# ONE ASPECT OF CREE SYNTAX Fumi Watai University of Calgary

# Introduction

Nonconfiguration languages pose problems for linguistic theory in general and Government-Binding Theory in particular. The theoretical constructs which form the basis of current Government-Binding Theory are crucially dependent on the notion of government. The Projection Principle, Theta Theory, Case Theory and Binding are all based on the fundamental assumption of hierarchical structure and the notion of government. If there is indeed a nonconfigurational language, then we have to add a parameter of configurationality in Universal Grammar and develop a separate theoretical framework, which is not dependent on government.

Cree, an Algonquian language, has been classified as a nonconfigurational language due to the properties common to such languages, namely: free word order, systematically discontinuous expressions, and null anaphora. Dahlstrom (1986) observes that the description of Cree syntax cannot be dependent on constituent structural relations and that its syntactic operations take place within the lexicon. In this paper I will agree that Cree indeed appears to be a nonconfigurational language according to the criteria Hale (1983) establishes, but I will argue that it has a rigid hierarchical structure, which controls movement of its constituents. In this sense, Cree is compatible with a configurational structure, and it has many components of grammar which may mask the presence of underlying hierarchical structure.

In this paper I will adopt the adjunct NP framework developed by Jelinek (1984) and Baker (1991) wherein most NPs are generated in adjunct positions and coindexed with pronominal arguments. This theoretical framework allows us to distinguish the components in A'-position from other components in A-position and to determine what makes freedom of word order possible. The goals of this paper are twofold: the first is to analyze the structure of Cree and to argue that Cree is a configurational language, and the second is to apply this Cree structural analysis to the so-called inverse construction in order to determine what kind of operation is involved in the inverse form and in Case and theta role assignment, in general.

This paper is constituted as follows. §1 summarizes the nonconfigurational properties of Cree, based on the criteria Hale (1983) proposes. §2 overviews the verbal morphology, focusing on person and gender features. §3 analyzes Cree structure. In §3.1, I summarize the NP adjunct framework proposed and advanced by Jelinek and Baker. In §3.2, I argue for a hierarchical structure for Cree. In §3.3, I illustrate the Cree clause structure with the adjunct NP framework. §4 examines the so-called inverse form and proposes that the inverse form is an ergative construction. I argue that Cree is an ergative split language; when a thematic hierarchy and a person hierarchy disagree, ergativity appears as an inverse form. When the two hierarchies agree, Cree maintains an accusative structure. §5 formalizes the Case assignment and theta assignment system, and also suggests that NPs must be in the adjunct position in order to account for an apparent violation of Case filter. §6 concludes the discussion.

# 1. Nonconfigurationality

Hale (1983) describes three properties characteristic of nonconfigurational languages: relative freedom of word order, the pervasive dropping of noun phrase arguments, and the existence of discontinuous expressions. All three of these properties are seen in Cree. Dahlstrom presents the following examples as evidence for free word order.

(1) e:kosi na:te:we awa isl so fetch this woman t 'So then the woman y (Ricomfield 1934 p.7)	kwe:w o:hi kaskete:watimwa this black horse obv went and got the black horse.'	(VSO)
( <b>BROWINCIG 1954,p.</b> <i>i</i>		
(2) nakat:w mahke:si:sah	wi:sahke:ca:jk.	
leave fox obv Wishah	kechahk	
'Wisahkechak left Fo	x behind.'	(VOS)
(Bloomfield 1930, p.3	6)	
(3) awa okini:kiskwe:w ki this young woman br	:we:htahe:w anihih awa:sisah, ing home that child obv	
'this young woman b (Bloomfield 1930, p. 1)	(SVO)	
(4) owi:ce:wa:kanah misk his companion oby fi	awe:w awa ne:hiyaw. nd this Cree	
'That Cree found his (Bloomfield 1934,p.3)	companions.' 4)	(OVS)
(5) ki:tahtawe iskwe:w presently woman mi:nisah berries	otawa:simisah wi:ce:we:w, her child obv accompany	e:h=na:tahkik fetch
'Once a woman went (Bloomfield 1934,p.1)	with her children, to get berries.' 58)	(SOV)
(6) pe:yak awa iskwe:w n	ayo:me:w	
one this woman take	on back	(OSV)
'the woman took one	on her back.'	
(Bloomfield 1934, p.2	58)	

As the above examples show, the subject, verb and object can appear in any of six logically possible orders, although Dahlstrom notes that OSV is the rarest of the six possibilities.

The phenomenon of argument drop is illustrated in (7).

(7) e:h=kiske:yihtahk e:htapasiyit, pi:htoke:w... know 3-inan/conj flee obv/conj, enter 3
'When he saw that they had fled, he went inside...' (Bloomfield 1934,p.94)

Sentence (7) implies reference to both a boy and Blackfoots, but neither is represented by any independent noun phrase within the sentence. Subject NPs and Object NPs are freely omitted in Cree.

The third property of a nonconfigurational language, is its discontinuous expressions. Examples of these are provided in (8).

(8) a. ki:=sipwe:ht:w[ka	hkinaw awiyak]
left a	ll someone
'Everybody left.'	
b. [kahkinaw awiya	k] ki:=sipwe:ht:w

\_ ... . . . . . . .

c. [kahkinaw] ki:=sipwe:ht:w [awiyak] (Reinholtz and Russell 1992)

In (8b) we observe that the morpheme *kahkinaw* 'all' and *awiyak* 'someone' together form an NP meaning 'everyone'. In (8c) the word meaning 'all' appears before the verb, while the word meaning 'someone' appears after it. In this example, these two words, while clearly associated with the same argument role, do not form an NP constituent on the surface.

All three properties discussed above seem to indicate that Cree is a nonconfigurational language.

# 2. Word-Internal Structure

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# 2.1. Verbal Affix Template

We have seen that Cree has nonconfigurational properties such as free word order, argument dropping, and discontinuous expressions. In contrast, the word-internal structure is very configurational. All Cree verbs are inflected to show the person, number and gender features for the subject and the object. Similarly, nouns are inflected for the features of the possessor. These inflections are obligatory and fixed in position.

Based on the analysis of Cree morphology by Wolfart (1973), Dahlstrom (1986a) proposes a flat inflectional template for verbs as shown in (9).

(9)  $[V \_[stem] 1 2 3 4 5 6 7 8]$ 

Prefix person category ni-, ki-. 1. obviative /em/

- 2. theme signs
- 3. obviative /evi/
- 4. mode -htay- (preterit), -hk- (future imperative)
- 5. person suffixes
- 6. mode -pan (preterit) -toke (dubitative)
- 7. third person suffixes
- 8. mode -i subjunctive

The position of a given suffix is predetermined in this template by one prefix position and eight suffix positions. Affixes are also in complementary distribution with other affixes in that position class.

## 2.2 Person Affix

Although we are not going to analyze all the verbal affixes in this section, we focus on the person prefix, which identifies the subject of the verb, as shown in (10).

(10) ni...nipa:...n I sleep ki...nipa:...n you sleep nipa:...w He or she sleeps (Ellis)

The number and gender features of the subject are marked in the prefix position consistently, although the subject person features also appear in the suffix position. The first person is indicated by ni-, the second person by ki-, and the third person by a null marking.

Almost the same person prefix can be found in the possession paradigms.

(11) ni-maskisin	'my shoe'
ki-maskisin	'your shoe'
o-maskisin	'his shoe'

The first person and the second person features of the possessor are indicated by the same person prefixes as those of the verb paradigms, while the third person is overtly marked. It has been pointed out by several linguists (Abney 1987, Grimshaw and Mester 1988, among others) that the structure of NPs parallels the structure of a clause in many languages. Assuming that the possessor acts as a subject of the noun phrase in Cree, we can account for the similarity between the possessor prefixes and the verbal prefixes. We also propose that the prefix position is the subject position for both the verbal complex and for the NP.

Objects are expressed in the suffix position. When the verb is transitive, positions 2, 5 and 7 usually have object markings as shown in (12).

-a- in suffix position 2 is called a theme suffix, indicating the subject-object relationship. -win position 5 indicates that the object has a third person referent, and -ak- in position 7 indicates that the third person object is plural. Thus, the verb's affix system shows a clear distinction between the subject and the object.

# 3. Sentence Structure

# 3.1 Adjunct NPs

In this section we will see where noun phrases are positioned and how they are licensed. In GB theory references, all noun phrases are subject to the Case Filter and the Theta Criterion. They may be assigned Case and a theta role, only if they appear in an appropriate structural relationship to the lexical categories (N, V, P and A) that are Case and theta role assigners. However, in languages where free word order is permitted, a different Case and theta assignment mechanism is required. We will review the theories proposed by Jelinek (1984) and Baker (1991).

Following Jelinek (1984), a widely-accepted analysis of the properties of 'nonconfigurational' languages holds that the theta requirements of the verb are satisfied by pronominal arguments (Baker 1990) or agreement morphemes (Jelinek 1984). Jelinek argues that any overt NPs in the sentence are adjuncts in A'-position, which must be licensed by being coindexed with agreement morphemes. The theta requirement of the verb is satisfied by the agreement morphemes in AUX, and not by the NPs in the adjunct position. Nonconfigurational languages are usually rich in agreement, and the presence of NPs is optional. Jelinek assumes that

this is the indication that only the pronominal-agreement morphology is obligatory because it is the agreement morphology which receives the verb's theta roles. Based on this assumption, Jelinek proposes that Warlpiri sentences have the following underlying structure.

(13)	S	T=Tense/Aspect/Modality
		S=Subject
	V AUX CPP	O=Object
		CPP=Case particle phrase
	TSON CP	
		(Jelinek 1984,p.50)

In this configuration the Case Particle phrases are coindexed with clitics in AUX, which are the real argument of the verb. The aux constituent includes clitics which are in Nominative, Accusative and Dative case. The theta roles are also assigned to agreement morphemes instead of syntactic argument positions.

Baker (1991) proposes a closely related but different structure. His argument is formalized in the Morphological Visibility Condition (MVC).

(14) The Morphological Visibility Condition (MVC):

A phrase X is visible for theta role assignment from a head Y only

if it is coindexed with a morpheme in the word containing Y via:

(i) an agreement relationship or

(ii) a movement relationship

According to the MVC, while there must be a relationship between each theta role of a verb and a morpheme on that verb, this relationship is not direct. Rather it is mediated by an NP or an argument of some other category. Thus the verb's theta role must be assigned to a phrase by the Theta Criterion, and that phrase must be coindexed with a morpheme on the verb by the MVC.

Having advanced the above condition, he postulates pro as an argument, which plays almost the same role as the agreement morphemes Jelinek posits or the morpheme defined in the MVC. His proposal is illustrated in (15).

(15) a. tl g–e	^cinit-kin	uwik	wiriNe-rk -nin.
father-erg	self-poss	body	defend-pres-3sS/3sO
'The father	defends himself.'	-	-



In his model the theta assignment is met syntactically rather than morphologically. The adjunct NP *father* is coindexed to *pro*; and assigned a theta role through the link. Without the link the NP has no part in the sentence. If there is no adjunct NP, solely the *pro* assumes the theta role.

#### **3.2 Hierarchical Structure**

Before we apply the adjunct NP framework to a Cree sentence, we have to find out whether or not Cree has a hierarchical structure, that is, whether it has a VP node or not. Jelinek analyzes Warlpiri as a flat language, as shown in (13). Laughren follows Jelinek's adjunct NP argument for Warlpiri, but suggests a structure in which the subject and the object are hierarchically distinguished. Baker (1991) and Speas (1990) argue for the hierarchical structure of Mohawk and Navaho respectively, while Van Valin argues against it for Lakhota, a Siouan language. As Van Valin (1987) says, whether or not a language has a hierarchical structure is a serious question for the Government Binding (GB) theory, because the subject-object asymmetries – such as Accusative and Nominative Case distinction, and the external and internal theta role distinction – cannot be made without it.

There are two tests which identify hierarchical sentence structure. The first one is the binding. According to Binding Principle C, which states that referential expressions must be free everywhere, full NPs cannot be c-commanded by co-referential NPs. Binding Principle C accounts for the subject-object asymmetries found in sentences like (17) in English.

(17) a. Hei saw Peter'sj\*i father
b. Peter'si father saw him i/i.

English has a VP node, which makes it possible for the subject to asymmetrically c-command the object and its possessor. Therefore, the coreference of the subject and possessor would be

ungrammatical in (17a) because lexical NP Peter is c-commanded by the pronoun he. Coreference of these two NPs would violate Condition C. In contrast, Peter in (17b) is embedded in the subject NP, and the pronoun in the object position does not c-commands it. Therefore (17b) is grammatical, even when Peter is coindexed with the pronoun 'him'.

Thus, binding theory is a useful test of the sentence structure. As for Cree, however, few detailed analyses seem to have been done in this area. Reinholtz and Russell (1992) and Dahlstrom (1986a) simply state that Cree has no subject-object asymmetries, but do not provide data based on the binding theory. James (1984), on the other hand, seems to assume that the subject is outside the VP in analyzing the Subjacency Condition in Moose Cree, but does not provide any evidence for her assumption. My own attempt to elicit data from a native Cree speaker has not yielded fruitful results either, yet I can present two pieces of evidence involving binding: the Binding Principle C and weak crossover effects.

The first piece of evidence involves the Binding Principle C, which requires that a lexical NP not be c-commanded by a coreferential pronoun.

(18) nikiske:yima:w George e:=sa:kih-a:t o-kosis-a know TA1-3 [direct] love 3-obv/conj [direct] his sons obv 'I know George loves his sons.' (Dahlstrom 1986 p.72)

The example in (18) is grammatical. For our current purpose we will focus on the lower clause. *George* can be coindexed with *his* of *his son*. The verbal suffix a:t, which is the direct form theme affix, indicates that the subject is proximate and the object is obviate, i.e., George is unmarked as proximate, while *his son* is obviative in this case, indicated by the obviative marker a. The grammaticality is predicted if we assume the hierarchical structure shown in (19).<sup>1</sup>

(19) S / \ NP VP | / \ George love his sons

The lexical NP George appears higher than the object his sons. If we assume a flat structure as in (20), then George and his son are mutually c-commanding, which would lead to a violation of the Binding Principle C.

<sup>&</sup>lt;sup>1</sup> The internal structure of INFL will be discussed in section 4.



In Cree the possessed noun is always obviative and the direct form theme affix requires the proximate noun to be the subject and the obviative noun to be the object. Thus, the following sentence is ungrammatical.

> (21) \*nikiske:yima:w George e:=sa:kiha:t okosis know TA1-3 [direct] love 3-obv/conj [direct] his sons 'I know his sons love George.'

*His sons* in (21) is now proximate, nully marked. The direct theme suffix forces *his sons* to appear in the subject position, while *George* is in the object position. The ungrammaticality of this example is only predictable if we assume the hierarchical structure shown in (22):

The rule that the possessed noun is always marked obviative seems to be the Cree strategy for avoiding the violation of the Binding Principle C. Cree avoids Binding Principle violations, not because Cree has a flat structure, but because Cree restricts interpretation so that the possessive noun is in the object position where it would not give rise to Binding Principle violation.

The second piece of evidence concerns the weak crossover phenomenon. Reinhart (1983) proposes that the following condition, applying at S-structure, defines when bound variable anaphora is possible:

# (23) Quantified NPs and Wh-traces can have anaphoric relations only with pronouns which they c-command. (Reinhart 1983)

(23) accounts for differences between subjects and objects in configurational languages such as English.

(24) a. Who t kissed his wife?b. \*Who did his wife kiss t ?

A pronoun within the object can be interpreted with a questioned object, but a pronoun within the subject cannot.

Dahlstrom (1986b) claims that Cree does not have weak crossover effects and attributes it to the flat structure of Cree sentences. She presents the following sentences to support her claim.

(25) a. namo: ya awiyak wanikiskisitotawe: w otawa: simisa no one forget 3-obv(theme) his child obv 'No one [prox] forget his [prox] children [obv].'

b. namo:ya awiyak wanikiskisitota:k otawa:simisa no one forget obv-3(theme) his child obv 'His [prox] children [obv] forget no one [prox].'

The quantified NP no one precedes the possessive pronoun his in (25a), while in (25b) it does not, yet both sentences are grammatical. Based on the data, she concludes that Cree has a flat, symmetrical clause structure and a corresponding lack of subject-object asymmetries in bound variable anaphora.

However, the problem with her analysis is the change of the theme suffix from 3-obv to obv-3. The theme suffix used in (25a) is a direct form and indicates that the subject is the proximate third person, while the object is the obviative third person. The theme suffix used in (25b) is called an inverse form and indicates that the subject is now the obviative and the object is the proximate. If we do not change the theme suffix, but change the subject and the object of (25a), then the sentence becomes ungrammatical.

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(26) \*namo:ya awiyak wanikiskisitotawe:w otawa:simis no one forget 3-obv(theme) his child 'His [obv] children [prox] forget no one [obv].'

This is precisely because the pronoun is higher than the quantified NP *no one* and c-commands it. Thus, we can see the same weak crossover effect in Cree as in English because Cree has a hierarchical structure, not a flat structure as Dahlstrom claims.

#### 3.3. Cree structure

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Now armed with the NP adjunct assumption proposed by Jelinek and Baker as discussed in §3.1, and with the hierarchical structure postulated in §3.2, we will examine some Cree examples. The functional categories are not included in order to keep illustration simple. The suffix glossed as 'direct' is a theme suffix.



(29) has no lexical NPs to be linked to the pro subject and object.

The following example has one NP, which is coindexed with  $pro_i$  in the object position through the third person suffix.

(30) a. ni—wa·pam	aw	asiniy
I- see	-direct-3	rock
'I see the rock.'		

b. S / \ S NP / \ | pro VP rock<sub>i</sub> / \ V pro<sub>i</sub> | see

The following example has two third persons, one marked by a null proximate marker and the other by an obviative marker. The verbal suffix a:t is the direct form marker. The tree structure in (31) does not include *three* and *this*, because these elements need separate analysis.

(31) a. aya:hciyiniw-ah nisto e:h=nipah-a:t awa na:pe:sis three kill 3-obv/conj[direct] Blackfoot obv this.boy 'This boy had killed three Blackfoot.' [Bloomfield 1934, p.98] b. S NP; S NP; boy NP Blackfoot NP pro; V kill pro;

In this configuration, the subject  $pro_i$  is coindexed with *boy*, while the object  $pro_j$  is coindexed with *Blackfoot*.

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A more complex structure is illustrated in (32). We will examine only the subordinate clause here.

(32) a. nikiske:yima:w George e:=sa:kih-a:t o-kosis-a know TA1-3 [direct] G. love 3-obv/conj [direct] his son obv 'I know George loves his sons.' (Dahlstrom 1986 p.72)



(32b) has two adjunct NPs, George and his son, which are coindexed with the subject proi and the object proj respectively.  $pro_i$  in NP<sub>j</sub> is a modifier of NP<sub>k</sub> and is coindexed with its antecedent George. It is not directly linked to  $pro_i$  in the subject position.

#### 4. Direct Form and Inverse Form

This section presents an analysis of the direct forms and the inverse forms of Transitive Animate verbs. Dahlstrom (1986a) and Wolfart (1991) both report that the inverse forms have provoked much controversy in Algonquian linguistics: the inverse is analyzed as passive by one group and as active by another group. I argue in this section that the inverse form is active, but involves ergative construction.<sup>2</sup> Assuming the Ergative Parameter presented by Murasugi (1992), I will claim that the inverse form is one manifestation of ergative construction; a transitive agent bears abstract ergative case, and a patient bears abstract absolutive case. I will also argue that Cree is a split ergative language which switches to the ergative structure when a conflict arises between a thematic hierarchy and a person hierarchy.

§4.1 summarizes morphology of direct forms and inverse forms in Cree. §4.2 presents a thematic hierarchy and a person hierarchy, adapting DeLancey's (1980) insight, and argues that split ergative construction, which has two manifestations, namely split ergative case marking and inverse construction, is a mechanism used to avoid a conflict between these two hierarchies. §4.3 examines the structure of the ergative construction, assuming Murasugi's (1992) ergative hypothesis. Finally, §4.4 analyzes Cree inverse forms.

<sup>&</sup>lt;sup>2</sup> This approach is suggested by E. Ritter (p.c.).

# 4.1 Overview of Inverse Morphology

(33) shows the sample paradigms of the direct and the inverse in independent forms. Stems of the verb are omitted from the sample paradigms in order that we may focus on the inflectional suffixes.

(33) Transitive A	nimate (A=Agent, P=P	Patient)	
Direct form	ns	Inverse for	rms
A – P		A – p	
1 – 3	ni – a:–w	3 – Ĩ	ni — ik
2 – 3	ki - a:-w	3 – 2	ki - ik
1 – 3p	ni - a:-w-ak	3p 1	ni — ik—w—ak
2 - 1	ki — i—n	1-2	ki — iti—n
2p- 1	ki — i—na:wa:w	1 – 2p	ki – iti–na:wa:w
3 – obv	- c:-w	obv3	– ik
3p- obv	– e:–w–ak	obv–3p	- ik-w-ak

In the direct forms, the subject is assigned the agent role of the verb and the object is assigned the patient or the theme role. As noted in §2.2, the subject (agent) person is marked by a prefix: ni- for the first person, ki- for the second person and null marking for the third person. The position 2 suffix in the affix template shown in (9) is a theme sign, indicating the subject-object relationship. The position 2 suffix -a:- indicates that the non-third person is the subject and the third person is the object. The suffix -i, which appears in examples 2-1 and 2p-1 above, indicates the second person subject and first person object relation. The suffix -e:- in examples 3-obv and 3p-obv denotes the third person subject and the obviative person object. When both arguments are non-third person, the suffixes indicating number of non-third persons are all position 5 suffixes. When one argument is third person, the position 5 suffix -w is the third person plural marker.

The following are a few examples.

stem wa?pam 'see' in independent indicative

(34) ni-wa pam-a -w 2 5 direct-3 'I see him.'

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(35) ni-wa·pam-a·-w-ak
2 5 7
direct-3 -3 animate pl
'I see them.'

(36) wa·pam-e· -w

2 5
direct -3
'He[prox] sees him[obv].'
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As mentioned in §3.1, in a direct form, a proximate third person always appears in the subject position and an obviative person in the object position.

Now let us examine the inverse forms. In these, the person prefix appearing in the subject position now indicates the patient. The theme suffix -iti- in position 2 denotes the first person agent-second person patient. Another theme suffix -ikw- indicates the third person agent-non-third patient, or the obviative person agent-proximate third person patient. The position 5 and 7 suffixes are similar to those in the direct forms. Two examples are shown in (37).

(37) a. /ni-wa·pam-kw-w/ ni-wa·pam-ik 'he sees me' 2 5 I-see-inverse-3
b. /ni-wa·pam-kw-w-ak/ niwa·pamikwak 'they see me' 2 5 7 1-see -inverse-3-3pl

Comparison of the direct forms with the inverse forms in (33) shows that they are quite symmetrical: they differ in only one element, the theme suffix. The person prefixes and the position 5 and 7 suffixes are almost the same, although the prefixes no longer indicate the agent in the inverse forms.

## 4.2 Thematic Hierarchy and Person Hierarchy

DeLancey (1981) argues that the inverse configuration occurs when a natural viewpoint and a natural starting-point conflict. According to him, languages require a speaker to specify the viewpoint he is taking when reporting an event. If 1st person or 2nd person is a participant in the event being reported, the most natural viewpoint for the sentence is his own. Next, DeLancey defines the natural starting-point as an NP which is positioned at the first place of Attention Flow. According to him, Attention Flow determines the linear order of NPs. An unmarked Attention Flow in a transitive sentence is from agent to patient. Thus, the starting point is the agent in a transitive event. In languages where the viewpoint and the starting-point do not agree, the language has two alternatives: split ergative case marking and inverse structure. (38) is an example of split ergative case marking from Kham.

nga-poh-ni-ke 1A-hit-2P-PERF
nə-poh-na-ke 2A-hit-1P-PERF
nə-poh-ke 2A-hit-PERF
<b>poh-na-ke-</b> o J hit-2P-PERF-3-A

In all these examples, the leftmost NP is the agent, the natural starting-point. When the leftmost NP is also a natural viewpoint, which is 1st or 2nd person, it is marked for nominative case, as shown in (38a)-(38c). In these cases the natural starting-point and the natural viewpoint agree. If the natural starting-point does not agree with the natural viewpoint, it is marked for ergative case. In (38d), the leftmost NP is 3rd person, and it is not the natural viewpoint, therefore it receives ergative case.

Another mechanism languages may employ in the case of conflict between the natural viewpoint and the natural starting-point is the inverse configuration. In the inverse configuration, a verb is morphologically marked. The following transitive animate paradigms from Powatomi (Hockette 1966) show that the inverse suffix -uk or -un occurs with 3A-1st/2nd P or 1A-2P configurations.

(39) a. 1A-3P	n-V-a	d. 1A-2P	kVun
b. 2A-3P	k-V-a	e. 3A-1P	nVuk
c. 2A-1P	kV	f. 3A-2P	k-V-uk

The prefixes are personal agreement-markers k-2nd, n-1st, and their distribution exhibits a hierarchy of 2>1>3. The inverse structure occurs only when agent-patient configuration violates the person hierarchy, such as in (39d)-(39f).

I follow DeLancey's insight, but would like to restate his analysis with the notion of a thematic hierarchy and a person hierarchy. The thematic hierarchy is shown in (40), which is similar to the one proposed by Carrier-Duncan (1985) and assumed by Larson (1988).

# (40) Agent>Patient>Goal>Obliques

We assume that the thematic hierarchy is universal, and that arguments are projected from lexicon to syntax according to this hierarchy. Thus, it determines the relative subordination of arguments in D-structure. In the case of a transitive verb, the arguments are positioned in D-structure, as shown in (41).

The second hierarchy we assume is a person hierarchy, given in (42), where 1st or 2nd person is most prominent.

# (42) 1, 2 > 3

The person hierarchy is language specific. Some languages have it, while others do not. In some languages with the person hierarchy, there is also a ranking between 1st and 2nd person, and within 3rd person. The person hierarchy constraints apply after arguments are projected according to the thematic hierarchy. When a conflict arises between the thematic and person hierarchies, the languages may employ some mechanism to avoid it. One such mechanism is ergative construction. If ergativity is coded on argument NPs, the result is split ergative case marking. If ergativity is coded directly on the verb as an affix, the result is an inverse configuration. Thus, the split ergative case marking and the inverse configuration are two manifestations of the single operation of switching to ergative construction.

#### 4.3 Ergative Parameter: Crossed Paths and Nested Paths

Murasugi (1992) proposes two functional heads, T(ense) and Tr(ansitivity) above VP. She argues that in an accusative language, the case features of T are strong, requiring NP movement to its Spec at S-structure. In an ergative language, the case features of Tr are strong, forcing S-structure movement to its Spec. Economy Principles (Chomsky 1991) require the shortest movement. Thus, in an accusative language, the subject moves to Spec of T, and in an ergative language, the subject raises to Spec of Tr. These movements produce "crossed paths" and "nested paths", as shown in (43).



Jelinek (1993) adopts Murasugi's proposal, and demonstrates that a split Case marking language has both 'crossed paths' and 'nested paths' movement. In the accusative construction, the raising of the agent and the patient to T and Tr respectively produces crossed paths; in the ergative construction, the raising of the agent and patient pronouns produces nested paths.

I advance Murasugi and Jelinek's position further, and claim that the inverse configuration also has the 'nested paths' structure. As demonstrated in §4.2, the split ergative case marking and the inverse configuration are two manifestations of the single operation of switching to ergative construction. The split ergative case marking has the strong case features of Tr appear on the argument as an ergative case marker. The inverse configuration marks the features on VP as an inflectional affix. Both are ergative construction and have the 'nested paths' structure shown in (43b).

Let us examine the examples in (38), which are repeated as in (45). (45a) is an accusative structure, while (45b) is an ergative structure with the ergative marker on the subject NP.

(45) a. nga: nën—lay I you—OBJ 'I hit you.'	nga-poh-ni-ke 1A-hit-2P-PERF	
b. no-e nën-lay he-ERG you-OB 'He hit you.'	poh-na-ke-o J hit-2P-PERF-3-A	

(46) shows the relevant structures.<sup>3</sup>

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(46) a. Accusative structure



b. Ergative structure



<sup>&</sup>lt;sup>3</sup> I assume that Kham is a head final language.

I assume that Case is assigned by the functional heads, T and Tr, to the NP in the Spec position. In (46a), the agent NP nga: raises to Spec of TP, and the patient  $n \ge n - lay$  raises to Spec of TrP. In (46b) the strong case features of Tr force the agent no-e to raise to Spec of TrP overtly, receiving ergative case, while the patient  $n \ge n - lay$  raises covertly.

Let us examine another example which has both inverse configuration and ergative split Case marking. Jyarong (Jin et al. 1958 cited by Delancey) manifests both patterns.

> (47) a. no-ke ke-u-nasno-ng. nga you-ERG I T-INV-scold-1st 'You will scold me.' b. me-ke u-nasno-ng. nga he-ERG INV-scold-1st T 'He will scold me.' c. nga me nasno-ng. he scold-1st L 'I will scold him.' d. nga no te-a-nasno-n. T-A-scold-2nd Ι ou 'I will scold you.' e. me-ke no te-u-nasno-n. he-ERG T-INV-scold-2nd vou 'He will scold you.'

The distribution of the inverse prefix u- and the ergative marker -ke is exactly the same. (47) shows that this language has a person hierarchy of 1>2>3>. When this person hierarchy conflicts with the argument projection governed by the thematic hierarchy, the language switches to ergative structure with the ergative case marker on the subject and an inverse marker on the predicate, as shown in (a), (b) and (e) of (47). The structure in (48a) reflects the accusative construction of (47d), and the structure in (48b) shows the ergative construction of (47a).



In (48a), nga and no raise overtly. In the ergative structure shown in (48b), the agent noke moves to the Spec of Tr overtly; the patient nga moves to Spec of T covertly. The existence of both split ergative case marking and inverse marking in a single language seems to be redundant, but the exact distribution of the ergative case marker and the inverse marker gives additional support to our proposal that split Case marking and inverse configuration are two manifestations of the single operation.

Finally, I speculate that the reason for switching to ergative structure in the case of a conflict is to restore the person hierarchy at LF. Park (1992) suggests the following principle:

#### (49) Argument Structure Interpretation (ASI)

Prominence relations on the two dimensions of a predicate's argument structure are interpreted structurally at syntax.

According to the ASI (49), the prominence relations in a predicate's argument structure should be realized in certain syntactic representations such as D-structure, S-structure and LF. If we adopt the ASI, we can state that when a thematic hierarchy and a person hierarchy are symmetrical in terms of prominence relations, both dimensions will be structurally interpreted at D-structure. But if the prominence relations are asymmetrical, only one dimension, which I assume is the thematic hierarchy in split ergative languages, is realized at D-structure, and the person hierarchy must be realized at S-structure or LF. In the ergative construction, the patient NP raises to Spec of T over the agent NP at LF. The example in (47) shows that the person hierarchy 1>2>3 is violated at D- and S-structure, but that raising the patient argument at LF puts the person hierarchy back into the proper order, as shown in (48b). Thus, this asymmetrical relation of the two hierarchies leads to LF raising of the patient argument to the position higher than the agent argument position, so that the ASI can be satisfied.

## 4.4 Ergative Structure of Cree Inverse Form

Now let us return to the Cree examples. The transitive animate paradigm in (33) is repeated in (50).

nimate (A=Agent, P=P	atient)	
ns	Inverse for	ms
	A – p	
ni – a:–w	3 – 1	ni — ik
ki – a:–w	3 – 2	ki — ik
ni — a:wak	3p 1	ni — ik—w—ak
ki — i—n	1-2	ki — iti—n
ki — ina:wa:w	1 – 2p	ki iti-na:wa:w
- e:-w	obv–3	— ik
– e:–w–ak	obv–3p	– ik–w–ak
	nimate (A=Agent, P=P ns ni - a:-w hi - a:-w ni - a:-w-ak ki - i-n ki - i-na:wa:w - e:-w - e:-w - e:-w-ak	$\begin{array}{llllllllllllllllllllllllllllllllllll$

(50) shows that Cree has a person hierarchy of 2>1>3>30bv. When the person hierarchy disagrees with the thematic hierarchy, the inverse forms are used. For example, in the 1A-3P configuration, the agent is 1st person, which is higher than the patient in the person hierarchy. Thus, no conflict arises. On the other hand, the 3A-1P configuration violates the person hierarchy, resulting in inverse structure.

In §3.1 I adopted Baker's NP adjunct approach for Cree. Thus, a lexical NP is an adjunct, which is coindexed to *pro* in argument positions; *pro* is in turn coindexed with a morpheme on the verb. In §4.3 we also adopted Murasugi's framework and claimed that inverse forms are ergative structures. If we incorporate all these frameworks, the structure of the direct forms and of the inverse forms can be represented as shown in (51). (51a) shows the structure of the 1A-3P configuration, and (51b) shows the3A-1P configuration.

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In (51a) pro; and proj are assigned an agent role and a patient role respectively by the verb, and projected according to the thematic hierarchy. Only pro; raises to Spec of T overtly, and occupies the subject position. This subject position of pro; is reflected by the prefix ni on the verb. Tr has the direct theme morpheme -a-. In (51b), pro; and proj are assigned a patient role and an agent role respectively. However, since the 3A-1P configuration violates the person hierarchy, the language adopts an ergative structure. It has an ergative Tr node, which shows up as the inverse theme suffix -ik- morphologically. As a result, proj raises to Spec of T overtly. In Cree inverse structure, the patient argument, proj, raises to Spec of T covertly. The prefix ni- again indicates the subject position of proj.

#### 5. Case Assignment and Theta Assignment

Based on the analysis of the direct forms and the inverse forms we are now able to formalize theta assignment and Case assignment as follows: (i) Theta roles are projected according to the thematic hierarchy, and assigned to pros VP internally; (ii) Case is assigned to pros by the functional category T and Tr, when pros raise to the Spec of T and Tr; (iii) if the thematic hierarchy agrees with the person hierarchy, Tr has the direct theme, which carries weak Case feature. As the result, the agent pro raises to Spec of T, while the patient pro raises to Spec of Tr.

If a conflict arises between the thematic and person hierarchies, Tr is marked by the inverse theme. The strong Case feature of the inverse theme forces the agent *pro* to raise to Spec of Tr, and the patient *pro* to Spec of T; (iv) full NPs are not assigned theta role, only receiving theta role indirectly via coindexation with *pro*. The NPs are also without Case. This explains why NPs appear only in the adjunct position. NPs cannot appear in the argument position because they are not assigned Case, which is a violation of Case Filter.

## 6. Conclusion

I have presented a rather different analysis of Cree from the one Dahlstrom has given. I have argued that Cree is actually a very configurational language, although it appears to be otherwise due to adjunct NPs. Cree has a hierarchical structure, is subject to the Binding theory, and shows the weak crossover effects. The inverse construction provides the evidence that Cree is an ergative split language which switches to the ergative structure when a conflict arises between a thematic hierarchy and a person hierarchy. The inverse form is one manifestation of ergative construction; a transitive agent bears abstract ergative case, and a patient bears abstract absolutive case. Case and theta role are assigned to *pros*, which are coindexed with full NPs in the adjunct position. Finally I have suggested that NPs are not licensed to appear in the argument position due to the lack of Case.

Cree is compatible with a configurational structure and specifically with a VP node. This removes some of the motivation for invoking a parameter of configurationality in Universal Grammar to accommodate completely flat, nonconfigurational languages.

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