THE SYNTAX AND SEMANTICS OF DETERMINERS: A COMPARISON OF SALISH AND CREE[1]

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1. Introduction

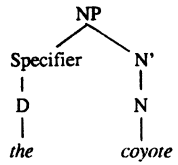
The goal of this paper is to provide a comparative analysis of determiners in Salish languages and in Cree. We will show that there are considerable surface differences between Salish and Cree, both in the syntax and the semantics of the determiners. However, we argue that these differences can and should be treated as part of a restricted range of cross-linguistic variation within a universally-provided DP (Determiner Phrase)-system.

The paper is structured as follows. We first provide an introduction to relevant theoretical proposals about the syntax and semantics of determiners. Section 2 presents an analysis of Salish determiners, and section 3 presents an analysis of Cree determiners. The two systems are briefly compared and contrasted in section 4.

1.1. The syntax of determiners

According to early proposals within X-bar theory, noun phrases have the internal structure in (1). The noun is the head of the phrase, and the determiner occupies the Specifier position (see for example Jackendoff 1977, Chomsky 1981).

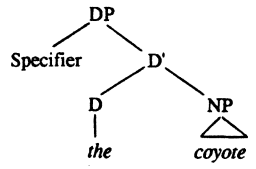
(1)



Abney (1987), on the other hand, argues for the Determiner Phrase (DP) analysis of noun phrases shown in (2).

[1] We are very grateful to our language consultants. For St'át'imcets, we thank Alice Adolph, Beverly Frank, Gertrude Ned, Laura Thevarge and Rose Whitley. For Swampy Cree, we thank Ida Bear, Ken Paupanekis, and Lydia Venturini. Many thanks also to Strang Burton, Henry Davis, Rose-Marie Déchaine, Hamida Demirdache, M. Dale Kinkade, Michael Rochemont, Kevin Russell, Chris Wolfart and Jan van Eijk for discussion. Errors are the authors' responsibility. Research on St'át'imcets was supported in part by SSHRCC grants #410-92-1629 and #410-95-1519. Research on Swampy Cree was supported by two SSHRCC/University of Manitoba grants, the Cree Language Project, and by the University of Manitoba RH Award.

(2)



According to the DP-analysis, the determiner is the head of the phrase and takes NP as its complement. D is a functional head, which selects a lexical projection (NP) as its complement. The lexical/functional split is summarized in (3):

(3) If $X^0 \in \{V, N, P, A\}$, then X^0 is a Lexical head (open-class element).
If $X^0 \in \{Tense, Det, Comp, Case\}$, then X^0 is a Functional head (closed-class element).
(Déchaine 1993:2)

A major motivation for the DP-analysis of noun phrases comes from the many parallels between clauses and noun phrases. For example, Abney (1987) notes that many languages contain agreement within noun phrases which parallels agreement at the clausal level. In Yup'ik, subjects of noun phrases take ergative case, just like subjects of transitive verbs:

(4) a. angute-**m** kiputa-a-Ø
man-**erg** buy-obj-subj
'The man bought it.' (Yup'ik; Abney 1987:39)

b. angute-**m** kuga-Ø
man-**erg** river-subj
'The man's river.' (Yup'ik; Abney 1987:39)

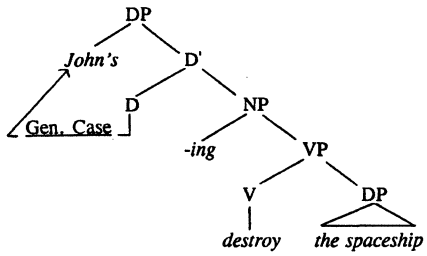
The presence of noun phrase-internal agreement morphology suggests the presence of an inflectional functional element within the noun phrase, which parallels inflectional functional elements within clauses. Abney proposes that the noun phrase-internal functional element is the determiner itself.

Nominal gerunds in English also display many clause-like properties. Gerunds contain VPs, and a gerundive verb can assign Case, unlike a deverbal noun:

(5) a. John's [destroying the spaceship]VP
b. * John's [destruction the spaceship] (Abney 1987:16)

The presence of a VP inside the noun phrase does not accord with the structure in (1), according to which N is the head of the phrase. It can be accommodated within the DP-analysis, however, as shown in (6).

(6)



(cf. Abney 1987:223)

Since Abney (1987), many authors have adopted the DP-analysis and/or argued for extensions of it; see for example Tellier (1991), Szabolsci (1983, 1987), Ritter (1991, 1993), Valois (1991), Longobardi (1994). We will provide evidence in this paper that noun phrases in Salish and Cree are best accounted for by means of the DP-analysis.

1.2. The distribution of determiners

In English, determiners are generally obligatory on nominals functioning as arguments, as shown in (7). The NP *woman* cannot function as an argument of the predicate *laugh* without the presence of a determiner.

(7) a. *[Woman] laughed.
b. [The woman] laughed.

Determiners may be missing on a restricted set of arguments, including bare plurals, as in (8). Bare plurals in Romance and Germanic languages have been analyzed as containing a null determiner which selects an overt NP (see for example Longobardi 1994).

(8) [Women] live longer than men.

While determiners are predominantly present on arguments in English, determiners are not obligatory, and indeed generally absent, on non-arguments such as predicates and vocatives. This contrast has led a number of researchers to correlate the presence of a determiner with argumenthood.

Higginbotham (1983, 1985, 1987), Stowell (1989, 1993) and Longobardi (1994) all argue for an analysis under which the category NP is a predicate. The external argument of the NP predicate must be bound if the phrase is to function referentially. Binding of the external argument saturates ('closes off') the NP-predicate, turning it into a referential argument and enabling theta-assignment to take place. Higginbotham, Stowell and Longbardi all argue that it is the determiner which performs this saturation function. This analysis accounts for the correlation of determiners with argument positions, as summarized in (9):

(9) DP can be an argument, NP cannot. (Longobardi 1994:628)

In §2, we will show that determiners in most Salish languages are straightforwardly consistent with this analysis. In the discussion of Cree in §3, we will argue that a DP structure is necessary not for arguments themselves, which are always null pronominals (cf. Jelinek 1984, Baker 1991, 1995), but rather for overt 'argument doubling expressions'.

1.3. Semantic distinctions encoded on determiners

As well as functioning to create arguments, determiners typically encode additional semantic distinctions. Some examples of attested determiner distinctions are given in (10).

(10)	a.	definiteness	English, ...
	b.	specificity	Turkish (Enç 1991), Polynesian (Chung 1978), ...
	c.	visibility	Bella Coola (Davis and Saunders 1975), ...
	d.	proximity	St'át'imcets (van Eijk 1985), ...
	e.	gender	German, ...
	f.	number	German, ...
	g.	Case	German, ...

The question immediately arises of the range of possible cross-linguistic variation in determiner distinctions. While variation clearly exists, it would not be a restrictive hypothesis to say that the semantics of determiners varies randomly from language to language. Matthewson (1996) argues based on Salish that the range of semantic distinctions available for determiners must be parameterized. Some evidence for this claim is given in §2 of this paper.

An important consequence of the claim that the semantics of determiners may vary cross-linguistically is that none of the distinctions in (10) can be used either as a diagnostic or as a necessary condition for determinerhood. For example, there is no reason why a definiteness distinction is a prototypical property of determiner systems (pace Baker's 1995 implicit assumption that the canonical true determiner system is one which encodes definiteness). We will provide evidence in this paper that there are languages which possess a robust system of determiners, but which do not encode definiteness.

To summarize so far, current theory predicts that argument phrases cross-linguistically will require an articulated DP-structure, headed by a determiner (D^0 head). The semantics of the determiners themselves may vary cross-linguistically within restricted bounds. In following sections, we will see that Salish and Cree raise certain challenges for DP-theory, but nevertheless provide strong evidence for the universality of the DP-system.

2. An analysis of Salish determiners

This section examines the syntax and semantics of determiners in Salish. In §2.1, we address the syntactic distribution of the determiners, and show that determiners in many Salish languages are obligatory on arguments, as predicted by a theory such as that of Higginbotham (1985). On the other hand, determiners are absent on main predicates. We conclude that determiners in Salish languages function to saturate NPs, enabling them to function as arguments.

In §2.2, we examine the distinctions encoded by Salish determiners. After briefly discussing the deictic notions of visibility and proximity and the pronominal notions of gender and number,

we argue for four major proposals about Salish, summarized in (11) (following Matthewson 1996).

(11) a. Salish determiners do not encode definiteness.
b. Salish determiners do not encode specificity.
c. There are no quantificational determiners in Salish (see also Jelinek 1995).
d. Salish determiners encode 'assertion of existence'.

The first three proposals in (11) are then derived from a parameter on determiner semantics, the Common Ground Parameter. The proposal in (11d) is also shown to be consistent with the Salish setting of the parameter.

In §2.3, we examine other DP-internal elements, in particular DP-internal quantifiers.

Before proceeding, a note is in order regarding the range of the current study. The languages from which data are drawn are listed in (12). Choice of languages is based on availability of relevant data. The language which has been investigated in the most detail is St'át'imcets.

(12)

Language (English name)	**Branch**
St'át'imcets (Lillooet)	Northern Interior
Secwepemctsín (Shuswap)	Northern Interior
Nɬeʔképmmxcin (Thompson)	Northern Interior
Bella Coola	-
Upper Chehalis	Tsamosan
Sechelt	Central
Straits	Central
Squamish	Central
Halkomelem	Central
Lushootseed	Central

While the range of languages examined is broad enough to suggest a general 'Salish pattern', the proposals made may fail to account for the Salish family as a whole in two respects. First, discussion based on secondary sources may be incomplete, due to absence in these sources of explicit discussion of the points being investigated. Second, there may be counter-examples in languages which are omitted from the current survey. Of particular relevance is the absence of any languages from the Southern Interior in our discussion. M. Dale Kinkade observes (p.c.) that Southern Interior languages may present counter-examples to some aspects of the analysis presented below.

2.1. The distribution of determiners in Salish

The distribution of determiners in Salish is sensitive to syntactic position. Consistent with approaches in which the presence of a determiner correlates with argumenthood (Higginbotham 1985, Stowell 1989, Longobardi 1994), Salish determiners show different behaviour according to whether they are associated with nominal projections in argument position or in non-argument position. These different syntactic environments will be discussed in turn.

2.1.1. The presence of determiners in argument positions

This section examines DPs which function as arguments of the main predicate (subjects and objects, including both nominal and clausal arguments), arguments which appear inside noun phrases (i.e. overt possessors), and argument DPs contained within adjunct phrases. St'át'imcets is examined in the most detail, followed by brief remarks about Sechelt, Straits, Halkomelem, Bella Coola and Upper Chehalis. We will find evidence to support Kroeber's (1991:27) claims about the distribution of determiners on argument phrases in Salish:

> Noun phrases (NPs) throughout the family are normally introduced by a determiner (article or demonstrative). In some but not all languages proper nouns do not need to be preceded by a determiner, and certain other exceptions to the generalization occur in Southern Interior languages ... but in general NPs are overtly delimited constituents.

St'át'imcets. Determiners are always obligatory on arguments in St'át'imcets, as shown in (13) and (14) for subjects and objects respectively.

(13) a. wa7 ts'aqw-an'-ítas [i t'éc-a] [i míxalh-a]
be eat-tr-3pl.erg [pl.det sweet-det] [pl.det bear-det]
'Bears eat honey.' *(subject)* (St'át'imcets; GN)

b. *wa7 ts'aqw-an'ítas [i t'éc-a] [míxalh]
be eat-tr-3pl.erg [pl.det sweet-det] [bear]
'Bears eat honey.' *(subject)* (St'át'imcets; LT)

(14) a. qwen-án-lhkan [ku sqlaw']
need-tr-1sg.subj [det money]
'I need money.' *(object)* (St'át'imcets)

b. *qwen-án-lhkan [sqlaw']
need-tr-1sg.subj [money]
'I need money.' *(object)* (St'át'imcets)

The requirement for a determiner holds for all noun-types (proper, common, count, mass) in argument position in St'át'imcets. Proper names are illustrated in (15).

(15) a. áts'x-en-ts-as [kw-s Rose]
see-tr-1sg.obj-3erg [det-nom Rose]
'Rose saw me.' *(subject)* (St'át'imcets)

b. áts'x-en-lhkan [kw-s Rose]
see-tr-1sg.subj [det-nom Rose]
'I saw Rose.' *(object)* (St'át'imcets)

Clausal arguments also obligatorily require a determiner, as shown in (16).

(16) a. áma [*(t) s-t'iq-su-*(a)]
good [*(det) nom-arrive-2sg.poss-*(det)]
'It's good that you came.' ('That you came is good.') (St'át'imcets; LT)

Determiners are obligatory on overt possessor arguments appear inside arguments, as shown in (17-18) for possessor-initial and possessor-final word orders respectively.[2]

(17) a. t'iq [ti skícza7-s-a ti kúkwpi7-a]
arrive [det mother-3sg.poss-det det chief-det]
'The chief's mother arrived.' (St'át'imcets)

b. *t'iq [skícza7-s ti kúkwpi7-a]
arrive [mother-3sg.poss det chief-det]
'The chief's mother arrived.' (St'át'imcets)

(18) a. t'iq [ti kúkwpi7-a **ti** skícza7-s-**a**]
arrive [det chief-det **det** mother-3sg.poss-**det**]
'The chief's mother arrived.' (St'át'imcets)

b. *t'iq [ti kúkwpi7-a skícza7-s]
arrive [det chief-det mother-3sg.poss]
'The chief's mother arrived.' (St'át'imcets)

Finally, arguments which are embedded inside manner or location adjuncts also require a determiner, as shown in (19).

(19) a. wa7 q'wez-ílc [ti smém'lhats-a] láti7 [ts'íla *(ku) sáma7]
prog dance-body [det woman(redup)-det] deic [like *(det) white]
'That girl is dancing like a white person.' (St'át'imcets; RW)

b. tsícw-kan áts'x-en [i wa7 tsunám'-cal]
go-1sg.subj see-tr [pl.det prog teach-intr]

[l-*(ki) tákem-*(a) skul]
[in-*(pl.det) all-*(det) school]
'I visited teachers in every school.' (St'át'imcets; RW)

Sechelt. Beaumont (1985) does not state a generalization about the obligatoriness or otherwise of determiners on arguments in Sechelt. However, perusal of the texts and sentences he provides reveals no instance of a missing determiner. As shown in (20), a determiner is necessary in Sechelt where English allows a bare plural:

[2] For discussion of the internal structure of DPs containing possessors in St'át'imcets, including a treatment of possessor scrambling, see Matthewson and Davis (1995).

(20) 7út-chexw ḵúmut [**she** x̱éyx̱eyéḵ'], we pépe-íwan-axw, ...
if-you eat [**det** crabs], when growing-belly-you, ...
'If you eat crabs when you are pregnant, ...' (Sechelt, Beaumont 1985:201)

Straits. Determiners are obligatory on arguments in Straits; the language 'has no nominals that are not under the scope of one of the demonstratives. Demonstratives are not optional constituents of nominals in Straits Salish' (Jelinek and Demers 1994:718).[3]

(21) čey [**cə** swəy̓qə']
work [**det** man]
'The man works.' (Straits; Jelinek and Demers 1994:718)

Halkomelem. Galloway (1993:386) states that in the Chilliwack dialect of Halkomelem, determiners are 'obligatory before nominals'. Some examples are given in (22).

(22) a. mɛ̃yθá-x̓-ə [**ƛ̓** Bill]
help-me-3erg [**det** Bill]
'Bill helped me.' (Chilliwack; Galloway 1993:390)

b. l sƛ̓ĺ [**k̓ʷə** qá:]
1sg.poss want [**det** water]
'I want (some) water.' (Chilliwack; Galloway 1993:389)

Bella Coola. In Bella Coola, overt determiners are generally obligatory on arguments, as in (23).

(23) k̓x-is [ti-ʔimlk-tx] [ɬa-xnas-ʔiɬ]
see-3sg [**prox.det**-man-**prox.det**] [**dist.det**-woman-**dist.det**]
'The man [visible] saw the woman [invisible].'
(Bella Coola; Davis and Saunders 1975:17)

Overt determiners can be missing in certain restricted environments. There is a zero variant of the plural proximate determiner *wa*, according to Nater (1984). This zero variant appears before the hypothetical proclitic *ka*.[4]

(24) 7alhi-a 7ala-7awcwa **Ø-ka**-tsaatsaws
is.there here **Ø-hyp**-church
'Is there a church here?' (Bella Coola, Nater 1984:47)

[3] There is no difference between determiners and demonstratives in Straits (Jelinek and Demers 1994).

[4] Nater also notes that 'Proper names and geographical names are often found without an article (due to English influence?)', for example *nuxalk* 'Bella Coola' (Nater 1984:42). He does not give an example of a proper name appearing in argument position in a sentence without an article.

The 'zero variant' of the plural proximate determiner in Bella Coola is the one systematic exception to the obligatoriness of determiners inside argument DPs. Since the zero form paradigmatically contrasts with overt determiners, we adopt Nater's analysis of it as a null variant, rather than as the absence of a determiner.

Upper Chehalis. Determiners are occasionally missing from arguments in Upper Chehalis, but are otherwise so pervasive that in the instances in which they are missing, it may be due either to transcription error by Boas, or to a phonological deletion process during fast speech (M.D. Kinkade, p.c.).[5]

In summary, in all the Salish languages discussed here, determiners appear to be obligatory on argument nominals. Overt determiners appear on arguments in St'át'imcets, Sechelt, Straits, and Chilliwack Halkomelem. In Bella Coola, there is a paradigmatically contrasting zero determiner, and in Upper Chehalis, phonological deletion processes obscure the grammatical requirement for determiners on argument DPs.[6]

2.1.2. The lack of determiners in (main) predicate position

Determiners are not required on main predicates in most Salish languages. (25) shows that no determiner is present on nominal predicates in St'át'imcets or Secwepemctsín.

(25) a. smúlhats-kan
woman-1sg.subj
'I am a woman.' (St'át'imcets)

b. qlmúxʷ-kn
Indian-1sg.subj
'I am an Indian.' (Secwepemctsín, Kuipers 1974:79)

Proper names may also function as main predicates, in which case no determiner is present:

(26) a. John [ta kúkwpi7-a]
John [det chief-det]
'The chief is John.' (St'át'imcets; LT)

b. Jimmy [che-n skwísh]
Jimmy [det-my name]
'Jimmy is my name.' ('My name is Jimmy.') (Sechelt; Beaumont 1985:15)

[5] This is true also in other languages such as Nɬeʔképmxcin, where the absence of determiners on arguments is due to phonetic deletion processes, and determiners should be regarded as syntactically present (Kroeber 1994b).

[6] As Kroeber (1991) notes, there may be exceptions to the obligatoriness of determiners in the Southern Interior languages. M.D. Kinkade (p.c.) confirms this for Columbian (Southern Interior).

(27) shows that complex noun phrases can also function as predicates, again without determiners present. (27a) contains a possessed noun as the main predicate, and (27b) a modified noun.

(27) a. [7álesh-s te skw'étú7] [lhe 7ásxw]
[sister-his det raven] [det seal]
'Raven's sister was Seal.' (literally 'The seal was Raven's sister.')
(Sechelt; Beaumont 1985:181)

b. [máy stúmish] [te skw'étú7]
[bad man] [det raven]
'Raven was a bad man.' (Sechelt; Beaumont 1985:185)

As expected, equative constructions (with determiners present on both sides of the equation) are impossible in at least St'át'imcets and Lummi (Straits).

(28) a. ***ti** kúkwpi7-a [ti7 ti sqáycw-a]
det chief-**det** [deic det man-det]
'That man is the chief.' (St'át'imcets; LT)

b. ***cə** si'em-sxʷ
det chief-2sg.subj
'You are the chief.' (Lummi; Jelinek 1993:5)

c. si'em-sxʷ
chief-2sg.subj
'You are a chief.' (Lummi; Jelinek 1993:5)

Upper Chehalis and Cowlitz provide exceptions to the claim that main predicates do not take determiners. In the perfective aspect, determiners appear on predicates in these languages. The perfective marker in (29) is homophonous with the determiner *tit*.

(29) ... wi tit wúči-t-m [ta(t) s-xʷáy-s tit qá:7] ...
... and **perf** wring.out-tr-pass [det nom-urinate-3poss **det** wa**t**er] ...
'... (and when Moon was kidnapped,) the water was wrung out of his diaper, ...'
(Upper Chehalis; M.D. Kinkade, p.c.)

The use of determiners to mark perfective aspect in these languages is somewhat mysterious at this stage. However, there is independent evidence that determiners in Salish take over part of the function which is performed by verbal functional projections in other languages. Demirdache (1996a,b) argues that in St'át'imcets, determiners perform part of the function which belongs to Tense in English, and Davis and Matthewson (1996, this volume) argue for independent reasons that there is no distinction between D and I in St'át'imcets. The Upper Chehalis/Cowlitz perfectives may represent a similar phenomenon.

Apart from in the perfective aspect, the Upper Chehalis/Cowlitz system follows the general Salish pattern. In particular, nominals which function as main predicates do not require determiners, as shown in (30). The nouns spatáln 'rock' and sɬánay 'woman' are the predicates of their respective clauses.

(30) spatáln titx̣t́l. wi húy cə́ni uk̓ʷa wi sɬánaỷ
rock this and then (s)he I.guess cop **woman**
'This is [a rock]. But she is [a woman].' (Upper Chehalis; M.D. Kinkade, p.c.)

There is one other environment (apart from main predicates) where determiners are systematically absent on nominal phrases in Salish. This case involves quantified temporal adjuncts, of the form 'every day' (or 'all days'). See Matthewson (1996) for some discussion of this phenomenon.

2.1.3. Accounting for the distribution of determiners

The distribution of determiners in Salish is regulated straightforwardly within the DP analysis, as follows. Arguments always require a determiner, following Higginbotham (1985), Longobardi (1994); a determiner serves to saturate the NP and enable it to function as an argument. Hence, any nominal phrase from which a determiner is syntactically missing must either be in predicate position or in adjunct position.[7] [8]

2.2. The semantics of determiners in Salish

In this section we examine the semantic distinctions encoded by Salish determiners. For a more detailed investigation, see Matthewson (1996).

2.2.1. Visibility, proximity, gender and number

Determiner systems throughout Salish encode (various subsets of) the distinctions in (31).

(31) a. visibility
b. proximity (to the speaker)
c. gender
d. number

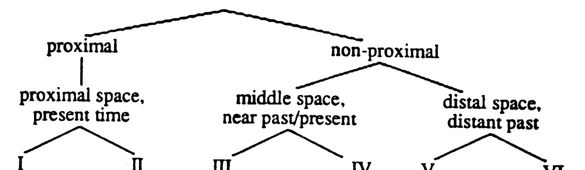
Visibility and/or proximity distinctions are highly pervasive throughout Salish, and are typically speaker-oriented (i.e. distance from the speaker is what is relevant). In the remainder of this sub-section, we give a few examples of Salish determiner systems to illustrate the distinctions in (31).

[7] Recall that some languages in the Southern Interior branch allow overt determiners to be absent in argument DPs. Further research is required into whether these are instances of null (phonetically empty) determiners (cf. Longobardi 1994), or whether they constitute counter-evidence to the claims being made here.

[8] Although the evidence presented in previous subsections strongly suggests the presence of a category DP in Salish, there is an alternative hypothesis which analyzes the relevant phrases as subordinate clauses (i.e. as being of category IP). Davis and Matthewson (this volume) address this issue in detail. They claim that there is no distinct category IP in Salish, but that a subset of subordinate clauses are introduced by determiners and are categorially DPs.

Bella Coola. The Bella Coola determiner system is represented in (32). An over-arching distinction between 'proximal' and 'non-proximal' further divides into six proximity distinctions (labelled I - VI). The proximity dimension encodes both spatial and temporal proximity; see Davis and Saunders (1975) for detailed discussion.[9] Gender and number are also encoded.

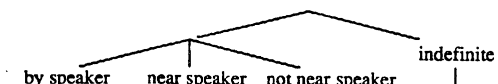
(32) Bella Coola determiners (Davis and Saunders 1975:14):



		I	II	III	IV	V	VI
-plural	+female	ci...cx	ci...čayx	ɬa-ʔiɬaʔiɬ	ɬa...ɬ	ɬa...ʔiɬ	ɬa...ʔiɬ
	-female	ti...tx	ti...tayx	ta-tax̣	ta...ɬ	ta...tx̣	ta...tax̣
+plural		wa...c	wa...ʔac	ta-tax̣ʷ	ta...ɬ	ta...tx̣ʷ	ta...tux̣

Upper Chehalis. Kinkade's (1964) classification of Upper Chehalis, given in (33), emphasizes that the proximity distinctions are speaker-oriented.

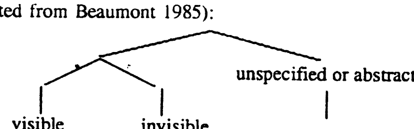
(33) Upper Chehalis determiners (adapted from Kinkade 1964):



	by speaker	near speaker	not near speaker	indefinite
+female	tic, cic	ʔic	tac, cac	c
-female	tit	ʔit	tat	t

Sechelt. In Sechelt, visibility, number and gender are encoded, but there is a certain amount of neutralization, as shown in (34). The determiner *te* is ambiguous with respect to visibility, as is *lhe*. The determiners *tse* and *che* are unambiguously visible and invisible respectively.

(34) Sechelt determiners (adapted from Beaumont 1985):



		visible	invisible	unspecified or abstract
+female	-plural	tse, lhe	lhe	she
	+plural	te	te, che	
-female	-plural			
	+plural			

[9] Bella Coola is probably not unusual within Salish in allowing temporal notions to be encoded on determiners; see Matthewson (1996), Demirdache (1996a,b), Davis and Mattthewson (this volume).

For discusion of other Salish determiner systems, see Kuipers (1974:57) on Secwepemctsín, van Eijk (1985) on St'át'imcets, and Montler (1986) on Straits, among others.

The following subsections turn to more subtle semantic distinctions. We will make the following four proposals, following Matthewson (1996):

(35) a. Salish determiners do not encode a definiteness distinction.
b Salish determiners do not encode a specificity distinction.
c. Salish lacks quantificational determiners (see also Jelinek 1995).
d. Salish determiners encode an 'assertion of existence' distinction.

2.2.2. Salish determiners do not encode definiteness

Following Heim (1982) and others, we take the indefinite / definite contrast in English to encode the distinction between novel and familiar discourse referents:

(36) a. Indefinites are NOVEL with respect to the common ground.
b. Definites are FAMILIAR with respect to the common ground.

In the definitions in (36), the COMMON GROUND of the discourse corresponds to the set of propositions that both the speaker and the addressee believe (Chierchia and McConnell-Ginet (1990:290)). The common ground includes, but is not restricted to, information introduced overtly into prior discourse; see Heim (1982), Chierchia and McConnell-Ginet (1990) among others.

The familiarity / novelty distinction is illustrated in (37-38). A novel discourse referent requires an indefinite determiner, while a familiar discourse referent requires a definite determiner.[10]

(37) A. I met [**a** man]$_i$ today. (*novel*)
B. What did [**the** man]$_i$ look like? (*familiar*)

(38) A. I met [a man]$_i$ today. (*novel*)
B. * What did [a man]$_i$ look like? (*familiar*)

Salish determiners do not encode a familiarity / novelty distinction. The evidence for this claim consists of pairs of coreferential DPs, one of which is used in a novel context, and one of which is used in a familiar context. The same determiner is used in both novel and familiar instances, showing that familiarity is not encoded in these languages:

[10] Definites whose discourse referents are novel to the common ground are possible, as shown in (i). (i) can be uttered felicitously even in a situation where there was no previous mention of a dog and there is no dog in sight (Heim 1982:371; see also Hawkins 1978:103).
i. Watch out, [the dog] will bite you.
Heim (1982) claims that novel definites are rendered felicitous by ACCOMMODATION (see Lewis 1979), a process which adjusts the common ground in the face of a violation of a felicity condition.

(39) a. t'i súxwt-as [**lhe** 7úlhka7 slhánay]$_i$ ...
fact saw-he [**det** snake woman] ...
'He saw [a snake-woman]$_i$ ...' (*novel*)

b. t'i tl'um s-ukwal-s [**lhe** slhánay]$_i$ ...
fact then nom-speak-her [**det** woman] ...
'Then [the woman]$_i$ said ...' (*familiar*) (Sechelt, Beaumont 1985:188)

(40) a. huy, šudxʷəxʷ [ti?i† čxʷəlu?]
compl see [**det** whale]
'They saw a whale.' (*novel*)

b. bapadəxʷ əlgʷə? [ti?i† čxʷəlu?]
pester pl [**det** whale]
'They pestered the whale.' (*familiar*) (Lushootseed; Hess 1995:140)

The absence of a familiar / novel distinction, and hence of a definiteness distinction, holds in at least St'át'imcets, Secwepemctsín (Kuipers 1974), Straits (Montler 1986, Jelinek 1995), and probably Bella Coola (Nater 1984). The only problematic cases are Upper Chehalis and Cowlitz, which Kinkade (1964, p.c.) analyzes as containing a definiteness distinction. However, see Matthewson (1996) for arguments that the Upper Chehalis determiner facts do not accord with a definiteness analysis.

2.2.3. Salish determiners do not encode specificity

In this section, only one Salish language (St'át'imcets) is discussed, since available literature on Salish contains no explicit discussion of specificity. In examining St'át'imcets, we apply Ludlow and Neale's (1991) definition of specificity. Their definition utilizes on the following concepts:

(41) SPEAKER'S GROUNDS: the proposition that is the object of the most relevant belief furnishing the grounds for an utterance
PROPOSITIONS MEANT: the proposition(s) a speaker intends to communicate
PROPOSITION EXPRESSED: the proposition expressed by the utterance
(Ludlow and Neale 1991:176)

According to Ludlow and Neale, specificity relies on a mismatch between the Speaker's Grounds and the Proposition Meant in whether they are SINGULAR PROPOSITIONS or GENERAL PROPOSITIONS.[11] The definition is as follows (Ludlow and Neale 1991:181, emphasis

[11] Singular propositions are those which contain only directly referring expressions (such as proper names), and which are therefore 'about' particular individuals. An example is given in (i).
i. Marama quit her job.
General propositions contain only definite or indefinite descriptions, as in (ii). It is possible to understand a general proposition without being acquainted with any particular individual who satisfies

original):

> When the speaker has singular grounds for an assertion of the form 'An F is G' but no intention of communicating a singular proposition, let us say that the indefinite description 'an F' is used *specifically*.

When there is no mismatch between the Speaker's Grounds and the Proposition Meant (e.g. they are both general propositions), a non-specific reading results. In a language which encoded specificity, different determiners would be used for specific and non-specific readings of a DP.

Specificity is not relevant for determiner choice in St'át'imcets, as shown in (42) and (43). In (42), the Speaker's Grounds is a singular proposition and the Proposition Meant is general. Therefore, the DP is being used specifically. The determiner *ti...a* is used (the enclitic portion is deleted for phonological reasons following the progressive auxiliary *wa7*).

(42) The speaker has heard that a teacher she knows named Leo is coming.

Speaker's Grounds:	Leo is coming.
Proposition Meant:	A teacher is coming.
Proposition Expressed:	A teacher is coming.

cuz'	ku7	ts7as	**[ti**	wa7	tsunám'-cal]
going.to	quot	come	**[det**	prog	teach-intr]

'A teacher is coming.' (St'át'imcets)

In (43), on the other hand, both the Speaker's Grounds and the Proposition Meant are general propositions. Hence, the DP is being used non-specifically. However, the same determiner is used as in (42). This indicates that specificity is not encoded by the determiner system.

(43) The speaker has heard that a teacher is coming.

Speaker's Grounds:	A teacher is coming.
Proposition Meant:	A teacher is coming.
Proposition Expressed:	A teacher is coming.

cuz'	ku7	ts7as	**[ti**	wa7	tsunám'-cal]
going.to	quot	come	**[det**	prog	teach-intr]

'A teacher is coming.' (St'át'imcets)

In this section, we have seen that St'át'imcets does not overtly encode the distinction between specific and non-specific uses of DPs. See Matthewson (1996) for further discussion.

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the description (Ludlow and Neale 1991:173). See also Loar (1976).

ii. The woman who won a million dollars yesterday quit her job.

2.2.4. Salish lacks quantificational determiners

The term 'quantificational determiner' is used to describe quantifiers which occupy the D° position within DP. Quantificational determiners in English are illustrated in (44). The quantifier *every*, *no* and *most* in (44) do not co-occur with a determiner, but rather replace it:

(44) a. **[Every** girl] forgot her pencil.
b. **[No** girl] forgot her pencil.
c. **[Most** girls] forgot their pencils.

In Salish, lexical items with quantificational force may not appear in determiner (D°) position. Jelinek (1995) has argued this point for Straits Salish; see Matthewson (1996) for evidence from a range of Salish languages.

(45) a. *

wa7	ama-mín-itas	k-wa	píx-em'	**[takém**	twéw'w'et]
prog	good-appl-3pl.erg	det-prog	hunt-intr	**[all**	boy(redup)]

'All boys love hunting.' (St'át'imcets)

b. *

qwetséts	**[xwexwéyt**	sqélemc]
leave	**[all**	man]

'Every man left.' (Secwepemctsín)

The only way a quantifier can appear inside DP in Salish is to co-occur with a determiner (Matthewson 1994, 1996; see also Demirdache et al. 1994).

(46) a.

qwetséts	**[xwexwéyt**	**re**	sqélemc]
leave	**[all**	**det**	man]

'[All the men] left.' (Secwepemctsín)

b.

na	ch'aw-at-as	**[i7x̱w**	**ta**	siw'i7ḵa]	[ta	slhenlhanay']
rel	help-tr-3erg	**[all**	**det**	men]	[det	women]

'[All the men] helped the women.' (Squamish; Demirdache et al. 1994)

c.

čls-n	**[t**	qə́x̱ɬ	čawaɬ[ó.]mš]
come-3subj	**[det**	**many**	girl[dimin]]

'Many girls come.' (Upper Chehalis; M.D.Kinkade, p.c.)

d.

s-iʔ	k̓ʷən-nəxʷ-s	**[tseə**	ŋəň	šə-škʷə́m̓]
nom-accom	see-cont.tr-3poss	**[det**	**many**	actual-swim]

'and he did see a bunch of swimmers' (Saanich; Montler 1986:251)

Elements which are excluded from D position in Salish include strong quantifiers, and weak quantifiers under either strong or weak readings.

2.2.5. Salish determiners encode 'assertion of existence'

So far we have seen that Salish determiners do not encode definiteness or specificity, and are never quantificational. This section argues that a distinction is made in Salish determiner systems between determiners which induce an ASSERTION OF EXISTENCE and determiners which do not. An informal definition of the distinction is given in (47).[12]

(47) **Assertion of existence** (informal definition):
the speaker's intent to 'refer to' or 'mean' a nominal expression to have non-empty references - i.e. to 'exist' - within a particular universe of discourse (i.e not necessarily within the real world) (Givón 1978:293-4).

We will illustrate the assertion of existence distinction using St'át'imcets. In (48) and (49), the discourse referent of the DP receives existential force. This existential force obtains whether the sentence is declarative, as in (48), or contains a modal, as in (49). The discourse referent can be either novel or familiar, as discussed in §2.2.2.

(48) tecwp-mín-lhkan **[ti** púkw-**a]** lhkúnsa
buy-appl-1sg.subj **[det** book-**det]** today

a. 'I bought a book today.' (*novel*)
b. 'I bought the book today.' (*familiar*)
c. ∃ x, book (x), I bought x today. (St'át'imcets)

(49) tecwp-mín-lhkan kelh **[ti** púkw-**a]** natcw
buy-appl-1sg.subj might **[det** book-**det]** tomorrow

a. 'I might buy a book tomorrow.' (*novel*)
b. 'I might buy the book tomorrow.' (*familiar*)
c. ∃ x, book (x), I might buy x tomorrow. (St'át'imcets)

If the determiner is changed from *ti...a* to *ku*, no existential force obtains. A DP containing *ku* is permitted under the scope of a modal, as in (50); this time, there is no assertion that a book exists that the speaker will buy.

(50) tecwp-mín-lhkan kelh **[ku** pukw] natcw
buy-appl-1sg.subj might **[det** book] tomorrow
'I might buy [a book] tomorrow.' (St'át'imcets)

The determiner *ku* is a non-assertion of existence determiner, and stands opposed to all other determiners in St'át'imcets in not inducing an assertion that its DP discourse referent exists.

[12] (47) is Givón's (1978) definition of 'referentiality', which he bases on Bemba (Bantu). For a formal definition in terms of Discourse Representation Theory (Kamp 1981), see Matthewson (1996).

DPs containing the determiner *ku* are ungrammatical in a declarative sentence, as shown in (51). The environment in (51) is the canonical environment where indefinites receive existential force in English. The meaning which (51) would receive is nonsensical in English also, as shown below the example.

(51) *tecwp-mín-lhkan **[ku** pukw] lhkúnsa
buy-appl-1sg.subj **[det** book] today
'I bought [a book] today.' (St'át'imcets)

!'I bought a book today, but I do not assert that a book exists that I bought.'

Argument DPs which contain the determiner *ku* may only appear within the scope of a non-factual operator, such as negation, a *yes-no* question marker, or a modal (e.g. *kelh* 'might' in (50)).

Salishanists have not previously used the term 'assertion of existence' in their descriptions of determiner systems. However, Matthewson (1996) argues that the same analysis can be extended to at least Sechelt (Beaumont 1985), Bella Coola (Davis and Saunders 1975) and Secwepemctsín (Kuipers 1974).[13]

2.2.6. Current theories cannot account for Salish

DPs in Salish cannot be analyzed as definites, since they lack the defining property of definites, a restriction to familiar contexts (see section 2.2.2). On the other hand, DPs in Salish cannot be treated as indefinites. For example, analyzing assertion of existence DPs as introducing a variable which receives existential force in certain environments (as in Heim 1982, Kamp 1981) gives the wrong results. This is shown in (52) using Heim's (1982, Chapter 2) Existential Closure.

(52) ay t'u7 kw-s áz'-en-an **[ti** káoh-a]$_i$
neg just det-nom buy-tr-1sg.conj **[det** car-exis]
'I didn't buy [a car].'
!¬(∃x, car (x), I bought x)

The meaning of the St'át'imcets sentence in (52) is that there exists a car, which the speaker did not buy. However, Existential Closure inserts an existential quantifier inside the scope of negation in (52), incorrectly producing a logical form which does not assert the existence of a car.

The problem is that indefinites in English can take either wide or narrow scope with respect to non-factual operators, while assertion of existence DPs in Salish always take wide scope with respect to non-factual operators. This is shown by cross-sentential coreference facts.

Assertion of existence DPs may corefer with DPs in subsequent sentences, across a non-factual operator:

[13] Consequently, the Bella Coola and Sechelt determiner systems introduced in section 2.2.1 above are partially reanalyzed in Matthewson (1996).

(53) ay t'u7 kw-s áz'-en-an **[ti káoh-a]$_i$**
neg just det-nom buy-tr-1sg.,conj **[det car-exis]**
'I didn't buy [a car]$_i$.'
∃x, car (x), ¬I bought x.

qvl-7ul pro$_i$ t'u7
bad-too just
'[It]$_i$ was too bad.' (St'át'imcets)

Non-assertion of existence DPs always take narrow scope with respect to non-factual operators, and hence cannot corefer with a DP in a subsequent sentence:

(54) ay t'u7 kw-s áz'-en-an **[ku kaoh]$_i$.**
neg just det-nom buy-tr-1sg.conj **[non.exis.det car]**
'I didn't buy [a car]$_i$.'

*qvl-7úl pro$_i$ t'u7
*bad-too just
*'[It]$_i$ was too bad.' (St'át'imcets)

The data in (53) and (54) show that the least we will have to do to account for Salish is to stipulate that assertion of existence DPs are like indefinites with obligatorily wide scope with respect to non-factual operators, and non-assertion of existence DPs are like indefinites with obligatorily narrow scope with respect to non-factual operators.[14]

In this section we have seen that the assertion of existence distinction cannot easily be captured by available theories of the semantics of DPs.

2.2.7. An explanation: Salish lacks presuppositional determiners

This section relies on the notion of PRAGMATIC PRESUPPOSITION (Stalnaker 1974). Pragmatic presupposition is a relation between a proposition and the *common ground* of the participants in the conversation, defined as follows:

> A proposition *P* is a pragmatic presupposition of a speaker in a given context just in case the speaker assumes or believes that *P*, assumes or believes that his addressee assumes or believes that *P*, and assumes or believes that his addressee recognizes that he is making these assumptions, or has these beliefs (Stalnaker 1974:473).

[14] The distinction between DPs which can corefer across non-factual operators and those which cannot is often argued to correlate with specificity (see for example Kamp and Reyle 1993). Matthewson (1996) argues in detail that the distinction between DPs which can corefer in Salish and those which cannot is not specificity, but assertion of existence.

The unifying generalization behind the absence in Salish of definite determiners, specific determiners, and quantificational determiners is that Salish determiners may never induce presuppositions.[15] Salish determiners may never access the common ground, or indeed anything other than the speaker's beliefs. The ability to access or refer to hearer assumptions or beliefs is missing in the determiner systems of Salish languages.

To show that the underlying absence of presuppositional determiners derives the Salish system, we must show that all the distinctions which are unavailable to determiners in Salish involve presuppositions.

Definites. The use of a definite DP means that the speaker presupposes the content of the DP; the descriptive content of the DP has necessarily been entered into the common ground of speaker and hearer (the file) prior to that utterance (Heim 1982). Hence, the claim that Salish lacks presuppositional determiners correctly rules out definites.

Specifics. According to Enç (1991:9), 'specifics require that their discourse referents be linked to previously established discourse referents.' A previously established discourse referent is necessarily understood by conversational participants to exist. Similarly, Diesing (1992:80) claims that 'the essential semantic contribution of 'specificity' [is] in fact presuppositionality.'[16]

Quantificational determiners. Strawson (1952:172f) claims that

> There are many ordinary sentences beginning with such phrases as 'All ...', 'All the ...', 'No ...', 'None of the ...', 'Some ...', 'Some of the ...', 'At least one ...', 'At least one of the ...' ... the existence of members of the subject-class is to be regarded as presupposed (in the special sense described) by statements made by the use of these sentences; to be regarded as a necessary condition, not of the truth simply, but of the truth or falsity, of such statements.

According to this view, a sentence which contains a quantifier (such as *Every unicorn likes bananas*) cannot be assessed for truth or falsity unless the set ranged over by the quantifier (in this case, the set of unicorns) is non-empty.

Diesing (1992) claims that only strong quantifiers (such as *every*, *most*) always 'presuppose the existence of the entities they are applied to.' Weak quantifiers (such as *many*, *some*) 'are ambiguous between a presuppositional and a non-presuppositional reading in which they merely assert the existence of whatever entities they are applied to' (Diesing 1992:59).

Matthewson (1996), on the other hand, argues that all quantificational determiners presuppose the existence of their range (and hence that all quantificational determiners can be correctly excluded from Salish in one fell swoop). Support for this claim comes from the

[15] See also Demirdache and Matthewson (1995), who reach a similar conclusion on the basis of independent evidence to do with topic-focus structure in Salish.

[16] Other definitions of specificity, which do not require previously established discourse referents (e.g. Ludlow and Neale 1991) still rely on an interaction between the speaker's beliefs and the hearer's beliefs (see Matthewson 1996). Thus, if Salish determiners cannot access the common ground, specific determiners will also be ruled out under these definitions.

behaviour of weak quantifiers under verbs like *deny*, which allow presuppositions to project from a subordinate clause.[17] Carden (1973) provides the following data:

(55) a. John denies the Whig candidates won.
Assumes there were Whig candidates. Denies that they won.

b. John denies that the many candidates won.
Assumes that there were many candidates. Denies that they won.

c. John denies that many candidates won.
Assumes there were candidates who won. Denies that they were many.
(Carden 1973:38-39)

(55c) is the crucial example. The weak quantifier *many* induces a presupposition of existence on candidates, which projects past the very *deny*. If it is true that weak quantifiers always induce presuppositions, we can derive the absence of weak quantifiers which occupy D° position in Salish from the absence of all presuppositional determiners.

Assertion of existence. Assertion of existence DPs do not induce a presupposition of existence; on the contrary, the hearer's beliefs (and the common ground of the discourse) are irrelevant in the assertion of existence distinction. To use an assertion of existence determiner it is not necessary that the hearer believe in the existence of the relevant individual. This is explicitly stated for St'át'imcets by van Eijk (1985:224), who claims that when it comes to determiner choice, 'the speaker is the sole arbiter'. See also Kuipers (1967:137) on Squamish.

2.2.8. The Common Ground Parameter

The underlying generalization that Salish determiners may not access the common ground of the discourse leads Matthewson (1996) to propose the parameter in (56).

(56) Determiners may access the common ground:

Yes: { English, ... }
No: { St'át'imcets, Secwepemctsín, Sechelt, ... }

The negative setting of the parameter for Salish derives the absence of a definiteness distinction, a specificity distinction, and of quantificational determiners, since all these determiner-types necessitate access to the common ground (section 2.2.7).[18] The assertion of existence distinction encodes only the speaker's state of knowledge; no account is taken of the common ground. Hence, its presence in Salish is compatible with the Common Ground Parameter.

[17] On the projection of presuppositions, see Langendoen and Savin (1971) and much subsequent work.

[18] The presence of a quantifier in other positions within DP (e.g. DP-adjoined) is not ruled out, since the parameter applies only to elements which occupy the determiner position itself (see e.g. (46) above).

The Common Ground Parameter sets up a subset - superset relation between languages; the Salish system is a subset of the English system, as shown in (57). We predict that there will be no languages which do not encode speaker knowledge.

(57)	English	Salish	*	*
Speaker knowledge accessible	+	+	-	-
Hearer knowledge accessible	+	-	+	-
C.G.P. setting	+	-	-	-

The subset - superset relation predicts that children will require a positive trigger for a positive (English) setting of the Common Ground Parameter (see Berwick 1985, Manzini and Wexler 1987). For concreteness' sake, Matthewson (1996) speculates that the presence of a quantificational determiner will trigger a positive setting of the Common Ground Parameter. This automatically follows if quantificational determiners necessarily induce a presupposition of existence.

The Common Ground Parameter is stateable at the level of the lexicon, and its setting relies on learnable cues.

In summary, we have provided evidence that the semantics of determiners must be parameterized. A single Common Ground Parameter derives all four separate properties of Salish determiner systems, and correctly accounts for differences between English and Salish.

2.3. DP-internal quantifiers

So far, we have examined the elements which occupy D° position, the head of the DP. In this section, we turn briefly to DP-internal quantifiers in Salish. See Demirdache et al. (1994), Matthewson (1996) for discussion of quantifiers in Salish, and Matthewson and Davis (1995) for a detailed examination of DP-internal syntax in St'át'imcets.

As mentioned in section 2.2.4 and illustrated in (46) above, DP-internal quantifiers in Salish languages co-occur with determiners rather than replacing them. Within the class of quantifiers, there is a split in the syntactic behaviour of strong quantifiers and weak quantifiers.[19] DP-internal strong quantifiers usually precede the determiner within DP:

(59) a. qwatsáts tu7 **[tákem** i sk'wemk'úk'wm'it-a]
leave compl **[all** pl.det children-exis]
'All the children left.' (St'át'imcets; BF, RW)

b. qwetséts **[xwexwéyt** re sqélemc]
leave **[all** det man]
'All the men left.' (Secwepemctsín; Demirdache et al. 1994)

[19] Weak quantifiers are those that can appear in *there*-insertion contexts (Milsark 1974):
i. a. There are some / many / three / no New Zealanders in the garden. (weak)
b. *There are the / every / all / most New Zealanders in the garden. (strong)

c. ʔax̱ʷá-w-n [x̱ʷáqʷu t ʔális=umš]
run-intr-3subj [**all** det chief-people]
'All the upper-class people run.' (Upper Chehalis; M.D. Kinkade, p.c.)

d. ni x̱ʷələnčənə́m [mə́kʷ k̓ʷθə sƛ̓əlʔíqəɬ]
aux run(pl) [**all** det children]
'All the children ran.' (Cowichan; Gerdts 1988:79)

e. k'wə́cləxʷ-əs [ti swíyeqə] [mə́k̓ʷ yi sɬəlɬɛ́lí]
see-3subj [det man] [**all** pl.det woman]
'The man saw all the women.' (Chilliwack; Galloway 1977:454)

f. na ilhen [**i7x̱w** ta sta7uxwlh]
rel eat [**all** det children]
'All the children are eating.' (Squamish; Demirdache et al. 1994)

In at least some languages, strong quantifiers may also follow the determiner within DP; at least in St'át'imcets, this second ordering is less common:

(60) qwatsáts tu7 [i **tákem-a** sk'wemk'úk'wm'it]
leave compl [pl.det **all-exis** children]
'All the children left.' (St'át'imcets)

The canonical position for DP-internal weak quantifiers is following the determiner rather than preceding it, as shown in (61).

(61) a. ít'-em [i **cw7ít-a** smúlhats]
sing-intr [pl.det **many-exis** woman]
'A lot of women sang.' (St'át'imcets; RW, GN)

b. č̓ís-n [t qə́x̱ɬ čawaɬ[ó.]mš]
come-3subj [det many girl[dimin]]
'Many girls come.' (Upper Chehalis; M.D. Kinkade, p.c.)

c. ʔaɬk̓c-ti-ts [wa **slax** wa yaki]
see-3pl.obj-1sgsubj [pl.det **many** pl.det mountain.goat]
'I see many mountain goats.' (Bella Coola; Nater 1984:121)

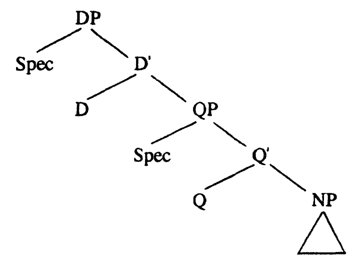
d. s-iʔ k̓ʷən-nəxʷ-s [tsə ŋə́ɦ šə-škʷə́m̓]
nom-accomp see-cont.tr-3poss [det **many** actual-swim]
'and he did see a bunch of swimmers.' (Saanich; Montler 1986:251)

In St'át'imcets, a weak quantifier may precede the determiner within DP only if the entire DP has been moved to the front of the sentence, as illustrated in (62).

(62) a. **[cw7ít** i smúlhats-a] ít'-em
[many pl.det woman-exis] sing-intr
'A lot of women sang.' (St'át'imcets)

b. *ít'-em **[cw7ít** i smúlhats-a]
*sing-intr **[many** pl.det woman-exis]
'A lot of women sang.' (St'át'imcets)

A possible analysis for the DP-internal quantifiers is summarized in (63). All quantifiers are generated as the head of a QP. Strong quantifiers, for reasons of scope, tend to raise to adjoin to DP, while weak quantifiers stay in their base-generated position unless a proportional (strong) reading forces them to raise. See section 3 for a more detailed defence of the structure in (63).

(63)


This analysis leaves a number of issues unresolved, such as the fact that in St'át'imcets (the only language for which data is available), *all* DP-internal weak quantifiers give rise to a proportional (strong) reading (Matthewson 1996). This suggests that by the level of Logical Form, all weak quantifiers, as well as all strong quantifiers, have raised out of their base-generated position in St'át'imcets. While the current analysis leaves this and other issues open, it has the advantage of capturing both Salish and Cree in a unified analysis. See section 3 for further discussion.[20]

2.4. Discontinuous DPs and word order in Salish

In this final subsection on Salish, we present certain facts which will facilitate comparison with the Cree data to be presented below. The data concern the status of discontinuous DPs and the possibility of post-nominal determiners. Although negative data is not available at present for languages other than St'át'imcets, the absence of positive evidence for the effects to be discussed suggests that they are lacking throughout the family.

In St'át'imcets, determiners may not be separated from their complements by intervening material such as the main predicate of the sentence. The string in (64) is interpretable as a

[20] The analysis presented here of the DP-internal quantifiers differs in matters of details from the analysis presented in Matthewson (1996), although relative c-command relations between elements and the movements proposed remain constant.

relative clause, but not as a sentence where the determiner is separated from its complement NP.[21]

(64) ti ats'x-en-án-a kúkwpi7
det see-tr-1sg.conj-exis chief
'the chief I saw'
* 'I saw the chief.' (St'át'imcets; LT)

With regard to DP-internal word order, determiners may not follow their complements, but must precede them, as shown in (65).

(65) * áts'x-en-lhkan kúkwpi7-a ti
see-tr-1sg.subj chief-exis det
'I saw the chief.' (St'át'imcets; LT)

In summary, we have shown that syntactically, Salish languages provide good support for the DP-analysis of noun phrases. Semantically, Salish determiners differ markedly from English determiners; we take this to constitute evidence that DP-theory must allow for a wider range of cross-linguistic variation than is usually countenanced. In the following discussion of Cree, we will see more striking evidence for this conclusion.

3. An analysis of Cree determiners

This section examines the syntax and semantics of determiners in Cree. Cree belongs to the Algonquian language family, which also includes the languages Fox, Menomeni, and Ojibwa.[22] The evidence presented in this section is drawn from a single dialect of Cree, namely Swampy Cree as spoken in Norway House.

Determiners in Cree display syntactic properties (introduced in 3.1.) which appear to contradict widespread assumptions regarding DP syntax: 1) They can form part of syntactically discontinuous DPs, 2) they display variable ordering, and 3) they may appear in post-nominal as well as pre-nominal position. At first blush, these properties migh be seen to argue for a non-DP treatment along the lines of Baker's (1995) appositional modifier analysis which is outlined in 3.1.1.

But there is compelling evidence that Cree possesses a system of genuine determiners and that their syntactic properties must be addressed by DP theory. Evidence to this effect comes from distributional and other inventory-related facts discussed in 3.2., and from a closer investigation of the problematic determiner behaviours listed above. These are discussed in 3.3.-3.5.

[21] Note that the enclitic portion of the discontinuous determiner *ti...a* phonologically attaches to the first lexical item available. (64) is ungrammatical under any reading if the enclitic is attached to *kúkwpi7* 'chief'.

[22] The term Cree is sometimes used to refer to the larger Cree-Montagnais-Naskapi language complex. More commonly, as here, Cree is used for a smaller group of closely related dialects which includes Swampy Cree, Plains Cree, Woods Cree, Moose Cree, and possibly Atikamek.

3.1. Problematic syntactic properties of Cree determiners

Cree determiners display three syntactic properties which suggest a high degree of syntactic freedom. Firstly, Cree allows discontinuous DPs in which a determiner and the noun it qualifies are separated by intervening material which is extraneous to the DP:

(66) a. Kî-sipwêhtêw kahkinaw awâsis.
Past-leave every child
'Every child left.'

b. Kahkinaw kî-sipwêhtêw awâsis.
every Past-leave child
'Every child left.'

Secondly, determiners in Cree can be very freely ordered, as shown below.

(67) a. Nikî-nakiskawâwak ôkok mihcêt awâsisak.
I-Past-meet-with these many children
'I met with these many children.'

b. Nikî-nakiskawâwak mihcêt ôkok awâsisak.
I-Past-meet-with many these children
'I met with many of these children.'

Finally, most Cree determiners can appear in either pre- or post-nominal position:

(68) a. Mihcêt ininiwak kî-sipwêhtêwak.
many people Past-leave
'Many people left.'

b. Ininiwak mihcêt kî-sipwêhtêwak.
people many Past-leave
'Many people left.'

3.1.1. A non-DP analysis?

Working on Mohawk, Baker (1995) observes that the determiner behaviours in (66)-(68) correlate with an absence of obligatorily transitive determiners like English *a, the, my* in (69).

(69) a. I prefer a detective story.
b. *I prefer a.
c. I prefer the detective story.
d. *I prefer the.
e. I prefer my detective story.
f. *I prefer my.

Baker takes these features (the determiner behaviours in (66)-(68), and the absence of obligatorily transitive determiners) to indicate the absence of a "true determiner system". He proposes that determiner-like elements in Mohawk and similar languages are appositional modifiers, whose distribution is different from determiners. Whereas determiners appear inside Determiner Phrases (DPs), appositional modifiers are adjoined elements, which can be licensed as VP- adjoined adverbials or as NP-adjoined appositional modifiers.

An appositional modifier treatment offers a seemingly simple and elegant explanation of Cree determiner behaviours. An appositional modifier may adjoin above VP to form what looks like a discontinuous DP, as in (66b). Appositional modifiers may be adjoined in free order. Hence the variable orderings in (67). Finally, an appositional modifier can be freely adjoined on either side above an NP, resulting in a pre- or post-nominal placement, as in (68).

3.2. Cree determiners require a DP-analysis

There is compelling evidence, however, that Cree possesses a genuine system of nominal determiners and quantifiers which require a DP analysis. Evidence to that effect comes, firstly, from distributional facts which are outlined below.

3.2.1. Cree possesses strictly nominal determiners and quantifiers

DP theory recognizes two classes of nominal modifiers which can saturate an NP, allowing it to function as a referring expression; determiners, and quantifiers.

Cree possesses both types of nominal modifiers. It has demonstrative determiners, and it has a rich variety of quantifying expressions. Among others, this includes numerals (*pêyak*, *nîso*, *nisto* 'one, two, three'), negation ((*na*)*môna* 'no'), quantifiers (*kahkinaw* 'all'; 'every'; *pâhpêyak* 'each'; *mihcêt* 'many'; *âtiht* 'a few'), indefinite modifiers (*kêkwân* 'some'; 'any'), question modifiers (*tân(i)tahto* 'how many'; *kêkwân* 'what';[23] *kêko* 'which'), and many others.

There are distributional properties which show that the nominal determiners and quantifiers of Cree require a DP analysis. Determiners and nominal quantifiers in Cree cannot, as a rule, be understood as adverbial modifiers.[24] They must associate with a nominal, either as nominal modifiers or as proforms.[25] This also holds when a modifier is separated from the noun it modifies or used as a nominal proform. Hence the glosses in the following examples.

(70) a. Awa nâpêsis kî-sipwêhtêw.
this boy Past-leave
'This boy left.'

b. Awa kî-sipwêhtêw.
this Past-leave
'This (one) left.'

c. Awa kî-sipwêhtêw nâpêsis.
this Past-leave boy
'This boy left.'

(71) a. Kahkinaw nâpêsisak kî-pâhpiwak.
all boys Past-laugh
'All the boys laughed.'

b. Kahkinaw kî-pâhpiwak.
all Past-laugh
'All (of them) laughed.'

c. Kahkinaw kî-pâhpiwak nâpêsisak.
all Past-laugh boys
'All the boys laughed.'

Agreement facts also show that Cree determiners and nominal quantifiers are strictly nominal, both when serving as modifiers and as proforms. This is evident from the fact that there is obligatory number agreement between a nominal modifier and the noun it modifies, as shown for singular *awa* 'this' and plural *âtiht* 'a few' in (72) and (73) below.

[23] *Kêkwân* 'something' doubles as a nominal modifier which reads as indefinite 'some'. It is also used in negated contexts with the negative polarity reading 'any', and initially in *wh*-questions with the question reading 'what'.

[24] As in most languages, specialized exceptions exist. (*Na*)*môna* 'no' may also be used as a sentential negative in Swampy Cree. Another exception (which does not generalize to the full paradigm of demonstratives) is the idiomatic use of *ôma* 'this' as an emphatic particle in Plains Cree.

[25] See Matthewson (1996) for similar facts in Salish.

(72) a. awa nâpêsis
this boy
'this boy'

b. *awa nâpêsis-**ak**
this boy-**Plur**
*'this boys'

(73) a. âtiht iskwêsis-**ak**
a-few girl-**Plur**
'a few girls'

b. *âtiht iskwêsis
a-few girl
*'a few girl'

The verbal morphology also displays obligatory singular and plural agreement, showing that Cree determiners and nominal quantifiers are strictly nominal, both when they serve as modifiers and as proforms. This is illustrated in (74) and (75) below.[26]

(74) a. Awa nâpêsis kî-sipwêhtêw.
this boy Past-leave
'This boy left.'

b. *Awa nâpêsis kî-sipwêhtêw-**ak**.
this boy Past-leave-**Plur**

c. Awa kî-sipwêhtêw.
this Past-leave
'This (one) left.'

d. *Awa kî-sipwêhtêw-**ak**.
this Past-leave-**Plur**

e. Awa kî-sipwêhtêw nâpêsis.
this Past-leave boy
'This boy left.'

f. *Awa kî-sipwêhtêw-**ak** nâpêsis.
this Past-leave-**Plur** boy

(75) a. Âtiht iskwêsis-ak kî-pâhpiw-**ak**.
a-few girl-Plur Past-laugh-**Plur**
'A few girls laughed.'

b. *Âtiht iskwêsis-ak kî-pâhpiw.
a-few girl-Plur Past-laugh

c. Âtiht kî-pâhpiw-**ak**.
a-few Past-laugh-**Plur**
'A few laughed.'

d. *Âtiht kî-pâhpiw.
a-few Past-laugh

e. Âtiht kî-pâhpiw-**ak** iskwêsis-ak.
a-few Past-laugh-**Plur** girl-Plur
'A few girls laughed.'

f. *Âtiht kî-pâhpiw iskwêsis-ak.
a-few Past-laugh girl-Plur

These facts are unexpected under an appositional modifier analysis, which predicts that nominal modifiers should have an alternative adverbial use that would not involve the strictly nominal interpretation or agreement patterns illustrated in (70)-(75). These patterns show that Cree has a genuine determiner system with strictly nominal demonstratives and quantifiers. It is our contention that any such system must be addressed by DP Theory.[27]

[26] Some speakers accept *mihcêt* 'many' with singular nouns (e.g. *mihcêt nâpêw* 'many a man'), but this usage, possibly from English, requires matching singular agreement on the verb.

[27] In the remainder of this paper, "genuine determiner system" will be used in this sense.

Additional evidence that Cree has a genuine determiner system comes from co-occurrence restrictions which are expected of a true determiner system. Demonstrative determiners, for example, may co-occur with a weak quantifier like *mihcêt* 'many', but not with singular *kahkinaw* 'every', which is a strong quantifier with universal scope and singular reference:

(76) a. Ôkok mihcêt awâsisak kî-pâhpiwak.
these many children Past-laugh
'These many children laughed.'

b. *Awa kahkinaw awâsis kî-pâhpiw.
this every child Past-laugh
*'This every child laughed.'

3.2.2 Optionally transitive determiners in Cree

Although the Cree inventory of nominal determiners and quantifiers certainly qualifies as a genuine determiner system, it falls short of meeting Baker's (1995) criterion for a "true determiner system"on one count: It has no obligatorily transitive determiners. Whereas Cree possesses a few strong quantifiers which are obligatorily transitive,[28] Cree has no determiners with that behaviour. The only free-standing determiner elements in Cree are demonstratives, which are optionally transitive and may appear on their own as well as with an overt noun:

(77) a. Awa awâsis kî-sipwêhtêw.
this child Past-leave
'This child left.'

b. Awa kî-sipwêhtêw.
this Past-leave
'This (one) left.'

Cree does not possess an equivalent of obligatorily transitive *a/the*. Instead of overtly marking nouns as [+/-definite], definiteness is a supplied through (context dependent) interpretation. Thus *nâpêw* 'man' in the following example has two possible readings.[29]

(78) Nâpêw kî-pâhpiw. 'The man laughed.'
man Past-laugh or: 'A man laughed.'

3.2.3. Optionally transitive determiners in other languages

There is cross-linguistic evidence which shows, independently of the Cree facts, that obligatorily transitive determiners are not a defining feature of "true determiner systems".

[28] Examples of strong quantifiers (with universal scope and singular reference) are *kahkinaw* and *pâhpêyak* in their singular usage as 'every' and 'each'. These are discussed in 3.5. An account of the properties of strong quantifiers in Cree is given in Reinholtz and Russell (1995).

[29] Cree does have nominal suffixes, marking a distinction between a *proximate* and *obviative* nouns, which provide a possible parallel to obligatorily transitive determiners in Salish. A foregrounded topic is *proximate*, and morphologically unmarked. Non-foregrounded nouns are marked with an *obviative* suffix, respectively *-a* and *-(i)niw* for animate and inanimate nouns in Swampy Cree. Among similarities with obligatorily transitive determiners in Salish can be mentioned that obviation markers are used with all referring expressions (in the third person), including proper nouns, and that they cannot be used with predicative or adverbial NPs, nor with vocative NPs. With the possible exception of obviation suffixes, Cree possesses no determiners (certainly not of the free-standing variety) which are obligatorily transitive.

We need look no further than English to see that obligatory transitivity is not a defining feature of determiners. In addition to obligatorily transitive determiners (e.g. *the*, *my*), English has determiners which are optionally transitive (e.g. *that*, *his*).

(79) a. I prefer {the/my} detective story.
b. *I prefer {the/my}.
c. I prefer {that/his} detective story.
d. I prefer {that/his}.

There are also languages which are regarded as having real determiner systems although they do not have obligatorily transitive determiners. One such language is Turkish. Turkish does not have obligatorily transitive determiners comparable to the English articles *a/the*, and it has no generalized means of marking DPs as [+ or - specific]. In direct object DPs, the accusative suffix (which may be omitted) marks the DP as [+specific]:

(80) a. Ali bir kitab-ı aldı.
Ali one book-acc bought
'Ali bought a (specific) book.

b. Ali bir kitab aldı.
Ali one book bought
'Ali bought a (non-specific) book.
(Enç 1991:5)

There is no comparable means of marking other DPs (subjects, indirect objects, etc.) as [+ or - specific]. Non-accusative case suffixes may not be dropped, and Turkish has no free-standing articles like English *a/the* (or affixes like the Scandinavian definite suffix *-en/-et*) with which to mark a DP as [+/- specific]. Rather, an unqualified singular nominal can receive either a definite or indefinite reading:[30]

(81) Adam geldi. 'A (non-specific) man arrived.'
man arrived 'A (specific) man arrived.'

Although Turkish lacks an equivalent of obligatorily transitive *a/the*, it is generally assumed to have a genuine system of nominal determiners and quantifiers whose behaviour must be addressed by DP theory.[31] Unless we reject that treatment, and reanalyze the determiners of Turkish (and similar languages)[32] as appositional modifiers, there is clearly a need to recognize the existence of real determiner systems without obligatorily transitive determiners.

3.3. Discontinuous DPs in Cree

In this section, we show that discontinuous DPs obey ordering restrictions (introduced in 3.3.1.) which cannot be explained without a DP analysis. Section 3.3.2. outlines necessary background information concerning the verb-internal location of arguments and the existence of a hierarchical clause structure in Cree. Section 3.3.3. presents a determiner movement analysis which explains

[30] A specificity marker is absent, but Turkish does have a numeral *bir* 'one', which doubles as a non-specific determiner. Unlike English *a*, Turkish *bir* need not be present in a singular DP.

[31] See for instance Enç (1991).

[32] Among languges which lack an equivalent of obligatorily transitive *a/the* can be mentioned Chinese, and many members of the Bantu family, for example Swahili.

why discontinuous DPs are not freely ordered. We argue that determiner movement is in fact predicted by DP theory. Section 3.3.4. shows that nominal determiners and quantifiers in Cree are phrasal elements that appear in specifier position. This does not contradict the existence of a (phonetically zero) head D^0, whose role in DP parallels that of I^0 in IP. Section 3.3.5. discusses evidence that structural Case government blocks determiner movement. Section 3.3.6. provides an ECP account which is extended to explain the absence of determiner movement in Salish and other configurational languages.

3.3.1 Ordering restrictions on discontinuous DPs in Cree

Determiners in discontinuous DPs obey two ordering restrictions: 1) They must appear in pre-verbal position, 2) they must precede the NP they qualify. Both conditions are met in (82a,b) below. Example (82c) illustrates the ungrammaticality which results when the determiner in a discontinuous DP appears in post-verbal position. The examples in (82 d and e) show that the determiner in a discontinuous DP cannot follow the noun it modifies, regardless of whether the noun is pre-verbal, as in (82d), or post-verbal, as in (82e).

(82) a. Ana nikî-wâpamâw kimotisk.
that I-Past-see thief
'I saw that thief.'

b. Ana otâkosîhk kimotisk nikî-wâpamâw.
that yesterday thief I-Past-see
'I saw that thief yesterday.'

c. *Nikî-wâpamâw ana otâkosîhk kimotisk.
I-Past-see that yesterday thief

d. *Kimotisk nikî-wâpamâw ana.
thief I-Past-see that

e. *Kimotisk otâkosîhk ana nikî-wâpamâw.
thief yesterday that I-Past-see

These restrictions are unexpected under an appositional modifier analysis. If determiners were appositional modifiers which could function as VP-adjoined adverbials, adjunction on either side of VP should be possible, and the position of additional nominals should be irrelevant.

Russell and Reinholtz (1995) propose a movement analysis which explains why determiners in discontinuous DPs cannot be freely ordered, but only if we assume a DP analysis. Before introducing this analysis, some background concerning the location of arguments and clause structure in Cree is necessary.

3.3.2. Verb-internal arguments and hierarchical clause structure in Cree

In contrast to Salish, Cree is a so-called non-configurational language which is characterized by an absence of argument DPs. Arguments are small *pro*s located inside the verbal complex:

(83) *pro*-kî-sipwêhtêw.
she-Past-leave
'She left.'

DPs never function as arguments. Rather, they serve as optional argument-doubling expressions:

(84) $[_{DP}$ Nâpêsis$]_i$ *pro*$_i$-kî-sipwêhtêw.
boy he-Past-leave
'The boy left.'

The analysis illustrated above was first proposed by Jelinek (1984) and is sometimes referred to as the Pronominal Argument Hypothesis (PAH). The PAH captures three properties:
1) The ordering of DPs is not determined by thematic relations, e.g. subject vs object, 2) although DPs can be understood as subjects, direct objects, etc., they are fully optional, 3) DPs show an absence of certain subject/object asymmetries which is unexpected in a language that possesses subject and object positions for DPs. Those three properties are illustrated below, along with a Pronominal Argument analysis which explains how they arise.

Since arguments (subject, and object) are expressed verb-internally, as *pro*s, it follows without further stipulation that argument doubling DPs can be freely ordered without affecting subject/object relations. It is therefore not surprising that a verb and two DPs can occur in all of the six logically possible orders, as shown below.

(85) a. $[_{DP}$ awâsisak$]_i$ *pro*$_i$-kî-wâpamêwak-*pro*$_j$ $[_{DP}$ nâpêwa$]_j$.
b. $[_{DP}$ awâsisak$]_i$ $[_{DP}$ wâposwa$]_j$ *pro*$_i$-kî-wâpamêwak-*pro*$_j$.
c. *pro*$_i$-kî-wâpamêwak-*pro*$_j$ $[_{DP}$ awâsisak$]_i$ $[_{DP}$ nâpêwa$]_j$.
d. *pro*$_i$-kî-wâpamêwak-*pro*$_j$ $[_{DP}$ nâpêwa$]_j$ $[_{DP}$ awâsisak$]_i$.
e. $[_{DP}$ nâpêwa$]_j$ *pro*$_i$-kî-wâpamêwak-*pro*$_j$ $[_{DP}$ awâsisak$]_i$.
f. $[_{DP}$ nâpêwa$]_j$ $[_{DP}$ awâsisak$]_i$ *pro*$_i$-kî-wâpamêwak-*pro*$_j$.
'The children saw a man.'

The verb internal realization of arguments also explains why argument-doubling DPs are fully optional, as shown below.

(86) a. $[_{DP}$ awâsisak$]_i$ *pro*$_i$-kî-wâpamêwak-*pro*$_j$ $[_{DP}$ wâposwa$]_j$.
children they-Past-see-him rabbit
'The children saw the rabbit.'

b. *pro*$_i$-kî-wâpamêwak-*pro*$_j$ $[_{DP}$ wâposwa$]_j$.
they-Past-see-him rabbit
'They saw the rabbit.'

c. *pro*$_i$-kî-wâpamêwak-*pro*$_j$.
they-Past-see-him
'They saw it.'

Finally, since thematic structure is internal to the verbal complex, we also expect the absence of certain subject/object asymmetries. In (87), which is modelled on Baker's (1991) illustrations, the b) example is fine in Cree, although it would be ungrammatical in English. The verb-internal subject and the bolded NP John, embedded within the post-verbal NP, are mutually non-c-commanding, so no binding violation arises.

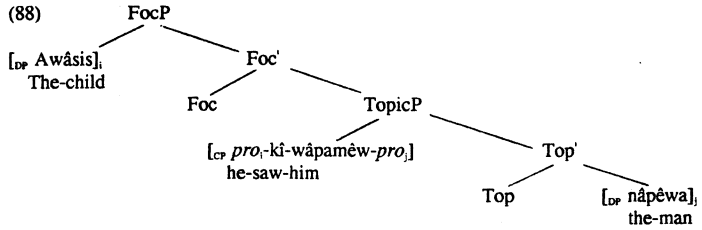
(87) a. [$_{DP}$ animêniw John$_i$ o-môhkomân]$_j$ *pro*$_i$-kî-wîchihik-*pro*$_i$.
that John his-knife it-Past-help-him
'That knife of John$_i$'s helped him$_i$.'

b. *pro*$_i$-kî-pîkonam-*pro*$_j$ [$_{DP}$ animêniw John$_i$ o-môhkomân]$_j$.
he-Past-break-it that John his-knife
*'He$_i$ broke that knife of John$_i$'s.'

In addition to the PAH, it has been assumed that non-configurational languages have no real clause structure, and that DPs and other elements are freely adjoined above the verbal complex, which is generally identified as a clause.[33]

Russell and Reinholtz (1995) show that, whereas Cree has verb-internal arguments, as assumed under the PAH, Cree does possess a hierarchical clause structure. Evidence for this comes from asymmetries in polarity licensing and other c-command sensitive relations which are set out in Russell and Reinholtz (1995). The clause structure which Russell and Reinholtz propose is shown in (88). Cree has discourse configurational projections, a Focus Phrase (FocP), and a Topic Phrase (TopP). DPs appear in the specifier of FocP, or in the complement of TopP.

(88)



'The child saw the man.'

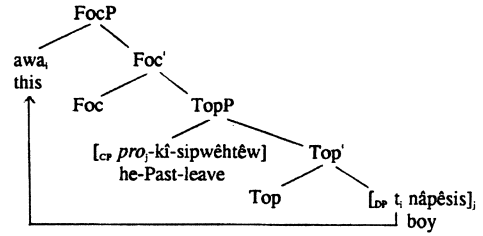
This hierarchical clause structure makes it possible to explain the ordering restrictions on determiners in discontinuous constituents as the restricted application of determiner movement. But that account, to which we turn next, is only possible if we assume a DP analysis for nominal modifiers (determiners and quantifiers) in Cree.

[33] Initially, it was assumed that non-configurational languages simply had a flat clause structure. In recent years, that analysis has been supplanted by a free adjunction analysis.

3.3.3. A movement account of discontinuous DPs

Following Russell and Reinholtz (1995), we will assume that discontinuous DPs arise from determiner movement, as shown below.

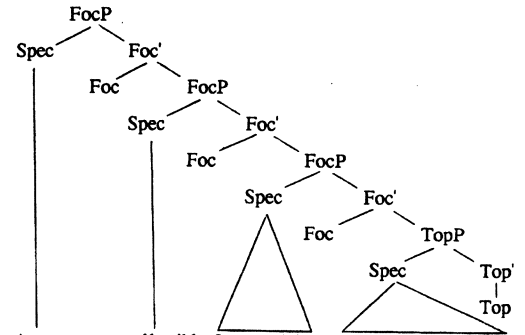
(89)



'This boy left.'

Downwards movement is not possible, since this would result in a structure where the moved determiner fails to c-command, and hence to bind, its trace in DP. This explains why the determiner in a discontinuous DPs cannot follow the noun it modifies. Determiner movement to higher c-commanding position is possible, as shown in (90a). But if a determiner moves to a lower, non-c-commanding position, it will fail to bind its trace in DP. Hence the ungrammaticality of example (90b) below.[34]

(90)



a. Awai otâkosîhk [DP ti awâsis]j [CP proj-kî-sipwêhtêw].
this yesterday child she-Past-leave 'This child left.'

b. *[DP ti Awâsis]j otâkosîhk awai [CP proj-kî-sipwêhtêw].
child yesterday this she-Past-leave

[34] Similarly, a determiner in post-verbal position would fail to c-command its trace in a preceding pre-verbal DP.

This explains why the determiner in a discontinuous DP must precede the noun it modifies, but only if we assume that the determiner originates in DP. In other words, a DP analysis is necessary. An appositional modifier analysis would incorrectly predict that e.g. *kahkinaw* 'all' should be grammatical as a VP-adjoined adverbial in the following examples.[35]

(91) a. *Awâsisak otâkosîhk kahkinaw kî-sipwêhtêw.
children yesterday all they-Past-leave

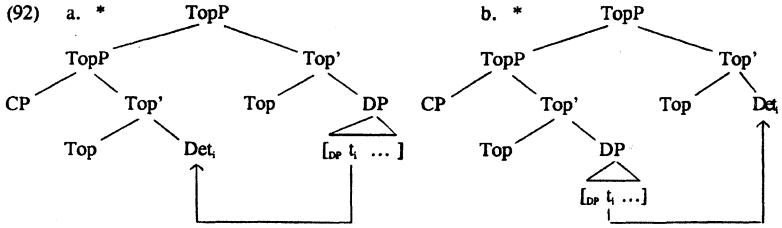
b. *Awâsisak otâkosîhk pâhpêyak kî-sipwêhtêw.
children yesterday each they-Past-leave

A DP analysis is also important in explaining the prohibition against determiner movement to a post-verbal position. While discontinuous DPs occur very productively in Cree, they are not considered natural unless the determiner is perceived as a focus element with contrastive or novel emphasis. If determiner movement is a case of structural focus movement, it is not surprising that determiners always move to the pre-verbal focus position, in [Spec, FocP].[36]

The clause structure we assume for Cree also precludes determiner movement to a post-verbal position for structural reasons, however. Focus elements appear in [Spec, FocP], and recursive projections of FocP appear in complement position, yielding the right-branching structure shown in (90) above. Here the element in [Spec, FocP] of the higher FocP projection asymmetrically c-commands the element in [Spec, FocP] of the lower FocP projection.

Topic elements, on the other hand, appear in the complement of TopP, and recursive projections of TopP appear in [Spec, TopP]. This creates a centre-embedding structure in which an element in the complement of the higher TopP projection and another element in the complement of the lower TopP projection are mutually non-c-commanding. Determiner movement to a post-verbal position in structures like (92a and b) is therefore precluded.

(92) a. *



b. *

This explanation is only possible if nominal modifiers (determiners and nominal quantifiers) orginate inside DP. Under an appositional modifier analysis, adjunction to the right VP should occur, and we would expect VP adjunction to be an unmarked, not focus-related, option.

[35] SeeRussell and Reinholtz (1995), and Reinholtz (1996a and b) for additional evidence against analyzing determiners in discontinuous DPs as VP adjoined adverbials.

[36] Determiner movement to any other position would violate Chomsky's (1991) principle of "movement as a last resort", and it would also be ungrammatical if focus operators must be licensed under feature government as proposed in Sportiche 1992, Reinholtz 1996, and others.

3.3.4. Phrasal demonstratives and quantifiers in Cree

The determiner movement analysis outlined in the preceding assumes that demonstrative determiners and nominal quantifiers in Cree are both phrasal constituents which appear in specifier position under DP and QP. We adopt this analysis because determiner movement in Cree shows a property which is incompatible with head-movement. Long determiner extraction to the pre-verbal focus position in superordinate clause is allowed, as shown below.

(93) Nîso$_i$ nikî-wâpahtamwân êkî-pîkonahk [$_{DP}$ t$_i$ wâskâhikana]
two I-Past-see-it Comp-Past-he-destroy-it house
'I saw that he had destroyed two houses.'

Long extraction of a head, D° or Q°, is extremely unlikely because of the potential for violations of the Head-Movement Constraint. Moreover, if we take seriously the parallelism between DP and IP, the only type of head movement which could plausibly apply to D would be some absolutely local equivalent of Infl-movement to the Comp position in a CP which immediately dominates the IP.

The facts outlined here should not be seen to undermine the treatment of DP as a functional projection headed by the category D°, whose role in DP closely parallels that of I° in IP. D° may be phonetically zero (under essentially the same variety of conditions which give rise to a phonetically zero I° in different languages). It is crucial, however, that a referring DP always contain a functional head D° with the abstract feature composition required to anchor the DP in the same fashion as Tense anchors IP, and to license an (NP) external argument which saturates the predicative head N.

While free-standing nominal modifiers of Cree are evidently phrasal elements occupying specifier positions, we therefore assume that a (phonetically zero) head D° is present in DP.

3.3.5. Structural Case government blocks determiner movement

It has been widely assumed that determiner movement, although possible at Logical Form,[37] is not permitted in the visible syntax. If our interpretation of the Cree facts is correct, Cree is a language which allows syntactic determiner movement. Salish, on the other hand, must disallow syntactic determiner movement, since it does not have discontinuous DPs. The question then arises of why syntactic determiner movement is possible in Cree, and not in Salish.

We begin by noting that syntactic determiner movement is in fact predicted by DP theory. A central assumption to DP theory is that there is a parallelism between DP and IP. If we take that parallelism seriously, then we expect DP to be a bounding node for movement, but not an inherent barrier. Barring additional circumstances that would block movement, we therefore expect that the external argument of DP can be be extracted. In other words, syntactic determiner movement, as found in Cree, is predicted. We sharpen our question accordingly: Why is syntactic determiner movement not possible in Salish?

An answer is offered by oblique arguments in Cree (source, goal, etc.). Oblique arguments cannot be expressed within the verbal complex in Cree, which only licenses subjects, direct

[37] See for example Hornstein and Weinberg (1990).

objects, and indirect objects. Instead, oblique arguments are realized as DPs, and these are licensed by adpositions which can affect determiner movement.

An oblique DP may appear inside a PP with a transitive head that serves as a structural case marker for DP. An oblique DP which is licensed in this fashion does not permit determiner movement, as shown below.

(94) a. Kî-pimipahtâw [$_{PP}$ [$_{DP}$ wâskâhikan-ihk] **isi**].
Past-run house-Loc towards
'She ran towards the house.'

b. [$_{PP}$ [$_{DP}$ Atâwikamik-ohk] **ohci**] kî-pê-itohtêw.
store-Loc from Past-come-leave
'She came out from the store.'

(95) a. *Nêtê$_i$ kî-wanawîpahtâw [$_{PP}$ [$_{DP}$ t$_i$ wâskâhikan-ihk] **ohci**]. [38]
that Past-go-out-run house-Loc from

b. *Anta$_i$ tâpwê [$_{PP}$ [$_{DP}$ t$_i$ atâwikamik-ohk] **isi**] kî-pimipahtâw.
that certainly store-Loc towards Past-run

Isi 'towards' and ohci 'from' can also license an oblique DP when they serve as initial roots (or preverbs) appearing inside the verbal complex:[39]

(96)
a. [$_{DP}$ Wâskâhikan-ihk] kî-**isi**pahtâw.
house-Loc Past-towards-run
'She ran towards the house.'

b. [$_{DP}$ Atâwikamik-ohk] kî-**ohci**pahtâw.
store-Loc Past-from-run
'She ran away from the store.'

An oblique DP which is licensed in this fashion permits determiner movement as shown below.

(97) a. Nêtê$_i$ kî-**ohci**pahtâw [$_{DP}$ t$_i$ mâtâwa-hk].
that Past-from-run river-mouth-Loc
'He ran from that river mouth.'

b. Anta$_i$ kî-**isi**pahtâw [$_{DP}$ t$_i$ atâwikamik-ohk].
that Past-towards-run store-Loc
'She ran towards that store.'

[38] If the place demonstratives in (95a,b) are set off from the rest of the sentence by a pause which signals interjection, the examples are fine. Without a pause to show that the demonstratives are not syntactically a part of the sentence, however, the examples are bad.

[39] Verb internal *isi* and *ohci* are DP licensers, and obligatorily transitive as shown below.
(i) a. **Kî-isi-pahtâw.* Past-towards-run
b. **Kî-ohcipahtâw.* Past-from-run

Assuming some version of Minimalist Theory, the licensing relation between an oblique DP and its verb internal licenser can be stated in terms of feature checking at L.F. We won't discuss that analysis here, but instead proceed to outline an explanation of the ungrammatical extraction cases in (95).[40]

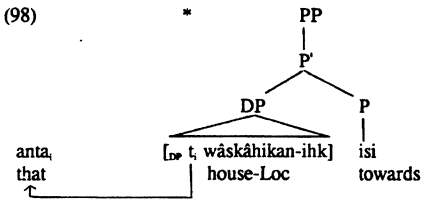
3.3.6. An ECP account which extends to Salish and other configurational languages[41]

Like the external argument of IP, determiners (and other nominal modifiers) in DP are not canonically theta-governed. Under what is now known as the conjunctive ECP,[42] we expect the equivalent of a *that*-trace effect to arise in the ungrammatical extraction cases in (95) above.

A non-pronominal empty category must both be licensed (under proper head-government) and identified (under theta-government or antecedent government). In the absence of a maximal phrase immediately above PP which excludes the moved determiner (or an intermediate trace thereof), the trace of the moved determiners in (95a.b) will meet the 'identification' clause of the conjunctive ECP.

The ungrammaticality of (95a,b) must therefore lie with a failure of proper head-government. Proper head-government is defined as government by X^0 within the immediate X', where X^0 must carry agreement features which are coindexed with the empty category (here a trace) which it governs. Postpositional *isi* and *ohci* are Case are proper head-governors for DP, with which they are coindexed. But they are not coindexed with a determiner element inside DP and therefore cannot properly govern the trace of determiner movement in a structure like (98) below. The determiner trace in (98) fails to be properly head-governed inside its minimal X'. It therefore stands in violation of the licensing clause of the conjunctive ECP.

(98) *



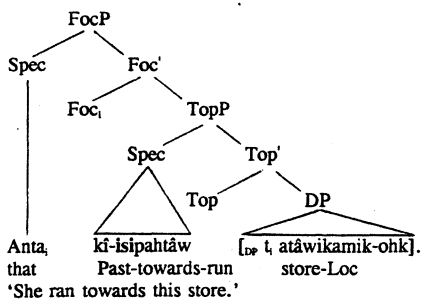
The failure of determiner movement in (95a,b) can thus be attributed to the presence of a lexical head in the X' immediately dominating the determiner's trace, where the agreement features of the lexical head are fixed at PF. Determiner movement out of other DPs (i.e., argument doubling DPs, and DPs licensed by verb-internal *isi* and *ohci*) can index a non-overt head-governor under adjunction, and thus ensure that the coindexed head identifies and properly head-governs the determiner trace in DP. This is illustrated in (99) below.

[40] See Reinholtz (1996b).

[41] The ECP account outlined in this section was originally proposed in a longer paper (Reinholtz (1996b)), now in the final stages of revision, which presents detailed analysis and account of discontinuous DPs in Cree.

[42] See for instance Jaeggli (1985) and Rizzi (1990).

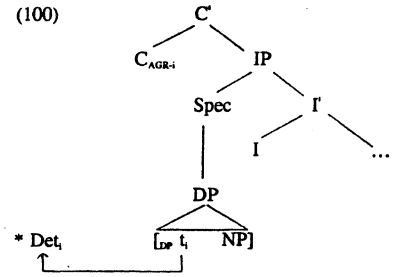
(99)



'She ran towards this store.'

This account can be extended to explain the absence of syntactic determiner movement in Salish. Salish is a configurational language. Overt DPs are arguments, which must be structurally Case governed by a lexical head, and the trace of a moved determiner therefore can never meet the ECP. DP complements of transitive Verbs and Prepositions are assigned structural Case under lexical government. Determiner movement out of such a DP will always leave a trace that fails to be properly head-governed in violation of the licensing clause of the conjunctive ECP. Assuming that subjects are assigned Case under m-command by a tensed Infl, they are not lexically governed within their minimal X' (C'). The trace of determiner movement may index Comp, to ensure that its trace is licensed (properly head-governed) in its minimal X' (i.e., C'), but since movement crosses two bounding nodes (DP and IP), a Subjacency violation will inevitably arise:

(100)



3.4. The ordering of determiners and quantifiers in DP

The evidence presented in this section shows that despite initial appearances, the ordering of nominal modifiers in Cree follows regular and predictable patterns which are expected under a DP analysis.

3.4.1. A weak quantifier can precede a demonstrative determiner

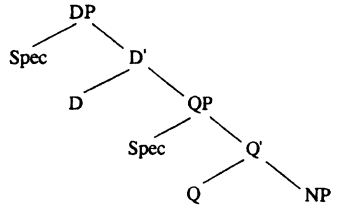
One ordering requirement which appears to be lacking in Cree is the requirement that a weak quantifier (with relative instead of universal scope) follow a demonstrative. Cree allows a weak quantifier like *mihcêt* 'many' to precede or follow a demonstrative,[42] while English simple DPs only allow the ordering found in (101a).

(101) a. Anikik mihcêt awâsisak kî-pâhpiwak.
these many children they-Past-laugh
'These many children laughed.'

b. Mihcêt anikik awâsisak kî-pâhpiwak.
many these children they-Past-laugh
'Many of these children laughed.'

The ordering in (101b) is unexpected under DP theory, which assumes that a simple DP has the structure given in (102)below, where demonstratives appear under the Determiner Phrase (DP), above quantifying expressions which are inside the Quantifier Phrase (QP). In a simple DP, we should expect that a weak quantifier like *mihcêt* 'many', since it does not take maximal scope, will remain in QP below the demonstrative determiner *anikik*, as in (101a) above.

(102)



3.4.2. A partitive analysis

As indicated in the English gloss, the DP in (101b) is not a simple DP, however. *Mihcêt anikik awâsisak* is a complex DP which is partitive and can only be understood with the partitive reading 'many of these children'.[43] Abney (1987:296) argues that an English partitive DP has the structure in (103) below, where a determiner takes an empty-headed NP complement, followed by a PP.

(103) [$_{DP}$ $_{D}$ two [$_{NP}$ $_{N}$ [$_{PP}$ of [$_{DP}$ the men]]]]

[42] This is a general property of weak quantifiers in Cree.

[43] This fact was elicited using two pictures, one depicting a group of five children who are all laughing, the other depicting a group of five children, four of whom are laughing. Example (101b) can only be understood as a description of the second picture where four out of five children are laughing.

The corresponding partitive construction in Cree contains no overt preposition; and is therefore recognizeable only by the relative ordering of determiner and quantifier. In regard to ordering and constituency, however, weak quantifiers in Cree follow a regular and predictable pattern familiar from e.g. English: Simple DPs with a non-partitive reading place a weak quantifier after a demonstrative, as expected under the DP structure outlined in (102) above. Complex DPs with a partitive reading place a weak quantifier before a demonstrative determiner, exactly as in English.

3.4.3. A universal quantifier following a demonstrative also induces partitivity

Another ordering restriction which appears to be absent in Cree is the requirement that a universal quantifier, such as English 'all', must appear in a position of maximal scope where it c-commands other DP elements:

(104) a. all these children b. *these all children

Both word orders are grammatical in Cree, but initial placement of a demonstrative determiner gives rise to a partitive reading. Example (105b) below, in which the demonstrative precedes the quantifier, can only be understood with a partitive reading: 'those of all my sister's sons are laughing (but the rest of my sister's sons are not)'.

(105) a. Kahkinaw anikik nimis okosa kî-pâhpiniwa.
all those my-sister sons Past-laugh
'All those sons of my sister laughed.'

b. Anikik kahkinaw nimis okosa kî-pâhpiniwa.
those all my-sister sons Past-laugh
'Those (ones) of all the sons of my sister, laughed.'

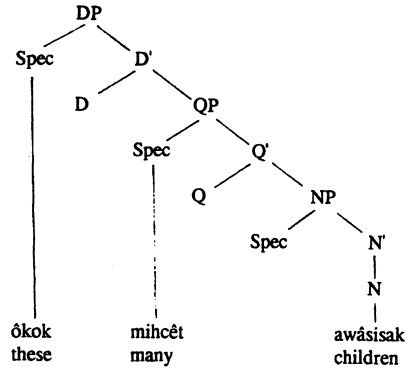
The same effect is found in simple DPs. In the b) example below, where the demonstrative precedes a universal quantifier, we get a partitive reading; out of a larger set of children, those ones (and not the others) are laughing.

(106) a. Kahkinaw anikik awâsisak kî-pâhpiwak.
all those children Past-laugh
'All those children laughed.'

b. Anikik kahkinaw awâsisak kî-pâhpiwak.
those all children Past-laugh
'Those (ones) of all the children laughed.'

The material presented in this section does not do full justice to all the intricacies which Cree DPs, especially complex ones, offer. But the evidence does show, contra initial appearances, that the ordering of determiner elements and quantifying expressions in Cree follows a regular and predictable pattern which is expected under DP analysis. Universal quantifiers, such as *kahkinaw* 'all', must appear in a maximal scope position where they c-command other DP material. Assuming that all quantifiers originate in QP, this presupposes syntactic quantifier raising within DP, possibly to an adjoined position.[45] Partitive DPs are complex recursive structures in which the initial determiner/quantity expression picks out a true subset of a larger set of referents. Most importantly, simple DPs are left-headed and right branching, with demonstrative determiners appearing above and to the left of a weakly quantifying expression in QP, as shown in (107) below.[46]

(107)



3.5. Post-nominal modifiers

In this section, we show that post-nominal modifiers in Cree are subject to special restrictions which indicate that post-nominal modifiers are DP external elements.

Cree allows a large range of nominal modifiers to occur in post-nominal position, but the usage is restricted. Whereas DPs with pre-nominal modifiers are freely distributed in Cree, DPs with post-nominal modifier must precede the verb in their clause.[47] We therefore get a contrast between the pre-verbal DPs in (108) , which permit post-nominal modifiers, and the post-verbal DPs in (109) which cannot have post-nominal modifiers.

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[45] In departure from Abney (1987: especially his discussion in Chap. 4), we assume a strong version of DP analysis, under which quantifiers uniformly originate in their categorial projection QP, and the appearance of universal quantifiers in positions of maximal scope is derivative of universal well-formedness principles regarding (in this case) scope. Since there are languages where scopal movement need not apply until Logical Form (e.g. Chinese *wh*-movement), there may well be languages which allow universal quantifiers to appear in-situ in the visible syntax. That possibility is mentioned for Salish in 2.3.

[46] See the end of 3.3.4. for evidence that free-standing (i.e., word level) demonstratives and nominal quantifiers in Cree are phrasal elements which occupy specifier positions.

[47] This restriction is clause specific. A DP with a post-nominal modifier may follow a superordinate verb as long is it precedes the verb in its own clause.

(108)

a. Mihcêt ininiwak kî-sipwêhtêwak.
many people Past-leave
'Many people left.'

b. Ininiwak mihcêt kî-sipwêhtêwak.
people many Past-leave
'Many people left.'

c. Kahkinaw ininiwak kî-sipwêhtêwak.
all people Past-leave
'All the people left.'

d. Ininiwak kahkinaw kî-sipwêhtêwak.
people all Past-leave
'All the people left.'

e. Awa nâpêsis kî-sipwêhtêw.
this boy Past-leave
'This boy left.'

f. Nâpêsis awa kî-sipwêhtêw.
boy this Past-leave
'This boy left.'

g. Nîso pinêsîsa kî-nipahêw.
two birds Past-kill
'He killed two birds.'

h. Pinêsîsa nîso kî-nipahêw.
birds two Past-kill
'He killed two birds.'

(109)

a. Kî-sipwêhtêwak mihcêt ininiwak.
Past-leave many people
'Many people left.'

b. *Kî-sipwêhtêwak ininiwak mihcêt .
Past-leave people many

c. Kî-sipwêhtêwak kahkinaw ininiwak .
Past-leave all people
'All the people left.'

d. *Kî-sipwêhtêwak ininiwak kahkinaw.
left people all

e. kî-sipwêhtêw awa nâpêsis.
Past-leave this boy
'This boy left.'

f. *kî-sipwêhtêw nâpêsis awa.
Past-leave boy this

g. Kî-nipahêw nîso pinêsîsa.
Past-kill two birds
'He killed two birds.'

h. *Kî-nipahêw pinêsîsa nîso.
Past-kill birds two

This suggests that nouns with post-nominal modifiers are focus elements, and hence required to appear in the pre-verbal focus position.

3.5.1. Post-nominal modifiers are DP-external

Evidence from strong nominal quantifiers suggests that post-nominal modifiers are DP-external. Alongside with negative *(na)môna*, Cree possesses two quantifiers (*kahkinaw* and *pâhpêyak*) which have a strongly quantified singular usage (with universal scope and singular reference) 'every' and 'each'. Unlike other nominal modifiers of Cree, these strong quantifiers have the special property that they cannot occur alone, but must qualify an overt noun:

(110) a. Kahkinaw awiyak kî-sipwêhtêw.
every person Past-leave
'Everyone left.'

b. *Kahkinaw kî-sipwêhtêw.
every Past-leave

c. Pâhpêyak awiyak kî-sipwêhtêw.
each person Past-leave
'Each person left.'

d. *Pâhpêyak kî-sipwêhtêw.
each Past-leave

e. Namôna awiyak pâhpiw.
Neg person laugh
'No-one is laughing.'

e. Namôna pâhpiw. [48]
Neg laugh
'He isn't laughing.'

This restriction does not preclude structural focus movement. As long as a strong quantifier originates in a DP with an overt noun, it may undergo movement to create a discontinuous DP:

(111) a. Kahkinaw$_i$ kî-sipwêhtêw [$_{DP}$ t$_i$ awiyak].
every Past-leave person
'Everyone left.'

b. Pâhpêyak$_i$ kî-sipwêhtêw [$_{DP}$ t$_i$ awiyak].
each Past-leave person
'Each person left.'

c. Namôna$_i$ pâhpiw [$_{DP}$ t$_i$ awiyak].
Neg laugh person
'No-one laughs.'

Strong nominal quantifiers are not permitted in post-nominal position, however.

(112) a. *Awiyak kahkinaw kî-sipwêhtêw.
person every Past-leave

b. *Awiyak pâhpêyak kî-sipwêhtêw.
person each Past-leave

c. Awiyak namôna pâhpiw. [49]
person Neg laugh
'Someone is not laughing.'

The failure of strong nominal quantifiers to be accepted in post-nominal position indicates that post-nominal modifiers are DP-external. Since the ungrammatical examples above do contain

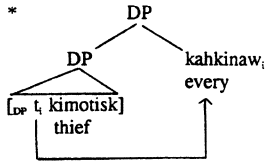
[48] When the negative marker *namôna* does not precede an overt noun, as in this example, it expresses sentential negation. It cannot be understood as a nominal negative.

[49] See preceding footnote.

an overt noun, we should expect a strong nominal quantifier following that noun to be grammatical if it were inside DP.

The absence of post-nominal strong quantifiers also provides evidence against a movement analysis for post-nominal modifiers. A movement analysis along the lines of (113) below would incorrectly predict that strong nominal quantifiers, since they can undergo movement out of DP, should also be able follow the movement path indicated in (113), and therefore that they should be able to occur in post-nominal position.

(113) *



The absence of post-nominal strong quantifiers therefore also rules out a movement analysis for post-nominal modifiers. We take these facts to suggest that post-nominal modifiers are DP external elements which are generated in-situ (i.e., outside DP).

3.5.2. A predication analysis

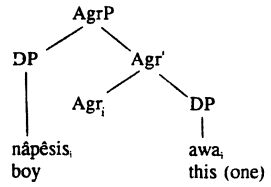
While post-nominal modifiers appear to be DP external elements which originate outside DP, the relation between a lexical noun and its post-nominal modifier is strictly local. A noun and its post-nominal modifier may not be separated:

(114) a. Kimotisk ana otâkosîhk nikî-wâpamâw.
thief that yesterday 1-Past-see
'I saw that thief yesterday.'

b. *Kimotisk otâkosîhk ana nikî-wâpamâw.
thief yesterday that 1-Past-see

This suggests that a lexical noun and its post-nominal modifier both belong in some larger constituent which does not permit the intrusion of extraneous, sentence-level material, possibly a predication structure along the lines of (115) below.

(115)



Under this analysis, a closer gloss for the example in (115) would be something along the lines of 'I saw the thief (who is) that one yesterday'. Predication structures with a lexical noun and a nominal modifier are in fact common in Cree. I.e., We find constructions like (116) below:

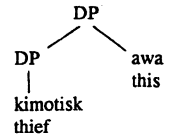
(116) a. Okimâw awa.
chief this
'The chief is this (one).'

b. Awa okimâw.
this chief
'This (one) is the chief.'

A predication analysis along the lines of (114) captures the strict adjacency requirement between a lexical noun and its post-nominal modifier, and it captures the fact that post-nominal modifiers are separate, DP external elements.

The question arises of whether the same facts would not be captured by a simple adjoined structure along the lines of (117) below.

(117)



If post-nominal modifiers were simply adjoined above and to the right of DP, this would create the DP recursive structure depicted in (117) above, where the lexical noun and its post-nominal modifier are both contained in the same maximal DP. Under that analysis, the logical (but factually incorrect) expectation would be that strong nominal quantifiers should be grammatical in the post-nominal position, since that position is contained in a complex DP which also contains a lexical noun. Although it would certainly be simpler, the adjoined analysis in (117) thus fails to capture the fact that post-nominal modifiers are DP external elements. For this reason, we adopt the predication structure suggested in (115).

3.5.3. Focus-Placement: A question for further research

The question arises of why a lexical noun with a post-nominal modifier must appear in the focus position, preceding the verb in its clause. It is most likely that this restriction is semantic in origin, owing to focus-like properties of nouns with post-nominal modifiers.[50] One interesting possibility (which would predict focus placement) is that post-nominal modifiers create focus-affected readings of (roughly) the type described in Herburger (1993). This is suggested by the fact that nouns with post-nominal modifiers tend to be emphatic, and have semantic focus on the post-nominal modifier. For instance, (108b) above is understood to mean that it was the people who were many that left. At the time of writing, the data which would show whether focus-affected readings must always arise have yet to be collected. We leave the focus-affected analysis an interesting possibility, hopefully to be confirmed or disconfirmed in the near future.

[50] There is no a priori reason to believe that the complement position under TopicP would fail to license a lexical noun with a post-nominal modifiers for structural reasons.

4. Comparison

Salish and Cree both possess nominal determiners and quantifiers which have a strictly nominal association pattern. This is a property fundamental to any determiner system, and we have argued that the determiner systems of Salish and Cree can and should be addresed by DP theory.

In discussing the two determiner systems, we have focussed on the features which are summarized below. The two right-hand columns indicate whether a feature is attested (✓) or unattested (✗) in each language.

(118)	Summary	Salish	Cree
1.	[+/- Definite] articles	✗	✗
2.	Obligatorily transitive determiners	✓	✗
3.	Discontinuous DPs	✗	✓
4.	Unexpected word orders in DP	✓	✓
5.	Post-nominal determiners	✗	✓

A brief discussion of each feature is provided below.

4.1. The absence of [+/- definite] articles

Salish and Cree both lack articles which mark a DP as [+ or - definite].

The Salish absence of [+/- definite] articles was discussed in section 2.2. We saw that determiners in Salish languages differ from determiners in English, at least with regard to the the points summarized under (119 a, b, and d) below.

(119) a. Salish determiners do not encode definiteness.
b. Salish determiners do not encode specificity.
c. Salish lacks quantificational determiners.
d. Salish determiners encode 'assertion of existence'.

It was proposed that not only do Salish determiners not encode definiteness or specificity, but the notions of definiteness and specificity may not even be accessed by the Salish determiner system. That is, there is no evidence of any kind for a distinction between [+ vs - definite] (familiar and novel) discourse referents, or between specific and non-specific uses of DPs.

The Common Ground Parameter introduced in (57), section 2.2.8., links the first three properties in (119) together, deriving them from the absence in Salish of determiners which may access the common ground of the discourse. The parameter predicts that languages of the world will fall into two types: 1) those whose determiners allow presuppositional notions (such as English), and 2) those whose determiners do not (such as Salish). It was pointed out that the parameter sets up a subset-superset relationship between the two language types. Languages with a negative setting for the parameter (e.g. Salish) allow their determiners only to access speaker-knowledge, while languages with a positive setting (e.g. English) allow their determiners to access both speaker and hearer knowledge. According to the Subset Principle (Berman 1995), the possibility for determiners which accesss hearer knowledge accessible (previously assumed to be universally available), is a parameter with a negative initial (zero-state) setting. Positive evidence is required to produce a positive setting for this parameter (see section 2.2.8.above).

The Common Ground Parameter correctly derives all four properties of Salish determiners in (119), as outlined in 2.2.8.

The absence of [+/- definite] articles in Cree cannot arise from a negative setting for the Common Ground Parameter, since Cree does in fact have demonstrative determiners and strong quantifiers which presuppose the existence of the nouns they modify. Cree must therefore have a positive setting for the CGP, and the absence of [+/- definite] articles emerges as an incidental gap.

We conclude that the existence of [+/- definite] articles is not a necessary characteristic of even those determiner systems which allow presuppositional determiners.[51]

4.2. Obligatorily transitive determiners

Cree differs from Salish in having no obligatorily transitive determiners. We have argued that this in no way casts doubt on the existence of a genuine determiner system in Cree.

In section 3.2.1., it was shown that Cree possesses an inventory of strictly nominal determiners and quantifiers. This was evident both from semantic readings and from the nominal and verbal agreement morphology. We submitted that any such system of strictly nominal modifiers must be addressed by DP theory.[52] It was also noted that Cree demonstratives and quantifiers show co-occurrence restrictions which are expected of a genuine determiner system.

Finally, we discussed the absence of obligatorily transitive determiners in Cree (in 3.2.2.), and pointed to cross-linguistic evidence (in 3.2.3.) which shows that obligatorily transitive determiners are not a defining feature of genuine determiner systems. We need look no further than English (e.g. demonstratives and possessive *his)* to see that obligatory transitivity is not a defining feature of determiners. Moreover, there are languages other than Cree whose inventory of (clearly genuine) determiners do not happen to include any which are obligatorily transitive.

4.3. Discontinuous DPs in Cree but not in Salish

Whereas Cree allows discontinuous DPs, Salish does not. This poses two questions: 1) Given independent evidence that Cree has DP internal determiners and nominal modifiers, how do discontinuous DPs arise? 2) Why are discontinuous DPs not allowed in other languages, such as Salish?

In section 3.3.1., it was shown that discontinuous DPs in Cree obey word order restrictions which cannot be explained under an appositional modifier treatment. Following an introduction to verb-internal arguments and hierarchical clause structure in Cree (see section 3.3.2.), it was shown that a movement analysis is required to explain why determiners and nouns in discontinuous DPs are not freely ordered (see section 3.3.3.). Nominal modifiers in Cree are

[51] This point is also borne out by the Turkish facts discussed in 3.2.3.

[52] This statement should not be misconstrued to apply to adjectives, which are distinguished from nominal determiners and quantifiers by several properties. Among those can be mentioned the fact that adjectives are qualifying expressions that cannot saturate an NP when they occur DP internally.

genuine determiners and nominal quantifiers which originate in DP, and they can subsequently undergo structural focus movement, provided that the determiner moves upwards to a position which c-commands its trace in DP. We also argued that, if we take seriously the parallelism between DP and IP, syntactic determiner movement, is in fact an expected phenomenon.

In section 3.3.4., we discussed evidence which shows that nominal determiners and quantifiers in Cree are phrasal elements that appear in specifier position. We argued that this does not contradict the existence of a (phonetically zero) head D°, whose role within DP closely parallels that of I° in IP.

Finally, we discussed the question of why determiner movement is permitted in Cree, but not, for example, in Salish. In section 3.3.5., we saw that structural Case government blocks determiner movement. In section 3.3.6., we introduced an ECP account which extends to explain the Salish absence of discontinuous DPs, as summarized below.

In Salish (and more generally in configurational languages), an argument DP must be structurally Case-governed, and determiner movement inevitably results in a failure of proper head- government (the DP equivalent of a *that*-trace effect).[53] Non-configurational languages have argument doubling DPs which are not assigned structural Case, and these languages permit determiner movement in the syntax, always providing that the DP is not an oblique DP which is licensed by a structural Case governor, in which case that Case governor will block proper head government of a moved determiner's trace.

Under this treatment, the occurrence of discontinuous DPs emerges as a phenomenon which is expected under standard DP theoretic assumptions, and only precluded in configurational languages owing to the failure of proper head-government which arises upon determiner extraction in structurally Case marked DPs.

4.4. The ordering of determiners and quantifiers in DP

Salish and Cree both show variable ordering of determiners and quantifiers.

The Salish ordering facts were presented in section 2.3. St'át'imcets permits two word orders which are problematic, namely: 1) [*many* Det Noun]', and 2) [Det *all* Noun]. St'át'imcets places a special restriction on the word order [*many* Det], which is only permitted in a DP which has moved to clause-initial position. It was also noted that all DP-internal weak quantifiers give rise to a proportional (strong) reading in St'át'imcets. Tentative analyses of the two word orders are provided at the end of section 2.3.

The Cree ordering facts were presented in section 3.4. We saw that Cree allows a weak quantifier to precede a demonstrative determiners (e.g., *mihcêt ôkok* 'many these'). Similarly, a universal quantifier may follow a demonstrative (e.g., *Ôkok kahkinaw* 'these all'). Both word orders result in partitive readings, however, and we proposed a partitive analysis under which the word orders above are in fact expected. With the exception of the absence of an overt partitive marker equivalent to English *of*, the ordering of determiners and quantifiers in Cree would thus seem to obey regular ordering restrictions familiar from e.g. English. Pending consultation with a larger number of speakers, we tentatively conclude that the ordering variations found in Cree DPs are in fact expected and as such may be seen to provide further evidence for a DP analysis.

[53] See section 3.3.6. for a discussion of why determiners cannot move out of subject DPs.

4.5. Post-nominal determiners

The unmarked word order in both Salish and Cree DPs is for determiners and quantifiers to appear in pre-nominal position (see sections 2.4. and 3.5). Cree differs from Salish, however, in allowing determiners as well as certain nominal quantifiers to appear in post-nominal position (see section 3.5.).

In section 3.5., we saw that Cree only permits a noun to be qualified by a post-nominal determiner or quantifier if the noun appears in the pre-verbal focus position. This suggests that nouns with post-nominal modifiers are focus elements which must appear in focus position.

Section 3.5.1. discussed the forced absence of strong quantifiers in post-nominal position, which shows that post-nominal modifiers are DP-external. In particular, we saw that both a movement analysis and a DP-adjoined for post-nominal modifiers would fail to predict the forced absence of post-nominal strong quantifiers. Instead, it was proposed, in 3.5.2., that nouns with post-nominal modifiers are predication structures. That analysis captures the fact that post-nominal modifiers are separate, DP external, elements, and it also captures the strict adjacency between a noun and its post-nominal modifier(s).

The question of why Salish does not allow post-nominal modifiers remains unresolved at the time of writing, as does the obligatory focus-placement of nouns with post-nominal modifiers in Cree.

5. Conclusion

Determiners in Salish and Cree display semantic and syntactic properties which raise interesting and difficult questions, both at a language-specific and a typological/theoretical level. In discussing these properties, we have argued that ...

A. Salish and Cree both possess strictly nominal determiners and quantifiers, whose syntactic and semantic properties must be treated as part of a restricted range of cross-linguistic variation within a universally provided Determiner Phrase (DP) system.

B. The DP systems of Salish and Cree offer evidence for variation in two broad areas which until now have been widely assumed to be uniform across languages: 1) Languages vary with respect to the semantic distinctions their determiner systems encode; 2) languages vary with respect to the syntactic operations they permit determiners.

C. Finally, the DP systems of Salish and Cree provide evidence for a series of specific points (summarized in the preceding section) which give cause for revision of both the inventory-related and the structural characterization of DP systems cross-linguistically.

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