (Doak 1997:49)                                |
|                      | <i>pinč</i>                                                   | ‘always’ <i>habitual</i> (Doak 1997:49)                                    |

The strict ordering of these particles, in relation to one another, revealed a hierarchy of functional and adverbial heads that was quite similar to that of Cinque’s (1999) universal hierarchy of functional and adverbial heads. Further, comparison of the Cr data with Rizzi’s 1997a Split CP hypothesis and Cinque’s universal hierarchy of functional and adverbial heads demonstrated that the two approaches captured generalizations with further linguistic coverage. Further, the hierarchy arrived at revealed that there is no apparent movement of the predicate above ASPP in the Cr clause.

In this way an analysis of the basic clause was arrived at, presented here as (167), with omission of specifiers for illustrative reasons.

( 167 ) Basic clause in Cr



Thus, it was demonstrated that while Cr may on the surface appear to be quite different from a language such as English, underlyingly, it can be argued to be quite similar. Further, as a formal account of underlying Cr clause structure has not been proposed previously, and no account of functional projections has been put forth, the structure in (167) can serve as a starting point for discussion of the formal intricacies of the Cr grammar. In what follows some suggestion are presented for this line of inquiry.

### 3. Future inquiry

A cursory review of Reichard's 1938 grammar will reveal that a great deal of verbal morphology was not discussed in this dissertation. Future research should include discussion of the numerous morphemes Reichard describes as being bound to the predicate. This should include discussion of the locative and directional morphemes to determine if they are case marking elements or somehow related to incorporation facts, or possibly something else entirely. Another area of interest for future inquiry would be a formal account of the deictic system in Cr. Baht (2004) demonstrates that third person pronouns in many of the world's languages are deictic elements, rather than true pronouns such as first and second person pronouns. It would be interesting, as the third person is generally null in Cr, to see how Cr fits within Bhat's typology.

Further, Doak's 1997 work serves as an excellent starting point for better understanding the many structures beyond the basic clause. With data from the Reichard manuscripts a formal account of adjoined clauses and unadjoined clauses could be arrived at, along with formal accounts of the benefactive and applicative constructions so elegantly illustrated in Doak's work. Further, as Gerdts finishes her decade-long work on the problematic Salishan *-m* morpheme in Halkomelem, a potential full account of this morpheme in Cr could be compared with her findings. In short, there is a great deal of work to be done, and the Reichard manuscripts along with the various other resources such as Nicodemus' 1975 grammatical sketch and dictionaries, along with the work Doak is preparing for the online dictionary, will provide an excellent corpus for investigation.

This work can shed further light on numerous issues within numerous languages in terms of theoretical inquiry. One area of particular interest is the area of computational linguistics, as well as the Principles and Parameters approach to linguistic inquiry. In terms of computational investigations, once the facts of Cr morphotactics are organized

in a notation suitable for input into Hulden's morphological parser, a number of questions regarding compositionality can be raised and answered. In terms of the Principles and Parameters approach to linguistic inquiry the Cr data has already shown that elements of Baker's (1996) Polysynthesis Parameter, namely incorporation, appear in Cr. In addition elements of Jelinek's (2004, 2006) Pronominal Argument Parameter have been seen in Cr, namely a ban on DPs in argument position. This suggests that languages such as Cr should be viewed not in terms of macro-parameters, but rather perhaps in terms of micro-parameters.

## APPENDIX

## Some notes on Coeur d'Alene Phonology

## 1. Introduction

What follows is a brief description of the phonological inventory of Coeur d'Alene and some often-occurring phonological phenomena. This description owes much to Doak 1997.

## 2. Consonants

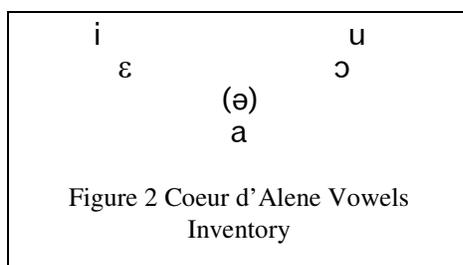
The Coeur d'Alene inventory comprises forty-two consonants that contrast eleven places of articulation: labial, alveolar, alveopalatal, lateral, labiovelar, uvular, labio-uvular, coronal pharyngeal, pharyngeal, labiopharyngeal, and laryngeal. There are six manners of articulation for the consonants: plain and glottalized voiceless stops and affricates; voiced stops and affricates; voiceless fricatives; and plain and laryngealized resonants. Coeur d'Alene lacks the glottalized lateral affricate /ɬ'/ that occurs in the other Salishan languages; in Coeur d'Alene this has merged with /t'/ (Thompson 1979:706). The Coeur d'Alene consonants are presented in Figure 1.

|    |    |    |    |    |                |    |                 |   |
|----|----|----|----|----|----------------|----|-----------------|---|
| p  | t  | c  |    | č  | k <sup>w</sup> | q  | q <sup>w</sup>  | ʔ |
| p' | t' | c' |    | č' | k <sup>ʷ</sup> | q' | q' <sup>w</sup> |   |
| b  | d  |    |    | ǰ  | g <sup>w</sup> |    |                 |   |
|    | s  | ʃ  |    | š  | x <sup>w</sup> | χ  | χ <sup>w</sup>  | h |
| m  | n  | l  | r  | y  | w              | ʕ  | ʕ <sup>w</sup>  |   |
| m' | n' | l' | r' | y' | w'             | ʕ' | ʕ' <sup>w</sup> |   |

Figure 1 Coeur d'Alene Consonant Inventory

### 3. Vowels

Salishan languages vary in the number of vowels they have from three to five. Coeur d'Alene has a five-vowel system distinguishing two levels of height<sup>87</sup> and two degrees of backness /i/ and /u/ are prototypical high vowels. /ɛ/ appears to exhibit the greatest phonetic range: from [e] to [æ]. /ɔ/ and /a/ are low back vowels that include elements of pharyngeal constriction. Schwa is never stressed and occurs as a reduced form of some unstressed vowels. Schwa also occurs as an inserted, or excrescent, element to break up consonant clusters. When schwa occurs as an excrescent element its use often varies from speaker to speaker (Doak 1997:12).



### 4. Syllables

There are four primary core syllables in Coeur d'Alene: V, VC, CV, and CVC:

- (1) a. u k<sup>w</sup>u nás            'you are wet'            (V CV CVC)  
       b. ul paq hε ?úsε?    'Easter egg'            (VC CVC CV CV-CVC)
- (Doak 1997:13)

<sup>87</sup>Doak 1997:12 distinguishes /i/ and /u/ as [+high] vowels and the remaining vowels [-high].

Doak notes that the V and CV primary core syllables occur in word initial position in a few proclitics or prefixes, and that some syllable initial *u*'s may be analyzable as glides.

The sonority of segments decreases with distance from the nucleus when consonants are added to the onset of a CV(C) syllable or the coda of a (C)VC syllable. With S representing segments that are of higher sonority than C, three additional syllables are: CSV(C), (C)VSC, and CVSSC.

- (2) scənc'mc'ínčt 'wrist' (C-CVC-CC-CVSSC) (Doak 1997:13)

The resonant *m* surrounded by consonants, in the previous example, may serve as a syllable peak. Other syllabic resonant ( $R_1$ ) can be seen in the following forms.

- (3) a. čn nx<sup>w</sup>εtp 'I got out of breath' (C  $R_1$   $R_1$ -CVC-C<sup>88</sup>)  
 b. lɛjncɛlm 'I got stung' (CVC-  $R_1$ -CVC-  $R_1$ ) (Doak 1997:13)

## 5. Morphophonology

### 5.1. Vowel lowering

In certain environments Coeur d'Alene vowels /u/, /i/, and /ɛ/ lower to [ɔ], [ɛ], and [a], respectively. Doak refers to this phenomenon as “vowel harmony.” There are two types of vowel lowering in Coeur d'Alene, long distance and allophonic. These can be broken down into two sub-types, regressive and progressive. The following are examples of the long distance regressive and progressive types, where [ɔ], [ɛ], and [a] occur preceding uvulars or pharyngeals as the result of regressive harmony.

- (4) a. q<sup>w</sup>ácqəŋ //√q<sup>w</sup>íc=qin// 'hat'  
 b. spɔ́mal'qs //s√pum=al'qs// 'fur coat'

<sup>88</sup>D appears to analyze the final *p* as extra syllabic material in this example.

- c. cɛ̌šalq<sup>w</sup> //Vcɪš=alq<sup>w</sup> // 'He is tall.'  
(Doak 1997:30)

Progressive harmony affects stressed suffixal /u/, /i/, and /ɛ/ following harmony roots. Some roots trigger the lowering of suffixal vowels as in the following.

- (5) a. t'm't'm'yɔ̌ye? //Vt'am'+CVC=yɔ̌ye?// 'snail'  
 b. t'apsčɛ̌nt //Vt'ap-svčɪnt// 'He shot (people).'  
 c. nmasmasátak<sup>w</sup>ɛ? //Vhnvmasmas=ɪtk<sup>w</sup>ɛ?// 'Water is full of masmas.'<sup>89</sup>  
(Doak 1997:31)

## 5.2. /h/ loss

Morpheme initial /h/ is frequently omitted in word initial position before a consonant, or in a compound:

- (6) a. mɛ:l'íčɛ? //mɛl'-hɪčɛ?// 'from where' (Doak 1997:34)  
 b. ku n ɣamínč //k<sup>w</sup>u hn-ɣaminč// 'I love you.' (Doak 1997:34)  
 c. ənšɛ̌lč //hn+šɛ̌lč// '(to) circle' (Reichard 1927-29:L010)

## 5.3. Coronal sequence reduction

When two coronals occur together, the first is usually dropped. This tends to vary somewhat and generally applies only to affixes, which tend to be less stable than roots. Some suffix sequences involving /t/ and /s/, however, are preserved: for example, the transitive sequence //t-Ø-s// merges to [c], and does not reduce to [s].

- (7) tɛk<sup>w</sup>ínč  
 tɛ-√k<sup>w</sup>ín -n -t -Ø -s  
 loc- receive -d -t -3abs -3erg  
 'He received it.'

(Reichard 1927-29:L025)

<sup>89</sup> *Masmas* is a type of vegetable (Doak 1997:31).

#### 5.4. /s/ palatalization

The sequence /s-ʔ/ (where the hyphen marks a morpheme boundary), results in [yʔ] :

(8)    yʔɪn                //sʔɪn//                'eating'                (Doak 1997:33)

The reader is directed to Reichard (1938) and Doak (1997; and references therein) for further discussion of phonological phenomena in Coeur d'Alene.

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