

CLAUSE STRUCTURE, AGREEMENT AND CASE
IN GITKSAN

by

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Abstract

This dissertation proposes an analysis of certain aspects of the syntax and morphology of Gitksan, a Tsimshianic language of northwestern British Columbia. In particular, the goal of the dissertation is to show that, despite claims and surface appearances to the contrary, the structure of a Gitksan sentence conforms to the putatively universal constraints on sentence structure proposed in Government and Binding theory. In order to defend this claim, I show that other structures which have been proposed for the language are not well-motivated by data, and that the structure I propose is able to account for the complex case and agreement facts observed in declarative Gitksan sentences.

The thesis is structured in the following way. Chapter 1 briefly sketches the theoretical framework I assume, while Chapter 2 consists of a short introduction to some salient aspects of Gitksan phonology, morphology and syntax. Chapter 3 contains a comprehensive discussion of typological and structural properties of Gitksan sentences. I review those characteristics of the language which have led researchers to claim that Gitksan is either an ergative or a non-configurational language, but I argue that these surface characteristics do not provide compelling evidence that Gitksan should be assigned any divergent type of syntactic structure. On the contrary, I show that there is syntactic evidence in Gitksan to support a standard structure. I conclude Chapter 3 by examining a possible alternative proposal, namely that Gitksan is a pronominal argument language. Once again, however, I argue that the data are more consistent with a conservative account - in this case, one in which nominals function as arguments rather than adjuncts. In Chapter 4, I present in some detail data relating to agreement, case and the distribution of overt and silent pronominals in Gitksan, showing how these complex data can be accounted for under the structure I assume. The analysis presented in this chapter has

important consequences for the treatment of morphological agreement and case in GB theory.

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Abbreviations used:

-	affix boundary
=	clitic boundary
A.extr	marker of extraction of transitive subject
antip	antipassive
Asp	Aspect
attr	attributive suffix
aux	auxiliary
cn	connective (discussed in Chapter 2)
comp	complementizer
compl	completive check..
contr	contrastive
dat	dative
def	definite
dem	demonstrative
detr	detransitivizer
dist	distributive (plural)
distr	distributive clitic (gi)
dub	dubitative
dur	durative
erg	/ə/ ergative suffix (discussed in Chapter 4.3)
fut	future
incept	inceptive
instr	instrumental
inter	interrogative clitic
interact	interactive clitic
intns	intensifier

juss	jussive
LF	Logical Form
O.extr	marker of extraction of transitive object
obl	oblique
pass	passive
perf	perfective
PF	Phonetic Form
pfx	prefix
pl	plural
prep	preposition
prog	progressive
rep	reportive
S.extr	marker of extraction of intransitive subject
sg	singular
st	something
T	a suffix found on transitive verbs, discussed in Chapter 4.3
tog	together
trn	transitivizer
vi	verb intransitive
[e]	phonetically empty pronominal

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Chapter 1: Theoretical Background.

1. Introduction to GB theory

The analysis in this thesis is presented within the Government and Binding (GB) syntactic model, developed in Chomsky (1981, 1982, 1986a, 1986b, 1991, 1992). This section presents a brief introduction to those components of GB theory which will be relevant to my discussion in Chapters 3 and 4. The discussion here will be quite general, with more detailed exposition of particular aspects of the theory presented as they become important to the discussion.

1.1. Lexicon

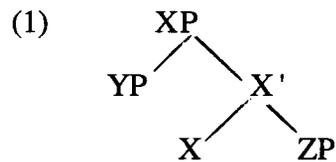
The lexicon is that component of the grammar in which lexical items are stored, along with idiosyncratic information about them, such as their category (e.g. noun, verb). For elements that function as predicates, the lexicon also contains information about their argument structure, such as how many arguments the predicate licenses and what thematic or theta roles (such as agent, patient, or experiencer) are associated with those arguments. For example, the lexical entry for an English verb such as "see" will encode the fact that this verb is associated with two arguments, which will bear the thematic roles agent (the one who sees) and patient (the one who is seen).

As well as containing entries for lexical categories such as nouns, verbs, prepositions and adjectives, the lexicon also contains what are called "functional" categories, such as complementizers, determiners, tense and aspect. These categories do not assign thematic roles, but can select particular kinds of complements.

1.2. Phrase structure

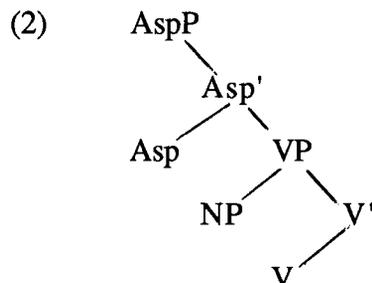
Phrase structure is projected from elements which are selected from the lexicon.

Projections are assumed to conform to the following type:



The category of a phrase XP is determined by the category of its head, X. Thus, if X is a noun, its maximal projection will be a NP. Both inflectional and lexical categories can serve as phrasal heads.

As a more concrete example, consider the following tree, which represents my analysis of part of a Gitksan sentence.



In this tree Asp is a functional category which serves as the head of the phrase AspP. VP is the complement of Asp, headed by the lexical category V, with NP as its specifier. AspP and VP are maximal projections of the heads Asp and V respectively.

Chomsky (1992) proposes that only particular structural relations within trees of this type can be syntactically relevant. One is the head-specifier relationship, which is exemplified in this tree by the relationship between V and NP. Another syntactically relevant structural

relationship is that which holds between different heads in a single tree. This kind of relationship holds between the two heads Asp and V in the above tree.

One further kind of structural relationship to which I will refer in this dissertation is c-command, which can be defined as follows:

- (3) C-command
 α c-commands β if and only if α does not dominate β and every γ that dominates α dominates β .

(Chomsky 1986a:8)

In the tree in (2), Asp c-commands VP and everything contained in VP.

1.3. Theta theory and argument structure

When a predicate is inserted into phrase structure, its thematic roles are assigned to other elements in the clause. GB theory assumes that there are various universal constraints on the relationship between a predicate and the elements which bear its theta roles. The extent to which language variation in this area is possible underlies much of the discussion in Chapter 3.

1.3.1. The Theta Criterion and empty categories

One principle of theta theory is the "Theta Criterion", which can be stated as follows:

- (4) Theta Criterion
Each argument bears one and only one theta role and each theta role is assigned to one and only one argument. (Chomsky 1981:36)

The requirements of the Theta Criterion sometimes demand that elements be posited which have no phonetic form. For example, consider the following Gitksan sentence:¹

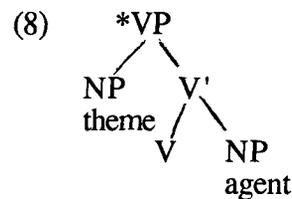
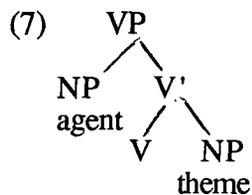
¹Such a sentence is grammatical in context - for example, in answer to the following question:

(15) nta = ɬ k^w əla - y'
 where = cn blanket-1sg
 "Where's my blanket?"

Sportiche 1991) or to a higher projection of V (Travis 1991). In Chapter 4's analysis of Gitksan clause structure I will be assuming Travis's version of the VP-internal subject hypothesis, although this choice is not crucial to my argument.

1.3.3. The organization of theta roles

The position to which particular theta roles can be assigned is also highly restricted. For example, most languages which have been investigated within the GB framework are analysed as having the type of structure given in (7), in which the agent is assigned to a higher position than the theme, but not structures such as (8), in which the theme is assigned to a higher position than the agent.



Evidence of this type has led to proposals that the theta roles which make up argument structures are hierarchically arranged. The following hierarchy from Grimshaw (1990:8) is one example:

- (9) (agent (experiencer (goal/source/location (theme))))

It is further assumed that structural realisation of arguments in the phrase structure must mirror this hierarchy, with roles higher in the hierarchy being associated with positions higher in the tree. The structure in (8) is thus ruled out, because the theme, the lowest element in the hierarchy, is assigned to a higher position than the agent.

1.4. LF and PF

In order to fulfill its communicative function, a representation generated by the modules and principles discussed above must ultimately produce a sentence which is well-formed

semantically and phonetically. The interface between the syntactic component and these semantic and phonetic components occurs at levels of representation referred to as Logical Form (LF) and Phonetic Form (PF). The structure which feeds the LF and PF components is referred to as S-Structure.

1.5. Checking theory and movement

Chomsky (1992) assumes that lexical items are inserted into syntactic structure with inflectional features already attached. During the course of the derivation each feature must be checked, or licensed under identity with a feature on another element within the structure. The checking requirements of a lexical item can potentially motivate syntactic movement.

The details of this feature-checking theory are relevant only in Chapter 4, and so I delay presenting a more detailed discussion of this topic until that chapter.

1.6. Summary

This section has presented a brief introduction to some of the theoretical notions which will be relevant to the discussion in later chapters. Before concluding this chapter, I briefly address why the Gitksan data I describe are of interest to both theoretical and descriptive linguists.

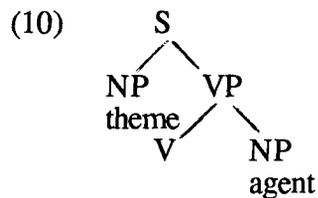
2. Relevance of Gitksan to the theory

Any theory which makes universal claims about the nature of language must obviously be accountable to data from any human language. However, the vast majority of work within the GB framework has been on the genetically related and typologically rather

homogeneous languages of Western Europe. An important test of the theory is, therefore, that it also be able to explain phenomena from genetically unrelated and typologically diverse languages.

Various aspects of the morphology and syntax of Gitksan suggest that it might have a rather different structure from a language like English.

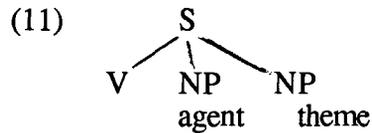
One such characteristic is that it has extensive ergative patterns in its morphology. It is therefore possible that Gitksan is a syntactically ergative language in the sense of Marantz (1984), with a structure like the following:



While such structures can account for ergative patterns, they violate the assumption that agents are universally assigned to the structurally highest position in the sentence, thus introducing undesirable interlanguage variation.

Gitksan also exhibits various characteristics which have been associated with so-called non-configurational languages (e.g. Hale 1982). For example, it allows frequent pro drop, has no expletives², does not exhibit NP movement and has a complex verb/aux. A non-configurational language has a structure such as the following, in which there is no hierarchical distinction between subject and object position.

²Expletives are semantically empty filler elements, such as "there" and "it" in English, and they are discussed in more detail in Chapter 3.



As with the ergative structure in (10), allowing non-configurational structures would dramatically increase the range of language variation permitted by the theory. Like the ergative structure, this non-configurational structure violates the assumption that hierarchical relationships in the syntax should reflect hierarchical relationships in the argument structure.

Given its typological characteristics, Gitksan thus seems like a plausible candidate for proving untenable the kind of structural identity among languages proposed in GB theory. However, I will argue on the basis of syntactic evidence that the most plausible analysis of Gitksan is one which conforms to the constraints proposed by GB theory. Given the typological differences between Gitksan and the languages of Western Europe, this finding provides interesting support for the theory.

More specifically, my analysis supports the instantiation of GB theory proposed in Chomsky (1992), which claims that language variation derives principally from morphological properties. Gitksan is morphologically much richer than English, especially in the area of agreement, and thus provides a good testing ground for a theory in which morphology plays a central role. My analysis of the Gitksan agreement data proves compatible with the general framework described in Chomsky (1992). In addition, however, my analysis leads me to some specific elaborations of the theory, related to the interaction of feature strength, morphological richness, and syntactic movement.

3. Broader implications of the dissertation

Although the arguments in this dissertation are couched within the terms of GB theory, the data I discuss and the issues they raise are of more general interest. For instance, much of the data on ergativity and non-configurationality presented in Chapter 3 is typological in nature, and thus relatively theory-neutral. Even the discussion in Chapter 4, which is more heavily dependent on the specific machinery of current GB theory, is ultimately aimed at producing a general characterization of the relationship between case/agreement morphology and syntax. For the reader whose primary interest is descriptive linguistics, this chapter can be viewed as one way of organizing complex data to reveal interesting generalizations.

Chapter 2. A sketch of Gitksan

1. Introduction

This chapter provides a brief introduction to Gitksan, the language which is the focus of this dissertation.

Gitksan is a Tsimshianic language, with at least 500 speakers (Powell and Stevens 1977) living mostly in Northwestern British Columbia, in a number of villages on or near the Skeena River and also in Kitwancool. Gitksan is very closely related to Nisgha, spoken on the Nass River, and more distantly to Coast Tsimshian and Southern Tsimshian, spoken in the coastal area.

The most complete early description of Tsimshianic languages is Boas (1911) which describes aspects of the phonology, morphology and syntax of Nisgha and Coast Tsimshian. More recent descriptions of the Tsimshianic languages are Rigsby (1986) on Gitksan, Tarpent (1987) on Nisgha, and Dunn (1979) on Coast Tsimshian.

2. Data

Unless otherwise stated, the data in this thesis are taken from my own field notes. My principal language consultants for this thesis have been Barbara Sennott and Margaret Heit of Kispiox. I have also worked with Elizabeth Tait and Rodney Good of Kitwancool and Pearl Tromblay of Hazelton, and, briefly, with Phyllis Haizimsque and Cindy of Kitwancool.

Where data come from other sources, R indicates Rigsby (1986), and T (date) indicates work by Tarpent. ~~Tarpent's research is on Nisgha rather than Gitksan, but the two~~

languages are very similar syntactically. Analyses by Tarpent will frequently be referred to in the discussion of Gitksan syntax, if the motivation for the Nisgha analysis also exists in Gitksan.

Most of the data are presented in four-part sets. The first line is a phonemic representation, with affix (-) and clitic (=) boundaries indicated. The second line consists of morpheme-by-morpheme glosses, and the third line provides an English translation. Finally, each sentence is also given (italicized) in the standard Gitksan orthography described in Hindle and Rigsby (1973) and Rigsby (1986).

The Gitksan orthography developed by Rigsby is broadly phonetic in nature, and in general, the symbol usage is close to North American phonetic notation. The following symbols, however, are particular to the Gitksan orthographic system.

(1) orthographic symbol	phonetic interpretation
<u>k</u>	[q]
<u>x</u>	[X]
<u>g</u>	[G]
hl	[ɬ]
'	[ʔ]
xw	[x ^w]
kw'	[k ^{w'}]
gw	[g ^w]
ky'	[k ^{y'}]
gy	[g ^y]

Various conventions govern the use of these symbols in the Gitksan orthography. Glottal stop is not indicated in word-initial position. "w" is used to indicate labialization of velars except when they occur before rounded vowels. "y" is used to indicate palatalization only before round back vowels. Glottalization of segments is represented with an apostrophe. However, the position of the apostrophe varies according to the kind of segment it is associated with. Ejective stops and affricates are represented with an apostrophe following

the stop symbol (*p'*, *t'*, *ts'*, *k'*, *k'*) . Glottalization on sonorants is represented with an apostrophe preceding the symbol (*'m*, *'n*, *'l*, *'y*, *'w*).

Long vowels are indicated by a sequence of two identical vowels. For example, "ee" represents [e:]. The orthography does not distinguish between tense and lax vowels.

Ungrammatical sentences, where used in argumentation, will not be presented in the Gitksan orthography, since they are not sentences which would be used by Gitksan speakers. Following standard practice, the phonemic representations of such sentences will be marked with an asterisk.

3. Introduction to Gitksan

This section briefly sketches some of the major features of Gitksan phonology, morphology, and syntax which will help the reader follow the data presented in the thesis. Certain aspects of the language will be described in more detail in later chapters, as they become relevant to the discussion.

3.1. Introduction to the phonology of Gitksan

In this section I present a brief introduction to the phonology of Gitksan. For more detailed discussion of the phonology of Gitksan, the reader is referred to Rigsby (1986, Chapter 3) and Hunt (1991).

The rules presented in this section will help readers to interpret the relationship between the phonemic and the orthographic representations of the data presented in this thesis. Some additional rules are discussed in the course of the dissertation, when they are relevant to a particular syntactic argument.

3.1.1. Phonemic inventory and across the board rules.

I assume the phonemic vowel inventory in (2), which is based on the inventory given in Rigsby (1986).

(2)	Short vowels:		Long vowels:
	i	u	i:
			u:
	ə		e:
	a		o:
			a:

The vowel /ə/ is coloured by adjacent consonants, so that it is realised as [u] before rounded consonants (3), as [a] before or after uvulars and glottals (4), and as [ɪ] (orthographic "i") elsewhere (5).

(3)	UR /lə-wa:x/ pl-paddle (vi)	PR [luwa:x]	orthography <i>luwaax</i>	R:93
(4)	/lə-ʔaks/ pl-drink (vi)	[laʔaks]	<i>la'aks</i>	R:93
(5)	/lə-mo:-tx ^w / pl-root-pass "be cured"	[lɪmo:tx ^w]	<i>limootxw</i>	R:93

A high vowel is lowered to a mid vowel before a uvular or a glottal stop:

(6)	[+syll] + hi	->	[-hi] -lo	/	___	{ʔ, q, q', X}	(based on Rigsby 1986: 204)
(7)	/nuX/ mother		[noX]			<i>noɣ</i>	

A vowel followed by a tautosyllabic glottal stop is realised with an echo vowel immediately following the glottal closure. This is illustrated in the following example:

(8) /siʔ/ [sɛʔ^ɛ] se'e
 foot

The phonemic consonant inventory I assume is the following:

(9) p t ts k k^w q ʔ
 p' t' ts' k' k^w' q'
 s x x^w X h
 ɬ
 m n l y w
 m' n' l' y' w'

The obstruents /k, k', x/ are generally realised with palatal articulation. However, I follow Rigsby (1986) in representing them phonemically without palatalization.

Voicing is not distinctive underlyingly. However, on the surface there are both voiced and voiceless stops and affricates, due to the effects of a prevocalic voicing rule:

(10) $\left[\begin{array}{l} -\text{son} \\ -\text{cont} \end{array} \right] \rightarrow [+voice] / _ [-\text{cons}]$ (based on Rigsby 1986:134)

(11) /k^wup - ə - t/ [gUbit] gubit
 eat - erg - 3sg
 "s/he ate (st)"

Rigsby (1986:135) notes that exceptions to the prevocalic voicing rule may arise in borrowings from English, in which aspirated voiceless stops appear prevocalically. He represents these phonemically as clusters of plain voiceless stops followed by /h/, as illustrated in the following example:

(12) /kha:/ [k^ha:] kaa
 "car" R: 135

There are also native words, such as [t^hun] "this", which contain prevocalic [t^h].

Distributional and comparative evidence leads Rigsby to analyse these as deriving from an underlying sequence of a voiceless stop followed by a velar fricative. A phonological rule

In certain syntactic environments, however, the /t/ connective does not surface. Instead, the proper noun is preceded by an /s/ morpheme:

- (17) ne: - ti: w'itx^w = s John qu? - y'
 not -contr come = John loc -1sg
 "John didn't come to my place"
needii 'witxws John go'o'y

Because of the apparently complementary distribution of the /s/ and /t/ morphemes, Tarpent (1981), Rigsby (1986), and Hunt (1987) (among others) assumed that they were variants of the same connective morpheme. However, Tarpent (1986, fn.3) points out that evidence from plural proper nouns suggests that the /s/ and /t/ must be realisations of different morphemes in Nisgha. Parallel evidence exists in Gitksan. The structure of Tarpent's argument is presented below, illustrated with examples from Gitksan.

Before a plural proper noun, the connective takes the form /tip/ instead of /t/. (The plural connective /tip/, used before a singular proper noun, has the interpretation of a group of people which includes the person named.)

- (18) pak^w **tip** John qu? - y'
 come.pl cn John loc -1sg
 "John and them came to my place"
*bakw **dip** John go'o'y*

Interestingly, the plural connective /tip/, unlike the singular connective /t/, can cooccur with the morpheme /s/:

- (19) ne: - ti: pak^w = s **tip** John qu? - y'
 not -contr come.pl = cn John loc -1sg
 "John and them didn't come to my place"
*needii bakws **dip** John go'o'y*

On the basis of such data, Tarpent concludes that /s/ must be a realisation of a different morpheme. Her analysis attributes the failure of the /t/ to cooccur with the /s/ to a cluster reduction rule which deletes the /t/:

(20) $t \rightarrow \emptyset / s_C$

Thus, the underlying representation of a sentence such as (17) must be the following:

(21) $ne: - ti: w'itx^w = s \quad t = John \quad qu\eta - y'$
needii 'witxws John go'o'y

The /t/ is not realised on the surface as a result of the application of the deletion rule (20).

The /t/ deletion rule in (20) is, however, clearly morphologically conditioned, since [stC] clusters occur elsewhere in the language, where (minimally) the /s/ is part of a separate morpheme from the following /t/, as illustrated in the following examples:

(22) $\eta aks - t = t \quad k^w\theta ats' - y'$
 wet -pass=cn coat - 1sg
 "My coat is wet"
aksthl gudats'i'y

(23) $\eta amam'as \quad t = Mary$
 beautiful cn = Mary
 "Mary is beautiful"
ama'mas t Mary

In the remainder of the thesis I will gloss the /t/ morpheme as a connective (cn) and the /s/ morpheme as a case-marker ("case").³

ii. t/∅ alternations

A number of morphemes in both Nisgha and Gitksan alternate between a /t/-initial form, which occurs after sonorants, and a non-/t/-initial form which occurs in other environments. For example, the passive morpheme alternates in form between /tx^w/ and /x^w/, as illustrated below⁴:

³ In this usage I differ from Tarpent (1981 and subsequently) and Rigsby (1990), who gloss the /s/ morpheme as a connective and the /t/ and /tip/ morphemes as determinate markers.

⁴ I follow Rigsby (1986) in glossing this suffix as passive. However, Tarpent (1987) glosses it as a definite medial suffix. It has a wide range of uses and meanings.

- (24) kutan - t^{xw} - y'
horse - pass-1sg
"my horse"

gyudantxwi'y

- (25.) haq - x^w - y'
goose-pass-1sg
"my goose"

haqxwi'y

Walsh (1990), working on Nisgha, proposes that the /t/-initial form of these suffixes is underlying and that the /t/ is deleted by a process of stray erasure resulting from the failure of the /t/ to be prosodically licensed when it occurs after a non-moraic segment.⁵ While I accept this analysis, in my phonemic representations I will represent these suffixes according to their surface form, in order to make the relationship between the phonemic and orthographic representations more transparent.

3.2. Introduction to the morphology of Gitksan

3.2.1. Morphological complexity

Gitksan is more complex morphologically than English, but less so than its Athabaskan neighbour, Carrier. Gitksan has been compared in its degree of morphological complexity to German (Tarpent 1983:123, Rigsby 1989:247-8).

The verb may be morphologically simple, but frequently hosts a range of affixes which are relevant to the syntax, such as passive, antipassive, and transitivity affixes, as well as number agreement and person markers. A few examples are given below (affixes

⁵ Walsh presents evidence that vowels and sonorant consonants are moraic in Gitksan and Nisgha. The t-deletion process is restricted to the first and second levels of the lexicon. Later in the phonology C t C sequences are permitted even if the first C is non-moraic, as for example in the following sentence:

(1) n'it - ɬ lip - wilp - t - ɬ qanwila lu: - saks - ən - t
3sg -cn self-house-3-cn always in -clean -trn -3sg
"It's his own house he always cleans"

'nithl lipwilpθl ganwila luusaksint

underlined):

- (26) sə - wila:x - s - ən - t
pfx⁶- know - pass - trn⁷ - 3
"S/he taught it" R:361

siwilaaksint

- (27) k^win sək - saks - ən - y' = t nu? = t ʔa = s t = Mary
juss pl - clean - trn - 1sg = cn dishes = cn prep=case cn=Mary
"I told Mary to wash the dishes"

gun siksaksini'yhl no'ohl as Mary

Nominals may also be morphologically simple or include various derivational affixes, as in the following examples:

- (28) ha - n'i: - t'a:
instr -on -sit
"chair"

ha'niit'aa

- (29) ʔan - lu: - quyp'aX
object - in - light
"window"

anluugoyp'aX

3.2.2. Clitics

Gitksan exhibits a range of proclitics and enclitics, including evidentials (30), the interrogative marker (31) and one set of person markers (32).

- (30) ləmo: - ə - t - gat = s t = Kathy t = John
help - erg - 3 - rep = case cn = Kathy cn = John
"Apparently Kathy helped John"

hlimooyitgas Kathy t John

- (31) yuk^w = t ʔix^w - n = a
prog = cn fish -2sg=inter
"Are you fishing?"

yukwhl iwina?

⁶The prefix /sə/ has a very wide range of uses and meanings, so Rigsby (1986) simply glosses it as "prefix".

⁷I differ from Rigsby (1986) in glossing this morpheme simply as a transitivity marker rather than a causative. Note also that I ultimately claim, following Tarpent (1987), that the suffix is followed by the /ə/ ergative suffix. See Chapter 4, Section 3.2 for further discussion.

- (32) ne: - ti: = ɬ k^wup = s t = Peter = ɬ susi:t
 not - contr = AGR eat = case cn = Peter = cn potato
 "Peter didn't eat the potatoes"
neediit gups Peterhl susiit

Other clitics which occur in almost every sentence are the so-called connectives, mentioned in Section 3.1.2, which precede all noun phrases. The form of the connective is determined by the head of the following noun phrase. Before phrases headed by common nouns, the enclitic connective /ɬ/ occurs.

- (33) k^wup- ə - y' = ɬ ʔits - m hun
 eat -erg-1sg= cn fry - attr fish
 "I ate fried fish"
gubi'yhl ijam hun

Before proper nouns⁸, a class which includes personal names, certain kinship terms and demonstrative pronouns, the connective takes the form /t/ in the singular and /tip/ in the plural, as was mentioned in the previous section.

The plural connective is not phonologically cliticized, but instead stands alone as a word, as in the following example:

- (34) kaʔ - ə - y' tip Mary
 see -erg-1sg cn Mary
 "I saw Mary and them"
ga'a'y dip Mary

The singular connective appears to be a clitic, but it is difficult to establish whether it cliticizes to the left or to the right. In Rigsby (1986) it is treated as an enclitic, but I follow Rigsby (1989) in treating it as a proclitic.⁹ Evidence supporting this analysis comes from the fact that this morpheme can occur in absolute sentence-initial position, where there is no element to its left to which it could cliticize, as in the following example:

⁸There is also a variety of terminology used to characterize these noun classes. Boas (1911:297) refers to the two classes as those referring to "special human individuals" and "common nouns". Tarpent (1981 and subsequently) uses the terms "determinate" and "non-determinate" to refer to the two noun classes. I follow Rigsby's (1986, 1990) use of the terms "proper" and "common".

⁹Tarpent (1987) also claims that the /t/ morpheme is an enclitic, but in her morpheme by morpheme representations treats it as an independent word.

- (35) t = Peter = ɬ sim'o:kit - x^w - m'
 cn= Peter = cn chief - pass - 1pl
 "Peter is our chief"
t Peterhl si'moogixwu'm

Proper nouns in certain syntactic environments are also preceded by a morpheme /s/ which I treat as a case morpheme. This morpheme is an enclitic, as illustrated:

- (36) naks - x^w - ə = ɟ t = John t = Mary
 marry - pass - erg=case cn= John cn = Mary
 "John married Mary"
naksxwiɟ John t Mary

3.2.3. Preverbals and pronominals

Rigsby (1986) identifies a class of preverbal and pronominal elements which are adverbial or adjectival in meaning, but which are difficult to classify morphologically. Unlike true adverbs and adjectives, these morphemes do not receive primary stress. The preverbals differ in syntactic position from morphologically independent adverbs, which occur after the verb and its arguments. The pronominals differ from adjectives in that they do not take an attributive suffix. Furthermore, Rigsby (1986:58) points out that the preverbals and pronominals are more independent in form and meaning than prefixes, and that they are more selective in their hosts than clitics. He thus proposes that they should be given an independent classification as pronominals and preverbals. The underlined elements in (37) - (39) are examples of preverbals, and in (40) - (42) are examples of pronominals.

- (37) lu: saks - ən - y' = ɬ ts'im wilp
 in clean-trn-1sg = cn in house
 "I cleaned the house"
luusaksini'yhl ts'im wilp

- (38) t'ak - ə - y' wil skitəm w'itx^w - y' quʔ = s t = Kathy
 forget-erg-1sg comp have.to come -1sg loc = case cn = Kathy
 "I forgot I was supposed to come to Kathy's"
t'agi'y wil sgidim 'witxwi'y goʔos Kathy

- (39) $\underline{k^w'a}$ $ma:s\eta us$ $n'u:m'$ $qu\eta = \ddot{1}$ laX $ts'e:= \ddot{1}$ ηaks
 formerly play (pl) 1pl loc = cn on edge = cn water
 "We used to play beside the river"
kw'a maas'us 'nuu'm go'ohl lax ts'eehl aks
- (40) $ts'i:k^w = \ddot{1}$ $\underline{galt\theta m}$ ηaks $t = x^w in$
 leak = cn container water cn = dem
 "This pail leaks"
ts'iikwhl galdim ?aks tun
- (41) $\underline{wit'aX}$ $hu - mux^w$ $n'i:y'$
 big(pl) pl - ear 1sg
 "I have big ears"
wit'a \underline{x} humuxw 'nii'y
- (42) $\underline{k^w'upa}$ $tk'i\eta x^w$
 small(pl) child
 "group of children"
k'uba tk'ihlxw

Some preverbals condition particular suffixes on the verb. For instance, in the following example, the preverbal /his/ *his* "pretend" conditions the presence of the passive suffix on the verb.

- (43) $w'i\eta$ **his** $paX - x^w = \ddot{1}$ ηku $tk'i\eta x^w$
 around pretend run -pass=cn small child
 "The child was just pretending to run"
w'ihl his baxxwhl hlgu tk'ihlxw

More detailed discussion of particular affixes and clitics will be given at relevant points later in the dissertation. See Rigsby (1986) and Tarpent (1987) for a much more extensive discussion of the morphology.

3.3. Introduction to the syntax of Gitksan

In this section I outline some basic features of Gitksan syntax.

noun despite the fact that it is preceded by the adjective /stin/ *sdin* "heavy".

- (50) stin - m Xpi:st
 heavy - attr box
 "heavy box"

sdinim xbiist

Oblique arguments, adverbials and subordinate clauses, if present, can never intervene in the VSO sequence, but rather follow the subject and object arguments in a sentence.

Subcategorized elements normally precede adjuncts, but there is some degree of freedom in ordering:

- (51) ye: t = John quʔ = ɿ Terrace k'o:ts
 go cn = John loc = cn Terrace yesterday
 "John went to Terrace yesterday"

yee t John go'ohl Terrace ky'oots

- (52) kin'am -ə = s t = Peter = ɿ saw'nsxw ʔa = s t = Mary
 give -erg=case cn=Peter = cn paper to = case cn= Mary
 "Peter gave Mary the paper"

gi'namis Peterhl sa'wnsxw as Mary

- (53) ɿimo: -ə - t n'i:y' [wil laqs - y']
 help -erg-3sg 1sg [comp wash - 1sg]
 "She helped me take a bath / when I took a bath"

hlimooyit 'nii'y wil laksi'y

The preverbal position may be occupied by wh-phrases (54) or foci (55).¹⁰ ((55) is the correct form for an answer to a question such as (54).)

- (54) na: = ɿ kaʔ = s t = John
 who = cn see = case cn = John
 "Whom did John see?"

naahl ga'as John

- (55) t = Peter = ɿ kaʔ = s t = John
 cn=Peter = cn see =case cn = John
 "John saw Peter."

t Peterhl ga'as John

¹⁰I use the term "focus" in the sense of Rochemont (1986).

3.3.2. Dependent vs independent clauses

Also in preverbal position, we find subordinating elements, which I shall refer to as "dependent markers".¹¹ The class of dependent markers includes elements marking negation (56), clause subordination (57) and aspect (58),(59).

- (56) **ne: - ti:** = t k^wup = s t = Peter = **ɬ** susi:t
not - contr = AGR eat = case cn = Peter = cn potato
"Peter didn't eat the potatoes"
neediit gups Peterhl susiit

- (57) **maɬ - T - ə** = s t = John **wil** = t n'im - kaʔ - y'
say- T - erg=case cn = John comp = AGR want - see - 1sg
"John said he wanted to see me"
mahldis John wilt 'nimga'a'y

- (58) **yuk^w** = t tsap = **ɬ** wine:x
prog =AGR make = cn food
"He is making food"
yukwt japhl wineex

- (59) **la:** ta:w^ɬ = s t = Mary
incept leave =case cn = Mary
"Mary is leaving right now"
hlaa daa'whls Mary

Clauses introduced by dependent markers, which I shall refer to as dependent clauses, differ in important ways from verb-initial independent clauses¹². Independent clauses exhibit different verbal morphology, and different patterns of case-marking and agreement from dependent clauses. More detailed discussion of these differences is given in Chapter 4.

¹¹Tarpen (1987) groups these elements into several classes: auxiliary verbs, negative verbs and subordinators. The status of these elements and of dependent clauses in general will be discussed in more detail in later chapters.

¹²Many different terms have been adopted to refer to this clause type. Boas (1911) termed them "subjunctive", Rigsby (1986,1990) and Tarpen (1981) use the term "dependent", which I have adopted, Tarpen (1987) refers to them as "regular" clauses and Livingston (1987) refers to them as "non-verb-initial". Similarly, independent clauses have gone by various names. Boas terms these "indicative", the term "independent" is used by Rigsby (1986,1990) and Tarpen (1981), Tarpen (1987) uses the term "predicate focused" and Livingston (1987) uses the term "verb-initial".

Chapter 3 Structural and Typological Characteristics of Gitksan

0. Introduction

This chapter explores some fundamental questions regarding the structure of the Gitksan clause. On the surface, Gitksan seems to differ greatly in its syntactic properties from a language like English. For example, Gitksan shows a range of ergative properties, it shares various properties with non-configurational languages, and, in many sentence types, verbal arguments appear to be represented by bound person markers rather than overt nominals.

These characteristics might be accounted for by claiming that Gitksan clause structure differs dramatically from the clause structure of a language like English. My goal in this chapter, however, is to show that these surface characteristics do not provide particularly strong evidence for deviating, in the case of Gitksan, from the kinds of clause structures permitted by GB theory. I conclude, in fact, that there is evidence to support an analysis of Gitksan using a quite standard clause structure.

The chapter is structured as follows. Section 1 considers the ergative features exhibited by Gitksan, and I show that these features are, from a typological standpoint, characteristic of a morphologically ergative rather than a syntactically ergative language. In Section 2, I consider the question of whether Gitksan is typologically non-configurational. I show that Gitksan cannot unambiguously be classed as non-configurational, since it shares properties with both non-configurational and configurational languages. Section 3 presents syntactic arguments which support an accusative, configurational analysis of Gitksan. Finally, Section 4 shows that Gitksan does not display the characteristics of a pronominal argument language.

1. Ergativity

In this section I consider the ergativity of Gitksan. In Section 1.2, I outline the ergative characteristics of Gitksan, and in Section 1.3, I show that these characteristics are morphological rather than syntactic in nature, and that Gitksan fails to show typologically ergative characteristics in its syntax.

1.1. Introduction

Gitksan, like all the Tsimshianic languages, shows many ergative patterns. That is, with respect to certain features, the intransitive subject and the transitive object (the absolutive arguments) pattern together and differently from the transitive subject (the ergative argument).

Since the issues under discussion here make the terms "subject" and "object" ambiguous, throughout the discussion of ergativity I shall adopt the following conventions, used in Comrie (1978) and Dixon (1979), for referring to the arguments of a verb: **S** will refer to the single argument of an intransitive verb, **A** will refer to the agent argument of a transitive verb, **O** will refer to the theme argument of a transitive verb. Ergative patterns will be ones in which S and O pattern alike and unlike A. Accusative patterns will be ones in which S and A pattern alike and unlike O.

(1)	<u>nom/acc</u>		<u>erg/abs</u>
	nominative	[A] [S]	ergative
	accusative		[O]

1.2. Constructions exhibiting ergative patterns.

In this section I outline the ergative patterns of Gitksan. The data I use to illustrate these patterns are largely my own, but the patterns themselves have all been described elsewhere in the Tsimshianic literature. See Rigsby (1975) on Gitksan, Tarpent (1982) and Belvin (1984) on Nisgha, and Mulder (1988) on Coast Tsimshian.

1.2.1. Ergative patterns restricted to independent clauses

Recall from Chapter 2 that Gitksan has two different clause types - independent (verb-initial) and dependent (introduced by a dependent marker). A number of ergative patterns in Gitksan are restricted to independent clauses, and it is these patterns which I will consider in this section.

1.2.1.1. Case marking

As I discussed in Chapter 2, proper nouns are sometimes preceded by an /s/ case-marking morpheme. In independent sentences, the distribution of this morpheme is ergative, in that it precedes A but not S or O, as is illustrated in the following data:

- (2) kaʔ - ə = s tip John t = Mary
see -erg=case cn John cn = Mary
"John and them saw Mary"
ga'as dip John t Mary
- (3) ye: tip John quʔ = ɬ Terrace
go cn John loc = cn Terrace
"John and them went to Terrace"
yee dip John go'ohl Terrace

The distribution of this /s/ morpheme is ergative only in independent clauses. In dependent clauses, /s/ precedes any proper noun argument which immediately follows the verb.

Thus, it can potentially appear before S, A, or O. The following example shows the /s/ morpheme appearing before S in a dependent clause.

- (4) yuk^w = ɬ litsXx^w = s t = John
 prog = cn read = case cn=John
 "John is reading"
yukwhl litsxxws John

1.2.1.2. Series II and III person markers

Two series of person markers in Gitksan also show ergative distribution in independent clauses. The Series II person markers¹, given in (5), appear suffixed to lexical heads, while the Series III person markers, given in (6), are independent pronouns.

(5) Series II (Rigsby 1986:413)

	sg	pl		
1	-y'	-m'	-y	-m
2	-n	-səm'	-n	-si'm
3	-t	-ti:t	-t	-diit

(6) Series III (Rigsby 1986:413)

	sg	pl		
1	n'i:y'	n'u:m'	'nii'y	'nuu'm
2	n'i:n	n'isim'	'niin	'nisi'm
3	n'it	n'idi:t	'nit	'nidiit

In independent clauses, Series II suffixes are used to represent the person and number of A (7), while Series III pronouns are used to represent S (8) and O(9).²

- (7) kaʔ - ə - y' tip John
 see -erg-1sg cn John
 "I saw John and them"
ga'a'y dip John

- (8) paX n'i:y'
 run 1sg
 "I ran"
baX 'nii'y

¹The names of the person marking series are taken from Rigsby (1986).

²Series III independent pronouns are also used whenever a pronominal is focused, regardless of its grammatical role. However, in this section I restrict my attention to pronouns in their canonical positions.

- (9) kaʔ - ə - y' n'i:n
 see -erg-1sg 2sg
 "I saw you"

ga'a'y 'niin

It is ungrammatical to use Series III pronouns to represent A (10) or to use Series II suffixes to represent S (11) or O (12).

- (10) *kaʔ - ə n'i:y' tip John
 see -erg 1sg cn John
 (I saw John and them)
- (11) *paX - y'³
 run -1sg
 (I ran)
- (12) *kaʔ - ə = s tip John - y'
 see -erg = case cn John - 1sg
 (John and them saw me)

Again, this ergative pattern does not extend to dependent sentences. In a dependent sentence, a Series II suffix can potentially be used to represent S, A or O,⁴ and a Series III pronoun can be used only to represent O. This is illustrated by the following examples. In (13), a dependent clause, S is represented by a Series II suffix. (14) shows that it is ungrammatical in this sentence type to represent S by a Series III pronoun.

- (13) yuk^w = ɬ litsXx^w - y'
 prog = cn read -1sg
 "I am reading"

yukwhl litsxxwi'y

³Tarpen (1991) claims that sentences of this type are in fact possible in Nisgaha. However, the data I have gathered for Gitksan suggest that such sentences are impossible with most verbs. See Chapter 4 for more discussion. Note, however, that (11) could be rendered grammatical by the addition of a dependent marker before the verb.

⁴Which argument is realised by the Series II suffix in a dependent sentence is not freely variable, but depends upon the person and number of the arguments, and on whether they are pronominal or lexical. See Chapter 4 for details.

- (14) *yuk^w = ɬ litsXx^w n'i:y'
 prog = cn read 1sg
 (I am reading)

1.2.1.3. Zero pronominals

Certain third person pronominal arguments in Gitksan may fail to be overtly realised in a clause if their reference is clear from context, as illustrated in the following question-answer pairs. In (16), the answer to (15), O is omitted, and in (18), the answer to (17), S is omitted. (The position of the omitted pronoun is indicated by [e].)

- (15) nta = ɬ k^wəla - y'
 where = cn blanket-1sg
 "Where's my blanket?"
ndahl gwila'y
- (16) kən'am - ə - y' [e] ʔa = s t = Bill
 give -erg-1sg to =case cn=Bill
 "I gave it to Bill"
gi'nami'y as Bill
- (17) k^wi = ɬ tsap - ə = s t = Bill k'o:ts
 what = cn make -erg =case cn= Bill yesterday
 "What did Bill do yesterday?"
gwihl jabis Bill ky'oots
- (18) ye: [e] quʔ = ɬ Terrace
 go loc = cn Terrace
 "He went to Terrace"
yee go'ohl Terrace

However, an A argument cannot be left totally unrealised, even if its reference is clear from context. In (20), a possible answer to (19), the 3rd person pronominal must be represented by the Series II /t/ suffix on the verb. The sentence is ungrammatical if the suffix is omitted, as in (21).

- (19) ne: - t kaʔ - y' t = Bill = a
 neg - 3 see -1sg cn= Bill = inter
 "Did Bill see me?"
neet ga'a'y t Billa ?

(20) ʔe:ʔ, kaʔ - ə - t n'i:n = əst
 yes see -erg- 3 2sg =interact
 "Yes he did (see you)"
ee'e, ga'at 'niinist

(21) *ʔe:ʔ, kaʔ - ə - [e] n'i:n - əst

Thus the distribution of phonetically empty pronouns in independent clauses appears to be ergative, in that it is restricted to S or O positions. Again this is true only of independent clauses; in dependent clauses the empty pronoun is restricted to O positions. The following examples show that in a dependent clause S must be realised by a Series II suffix (22) and cannot be left unrealised (23):⁵

(22) ne: - ti: ye: - t quʔ = ʔ Terrace
 not - contr go - 3sg loc = cn Terrace
 "He didn't go to Terrace"
needii yeet go'ohl Terrace

(23) *ne: - ti: ye: [e] quʔ = ʔ Terrace

1.2.2. Ergative patterns restricted to dependent clauses.

As illustrated in the previous section, various ergative features of Gitksan are restricted to independent clauses. However, one ergative feature of the language - the distribution of Series I person markers - is restricted to dependent clauses.

1.2.2.1. Series I person markers

The Series I person/number morphemes have the following forms:

⁵In fact the distribution of the empty pronoun is identical to the distribution of the Series III pronoun.

(24)	Series I (Rigsby 1986:412)			
	sg	pl		
1	nə	təp	ni, na, nu	dip
2	mə	mə səm	mi, ma, mu	mi ... sim
3	t	t	t	t

These morphemes appear preverbally, and show an ergative distribution in that they reflect the person/number value of A, but not of S or O. This is illustrated in (25) - (27).

- (25) ne: - ti: = t_i kaʔ - y'_j; t = Peter_i
not -contr=AGR.3 see -1sg cn= Peter
"Peter didn't see me"
neediit ga'a'y t Peter
- (26) ne: - ti: = təp_i kaʔ = s t = John_j
not -contr =AGR.1pl see =case cn= John
"We didn't see John"
neediidip ga'as John
- (27) ne: - ti: (*=t) paX = s t = Peter
not -contr (*=AGR) run = case cn= Peter
"Peter didn't run"
needii baxs Peter

The Series I morphemes appear only in dependent clauses and imperatives.⁶

1.2.3. Other ergative patterns

The data in this final section illustrate patterns which are ergative to some degree, but which are not restricted to either dependent or independent clauses.

1.2.3.1. Imperatives

Imperatives pattern ergatively in Gitksan, in that it is only A which (potentially) fails to be phonetically realised in an imperative. Consider the imperatives below:

⁶Imperatives pattern like truncated dependent clauses.

(28) yo:q - ən = ɬ ɬkʷu tk'itxʷ
 eat - trn = cn small child
 "Feed the baby"
yooginhɬ hlgu tk'ihlxw

(29) paX - n
 run - 2sg
 "Run!"
bahan!

In a transitive imperative such as (28), the second person addressee (A) is not phonetically realised. In an intransitive imperative such as (29), however, the second person addressee (S) is phonetically realised, by the Series II second person suffix /-n/. Since O must be phonetically realised also, as in (28), this is another example of ergative patterning, in which S and O behave alike, and unlike A.

The ergative pattern does not extend to imperatives with plural addressees, however. In these imperatives, the addressee (A) is realised by the Series I person marker /sim/:

(30) səm = kipa - m'
 2pl = wait -1pl
 "Wait for us" R 310
sim giba'm

1.2.3.2. Number agreement

Another characteristic of Gitksan which patterns in an ergative manner is verbal number agreement. The verb agrees in number with S and O, but not with A. The agreement is morphologically marked on the predicate via prefixation or suppletion.

(31) and (32) are intransitive sentences. The form of the verb alternates according to whether S is singular (31) or plural (32).

(31) **yu:qx^w** t = Peter
eat(sg) cn= Peter
"Peter has eaten"
yuukxw t Peter

(32) **tXo:qx^w** = ɿ smax
eat(pl) = cn bear
"The bears have eaten"
txookxwhl smax

(31) - (32) are instances of independent sentences. However, the agreement patterns identically in dependent sentences, as in (33) - (34):

(33) yuk^w = ɿ **yu:qx^w** - y'
prog = cn eat(sg) -1sg
"I am eating"
yukwhl yuukxwi'y

(34) yuk^w = ɿ **tXo:qx^w** - m'
prog = cn eat(pl) -1pl
"We are eating"
yukwhl txookxwu'm

(35)-(37) are transitive sentences. The verb alternates in form according to whether O is singular (35) or plural (36). The plurality of A does not make the verb appear in its plural form (37).

(35) n'i: - **maq** - T - ə = s t = Peter = ɿ k'iy' = ɿ ts'ak' laX ha - n'i: - tXo:qx^w
on-put -T-erg=case cn=Peter=cn one=cn plate on instr-on - eat
"Peter put one plate on the table"
*'niimakdis Peterhl k'iyhl ts'ak' lax
ha'niitxookxw*

(36) n'i: - **t'at** - T - ə - s t = Peter = ɿ nuʔ laX ha - n'i: - tXo:qx^w
on -put(pl)-T-erg=case cn=Peter = cn dishes on instr-on - eat
"Peter put the dishes on the table"
'niit'ahldis Peterhl no'ohl lax ha'niitxookxw

(37) n'i: - **maq** - T - ə - m' = ɿ ʔan - tsam laX ha - n'i: - tXo:qx^w
on -put(sg)- T-erg-1pl = cn object -cook on instr-on - eat
"We put the pot on the table"
'niimakdi'mhl anjam lax ha'niitxookxw

The transitive number agreement is also found in dependent clauses, as illustrated in the subordinate clause in the following pair of examples. In (38) O is singular, while in (39) O is plural. The plurality of the verb in (39) is indicated by the CVC reduplicative prefix on the verb.

- (38) wila:x - y' wil ne: - ti: - t saks-ən = s t = John = ɪ ts'im wilp
 know - 1sg comp not-contr-3 clean-trn=case cn=John=cn in house
 "I know that John didn't clean the house"
wilaayi'y wil neediit saksins Johnhl ts'im wilp

- (39) ɬimo: - ə - t n'i:y' nə- wil sək - saks - ən = ɪ nuʔ
 help -erg-3 1sg 1sg - comp pl - clean - trn= cn dishes
 "She helped me clean the dishes"
hlimooyit 'nii'y nul siksaksinhl no'ohl

However, as noted in Rigsby (1986 :269 and 361) and in Tarpent (1987), plural marking on the verb can indicate plural actions rather than the plurality of S or O, as in the following examples. In (40), S is singular, but the verb is plural, indicating repeated actions. In (41), S is plural, but the verb is singular indicating a single action.

- (40) n'a: - təs - t'is - a n'it
 into.view - pl - hit -detr 3sg
 "S/he knocked"
'naa dist'isa 'nit

- (41) ɬa: k'atsx^w - ti:t
 incept arrive.sg - 3pl
 "They have arrived/docked (in one boat)" ⁷
hlaa k'atsxwdiit

The details of number agreement on the verb are considered in much more detail in Chapter 4.

⁷ This example is based on Tarpent (1987), who notes the contrast in meaning with the plural form:

(i) ɬa: kəs-k'atsxw - ti:t
 perf pl- arrive - 3pl
 "They have arrived/docked (in many boats)" (based on Tarpent (1987))
hlaa gisk'atsxwdiit

1.2.3.3. Extraction

Ergative patterns are also observed when arguments are extracted, as in wh-questions, focus constructions or relative clauses.⁸ When A is extracted, a special morpheme /*ʔan - t/* appears between the fronted element and the remainder of the clause, as in (42). However, this morpheme fails to appear when either S or O is extracted. Instead, the connective /*ʔ/* appears, as in (43) and (44). This is an ergative pattern.

(42) t=John **ʔan - t** ne:ti: - t **ʔimo: - t = s** t = Mary k'o:ts
 cn=John A.extr-3 not - 3 help- 3 = case cn= Mary yesterday
 "It's John who didn't help Mary yesterday"
t John ant neediit hlimoos Mary ky'oots

(43) t =John = **ʔ** **ʔimo: - ʔ - t - s** t = Mary k'o:ts
 cn=John = cn help - erg- 3 = case cn = Mary yesterday
 "It's John Mary helped yesterday"
t Johnhl hlimooyis Mary ky'oots

(44) t =John = **ʔ** w'itx^w - **ʔt**
 cn =John= cn come - S.extr
 "It's John who came"
t Johnhl 'witxwit

However, O and S do not show identical patterns. When S is extracted (44), the suffix /*ʔt/* appears on the verb. This morpheme does not appear when O is extracted (43).

Thus, while the marking of extraction is partially ergatively, in some respects A, S and O all pattern distinctly.

1.3. The status of Gitksan's ergativity

In the previous section I reviewed a wide range of ergative patterns in the Gitksan data. How these ergative patterns should be accounted for has been a controversial issue among linguists working on Gitksan and other Tsimshianic languages.

⁸I do not address in this dissertation whether the movement in these constructions is of overt NPs or empty operators.

1.4. Morphological vs. syntactic ergativity

It is generally accepted that ergativity may be of two types, syntactic or morphological, a division proposed in Anderson (1976). If a language is syntactically ergative, then this suggests that it may have a rather different syntactic structure from an accusative language. However, identifying a language as morphologically ergative does not necessarily entail the assumption that it is syntactically ergative. In fact, analyses of morphologically ergative languages generally assume that these languages have syntactically accusative structures.

There has been some disagreement in the literature on Tsimshianic languages regarding whether they should be classed as syntactically or morphologically ergative. Rigsby (1975) proposed a syntactic analysis of Gitksan's ergativity, claiming that it derived from a syntactic structure in which the ergative argument was in VP internal position at D-Structure, while the absolutive argument was in VP external position.⁹ Rood (1977) proposed a partially syntactic analysis of these ergative facts. He claimed that transitive clauses in Gitksan had the same structure as in an accusative language but that intransitive clauses were structured differently in that the single argument was always in VP internal position, and thus in the same position as transitive objects.¹⁰

An almost identical range of facts has been cited in discussions of ergativity in Nisgha. Tarpent (1982) claims that Nisgha is syntactically ergative¹¹, while Belvin (1984) claims that Nisgha is syntactically accusative and morphologically ergative. Mulder (1987) shows

⁹This is in principle identical to Marantz's (1984) proposal, discussed later, although Rigsby's proposal predates Marantz's and is based on different theoretical assumptions. In a more recent paper, Rigsby (1989) revises his earlier analysis, and concludes that there is not strong evidence of syntactic ergativity. Instead, he speculates that Gitksan is perhaps non-configurational, a proposal which is discussed in Section 2 of this chapter.

¹⁰This is similar in some respects to the analysis I propose in Chapter 4.

¹¹Note that Tarpent and Belvin do not assume the same definition of syntactic ergativity.

that Coast Tsimshian exhibits some ergative patterns and some accusative patterns in both its syntax and its morphology. Dunn(1987) explicitly proposes a syntactically ergative analysis of Coast Tsimshian.¹²

The range of analyses that have been proposed illustrate that it is not immediately obvious whether the ergativity displayed by these languages is syntactic or morphological in nature. In order to address this question, I will examine two different definitions of syntactic ergativity - that of Dixon (1979) and that of Marantz (1984). I will show that under both approaches, Gitksan should be classified as morphologically rather than syntactically ergative.

1.4.1. Dixon (1979)

Dixon (1979) considers data from a wide variety of languages which are considered to be ergative, and based on this study proposes a basis for determining whether certain constructions are morphologically or syntactically ergative.

Briefly, Dixon suggests that ergative patterns should be classed as morphological if they relate to how the language marks its grammatical functions. For example, verbal affixes, case-marking or particles which mark S and O in the same way, but mark A distinctly are morphologically ergative patterns

With respect to syntax, Dixon assumes that all languages are syntactically accusative at some abstract level, since A and S are grouped together as a universal category of "subject". Certain syntactic constructions in all languages appeal to this universally accusative base. For example, in imperatives, S and A are universally grouped together as

¹²Note, however, that Coast Tsimshian is syntactically rather different from Gitksan and Nisgha, so that claims about its grammar cannot automatically be assumed to hold of Nisgha and Gitksan.

the 2nd person addressees; in jussive complements, the object of the jussive verb is universally the S or A of the complement; the subject of a verb like "can" is universally the S or A of the associated lexical verb. Since these constructions are universally accusative, Dixon argues that they should not be used in determining whether a language has ergative or accusative syntax.

Instead, true evidence of syntactic ergativity is revealed at a more shallow level, related to constructions such as coordination, subordination and relativization. If a language groups together S and O as syntactic pivots¹³ in this type of construction, then Dixon argues that it may be considered to show syntactic ergativity.

In the following section I consider how the data from Gitksan should be classified under this definition of syntactic vs. morphological ergativity.

1.4.1.2. Morphological ergativity in Gitksan

It is clear that many of the ergative patterns listed earlier should be classed as morphological under Dixon's approach. In particular, all patterns relating to case-marking, agreement and person-markers could be classified as morphologically ergative, since they relate to how Gitksan marks grammatical relations. It is somewhat more difficult to classify the ergative patterns related to empty pronominals, imperatives, and extraction. However, I suggest that these are also basically morphological in nature.

The fact that S and O group together in being potentially realised by zero pronominals in independent clauses can ultimately be traced to morphological factors. The distribution of zero pronominals is exactly equivalent to the distribution of Series III person markers, and

¹³The "syntactic pivot" in this sense is the NP which is coreferential between two clauses in such constructions. See Dixon (1979:120ff) for more discussion of this term.

since only S and O can be realised by Series III person markers, only S and O can occur as zero pronominals.

The ergative pattern observed in imperatives also seems to be a byproduct of the ergative person marking system. Morphologically, an imperative patterns like a truncated dependent clause, and in a dependent clause only A is marked by a preverbal morpheme. Thus, when the clause is truncated preverbally it is only the morpheme representing A which is lost.

Finally, the ergative pattern in extraction constructions also seems to be basically morphological in nature, in that the extraction morphology serves to mark the grammatical function of the extracted NP.

Adopting Dixon's view of the split between morphological and syntactic ergativity, then, all the ergative patterns described earlier should be classified as morphologically ergative.

The fact that many of these ergative patterns are restricted in their distribution to particular clause types does not mean that Gitksan should not be classified as morphologically ergative. Dixon (1979:64) notes that of the languages which have been classified as having ergative morphology, none is consistently ergative throughout all its morphology.

1.4.1.3. Lack of syntactic ergativity in Gitksan

In order to support my general claim that Gitksan is morphologically ergative but not syntactically ergative, it is also necessary to show that Gitksan does not exhibit the kinds of syntactically ergative patterns described by Dixon. In this section I begin by discussing ~~one putative example of syntactic ergativity in Gitksan, showing that the facts in question~~

can be explained without appealing to the notion of syntactic ergativity. More specifically, I argue that the apparent evidence of syntactic ergativity encountered in one type of coordination construction is actually the result of a morphologically ergative pattern. I then show that in subordination and relativization constructions no ergative patterns are exhibited.

1.4.1.3.1. Coordination

Dixon shows that in the Australian language Dyirbal, clausal coordination has an ergative basis, in that S and O act as the syntactic pivot. In Dyirbal, two clauses can be coordinated only if they share an NP which has S or O function. In the second clause the common NP can be deleted. Thus, a sentence paralleling (45) is acceptable, since the common NP is S in both clauses.

(45) Father returned and was seen by mother.

However, a sentence such as (46) is not acceptable, since the common NP is S in the first clause, but A in the second.

(46) Father returned and saw mother.

Tarpen (1982) suggests that Nisgha shows a similar kind of syntactic ergativity related to deletion in coordinate structures. Consider the following Nisgha sentence, taken from Tarpen (1982:63):

(47) *ts'in t = Fred ?i: - t humts'aX = s t = Mary*
come.in cn=Fred and-3 kiss = case cn=Mary
"Fred came in and Mary kissed him"
ts'in t Fred iit humts'axs Mary

In the second half of the conjunct, the argument "Fred" is understood but not phonetically realised. ~~The morphology of the sentence does not reveal whether Fred should be~~

interpreted as the A or O of the second clause. However, according to Tarpent, Nisgha speakers normally interpret the missing argument as the O rather than the A of this second clause. Thus, the O of the second clause is deleted under identity with the S of the first clause. Tarpent therefore claims that the Nisgha construction has an ergative/absolutive rather than a nominative/accusative basis. This, she notes, contrasts to a comparable construction in an accusative language like English. In the following example, it is the A of the second clause which is deleted under identity with the S of the first clause.

(48) Fred came in and kissed Mary (Tarpent 1982:63)

The relation of identity between S and A is a nominative/accusative pattern.

Data comparable to (47) are found in Gitksan. However, there are a number of problems with using sentences of this type as an argument for syntactic ergativity. First, unlike Dyirbal, Gitksan does not restrict to S and O the elements which may be coreferential between two conjoined clauses, as illustrated in the following example:

(49) w'itx^w t = John_i ʔi: - t_i sə- ʔank^w = ʔ hun
 arrive cn=John and-3 pfx-cook=cn fish
 "John arrived and he cooked the fish"
 'witxw t John iit sa'ankwhl hun

In this example, the S of the first clause is coreferential with the A of the second clause (both marked with *i* subscript).

This example does differ from the examples cited in (47) in that there is no truly missing argument in the second clause. The A argument is realised in the second clause by the Series I agreement marker, underlined in (49). However, the fact that the A argument is realised by a person marker in the second clause in (49), while the O argument is totally unrealised in the second clause in (47) has no bearing on the question of syntactic

ergativity. Rather it simply results from a morphological fact about person marking. Clauses introduced by the coordinator /ʔi:/ are dependent in form, and therefore always contain a Series I person marker reflecting the person and number of A. Thus there are morphological reasons why A can never be totally unrealised in the second clause of a coordinate sentence.

A second problem with using data such as (47) as evidence to support a syntactically ergative analysis is that, as Tarpent notes, sentences of this type are potentially ambiguous, with the interpretation "Fred came in and kissed Mary" also available for (47). Under this interpretation the sentence clearly no longer illustrates the ergative pattern under consideration. Tarpent notes that for Nisgha speakers this alternative interpretation is marked and has a different stress pattern^{14,15}. However, the fact that the alternative interpretation is available at all undermines the argument that data such as (47) constitute evidence of syntactic ergativity.

1.4.1.3.2. Relative clauses

Relative clauses are a second construction type in which we might expect to find evidence of syntactic ergativity. Dixon notes that in Dyirbal relative clauses, the relativized NP must be in S or O function in the relative clause. In Gitksan, however, NPs can be relativized in S, O or A function, as illustrated in the following examples:

(50) S relativized

kaʔ - ə - y' = ɪ kat = ɪ tawɪ - ət = əst
 see - erg-1sg=cn man=cn leave-S.extr=interact
 "I saw the man who left"

ga'a'yhl gathl da'whlidist

¹⁴For the Gitksan speakers I have worked with this actually seems to be the preferred interpretation of the equivalent Gitksan sentence.

¹⁵Primary stress must be placed on the nominal following the verb ("Mary" in this case) instead of on the verb, as is usual.

1.4.1.3.4. Summary

In this section I have considered three types of constructions where syntactically ergative patterns are likely to be found, and I have shown that in all cases ergative patterns fail to appear. This provides further support for the claim that Gitksan is not syntactically ergative.

1.4.1.4. Split ergativity.

Before concluding this section I wish to address briefly the question of split ergativity in Gitksan.

As was evident in the description of ergative patterns in Section 1.2, there are many ergative patterns which are restricted to independent clauses. These apparent differences in ergative patterns between independent and dependent clauses have led Silverstein (1976:113) to cite Tsimshianic languages as examples of split ergative languages, with the split being conditioned by clause type.

While it is certainly true that there is a relationship between clause type and the extent of ergative patterning, with ergative patterns more prevalent in independent clauses, it is somewhat misleading to classify Gitksan as a split ergative language in this simple manner. As we have seen, some ergative patterns occur in both independent and dependent clauses, and at least one ergative pattern (the distribution of Series I agreement) is restricted to dependent clauses.

1.4.1.5. Conclusion

This section has shown that under Dixon's (1979) assumptions, Gitksan should be ~~classified as morphologically but not syntactically ergative.~~

1.4.2. Marantz's definition of syntactic ergativity.

1.4.2.1. Introduction

A rather different approach to the issue of syntactic vs. morphological ergativity, based on a structural definition of syntactic ergativity, is found in Marantz (1984). Although the previous section showed that under Dixon's definition of ergativity, all the ergative patterns in Gitksan should be classed as morphologically ergative, Marantz's definition is sufficiently different that the same conclusion might not necessarily hold under his approach.

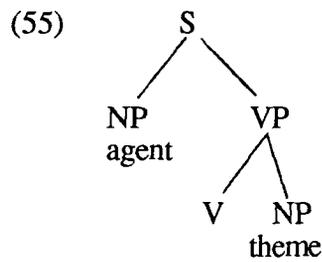
In this section I outline Marantz's proposal and discuss some general problems with it. I ultimately claim that under this definition also, Gitksan proves to be morphologically rather than syntactically ergative. However, the evidence for this classification is not presented until Section 3 of this chapter.

1.4.2.2. Outline of Marantz's proposal

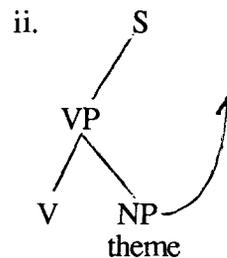
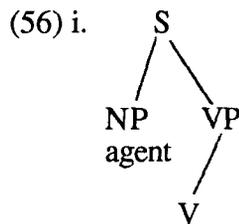
Marantz claims that syntactically ergative languages differ from syntactically accusative languages at D-Structure, in the mapping of theta roles onto syntactic positions.

In a syntactically accusative language, like English, the agent role is mapped onto the [NP, S]¹⁶ position and the theme role is mapped onto the [NP, VP] position, producing a transitive structure like the following:

¹⁶ For referring to structural positions, [NP,S] refers to an NP immediately dominated by S, sister to VP and [NP, VP] refers to an NP immediately dominated by VP, sister to V.



In an intransitive sentence, the single argument, whether agent or theme, will also be in [NP,S] position at S-Structure. If this argument is an agent, it will be base-generated in this position (i); if it is a theme it will reach this position by movement (ii).¹⁷

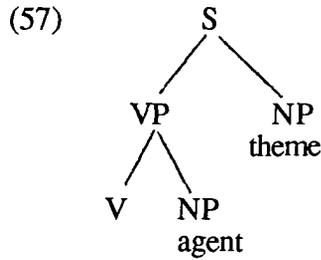


In (55)-(56), S and A are both in the [NP,S] position at S-Structure. This explains why, in English, they pattern together syntactically.

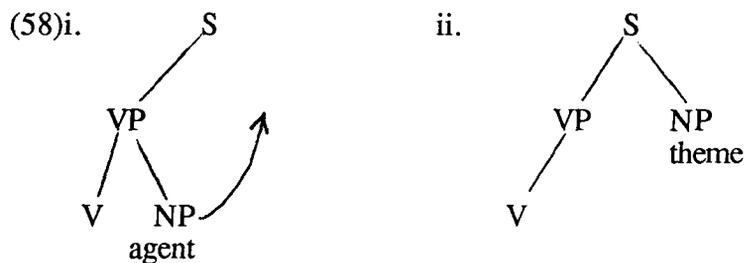
Marantz proposes, however, that languages have another mapping available to them, in which the agent is mapped onto the [NP,VP] position and the theme is mapped onto the [NP,S] position. This mapping results in a transitive structure such as the following:¹⁸

¹⁷What exactly motivates movement to [NP,S] position depends on what version of GB theory is assumed. In Chomsky (1981) such movement is motivated by the Extended Projection Principle which requires every clause to have a subject.

¹⁸I assume a V-initial structure here, since this is the one which is relevant for Gitksan. Other orderings are obviously possible.



In intransitive sentences, again, the single argument will be in the [NP,S] position at S-Structure, by movement (i) or base-generation (ii).



This other mapping produces what Marantz terms a syntactically ergative language. In a language with this type of mapping, S and O are in the same structural position, [NP,S], at S-Structure, while A is in a different structural position inside the VP. This provides a syntactic account of why A should pattern differently from S and O.

Under this assumption about mapping, a syntactically ergative language is predicted to show very different syntactic characteristics from an accusative language.¹⁹ For example, in a transitive clause V and A instead of V and O should pattern together as a VP constituent, and O should behave as though it is structurally higher (rather than lower) than A. In Section 3 of this chapter, which discusses syntactic evidence concerning the structure of the clause in Gitksan, I will show that in fact Gitksan fails to pattern as syntactically ergative in the ways predicted by Marantz's classification.

¹⁹See Levin (1983) for more detailed discussion of this issue.

The status of Marantz's proposal is somewhat controversial. Allowing such radical differences in the kinds of structures assigned to languages is clearly undesirable for a theory which aims to restrict the extent to which languages may vary. Since the main reason for wanting the theory to be restrictive in this way is to account for learnability, it is interesting that Pye (1990) has argued explicitly that this type of syntactic ergativity is unlearnable, since no consistent cues are available to tell children whether or not the language they are learning is syntactically ergative. As Johns (1987) points out, any cue would need to be robust, given that this type of syntactic ergativity, if it exists at all, is clearly the marked option. Pye shows that neither morphology, nor word order, nor semantic bootstrapping can be used as cues, and that if a learner once wrongly assumed that the language she was learning was syntactically accusative, there would be nothing to force her to retreat from this position. All apparent counterevidence could be handled with simple local adjustments.

These problems suggest that probably no language is syntactically ergative in Marantz's sense. Despite this, however, Marantz's proposal has been important in the literature on ergative languages over the last decade, and so it seems worthwhile to show explicitly, as I do in Section 3 of this chapter, that Gitksan is not syntactically ergative in this sense. This result is desirable in that it provides indirect support for my claim that Gitksan data can be accounted for within a standard accusative structure, and also for the broader claim that syntactically ergative languages in Marantz's sense do not exist.

2. Gitksan and non-configurationality

Another hypothesis that has been advanced regarding the structure of Gitksan and Nisgha is that they might be classed as non-configurational languages. Jelinek (1986) first claims that Nisgha is non-configurational, and Rigsby (1989) suggests that Gitksan might be non-configurational. As noted in Chapter 1, such an analysis is problematic for GB theory. A non-configurational structure violates putative universals governing the relationship between theta roles and syntactic structure, and, as a result, allowing such structures makes the theory less restrictive. From a theory-internal standpoint, then, there is a strong motivation for trying to reanalyse any apparent examples of non-configurational languages as configurational.

Although Gitksan and Nisgha have been regarded as non-configurational, no extensive defence of this position has been presented in the literature. This section examines this question with respect to Gitksan, and concludes that there is in fact insufficient evidence to support a non-configurational analysis of Gitksan.

2.1. Defining non-configurationality

Since the term "non-configurational" has been used in (at least) two distinct ways in the literature, I begin by defining how I will be using the term. In current usage, a language might be classed as non-configurational if it either :

A. Exhibits certain surface characteristics, in particular free word order, but also discontinuous constituents, extensive use of null anaphora, lack of expletives, lack of movement transformations, especially NP movement, and a rich case system.

or:

B. Lacks some or all hierarchical phrase structure configurations, and in particular the phrasal category VP.

In order to keep these two meanings distinct, I shall refer to A as "typological non-configurationality", and B as "structural non-configurationality".

Under certain accounts of non-configurationality (e.g. Hale 1983), the two definitions of configurationality are closely related, since typological non-configurationality is viewed as resulting from structural non-configurationality, and in general it is only proposed that a language is structurally non-configurational if it shows at least some of the typological properties in A. One approach to determining whether Gitksan is structurally non-configurational, therefore, is to consider whether it shows the predicted typological characteristics. This is addressed in this section. Since this approach ultimately proves inconclusive, however, in Section 3 of this chapter I turn to structural tests to determine whether Gitksan is structurally non-configurational. I conclude that there is sufficient evidence of a VP to classify Gitksan as a configurational language.

2.2. Typological non-configurationality

As pointed out in Marácz and Muysken (1989:15), little exclusively typological work has been done on non-configurationality. However, in the syntactic literature, many claims have been made about the typological characteristics of non-configurational languages. The best known list of typological characteristics is the following, given in Hale (1982):

- (59) free word order
discontinuous expressions
frequent pro-drop
no NP movement
no expletives
rich case system
complex verb words or verb cum AUX system

These properties clearly divide English, which is considered to be a configurational language, and shows none of the properties, from Warlpiri, which is considered to be a non-configurational language, and shows all of the properties.

In the remainder of this section I consider each of these properties in turn, and show how Gitksan patterns with respect to each.

2.2.1. Defining and applying the typological tests

The fact that languages such as English and Warlpiri can be readily classified with respect to Hale's typological characteristics seems to suggest that it will always be obvious whether or not a particular language exhibits any of these properties. However, English and Warlpiri seem to represent unusually clear cases, being at the extreme points on a continuum, with many languages arrayed between these two extremes. For these intermediate languages it is often much more difficult to determine whether or not they show a particular property. In this section, therefore, I consider in detail what is meant by each property, and propose a more precise definition for each, before trying to classify Gitksan with respect to that property.

2.1.1. Free word order

i. Discussion of the property

The first property proposed by Hale as a distinguishing feature of non-configurational languages is free word order. The term "free word order" is used in a number of different

ways, as has been pointed out by Schauffele (1991), Perhaps in its most common usage, it is used to mean "free constituent order", as in Stowell (1981:75).²¹ This has often been viewed as the prototypical non-configurational property, and like most of the properties discussed in this section, it is one which clearly distinguishes Warlpiri and English. In Warlpiri, the elements subject, object and verb can appear in any order, as illustrated: (AUX is restricted to second position.)

- | | | | | | |
|------|---|------|--------------|-------------------|-----|
| (60) | Kurdu-ngku | ka | maliki | wajilipi-nyi | SOV |
| | child | -ERG | AUX:pres | dog chase-NONPAST | |
| | "The child is chasing the dog"(Hale 1981:1) | | | | |
| | Maliki | ka | kurdu-ngku | wajilipi-nyi | OSV |
| | Maliki | ka | wajilipi-nyi | kurdu-ngku | OVS |
| | Wajilipi-nyi | ka | kurdu-ngku | maliki | VSO |
| | Wajilipi-nyi | ka | maliki | kurdu-ngku | VOS |
| | Kurdu-ngku | ka | wajilipi-nyi | maliki | SVO |

In English, by contrast, only SVO order is possible.

- | | | |
|------|---|--------------------|
| (61) | The child chased the dog | SVO |
| | *The dog chased the child | *OVS |
| | (ungrammatical under this interpretation) | |
| | *Chased the child the dog | *VSO |
| | *Chased the dog the child | *VOS |
| | *The dog the child chased | *OSV ²² |
| | *The child the dog chased | *SOV |

However, even the prototypical cases, such as Warlpiri and English, fail to be totally free or totally fixed, respectively, in their constituent order. In Warlpiri, AUX must appear in second position and there are certain ordering restrictions in non-finite clauses (Laughren 1989:345). In English, on the other hand, elements such as PPs and adverbs show relative freedom of ordering, as illustrated in the following example from Haider (1989:189):

²¹Under this interpretation it is clearly distinct from the notion of discontinuous constituents, dealt with in the next section. Schauffele uses the term "free phrase order" for what I am terming free constituent order.
²² This order is acceptable only with particular intonation to indicate a contrastive focus.

- (62) He argued with me about her.
 (63) He argued about her with me.

Furthermore, orders other than SVO are exhibited in questions and topicalization structures, such as the following:

- (64) Whom does John like? O(aux)SV
 (65) John, I really dislike. OSV

A second problem with classifying languages as free or fixed in their constituent order comes from languages which seem to be intermediate between the extremes represented by English and Warlpiri. For instance, Japanese is often classed as a free constituent order language. Nevertheless, although the ordering of subject, object and oblique is free, as illustrated in the following data set, the verb must be clause final.

- (66) John-ga naihu-de Bill-o sasita S Obl O V
 John -nom knife-with Bill-acc stabbed
 "John stabbed Bill with a knife"
- John-ga Bill-o naihu-de sasita S O Obl V
 naihu-de John-ga Bill-o sasita Obl S O V
 naihu-de Bill-o John-ga sasita Obl O S V
 Bill-o John-ga naihu-de sasita O S Obl V
 Bill-o naihu-de John-ga sasita O Obl S V

(Saito 1985:23-4, taken from Muraki 1974:86)

Many other languages also fall into this intermediate category. German exhibits relatively free ordering of nominals, but the position of the verb is fixed. In Finnish, the order of elements SVO is free if no other elements are present in the sentence, but limited if, for example, adverbials are added (van Steenbergen 1989:156). Italian is basically an SVO language, but it allows subject inversion, giving an alternative surface VOS order (Speas 1990).

Freedom of constituent order thus seems to be a relative rather than an absolute property, and without a more precise definition it is difficult to classify languages as exhibiting free or fixed order. Perhaps the most intuitively appealing attempt to formalize this notion is

these cases the pronominal object normally precedes the lexical subject, resulting in apparent VOS order.²⁴

- (68) $\text{hmo: -}\underline{\text{ə}}\text{-tj}$ $\underline{\text{n'u:m'}}$ t = Mary_i
 V (S) O S
 help -erg-3sg 1pl cn = Mary
 "Mary helped us" R 262
hlimooyit 'nuu'm t Mary

In a sentence of this type it is the form and ordering of the person markers (underlined) which determines the grammatical relations which hold among the sentence constituents, rather than the position of the independent nominal "John". However, given the restricted environments in which this order can occur, and the ordering constraints operative even here, this sentence type certainly does not constitute evidence that Gitksan is free in constituent order.

The only other type of exception to surface VSO order arises in questions and focus constructions. In these cases, a single NP appears preverbally and the sentence shows special morphological marking (underlined in the given examples):

- (69) focus object:
 $\text{hun} = \underline{\text{t}}$ $\text{k}^{\text{w}}\text{up} - \underline{\text{ə}} = \underline{\text{t}}$ kat
 O V S
 fish = cn eat - erg-3=cn man
 "(It was) fish the man ate"
hunhl gubihl gat

²⁴Younger speakers I have worked with do not seem to use this special order in independent sentences, and only optionally in dependent sentences. Thus they will usually produce sentences such as the following, which exhibit normal VSO order:

- i. $\text{hmo: -}\underline{\text{ə}} = \text{s}$ t = Mary n'u:m'
 help - erg = case cn = Mary 1pl
 "Mary helped us" R 263
hlimooyis Mary 'nuu'm
- ii. $\text{ka? -}\underline{\text{ə}} = \text{s}$ t = John n'i:y'
 see -erg=case cn = John 1sg
 V S O
 "John saw me"
ga'as John 'nii'y

Rigsby (1986:263/4) notes that even older speakers, while they consider the sentences such as (68) in the text to be "better", admit to using sentences such as (i) also. More detailed discussion of such variation is given in Chapter 4.

- (72) **Wawirri** kapi-rna panti-rni **yalumpu**
 kangaroo AUX spear NON PAST that
 "I will spear that kangaroo" (Hale 1983:6)
- (73) **Kurdu** - jarra - rul ka-pala maliki wajilipi-nyi **wita**-jarra-rlu
 child-DUAL-ERG AUX:pres-du dog chase-NONPAST small-DUAL-ERG
 "The two small children are chasing the dog" (Hale 1981:1)

In (72), the demonstrative "yalumpu" is separated from the noun "wawirri" which it modifies, and in (73) the adjective "wita" is separated from the noun "kurdu" which it modifies. Evidence from AUX placement shows that such sequences potentially form constituents, because they can occur together in pre-AUX position.

- (74) **Wawirri yalumpu** kapi-rna panti-rni
 kangaroo that AUX spear-NONPAST
 (Hale 1983:6)
- (75) **kurdu wita**-jarra-rlu ka-pala maliki wajilipi-nyi
 child small-DUAL-ERG AUX:pres-du dog chase-NONPAST
 (Hale 1981:5)

Again, English and Warlpiri differ in their behaviour with respect to this property. English does not allow discontinuity of this type between an adjective or determiner and the noun it modifies:

- (76) ***Kangaroo** I will spear **that**.
 (77) *The two **children** are chasing the dog **small**.

English does exhibit discontinuous NPs in certain construction types, as illustrated below.

(78) and (79) are examples of rightward extraposition (taken from Rochemont (1992:373)), and (80) is an example of topicalization. Nevertheless, there appear to be many more constraints in English than in Warlpiri on which elements can be discontinuous, and where the discontinuous elements may occur.²⁵

²⁵In GB style analyses, these are assumed to result from constraints on movement, such as subjacency, constraints on licensing of empty categories, such as the ECP, or constraints on interpretation, such as the Complement Principle (Rochemont and Culicover 1990).

- (78) **A man** came into the room **who everybody recognized**.
 (79) **The construction** has just begun **of a new bridge over the bay**.
 (80) **This language** I have read **many articles about**.

Given the following examples, German appears to be more tolerant of discontinuent NPs than English, but less free in this regard than Warlpiri. ((81) is from Haider (1989:192), (82) from Helmi Braches (p.c.):

- (81) **Fotos** habe ich **von ihr** noch **keine guten** gemacht
 Photos have I of her yet none good taken
 "I haven't yet taken any good photos of her"
- (82) ***Foto** habe ich **von ihr das gute** noch nicht gesehen
 photo have I of her the good yet not seen
 "I haven't yet seen the good photo of her"

As with the property of constituent order, then, whether or not a language allows discontinuous constituents seems to be a relative property rather than an absolute one. While intuitively there does seem to be a fundamental difference between the relatively constrained types of discontinuities observed in English and German, and what Schauffele terms the "gratuitous" discontinuities observed in Warlpiri, it is difficult to formalize this intuition precisely.²⁶ Therefore, in the discussion in the next section I will simply use Warlpiri and English as points of reference with which to compare Gitksan, assuming that they represent extremes in terms of allowing and disallowing discontinuous constituents.

ii. Gitksan discontinuous constituents

A comparison of Gitksan with Warlpiri and English shows that Gitksan is very similar to English in the extent to which it allows discontinuous constituents. Thus, in view of the discussion above, I assume that Gitksan must be classed as not allowing discontinuous constituents.

²⁶Schauffele (1990) suggests that the term "scrambling" be reserved for languages such as Warlpiri, Latin and Sanskrit, which show relatively unconstrained discontinuities.

- (86) **k^wilu:n = ɿ kat wila:x-ə -y' ʔan - t ʔati k^wup = ɿ smax**
 three = cn man know -erg-1sg A.extr-3 not eat = cn meat
 "I know three people who don't eat meat"
gwiluunhl gat wilaayiy ant ati guphl smax

The only other type of discontinuous constituent I have found in my data is illustrated in (87) - (88). In both these cases, what appears to be the second half of a conjunct appears sentence finally, separated from the first half of the conjunct.

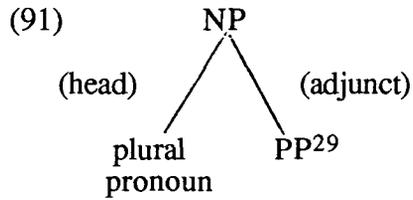
- (87) **k'an - m'i [pro]_i t=x^win qan t = n'i:n**
 own-1pl cn=this and/with cn= 2sg
 "This belongs to you and me/You and I own this"
k'ani'm tun gant 'niin
- (88) **ne: - tip_i - ti: [pro]_i k^wup = ɿ hun qan t = Bill²⁸**
 not - 1pl - contr eat = cn fish and/with cn= Bill
 "Bill and I didn't eat the fish"
needipdii guphl hun gan t Bill

If these were indeed conjunct structures, then such data would show that Gitksan allowed more types of discontinuous constituents than English, since conjuncts cannot be split in this way in English:

- (89) ***We/I** ate the fish **and Bill**
 (90) ***We/I** own this **and you**.
 (Both are ungrammatical under the relevant interpretation.)

However, what is translated into English as a conjunct is in fact an example of a Gitksan plural pronoun construction (Schwartz 1988) in which the initial pronominal in the NP is inclusive of the person and number value of the whole NP. What appears to be the second half of the conjunct is actually an adjunct modifying the head N, with a structure as follows:

²⁸Justification for the position of *pro* in these sentences will be given in Chapter 4.



The examples in (87) - (88) thus involve a discontinuity between an NP and an adjunct, similar to the kind of English discontinuities illustrated in (79) above.

I therefore conclude that Gitksan, like English, should be classified as a language which does not show the property of discontinuous constituents.

2.1.3. Frequent pro drop

i. Discussion of the property

The third property which Hale suggests characterizes non-configurational languages is that they exhibit frequent pro drop. Again, English and Warlpiri differ sharply in this property. A Warlpiri sentence can be complete without any independent nominals or pronominals in the sentence:

- (92) Panti - rmi ka
 spear -NON PAST AUX
 "He/she is spearing him/her/it"

In a parallel sentence in English, however, both subject and object must be overtly expressed:

- (93) *is spearing
 (94) He/she is spearing it

Once again, though, it is difficult to divide languages neatly into two classes with respect to this property. Even English allows empty pronouns in certain environments. For

²⁹The structure I propose is taken from Aissen 1989:523. It is not clear whether the adjunct phrase should be analysed as a PP or some other phrase type in Gitksan.

example, empty pronouns can occur in the subject position of an untensed clause (95) and an imperative (96).

- (95) Mary wants [e to leave]
- (96) e close the door!

In informal speech, empty pronouns (and contracted auxiliaries) can occur in the subject position of questions, as illustrated in (97) - (98) (taken from Akmajian et al. 1990:244-5):

- (97) e want some coffee?
- (98) e been sneaking to the movies again, haven't you?

Finally, in recipe contexts empty objects occur, as in the following example (from Massam and Roberge 1989:135):

- (99) Remove e from oven and cool e.

Other languages instantiate many intermediate stages between English and Warlpiri with respect to the degree to which they allow pro drop. In Spanish and Italian subject pronouns can be freely dropped³⁰; in Hebrew first and second person subjects in future and past tenses, and possessors in construct state constructions can be dropped (Borer 1983, 1986:392); in Irish (McCloskey and Hale 1984) and Turkish (Kornfilt 1984) subjects, possessors and prepositional objects can be dropped, but not the objects of verbs.³¹ In Mohawk and Navajo, as in Warlpiri, both subjects and objects can be dropped.³²

In other languages, such as Chinese, Japanese and Korean (Huang 1984), virtually any argument that can be identified with a discourse topic can be subject to pro drop. In

³⁰If clitic pronouns are analysed as functioning much like agreement, as in Roberge (1986), then Spanish and Italian would be analysed as being able to drop objects also. However, in this context I interpret the property of pro-drop conservatively, as meaning the absence of any pronoun, whether cliticized or not.

³¹Kornfilt notes that objects may be pro-dropped in certain discourse contexts, but not with the same freedom as the other elements.

³²In all of these languages, the possibility of pro drop is linked to the presence of a licensing agreement element in the sentence.

German, under similar discourse conditions, it is possible to drop either a subject or an object, but not both (Huang 1984).

Such variation in the constraints on pronoun drop show that making a clearcut decision on whether a language shows "frequent" pro drop is far from simple. Again it seems to be a graded rather than a discrete property.

For the purposes of this discussion, however, I will classify a language as displaying "frequent" pro drop if it allows both subject and object to be dropped in most sentence types.³³ Under this definition, Warlpiri, Mohawk, Navajo, Japanese and Chinese would be classed as showing frequent pro drop, while English, Spanish, Hebrew, Turkish, Irish and German would not.

ii. Gitksan and pro drop

Even adopting the definition of frequent pro drop given above, classifying Gitksan with respect to this property proves somewhat difficult, for two reasons. First, the extent to which pro drop occurs varies according to clause type. Secondly, the degree to which the language appears to show pro drop is, to a large extent, dependent on what status is assigned to the person marking affixes. However, under the analysis I assume, Gitksan will be classed as showing frequent pro-drop.³⁴

³³This seems to correlate with the predictions of most syntactic theories of non-configurationality - for example, Jelinek (1984) and Hale (1983). However, it is a somewhat arbitrary cut off, since it is not clear that there is any fundamental distinction between languages which can drop one vs more than one pronominal.

³⁴My assumptions about the status of person markers, and pro drop phenomena in Gitksan in general will be examined in much more detail in Section 4 of this chapter.

pro can always occur in a nominal position which is coindexed with an agreement morpheme. Thus, in independent sentences, *pro* can normally occur only in transitive subject position, since this is the only position coded by agreement.

- (100) k^wup - ə - t_i [pro]_i=ɩ hun
 eat -erg-3 =cn fish
 "S/he ate the fish"
gubithl hun

Based on the definition of "frequent" *pro* drop proposed above, such distribution would not count as frequent.

However, in dependent sentences, which are more frequent in discourse, and which exhibit richer agreement, *pro* can potentially occur in both subject and object position:

- (101) wil - t_i [pro]_i kaʔ - y'_j [pro]_j
 that - 3 see - 1sg
 "..that he saw me"
wilt ga'a'y
- (102) wil paX - t_i [pro]_i
 that run - 3
 "..that he ran"
wil baxt

As discussed in Section 1 of this chapter, under certain discourse conditions it is even possible for *pro* to occur in positions in which it is not coindexed with an agreement morpheme. In such cases *pro* normally receives a default third person singular interpretation, as in the following examples:

- (103) paX [pro]
 run
 "s/he ran"
bax
- (104) kaʔ - ə = s t = Bill_i [pro]_j
 see-erg = case cn=Bill
 "Bill saw him/her"
ga'as Bill

Thus, overall, it seems appropriate to class Gitksan as having the property of frequent pro drop.

2.1.4. No NP movement

i. Discussion of the property

The fourth typological property which non-configurational languages are claimed to exhibit is a lack of NP movement. This is perhaps the most difficult of the properties to determine, since it is not something which can necessarily be determined from the surface form of sentences.

NP movement in English is commonly assumed to operate in syntactic constructions of the following types:

	construction type	example
(105)	passive	<u>John</u> was hit
(106)	unaccusative verb	<u>A storm</u> arose
(107)	raising verbs	<u>John</u> seems to like Bill
(108)	existential (raising verb) ³⁵	<u>A man</u> is in the garden

Within GB theory, each of these sentences is analysed as involving movement of the underlined NP into subject position. Evidence that this movement has occurred in these cases comes from the fact that the subject NP occurs on the surface in a position in which it could not have been theta-marked. In the passive and unaccusative constructions in (105) and (106), for example, this is because the subject bears a theme role, even though it surfaces in a position to which only an agent theta role can be assigned. In the raising and existential constructions in (107) and (108), evidence for NP movement comes from the fact that the verb adjacent to the subject - "seem" and "be" respectively - does not assign a theta role.

³⁵I follow Stowell (1978) and Heggie (1988) in assuming that "be" is a raising verb, but I classify existentials as a separate class for the purpose of cross-linguistic comparison.

While it is a relatively trivial matter to determine whether a language has constructions parallel to these (i.e. whether it has passives, existentials, etc.), simply establishing the presence of such constructions in a language cannot be taken as evidence that that language has NP movement. In GB theory, the NP movement in the above English sentences is motivated by case/agreement requirements.³⁶ However, in languages with different case/agreement properties, movement may not be required. For example, Baker (1987: 356) argues that in Irish, Georgian and Ute, NP movement does not occur in passives. Furthermore, in a VS(O) language, such as Gitksan, there is no evidence from word order to indicate whether a single post-verbal NP is in subject or object position.

Thus, unless a language can be shown to lack all constructions parallel to those in (105) - (108) above, how it should be classified with respect to the property NP movement will necessarily be dependent to some extent on particular theoretical assumptions and analysis. Such problems make this property rather unsatisfactory from a typological perspective.

ii. NP movement in Gitksan

In this section I review the available evidence, and conclude that Gitksan probably does not employ (overt) NP movement to subject position in its grammar, since there is no clear evidence for it in any of the environments discussed above. However, given the problems outlined in the previous section, my conclusions remain somewhat tentative.

A. Passive

Gitksan does have a passive construction, but various types of evidence suggest that it is a lexical rather than a syntactic passive and thus does not necessarily entail syntactic NP

³⁶In Chomsky (1981), the case requirements of the subject motivate the NP movement. In Chomsky (1992) it is the strength of the inflectional features of tense which forces overt movement.

movement. It should be noted, however, that these arguments are valid only against a totally syntactic approach to passive, such as that proposed in Baker.³⁷ An approach which assumes that the attachment of the passive morpheme is lexical, but that NP movement applies in the syntax, would still be compatible with the data I present.

a. Form of the passive

There are two passive suffixes which occur on transitive verb stems: the suffix /-s/ occurs on stems ending in velars, and the suffix /-(t)xw/ occurs on stems ending in non-velars.

The suffixes are illustrated in the following examples:

- (109) k^wux^w - s t = John
 shoot-pass cn = John
 "John got shot"

gukws t John

- (110) ʔak^wu wil ho:x- s - t
 what comp use - pass - 3
 "What is it used for?" R 304

agu wil hookst

- (111) ʔuw' - tx^w t = Mary quʔ = ʔ party
 invite -pass cn = Mary loc = cn party
 "Mary was invited to the party"

u'wtxwt Mary go'ohl party

- (112) Xpə - k^wu: - tx^w = ʔ book = s t = Kathy
 away -take -pass = cn book=case cn = Kathy
 "Kathy's book was snatched away"

xbiguutxwhl books Kathy

However, the passive morphemes show some idiosyncracies. For example, in the following example, both allomorphs of the passive are realised, and the less productive /-s/ allomorph appears outside the more productive /-(t)xw/ form:

³⁷Baker proposes that the passive morpheme is generated in Infl, and that the verb adjoins syntactically to the Infl containing the passive morpheme.

- (113) k^w in kaʔ - T - ə - y' = ɬ wila tsap - x^w .s = ɬ k^w i:s qan.m'ala
 juss see - T -erg - 1sg = cn how make-pass.pass=cn blanket button
 "I showed how to make a button blanket"
 (lit: how a button blanket is made)
gun ga'adi'yhl wila japxwshl gwiis gan 'mala

Such idiosyncracies suggest that passives in Gitksan are formed in the lexicon, rather than in the syntax.

b. Lexical exceptions and lack of productivity.

Additional evidence that Gitksan passives are lexical comes from the limited productivity of this construction. Rigsby (1986:334 and 1989:255) notes that there are many transitive verbs which do not have passive equivalents.³⁸ Furthermore, when English verbs are incorporated into Gitksan sentences, as in the following example, they cannot be passivized:

- (114) "type" - T - ə - y' = ɬ "letter" laX "computer"
 type - T - erg - 1sg = cn letter on computer
 "I typed the letter on the computer"
"type"di'yhl "letter" laX "computer"

- (115) *" k^w up" - x^w = ɬ "letter" laX "computer"
 type - pass = cn letter on computer
 "The letter was typed on the computer"

Such idiosyncratic productivity is characteristic of lexical rather than syntactic processes.

c. Idiosyncratic meanings

Another argument that the passive should be treated lexically is due to Rigsby (1989:255), who notes that certain passive verbs have idiosyncratic meanings. For example, the passive of the verb / k^w up/ "eat" is / k^w up- x^w / which has the meaning "be edible", as well as "be eaten".

³⁸He notes that more verbs have antipassive than passive forms.

d. Suppression of agent.

It is not possible to express overtly the agent argument of the passive in Gitksan. This apparent complete suppression of an argument of the verb is certainly consistent with a lexical treatment of the passive. However, it cannot be considered a strong argument for the lexical treatment, since this pattern can also be accounted for in a syntactic analysis. Baker (1987:336), for example, argues that the agent theta role is assigned to the passive morpheme in passive sentences, and that it is a lexical property of the passive morpheme which determines whether the morpheme can transmit its theta role to another NP. In a language in which the passive morpheme cannot transmit its theta role, the agent will not be realised. Thus the failure of the agent role to appear in Gitksan passives is not necessarily incompatible with a syntactic analysis of the passive.

e. Summary

In this section I have shown that the passive is somewhat unpredictable in form, is not productive, is sometimes idiosyncratic in meaning, and does not allow the expression of an agent. Most of these characteristics are more consistent with a lexical than a syntactic analysis of the passive, providing further support for the idea that NP movement is not involved in Gitksan passive constructions.

B. Unaccusative verbs.

A second environment in which NP movement might occur is with unaccusative verbs. If unaccusative and unergative verbs patterned similarly in certain respects, but distinctly in others, this might provide evidence for an analysis in which the underlying structural distinction in the position of the single argument is resolved by NP movement during the course of the derivation. However, although there are many ways in which the two classes of verbs pattern similarly, I have been unable to find any ways in which they

pattern differently. In what follows, I illustrate the identity of the two classes of verbs with respect to surface ordering, case-marking, person-marking, morphological marking of extraction and plural-marking.

a. Surface ordering

The single argument of an intransitive verb immediately follows the verb, regardless of whether it is an unergative or an unaccusative predicate, as is illustrated below:

Unergative: ʔalkaX "to speak"

(116) $\text{ʔalkaX} = \text{ʔ}$ kat
 speak = cn man
 "A man is talking"

algaxhl gat

Unaccusative: si:px^w "to be sore"

(117) $\text{si:px}^w = \text{ʔ}$ $\text{ʔanʔun} - y'$
 hurt = cn hand - 1sg
 "My hand hurts"

siipxwhl an'oniy'

Because the basic word order is VSO, however, these ordering facts fail to provide any evidence either for or against the claim that the position of the subject in the unaccusative sentences is derived through movement.

b. Case-marking

Case-marking also fails to provide evidence of a distinction between unergative and unaccusative predicates. As illustrated below, the intransitive subject is marked by an /s/ case-marker in a dependent sentence and is unmarked in an independent sentence, regardless of whether the predicate is unergative (118) - (119) or unaccusative (120) - (121).

Unergative:

Dependent

(118) $\text{yuk}^w = \text{ʔ}$ $\text{litsXx}^w = \text{s}$ t = John
 prog = cn read = case cn=John
 "John is reading"

yukwhl litsxxws John

Independent
(119) *limx t = John*
sing cn=John
"John sang"

limx t John

Unaccusative:

Dependent
(120) *ne: - ti: n'a:ʔe:q = s t=John*
not-contr bald = case cn=John
"John's not bald"

needii 'naahleeʔs John

Independent
(121) *n'a:ʔe:q t =John*
bald cn=John
"John is bald"

'naahleeʔ t John

c. Pronominal marking

Person markers also take the same form on unaccusative and unergative predicates. In independent clauses, Series III independent pronominals appear ((122), (124)) while in dependent clauses, Series II pronominal suffixes appear ((123), (125)).³⁹

Unergative:

Independent
(122) *limx n'i:y'*
sing 1sg
"I sang"

limx 'nii'y

Dependent
(123) *yuk^w = ʔ litsXx^w - y'*
prog = cn read -1sg
"I am reading"

yukwhl litsxxwi'y

³⁹Tarpen (1991) notes that there is a small class of verbs which take either independent pronominal suffixes or independent pronouns in apparently independent sentences. However, this class is not equivalent to the unaccusative or unergative class of verbs. Furthermore, Tarpen notes that this apparent "dependent" behaviour in independent clauses can also be observed with certain transitive verbs. More discussion of this phenomenon appears in Chapter 4.

Unaccusative:

Independent

(124) n'a:ɬe:q n'i:y
bald 1sg
"I'm bald"

'naahleek 'nii'y

Dependent

(125) ne: - ti: n'a:ɬe:q - y'
not-contr bald -1sg
"I'm not bald"

needii 'naahleek'a'y

d. Morphological marking of extraction

The morphological marking of extraction from intransitive predicates does not appear to be sensitive to whether the verb is unaccusative or unergative. With both types of predicates the connective /ɬ/ occurs between the extracted element and the clause, and the suffix /ət/ appears on the predicate:

Unergative:

(126) na: = ɬ litsXx^w - ət
who=cn count - S.extr
"Who counted?"

naahl litsx^wɬit

Unaccusative:

(127) k^wi = ɬ n'i: - toq - ət laX ha - n'i: - tXo:qx^w
what=cn on - lie - S.extr on instr - on - eat
"What is (lying) on the table"

gwi^hl 'niidog^at la^x ha'niit^xook^{xw}

e. Plural marking

As has already been mentioned, plural marking on an intransitive verb, in both Gitksan (Rigsby 1986:361), and Nisgha (Tarpent 1987) can mark either the plurality of the nominal argument, or plurality of actions. Plural marking of both types appears to pattern identically on unaccusative and unergative verbs.

The following examples illustrate plural marking indicating plural actions. Both unaccusative and unergative verbs can be marked for this type of plurality.

Unergative:

- (128) n'a: tɔs - t'is - a n'it
into.view pl - hit - detm 3sg
"S/he knocked"

'naa dist'isa 'nit

Unaccusative:

- (129) **tu**x^w - t'ak^w = ɬ ʔan - lip'insx^w - y'
pl - twist =cn instr - sew - 1sg
"My thread twisted (many times)"

duxwt'akwhl anlip'insxwi'y

Plural marking indicating the number of the subject nominal also occurs with both unergative and unaccusative verbs. The following pairs with singular and plural subjects illustrate this type of plural marking.

Unergative:

- (130) ʔalkaX = ɬ kat
talk = cn man
"A man is talking"

algaxhl gat

- (131) ʔal - ʔalkaX = ɬ ha:naq'
pl - talk = cn woman.pl
"Women are talking"

al'algaxhl haanak'

Unaccusative:

- (132) taw = ɬ ʔaks
frozen=cn water
"The water's frozen"

dawhl aks

- (133) **tu**: - taw = ɬ susi:t - x^w - m'
pl - frozen = cn potato - pass-1pl
"Our potatoes are frozen"

duudawhl susiitxwu'm

f. Conclusion

The data presented in this section illustrate that the two classes of intransitive verbs pattern identically in many respects. The data are not necessarily inconsistent with an NP movement analysis, since all the patterns described here may simply be ones which are not sensitive to D-Structure structural distinctions. Additionally, further research on the

language may reveal asymmetries of which I am unaware. What is clear, however, is that none of these data provide any evidence of NP movement in Gitksan.

C. Raising to subject predicates

A third environment which might provide a test for whether Gitksan exhibits NP movement involves verbal or adjectival raising predicates. However, I have been unable to elicit any examples of raising constructions in Gitksan. Two examples of how English raising constructions may be translated into Gitksan are given in (134) - (135), and neither involves raising. In (134), the meaning of the raising verb "seem" is expressed through the use of non-predicative dependent markers and preverbals. In (135), the English raising predicate "difficult" is translated with a predicate adjective /haqetx^w/. However, word order and case-marking indicate that the NP "Bill" has remained in the embedded clause with the predicate /titalq/ "talk to" which theta marks it.

- (134) mo:tsi liki w'ił lu: - ʔama - ti = ł qu:ts = s t = John ku:n'
 almost somehow around in - good- ? = cn heart =case cn =John now
 "John seems to be happy now"
 (lit: almost somehow happy in John's heart now.)
mooji ligi 'wil luu'amadihl goots John gyuu'n

- (135) haqetx^w ti: -t titalq - x^w = s t = Bill
 difficult contr-3 talk.to - pass=case cn=Bill
 "Bill is difficult to talk to" (lit: ?~difficult [Bill spoken to])⁴⁰
haqetxwdiit didalkxws Bill

While it would be possible for a language to lack raising verbs while still allowing NP movement in other circumstance, the apparent absence of raising verbs in Gitksan provides further circumstantial evidence for the claim that Gitksan does not allow NP movement.

⁴⁰The presence of the /t/ agreement morpheme following the predicate adjective in this sentence is unexpected and I am not sure how to account for it.

D. Existentials

The fourth environment in which we might expect to find evidence of NP movement is in existential constructions. The following are examples of Gitksan translations of English existential clauses.

(136) n'i: - ski: =ɬ "cup" laX ha - n'i: - yo:qx^w
on - lie = cn cup on instr-on - eat
"There's a cup on the table" (lit. A cup is lying on the table)
'niisgiihl cup lax ha'niiyookxw

(137) w'iɬ wil =ɬ kat qu2 =ɬ ts'im ʔaks
around be = cn man loc = cn in water
"There's a man in the water"
w'ihl wilhl gat go'ohl ts'im aks

I am unaware of any evidence in Gitksan which might indicate whether or not the subject of these sentences has undergone raising. The VS order is, of course, compatible with both a movement and a non-movement analysis.

E. Conclusion regarding NP movement

In this section I have considered various constructions in which we might expect to find evidence of NP movement - passive, unaccusative verbs, raising predicates and existentials. However, each construction has failed to provide any evidence that NP movement has applied. While not conclusive, this dearth of evidence strongly suggests that Gitksan lacks NP movement of the type which occurs in English.

2.1.5. No expletives

i. Discussion of the property

A fifth property claimed to distinguish configurational from non-configurational languages is the respective presence or absence of expletives, elements in NP positions which bear no theta role and have no semantic content. Again, this property clearly distinguishes English,

which has the expletives "it" and "there", from Warlpiri, which has no such expletive elements.

In languages which do exhibit expletives, these elements are generally found in subject positions to which no theta role is assigned and to which no NP has raised, as in the following English constructions:

raising

(138) It seems that John has left

unaccusative

(139) There arose a storm.

existential

(140) There is a man in the garden.

weather verbs

(141) It is raining.

Some languages also allow expletives in the subject position of impersonal passives, as in the following French example (Kayne 1975):

impersonal passive

(142) Il a été mangé beaucoup de pommes hier soir
"there were eaten many apples last night"

If a language exhibits overt expletive elements in any of these environments, then obviously that language does not lack expletives. Making the claim that a language *does* lack expletives, however, is somewhat more difficult, given the possibility within GB theory of phonetically empty expletives. Arabic, for example, is claimed to have an empty expletive subject in the following sentence type (Mohammad, 1989):

(143) [e] yabduu ?anna al - banaat - i saafarna
 seem.3.s.m that the-girls-acc departed.3.pl.f
 "It seems that the girls departed"

Evidence that there is an expletive element in subject position, even though there is no phonetically realised subject, comes from the third person singular subject agreement on the

verb "yabduu". Similar agreement patterns with empty expletives are found in Hebrew (Borer, 1986).

Since the existence of such empty expletives is a theoretical claim, it is unclear whether they should be considered when dealing with the purely typological question of whether a language lacks expletives. However, I will assume that in order for a language to be classed as lacking expletives it must not only lack overt expletives but also must lack any agreement which might be interpreted as identifying a phonetically empty expletive.

ii. Expletives in Gitksan

In order to test whether Gitksan shows the non-configurational property of lacking expletives, I consider the range of environments in which we might expect to find them, and I show that Gitksan has neither overt nor phonetically empty expletive elements in these environments. On the basis of this lack of positive evidence, I conclude that Gitksan probably lacks expletives.

A. Passive

Passivized transitive verbs pattern just like regular intransitive verbs in case-marking and agreement, and, again like intransitive verbs, they do not allow any expletive subject.

To my knowledge, in Gitksan, unlike German for example, it is not possible to passivize (unergative) intransitive verbs. An equivalent meaning is derived through the use of what Rigsby terms the impersonal pronoun /tix/. (Note that the passive morpheme does not surface in these forms, so they cannot be interpreted as impersonal passives.)

(144) limx - tix
sing - one
"There was singing"

limxdix

(145) yo:qx^w - tix qu = s = xwin
 eat(intr)-one loc = case = this
 "Someone has eaten here"
yookxwdix gosun

(146) hadiks - tix qu = s = xwin
 swim - one loc = case = this
 "Swimming is done here/Someone swims here"
hadiksdix gosun

B. Raising, unaccusative, existential and weather predicates

The data below show that overt expletives fail to surface with raising, unaccusative, existential and weather predicates:

Raising predicate

(147) haqetx^w = ɿ tim wil m'in - pats - x^w = ɿ Xpi:st t = x^wist
 difficult = cn fut comp up - lift - pass = cn box cn = that
 "It is difficult to lift that box"
haqetxwhl dim wil 'min batsxwhl xbiist tust

Unaccusative predicate

(148) luk^wil ʔam wil w'itx^w = s t = John
 really good comp come = case cn = John
 "It's really good that John came"
lukw'il am wil 'witxws John

Existentials

(149) helt = ɿ pil'ust ts'im laX - ha gaXx^w
 many = cn star in in - sky last night
 "There were lots of stars in the sky last night"
helthl bi'lust ts'im laxha gaxxw

(150) w'iɿ wil = ɿ kat quʔ = ɿ ts'im ʔaks
 around be = cn man loc = cn in water
 "There's a man in the water"
w'ihl wilhl gat go'ohl ts'im aks

Weather verbs

(151) m'isa:x
 daylight
 "It is daylight" R 254
'misaax

(152) hasaq - y' tim w'is tsi - ku:n'
 desire-1sg fut rain ? - now
 "I want it to rain right now"
hasaga'y dim 'wis jigyuu'n

Given that Gitksan does allow empty pronominals, it would be possible to claim that these constructions contain phonetically empty expletive NPs. There is evidence, however, that this analysis is untenable for Gitksan.

Intransitive predicates allow a zero subject unlicensed by agreement only in independent clauses, such as (153) below:

- (153) paX [pro]
 run
 "s/he ran"
bax

In a dependent clause, such as (154), an agreement morpheme always surfaces to license the empty subject:

- (154) yuk^w = 1 paX - t_i [pro]_i
 prog = cn run - 3
 "s/he is running"
yukwhl baxt

- (155) *yuk^w = 1 paX

Thus, if sentences such as those in (147) - (152) above contained empty expletive subjects, some agreement with these subjects should surface in dependent clauses of the same types. However, as the following data illustrate, no agreement surfaces on raising, unaccusative, existential or weather predicates even in dependent clauses. (Dependent markers in the following sentences are underlined.)

raising

- (156) ne: - ti: qaqetx^w tim wil si:px^w - tix 2a - wil hat'aqx^w laX - ha
 not-contr difficult fut comp sick - one prep-comp bad in - sky
 "It's easy to get sick due to the bad weather"
needii gaqetxw dim wil siipxwdix awil
hat'akxw laxha

unaccusative

- (157) ne: - ti: 2am = 1 wil = s t = Peter wil - t t'is = s t = Bill
 not - contr good=cn do=case cn = Peter when - 3 hit = case cn = Bill
 "It's not good what Peter did when he hit Bill"
needii amhl wis Peter wilt t'iss Bill

existential

- (158) ne: - ti: w'ił wil =ł ye:n ts'im laX - ha
not - contr around be = cn cloud in in - sky
"There are no clouds in the sky"
needii 'wihl wilhl yeen ts'im laxha

weather

- (159) yuk^w =ł w'is = əst
prog = cn rain = interact
"It's raining"
yukwhl 'wisist

- (160) yuk^w =ł ma:tim kalX
prog = cn snow outside
"It's snowing outside"
yukwhl maadim galx

To summarize, then, Gitksan does not exhibit overt expletives in any of the environments in which we might expect them to occur. Furthermore, there is no evidence from agreement that Gitksan has phonetically empty expletives. Thus, I conclude that Gitksan should probably be classed as patterning like a non-configurational language in lacking expletives.

2.1.6. Rich case system

i. Discussion of the property

A sixth property which is claimed to hold of non-configurational languages is that they should have a rich case system, and this property again distinguishes Warlpiri from English. In a Warlpiri sentence, the case-marking of the nouns reveals their grammatical role, as illustrated:

- (161) ngajulu - rlu ka-ma-rla karli-ki warri-rni
I-ERG PRES-1sgNOM-3DAT boomerang-DAT seek-NONPAST
"I am hunting a boomerang" (Hale 1973:335; cited in Jelinek 1984:54)

In contrast, English nouns are generally unmarked for case. With respect to this property, however, it is not clear that English and Warlpiri represent the possible extremes. In

English, genitive case is marked on nouns, and nominative and accusative, as well as genitive, are marked on pronouns, so that English does not entirely lack case-marking, and certainly exhibits richer case-marking than a language like Chinese. On the other hand, there are languages which have richer case systems than Warlpiri. Absolutive NPs in Warlpiri are unmarked for case, which means that its case-paradigm is less morphologically rich than, for example, the paradigm in Latin. For most Latin noun declensions there is a distinct suffix for subject and object case, in addition to a range of other case markings .

As the above discussion already illustrates, richness in case-marking is yet another property which is graded rather than absolute, making the classification of individual languages difficult. However, as with the word order property, one can come to some kind of classification based on whether, in a given language, grammatical relations are coded (principally) by case-marking.

Under this interpretation, Warlpiri and Latin would count as rich case-marking languages and Chinese and English would not.

ii. Case in Gitksan

Under this (or probably any) interpretation of the notion of rich case, Gitksan must be classed as lacking rich case, since its case system is quite impoverished. Only proper nouns are morphologically marked for case, and even these nouns are case-marked only in limited environments. This case-marking is realised by the /s/ morpheme, discussed earlier, and it certainly cannot be considered crucial to determining grammatical relations, since, depending on the sentence type, the same case-marking can appear on transitive subjects (162), intransitive subjects (163) or objects (164).

In this regard, again, English and Warlpiri behave differently. In Warlpiri, AUX can contain up to three person markers, as well as elements such as tense and negation, as in the following example:

- (167) ngajulu-rlu ka-rna-rla-jinta karli-ki warri-rni
 I-ERG PRES-1sgNOM-3DAT-3DAT boomerang-DAT seek-NONPAST
 ngarrka-ku
 man-DAT
 "I am looking for a boomerang for the man" (Hale 1973:336, cited in
 Jelinek 1984:57)

In addition, the main verb can carry inflections marking tense and aspect, and may be preceded by a range of adverbial preverbs (Nash 1986).

In English, both the verb and AUX are generally fairly simple from a morphological standpoint. Tense and aspect are marked on the verb/AUX, but person marking is limited to the /-s/ morpheme which marks a 3rd person singular subject in the present tense:

- (168) John likes cookies

The Warlpiri verb/AUX thus appears to be more complex than the English one.

As with most of the other properties discussed above, there is considerable variation among languages with respect to how complex the AUX/verb may be. In order to classify Gitksan with respect to this property, I will simply compare it to English and Warlpiri, assuming that they diverge sufficiently with respect to this property to serve as appropriate points of reference .

ii. Complex verb/AUX in Gitksan

The complexity of the verb/AUX in Gitksan appears to be comparable to that of Warlpiri, and so I class Gitkan as exhibiting a complex verb/AUX.

Although I have not so far referred to an AUX constituent in Gitksan, the kinds of elements usually associated with AUX, such as tense, negation and aspect, are all found preverbally in Gitksan, with most of them functioning as dependent markers. For the purposes of this discussion I shall therefore consider these elements to constitute AUX. The verb and AUX thus occur together in clause-initial position.

This verb/AUX component may contain a range of elements, including tense, aspect, negation, person markers, adverbials, agreement and transitivity markers. The following sections briefly review these categories.

i. Dependent markers

Dependent markers, which appear in preverbal AUX position, may indicate negation and aspect. Two examples are given below (dependent markers underlined>):

(169) hisx^w = 1 taw^h = s t = Michael = a
 perf =cn leave=case cn=Michael=inter
 "Has Michael left?"
hlisxwhl da'whls Michaela

(170) ne: - ti: - t himo: = s t=John t=Peter
 not - contr - 3 help = case cn=John cn=Peter
 "John didn't help Peter"
neediit hlimoos John t Peter

ii. Person marking

As already discussed, various person markers occur before and after the verb. The number and type of person markers which can occur depends on the sentence type and the transitivity of the verb. In a dependent clause, the more common type in discourse,

transitive and intransitive subjects are always marked on (or adjacent to) the verb, and transitive objects usually are:⁴¹

(171) yuk^w - t kipa - y' t = Barbara
 prog - 3 wait.for - 1sg cn=Barbara
 "Barbara is waiting for me"
yukwt giba'yt Barbara

(172) ne: - ti: w'itx^w - y'
 not -contr come-1sg
 "I didn't come"
needii 'witxwi'y

This pattern of person marking is clearly more complex than the English system, and appears comparable in complexity to the Warlpiri data.

iii. Preverbals

As discussed in Chapter 2, the verb is also often preceded by preverbals, which contain adverbial information. Some examples appear below.

(173) lu: saks - ən - y'=ɩ ts'im wilp
 in clean-trn-1sg = cn in house
 "I cleaned the house"
luusaksini'yhl ts'im wilp

(174) sa: tsak =ɩ hənaq'
 suddenly faint = cn woman
 "The woman suddenly fainted" R378
saa jakhl hanak'

These appear similar in nature to the Warlpiri preverbals, and also contribute to the complexity of the verb/AUX.

⁴¹Whether the transitive object is marked on the verb/aux is dependent on whether the subject is lexical and on the person of the object. Details are given in Chapter 4.

iv. Verbal affixes

The verb itself often appears with a range of affixes, as discussed in Chapter 2. These affixes include number marking, and transitivizing and detransitivizing affixes. One example is given below.

- (175) k^win sək -saks -əŋ -y' ɛ̃ nuʔ ɛ̃ ʔa = s t=Mary
 juss pl -clean -trn -1sg =cn dishes=cn prep=case cn=Mary
 "I told Mary to wash the dishes"
gun siksaksini'yhl no'ohl as Mary

v. Summary

To summarize this section, a much wider range of elements can potentially occur in the verb/AUX of a Gitksan sentence than in the verb/AUX of an English sentence. The complexity of the Gitksan verb/AUX appears to be comparable to the Warlpiri verb/AUX. I therefore classify Gitksan as exhibiting a complex verb/AUX constituent.

2.1.8. Summary

In this section I have considered in some detail seven typological characteristics claimed to distinguish configurational from non-configurational languages, and determined how Gitksan should be classified with respect to each of them. The results for Gitksan are summarized below:

	configurational	non- configurational
(176) free word order	⊖	+
discontinuous expressions	⊖	+
frequent pro-drop	-	⊕
no NP movement	-	⊕
no expletives	-	⊕
rich case system	⊖	+
complex verb words or verb cum AUX system	-	⊕

Typologically, then, Gitksan seems to be neither strongly configurational, nor strongly non-configurational.

2.3. Structural non-configurationality

In the previous section, I considered whether Gitksan showed the properties of a typologically non-configurational language. The results were inconclusive, with Gitksan exhibiting some but not all of these properties.

For any approach to non-configurationality that assumes a close relationship between typological and structural non-configurationality, this might appear to indicate that Gitksan was of an unusual structural type. However, in fact, there appear to be relatively few languages which pattern as consistently as English and Warlpiri with respect to these properties.

On the one hand, many languages which have been claimed to be structurally non-configurational fail to show certain of the typological properties. For example, Navajo does not exhibit free word order (Hale 1981, Speas 1989), German allows only restricted types of discontinuous constituents (Schauefeled 1991), does not have frequent pro drop but allows expletives and NP movement, and Mohawk does not have a rich case system (Baker 1991).

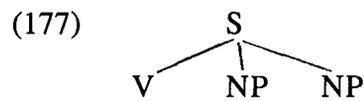
On the other hand, there are languages which are commonly assumed to be configurational which exhibit some of the typologically "non-configurational" properties. For example, Chinese allows frequent pro drop, Papago allows free word order (Hale 1981) and discontinuous dependencies (Speas 1990:143), and Chinese, Hebrew⁴² and Italian lack overt expletives.

These examples illustrate that the typological properties considered in this section are not necessarily a reliable diagnostic of structural non-configurationality, a problem which is

⁴²Borer (1986) notes that in nonstandard dialects there is an expletive /ze/.

noted by Hale (1981, 1989), Horvath (1984) and Speas (1990). In order to determine whether Gitksan is structurally non-configurational, then, we will have to consider some of the more abstract syntactic properties which are predicted by GB theory to characterize structurally non-configurational languages.

The version of non-configurationality against which I will be testing Gitksan is a flat clausal structure which lacks a VP, following Hale (1982) and others.⁴³



I assume, following Hale (1982), that such a structure could be generated if a language had only the following single PS rule:

$$(178) \quad X' \rightarrow X'^* X \quad (\text{Hale 1982})$$

Significantly, this rule expands only to a single bar level. Under the assumption that S is a maximal projection of V (=V'), this precludes the possibility of a constituent which could configurationally distinguish subjects from objects.

A language with a structure such as (177) is predicted to show rather different structural characteristics from a configurational language like English. In Section 3, I present evidence that the nonconfigurational structure in (177) is not appropriate for Gitksan, and that in fact Gitksan must have a VP constituent which structurally differentiates subjects and objects. This is clearly a theoretically desirable result since it provides support for the claim within GB theory that the basic structural representation of sentences does not vary from language to language.

⁴³In Section 4 of this chapter I address a rather different approach to the issue of non-configurationality - the pronominal argument approach outlined in Jelinek (1984).

Before turning in Section 3 to consider the evidence which supports a structurally configurational analysis of Gitksan, however, I wish to justify briefly why I have chosen to base my discussion of structural non-configurationality on the structure in (177), rather than on some of the other proposals which have been made in the syntactic literature.

2.3.1. Motivation for adopting Hale's (1982) approach to structural non-configurationality

Several different proposals have been made in the literature concerning how structural non-configurationality should be defined. In this section I outline my reasons for choosing to base my discussion of Gitksan on the proposal in Hale (1982).

There is strong theoretical motivation for concluding that Gitksan is not non-configurational, and it therefore seems particularly important to make the best possible case for analysing Gitksan as non-configurational before concluding that it is configurational. For this reason, my goal was to choose the representation of structural non-configurationality which was the most compatible with the Gitksan data. Since Gitksan showed only a few of the typologically non-configurational properties discussed in the last section, any approach to structural non-configurationality which predicted that a structurally non-configurational language should necessarily exhibit all the typological properties would automatically categorize Gitksan as configurational. Hale's (1982) approach to structural non-configurationality does not seem to be particularly closely tied to the typologically non-configurational properties, and it thus seems appropriate to apply it to Gitksan.

The approach to structural non-configurationality proposed in Hale (1981) is clearly not compatible with the Gitksan data. It is suggested there that Warlpiri sentences lack all configurational structure, being generated by the following rule:

(179) $E \rightarrow W^*$ (Hale 1981:2)

According to this rule, an expression (E) consists simply of a series of words (W), and thus has no constituents larger than the word and no hierarchical structure. Hale has since rejected this approach even for Warlpiri, and it is clearly not a plausible approach for Gitksan either. It is non-controversial that Gitksan has constituents larger than the word. For example, there are clearly NP constituents, which function as units for ordering, movement and case-marking.

Another approach to structural non-configurationality is presented in Hale (1983). In this paper, Hale relates the difference between configurational and non-configurational languages to the relationship between two different kinds of representations: Phrase Structure (PS) and Lexical Structure (LS) - the argument structure associated with a predicate which is projected from the lexicon.⁴⁴ He proposes that languages are universally configurational at LS, but may differ in whether their phrase structure is configurational, because the application of the projection principle is parameterized, as follows:

(180) Projection Principle

If a verb selects arg at L_i , then verb selects arg at L_j (where L_i, L_j range over "levels" LF, D- and S-Structure in syntactic representation.) (Hale 1983:25)

(181) Configurationality Parameter

In a configurational language, the projection principle holds of the pair (LS,PS).

In a non-configurational language, the projection principle holds only of LS.

(Hale 1983:26)

If, in a particular language, the projection principle does not hold of PS, then there is no requirement that the configurational structure of LS be reflected in PS. The various

⁴⁴ A similar idea of dual representations is proposed in Mohanan (1983).

typological properties of non-configurational languages can be derived from this parameter. Pro drop can occur, because there is no longer any requirement that all NP positions be represented. Free word order and discontinuous expressions result, because there is no constraint on the structural relationship between a head and its arguments. There will be no NP movement rules or expletives, since there will be no distinction between theta and non-theta positions in the syntax.

There are a number of problems with this approach in general, and in particular in applying it to Gitksan.

A general problem with the approach, pointed out in Speas (1990), relates to the proposed dichotomy between LS and PS. Speas notes that simplicity dictates that such dual representations should only be added to the theory if there are data that cannot be accounted for without them. She addresses the strongest cases which have been made in favour of the dual representation, and proposes alternative accounts which use only a single structural representation.

Secondly, without a very explicit universal theory of what kinds of processes apply at LS and what kinds at PS, the presence of a configurational LS in all languages makes it almost impossible to argue against an analysis of any language as non-configurational at PS, since any processes which seem to exhibit asymmetries can be claimed to have applied at LS.

Finally, a problem with this approach for Gitksan specifically, is that it predicts a strong correlation between structural (PS) non-configurationality and the typological characteristics of free word order and discontinuous constituents which Gitksan fails to exhibit.

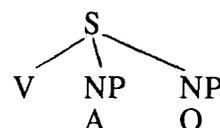
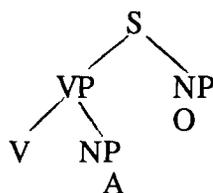
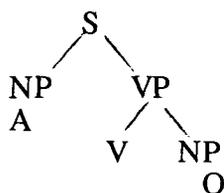
Given these problems with this general approach to non-configurationality, I will be assuming that there is no dichotomy between PS and LS in Gitksan, and thus that any evidence of a VP constitutes an argument in favour of syntactic configurationality.

3. VP tests

The previous two sections have explored whether Gitksan should be considered typologically ergative or non-configurational. This section considers the classification of Gitksan as ergative or non-configurational from a structural standpoint, addressing the crucial question of the status of the VP in Gitksan.

The three possible (transitive) structures to be compared are schematized below. (I use A and O to represent the agent and theme argument respectively, as I did in my discussion of ergativity in Section 1 of this chapter.)

- (181) i. structurally accusative⁴⁵ ii. structurally ergative iii. structurally non-configurational



If Gitksan is a structurally accusative language then structural tests should show that the verb and O behave as a constituent, and that A is structurally higher than O. If, however, Gitksan is a structurally ergative language, in the sense of Marantz (1984), then tests should show that the verb and A behave as a constituent with O structurally higher than A. Finally, if Gitksan is a structurally non-configurational language, then tests should show

⁴⁵Note that the word order in this structure is SVO, while the surface word order of Gitksan is VSO. It is not possible to generate VSO order directly in an accusative structure and so it is assumed to be derived by verb movement.

In Baker (1988), noun incorporation is viewed as a syntactic movement process by which a noun adjoins to a governing verb. The fact that generally only objects and not subjects can incorporate follows, under his analysis, from the ECP, which requires that the trace of the incorporated noun must be properly governed. This is only possible if the noun moves to a position from which it can antecedent-govern its trace. This requirement effectively restricts incorporation to positions governed by the verb.

The fact that in Gitksan only O can incorporate is consistent with the accusative structure for the language, since in this structure only O is governed by the verb.⁴⁹

The restrictions on incorporation in Gitksan would be difficult to account for under an ergative analysis. As Baker (1988:142) points out, in a syntactically ergative language we would expect incorporation to take place only from A position and not from O, since only A is governed by the verb. As illustrated by the data above, however, this prediction proves exactly wrong for Gitksan.

The incorporation facts are also problematic for a non-configurational analysis. In a non-configurational structure both A and O are governed by the verb, and so incorporation from both positions would be expected (Baker 1988:427). Thus the constraint against incorporation of A in Gitksan is unexplained if we adopt a structurally non-configurational analysis of the language.

⁴⁹Given that under the accusative analysis of VSO order the verb must raise to a position which governs the subject, one might expect, under Baker's account, that in VSO languages the subject (A) would be able to incorporate also. However, this is not the case. Baker and Hale (1990) propose an analysis of this fact in terms of relativized minimality.

A potential problem for this argument in favour of an accusative structure, however, is that it is not clear that noun incorporation should be viewed as a syntactic process in Gitksan. Although there is some evidence suggesting the process is productive, and thus plausibly syntactic, there is stronger evidence indicating that the process is lexical.

Gitksan speakers are able to make up new incorporated forms, using English words, as in the following cases:

- (189) *sim xsaX litsX - x^w - m "book" = 1 ti: tsap -(ə)= s t = John*
 real only read -pass-attr book = cn contr do -erg=case cn=John
 "All John did was read books"
sim xsax litsxwum bookhl dii jabis (japs)
John
- (190) *wila:x - ə - y' wil n'it t = John=1 mo:tsə*
paX - ən - sx^w - m kha: - tx^w - ət
 know - erg-1sg comp 3sg cn=John=cn almost
 run -trn -antip-attr car -pass- S.extr
 "I know it was John that almost drove the car"
wilaayi'y wil 'nit Johnhl mooji bahansxwum
kaatxwit

This apparent productivity is compatible with either a syntactic or a lexical view of incorporation.

However, a range of evidence seems to be more compatible with a lexical analysis. First, not all verbs have incorporated equivalents, as Rigsby (1989) points out. Secondly, incorporated forms may occur inside derived nominals, suggesting that they must be available in the lexicon:

- (191) *ha - yats - aʔ - m - 1it*
 instr-hit-detr-attr - ball
 "(base)ball bat"
hayaja'am hlit

Finally, the idiosyncratic presence of detransitivizing suffixes in some incorporated forms, discussed above, would be unexpected in a syntactic process.

However, a lexical analysis of incorporation must also explain why incorporation cannot affect A. Rosen (1989), in a recent lexical analysis of incorporation, notes that in various languages arguments other than the direct object may incorporate. For instance, she cites cases of instrumentals (Nahuatl), means phrases (Niuean) and locatives (Samoan) incorporating. However, the constraint against "subjects" incorporating still holds in these languages. She entertains the possibility that this crosslinguistic constraint may be expressed lexically, as a prohibition on the incorporation of external arguments.

Under a lexical analysis of this type, the Gitksan incorporation facts are explained only under an accusative analysis of the language. Since in an accusative structure A is the external argument, the lexical analysis correctly predicts that A will not be able to incorporate. If Gitksan were syntactically ergative, however, the lexical analysis would incorrectly predict that O could not incorporate, since O is the external argument. Finally, if Gitksan were structurally non-configurational the lexical analysis would incorrectly predict that either O or A could incorporate, since there is no external argument. Thus, a lexical analysis of Gitksan incorporation also supports the claim that Gitksan is structurally accusative.

3.1.3. Weak crossover

Another potential VP test comes from the phenomenon of weak crossover (Postal 1971). In English there are subject/object asymmetries regarding the coreference possibilities between fronted wh words and possessive pronouns, as illustrated:

- (192) Who_i t_i loves his_j mother?
(193) *Who_i does his_j mother love t_i?

In (192), in which the possessive pronoun is part of the object, coreference is possible, but in (193), in which the possessive pronoun is part of the subject, coreference is not possible. Koopman and Sportiche (1982) propose the Bijection Principle to account for these asymmetries:

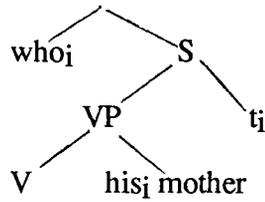
- (194) Bijection Principle
Every operator must locally bind exactly one variable, and every variable must be bound by exactly one operator.

Under this account, the data in (192) - (193) are explained as follows. In (192), the operator "who" locally binds only the subject trace. The pronoun contained in the object NP is bound by the trace in subject position. This satisfies the Bijection Principle. In (193), however, the operator "who" is the only local binder available for both the possessive pronoun in the subject NP, and the trace in object position. This binding relation violates the Bijection Principle, because one operator binds more than one variable.

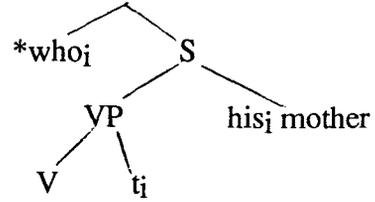
This analysis of weak crossover crucially hinges on the fact that the subject in English is in a structurally higher position than the object, so that a subject trace can bind a variable inside the object, but not vice versa. Thus, the analysis provides a potential test to differentiate accusative languages from ergative and non-configurational languages.

In a syntactically ergative language, sentences parallel to (193) should be grammatical, while sentences parallel to (192) should be ungrammatical, as illustrated:

(195) i. Who does his mother love?



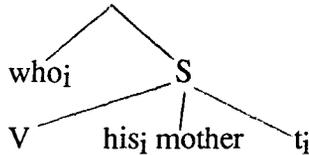
ii. Who loves his mother?



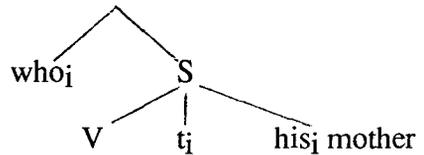
In (i), the Bijection Principle is not violated, because "who" binds its trace, and the trace in turn binds the possessive "his". (ii), however, violates the Bijection Principle because "who" locally binds both the trace and the possessive.

Finally, in a non-configurational language, sentences parallel to both (192) and (193) should be grammatical, as illustrated:

(196) i. Who does his mother love?



ii. Who loves his mother?



In both (i) and (ii), the trace c-commands the possessive pronoun, and "who" binds only its trace, thus conforming to the Bijection Principle.

The following chart summarizes the predictions of the Bijection Principle for the three types of languages.

(197)	accusative	ergative	non-configurational
Who _i loves his _j mother?	ok	*	ok
Who _i does his _j mother love?	*	ok	ok

Belvin (1984) shows that in Nisgha, weak crossover data support an accusative analysis for that language. The data I have found appear to support this conclusion for Gitksan

also. However, eliciting the relevant data and being certain of the interpretation is more difficult for this test than for any others I have applied.

Sentences parallel in structure to (192) are acceptable in Gitksan:

- (198) na: ʔan - t titalq = s lip - nuX - t
 who A.extr - 3 speak.to = case self-mother-3
 "Who spoke to his own mother?"
naa ant didalks lipnoxt

It is difficult to elicit sentences such as (193), given that the English gloss is ungrammatical under the relevant interpretation but grammatical under an irrelevant interpretation.

However, the following potential translation of the sentence was rejected:

- (199) *na:j = ɬ titalq - ə = s lip-nuX - t_j
 who=cn talk.to -erg=case self-mother-3
 "Who did his own mother talk to?"

In this example, the presence of the prefix /lip/ "self, own" on the noun /nuX/ "mother" seems to ensure coreference between the wh-element and the possessor, and thus the sentence constitutes a weak crossover violation.

Assuming the Bijection Principle account of weak crossover effects, the grammaticality of (198) and the ungrammaticality of (199) support an accusative analysis of Gitksan. As shown in (197), if Gitksan were a structurally ergative language, then (199) should be grammatical, and (198) ungrammatical. If Gitksan were a structurally non-configurational language, then both (198) and (199) should be grammatical.

3.2. Inconclusive tests with binding

In the previous section I considered a number of tests which supported an accusative structure for Gitksan, rather than an ergative or a non-configurational structure. Another

area in which one might expect to find evidence about the VP is binding. However, as I show in this section, evidence from binding is inconclusive in Gitksan.

3.2.1. Binding Condition C

In this section I show that the distribution of R expressions in Gitksan is governed not by the structurally based Binding Condition C, but rather by a precedence condition, and that therefore the distribution of R-expressions fails to provide evidence about the structure of a Gitksan clause.

Condition C, which governs the distribution of R-expressions, is formulated as follows in Chomsky (1981:188):

- (200) Condition C
An R-expression is free.

A NP is free if it is not c-commanded by a coreferential NP. This condition thus predicts that an R-expression cannot cooccur in a clause with a coreferential expression, if that expression c-commands it. Thus, in an accusative language, an R-expression cannot occur in O position with a coreferential A, since A c-commands O. In an ergative language, an R-expression should not occur in A position with a coreferential O, since O c-commands A. In a non-configurational language, an R-expression should be ruled out if any matrix argument is coreferential with it, since O and A are in a relationship of mutual c-command (Mohanan (1983), Whitman (1987) and Speas (1990)).

According to the predictions of Condition C, then, the equivalents of the following sentences, which are grammatical in an accusative language like English, should be ungrammatical in an ergative or non-configurational language.

		accusative	ergative	non-config
(201)	Mary _i saw herself _i	ok	*	*
(202)	Mary _i 's mother helped her _i	ok	*	*
(203)	The man who knows John _i helped him _i	ok	*	*

In fact, the equivalent of each of these sentences is grammatical in Gitksan:

- (204) q'uts - ə = s t = Mary lip - n'it
cut -erg= case cn = Mary self-3sg
"Mary cut herself"
k'ojis Mary lip'nit
- (205) hmo: -ə = s nuX = s t = Mary_i n'it_i
help - erg = cn mother= case cn = Mary 3sg
"Mary's mother helped her"
hlimooyis noxs Mary 'nit
- (206) hmo: - ə = t̥ kat ʔan - t wila:x = s t = John_i n'it_i
help -erg= cn man A.extr - 3 know = case cn = John 3sg
"A man who knows John helped him"
hlimooyihl gat ant wilaaxs John 'nit

The grammaticality of these sentences appears to provide support for an accusative structure for Gitksan. However, the data only constitute an argument in support of Gitksan's accusativity if Condition C can be shown to be the optimal way of stating the constraints on the distribution of R-expressions. In what follows, I show that a precedence condition is (also) required to account for the Gitksan data. As a result, the grammaticality of (204) - (206) fails to provide evidence about the structure of the Gitksan clause.

Mohanan (1983:120) proposes for Malayalam the following precedence condition which governs the relationship between R-expressions and pronouns.

- (207) A pronoun must not precede its antecedent.

This condition is compatible with the Gitksan data presented in (204) - (206). Since in each sentence the pronoun follows its antecedent, (207) correctly predicts that (204) - (206)

should be grammatical. Thus, with respect to (204) - (206), the precedence condition makes the same prediction as Condition C combined with an accusative structure.

However, with respect to other sentence types, the two make different predictions, as illustrated schematically below:

	Condition C (accusative structure)	Precedence (any structure)
(208) His _i mother helped John _i	ok	*
(209) A man whom he _i knows helped John _i	ok	*

Interestingly, the equivalent Gitksan sentences are judged *ungrammatical*, in line with the predictions of the precedence condition.

i. Possessor

(210) **imo*: -ə = s nuX -t_i t = Mary_i
 help -erg= case mother-3sg cn = Mary
 (Her_i mother helped Mary_i)⁵⁰

(211) **hats* - T - ə = ɬ ʔus - t_i t = John_i
 bite -T - erg= cn dog - 3sg cn = John
 (His_i dog bit John_i)

ii. Relative clauses

(212) **imo*: -ə = ɬ kat ʔan - t wila:x - t t = John⁵¹
 help -erg= cn man A.extr - 3 know -3sg cn = John
 (A man who knows him helped John)

The following sentences, in which the NP precedes its antecedent, were provided by my consultant as the grammatical equivalents:

⁵⁰ The judgements in all these cases were very clear. For example, the speaker noted that this sentence would be acceptable, if Mary were replaced by the pronoun /n'it/ (3sg), giving the equivalent of "Her mother helped her".

⁵¹ Gitksan also shows a strong preference for extraposing relative clauses, so the presence of the relative clause before the object may contribute to the ungrammaticality of this sentence. However, the fact that (215) below is grammatical shows that the position of the relative clause alone is not sufficient to account for the judgement.

- (213) $\text{himo:} - \text{ə} = \text{s}$ $\text{nuX} = \text{s}$ $\text{t} = \text{Mary}$ n'it
 help - erg = case mother=case $\text{cn} = \text{Mary}$ 3sg
 "Mary's mother helped her"
hlimooyis noxs Mary 'nit
- (214) hats - T - $\text{ə} = \text{t}$ $\text{?us} = \text{s}$ $\text{t} = \text{John}$ n'it
 bite - T - erg = cn dog = case $\text{cn} = \text{John}$ 3sg
 "John's dog bit him"
hatsdihl os John 'nit
- (215) $\text{himo:} - \text{ə} = \text{t}$ kat $\text{?an} - \text{t}$ $\text{wila:x} = \text{s}$ $\text{t} = \text{John}$ n'it
 help -erg= cn man A.extr-3 know =case $\text{cn} = \text{John}$ 3sg
 "A man who knows John helped him"
hlimooyihl gat ant wilaaxs John 'nit

The importance of S-Structure precedence is reinforced by the fact that, under focusing, precedence still holds, as is illustrated in the following data. ((216) and (217) form a question/answer pair, but (218) is not a possible answer to (216).)⁵²

- (216) ?o: , $\text{himo:} - \text{ə} = \text{s}$ $\text{t} = \text{Mary}$ $\text{t} = \text{nuX} - \text{t}$ $\text{k'o:ts} = \text{a}$
 help -erg=case $\text{cn} = \text{Mary}$ $\text{cn} = \text{mother-3sg}$ yesterday = inter
 "Oh, did Mary_i help her_i mother yesterday?"
oo hlimooyis Mary t noxt ky'ootsa
- (217) ne: $\text{nəkwo:t} = \text{s}$ $\text{t} = \text{Mary} = \text{t}$ ti: $\text{himo:} - \text{ə} - \text{t}$
 no father = cn $\text{cn} = \text{Mary} = \text{cn}$ contr help - erg - 3sg
 "No, it was her_i father that Mary_i helped"
 literally: "No, it was Mary_i's father that she_i helped"
nee, negwoots Maryhl dii hlimooyit
- (218) *ne: $\text{nəkwo:t} - \text{t} = \text{t}$ ti: $\text{himo:} - \text{ə} = \text{s}$ $\text{t} = \text{Mary}^{53}$
 no father -3sg = cn contr help - erg =case $\text{cn} = \text{Mary}$

Such data strongly support positing a precedence condition to govern the distribution of R-expressions in Gitksan. Since a precedence condition makes no reference to structural

⁵²The grammaticality judgements of sentences (216) and (217) are the opposite of the judgements in English. For example, an English sentence equivalent to (217) is ungrammatical:

(i) *It was Mary_i's father that she_i helped.

One account of this appeals to reconstruction of wh-moved elements into their original positions. Once reconstructed, the pronoun "she" in (212) would c-command "Mary", and thus violate condition C. The Gitksan data, however, clearly require a different account.

⁵³ Again the speaker noted that the sentence would be grammatical if the subject were pronominal.

(i) ne: $\text{nəkwo:t} - \text{t} = \text{t}$ ti: $\text{himo:} - \text{ə} - \text{t}$
 no father - 3sg = cn contr help - erg - 3sg
 "No it was her father that she helped"

nee negwootthl dii hlimooyit

conditions, the data presented in this section fail to provide evidence about the structure of a Gitksan clause.

3.2.2. Binding Condition A

In the previous section I showed that restrictions on the distribution of R-expressions in Gitksan failed to provide evidence about the structure of a Gitksan clause. In this section I show that the restrictions on the distribution of anaphors fail to provide evidence about Gitksan clause structure for the same reason.

Chomsky (1981:188) proposes the following condition to govern the distribution of anaphors:

(219) Condition A
An anaphor must be bound in its governing category.

For the purposes of this discussion, the governing category is assumed to be the minimal S dominating the anaphor. The relevant notion of binding is A-binding, which is defined as follows, based on Chomsky (1981:184):

(220) A-Binding
 α is A-bound by β if and only if α and β are coindexed, β c-commands α , and β is in an A-position.

This condition appears to make the following predictions regarding the distribution of anaphors in simple transitive clauses in accusative, ergative and non-configurational languages:

(221)		accusative	ergative	non-configurational
	anaphor in A position	*	ok	ok
	anaphor in O position	ok	*	ok

Consider the distribution of anaphors in the following data from Gitksan. (The Gitksan reflexive pronoun consists of the prefix /lip/ followed by a Series III pronoun.)⁵⁴

- (222) q'uts - ə = s t = Mary lip - n'it
 cut -erg= case cn = Mary self-3sg
 "Mary cut herself"

k'ojis Mary lip'nit

- (223) *q'uts - ə (=ɪ) lip - n'it t = Mary
 cut -erg (=case) self-3sg cn = Mary

As Belvin (1984) observes for parallel data from Nisgha, these data appear to support an accusative analysis - the clause with the anaphor in A position is ungrammatical, but the clause with the anaphor in O position is grammatical. As the chart in (221) shows, only the accusative analysis makes this prediction.

In fact, however, the data cannot be interpreted so simply. (223) is predicted to be ungrammatical independently of condition A, by the precedence condition (207), since the (reflexive) pronoun precedes its antecedent. Thus, the distribution of anaphors also proves to be inconclusive with respect to clausal structure.

⁵⁴Tarpen (1988) has claimed that data such as those in (222) above are unnatural sentences, reflecting influence from English, and that the unmarked way of forming reflexive sentences involves the use of the detransitivizing preverbal element /kux^Ws/ and the passive suffix. It is certainly true that reflexives can be formed morphologically in Gitksan, as in the following sentence:

- (i) kux^Ws q'uts - x^W t = Mary
 backward cut -pass cn = Mary
 "Mary cut herself"

guxws k'otsxw t Mary

However, as Rigsby (1986:373-4) points out (and speakers I have consulted confirm this), the meaning of sentences formed with /kux^Ws/ is different from sentences such as (222) in which a reflexive pronoun is used. The morphological reflexive indicates deliberate rather than unintentional action. Thus in (222), Mary cut herself by accident, while in (i) she cut herself intentionally. This suggests that in Gitksan it is not the case that the lexical reflexive is more natural than the syntactic reflexive, but rather that the two coexist and perform different functions.

3.3. Summary

In this section I have considered evidence regarding the status of the VP in Gitksan. I provided evidence from VP ellipsis, incorporation and weak crossover which supported the accusative structure for Gitksan over either the ergative or the non-configurational. For completeness, I showed in the last section that binding provided no structural insights, since it was governed by precedence rather than structurally based conditions.

4. Is Gitksan a pronominal argument language?

The goal of this chapter has been to determine what kind of structural representation should be assigned to a Gitksan clause. So far in this chapter, I have examined the question of whether the syntax of Gitksan should be viewed as ergative, non-configurational or accusative, and I have concluded that the evidence supports an accusative analysis.

However, one other area of potential controversy in the analysis of Gitksan clause structure remains to be addressed, namely, the question of whether independent nominals or bound person markers serve as arguments in the clause. This final section addresses this question.

4.1. Introduction

Jelinek (1984) proposes that there is a class of languages, called pronominal argument languages, in which only person marking affixes may function as arguments, and nominals are optional adjuncts. In this section I consider whether Gitksan should be classified as a pronominal argument language, as has been proposed for Nisgha in Jelinek (1986) and Tarpent (1988).

Jelinek (1984) has further claimed that pronominal arguments languages are structurally non-configurational. Given this claim, the evidence presented in the previous section

showing that Gitksan is configurational might seem to obviate the possibility of analysing Gitksan as a pronominal argument language. However, while it may be true that a pronominal argument language shows many of the typological characteristics of non-configurationality, it has been shown by Bresnan and Mchombo (1987) for Chichewa and by Baker (1991) for Mohawk that a language may be a pronominal argument language without being structurally non-configurational. Thus, the evidence used earlier to argue that Gitksan is structurally configurational does not provide evidence about whether or not the language is a pronominal argument language. The evidence considered in this section is therefore related specifically to determining whether nominals are arguments or adjuncts. I conclude that nominals in Gitksan function as arguments not adjuncts, and that therefore person-marking affixes function as agreement. Thus Gitksan should not be classed as a pronominal argument language.

4.2. The data

I begin by considering the Series II person markers, whose behaviour is crucial to the issue of whether Gitksan is a pronominal argument language.

(224) Series II person markers

	sing	plural		
1	-y'	-m'	-y	-m
2	-n	-sim'	-n	-si'm
3	-t	-ti:t	-t	-diit

The distribution of these person markers is illustrated in (225) through (230) using the 1st person singular suffix /-y'/. Attached to a noun, as in (225), the suffix indicates the possessor. Attached to a preposition, it may realise an oblique argument of a verb, as in

(226), or the object of a preposition, as in (227). Attached to a verb it may indicate either a subject, as in (228) - (229), or an object, as in (230).⁵⁵

- (225) wilp - y'
house - 1sg
"my house"
wilbi'y
- (226) kən'am - ə - t = ɬ ʔna:x lo: - y'
give - erg-3 = cn bread prep - 1sg
"S/he gave me the bread"
gi'namithl anaax loo'y
- (227) w'itx^w t = John quʔ - y'
come cn = John loc - 1sg
"John came to my place"
'witxwt John go'o'y
- (228) kup - ə - y' = ɬ hun
eat - erg-1sg = cn fish
"I ate the fish"
gubi'yhl hun
- (229) ne: - ti: w'itx^w - y'
not - contr come - 1sg
"I didn't come"
needii 'witxwi'y
- (230) ne: - ti: - t kaʔ - y'
not - contr - 3 see - 1sg
"S/he didn't see me"
neediit ga'a'y

Distributional evidence seems to suggest that these suffixes serve the same function as full NPs. First of all, they occur immediately after a lexical head, occupying the same string positions as nominals with the same grammatical function. This can be seen by comparing (225) - (230) with (231) - (236) below, which have nominal arguments.

⁵⁵ In these cases, whether the suffix realises the subject or object is not freely variable, but depends on the type of sentence. An analysis of this phenomenon is given in Chapter 4.

- (231) wilp = s t = Mary
house = case cn = Mary
"Mary's house"
wilps Mary
- (232) kən'am - ə - t = ɪ ʔəna:x ʔa⁵⁶ = s t = Mary
give - erg- 3 = cn bread prep = case cn = Mary
"S/he gave Mary the bread"
gi'namithl anaax as Mary
- (233) w'itx^w t = John quʔ = s t = Mary
come cn = John loc = case cn = Mary
"John came to Mary's place"
'witxw t John go'os Mary
- (234) k^wup - ə = s t = Mary = ɪ hun
eat - erg= case cn = Mary= cn fish
"Mary ate (the) fish"
gubis Maryhl hun
- (235) ne: - ti: w'itx^w = s t = Mary
not -contr come = case cn = Mary
"Mary didn't come"
needii 'witxws Mary
- (236) ne: - ti: - t kaʔ = s t = Mary
not -contr - 3 see = case cn = Mary
"S/he didn't see Mary"⁵⁷
neediit ga'as Mary

Furthermore, in almost all environments the person-marking suffixes are in complementary distribution with full nominals.⁵⁸ This is illustrated in the possessive NPs in (237) - (239). In (237) the possessor is realised by 3rd person suffix /t/, while in (238) the possessor is realised by the nominal "John". It is ungrammatical for the /t/ suffix and the nominal to cooccur, as in (239).

⁵⁶ In the unmarked case, the preposition /ʔa/ is used before nominals, while /lo:/ occurs before pronominals, as in (226).

⁵⁷ This sentence has an alternative interpretation "Mary didn't see him/her". A contrast in stress pattern differentiates between the two interpretations. cf. Tarpent (1982) for further discussion.

⁵⁸ This is only observable with 3rd person arguments. Thus, in the remainder of this section, my discussion focuses on sentences with 3rd person arguments.

- (237) wilp - t
house - 3
"his/her house"
wilpt
- (238) wilp = s t = John
house = case cn = John
"John's house"
wilps John
- (239) **wilpts John*⁵⁹

Similar distributional restrictions can be observed with the arguments of verbs. In (240) and (243) the subject is realised by the /t/ suffix, while in (241) and (244) it is realised by a full nominal. It is ungrammatical for the suffix and the coreferential nominal to cooccur, as in (242) and (245).

- (240) *himo*: - ə - t_i t = Peter;
help - erg - 3 cn = Peter
"S/he helped Peter"
hlimooyit t Peter
- (241) *himo*: - ə = s t = John_i t = Peter;
help - erg = case cn = John cn = Peter
"John helped Peter"
hlimooyis John t Peter
- (242) **hlimooyits John t Peter*
- (243) naks - x^w - ə - t_i t = John;
spouse-pass-erg-3 cn = John
"S/he married John"
naksxwit t John
- (244) naks - x^w - ə = t_i hanaq' t = x^wəst_i t = John;
spouse-pass-erg= cn woman cn = that cn = John
"That woman married John"
naksxwihl hanaq' tust t John

⁵⁹ Since I ultimately assume that both the person marker and the nominal are present in the underlying representation of forms such as these, I give only the surface form here.

(245)

**naksxwithl hanak' tust t John*

The only exception to this distributional pattern is noted in Tarpent (1988). She observes that in sentences containing postverbal evidential enclitics, person markers and coreferential nominals cooccur. This is illustrated in (246) - (248) below. (The enclitics are underlined.)

(246) *ləmo: - ə - t_i - qat = s t = Kathy_i t = John*
help -erg - 3 -rep = case cn = Kathy cn = John
"Apparently Kathy helped John"⁶⁰
hlimooyitgats Kathy t John

(247) *naks - x^w - ə - t_i - qat = ɪ hanaq' t = x^wəst_i t = John*
spouse-pass-erg- 3 - rep = cn woman cn = that cn = John
"Apparently that woman married John"
naksxwitgathl hanak' tust t John

(248) *ne: - ti: ye: - t_i - əma = s t = John_i quʔ = ɪ Vancouver*
not -contr go - 3 - dub = case cn = John loc = cn Vancouver
"John probably didn't go to Vancouver"
needii yeedimas John go'ohl Vancouver

4.3. Tarpent's analysis

The contrast between, on the one hand, sentences such as (242) and (245), in which a nominal may not cooccur with a coreferential suffix and, on the other, sentences such as (246)-(248), in which a nominal must be accompanied by a coreferential pronominal suffix, clearly presents an analytical problem. The complementary distribution of person markers and nominals could be accounted for by claiming that they are generated in the same structural positions, with the person-marking affixes subsequently undergoing phonological incorporation onto the preceding head.⁶¹ Anderson (1982) proposes such an

⁶⁰ Speakers vary in how they translate the evidential clitics. Rigsby (p.c.) notes that alternative translations of sentences such as (246) - (247) would be "They say Kathy helped John" and "They say that woman married John" respectively, indicating that the speaker's knowledge comes from another person's verbal report, while an alternative translation of (248) would be "Maybe John didn't go to Vancouver".

⁶¹ This is reminiscent of early accounts of French clitics, such as Kayne (1975), in which the clitics are generated in argument positions and then cliticized to the verb by a syntactic movement transformation.

analysis of the Breton person markers.⁶² However, such an analysis would be unable to account for the cooccurrence of person marking and nominals illustrated in (246) - (248).

Alternatively, we might explain the cooccurrence of person markers and nominals in (246) - (248) by claiming that they are generated in different structural positions. This analysis, however, faces the problem of accounting for the apparent complementary distribution illustrated in (237) - (245).

A solution to this problem, which I adopt in principle, is proposed by Tarpent (1988). Tarpent's analysis is based on data from Nisgha. However, the essentials of the analysis can also be applied to Gitksan, since, except where noted, the languages behave identically in the relevant respects.

Tarpent claims that the /t/ suffix is always present underlyingly when there is 3rd person nominal argument. Under this analysis, surface forms such as those in (246)-(248), in which the suffix cooccurs with the nominal, pattern as expected, and it is sentences such as (242) and (245), in which the suffix does not surface, which pose a problem. Tarpent attributes the absence of the /t/ suffix in such sentences to a phonological process of /t/ deletion, which can be represented informally as follows:

$$(249) \text{ t-deletion rule}^{63} \\ t \rightarrow \emptyset / _ = \left\{ \begin{array}{l} s \\ i \end{array} \right\}$$

However, Gitksan differs from French in that the linear position of the person markers is the same as that of the full nominals. Thus there is less motivation for an analysis in terms of syntactic movement.

⁶² See Stump (1984) for a different account of the Breton facts.

⁶³ Tarpent (1988) refers to this as a deaffrication rule. However, since the /t/ and the following /s, ð/ belong to separate morphemes, I assume that they do not have the phonological structure of affricates.

My data suggest that this deletion process is more restricted in Gitksan than in Nisgha, applying obligatorily only when the /t/ is the 3rd person morpheme⁶⁴. Thus I modify the rule to encode this restriction:

$$(250) \text{ Revised t-deletion rule} \\ t \rightarrow \emptyset / _ = \begin{cases} s \\ \mathfrak{t} \end{cases} \\ [3]$$

Under this analysis, the underlying representations of sentences such as (241) and (244) are the following:

$$(251) \text{ } \mathfrak{t} \text{mo:} - \mathfrak{t} - \mathfrak{t}_i = s \quad t = \text{John}_i \quad t = \text{Peter}_j \\ \text{help} - \text{erg} - 3 = \text{case} \quad \text{cn} = \text{John} \quad \text{cn} = \text{Peter} \\ \text{"John helped Peter"}$$

$$(252) \text{ } \text{naks} - x^w - \mathfrak{t} - \mathfrak{t}_i = \mathfrak{t} \quad [\text{hanaq}' \quad t = x^w \text{est}]_i \quad t = \text{John}_j \\ \text{marry-pass-erg-3} = \text{cn} \quad \text{woman} \quad \text{cn} = \text{that} \quad \text{cn} = \text{John} \\ \text{"That woman married John"}$$

The /t/ person markers (underlined) are present underlyingly, but do not surface because the /s/ morpheme in (251) and the /t/ morpheme in (252), which follow the /t/ suffix, trigger t-deletion.

Two features of Nisgha and Gitksan morphosyntax conspire to ensure that this rule almost always operates to delete a /t/ person marker when it is coreferential with a following

⁶⁴ Certain other /t/'s delete optionally before /s/ only. For instance, in the following examples the final /t/ in the morpheme /qat/ may optionally delete before the following /s/, as in (i), but does not delete before a following /t/, as in (ii): (Phonetic representations of the underlined portions are given to the right.)

$$(i.) \text{ } \underline{\text{naks} - x^w - \mathfrak{t} - t = \text{qat} = s} \quad t = \text{Kathy} \quad t = \text{Bill} \\ \text{marry-pass-erg-3sg} = \text{rep} = \text{case} \quad \text{cn} = \text{Kathy} \quad t = \text{Bill} \\ \text{"Apparently Kathy married Bill"} \quad [\text{naks}^w \text{itGas}] \sim [\text{naks}^w \text{itGats}]$$

$$(ii.) \text{ } \underline{\text{naks} - x^w - \mathfrak{t} - t = \text{qat} = \mathfrak{t}} \quad \text{hanaq}' \quad t = x^w \text{ist} \quad t = \text{Bill} \\ \text{marry-pass-erg-3} = \text{rep} = \text{cn} \quad \text{woman} \quad \text{cn} = \text{dem} \quad \text{cn} = \text{Bill} \\ \text{"Apparently that woman married Bill"} \quad [\text{naks}^w \text{itGat}\mathfrak{t}] \quad *[\text{naks}^w \text{itGa}\mathfrak{t}]$$

Tarpen's data show that in Nisgha the deletion process is much more widespread.

nominal. First, a nominal which is coreferential with a person suffix is always preceded by either a case-marking morpheme which has the form /s/ or by a connective which has the form /ʌ/. Secondly, no phrasal constituent may intervene between a lexical head, which hosts person affixes, and its nominal arguments. As a result, in almost all cases in which a /t/ person suffix cooccurs with a coreferential nominal, the suffix is immediately followed by a /s/ or /ʌ/, and the suffix is thus deleted by (250).

The crucial feature of sentences such as (246) - (248) which allows the /t/ suffix to cooccur on the surface with a coreferential nominal is the presence of the postverbal evidential clitics - the reportive /qat/ in (246) and (247), and the dubitative /əma/ in (248).⁶⁵ Clitics of this type are the only elements which can intervene between a person marking affix and a following coreferential nominal, and thus block the application of the t-deletion rule. As a result, sentences containing such clitics are the only ones in which doubling of the person affix and the nominal is apparent on the surface.

Thus, with minimal modification, Tarpent's analysis of the distribution of the person markers in Nisgha can be adopted in the analysis of Gitksan to account for the apparent complementary distribution of nominals and person markers.

4.4. Pronominal vs. nominal argument analysis

An important consequence of adopting Tarpent's analysis is that it entails that person markers are obligatorily present in (at least some) sentences, while nominals are optional. Tarpent (1988) argues on this basis that Nisgha is a pronominal argument language (Jelinek

⁶⁵ Tarpent also cites a number of cases from Boas (1902) in which nominals and person markers cooccurred in other environments. This suggests that the process which normally blocks the cooccurrence of the affix and the nominal in contemporary Nisgha/Gitksan was previously less pervasive.

(1984))⁶⁶, in which person affixes function as arguments⁶⁷, while nominals are optional adjuncts.⁶⁸

The fact that a language has obligatory person marking and optional nominals does not necessarily mean that it is a pronominal argument language, however. An alternative interpretation is that the person affixes function as agreement, while the nominals fill argument positions. Belvin (1990), for example, has suggested that this is the appropriate representation for certain person affixes in Nisgha.⁶⁹ I shall refer to this approach as the "nominal argument" analysis. Under this type of analysis, argument positions can be filled either by independent nominals (or pronominals), or by the empty pronominal *pro*, licensed and identified by agreement.

In the remainder of this section I argue that Gitksan is a nominal argument language.

Evidence for this claim comes from the syntactic behaviour of nominals, and from certain problems with Tarpent's t-deletion rule.

⁶⁶Jelinek (1986) proposes that Nisgha is a partially pronominal argument language. However, her claim is based on a more restricted set of data than is considered by Tarpent, and so I do not explicitly address her proposal here.

⁶⁷Baker (1991), in his analysis of Mohawk, has a slightly different interpretation of the pronominal argument hypothesis. He maintains the claim that nominals are adjuncts, but interprets the person marking as occurring in agreement rather than in argument position. However, for the purposes of this paper, this difference is not relevant. My arguments focus on the status of nominals, and once it is shown that nominals are arguments, then the status of person markers as agreement is not at issue.

⁶⁸Note that even in a language which is not a pronominal argument language, structures can arise in which a pronominal is in argument position and a nominal in adjunct position, for instance through left or right dislocation. ("That guy, I really like him." "I really admire him for his courage, that politician.") What distinguishes a pronominal argument language is that nominals can *only* be in adjunct position.

⁶⁹Belvin's analysis differs from the one presented in this thesis in that he claims that third person /t/ can function either as agreement or as an argument, while the other members of the person marking paradigm function as arguments, because they cannot double with nominals. However, I attribute the apparent constraint against doubling of 1st and 2nd person suffixes with nominals to the lack of 1st or 2nd person nominals, and consider that all the person marking suffixes have the same status, functioning as agreement markers.

These ordering facts are problematic for the pronominal argument analysis of Gitksan, however. Since in a pronominal argument language all NPs are adjuncts, all NPs should be freely ordered in such a language. This is true, for instance, of Warlpiri (Jelinek (1984)) and Mohawk (Baker (1991)), which are claimed to be pronominal argument languages. Thus, word order constraints in Gitksan constitute one argument against a pronominal argument analysis of the language.

4.4.1.2 Long distance extraction asymmetries

Further evidence against a pronominal argument analysis of Gitksan comes from an adjunct/argument asymmetry with respect to extraction out of subordinate clauses, illustrated in (255) - (257).

- (255) na: =ɬ ha - n'i: - qu:t - n tsə ʔan - t kup -t =ɬ hun .
 who= cn instr - on - heart-2sg comp A.extr-3 eat -3= cn fish
 "Who do you think ate the fish?"
naahl ha'niigoodin ji ant guphl hun
- (256) n'it t = John = ɬ həsaq - y' tim ʔan - t kup -t = ɬ hun
 3sg cn = John = cn desire -1sg fut A.extr-3 eat -3= cn fish
 "It's John I want to eat the fish"
'nit Johnhl hasaga'y dim ant guphl hun
- (257) *t = Mary = ɬ ta:wɬ t = John quʔ = ɬ Hazelton
 cn = Mary = cn leave cn = John loc= cn Hazelton
 after up -take - T - erg -3sg
 (*It was Mary John went to Hazelton after he picked up.)

Under the nominal argument analysis, the extraction facts can be characterized as follows. In (255) - (256), in which the subordinate clause is an argument, extraction out of the clause is possible. However, in (257), in which the subordinate clause is an adjunct, extraction out of the clause is barred. Huang's (1982) Condition on Extraction Domains (CED), which claims that extraction is only possible out of properly governed domains,

provides an account of these facts.⁷¹ The embedded clauses in (255) - (256) are arguments, properly governed by the verb, and thus extraction is possible. However, the adverbial clause in (257), being an adjunct, is not properly governed, and thus extraction is barred.

This explanation of the extraction facts would not be possible under the pronominal argument analysis. If only pronouns can be arguments, then the subordinate clauses in the above sentences would have to be analysed as adjuncts. If all subordinate clauses are adjuncts, the CED predicts that extraction from them should consistently be barred. The grammaticality of the extractions in (255) - (256) thus provides a second argument against the pronominal argument analysis of Gitksan.⁷²

⁷¹ Note that in Chomsky (1986a), the CED is subsumed under subjacency.

⁷² The force of this argument against the pronominal argument analysis is weakened by a recent analysis of Mohawk (Baker 1991). Baker claims that Mohawk clauses can be (S-Structure) arguments but nominals cannot. One type of evidence he adduces for this claim comes from CED effects. The predicted argument/adjunct extraction asymmetries hold with respect to extraction out of clauses, but not with respect to extraction out of nominals, which is always ungrammatical.

The possibility that such an analysis could also be appropriate for Gitksan makes the clausal extraction facts in Gitksan less conclusive. That is, while the asymmetries illustrated in (255)-(257) are consistent with the nominal argument analysis, they might also be compatible with a Baker-style pronominal argument analysis. Furthermore, in Gitksan, as in Mohawk, extraction out of nominals is ungrammatical in all circumstances.

- i *na: = ʔ titiy' - (ə) - n noX - ət
 who =cn look.after -erg - 2sg mother -S.extr
 "Whose mother did you look after?" lit = Whose_i did you look after t_i mother?
- ii *na: = ʔ titiy' - (ə) = s noX - ət t = John
 who = cn look.after -erg =case mother-S.extr cn=John
 "Whose mother looked after John" lit = Whose_i looked after t_i mother John?
- iii *na: = ʔ ski = ʔ k^wila - ət laX ha - n'i:-wan- əst
 who =cn lie =cn blanket-A.extr on instr-in-sit -interact
 "Whose blanket is lying on the floor?" lit = Whose_i is lying t_i blanket on the floor?

The only way to render these questions grammatical is to front the whole NP, rather than just moving the possessor. The ungrammaticality of (i - iii) might be interpreted as evidence in favour of the pronominal argument analysis, since we would expect extraction out of nominals to be impossible if they were in ungoverned adjunct positions. However, there are other possible explanations of the ungrammaticality of the above sentences, such as that nominals are not proper governors. In view of the fact that there is other strong evidence that Gitksan nominals are arguments, and in view of the fact that many languages which are not pronominal argument languages have restrictions on extraction out of nominals, I do not consider the failure of extraction out of nominals to be a serious problem for my analysis.

4.4.2. Case-related asymmetries

The second set of arguments against the pronominal argument analysis of Gitksan comes from asymmetries in the morphological marking of nominals. Since in a pronominal argument language all independent nominals have the same status, serving as adjuncts, such asymmetries are unexpected if Gitksan is a pronominal argument language. In this section I show, however, that a nominal argument analysis can provide an account of these asymmetries.

4.4.2.1 Presence of obliques

The preposition /ʔa/ appears obligatorily before certain NPs in a Gitksan sentence. As the following sentences illustrate, the semantic role of the NP following /ʔa/ varies widely, so that the function of the preposition seems to be grammatical rather than semantic.

- (258) kən'am - ə - t = s t = John = ɪ ʔəna:x ʔa = s t = Mary
 give - erg -3 = case cn = John = cn bread prep = case cn = Mary
 "John gave the bread **to** Mary"
gi'namis Johnhl anaax as Mary
- (259) kin - ə - t = s t = Clara = ɪ ɪkʷu:ɪxʷ-t ʔa = ɪ ts'al = kə
 give-erg-3 = cn cn = Clara = cn child -3 prep = cn half.smoked.salmon = distr
 "Clara gave her child **half-smoked salmon**"
ginis Clarahl hlguuhlɔwt ahl ts'algi
- (260) kʷin kəkɪy' - T - ə - s t = John = ɪ tk'ɪxʷ ʔa = s t = Mary
 juss look.after-erg = case cn = John = cn child prep = case cn = Mary
 "John told **Mary** to look after the children"
gun gigi'ydis Johnhl tk'ihlxw as Mary
- (261) q'uts - ə - t = s t = Tom = ɪ smax ʔa = ɪ t'u:ts'xʷ
 cut -erg-3 = case cn = Tom = cn bear prep = cn knife
 "Tom cut the meat **with a knife**"
k'ojis Tomhl smax ahl t'uuts'xw

Under the nominal argument analysis, the class of NPs which must be preceded by /ʔa/ may be characterized as any arguments other than subject or object. A principled explanation of this fact can be derived from Case Theory, which requires that all nominals

in argument positions be assigned abstract Case in order to be visible for theta marking (Chomsky 1986b). It appears that in Gitksan, as in many Romance languages, the verb/Infl can assign structural case to the subject and at most one object argument. This leaves any additional arguments without Case. The only way for these NPs to be assigned Case is by the insertion of the Case-assigning preposition /ʔa/.

Such an explanation of the function of /ʔa/ is not available under the pronominal argument analysis, however. Adjuncts do not need to be Case-marked because they are not theta-marked, and so the pronominal argument analysis predicts that NPs should not require Case. Therefore, under this analysis, it would be difficult to explain the presence of the prepositions in sentences such as (258) - (261).

The distribution of the preposition /ʔa/ is thus another aspect of Gitksan syntax which seems to be better accounted for under the nominal argument analysis.

4.4.2.2 Morphological marking of extraction

Subjects and objects also behave differently from other elements in the sentence with respect to extraction.

Extraction of any element except subject and object is consistently marked by the presence of the complementizer /wil/ between the fronted element and the remainder of the clause, as illustrated in (262) - (264):

(262) k'o:ts **wil** ne: - ti: - t ʔəmo: - t = s t = John t = Mary
 yesterday comp not-contr - 3 help - 3 = cn cn = John cn = Mary
 "It was yesterday that John didn't help Mary"
ky'oots wil neediit hlimoos Johnt Mary

(263) quʔ = ʔ California **wil** - ti: tawʔ - t = s t = Kathy lo: - t
 loc = cn California comp - contr go - 3 = case cn = Kathy to - 3sg(emph)
 "Kathy went to California"
go'ohl California wildii da'whls Kathy loot

- (264) t = Barbara wil - t kən'am - t = s t = Kathy =ɪ mətəqəle:
 cn = Barbara comp - 3 give - 3 = case cn = Kathy =cn flowers
 "It was Barbara Kathy gave the flowers to"
t Barbara wilt gi'namis Kathyhl majagalee

However, extraction of subject and object arguments is never marked by /wil/, but by other special morphology between the fronted NP and the remainder of the clause. /ɲant/ marks extraction of transitive subjects (265), /ɲ/ marks extraction of transitive objects (266), and /ɲ/ accompanied by the verbal suffix /ət/ marks extraction of intransitive subjects (267).

- (265) t = John ɲan - t ne: - ti: - t ɲəmo: - t = s t = Mary k'o:ts
 cn = John A.extr-3 not - contr - 3 help- 3 = case cn = Mary yesterday
 "It's John who didn't help Mary yesterday"
t John ant neediit hlimoos Mary ky'oots

- (266) t = John =ɪ ɲəmo: - ə - t = s t = Mary k'o:ts
 cn = John = cn help - erg- 3 = case cn = Mary yesterday
 "It's John Mary helped yesterday"
t Johnhl hlimooyis Mary ky'oots

- (267) t = John =ɪ w'itx^w - ət
 cn = John = cn come - S.extr
 "It's John who came"
t Johnhl 'witxwit

Under the nominal argument analysis, this distinction can be captured descriptively as a distinction between extraction from positions structurally Case-marked by the verb/Infl and extraction from positions which are licensed in other ways.⁷³

Under the pronominal argument analysis, however, according to which nominals are adjuncts and therefore not Case-marked, such a characterization of the asymmetry is not available. Thus, this asymmetry also argues against the pronominal argument analysis.

⁷³ Note that this characterization of the asymmetry would not be available even under a Baker-style pronominal argument analysis, since a central feature of his analysis of Mohawk is that Case cannot be assigned to any argument positions.

4.4.3. Problems with the t-deletion rule

A further potential problem for the pronominal argument analysis of Gitksan relates to the t-deletion rule discussed above, and repeated here.

$$(268) \text{ Revised t-deletion rule} \\ t \rightarrow \emptyset / _ = \left\{ \begin{array}{l} s \\ t \end{array} \right\} \\ [3]$$

Recall that this rule serves to delete a /t/ person suffix when it immediately precedes a connective with the phonological shape /s/ or /t/, as in the following example, in which the /t/ suffix (underlined> is not phonetically realised:

$$(269) \text{ m'ats - } \underline{t} = t \quad tk^w\theta - tk'ix^w = t \quad \text{ha - n'i: - quyp'aX} \quad \text{ʔa} = t \quad \text{luʔp} \\ \text{hit - erg - 3 = cn} \quad \text{small - child = cn} \quad \text{instr - in - light} \quad \text{prep = cn} \quad \text{rock} \\ \text{"The child hit the window with a rock"} \\ \text{'madzihl hlgutk'ihlxwhl ha'niigoyp'aX ahl} \\ \text{lo'op}$$

A problem for any analysis which adopts this rule is that there is a class of consistent exceptions. In sentences with both a 3rd person pronominal subject and a lexical object, the /t/ subject suffix is immediately followed by the /t/ connective of the object nominal, and yet the deletion rule fails to apply, as is exemplified in (270):

$$(270) \text{ m'ats - } \underline{t} = t \quad \text{ha - n'i: - quyp'aX} \quad \text{ʔa} = t \quad \text{luʔp} \\ \text{hit - erg - 3 = cn} \quad \text{instr - in - light} \quad \text{prep = cn} \quad \text{rock} \\ \text{"S/he hit the window with a rock"} \\ \text{'madzithl ha'niigoyp'aX ahl lo'op}$$

The descriptive generalization seems to be that the /t/ suffix deletes in the relevant phonological environment only if it is also coreferential with the following NP. In (270), the phonological environment is met, but the /t/ suffix fails to delete because it is not coreferential with the following NP /han'i:quyp'aX/ ("window"). Since phonological rules should not be able to access coreference information, sentences such as (270) appear

to be problematic for both the nominal argument analysis and the pronominal argument analysis. However, I propose that under the nominal argument analysis the apparent exceptions to the deletion rule can be accounted for in a principled way.

Under a nominal argument analysis, sentences such as (269) and (270) have rather different S-Structures, and I claim that this difference in structure is responsible for their different behavior with respect to the t-deletion rule. Under the structure I propose in Chapter 4, sentences such as (270) have the following structure, with *pro* in subject position, licensed under agreement with the /t/ suffix on the verb:

(271) $pro_i \overbrace{m'ats -\emptyset - t_i} \left[VP \overbrace{t_i} \left[AspP \overbrace{t} \left[Asp/V \left[VP \overbrace{t} \left[v = \text{ɬ} \text{han}'i:quyp'aX_j \right] \right] \right] \right] \right] \right]$

In this structure, the /t/ suffix is syntactically quite distant from the connective associated with the object NP, even though they are adjacent on the surface.

A sentence such as (269), however, has the structure given in (272), in which the /t/ suffix is syntactically close to the connective of the following NP, which in this case is the subject.

(272) $m'ats - \emptyset - t_i \left[VP = \text{ɬ} \text{ɬ}^w \emptyset - \text{tk}'i \text{ɬ}^w \left[AspP \overbrace{t} \left[Asp/V \left[VP \overbrace{t} \left[v = \text{ɬ} \text{han}'i:quyp'aX_j \right] \right] \right] \right] \right]$

It appears that t-deletion occurs only if the /t/ suffix is syntactically close to the connective which triggers the deletion.

The necessary structural restriction might be incorporated into the phonological analysis of /t/ deletion in a number of different ways. One possibility would be to impose a government condition on the rule, of the type proposed in Kaisse (1985). Alternatively, the rule might be made sensitive to phonological phrasing, following proposals in work

such as Selkirk (1984) , Nespor and Vogel (1986) and Hayes (1989). Under this approach the syntax cannot be directly referred to in phonological rules, but can have indirect effects in determining certain aspects of prosodic structure.

A solution of this type is not available under the pronominal argument analysis. If Gitksan is a pronominal argument language, the structural relationship between the person-marking suffix and any following NP should always be the same, since all NPs are adjuncts:

(273) [m'ats - ə - t_i] S [= ʔ ʔk^{wə}-tk'ix^w]_i [= ʔ han'i:quyp'aX]_j

(274) [m'ats - ə - t_i] S [= ʔ han'i:quyp'aX]_j

In each case the following NP is an adjunct to the sentence containing the /t/ suffix, regardless of whether that NP is thematically related to the subject or object pronominal. Thus, under this approach it is difficult to account for why the /t/ suffix deletes in (269) and not in (270).⁷⁴

⁷⁴Tarpen (1991) proposes that Nisgha sentences of this problematic type have a rather different structure, which she suggests might account for the deletion facts. She claims that in sentences of the type under discussion, the so-called independent sentences, the "object" nominal is in fact a clefted element. Translating this proposal into structural representations, the sentences (i) and (ii) would presumably be assigned structures something like the following:

i [ø_j [m'ats - ə - t_i e_j] S] [= ʔ ha - n'i: - quyp'aX]_j
 hit - erg - 3 = cn instr - in - light
 (loose translation: "What s/he hit was the window")

ii [ø_j [m'ats - ə - t_i e_j] S [= ʔ ʔk^{wə}-tk'ix^w_i]] [= ʔ ha - n'i: - quyp'aX]_j
 hit - erg - 3 = cn small - child = cn instr - in - light
 (loose translation: "What s/he hit, the child, was the window")

Given this analysis, the syntactic distance between the /t/ person-marker and the object NP /ʔ han'i:quyp'aX/ would indeed be greater than the distance between the /t/ person-marker and the subject NP /ʔ ʔk^{wə}-tk'ix^w/, since /ʔ ʔk^{wə}-tk'ix^w/ would be adjoined within the same S, while /ʔ han'i:quyp'aX/ would be adjoined to a higher S. However, although there is some morphological evidence in favour of this analysis, various types of syntactic evidence suggest that the representations in (i) and (ii) are not appropriate for Gitksan. This issue is discussed in detail in Chapter 4.

However, this lack of person markers seems to be a serious problem for the pronominal argument analysis. One might try to save the analysis by proposing that there is a series of phonetically null person markers coreferential with the absolutive arguments in these cases. However, while it is not uncommon for an agreement paradigm to have some zero members, or to be zero in some environments, a series that is zero for every person and number value in every environment would seem to pose learnability problems.

The lack of person marking in these sentences is thus another aspect of Gitksan which seems incompatible with the pronominal argument analysis.

4.5. Independent pronominals

In the preceding sections we have seen various arguments that NPs in Gitksan should be analysed as arguments and that consequently person markers should be analysed as agreement. However, I have not yet discussed the status of independent pronouns, which might further complicate our analysis. In this section I give evidence that independent pronominals should be considered to have the same argument status as nominals.

Positions which are not associated with a bound person marker receive a pronominal interpretation through the use of a Series III independent pronoun, as is illustrated in the following sentences:⁷⁵

(278) paX n'i:y'
run 1sg
"I ran"

bax 'nii'y

⁷⁵ As discussed previously, the pronoun can be omitted altogether, in which case the argument will receive a default 3sg interpretation (Rigsby 1986, Tarpent 1988).

(279) *kaʔ - ə - t n'i:y'*
 see - erg - 3 1sg
 "S/he saw me"

ga'at 'nii'y

Given that Series III pronouns occur just in positions that are not referenced by bound person markers, one might propose that they have the same status as these affixed person markers. However, two types of evidence suggest that this assumption is incorrect.

First, unlike the person affixes, independent pronouns never double with lexical nouns, as is illustrated by the ungrammaticality of the following example:

(280) **paX n'it_i t = John_i*
 run 3sg cn = John
 "John ran"

Secondly, independent pronominals may be syntactically conjoined with other nominals

(281), while person-marking affixes cannot (282): ⁷⁶

(281) *kaʔ - ə - y' n'i:n qan t = Bill*
 see -erg- 1sg 2sg and cn = Bill
 "I saw you and Bill"

ga'a'y 'niin gan t Bill

(282) **kaʔ - ə - n qan t = Bill t = John*
 see - erg - 2sg and cn = Bill cn = John
 "You and Bill saw John"

In both these respects, then, independent pronouns behave just like nominals. Since under my analysis nominals are arguments, it is plausible to assume that independent pronominals should also be analysed as occurring in argument position.

⁷⁶ Following Livingston's (1989) analysis of parallel facts in Nisgha, I distinguish syntactic coordination, in which both parts of the conjunct have equal syntactic status, from so-called "plural pronoun" constructions (Schwartz 1988) in which the first element of an apparent conjunct subsumes the person and number of the whole NP, and the second element has adjunct status in the NP. Series II affixes may occur in plural pronoun constructions. (cf. Chapter 3, Section 2.1.2 (ii) for examples and discussion of this construction.)

The only potential problem for this analysis of independent pronouns relates to doubling with agreement. As we have seen, independent nominals may double with the agreement suffixes:

- (283) $ka\lambda - \text{ə} - t = qat = s$ $t = \text{Bill}$ $t = \text{John}$
 see -erg-3 = rep = case $cn = \text{Bill}$ $cn = \text{John}$
 "Apparently Bill saw John"
ga'atgas Bill t John

However, there is never doubling of independent pronouns with agreement:

- (284) $*ka\lambda - \text{ə} - t = qat$ $n'it$ $t = \text{John}$
 see - erg - 3 = rep 3sg $cn = \text{John}$
 "Apparently s/he saw John"

An NP position licensed by agreement can only be a nominal, as in (283) above, or be empty (contain *pro*, under my analysis):

- (285) $ka\lambda - \text{ə} - t = qat$ *pro* $t = \text{John}$
 see -erg - 3 = rep $cn = \text{John}$
 "Apparently s/he saw John"
ga'atgatt John

This clearly represents an asymmetry between independent pronouns and nominals, and it is unexpected if pronominals and nominals have the same argument status. However, the fact that overt pronouns fail to surface in Gitksan when their content is recoverable through context or agreement is not unusual. Many other languages, such as Chamorro (Chung 1982), prohibit pronouns from cooccurring with agreement. The preference shown in various languages for silent rather than overt pronouns is captured in Chomsky (1981) and Jaeggli (1981) by the "Avoid Pronoun Principle". This principle seems to be operative in Gitksan. Further discussion of this property is given in Chapter 4.

4.6. Conclusion

In this section, I have examined various kinds of evidence pertaining to the status of person marking elements, independent nominals and independent pronominals in Gitksan.

Evidence from word order, extraction and Case-marking supports the conclusion that nominals fill argument rather than adjunct positions in this language, and thus that affixed person markers should be analysed as agreement elements. This supports the claim that Gitksan is not a pronominal argument language, a conclusion bolstered by my analysis of exceptions to the phonological rule of "t deletion", and by the fact that certain argument positions are not referenced by any person marking elements. Finally, I showed that independent pronominals function like independent nominals (i.e. as arguments), rather than like the bound person markers (i.e. as agreement).

5. Summary of Chapter 3

This chapter has been concerned with establishing an appropriate representation for the Gitksan sentence. The overall conclusion of the chapter is that a Gitksan clause has the same basic syntactic structure as more familiar languages.

In Sections 1 and 2 I considered typological features of Gitksan related to ergativity and non-configurationality as potential sources of evidence for determining whether Gitksan should be assigned a non-standard structural representation. I showed that Gitksan's ergative patterns were morphological rather than syntactic, and that its non-configurational features were not overwhelming. These results suggested that Gitksan might be compatible with a standard accusative structural representation. In Section 3 I provided syntactic evidence which further supported an accusative analysis of Gitksan. Finally, in Section 4

I considered the question of whether Gitksan was a pronominal or a nominal argument language, and I concluded that it was a nominal argument language.

Chapter 4: Agreement and Case in Gitksan

0. Introduction

In the previous chapter I considered, and rejected, possible analyses of Gitksan as syntactically ergative, non-configurational or pronominal argument, concluding instead that Gitksan was an accusative configurational language in which independent nominals functioned as the arguments of the verb. In this chapter I propose an analysis of the various agreement and case patterns in the language, assuming a particular structural instantiation of this accusative structure.

The chapter begins in Section 1 with a discussion of the status of independent vs. dependent clauses in Gitksan, which is a necessary preliminary to the discussion of agreement and case patterns in Section 2. Finally, Section 3 considers in detail previous analyses of the /ə/ suffix, showing how the behaviour of this morpheme is compatible with the analysis of agreement and case in Section 2.

1. Independent vs. dependent clauses

1.1. Major differences between independent and dependent clauses:

As discussed briefly in Chapter 2, there are two distinct clause types in Gitksan, which are commonly referred to as dependent and independent. Independent clauses are restricted to matrix clause position, and in an independent clause, the verbal complex is the first element in the sentence. Dependent clauses may occur as matrix or embedded clauses, and are normally characterized by the presence of certain types of elements preceding the verb. I refer to these elements as dependent markers. The presence of the dependent markers is

associated with different patterns of verbal morphology, case marking and agreement from those which appear in independent clauses.¹

The exact nature of the differences between independent and dependent clauses depends on the transitivity of the verb.

(1) -(2) illustrate the two major differences between dependent and independent transitive clauses.

(1) independent transitive clause

stil - t = s t = John t=Peter
 accompany-erg - 3 =case cn=John cn=Peter
 "John accompanied Peter"
sdilis John t Peter

(2) dependent transitive clause

ne: - ti: =t stil - t = s t = John t=Peter
 not -contr =3 accompany-3=case cn=John cn=Peter
 "John did not accompany Peter"
neediit sdils John t Peter

The first difference is that an independent clause such as (1) contains a verbal suffix /ə/ which does not appear in a dependent clause. The second difference is that a dependent clause such as (2) contains a preverbal ergative person marker (/t/ in this instance) which is not present in the independent clause.²

In clauses containing intransitive verbs, the differences between independent and dependent clauses relate to the realisation of pronominal subjects, the case-marking of the subject, and the occurrence of a person-marking suffix on the verb. In an independent intransitive clause such as (3) the subject is not marked with the /s/ case-marker and no person-marking

¹There are also some more complex differences in the realisation of pronouns. These will be dealt with in detail in Section 2 of this chapter.

²(1) also contains a person marking affixes which has the form /t/. However, it is from a different person-marking paradigm (Series II), and occurs post-verbally rather than preverbally. More detailed discussion of these person-marking paradigms is given in Sections 2.6-2.7 of this chapter.

suffix appears on the verb. Furthermore, a pronominal subject in such a sentence will be realised by an independent pronoun (4). In a dependent intransitive clause, such as (5), the /s/ case-marking appears on the subject and a person marking suffix appears on the verb. If the subject is pronominal in a clause of this type it will be realised only by a person marking suffix, not by an independent pronoun (6):

intransitive independent clauses

- (3) w'itx^w t = John
 come cn=John
 "John came"

'witxw t John

- (4) w'itx^w n'i:y'
 come 1sg
 "I came"

'witxw 'nii'y

intransitive dependent clause

- (5) ne: - ti: w'itx^w - t = s t=John
 not-contr come - 3 =case cn=John
 "John didn't come"

needii 'witxws John

- (6) ne: - ti: w'itx^w - y'
 not-contr come - 1sg
 "I didn't come"

needii 'witxwi'y

These differences are summarized below:

(7) Major differences between independent and dependent clauses

	<u>independent</u>	<u>dependent</u>
	-verb-initial	-dependent marker-initial
Transitive clauses:	-ə/ verbal suffix	-preverbal ergative person-marker
Intransitive clauses:	-no /s/ case to subject -independent pronoun for pronominal subject	-/s/ case to subject -person suffix for pronominal subject

1.2. Dependent markers

A range of elements can function as dependent markers.³ The following list is not exhaustive, but gives representative examples from my data of the different classes of dependent markers.

1.2.1. Certain intransitive verbs

Among the elements which can introduce a dependent clause is a small number of words which can function both as dependent markers and as intransitive verbs. Examples of their use as verbs and dependent markers are given below:

i. hix^w

- as intransitive verb (to finish)

- (8) $\text{!a: hix}^w - t = s$ $t = \text{John}$ $\text{?a} = \text{!}$ $\text{sə} - \text{kofi} - t$
incept finish - 3 = case cn=John prep=cn pfx-coffee - 3
"John has finished making coffee"
hlaa hlixxws John ahl sikofit

- as dependent marker (perfective)

- (9) $\text{hix}^w = \text{!}$ $\text{taw!} - t = s$ $t = \text{Michael} = a$
perf =cn leave - 3 =case cn=Michael=inter
"Has Michael left?"
hlixxwhl da'whls Michaela

ii. yuk^w

- as intransitive verb (to work)

- (10) $\text{hi} - \text{yuk}^w$ $t = \text{Mary}$ $\text{?a} = \text{!}$ $\text{tsam} - \text{hun}$
dur-work cn=Mary prep=cn cook-fish
"Mary's busy cooking fish"
hiyukw t Mary ahl jamhun

- as dependent marker (progressive)

Intransitive predicate

- (11) $\text{yuk}^w = \text{!}$ $\text{litsX} - \text{x}^w - t = s$ $t = \text{John}$
prog = cn count - pass - 3 =case cn = John
"John is reading"
yukwhl litsxxws John

³See Rigsby (1986:272-4) and Tarpent (1987) for more extensive lists of dependent marking elements.

Transitive predicate

- (12) yuk^w - t kipa - t = s t=John t=Mary
 prog - 3 wait.for - 3 =case cn=John cn=Mary
 "John is waiting for Mary"
yukwt gibas John t Mary

iii. ne:

-as intransitive verb (to be absent, not exist)

- (13) ne: = ɬ hun
 not.exist=cn fish
 "There are no fish"
nehl hun

-as dependent marker (negative)

- (14) ne: - t ɬimo: - t = s t=Margaret t=Kathy = a
 not-3 help - 3 = case cn=Margaret cn=Kathy=inter
 "Did Margaret help Kathy?"
neet hlimoos Margaret t Kathya

/ne:/ used alone as a dependent marker, as in (14), generally indicates a (polite) question.

To indicate a negative declarative, it combines with the morpheme /ti:/ (contrastive), as in

(15) below.

- (15) ne:ti:
 ne: - ti: - t ɬimo: - t = s t=John t=Peter
 not - contr - 3 help - 3 = case cn=John cn=Peter
 "John didn't help Peter"
neediit hlimoos John t Peter

iv. ʔaq

- as intransitive verb (to be impossible, to lack, to be non-existent)

- (16) ʔaq = ɬ ta:la
 lack =cn money
 "Money is lacking"
aɣhl daala

- as dependent marker (cannot)

- (17) ʔaq nə =wila q'uts - ə - t = ɬ ʔana:x ; ne: - ti: t'u:tsx^w - y'
 unable 1sg = how cut -erg - 3=cn bread not-contr knife -1sg
 "I cannot cut the bread - I don't have a knife"
aɣ nuwila k'ojihl anaax; nee dii t'uutsxwi'y

Morphologically, this class of dependent markers is distinguished from the others by the presence of the /h/ morpheme between the dependent marker and a following intransitive verb, as in (9), (11) and (13) above.

1.2.2. Temporal / aspectual particles

A second class of elements which function as dependent markers have temporal/aspectual meanings, as illustrated in (18) - (22). Unlike the dependent markers discussed in the previous section, they function only as dependent markers, never as intransitive verbs. Examples are given below. In each of these examples it is clear that the clause is dependent, because the intransitive subject is marked with /s/ case

i. hla: (right now, inceptive, already)

- (18) **la:** w'itx^w - t = s t=John
 already come - 3 =case cn=John
 "John has already come"
hlaa 'witxws John

ii. q'ay (just)

- (19) **q'ay** kuksx^w - t = s t=Martin
 just awake - 3 =case cn=Martin
 "Martin just woke up"
q'ay gyuksxws Martin

iii. qas - ti: (finally)

- (20) **qas - ti:** kuksx^w - t = s t=Martin
 finally-contr awake - 3 =case cn=Martin
 "Martin finally woke up"
gasdii gyuksxws Martin

iv. wilk'i (right away),

- (21) **wilk'i** haw' - t = s t=Kathy
 right.away go.home - 3=case cn=Kathy
 "Kathy went home right away"
wilk'i ha'ws Kathy

v. haw'en (ti:) (not yet)

- (22) haw'en - ti: ɬe:qɣ^w - t = s t = John
 not.yet -contr finish.eating - 3=case cn=John
 "John hasn't finished eating yet"
haw'endii hleeɣxws John

Although these elements appear to be adverbial in nature, their distribution differs from that of other Gitksan adverbial elements. Note that in (18) - (22) above, the temporal/aspect marker occurs preverbally. In contrast, true adverbial phrases normally appear after the verb and its arguments, as in (23), and can appear preverbally only if they are fronted, for focusing or questioning, as in (24). This is not the case in (18) - (22), however, because when an adverbial is fronted, a complementizer must occur between the adverbial and the rest of the clause, as in (24). No such complementizer occurs in (18) - (22).

- (23) kaʔ - ə - t = s t = Peter t= Mary **k'o:ts**
 see-erg - 3 =case cn=Peter cn=Mary yesterday
 "Peter saw Mary yesterday"
ga'as Peter t Mary k'yoots

- (24) **k'o:ts** **tiswil** = t kaʔ - t = s t=Peter t=Mary
 yesterday comp=3 see - 3 =case cn=Peter cn=Mary
 "It was yesterday that Peter saw Mary"
ky'ooots diswit ga'as Peter t Mary

The temporal/aspectual markers in (18) - (22) also differ from the preverbals discussed in Chapter 2. Although preverbals may be adverbial in nature, like /yalki/ in the following example, they do not trigger dependent morphology. This is illustrated in the following sentence, where the intransitive subject surfaces as an independent pronoun, rather than as a person suffix. This fact provides evidence that the sentence is independent in form:

- (25) tim **yalki** ki:ɬ n'i:y'
 fut early lie.down 1sg
 "I'll go to bed early" R 381
dim yalgi giuhl 'nii'y

1.2.3. Conjunction

The clausal conjunction /ʔi:/ "and then" also has the effect of making the following clause dependent in form. This suggests that it should probably be viewed as a subordinator rather than a true coordinator.

- (26) tsam-hun t=John ʔi: sə - ʔana:x - t = s t=Mary lo: - t
 cook-fish cn=John and pfx-bread - 3 =case cn=Mary prep-3
 "John cooked fish and Mary made bread"
jamhun t John ii sa'anaaxs Mary loot

1.2.4. Subordinators

In addition to clauses introduced by the elements listed above, all subordinate clauses are dependent in form. Subordinate clauses are usually introduced by a complementizer such as /wil/ (27) - (28), which is roughly equivalent to English "that" in some contexts, and to "when" in others, and /tsə/ (29) - (30), which is often used when the subordinate clause expresses uncertain or non-factual information.

- (27) maʔ -T=ə - t = s t=John lo: - y' wil - t kaʔ - t = s t=Bill t=Mary
 tell-T-erg-3=case cn=John prep-1sg comp-3 see - 3=case cn=Bill cn=Mary
 "John told me that Bill saw Mary"
mahldis John loo'y wilt ga'as Bill t Mary
- (28) kaʔ - ə - t = s t = John t=Bill qan t = n'i:y' wil w'itx^w - t
 see-erg - 3=case cn=John cn=Bill and cn=1sg quʔ = ʔ Vancouver
 comp come-3sg
 loc=cn Vancouver
 "John saw Bill and me when he came to Vancouver"
*ga'as John t Bill gan t 'nii'y wil 'witxwt
 go'ohl Vancouver*
- (29) ha - n'i: - qut - t = s t = John tsə tawʔ - t = s t=Peter
 instr-in-heart - 3 =case cn=John comp leave - 3=case cn = Peter
 "John thinks that Peter left"
ha'niigoots John ji da'whls Peter
- (30) ne: - m wila:x tsə = t kaʔ - t = s t=Mary ʔ tu:s = a
 neg-2sg know comp=3 see - 3 =case cn=Mary=cn cat = inter
 "Do you know if Mary saw the cat?"
neem wilaax jit ga'as Maryhl duusa

basically descriptive generalization about the nature of the difference between the two Gitksan clause types.

1.3.1. Main vs. embedded clauses?

Given that independent clauses are restricted to root contexts, I first consider whether accounts of main vs. embedded clause distinctions in other languages can be applied to the Gitksan facts.

In many Germanic languages there are particularly clear differences between root and embedded clauses, related to the position of the verb. In root clauses the verb is in second position, while in other clauses the verb is clause-final. Standard accounts of these phenomena relate them to the interaction of verb movement and the presence or absence of material in the complementizer position (e.g. Koopman 1984, Travis 1984 i.a.). Under such accounts the complementizer position in matrix clauses is empty, allowing or forcing (depending on the language and the construction) the verb to move to fill this position. In embedded clauses, on the other hand, the presence of a complementizer blocks raising of the verb.

The Gitksan data resemble the Germanic data in that it is the presence or absence of a sentence initial element which seems to be correlated with the distinction between the two clause types. However, the analysis of the Germanic facts cannot be directly applied to the Gitksan data, since in Gitksan, unlike Germanic, the same VSO word order occurs in both

dependent and independent clauses, suggesting that the verb occupies the same position in both clause types.^{5 6}

1.3.2. Independent clauses vs. infinitives?

Another possible approach to explaining the differences between independent and dependent clauses is to try to correlate the features of independent clauses with those of infinitival clauses. However, this approach also proves problematic.

The crucial feature of an infinitival clause is that it lacks tense (and possibly agreement). However, while independent clauses do lack one type of agreement (the Series I ergative person marker), they can show overt tense marking, as in the following example, in which the morpheme /tim/ indicates future tense.

- (33) tim haw' t=John
fut go.home cn=John
"John will go home"
dim ha'w t John

As a result, independent clauses cannot be identified with infinitival clauses.

Another difference between infinitival and independent clauses has to do with their distribution. As noted above, independent clauses are possible only as matrix clauses, never occurring in embedded position. This is exactly the opposite of the distribution of infinitives, which, at least in English, are restricted to embedded environments. In English, this restriction is due to the problem of assigning Case to the subject of the clause in the absence of tense or agreement. Case assignment also plays some role in

⁵This is true of Gitksan word order under the assumption that the preverbal Series I person markers are treated as agreement or clitics rather than arguments, as under my analysis. (cf. Rigsby (1986) for a different view.)

⁶ As noted by Koopman and Sportiche(1991), VSO languages usually have the same word order regardless of whether or not there is a complementizer in the clause. This fact is the basis for the assumption that verb movement in these languages is to Infl rather than Comp.

distinguishing dependent and independent clauses in Gitksan, in that morphological case is assigned to an intransitive subject only in a dependent clause. However, a Gitksan independent clause, unlike an infinitival clause, can stand alone, and so, unlike an infinitival clause, it must have some mechanism for licensing its subject.

It thus appears that the features of independent clauses cannot be explained by equating them with infinitival clauses.⁷

1.3.3. A structural generalization

So far I have shown that the distinction in Gitksan between independent and dependent clauses cannot be equated with the distinction between root and embedded clauses or with the distinction between tensed and infinitival clauses. Although ultimately it may be possible to relate the difference between the two clauses types in Gitksan to phenomena analysed in other languages, in this section I simply propose the following structural generalization about what distinguishes a dependent from an independent clause:

(34) A clause is dependent if and only if the verb is governed by a lexically filled functional head.

In recent approaches to clause structure within GB theory (Pollock (1989), Chomsky (1992), Carstens and Kinyalolo (1989) and others), functional elements such as negatives, aspectuals, auxiliary verbs and complementizers are assumed to head their own syntactic projections which dominate the VP.⁸ Interestingly, these classes of elements correspond closely to those which cannot occur in Gitksan independent clauses. Based on this observation, I propose that the crucial feature distinguishing independent from dependent

⁷The differences noted above between independent and infinitival clauses - the distributional restrictions and the possibility of overt tense marking - also argue against equating independent clauses with small clauses.

⁸Tense is also generally included in this set of functional heads. However, since the minimal tense marking in Gitksan appears to have no syntactic effects, I assume that this is not a functional head in Gitksan clause structure.

clauses is that in independent clauses these functional projections are empty, or missing, while in dependent clauses at least one of these projections is filled.

Multiple dependent markers may cooccur in a single clause, providing us with a potential source of information about the ordering of the various functional projections within the Gitksan clause structure. However, I have found it difficult in elicitation to get consistent data regarding the ordering and cooccurrence restrictions on these elements. I will therefore represent them as instantiations of a generic functional projection: FP.

This proposal about the structural distinction between independent and dependent clauses entails the claim that the intransitive verbs which can introduce dependent clauses (Section 1.2.1 above) are not functioning as the heads of separate VPs when they are used as dependent markers. This seems appropriate for at least two reasons. First, as illustrated above, these verbs have a different meaning when they are functioning as independent predicates from when they are functioning as dependent markers. A second difference relates to the marking of tense. When these verbs are functioning as main verbs, they can be marked for tense, as in (35), where the future tense marker /tim/ precedes the main verb /yuk^w/.

- (35) **tim** hi-yuk^w n'i:y' ʔa =ɬ tsam - hun
 fut dur-work 1sg prep=cn cook - fish
 "I'm going to be busy cooking fish"
dim hiyukw 'nii'y ahl jamhun

However, when the same verb functions as a dependent marker, it cannot be preceded by the tense marker, as illustrated in (37). Instead the tense marking immediately precedes the main verb (36).

- (36) ɬa: yuk^w **tim** ɬisx^w - y'
 incept prog fut finish - 1sg
 "I'm very close to finishing"

hlaa yukw dim hlisxwi'y

(37) *ɬa: tim yuk^w ɬisx^w - y'

1.3.4. Dependent clauses without dependent markers

An apparent problem for this description of the difference between dependent and independent clauses are clauses which are dependent in form, but which lack a dependent marker. Two types of sentences have this character. The first type is imperatives, described briefly in Chapter 3, which exhibit the person-marking associated with dependent clauses, but which lack dependent markers, as illustrated:

(38) paX - n
run - 2sg
"Run!"

bahan!

(39) sim = kəpa - m'
2pl = wait - 1pl
"Wait for us" R 310

sim giba'm

Tarpen (1987:238-9) suggests that imperatives of this type may be viewed as being truncated versions of full dependent clauses. In a more polite command form, which Rigsby (1986:313) terms a "periphrastic directive", the command appears as a clause embedded under the predicate adjective /ɲam/ "good", as in the following examples:

(40) ɲam = ɬ tim t'a: - n
good=cn fut sit-2sg
"Sit down!" R 313

amhl dim t'aan

(41) ɲam (mə) tim sim = kəpa - ti:t
good (2sg) fut 2pl = wait - 3pl
"Wait for them" (plural agents) R 314

am (mi) sim gibadiit

Tarpen suggests that the more direct imperative is a truncated form of this periphrastic form. Note that if the introductory elements /ɲam ..tim/ are truncated, the remainder of the

sentence is dependent in form just like the imperatives in (38) - (39).⁹ This provides a possible explanation of why imperatives appear to violate the generalization in (34).

Even if such an analysis of imperatives ultimately proves to be incorrect, however, I do not consider the imperatives to constitute a significant counterexample to (34), since it is so common cross-linguistically for imperatives to be exceptional in form.

A second apparent exception to (34) comes from a sentence type discussed in Tarpent (1987: 237-8; 1991). Tarpent notes that sometimes, in informal conversation, sentences occur which are dependent in form, but lack a dependent marker. The following examples from Nisgha are taken from Tarpent (1991:5).

- (42) $\text{hisk}^w - y'$
finish-1sg
"[I am] finished"
hlisgwi'y
- (43) $\text{nə} \quad \text{qaks} \quad \text{hisaʔan-t}$
1S.ERG finally finish.s-3
"[I] finally finished it"
na gaks hlisa'ant

Tarpent uses these data to support her claim that the crucial difference between dependent and independent clauses is not the presence of the dependent marker.

I have been unable to elicit in Gitksan transitive clauses parallel to (43), but it is possible to find intransitive examples parallel to (42) in Gitksan, as illustrated below:

⁹ I use the term "truncated" in a purely descriptive sense, not implying any particular theoretical analysis.

(44) ʔe:qx^w - y'
 finish.eating-1sg
 "I'm finished (eating)"¹⁰
hleekxwi'y

(45) ʔeʔ ʔisx^w - y'
 yes finish-1sg
 "Yes, I'm finished" ¹¹
e'e, hlisxwi'y

However, although sentences of this type are possible with certain verbs, the construction does not seem to be productive. There are many verbs which cannot occur in such constructions. For example, my speaker rejected parallel sentences constructed with the intransitive verbs /yo:qx^w/ "eat", /hatiks/ "swim", /ʔix^w/ "fish", /yel/ "lie" and /ts'in/ "enter". The sentences were judged to be ungrammatical unless a dependent marker was added to the clause, as illustrated:

(46) *hatiks - y'
 swim-1sg

(47) yuk^w = ʔ hatiks - y'
 prog=cn swim-1sg
 "I'm swimming"
yukwhl hadixsi'y

¹⁰These verbs can also be used in sentences exhibiting the pattern which is normal for independent sentences, as follows:

(1) ʔe:qx^w n'i:y'
 finish.eating 1sg
 "I'm finished (eating)"
hleekxw 'nii'y

(2) ʔisx^w n'i:y'
 finish 1sg
 "I'm finished"
hlisxw 'nii'y

¹¹This sentence was given as an answer to the following question:

(3) haw'en ʔisx^w - n = a
 not.yet finish-2sg=inter
 "Are you finished?"
ha'wen hlisxwina

This suggests that sentences such as those in (44) - (45) above are exceptional, and thus should not be expected to fall out directly from the general analysis.¹³

2. A theoretical account of Agreement and Case in Gitksan

This section proposes a theoretical account of agreement, case and the distribution of overt and silent pronouns in Gitksan. I begin with a detailed examination of number agreement in Gitksan, a discussion which leads me to make a specific proposal about the structure of a Gitksan clause. Subsequent sections then show how this structure, in conjunction with the agreement framework of Chomsky (1992), allows an elegant account of agreement, morphological case patterns and pronoun distribution in Gitksan.

2.1. Verbal Number Agreement

In this section I present facts about the number agreement marking on the predicate in Gitksan.

2.1.1. Absolutive number agreement

As discussed in Rigsby (1986:268-9), the verb in Gitksan agrees in number with the absolutive argument. This is illustrated in the following data. In (48) - (50), the absolutive is singular and so the verb appears in its singular form. If the absolutive is made plural, as in (51) - (53), the verb is also plural.

¹³They can perhaps also be viewed as truncated dependent clauses, similar to truncated English sentences like "Finished!" "Done it!". In English, as in Gitksan, the truncated forms are possible only in informal discourse, and only with certain verbs, as illustrated by the ungrammaticality of forms such as *"Eaten!", *"Swum!", *"Opened it!".

singular absolutive, singular verb
 (48) ts'i:p n'i:y'
 close.eyes(sg) 1sg
 "I closed my eyes"

ts'iip 'nii'y

(49) ne: - ti: paX - y'
 not - contr run(sg)- 1sg
 "I didn't run"

needii baha'y

(50) ts'i:k^w =ɬ hə - ʔaks t = x^win
 leak(sg) = cn instr-water cn = this
 "This pail leaks"

ts'iikwhl ha'aks tun

plural absolutive, plural verb

(51) tsəp - ts'i:p n'u:m' qan t = Kathy
 pl - close.eyes 1pl and cn =Kathy
 "Kathy and I closed our eyes"

jipst'iip 'nuu'm gant Kathy

(52) ne: - ti: qul - m'
 not-contr run(pl) - 1pl
 "We didn't run"

needii goli'm

(53) w'alqa tsəx - ts'i:k^w =ɬ hə - ʔaks tip = x^win
 all pl - leak =cn instr-water cn(pl) = this
 "All these pails leak"

'walga jixts'iikwhl ha'aks dipun

2.1.1.1. Invariant nouns and verbs

The agreement pattern just outlined appears to be quite pervasive, although number is not always morphologically realised on both the noun and the verb. The reason is that some nouns and verbs in Gitksan do not have a distinct singular and plural form (Rigsby 1986:90-91).¹⁴

The sentence pairs in (54) - (57) are representative examples of invariant nouns in absolutive position. In these examples, it is the form of the verb which determines whether

¹⁴There appears to be some inter-speaker variation in which verbs and nouns are invariant.

the absolutive argument receives a singular or plural interpretation. (The invariant absolutive is underlined.)

(54) n'i: - maq - T - ə - y' = ɬ lakx^w laX ʔan - lakx^w
 on - put(sg) - T - erg - 1sg=cn fuel on place-fire
 "I put (one piece of) wood on the fire"
'niimaqdi'yhl lakxw lax anlakxw

(55) n'i: - t'aɬ - T - ə - y' = ɬ lakx^w laX ʔan - lakx^w
 on - put(pl) - T - erg - 1sg=cn fuel on place-fire
 "I put (more than one piece of) wood on the fire"
'niit'ahldi'yhl lakxw lax anlakxw

(56) ʔalkaX = ɬ kat
 talk = cn man
 "A man is talking"
algaxhl gat

(57) ʔəl - ʔalkaX = ɬ kat¹⁵
 pl - talk = cn man
 "People are talking"
al'algaxhl gat

The sentence pairs in (58) - (61) are examples of invariant verbs with singular and plural absolutive arguments. (The verb is underlined.)

(58) ye:Xs - T - ə - y' t=Mary quʔ = ɬ Vancouver
 visit - T - erg - 1sg cn=Mary loc=cn Vancouver
 "I visited Mary in Vancouver"
yeexsdi'y t Mary go'ohl Vancouver

(59) ye:Xs - T - ə - t n'iti:t quʔ = ɬ Vancouver
 visit - T - erg - 3 3pl loc=cn Vancouver
 "She visited them in Vancouver"
yeexsdit 'nidiit go'ohl Vancouver

(60) yuk^w = ɬ ʔix^w - y'
 prog =cn fish -1sg
 "I'm fishing"
yukwhl iwi'y

¹⁵Rigsby (p.c.) points out that the word /kat/ "man" in fact has two plural forms, but with specialized meanings. The reduplicated plural /ki-kat/ means "peoples", as in /ʔalu: - ki - kat/ "aboriginal peoples", and the suppletive plural /ʔi:w'x^wi/ means "men (masculine, not generic, reading)".

- (61) yuk^w =ɬ ʔix^w - m¹⁶
 prog =cn fish -1pl
 "We're fishing"

yukwhl iwu'm

2.1.2. Iterative plural

As well as indicating number agreement with the absolutive argument, however, plural marking on the verb in Gitksan can also have another interpretation, indicating plural actions, as Rigsby (1986:269) also points out.¹⁷ This is illustrated in the following examples:

- (62) his - yats - ti:t =ɬ qan
 pl - beat - 3pl =cn tree
 "They banged on the tree (repeatedly)"
hisyatsdiithl gan

- (63) his - yats - ə - y' =ɬ qan
 pl - beat -erg -1sg=cn tree
 "I banged on the tree (repeatedly)"
hisyaji'yhl gan

In both of these sentences the verb form is plural but the absolutive argument is singular. In these cases the plural marking on the verb indicates that plural actions were performed. In particular, it indicates that each participant performed plural actions. As an illustration, consider the meaning contrast between (63) above and (64):

- (64) yats - ti:t =ɬ qan
 beat -3pl =cn tree
 "They banged on the tree (once each)"
yatsdiithl gan

In (64), plural actions were performed, since the tree was hit many times, but the singular verb indicates that each person hit the tree only once. The plural verb in (63) indicates that

¹⁶It is possible to make this, and most verbs, plural with the distributive plural prefix /qa/, but the distributive reading is inappropriate in this sentence.

¹⁷Tarpen (1987:723-4 ch 11) notes similar data in Nisgha.

each person hit the tree many times. I shall refer to this use of plural marking as the iterative plural.

Only certain verbs are compatible with an iterative plural interpretation. For example, the following examples, in which the absolutive argument is clearly singular, are judged to be ungrammatical, thus showing that an iterative plural interpretation is not permitted.

- (65) *yuk^w = ɬ tux^w - t'ax^w - asx^w = s t = John
 prog = cn pl - sweep - antip = case cn = John
 *"John is sweeping (repeatedly)"
- (66) *qul n'i:y'
 run(pl) 1sg
 *"I ran (repeatedly)"
- (67) *həs - ʔisx^w = ɬ hun
 pl - stink = cn fish
 *"The fish stinks (repeatedly)" (grammatical with the interpretation: "The fish (plural) stink")

The generalization which seems to emerge from the data is that the iterative plural is only possible with verbs which have a "delimited" (Tenny 1987) or "telic" (Comrie 1976) interpretation - that is, those verbs which are compatible with an adverbial such as "in an hour" rather than "for an hour". Expressions which are inherently non-delimited or atelic, such as "sweeping" (65), "running" (66) and "stinking" (67), cannot be viewed as iterating, leading to the ungrammaticality of the above sentences.

Thus, in sentences with non-delimited or atelic predicates, plural marking on the verb can only indicate the plurality of the absolutive argument.

2.1.3. Interaction patterns

The data presented so far illustrate that in Gitksan the same morphological marking on the verb can potentially serve to indicate either number agreement with the absolutive argument

- (73) $\text{həX} - \text{ləqs} - \text{ti:t} = \text{ɬ}$ $\text{həɬ} - \text{ha:ɬXan}$
 pl - scratch - 3pl = cn pl - wall
 "They scratched the walls" (multiple scratches)
hlaxhlakɬsdiithl hahlhaahlxan
- (74) $\text{saqayt} \quad \text{qəp} - \text{qa:p} - \text{ə} - \text{t} = \text{ɬ}$ $\text{t} = \text{x}^{\text{w}}\text{is} - \text{ət}$
 together pl - gather-erg-3=cn cn = that - S.extr
 "She gathered together her things"
sagayt gapgaabithl tosit
- (75) $\text{tux}^{\text{w}} - \text{t'ak}^{\text{w}} = \text{ɬ}$ $\text{ʔan-lip'insx}^{\text{w}} - \text{y}'$
 pl - twist =cn instr-sew -1sg
 "My threads twisted (many times)"
duxwt'akwhl anlip'insxwi'y

2.1.3.2. Number of absolutive and number of actions are different

When the absolutive is plural but the number of actions performed is singular, the verb is marked plural, as shown by the following examples.

- (76) $\text{təx} - \text{t'ak} - \text{ə} - \text{y}' = \text{ɬ}$ $\text{qa} - \text{hu} - \text{wa} - \text{sim}'$
 pl - forget -erg-1sg=cn distr-pl - name - 2pl
 "I forgot your names"
dixt'agi'yhl gahuwasi'm
- (77) $\text{k}^{\text{w}}\text{ət} - \text{k}^{\text{w}}\text{':o:t} - \text{ən} - \text{y}' = \text{ɬ}$ $\text{tXa: n'itx}^{\text{w}}\text{s} = \text{ɬ}$ $\text{hə} - \text{q'aq} - \text{y}'$
 pl - lose -trn -1sg =cn all = cn instr-open - 1sg
 "I lost all my keys (at one time)"
gwikw'oodini'yhl t'xaa'nitxwshl hak'aga'y
- (78) $\text{məɬ} - \text{miɬ} - \text{T} - \text{ə} - \text{y}' = \text{ɬ}$ $\text{saw'nsx}^{\text{w}}$
 pl -burn-T - erg - 1sg =cn paper
 "I burned up the papers (all at once)"
mihlmihldi'yhl sa'wnsxw
- (79) $\text{ne:} - \text{ti:} - \text{t}$ $\text{xsə} \quad \text{tə} - \text{qul} - \text{t} = \text{s}$ $\text{t} = \text{John} = \text{ɬ}$ $\text{k'upa} \quad \text{tk'itx}^{\text{w}}$
 not - contr-3 out trn-run(pl) - 3=case cn = John = cn small(pl) child
 "John didn't run out with the kids" (based on Walsh 1988)
neediit xsi digols Johnhl k'uba tk'ihlxw
- (80) $\text{yuk}^{\text{w}} - \text{t}$ $\text{sil} - \text{ʔəl} - \text{ʔalkaX} - \text{t} = \text{s}$ $\text{t} = \text{Mary}$ tip John qan $\text{t} = \text{Fred}$
 prog -3 with-pl-angry - 3 = case cn = Mary cn John and cn=Fred
 "Mary didn't get angry with John and Fred"(based on Walsh 1988)
yukwt sil'al'algaxs Mary dip John gant Fred

intransitive

- (81) *hił - yałx^w =ł ts'aw'aXs - y'*
pl - slippery =cn shoe - 1sg
"My shoes are slippery"
hihlyahlxwhł ts'a'wałsi'y
- (82) *hix - hix =ł mu:s ku:n'*
pl - fat = cn moose now
"The moose are fat now"
hixhixhl muus guu'n
- (83) *həs - ɣisx^w =ł hun tip = x^win = sa*
pl - stink = cn fish cn(pl) =this =evid
"These fish stink"
has'isxwhł hun dipunsa

When the absolutive is singular but plural actions are performed, the verb is also marked plural, as illustrated in the following data:

Plural verb, singular absolutive, plural actions

intransitive

- (84) *n'a: təs - t'is - a n'it*
into.view pl - hit -detr 3sg
"S/he knocked"
'naa dist'isa 'nit
- (85) *təx^w - t'ak^w =ł ɣan-lip'insx^w - y'*
pl - twist =cn instr - sew -1sg
"My thread twisted (many times)"
duxwi'akwhł anlip'insxwi'y

transitive

- (86) *qəs - q'uts - ə - y' =ł hału?*
pl -cut -T - erg-1sg=cn material
"I cut up the material (into pieces)"
gask'oji'yhl hahlo'o
- (87) *həs - hats - T - ə - t =ł ɣəs - ɣus =ł tu:s = kə*
pl - bite - T - erg - 3 = cn pl - dog = cn cat = dist
"The dogs bit the cat" R 269
hashatsdihl as'ushł duusgi
- (88) *łəq - łəqs - ti:t =ł ha:łXan*
pl - scratch -3pl =cn wall
"They scratched the wall" (multiple scratches)
hlakhlakłsdiithł haahlxan

- (89) his - yats - ti:t = ɬ qan
 pl - beat - 3pl =cn tree
 "They banged on the tree"

hisyatsdiithl gan

2.1.3.3. Summary and discussion

In the above data, the following combinations have been illustrated:

(90)	number of absolutive	number of actions	verbal marking
	singular	singular	singular
	plural	plural	plural
	singular	plural	plural
	plural	singular	plural

The most interesting cases are those in which the number of the absolutive is not the same as the number of actions. As summarized in the chart above, the data show that in these instances, the marking of plurality consistently takes priority. Further evidence of this comes from the ungrammaticality of the following forms.

- (91) *k^wo:t - ən - y' = ɬ tXa: n'itx^ws = ɬ hə - q'aq - y'
 lose -trn - 1sg =cn all = cn instr-open - 1sg
 *"I lost all my keys (at one time)"

- (92) yats - ə - y' = ɬ qan
 beat -erg - 1sg =cn tree
 *"I banged on the tree repeatedly" (ungrammatical under this interpretation)

(91) shows that if the absolutive is plural, it is not possible to use a singular form of the verb to indicate that only a single action occurred. (92) illustrates that if the number of actions is plural, but the absolutive is singular, then the verb must be plural. If not, the interpretation of plural actions is lost.

Since both the iterative plural and the absolutive number agreement plural are marked with the same morphology, I assume that they are the realisation of a single morphological

feature [+/- plural]. That is, they are in competition for the same slot in the morphological feature matrix of the verb.

The priority of plural over singular marking suggests that only the feature [+plural] is active in the agreement system which supplies the verb with its number marking. This can be represented if we assume that some kind of underspecification holds of the number marking system, with only [+plural] being marked, and [-plural] being supplied by default in the absence of plural marking. Either a plural absolutive or iterative aspect may supply the verb with plural marking. If neither does so, then the verb will surface in its singular form.

2.1.3.4. Exceptional verbs

The above generalizations cover the majority of sentence types in Gitksan. However, there is a small class of verbs which can appear in their singular form even when their absolutive argument is plural. Examples are given in (93) - (95):

- (93) $\lambda a:$ k'atsx^w - ti:t
 incept arrive(sg) - 3pl
 "They have arrived/docked (in one boat)" (based on Tarpent (1987))
hlaa k'atsxwdiit
- (94) ne: - ti: haw' - sim' qan t = John kaXx^w
 not - contr go.home(sg)-2pl and cn = John last.night
 "You and John didn't come home last night"
neediit ha'wsi'm gan t John gaxxw
- (95) tsuq n'u:m qu = s = x^win
 live(sg) 1pl at = case=this
 "We live here - in one building"
jok 'nuu'm gosun

These cannot be analysed as instances of invariant verbs, since they do have plural forms, as in (96) - (98) below. However, the use of the plural form changes the meaning of the sentence, as indicated in the translations provided.

- (96) ɬa: kəs - k'atsx^w - ti:t
 incept pl - arrive - 3pl
 "They have arrived/docked (in several boats)" (based on Tarpent (1987))
hlaa gisk'atsxwdiit
- (97) haw - $\text{haw}' = \text{ɬ}$ kat
 pl-go.home=cn man
 "People are leaving (in groups and/or at different times)"¹⁸ Rigsby (p.c.)
hawha'whl gat
- (98) tsəX - tsuq n'u:m $\text{qu} = \text{s} = \text{x}^w$ in
 pl - live 1pl at = case=this
 "We live here - in different buildings"
jaxjok 'nuu'm gosun

These examples show that the plural in such sentences cannot be interpreted as being iterative, since in none of these instances is iterative action implied.

I suggest that in these exceptional cases, the verb is exhibiting agreement with an implicit argument - that is, one which is logically present but not overtly expressed. Thus, the verb / k'atsx^w / "to dock, arrive" agrees with the number of boats or cars arriving, / tsuq / "to live" agrees with the number of buildings lived in and / haw' / "to go home" agrees with the number of groups in which people are leaving. Since this agreement pattern is exceptional, I suggest that it must be specially marked in the lexical entry of these verbs.

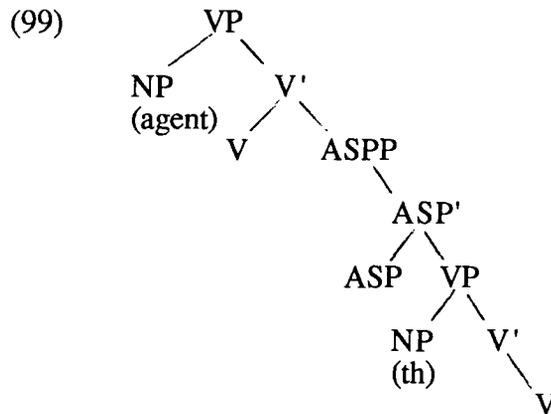
2.2. ASPP (Travis (1992))

In this section I consider how the data regarding number agreement and iterative aspect described above can be accounted for.

Interaction between the morphological marking of plurality and aspect such as that just described is not unique to Gitksan. Travis (1992) discusses a similar phenomenon in

¹⁸ Rigsby (p.c.) notes that speakers vary in whether they accept this form. For some speakers / haw' / is an invariable verb.

Tagalog. She notes that in Tagalog, reduplicative plural marking may indicate either progressive aspect or the plurality of a derived (non-actor) subject. She suggests that plural marking of this type should be associated with an aspectual head positioned between two VP projections in a Larson (1988) style VP, as follows:



Travis proposes for the Tagalog data that "reduplication is represented in Aspect and either indicates verbal plurality (progressive aspect), or it shows nominal plural agreement with a subject NP that has passed through the SPEC of Aspect position (i.e., a non-Actor)."

(Travis 1992:343)

On the surface, the Gitksan data appear to differ from the Tagalog data in two ways. One difference is that the aspectual plural marking on the verb in Gitksan indicates repeated actions rather than progressive aspect. However, as Travis, citing Cowper (1992), points out, for at least certain verbs there is a clear correlation between progressive aspect and an iterative interpretation, as in the following English example:

(100) The light was flashing.

A second difference between Gitksan and Tagalog plural marking relates to the agreement function of plural. The Gitksan agreement is with the absolutive argument rather than with

a derived subject. However, ignoring for the moment the intransitive pattern in Gitksan, the agreement in both languages is with (deep) objects not subjects. As Travis (p.c.) notes, the structure in (99) in fact prevents aspectual agreement from being with a deep subject, since this would require lowering of the subject into the spec of ASP position.¹⁹

In spite of some surface differences, then, there are clear parallels between the Tagalog and Gitksan data, and so I propose to adopt in principle Travis's account of verbal plural marking, and employ for Gitksan a structure in which an aspectual head is generated between two VP projections.

2.3. ASPP and Gitksan number agreement

2.3.1. Feature Strength and Agreement

The framework for agreement which I follow in this and the following sections is basically that of Chomsky (1992). I review here the main features of this approach to agreement.

As mentioned briefly in Chapter 1, Chomsky (1992) assumes that the marking of inflectional features, such as plural, person, number and case, takes place in the lexicon. In the course of the derivation these features must be licensed through a process of checking, or matching, under identity with a feature on another element within the structure. This checking can take place between a head and a NP, via spec head agreement, or between two heads, when one head adjoins to the other. After features are checked, they disappear.

Chomsky claims that checking cannot take place within a lexical projection. As a result, heads and arguments must move to a functional projection if their features are to be

¹⁹Interaction between aspect and objects (rather than subjects) is also found in range of other languages, as noted in Travis (1991). This provides further support for this analysis of ASP.

licensed. This movement may take place at either S-Structure or LF, with the so-called "strength" of the features involved in checking determining when this process must occur. "Strength" appears to be related in some way to the richness of the morphological realisation of a given feature. Precisely how this notion should be defined is discussed below.

Overt movement (i.e. movement which takes place at S-Structure) occurs only if the features to be checked are strong. This follows from Chomsky's dual claims that (1) features are not legitimate PF objects (Chomsky 1992:37)²⁰, and (2) strong features are visible at PF. Thus, if strong features are not checked and hence eliminated from the representation prior to PF, the derivation will be ill-formed. Weak features, on the other hand, are invisible at PF, and so their presence at this level will not cause the derivation to fail. In fact, Chomsky claims that the checking of weak features will always occur later in the derivation (at LF), due to a principle of procrastination (Chomsky 1992:43) which ensures that movement takes place as late as possible. Thus, the movement will be covert (i.e. at LF) unless forced to occur overtly (i.e. at S-Structure) by the presence of strong features.

In the analysis which follows, I will be appealing extensively to this distinction between weak and strong features, so in this section I want to make explicit my assumptions about how these terms are to be interpreted.

When Chomsky introduces the terms "weak" and "strong", he cites Pollock (1989), who makes reference to the morphological richness of agreement in determining whether or not verb raising can apply. This suggests that the notion of feature strength is related to the

²⁰Inflectional features, unlike articulatory features, are not considered to be legitimate PF objects because they do not have "a uniform language independent interpretation". (Chomsky 1992:37)

notion of morphological richness. However, Chomsky, unlike Pollock, generally fails to make any reference to the richness of the morphological realisation of a feature in his classification of that feature as weak or strong. Rather, in most of the examples he discusses, the strength of a particular feature is determined solely by whether or not it motivates overt movement.

There are two problems with this purely movement-related use of the notions strength/weakness. First, it causes the definition of strength to become circular - strong features motivate overt movement, while features are strong if they motivate overt movement. Secondly, in languages in which surface word order does not reveal whether movement has occurred, there is no way to classify features as strong or weak. For both these reasons, it is clearly preferable to have some independent morphological evidence to support the classification of a feature as strong or weak.

Chomsky's failure to explicitly discuss the relationship between PF strength and morphological richness does not necessarily imply that the notions cannot be related. Rather, this problem seems to derive from Chomsky's focus in this paper on languages which provide little data which might help elucidate the relationship. The only facts he discusses which potentially bear on this issue come from Arabic. Since this case is of particular relevance for my discussion of Gitksan, I will consider it in more detail in the next section.

In the discussion that follows, I shall use the term "PF-strong/weak" to refer to Chomsky's abstract notion of feature strength, to prevent potential confusion with my use of the term "morphological strength/weakness" which refers to whether the overt realisation of the features is morphologically rich / impoverished.

2.3.1.1. Word Order in Arabic and morphological richness

Given the syntactic structures assumed in Chomsky (1992), the difference between an SVO and a VSO language is that in an SVO language the subject raises overtly to spec TP (tense phrase), while in a VSO language the subject remains in the VP until LF. Chomsky claims that the difference in the position of the subject follows from the PF-strength of the inflectional features in T. In an SVO language like English, the NP feature of T is PF-strong, and so subject raising is forced in order to check these features overtly at S-Structure. In a VSO language like Irish, however, the NP feature of tense is PF-weak, so that overt subject raising does not occur.

In discussing these cases, Chomsky gives no morphological justification for this claim regarding the relative PF-strength of features in TP. However, in his discussion of Arabic, Chomsky suggests that the morphological richness of verb inflection is somehow related to the need for subject raising. Arabic exhibits both SVO and VSO order, with SVO order occurring in conjunction with morphologically rich inflection (person/number agreement with the subject), and VSO order cooccurring with morphologically weak inflection (default 3sg agreement)²¹. Chomsky's suggestion is that the rich agreement counts as PF-strong, thus forcing subject raising, and yielding SVO order. The morphologically weak agreement, on the other hand, counts as PF-weak, so that subject raising does not occur, yielding VSO order.

Implicit in Chomsky's analysis of Arabic is the notion that morphological richness and PF-feature strength are somehow related. The exact nature of this relationship, however, is left unexplored. The Arabic facts indicate that the relevant generalization is not entirely

²¹Details of the difference between rich and weak agreement in Arabic are not given in Chomsky (1992), but are taken from Koopman and Sportiche (1991), who cite Mohammad (1989).

straightforward: person and number features occur in both the weak and strong morphological paradigms, so that these features cannot be classified as being consistently PF-weak or PF-strong.

The Gitksan data which I consider in the remainder of this chapter present some of the same difficulties for the analysis of agreement as those encountered in Arabic, in that there seems to be some relationship between morphological richness and the PF-strength of features, but the correlation is somewhat indirect. In particular, person and number features sometimes function as PF-weak and sometimes as PF-strong. In order to account for this data, I will argue that the PF-strength or weakness of person/number agreement features can be predicted based on the morphological richness of the morpheme to which they are linked:

(101) PF-Strength (Gitksan)

A feature is PF-strong if and only if it is associated with a morphologically rich agreement morpheme.

I define morphological richness as follows:²²

(102) Morphological Richness (Gitksan)

If an agreement morpheme overtly encodes both person and number features, it is morphologically rich.

2.3.2. Feature checking of verbal plural marking

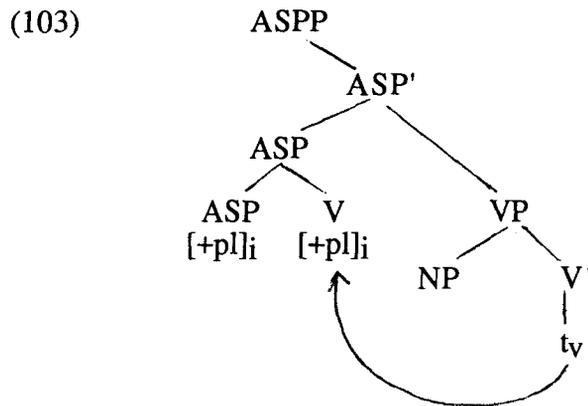
In this section I consider how the approach to agreement just outlined can be used to account for Gitksan verbal number agreement.

Like all inflectional features, the feature [plural] on the verb in Gitksan must be checked in the syntax. It appears that it may be checked in two different ways.

²²Ultimately it would be desirable to have a broader notion of morphological richness which could be used to predict the strength or weakness of other features such as [case] and [transitivity]. The Gitksan data suggest that there is still a correlation between feature strength and morphological realisation for these features, as I show later, but it does not provide adequate evidence for a precise definition.

2.3.2.1. Feature checking with ASP

If ASP has a [+pl] feature (i.e. aspect is iterative), then the verb's plural feature can be checked, and thus licensed, when it raises to ASP, as illustrated²³: (I indicate the checking by coindexing here.)



2.3.2.2. Feature checking with the object

However, as we have seen, a Gitksan verb may be plural even when the aspect is non-iterative (and thus not plural), provided the object is plural. An alternative licensing of the plural feature of the verb is thus via spec head agreement with the object NP. As illustrated in the following tree structure, both the verb and the object raise into the ASP projection to allow checking to take place.^{24, 25}

²³As outlined below, I assume that the verb always raises through ASP on its way to a higher projection TrP.

²⁴In Chomsky's framework, when checking takes place between a head and a NP, the head features to be checked may originate either on the functional head itself, or else on a lexical head adjoined to that functional head. In (104), it is the verb which supplies the features to be checked with the object NP.

²⁵That the object raises to spec ASPP to undergo this agreement is consistent with Travis's discussion of the special effects of derived objects and subjects, since these are NPs which would also appear in, or pass through, this spec position.

spec ASPP for checking its [plural] feature must take place only at LF. At S-Structure the object will remain in the VP, in a structure such as (105).²⁶

2.3.3. Underspecification of [plural]

As outlined in the previous section, the verb can agree in number with either of two elements - ASP or the absolutive argument. Since both types of agreement are in competition for the same agreement morphology on the verb, there appears to be potential for feature clashes. However, as I illustrated earlier, it is always the marking of plural that "wins out" when there is disagreement between the number of the aspect and the number of the absolutive. I propose that this result can be accounted for if it is assumed that only the feature value [+plural] is lexically marked, and that non-plural elements are unmarked for plural, which I represent as [\emptyset plural].²⁷ As under unification theory, I assume that the value [\emptyset plural] is compatible with the value [+plural].

In all Gitksan sentence types the verb will automatically check its features with both ASP and the NP in specifier position. However, although both ASP and the NP may be marked for plurality, no feature clashes will occur under this approach. If both elements are [+plural], then the verb's [+plural] feature will be compatible with both. If both elements are [\emptyset plural], then the verb's [\emptyset plural] feature will be compatible with both.

²⁶Given that already at S-Structure the verb will have moved to a higher projection than ASPP, the question arises of how exactly this LF checking in ASPP takes place. I assume that the trace of ASP encodes the features of the verb which adjoined to it. Alternatively, the verb might move back to ASP at LF.

²⁷This suggestion is consistent with the fact that, on regular verbs, it is plurality rather than singularity which is overtly marked by the morphology. In cases of suppletion, it is not clear whether it is the singular or plural form which is more marked. However, cases of suppletion are in the minority, and are still compatible with the approach to features outlined here.

If one element is [\emptyset plural] and the other [+plural], the [+plural] will check the [+plural] on the verb, and the [\emptyset plural] will be compatible with this. The four permissible combinations are spelled out in the following chart:

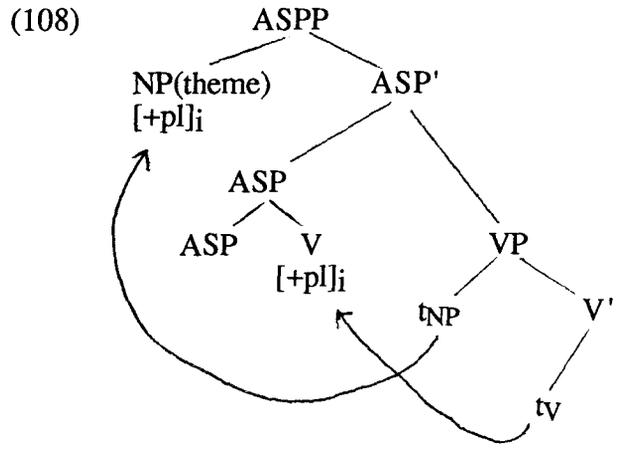
(107)	ASP	absolute	=>	verbal marking
	+pl	+pl	=>	+pl
	\emptyset pl	\emptyset pl	=>	\emptyset pl
	+pl	\emptyset pl	=>	+pl
	\emptyset pl	+pl	=>	+pl

2.4. Agreement in intransitive clauses

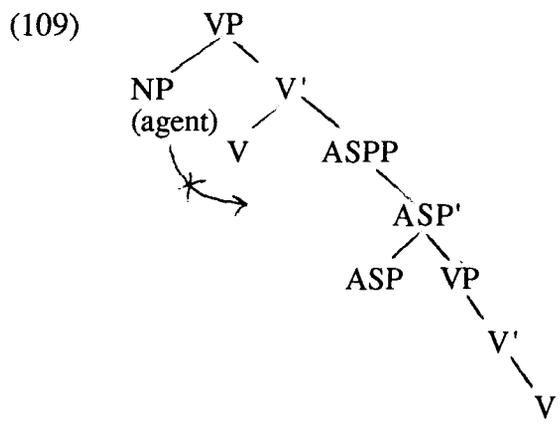
The analysis outlined in the previous section provides an account of number agreement between a transitive verb and either an aspectual head or an object NP. In this section I consider how this account can be extended to account for agreement in intransitive clauses.

As in transitive clauses, number agreement on an intransitive verb can indicate iterative aspect or plurality of the absolute argument. Iterative aspect on intransitive verbs can be accounted for with the same head/head agreement process between the verb and the aspectual head which was illustrated in (103) above. Providing an analysis of number agreement with the single absolute argument of the intransitive verb is somewhat more problematic.

When this single argument is a theme, agreement can clearly be accounted for in the same way as in the earlier transitive examples, through raising of the argument from a position inside the lower VP to spec ASPP.

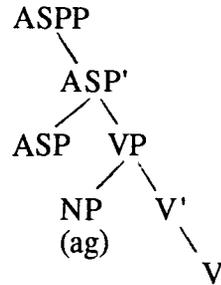


However, the situation is complicated by the fact that intransitive verbs also agree in number with agent arguments. If intransitive agents are generated in the higher VP, in the same position as transitive agents, as we might expect, then number agreement with this argument could not occur within ASPP, since, as noted earlier, this would entail lowering:



The agreement facts therefore suggest that the intransitive agent must be generated in a position lower than the ASP projection. I propose that this position is the spec of the lower VP, as in the following tree:

(110)



Agreement can then proceed in the same way as it did for the objects of transitive clauses, through raising of both the verb and its NP argument into ASPP.

The discussion in this section suggests that no structural distinction should be made between the agent and theme arguments of intransitive verbs in Gitksan. This generalization is consistent with the evidence presented in Chapter 3 showing that unaccusative and unergative verbs consistently pattern identically.

2.4.1. Theoretical Implications

A consequence of the proposal that intransitive agent arguments are generated in the same position as theme arguments, in the VP dominated by ASP, is that the structure of transitive and intransitive clauses will now be rather different from each other.

First, the higher VP projection which is required in a transitive clause is not needed in an intransitive clause, and thus, by economy, is presumably not generated. This is consistent with the general approach of Larson (1988) which assumes that the higher VP projection is generated only if the number of arguments of the verb requires it.²⁸ Otherwise, only a single VP is generated.

²⁸ Under Larson's approach, the higher VP is required only when the verb has more than two arguments, since he assumes that two arguments can be included within a single VP projection. My assumptions differ from his in that I assume only one argument is generated per VP projection.

A second difference between transitive and intransitive structures under my proposal relates to the position of the agent argument. The agent argument of a transitive verb is generated in the higher VP dominating ASPP while the agent argument of an intransitive verb is generated in the VP dominated by ASPP. However, the claim that elements with the same theta role (namely, transitive and intransitive agents) are not always generated in the same structural position is not without precedent. In Larson (1988), agents of ditransitive verbs are generated in a higher VP, while agents of verbs with fewer arguments are generated in the lower (and only) VP. Similarly, Belletti and Rizzi's (1988) analysis of psych verbs assumes that the D-structure position of a NP cannot be predicted solely on the basis of its theta role. They claim that experiencer arguments can be projected to two different positions, motivating their analysis with evidence that experiencers do not all pattern alike syntactically. The same claim can be defended for agent arguments in Gitksan. As shown in Chapter 3, agents of intransitive verbs pattern more like theme arguments than like the agent arguments of transitive verbs.

Perhaps a more fundamental issue raised by the different structures I propose for Gitksan intransitive and transitive clauses, though, is whether the same structural difference should also be allowed (or even required) in accusative languages such as English. If we assume that a general principle of structural economy forces the intransitive agent to be generated in the lower VP in Gitksan, then the same constraint should hold of English. However, this assumption seems less plausible for English than for Gitksan, since English intransitive agents behave like transitive agents rather than like themes.

This apparent problem can be resolved by invoking Chomsky's approach to the nominative/ergative parameter. Chomsky (1992:13) proposes that the difference between ergative and accusative languages lies not in different D-Structures, but rather in the relative "activity" or "inertness" of the functional projections AGR_S and AGR_O . He suggests that

in ergative languages AGR_O is active, which means that its specifier position must be filled during the course of the derivation. In accusative languages, on the other hand, it is AGR_S which is active. Thus, in his model, the single argument of an intransitive verb must move to spec AGR_S in an accusative language and to spec AGR_O in an ergative language.

Under my approach, there are no AGR projections. However, the functional projections ASP and Tr²⁹ serve a parallel function. If we claim that ASP is active in ergative languages and that Tr is active in accusative languages, then we can account for why intransitive subjects in ergative and accusative languages behave differently, despite the fact that they are generated in the same position. In an accusative language like English, the intransitive argument will move to spec Tr, the same position as a transitive subject. In an ergative language like Gitksan, the intransitive argument will move to spec ASP, the same position as a transitive object.

2.5. Structure above VP

The structure proposed for the Gitksan VP in the previous section allowed a straightforward account of the number agreement facts, and will be assumed in the remainder of this chapter. In this section I consider what structure dominates this VP, in order to examine the other agreement paradigms in Gitksan, and the licensing of the transitive subject.

In the recent syntactic literature, various proposals have been made regarding what kinds of functional categories dominate VP and are relevant for the licensing of the subject. A projection of tense (TP) (Pollock 1989, Chomsky 1991), a subject agreement phrase

²⁹Tr is a "transitive phrase", a construct which is discussed and motivated below.

(AgrsP) (Chomsky 1991), or a projection of the feature [transitive] (TrP) (Murasugi 1992) are some of the suggested phrase types.

Tense in Gitksan, unlike in English, plays no syntactic role and has minimal overt realisation. Only future tense is overtly indicated, by the preverbal element /tim/, and the presence of this tense marker does not affect the syntax of the clause in any way. Furthermore, this morpheme occurs in the same position in the clause as other adverbial elements which also occur preverbally without obvious syntactic effects. For these reasons it does not seem plausible to accord tense its own syntactic projection in the Gitksan clause.

In contrast, various types of subject (ergative) agreement do occur in Gitksan, so that it is more plausible to propose that the language has an AgrS node. However, I follow Carstens and Kinyalolo (1989) in considering that agreement should be the result of a spec head relationship rather than a phrase in itself.

Instead of an AgrS phrase, I will therefore adopt TrP to represent the functional projection which dominates VP in Gitksan. As I show in the next section, there appears to be good evidence that [trans] is an independent feature in Gitksan, not derivable from argument structure or case features. However, while there is evidence to support the choice of TrP as the projection dominating VP in Gitksan, it should be noted that this choice is ultimately not crucial to my analysis of the Gitksan agreement patterns presented in later sections.

2.5.1. Motivation for TrP

This section provides explicit motivation for the presence of a TrP in the Gitksan clause.

The syntax and morphology of Gitksan clearly distinguish between transitive and intransitive verbs. First, as illustrated in the discussion of ergative phenomena in Chapter 3, transitive and intransitive verbs assign distinct case and agreement markers to their subjects. Secondly, transitivity alternations in Gitksan are clearly morphologically marked, with a range of prefixes and suffixes. Thus transitivity has more dramatic morphological and syntactic effects in Gitksan than it does, for example, in English, where many verbs may function as either transitive or intransitive with no apparent syntactic or morphological changes.

Furthermore, verbs taking clausal arguments show conclusively that it is not possible to predict based on argument structure whether or not a verb is transitive. Some verbs with clausal objects pattern as transitive, and others as intransitive.³⁰ This is clear from the case and agreement marking of the subject and from the verbal morphology, as illustrated:

Intransitive verbs with clausal complements³¹

- (111) *pisx^w n'i:y'* [tim w'itx^w - t = s t = John]
 hope 1sg fut come - 3 = case cn = John
 "I hope John will come"

bisxw 'nii'y dim 'witxws John

- (112) *ʔe:ʔsx^w t=John* [tim - t stil - y']
 promise cn =John fut-3 accompany-1sg
 "John promised he'd accompany me"

ee'exxw t John dimt sdili'y

³⁰It is interesting that verbs in Niuean, another ergative language, show a similar pattern, as discussed in Levin and Massam (1985).

³¹Note that an alternative analysis of these intransitive cases as having nominal predicates is not possible. For instance, (112) cannot be analysed as "John's promise was that" Such predicates do exist in Gitksan, but show different case-marking properties, as illustrated in the following example with the nominal predicate /hasaq/ "want":

- (1) *hasaq = s t = John* [tim - t ka? - y']
 want =case cn= John fut - 3 see -1sg
 "John wants to see me" (lit: John's want/desire is that he see me)

hasaks John dimt ga'a'y

Note that in this case, unlike a sentence such as (112), the NP "John" receives /s/ case-marking.

Transitive verbs with clausal complements

(113) ʔam - qu: - T - ● - t = s t = John [tim - t ʔimo: - n]
 remember- T -erg - 3 = case cn = John [fut - 3 help - 2sg]
 "John remembered to help you"
amgoodis John dimt hlimoon

(114) təʔaqx^w - ● - t = s t = Robyn [tim hatiks - t]
 able - erg - 3 = case cn = Robyn [fut swim - 3]
 "Robyn can swim"
da'aq^wwis Robyn dim hadikst

(115) t'ak - ● - t = s t = John [tim - t ʔimo: - n]
 forget-erg-3=case cn = John fut-3 help-2sg
 "John forgot to help you"
t'agis John dimt hlimoon

In (111) the subject appears as an independent pronoun, in (112) the subject is unmarked for case, and in both (111) and (112) the verb has no /-ə/ suffix, all characteristics associated with intransitive verbs. In (113) - (115), however, the subject receives the marked /s/ case, and the /-ə/ suffix appears on the verb, characteristics associated with transitive verbs. Which verbs with clausal arguments pattern as transitive and which as intransitive seems to be unpredictable, and thus transitivity cannot always be derived from argument structure.

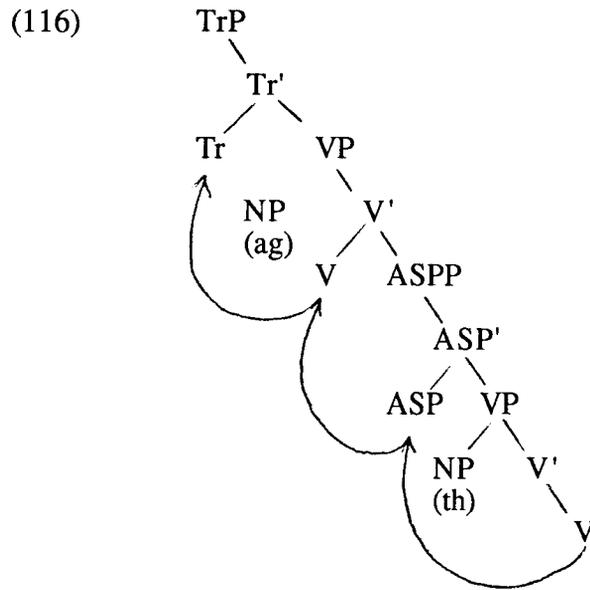
It is also difficult to see how transitivity could be predicted based on the case assigning properties of the verb. Although it seems plausible that this could hold true in an accusative language, where the transitivity of a verb is associated with the ability to assign accusative case, the relationship is less clear for ergative languages. Since absolutive case in an ergative language is assigned in both transitive and intransitive sentences, absolutive cannot be the case associated with transitivity. Ergative case is associated with transitive verbs only, but since it is assigned to subjects, it seems in principle less likely to be associated with the verb than with some functional category. This is true, for example, in Levin and Massam's (1985) analysis which assumes that ergative case is assigned by Infl.

I ultimately claim that in Gitksan both transitive and intransitive verbs are case-assigners, so that under my analysis transitivity could not be predicted based on case-assigning properties.

Thus, I conclude that there is good evidence for positing a TrP in the Gitksan clause. Transitivity has clear syntactic and morphological effects, and the feature transitivity cannot be predicted based on either argument structure or case features.

2.5.2. Deriving VSO order

Under the assumptions outlined above, a transitive clause will have the following structure, with a TrP dominating the higher VP projection:

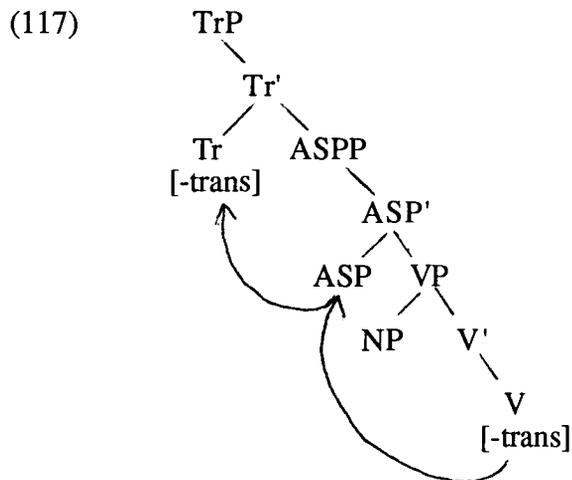


The surface word order of a Gitksan clause is consistently VSO, which shows that the verb must always raise at S-Structure to the pre-subject head Tr, as indicated. Under the assumptions of Chomsky's framework, such overt verb movement can only be motivated by the need to check the transitivity feature of the verb with that of the Tr head. This suggests that the Tr feature on the verb must be PF-strong.

It would be desirable to be able to propose some clear correlation between the PF-strength of the [trans] feature and the richness of its morphological realisation, as we did earlier for agreement. Unfortunately, the Gitksan data do not provide adequate evidence to make a conclusive claim about what constitutes morphologically rich transitivity marking.

However, it does seem clear that the marking of transitivity in Gitksan must fall toward the rich end of the scale, since it is always possible to tell from the morphology associated with a verb whether or not it is transitive.³² The apparent morphological richness of the marking of transitivity, coupled with the fact that the [transitivity] feature functions as PF-strong in motivating overt movement suggests once again that there is a relationship between the PF-strength of a feature and the richness of its morphological realisation.

The structure of an intransitive clause will also include a TrP, associated with a [-trans] feature. The full intransitive clause structure is the following:



In the derivation of an intransitive sentence the verb will again raise to Tr, just as in the transitive clause. In this instance, though, the verb will be checking its [-trans] feature. Following Chomsky's notion of the ergative parameter, mentioned earlier, I assume that Tr

³²The presence of a /ə/ suffix or a Series I agreement marker indicates that a verb is transitive, as discussed below.

is "inert" in Gitksan, so that in an intransitive clause the specifier position of the Tr projection is not filled during the derivation.

2.6. Series II agreement markers

In this section I consider the distribution of Series II person marking. Recall from the discussion in Chapter 3 that Series II person markers take the following forms:

(118)	Series II	(Rigsby 1986:413)		
	sg	pl		
1	-y'	-m'	-y	-m
2	-n	-səm'	-n	-si'm
3	-t	-ti:t	-t	-diit

These markers may occur on any type of lexical head, indicating the person and number of the possessor of a noun, the object of a preposition, or the subject or object of a verb. The discussion in this section will concentrate on their occurrence on verbs. They may license a coreferential *pro* (119) or, in the third person only, they may cooccur with a lexical argument (120):³³

(119) *tsaɬ - ti:t_i [pro]_i = t̩ susi:t*
 eat.up-3pl = cn potato
 "They ate up the potatoes"
jahlđiithl susiit

(120) *nim naks - x^w - ə - t_i = qat = s t = Mary_i t = John*
 want marry-pass-erg-3=rep=case cn= Mary cn = John
 "Apparently Mary wants to marry John"
nimnaksxwitgas Mary t John

2.6.1. Strength of Series II

In order to account for the syntactic properties of sentences containing Series II suffixes, it is necessary to determine whether the features associated with these agreement morphemes

³³Recall from the discussion in Chapter 3, Section 4, that the Series II agreement is not normally phonetically realised when it doubles with an overt NP, due to the effects of a phonological deletion process.

are PF-strong or PF-weak. This can be established based on the morphological richness of the Series II agreement morphemes.

Given the definition of morphological richness for agreement in (102) above, it is clear that the first and second person Series II morphemes are morphologically rich, since these forms overtly realise both person and number features. However, in the third person, the classification is less clear.

As Tarpent (1988) first notes for Nisgha, when the Series II morpheme appears doubled with an overt argument, it takes the form /t/ regardless of whether the doubled NP is singular (121) or plural (122):

(121) $\text{h}is = \text{t}$ $\text{naks} - \text{t}_i - \text{əma} = \text{s}$ $[\text{t} = \text{John}]_i$
 already=cn marry-3-probably=case cn = John
 "John probably got married already"
hlishl naksdimas John

(122) $\text{h}is = \text{t}$ $\text{simim-naks- t}_i - \text{əma} = \text{s}$ $[\text{tip John} \text{ qan } \text{t} = \text{Mary}]_i$
 already=cn tog-marry-3-probably=case cn John and cn = Mary
 "John and Mary probably got married already"
hlishl simimnaksdimas dip John gan t Mary

In these instances the /t/ morpheme is not morphologically strong, since it encodes only the feature [3rd person] and not the feature [plural] .

However, when the Series II morpheme appears licensing a *pro*, it has two distinct third person forms - /-t/ in the singular (123) and /ti:t/ in the plural (124):

(123) $\text{ka}^? - \text{ə} - \text{t}_i$ $[\text{pro}]_i$ $\text{t} = \text{John}$
 see-erg-3 cn=John
 "He saw John"
ga'at John

(124) kaʔ - ti:t_i [pro]_i n'isim'
 see -3pl 2pl
 "They saw you"

ga'adiit 'nisi'm

In this case both /t/ and /ti:t/ are morphologically rich, since they encode both person and number features.³⁴

I therefore propose that there are two distinct Series II paradigms, as illustrated:³⁵

(125) Series II markers

<i>morphologically rich paradigm</i> => PF strong features	<i>morphologically impoverished paradigm</i> => PF weak features
-y'	-m'
-n	-sim'
-t	-ti:t
	-t

The person and number features associated with the morphemes in the rich paradigm are PF-strong, and must therefore be checked at S-Structure. The person feature associated with the single member of the impoverished paradigm is PF-weak, and therefore requires checking only at LF.

In the following section I show how this classification of the Series II markers leads to an account of the distribution of Series II markers and the NPs with which they agree.

³⁴As discussed earlier, Tarpent (1988) suggests that /t/ is the 3rd person Series II marker, unmarked for number, and that the /ti:/ part of the 3pl morpheme is historically a separate indefinite personal suffix with plural or collective meaning. Synchronically, however, it seems unlikely that the 3pl morpheme is analysed in this way by speakers (Rigsby p.c.).

³⁵An alternative is to claim that there are in fact two different /-t/ morphemes, one of which has the features [3rd person, singular] and the other of which has only the feature [3rd person].

2.6.2.2. Agreement with overt lexical arguments.

Surface word order shows that feature checking between an overt NP and a Series II agreement morpheme occurs only at LF. The relevant evidence comes from the string position of overt arguments, which always follow, rather than precede, the verb which bears the agreement morpheme. The following partially labelled bracketing of (120) shows that since the verb is in Tr at S-Structure, the post-verbal position of the subject "Mary" can only be explained if it is assumed that "Mary" is still in the VP at S-Structure.

(128) S-Structure

$$[\text{TrP } \text{nim } \text{naks-x}^w\text{-}\mathfrak{e}\text{-t}_i =\text{qat}=\text{s} \quad [\text{VP } \text{t} =\text{Mary}_i \text{ [ASPP [VP } \text{t} =\text{John}]]]]$$

verb	subj	obj
want marry-pass-erg-3=rep=case	cn =Mary	cn=John

"Apparently Mary wants to marry John"

If "Mary" raised to spec TrP to check its features at S-Structure, the ungrammatical ordering illustrated in (129) would surface.

(129) $*[\text{TrP } \text{t} =\text{Mary}_i \text{ [Tr } \text{nim } \text{naks-x}^w\text{-}\mathfrak{e}\text{-t}_i =\text{qat}=\text{s} \text{ [VP } \text{t}_i \text{ [ASPP [VPt } =\text{John}]]]]]$

subj	obj
------	-----

The fact that overt NPs do not raise to check their features overtly shows that the person and number features associated with an overt NP must be PF-weak. If its features were PF-strong, overt raising such as that illustrated in (129) would need to take place, in order to allow these features to be checked at S-Structure.

That overt NPs have PF-weak features is consistent with the fact that they never cooccur with agreement from the rich Series II paradigm, as illustrated by the ungrammaticality of the following sentence:

- (130) **ɿs = ɿ simim-naks- ti:tj -əma = s [tip John qan t=Mary]i*
 already=cn tog.-marry-3pl-probably=case cn John and cn=Mary
 "John and Mary probably got married already"

The derivation of a sentence such as this would fail to converge for the following reason. The PF-strong features associated with the Series II agreement morpheme need to be checked at S-Structure, while the PF-weak features on the NP need to be checked only at LF. According to the Greed Principle, the requirements of the agreement on the head cannot force the NP to raise. Therefore the NP would raise only at LF, and the PF-strong features on the Series II agreement would fail to be licensed at S-Structure. The derivation would therefore fail to converge.

2.6.2.3. Agreement with *pro* arguments

In the previous section I claimed that overt NPs had PF-weak inflectional features, based initially on their surface ordering. The PF-strength of features associated with *pro*, however, cannot be determined in this way, since it is not possible to deduce the surface position of the phonetically empty element *pro* from the surface form of a sentence. However, given the Greed Principle, it is possible to claim, based on the form of the agreement which licenses *pro*, that its features must be PF-strong. The argument runs as follows: the Series II agreement which appears on a verb with a *pro* argument is always taken from the rich paradigm. If the person and number features associated with *pro* were PF-weak, then *pro* would not raise to check its features until LF. This would mean that the PF-strong features on the verb would fail to be licensed at S-Structure, and so the derivation would fail to converge. If, however, the features associated with *pro* are PF-strong, then this problem does not arise. *pro* will raise at S-Structure to check its PF-strong features with the PF-strong features of the verb, and the derivation will converge.

Under this analysis, the S-Structure of a sentence such as (123) above will be the following, with the subject *pro* having raised from within the VP to the spec position of TrP to check its features:

(131) S-Structure

$$[\text{TrP } [\text{pro}]_i \text{ } [\text{Tr } \text{ka?} - \text{ə} - \text{t}_i \text{ } [\text{VP } \text{t}_i \text{ } [\text{ASPP } [\text{VP } \text{t} = \text{John }]]]]]]$$
see-erg-3
cn=John
 "He saw John"

This claim about the PF-strength of features associated with *pro* is consistent with Chomsky's observation (Chomsky 1992:14) that the licensing of *pro* normally requires that it be in a spec head relation to strong agreement.³⁶

2.6.3. Morphological strength of NPs

In the previous sections I made the following claim about the PF-strength of person and number features associated with *pro* and overt NPs:

(132) PF-strong features PF-weak features
 pro overt NPs

This classification was based both on surface ordering facts, and on the PF-strength of the associated Series II agreement features. Such a classification of NPs does not seem to fit particularly well, however, with our proposal that the PF-strength of a feature should correlate with the morphological richness of the morpheme with which it is associated. Intuitively, *pro* seems totally morphologically impoverished since it does not overtly realise any of its features, while overt NPs seem morphologically richer, since they normally realise both the values 3rd person and singular or plural.

³⁶ The full quotation is the following: "pro is licensed only in the SPEC-head relation to [AGR a AGR], where a is [+tense] or V, AGR strong or V = V*." (p 14) I ignore for the purposes of this thesis licensing of *pro* by V*, since it does not seem to play any role in Gitksan.

However, there does seem to be some morphological motivation for the distinction between *pro* and overt NPs that is proposed here. Overt NPs are capable of phonetically realising their own features, and thus do not need to check them overtly with any other head in order for them to be realised at PF. However, the features of empty NPs, such as *pro*, will not be phonetically realised at all unless they can be overtly realised on some agreeing head. Thus, the requirement that the features of *pro* must be checked at S-Structure while the features of overt NPs must be checked only at LF does correlate in a logical way with the morphological properties of the NPs concerned.

2.6.4. Subject or object agreement?

An interesting feature of Series II agreement is that it may potentially agree with either the subject (133) or the object (134): (Series II morpheme underlined)

- (133) yim - ə - y' = t hun
 smell - erg-1sg=cn fish
 "I smelled the fish"

yimi'yhl hun

- (134) ne: - ti: - t ʔu:w' - y'
 not -contr - 3 invite - 1sg
 "S/he didn't invite **me**"

neediit uu'wi'y

I therefore assume that the features that are ultimately spelled out as Series II suffixes may be checked either in ASPP, in which case the suffixes will be coreferential with the object, or in TrP, in which case the suffixes will be coreferential with the subject.³⁷ The factors which determine where the Series II agreement is checked in a given sentence are discussed in Section 2.8.2.

³⁷Note that this is different from the number agreement which must be with the absolutive argument, and thus take place in ASPP.

2.6.5. Summary

In this section I proposed an analysis of Series II agreement in Gitksan. The following table summarizes the salient features of the analysis.

(135)

Agreement paradigm	Features encoded	PF-strength of features	NP types licensed
Strong Series II paradigm	person and number	strong	pro
Weak Series II paradigm	person	weak	overt NPs

2.7. Series I agreement markers

The previous section has outlined a theoretical framework which allows the distribution of Series II agreement to be accounted for. In this section I consider the Series I agreement paradigm, and show how the data from this paradigm can be explained under the same set of assumptions.

2.7.1. The form and position of Series I

The paradigm for Series I agreement is given below:

(136) Series I person markers (Rigsby 1986:412)

sg	pl		
nə	təp	ni, na, nu	dip
mə	mə səm	mi, ma, mu	mi ... sim
t	t	t	t

Recall that these Series I markers are clitics which occur preverbally and indicate agreement with a transitive subject. Like the Series II markers, they may license a coreferential *pro* (138) or, in the third person only, cooccur with a lexical argument (137). Unlike the Series II suffixes, Series I agreement markers take the same form regardless of whether the coreferential argument is lexical (137) or *pro* (138):

- (137) ne: - ti: - **tj** kup - t = s t=**Peterj** = **ɬ** susi:t
 not-contr-3 eat - 3 = case cn=**Peter**=cn potato
 "Peter doesn't eat potatoes"
neediit gups Peterhl susiit
- (138) ne: - ti: - **tj** kux^w [**pro**]i = **ɬ** smax
 not-contr-3 shoot =cn bear
 "He didn't shoot the bear"
neediit guxwhl smax

Series I agreement occurs in transitive dependent clauses, and is in complementary distribution with the /ə/ suffix which occurs in transitive independent clauses. I propose that both the /ə/ suffix and the Series I agreement morphemes should be regarded as realisations of a [+trans] TrP. This proposal accounts for the fact that the Series I markers are in complementary distribution with /ə/, and for the fact that both the Series I markers and /ə/ occur only with transitive verbs.

A [+trans] TrP thus has two different possible realisations - as Series I agreement in a dependent clause or as the /ə/ suffix in an independent clause.³⁸ As discussed earlier in this chapter, the relevant descriptive generalization concerning the difference between the two clause types is the presence or absence of a higher governing head. We can therefore make the following parallel generalization about the realisation of Tr: Series I agreement surfaces in Tr if a higher governing head is present in the clause; otherwise the /ə/ suffix surfaces. I assume that the higher governor serves in some way to license an agreement relationship between Tr and its specifier, which is realised as Series I agreement.³⁹ The /ə/ suffix is a default realisation of the [+trans] Tr head, and surfaces only if there is no

³⁸One possible theoretical account of this somewhat strange alternation in the form of the Tr head between Series I agreement and the /ə/ suffix is that Tr is in fact an empty head. In accordance with the ECP, an empty head can only be licensed if it is lexically governed. Thus, only in the presence of a higher governing head can the empty Tr be licensed. In the absence of a head governor, the Tr head must be filled, and the default filler is the /ə/ suffix. Under this analysis, the Series I agreement marker is simply the realisation of spec head agreement in the Tr projection. Only the empty head, however, and not the default filler /ə/, is capable of realising spec head agreement.

³⁹The idea that government by a higher (functional) head can affect the Case assigning properties of a head is not totally new. For example, Larson (1988:360) proposes that V can assign Case only if it is governed by Infl. A similar proposal is developed in Li (1990:409).

governing head present in the clause to license the spec head agreement process. I encode this generalization in the following statement:

(139) Series I agreement licensing
 Series I agreement between Tr and its specifier is licensed if and only if Tr is governed by a higher head.

Under this analysis, Series I agreement is unlike Series II agreement in that it is generated on a functional head rather than on the verb. The fact that Series I agreement usually surfaces adjacent to the verb results from the fact that when the verb moves to check its transitivity feature, it adjoins to the Tr head which contains the Series I agreement.

2.7.2. Strength of Series I agreement

As with the Series II markers, it is necessary to determine whether the features associated with Series I markers are PF-strong or PF-weak, in order to account for their distribution and the distribution of the NPs with which they agree. Note from the above paradigm that Series I agreement shows person and number distinctions in the first and second person. Thus, according to the definitions in (101) and (102) above, the 1st and 2nd person Series I agreement markers are morphologically rich and are thus associated with features which are PF-strong. In the 3rd person, however, the Series I markers appear to encode only person values. This suggests that these morphemes are morphologically impoverished, and thus that the features associated with them are PF-weak.

(140) Feature strength of Series I person markers - version 1

nə mə	təp mə səm	<i>morphologically rich</i> => <i>PF-strong features</i>
t		<i>morphologically impoverished</i> => <i>PF-weak features</i>

2.7.3. 1st and 2nd person *pro* arguments

Since the features of 1st and 2nd person Series I agreement morphemes are PF-strong, these morphemes can serve to check the PF-strong features of *pro* arguments, as in the following sentence, in which the Series I agreement morpheme (underlined) agrees with a phonetically empty 1st person subject :

- (141) yuk^w neɪ yo:q - ən - t = ɬ "baby"
 prog 1sg feed - trn- 3 = cn baby
 "I'm feeding the baby"
yukw niyooginhl baby

As illustrated in the following bracketed representation of this sentence, the *pro* subject raises at S-Structure to spec TrP so that its features, which are PF-strong, can be checked against the strong features of the Series I agreement.⁴⁰

- (142) yuk^w [_{TrP} *pro*_i [_{Tr} neɪ yo:q - ən - t = ɬ [_{VP} [_{ASPP}[_{VP} baby]]]]]
 subj Series I verb obj

2.7.4. 3rd person *pro* arguments

Although this analysis of Series I agreement seems to work well for 1st and 2nd person *pro* arguments, a potential problem is posed by third person *pro* arguments. If the 3rd person Series I agreement has the feature [person], but not the feature [plural], it should not be possible for Series I agreement to license 3rd person *pro* arguments, since their [plural] feature could not be checked. This is in fact the correct prediction for 3rd person plural *pro*. It cannot be licensed by a Series I agreement alone, as illustrated by the ungrammaticality of the following example: (The /t/ affix is the Series I morpheme)

⁴⁰Again, of course, as was pointed out in connection with series II agreement, there is no overt evidence that this movement has occurred, but the theory predicts that such movement must take place.

- (143) *ne: - ti: [TrP [**pro**_{3pl}]i [Tr - **tj** kaʔ - y' [VP]]]]
 not-contr - 3 see - 1sg
 *"They didn't see me"⁴¹

However, this analysis appears to make the incorrect prediction when the *pro* in this same surface form is interpreted as 3rd person singular. Under this interpretation the sentence is grammatical:

- (144) ne: - ti: [TrP [**pro**_{3sg}]i [Tr - **tj** kaʔ - y' [VP]]]]
 not-contr - 3 see - 1sg
 "S/he didn't see me"
neediit ga'a'y

Contrary to our prediction, 3rd person singular *pro* can be licensed by Series I agreement even though the agreement morpheme appears to be associated only with the feature [3rd person]. Our expectation was that this morpheme would not be capable of checking both the person and number features of *pro*.

I propose that these facts can be accounted for if we assume that there are in fact two different /t/ agreement markers in the Series I paradigm. One of these, which cooccurs with overt NPs, is specified only [3rd person], with no value for number. This constitutes a morphologically impoverished agreement paradigm which is associated with PF-weak features. The other /t/ morpheme is specified [3rd person, singular], and is thus a morphologically rich agreement morpheme associated with PF-strong features. Under this analysis, the appropriate representation of Series I agreement is as follows:

⁴¹In the next section I consider how Gitksan expresses this meaning through the use of doubled series I and II agreement.

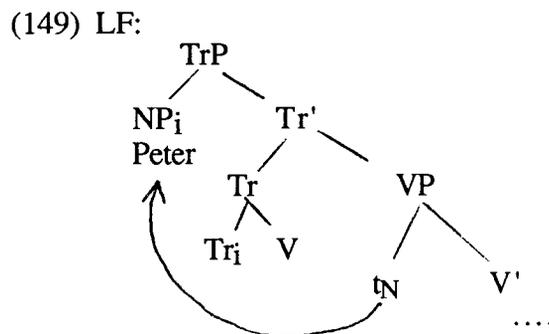
- (147) ne: - ti: - t_i kup - t = s t =Peter_i = t_i susi:t
 not-contr- 3 eat - 3 = case cn =Peter=cn potato
 "Peter doesn't eat potatoes"
neediit gups Peterhl susiit

The partially bracketed representation of this sentence is given below.

- (148) S-Structure
 ne: - ti: [TrP - t_i kup - t = s [VP t =Peter_i = t_i [ASPP [VP susi:t]]]

The overt subject NP "Peter" remains in the VP at S-Structure. This is expected since, as we claimed above, the features of overt NPs are PF-weak, and thus do not require overt checking. Since this Series I agreement morpheme is also associated with PF-weak features, the result is a well-formed PF representation .

Feature checking between the Series I agreement morpheme and the overt subject will thus occur at LF, when the subject will raise to spec TrP.



A prediction of this analysis is that the morphologically impoverished Series I agreement morpheme should be able to occur with either singular or plural overt NPs, since it is unspecified for the feature [plural]. This prediction proves correct. As well as agreeing with singular NPs, as in (147), the weak Series I morpheme can also agree with plural NPs, as in the following example:

- (150) ne: - ti: - tʃ kaʔ - y' [tip Peter qan t = John]i k'o:ts
 not-contr-3 see -1sg cn Peter and cn = John yesterday
 "Peter and John didn't see me yesterday"
neediit ga'a'y dip Peter gan t John k'yoots

2.7.6. Series I agreement paradigm - summary

In this section I have argued that the Series I agreement paradigm should be represented as follows:

- (151) Feature strength of Series I person markers - revised

morphologically rich paradigm => PF-strong person and number features nə təp mə mə səm t	morphologically impoverished paradigm => PF-weak person feature t
---	--

Morphemes from the rich agreement paradigm are associated with PF-strong person and number features, and thus can license the PF-strong person and number features of *pro* arguments. The morpheme in the impoverished paradigm is associated with a PF-weak person feature, and thus can only license the PF-weak features of singular or plural overt NPs.

2.8. Agreement Interactions in Transitive Clauses

In the previous sections I have presented an analysis of the distribution and use of number agreement, and the Series I and II agreement paradigms. In this section I consider how these different agreement patterns interact in various sentence types.

In transitive sentences, verbal number agreement is always with the object, while Series I agreement is always with the transitive subject. As mentioned earlier, however, Series II agreement is sometimes with the subject (i.e. licensing an NP in TrP) and sometimes with

(154) Agreement in independent transitive clauses

subject	object
Series II agreement on verb (TrP)	number agreement on verb (ASPP)

2.8.2. Agreement in Dependent Clauses

In dependent sentences, Series I agreement is available to check the features of the subject, and number agreement is available to check the features of the object. Thus, one might expect more flexibility in whether Series II morphemes agreed with the subject or with the object. In fact, however, which argument the Series II morpheme agrees with in dependent clauses seems to depend on whether the subject is *pro* or a lexical NP. With a few interesting exceptions, which will be discussed later, if the subject is lexical, Series II agreement in dependent sentences is with the subject (i.e. it occurs in TrP). In contrast, if the subject is *pro*, Series II agreement is with the object (i.e. occurs in ASPP). This pattern is schematized in the chart in (155) and is illustrated by the data in (156) - (159).

(155) Summary of distribution of Series II agreement

subject	object		agreement with - in
lexical	pronominal	=>	subject - TrP ⁴²
lexical	lexical	=>	subject - TrP
pro	lexical	=>	object - ASPP
pro	pronominal	=>	object - ASPP

(156) Lexical subject, pronominal object

ne: - ti: - t kaʔ - t_i = s t = Peter_i n'iti:t
 not-contr-3 see - 3 = case cn=Peter 3pl
 "Peter didn't see them"

neediit ga'as Peter 'nidiit

⁴²See discussion below regarding inter-speaker variation on this point, and the role of a person hierarchy. The generalization given does, however, hold for all speakers if the object pronominal is third person.

(157) Lexical subject, lexical object
 ne: - ti - t iimo: - t_i = s t = **John**_i t = Peter
 not-contr-3 help-3=case cn = John cn= Peter
 "John didn't help Peter"
neediit hlimoos John t Peter

(158) *pro* subject, lexical object
 mo:tsə - [pro] tip stil - t_i = s t = **Peter**_i
 almost- 1pl accompany-3=case cn = Peter
 "We almost went with Peter"
mooji dip sdils Peter

(159) Pronominal subject, pronominal object
 ne: - ti: - [pro]_i t_i ?uw' - m'_j [pro]_j
 not-contr- 3 invite-1pl
 "He didn't invite us"
neediit u'wu'm

2.8.2.1. Determining the reference of the /t/ suffix

Before continuing with discussion of these results, it is important to justify my claim that in dependent sentences such as (157), in which both arguments are third person, the Series II agreement marker is coreferential with the subject rather than the object. In sentences of this type, the form of the agreement does not show whether it is reflecting the features of the subject or the object, since both arguments are 3rd person. Tarpent (1988) argues that in Nisgha the Series II /t/ suffixed to the verb in sentences such as (157) is in fact coreferential with the object, thus providing support for her claim that Nisgha is a pronominal argument language. I claim, however, that evidence from the distribution of the case marking morpheme /s/ shows that the /t/ suffix is coreferential with the subject in sentences of this type.

Recall that /s/ case is only assigned to NPs in certain environments. One condition on the assignment of /s/ case is that the NP must be adjacent to a lexical case assigning head. However, this in itself is not a sufficient condition to ensure that a NP receives /s/-case-

only possible if it is coreferential with the Series II suffix on the verb. Thus, I conclude that in (157), the Series II suffix and the immediately following NP must be coreferential.

2.8.2.2. Restricting Series II agreement

In this section I propose how the agreement patterns summarized in (155) can be accounted for.

An important generalization in table (155) is that if the subject is *pro* then it is not licensed by Series II agreement. Recall that, except in the 3rd person plural, the features of *pro* subjects in dependent clauses can be checked by Series I agreement. Thus, Series II agreement is clearly not needed for checking the features of the subject. However, given that Series II agreement *can* check the features of a subject, nothing in the framework proposed thus far will prevent it from doing so in a sentence with a *pro* subject. This is a problem, given that sentences in which both Series I and Series II agreement is with a *pro* subject are definitely ungrammatical:

(166) Pro subject, lexical object
 *mo:tsə - [pro] tipj stil - m'j t = Peterj
 almost- 1pl accompany-1pl cn = Peter
 "We almost went with Peter"

(167) Pro subject, pronominal object
 *ne: - ti: - [pro] tj 2uw' - tj n'u:m'
 not-contr- 3 invite-3sg 1pl
 "He didn't invite us"

In order to account for such data, I propose the following principle:

(168) One strong agreement principle (OSAP) (Gitksan)
 The features of an NP can be checked at most once by strong features.

This principle accounts for the ungrammaticality of the sentences in (166) - (167) above. In each of these sentences the features of the *pro* subject are checked by two sets of strong features - one set associated with the Series I morpheme, and one set associated with the Series II morpheme. Thus these sentences violate the OSAP.

A second generalization in table (155) is that when the subject is an overt NP, its features are checked by Series II agreement as well as Series I agreement. First, note that such sentences are not in violation of the OSAP, since the Series I and Series II agreement morphemes which cooccur with overt subjects are associated with weak features. However, this does not explain why Series II agreement in such sentences must always be with the subject rather than the object. Series I agreement alone should be adequate to check the features of the subject NP. I therefore invoke the following condition governing where agreement should take place.

- (169) Highest Projection Agreement (HPA)
Check features at the highest projection possible.

This will ensure that, unless some other principle such as (168) intervenes, Series II agreement will always take place in TrP, rather than in ASPP.^{43, 44}

⁴³ The following alternative set of conditions to the HPA and OSAP might also be proposed.

- (1) Check features at the lowest projection possible
- (2) Lexical arguments must check their features with lexical heads.

(1) would force agreement to take place in ASPP, unless some other condition such as (2) intervened. For the sentences considered up to this point, these conditions appear to derive exactly the same results as the conditions I propose. I adopt the HPA and OSAP instead, however, because they account somewhat more neatly for the sentences with 3rd person plural pronominal subjects dealt with in the following section.

⁴⁴In searching for some motivation for the HPA, it is tempting to claim that it must be more economical for LF agreement to take place in TrP, because the verb has already raised to this projection by S-Structure, and that for the verb to agree at LF in ASPP would entail some extra mechanism such as lowering. However, since number agreement on the verb must occur in ASPP at LF, whatever mechanism is responsible for this could presumably also handle Series II agreement in the same projection.

2.8.2.3.2. Clause with *pro* subject

The following is an example of a clause with a *pro* subject.

(173) Pro subject, lexical object
 mo:tsə - tipj stil - t_i = s t = Peter_i
 almost- 1pl accompany-3=case cn = Peter
 "We almost went with Peter"
moojidip sdils Peter

The S-Structure of this clause is the following:

(174) S-Structure
 mo:tsə - [TrP *pro* j [Tr tipj stil - t_i = s [VP [ASPP [Vpt = Peter_i]]]]]
 subj I II obj

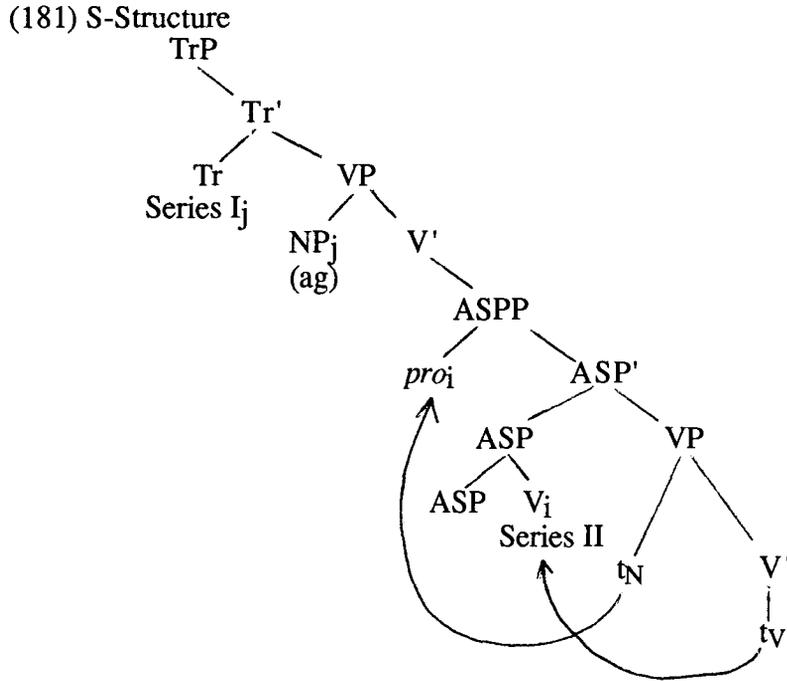
Since *pro* is associated with PF-strong features, it raises at S-Structure to spec TrP, and its features are checked with the PF-strong features of the Series I agreement morpheme /tip/. If the *pro* subject were also licensed by Series II agreement in this structure, this would violate the OSAP, since it would be licensed by the PF-strong features of both the Series I and the Series II agreement. Thus Series II agreement is with the object. Since the object is lexical, it has PF-weak features, and requires checking only at LF. Thus the LF representation of the above clause is the following:

(175) LF
 mo:tsə - [TrP *pro* j [Tr tipj stil - t_i = s [VP [ASPP t Peter_i t_{ASP/vi} [VP]]]]
 subj I II obj

The object has raised to spec ASPP and checks its features against those of the Series II morpheme on the verb, encoded in the trace which remains in ASP.

2.8.2.4. Extensions

In this section I consider how the conditions proposed above allow us to account for some additional data, which were not included in table (155).



The problem is that Series II agreement has taken place in ASPP, with the object *pro*, even though the HPA should force the verb to agree with the subject in the higher TrP projection. I will refer to sentences of this type as "subject-final", to reflect the fact that there is no overt object following the subject.

According to Rigby (1986:263-4), subject-final sentences are used by older speakers, and are considered to be more correct⁴⁵, while younger speakers are more likely to use forms such as (179), with the object pronoun following the subject.

Jelinek (1986), in discussing similar data in Nisgha, proposes that there is a person hierarchy operative in the language, which requires that 1st and 2nd person elements precede lexical arguments.⁴⁶ The effects of such a surfacing ordering principle might be

⁴⁵Similar data occur in Nisgha (Tarpent 1987: 253).

⁴⁶This is consistent with the fact that for older speakers, the same subject-final pattern appears in independent sentences with a lexical subject and 1st or 2nd person object, as illustrated:

(1) *ɬmo: - ə - t_i n'u:m' t= Mary_i*
 help - erg-3 1pl cn = Mary

able to force agreement to take place in ASPP rather than TrP, thus accounting for why these sentences violate the HPA.

Another possible explanation is that the Avoid Pronoun Principle (Chomsky (1981), Jaeggli (1981)) is operative in this construction.

(182) Avoid Pronoun Principle
 Avoid pronoun if PRO is possible.⁴⁷ (Jaeggli 1981:42)

According to this principle, silent pronouns (such as *pro*) are preferred to overt pronouns.

Note that in the subject-final form (180), no overt pronoun is required, because the object agreement licenses a *pro* in object position. In (179), however, an overt object pronoun is needed because there is no strong object agreement. The variation exhibited by younger speakers between the subject-final forms and the object-final forms might be accounted for by the competition between the HPA, which motivates agreement in TrP, and the Avoid Pronoun Principle, which, in this case, motivates agreement in ASPP.

An apparent problem for this approach is that this variation occurs only with non-3rd person objects. With 3rd person pronominal objects, Series II agreement always takes place in TrP, agreeing with the subject, as predicted by the HPA. However, this can perhaps be explained by the relative freedom of occurrence of 3rd person *pro*. As

"Mary helped us" R 262

hlimooyit 'nuu'm t Mary

Forms such as these are actually rejected by younger speakers I have worked with. I have no account of how such forms should be derived, given that the subject does not actually seem to have been extraposed, since it still precedes all other verbal arguments, as in the following example:

(2) kin - ə - t_i n'i:y' t = Mary ?a = ɬ hon k'o:ts
 give(to eat)-erg-3sg 1sg cn=Mary prep=cn fish yesterday
 "John gave me fish to eat yesterday"

ginit 'nii'y t Mary ahl hon ky'oots

⁴⁷The use of PRO rather than *pro* in the statement of this principle is not significant. At the time this principle was proposed, PRO was assumed to be the only phonetically empty pronoun.

discussed briefly in Chapter 3, a 3rd person *pro* can occur in absolutive position in a sentence, where it is apparently licensed only by number agreement.⁴⁸ This is illustrated in the following question/answer pair:

(183) nta =ɪ kwəla - y'
 where = cn blanket-1sg
 "Where's my blanket?"
ndahl gwila'y

(184) kin'am - ə - y' **pro** ʔa = s t = Bill
 give -erg-1sg to =case cn=Bill
 "I gave **it** to Bill"
gi'nami'y as Bill

Such patterns are also possible in dependent sentences with lexical subjects, as in the following example:

(185) ne: - ti: - t_i lu: - maq - T - t_i = s t = Peter_i **pro** ts'im kha:
 not -contr-3 in - put (sg)- T - 3 = case cn = Peter in car
 "Peter didn't put **it** in the car"
neediit luumagas Peter ts'im kaa

Note that the Series II agreement here is with the subject. Such sentences obey both the HPA, since agreement is in TrP, and the Avoid Pronoun Principle, since no overt pronoun appears. Thus, the lack of variation in sentences with 3rd person pronominal subjects can perhaps be attributed to the fact that both the HPA and the Avoid Pronoun Principle can be satisfied in one sentence pattern.

⁴⁸Such cases appear to pose a problem for the analysis of *pro* as requiring licensing by PF-strong features. This issue is addressed in Section 9 of this chapter.

2.9. Summary

In this section I have proposed an analysis of agreement licensing in transitive sentences. I began with the following two assumptions about the relationship between PF-weak / strong features and the morphological richness of individual agreement morphemes:

(186) PF-Strength (Gitksan)

A feature is PF-strong if and only if it is associated with a morphologically rich agreement morpheme.

(187) Morphological Richness (Gitksan)

If an agreement morpheme overtly encodes both person and number features, it is morphologically rich.

These assumptions led me to the following classification of verbal number agreement, Series I agreement and Series II agreement:

(188) Agreement paradigm	Features encoded	PF-strength of features	NP types licensed
Verbal number agreement	number	weak	overt NPs
Strong Series II paradigm	person and number	strong	pro
Weak Series II paradigm	person	weak	overt NPs
Strong Series I paradigm	person and number (except 3pl)	strong	pro (except 3pl)
Weak Series I paradigm	person	weak	overt NPs

I have analysed the distribution of the three agreement paradigms as follows:

(189)	realisation of features associated with:	checks features in:	checks features of:
Verb number agreement	V	ASP	transitive object
Series I	Tr	Tr	transitive subject (dependent clause)
Series II	V	Tr	transitive subject
object		or ASP	transitive

Based on the distribution of agreement, I have proposed that NP types in Gitksan must be classified with respect to the strength of their person and number features as follows:

(190)	<u>PF-strong features</u>	<u>PF-weak features</u>
	pro	overt NPs

The above assumptions allowed me to account for agreement patterns in all types of transitive clauses. The various types are summarized below: (V # refers to verbal number agreement.)

(191) Summary of agreement patterns in transitive clauses
 - independent sentences

<u>Form of subject</u>	<u>Form of object</u>	<u>Subject agreement</u>	<u>Object agreement</u>
any	any	Series II	V #

- dependent sentences

<u>Form of subject</u>	<u>Form of object</u>	<u>Subject agreement</u>	<u>Object agreement</u>
lexical	lexical NP or 3rd person pronominal	Series I and II	V #
lexical	pronominal (non 3rd person)	Series I and II	V #
	OR	Series I	V # and Series II
pronominal (not 3pl)	lexical	Series I	V # and Series II
pronominal (3pl)	any	Series I and II	V #
pronominal (not 3pl)	pronominal	Series I	V # and Series II

The following conditions specific to Gitksan have been invoked to account for these different patterns.

(192) One strong agreement principle (OSAP) (Gitksan)
 The features of an NP can be checked at most once by strong features.

- (193) Highest Projection Agreement (HPA)
Check features at the highest projection possible.
- (194) Series I agreement licensing
Series I agreement between Tr and its specifier is licensed iff Tr is governed by a higher head.

2.10. Overt pronominals in transitive clauses

The discussion so far has focused on the licensing by agreement of lexical NPs and *pro*. In this section I consider how the same principles can be used to account for the distribution of overt pronominals.

In addition to person marking suffixes, Gitksan has the following set of independent pronouns:

(195) Independent pronominals (Rigsby 1986:413)

	<u>sing</u>	<u>plural</u>		
1	n'i:y'	n'u:m'	'nii'y	'nuu'm
2	n'i:n	n'isim'	'ni:n	'nisi'm
3	n'it	n'idi:t	'nit	'nidiit

In transitive clauses, overt pronominals may occur only in the restricted environments listed below:

- (196) Distribution of overt pronominals in transitive clauses
 -object of independent clause (197)
 -object of dependent clause with lexical subject (198)
 -object of dependent clause with 3rd person plural pronominal subject (199)

The distribution is illustrated in the following data:

- (197) independent clause object
 titiy' - ə- t n'i:y'
 look.after-erg-3 1sg
 "He looked after me"
didi'yit 'nii'y

(198) dependent clause object (lexical subject)
 ne: - ti: - t kaʔ- t = s t = Peter n'iti:t
 not-contr-3 see - 3 =case cn=Peter 3pl
 "Peter didn't see them"
neediit ga'as Peter 'nidiit

(199) dependent clause object (3pl subject)
 ne: - ti: - t kaʔ - ti:t n'isim'
 not -contr-3 see - 3pl 2pl
 "They didn't see you"
neediit ga'adiit 'nisi'm

A comparison of this distribution with the chart in (191) above reveals the interesting generalization that the positions in which overt pronominals occur are exactly those positions licensed solely by verbal number agreement. They never occur in positions licensed by either Series I or Series II agreement. This distributional restriction can, I claim, be easily accounted for by conditions already proposed.

I assume on morphological grounds that the person and number features associated with overt pronominals must be PF-weak. This is because overt pronominals, like overt nominals and unlike *pro*, can realise their own person and number features.

(200)	<u>PF-strong features</u>	<u>PF-weak features</u>
	<i>pro</i>	overt NPs overt pronominals

This classification of overt pronominals is consistent with the fact that they can be licensed by number agreement alone, since the features associated with number agreement are PF-weak.

I attribute the fact that the distribution of overt pronouns is much more restricted than that of overt nouns to the Avoid Pronoun Principle, cited above. We have seen in previous sections that *pro* can occur in positions licensed by Series I and Series II agreement, and overt pronouns never occur in these environments. These facts are exactly what we would

predict, given the Avoid Pronoun Principle. Overt pronouns can only occur in positions in which a silent pronoun (*pro*) cannot occur. The only positions in which overt pronouns can occur are those licensed by number agreement. *pro* cannot occur in these positions because number agreement is associated with PF-weak features. The only pronominals which can occur in these positions are therefore overt ones.

An apparent exception to this generalization, mentioned previously, is that a 3rd person overt pronoun can be replaced by *pro* if its reference is clear from context. For example, in the following sentence either *pro* or an overt pronoun may occur in object position.

(201)	kaʔ - ə - t = s	t = Bill	<i>pro</i> /
			n'it
	see - erg - 3 = case	cn = Bill	3sg
	"Bill saw him/her"		
			<i>ga'as Bill ('nit)</i>

The fact that *pro* can occur here is unexpected, since this position is licensed only by the PF-weak number feature on the verb. In order to account for the fact that *pro* can occur in this environment, I am forced to assume that there must be an optional default rule adding the feature [3rd person] to the verbal number agreement paradigm. Once the agreement paradigm has both person as well as number features, its features will count as strong, and will thus be able to check the PF-strong features of the *pro*. The fact that only the feature [3rd person] can be added explains why non-3rd person *pro* cannot be licensed in this position.

2.11. Morphological Case-marking in Gitksan

The previous sections presented a detailed discussion of the distribution of morphological agreement in Gitksan. In this section I consider the distribution of morphological case.

2.11.1. Form and Position of /s/ case-marking

As already mentioned, I classify the /s/ morpheme which occurs before proper nouns in certain syntactic environments as a case-marker. In transitive sentences, /s/ case-marking occurs before proper nouns in the following environments:

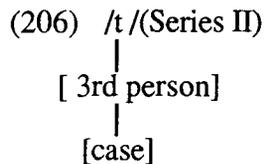
- (202) /s/ case-marking in transitive sentences
 -subject of independent sentence
 -subject of dependent sentence (except, variably, if object is 1st or 2nd person pronominal)
 -object of dependent sentence (unless subject is a 3rd person plural pronominal)

These environments are illustrated in the following data (/s/ underlined>):

- (203) independent clause subject
 kin'am - ə - t_i = s t = **John**_i = ɬ t'u:tsx^w lo: - y'
 give -erg- 3 =case cn = John=cn knife prep-1sg
 "John gave me a knife"
gi'namis Johnhl t'uutsxw loo'y
- (204) dependent clause subject
 ne: - ti: - t kaʔ - ə - t_i = s t = **Peter**_i n'iti:t
 not-contr-3 see-erg-3 =case cn = Peter 3pl
 "Peter didn't see them"
neediit ga'as Peter 'nidiit
- (205) dependent clause object
 ne: - tip - ti: stil - t_i = s t = **Peter**_i
 not-1pl-contr accompany-3=case cn = Peter
 "We didn't go with Peter"
needipdii sdils Peter

As was claimed in (165), the descriptive generalization concerning the distribution of /s/ case-marking is that it is licensed in a position adjacent to a lexical head, provided the head is suffixed with a coreferential Series II agreement marker. In transitive sentences, the environments which meet these conditions are just those listed in (202). Proper nouns in other environments are unmarked for case.

Note that the Series II agreement which licenses a lexical NP is the /t/ suffix from the weak Series II paradigm, which is marked only for person, and not for number. Since an /s/ case-marked NP is always licensed by this particular agreement morpheme, I suggest that the feature [case] is lexically linked to that agreement morpheme on the verb, as schematized below:



2.11.2. Weak vs. strong case feature

Given the fact that there is only one type of morphological case-marking in Gitksan, it is not possible to defend a principled distinction between strong and weak case features based on the Gitksan data. However, as discussed in Chapter 3, the morphological realisation of case-marking in Gitksan is rather impoverished. First, it surfaces only on proper nouns, while other nouns are unmarked for case. Secondly, even proper nouns get the overt /s/ case-marking only in certain contexts, and in other contexts are unmarked for case. These factors make it reasonable to assume that the case feature on nouns in Gitksan should be classed as PF-weak.

Furthermore, the claim that the case feature associated with nouns is PF-weak is consistent with the word order facts. As illustrated in the following partially bracketed representation of the S-Structure of (203), the /s/ case-marked subject NP "John" does not undergo overt raising to spec Tr for feature checking, but instead remains in the VP:

(207) S-Structure
 [TrP kin'am-ə-ti [VP= s t = John_i = ɬ [ASPP [VP t'u:tsx^w lo: - y']]]]
 give-erg-3 =case cn =John=cn knife prep-1sg
 "John gave me a knife"

If the case-feature of the subject NP were PF-strong, then the NP would need to raise at S-Structure for feature checking. The same argument can be made about the case feature associated with the verb. If it were PF-strong, then an S-Structure such as (207) should be ill-formed, since the PF-strong case feature of the verb would fail to be checked. The fact that (207) represents a well-formed sentence, however, indicates that the case feature of the verb must be PF-weak.

Although morphological case is marked in the relevant environments only on proper nouns, I assume that other nouns in the same environments also have a case feature which can be checked at LF. However, on these nouns, the feature receives no overt realisation.

2.11.3. Summary

In this section I have claimed that the feature [case] in Gitksan is a PF-weak feature on both nouns and verbs. I proposed that the case feature on the verb is lexically linked to the weak Series II agreement morpheme, since only NPs licensed by weak Series II agreement markers receive morphological case-marking.

2.12. Agreement and Case in Intransitive clauses

A complete account of agreement and case in transitive clauses has now been presented. In this section I consider how the same approach can be used to explain the patterning of agreement and case in intransitive clauses.

Recall that Series I agreement does not occur in dependent intransitive sentences. As mentioned previously, this is because, in an ergative language, the [-trans] Tr head is "inert", and so has no agreement features to license its specifier position.

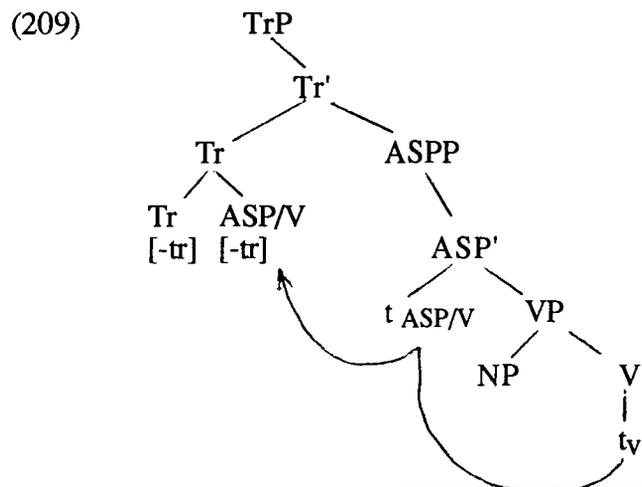
2.12.1. Agreement and case in dependent intransitive clauses

2.12.1.1. overt subject

In dependent intransitive clauses, a Series II agreement morpheme appears on the verb, agreeing with the single NP argument, and the single NP argument receives /s/ case-marking.

- (208) $\text{\textit{la: w'itx}^W - t_j = s \quad t = \text{John}_i}$
 incept come - 3 =case cn = John
 "John has arrived"
hlaa 'witxws John

Given the analysis presented earlier, we know that the features associated with the overt NP are PF-weak. Furthermore, we know that the Series II morpheme which agrees with an overt NP also has PF-weak features, including a case feature. The S-Structure of this sentence will thus be the following, with the subject NP remaining in VP and the V raising to Tr to check its PF-strong transitivity feature.



2.12.2. Agreement and case in independent intransitive clauses

2.12.2.1. Absence of Series II agreement

Independent intransitive clauses behave somewhat differently from dependent intransitive clauses in that Series II agreement does not appear on the verb, as illustrated (verb underlined):

- (213) **t'a:** t = Mary sqapti - m' qan t = John
sit(sg) cn = Mary between-1pl and cn = John
"Mary sat between John and me"
t'aa t Mary sgapdi'm gan t John

- (214) **limx** n'i:y'
sing 1sg
"I sang"
limx 'nii'y

The absence of Series II agreement morphemes in these clauses is somewhat surprising. We know from the behaviour of dependent clauses that Series II agreement can potentially occur on intransitive verbs. Descriptively, its absence in independent intransitive clauses correlates with the absence of a dependent marker. It appears therefore that the presence of a higher governing head serves in some way to license Series II agreement on the intransitive verb, just as the higher head serves to license the presence of Series I agreement in transitive clauses. I encode this generalization in the following statement:

- (215) Series II agreement licensing - intransitive verbs (preliminary version)
Series II agreement between an intransitive verb and its subject is licensed if and only if a higher governing head is present in the clause.

This generalization also applies to nominal predicates, as illustrated by the following pair of examples:

- (216) sim'o:kit t = nək^wo:t - y'
chief cn = father - 1sg
"My father is chief"

si'moogit nigwoodi'y

- (217) ne: - ti: sim'o:kit - t = s t = nək^wo:t - y'
 not-contr chief -3 = case cn = father - 1sg
 "My father is not the chief"
needii si'moogits nigwoodi'y

Thus the condition in (215) might be expanded to include all intransitive heads, as follows:

- (218) Series II agreement licensing - intransitive verbs (revised version)
 Series II agreement between an intransitive head and its subject is licensed if
 and only if a higher governing head is present in the clause.

2.12.2.2. Lexical and overt pronominal subjects

Despite the absence of Series II agreement in independent intransitive clauses, lexical and overt pronominal subjects are still licensed in these clauses. Consider examples (219) - (220), repeated from the previous section (subject underlined):

- (219) t'a: t = Mary sqapti - m' qan t = John
 sit(sg) cn = Mary between-1pl and cn = John
 "Mary sat between John and me"
t'aa t Mary sgapdi'm gan t John

- (220) limx n'i:y'
 sing 1sg
 "I sang"
limx 'nii'y

The intransitive subject of such clauses is licensed only by the weak number agreement on the verb.

Since the features associated with overt pronouns and lexical NPs are PF-weak, their features will be checked against the PF-weak number agreement features of the verb only at LF. Thus the S-structures of sentences such as (219) - (220) are the following:

2.12.3. Summary

In this section I have proposed an analysis of case and agreement in intransitive clauses. The different patterns exhibited in intransitive clauses are summarized in the following chart.

(225) Summary of Agreement Patterns
- independent sentences

<u>Form of subject</u>	<u>Subject agreement</u>	<u>/s/ case assigned?</u>
lexical NP, overt pronominal or 3rd person <i>pro</i>	V #	no

- dependent sentences

<u>Form of subject</u>	<u>Subject agreement</u>	<u>/s/ case assigned?</u>
lexical NP	Series II (weak paradigm) and V #	yes
<i>pro</i>	Series II (strong paradigm) and V #	no

The absence of Series I agreement in intransitive clauses is because Gitksan is an ergative language and thus the [-trans] Tr head is inert (Chomsky 1992). The fact that Series II agreement occurs only in dependent intransitive clauses is encoded in the following statement:

(226) Series II agreement licensing - intransitive verbs (revised version)
Series II agreement between an intransitive head and its subject is licensed if and only if a higher governing head is present in the clause.

2.13. Conclusion

This section of the dissertation has considered the distribution of number agreement, Series I and II agreement markers, morphological case-marking, and overt and silent pronominals in Gitksan. An analysis of the complex interactions among these different elements has

- (228) susi:t=1 ti: ne: - ti: kup - 3 - t = s t=John
 potato =cn contr not - contr eat-erg - 3 =case cn=John
 "Potatoes John doesn't eat" (reply to "What does John not eat?")
susiithldii needii gubis John

In both of these environments the suffix is in complementary distribution with Series I agreement.

3.2. /ə/ and transitivity suffixes.

Rigsby (1986:340) refers to /ə/ as a transitivity suffix, in a section of his grammar discussing transitive verbs. Although he does not explicitly argue for this analysis of the suffix, he makes the important observation that the /ə/ suffix does not cooccur with the transitivity suffix /(t)ən/. Such data seem to suggest that /ə/, like /(t)ən/, could have a transitivity function. This would be unexpected, however, under my analysis of the function of the /ə/ suffix. If this suffix is a realisation of a [+trans] Tr head, it should only surface on verbs which are lexically marked as [+transitive], and should not be responsible for changing the transitivity of a verb.

In this section I argue against analysing /ə/ as a transitivity suffix on the basis of its distribution. I show that its absence after the transitivity suffix /(t)ən/ can be accounted for phonologically in Gitksan, as in Nisgha (Tarpent 1987). The surface absence of the /ə/ suffix after the transitivity suffix thus does not force a reanalysis of its function.

3.2.1. Distributional description of /(t)ən/

The suffix /-(t)ən/ ((t)ən in Nisgha) can be added to predicates to form transitive verbs.⁴⁸

The suffix takes the form /tən/ when following a vowel or resonant, and /ən/ when following an obstruent.

⁴⁸Rigsby (1986) and Tarpent (1987) refer to the suffix as a causative. It does resemble a causative in that in most cases it adds an agent argument. However, it is not semantically causative in the usual sense of this term and I shall use the neutral term "transitivity suffix".

Some examples of intransitive stems and their transitivized counterparts are given in

(229):

(229) Intransitive predicates	Derived transitive predicates
laqs "to wash o's body" <i>laqs</i>	laqs-ən "to bath s.o." <i>laqsin</i>
paX "run" <i>baX</i>	paX-ən "to drive st" <i>bahan</i>
ts'in "to enter" <i>ts'in</i>	ts'in-tən "to admit, let in" <i>ts'indin</i>
wa "be called" <i>wa</i>	wa-tən "to name s.o." <i>wadin</i>

In each of these cases the stem is an intransitive (unaccusative) verb. However, the suffix /-(t)ən/ can also attach to stems which seem to be unmarked for transitivity. In the following examples, /-(t)ən/ is added to stems which take the middle suffix /-(t)xw/ in their intransitive forms (Rigsby (1986:342). (s = someone/something)

(230) Intransitive predicates	Transitive predicates
kw'o:t-xw "to be lost" <i>kw'ootxw</i>	kw'o:t-ən "to lose s" <i>kw'oodin</i>
hat'aq-xw "to be bad" <i>hat'aqxw</i>	hat'aq-ən "to forbid, tell so off" <i>hat'agan</i>
ɬis-xw "to be finished" <i>hlisxw</i>	ɬis-ən "to finish s" <i>hlisin</i>
mit-xw "to be full" <i>mitxw</i>	mit-ən "to fill s" <i>midin</i>
saks-xw "to be clean" <i>saksxw</i>	saks-ən "to clean s" <i>saksin</i>
t'əkwan-txw "to drop,fall " <i>t'igwantxw</i>	t'əkwan-tən "to drop s" <i>t'igwandin</i>
yø:q-xw "to eat (sg)" <i>yookxw</i>	yø:q-ən "to feed so(sg)" <i>yoogan</i>

The suffix /-(t)ən/ can also be added to certain nouns to form related transitive verbs:

transitivizing affixes such as /-(t)ən/ appear consistently in all clause types, including dependent clauses, as illustrated below (dependent markers underlined):

- (234) mo: - tsə - t kw'as-ən - t = s t=John=ɿ ?an - lu: - quyp'aX
 almost-comp-3 break - trn - 3 = case cn=John=cn instr - in - light
 "John almost broke the window"
moojit kw'asins Johnhl anluugoyp'aX

- (235) yukw - t lu: - saks - ən - t = s t = John = ɿ wilp - t
 prog - 3 in -clean -trn - 3 =case cn = John = cn house-3
 "John is cleaning his house"
yukwt luusaksins Johnhl wilpt

This regularity of appearance is what we would expect of a transitivizing suffix, which presumably must be present to provide an additional theta role. The fact that /ə/ is not present in all clause types undermines the claim that it is a transitivizer.

A further difference between /ə/ and /-(t)ən/ is that while /-(t)ən/ consistently attaches to stems which are intransitive (229) or unmarked for transitivity (230), /ə/ normally only attaches to inherently transitive stems, such as the following:

- | | | | |
|-------|--------|------------------|---------------|
| (236) | kup | "to eat s" | <i>gup</i> |
| | tsap | "to make s" | <i>jap</i> |
| | pis | "to tear s" | <i>bis</i> |
| | q'uts | "to cut s" | <i>k'ots</i> |
| | ts'al | "to slice up s" | <i>ts'al</i> |
| | t'is | "to hit s" | <i>t'is</i> |
| | w'a | "to find s" | <i>'wa</i> |
| | stil | "to accompany s" | <i>sdil</i> |
| | wila:x | "to know s" | <i>wilaax</i> |

These verbs have no (unsuffixed) intransitive form.

3.2.3. /ə/ and transitivizing prefixes

Another argument against analysing /ə/ as a transitivizing affix is that it cooccurs (in the two sentence types in which it is licensed) with transitivizing affixes other than /-(t)ən/,

as pointed out in Rigsby (1986: 344-8). For example, verbs transitivized with the prefixes /tə-/("with") and /sil/("with") take the /ə/ suffix, as illustrated:

- (237) tə - w'itxw - ə - t = s t = Kathy = 1 ?ana:x
 with - come - erg - 3 =case cn = Kathy = cn bread
 "Kathy brought bread"
di'witxwis Kathyhl anaax

- (238) sil ma?us - xw - ə - t n'u:m'
 with play -pass-erg-3 1pl
 "S/he played with us"
sil ma'usxwit 'nuu'm

If /ə/ is a transitivizer, we would not expect it to be needed if another transitivizer occurred on the verb.

3.2.4. Phonological /ə/ deletion

The lack of parallelism in the distribution of /ə/ and /(t)ən/ and the fact that /ə/ must cooccur with other transitivizing affixes makes it unlikely that the two suffixes serve a parallel function, and suggests that the absence of /ə/ in the environment of the /(t)ən/ suffix should be accounted for in some other way.

Tarpent (1987:613&817) claims that in Nisgha the /ə/ suffix is present underlyingly following /(t)ən/, but is deleted by phonological rule. I propose that the same rule applies in Gitksan as in Nisgha. The rule can be stated as follows: ⁵⁰

⁵⁰The rule is not formalized in Tarpent (1987). Reference to stress is necessary, since the rule does not apply in cases such as the following, where the verb stem ends in a stressed vowel followed by a resonant.

- (1) kɪn - ə - t = s t = Mary t = John ?a = 1 hun [gɪnɪs] *[gɪns]
 give-erg - 3 =case cn = Mary cn = John prep = cn fish
 "Mary gave fish to John (to eat)"

ginis Mary t John ahl hun

Reference to a resonant is necessary since the rule does not apply after an unstressed vowel followed by a non-resonant, as in the following example:

- (2) kɪtaq - ə - t = s t = John t = Mary kwi = 1 he: - n
 ask-erg 3 = case cn = John cn = Mary what = cn say-2sg
 "John asked Mary what you said"

gidagas John t Mary gwihl heen

I have left the righthand environment of the rule unspecified. Although the rule's effects are only visible when an obstruent consonant occurs to the right, it is not possible to get evidence of whether /ə/ is deleted if a resonant follows, since vowel epenthesis would apply anyway in such an environment. Furthermore, to

(239) /ə/ deletion
 /ə/ → ø / V R ___
 [-stress]
 -long

Under this analysis, a surface form such as [kw'ásins] (233) will have the following underlying representation:

(240) / kw'ás - ən - ə - t = s /

Since the suffix /-ən/ is unstressed, the /ə/ suffix will be deleted by the rule in (239), giving the surface form [kw'ásins].

If the deletion rule applied only to delete the /ə/ suffix on stems ending with the /-ən/ suffix, it might seem implausible to propose a phonological account. However, in the following sections I provide justification for this rule by showing that it applies in other environments in Gitksan, just as the corresponding rule does in Nisgha.

3.2.4.1. VR final stems

One way in which Tarpent supports the phonological account of the absence of /-ə/ after the suffix /-(t)ən/ is by showing that in Nisgha the /ə/ suffix fails to appear not only after the /-(t)ən/ suffix, but also after other verb roots which end with the appropriate VR sequence. Since the vast majority of verbal roots (in both Nisgha and Gitksan) are stressed on the final (or only) syllable, such examples are rare and the following two

my knowledge, there are no appropriate suffixes which would allow us to test what happens when another vowel follows. The rule does not apply across clitic boundaries, as illustrated by the following form:

(3) kwi=ɬ tsáp - ə - n=əst
 what =cn make-erg-2sg=interact
 "What are you making"

gwihl jabinist (*jabinst)

- | | | |
|------------------------|--------------------|-------------|
| (243) after consonants | | |
| sí:pxw + ət | "sore" | [sí:pxwIt] |
| hilín + ət | "lonely" | [hilínIt] |
| ?an?ón + ət | "hand" | [?an?ónIt] |
| (244) after vowels | | |
| q'apalú: - ət | "rifle" | [q'abalú:t] |
| skí - ət | "be on, belong to" | [sgít] |

However, I have observed that when this suffix occurs after a resonant preceded by an unstressed vowel, it surfaces as [t] rather than [Vt]:

- | | | | |
|-------|--------------------|---------------------|------------------|
| (245) | ?á:pxin + ət | "be light (weight)" | [?á:pxint] |
| | q'alá:Xan + ət | "fence" | [q'alá:Xant] |
| | qansq'ó:tsXan + ət | "shadow" | [Gansq'ó:tsXant] |
| | há:lXan + ət | "wall" | [há:lXant] |
| | ?úpan + ət | "pregnant" | [?úbant] |

This alternation in the form of the suffix between the forms in (243) and (245) is straightforwardly accounted for if we assume the operation of the same /ə/ deletion rule proposed above. This shows that the /ə/ deletion rule is not limited in its domain to the /ə/ suffix, but applies more generally to other (inflectional) suffixes.

3.2.5. Conclusion

This section has argued that the suffix /-ə/ should not be analysed as a transitive suffix, despite the fact that it does not cooccur on the surface with the transitive suffix /-(t)ən/. First of all, the distribution of the /ə/ suffix is unlike that of a transitive suffix in that it occurs only in transitive independent and object fronted clauses, and can cooccur with transitive affixes other than /-(t)ən/.

- (246) independent clause with regular verb
 kup - ● - t = s t = John = 1 smax
 eat -erg - 3 =case cn=John=cn meat
 "John ate the meat"
gubis Johnhl smax
- (247) independent clause with T verb:
 ?i:ts - t● - m' = 1 hun
 fry - -1pl=cn fish
 "We fried the fish"
iitsdi'mhl hun
- (248) object wh-moved clause with regular verb
 kwi = 1 kup - ● - t = s t=John
 what=cn eat-erg - 3 =case cn=John
 "What did John eat"
gwihl gubis John
- (249) object wh-moved clause with T verb
 nda = 1 ?alp'a m'al tim ku:- t● -sim'
 wh =cn exactly canoe fut take- -2pl
 "Which canoe are you guys going to take?"
ndahl alp'a 'mal dim guudisi'm

If the /tə/ suffix were simply a morphological variant of the /ə/ suffix, we would predict that /tə/, like /ə/, should be in complementary distribution with Series I agreement, and should therefore not surface in dependent clauses.⁵⁷ However, the T verbs behave unexpectedly in this respect. While the complete /tə/ suffix does not generally surface in dependent clauses, T verbs generally appear in dependent clauses suffixed with a /ə/, as in the following data:

- (250) yukw = tip ?i:ts - ● - t = 1 hon
 prog = 1pl fry - - 3 =cn fish
 "We are frying fish"
yukwdip iijihl hon
- (251) ne: - ti: = t ?isi qats - ● - t = s t=John=1 kofi-t
 not - contr=3 accidentally pour- ? - 3=case cn=John=cn coffee-3
 "John didn't spill his coffee"
neediit isi gajis Johnhl kofit

⁵⁷Recall that this follows under my analysis because /ə/ is analysed as the dummy realisation of the Tr head. In dependent clauses /ə/ does not surface because agreement between Tr and its specifier is licensed and so the Tr head surfaces as Series I agreement.

The suffixes normally found on the two classes of verbs are summarized in the following table:⁵⁸

(252)	<u>regular verbs</u>	<u>T verbs</u>
independent clause	- ə	- tə
dependent clause	∅	- ə

The fact that the /ə/ ~ ∅ alternation and the /tə/ ~ /ə/ alternation both seem to be correlated with the difference between the two clause types suggests that their analysis should be unified. However, the fact that a /ə/ suffix is present at all in the dependent clauses seems problematic, since I have claimed that in dependent clauses the Tr head should be realised by Series I agreement, not by /ə/.

3.3.1. Characterizing the T verbs

One way to approach the problem posed by this class of verbs is to consider whether or not they share any phonological or semantic characteristics which might be used to explain their behaviour.

Rigsby (1986:339-40) notes that the class of T verbs includes the stems which end in a long vowel⁵⁹, but otherwise, which verbs belong to this class seems to be unpredictable on phonological grounds. Furthermore, as the list below illustrates, the verbs do not seem to form any coherent semantic class.

⁵⁸As I show later, this is actually a simplification of the suffix pattern exhibited by T verbs in dependent clauses.

⁵⁹The stem /*aimo:*/ "to help" is an exception, since although it ends in a long vowel it does not take the /T/ suffix.

(253) Examples of verbs belonging to the T class

/hane:q/	"smell"	<i>haneek</i>
/hats/	"bite"	<i>hats</i>
/ku:/	"to take"	<i>guu</i>
/lu: - litixs/	"wash"	<i>luulidixs</i>
/lu: - maks/	"wash"	<i>luumaks, luulagiks</i>
(pl /lu:lagiks/)		
/maq/	"put"	<i>mak, t'ahl</i>
(pl /t'ał/)		
/mał/	"tell"	<i>mahl</i>
/pats/	"pick up"	<i>bats</i>
/pts'ay'/	"comb"	<i>pts'a'y</i>
/qats/	"to spill, pour"	<i>gats</i>
/su:/	"to fetch"	<i>suu</i>
/tsakw/	"kill"	<i>jakw</i>
/ye:Xs/	"visit"	<i>yeexs</i>
/?ama-ka?/	"look after"	<i>amaga'a</i>
/?amqu:/	"to remember"	<i>amgoo</i>
/?its/	"fry"	<i>its</i>

I assume, therefore, following Rigby (1986), that verbs such as these must be lexically marked.⁶⁰

In addition to verbs which inherently belong to the T class, verbs may become T verbs through the addition of certain preverbals. Among the preverbals which have this effect are /n'a:/ "into view", /Xsi/ "out", /his/ "pretend", /tXa/ "all", and /?ama/ "well". Two examples of such alternations are given below:

- /kup/ "eat"
- (254) kup - \bullet - t = s t=Mary= $\mathbf{1}$ hun
 eat-erg - 3 =case cn=Mary=cn fish
 "Mary ate the fish"
gubis Maryhl hun
- (255) ?am his kup - $\mathbf{t\bullet}$ - t = s t=Mary= $\mathbf{1}$ hun
 only pretend eat- - 3 =case cn=Mary=cn fish
 "Mary only pretended to eat the fish"
am his gupdis Maryhl hun

⁶⁰Tarpen (1987:623) notes that some verbs may alternate between the T class and the regular class, with the T verb having "a more definite meaning". I have been unable to find any such examples in Gitksan.

- (258) ?i:ts - T - ə - m' = t̥ hun
 fry - T -erg-1pl=cn fish
 "We fried the fish"
iitsdi'mhl hun

In dependent clauses, the /ə/ suffix is absent, as usual, but the T suffix still appears, so that the underlying representation of a sentence such as (250) is the following:

- (259) yukw = tip ?i:ts - T - t̥ hun
 prog = 1pl fry - T - 3 =cn fish
 "We are frying fish"
yukw dip iijihl hun

The problem now, of course, is accounting for why the T suffix surfaces as [d] in sentences such as (258), but as a vowel in sentences such as (259). Tarpent proposes a phonological account which can be schematized as follows:

(260) Realisation rules for T suffix

- T -> ə /C _ C (usually in dependent clauses)
 T -> t⁶² / _ V (usually in independent clauses)

Under this account, the fact that the two different realisations of the suffix normally correlate with the two different sentence types is merely an epiphenomenon, derivable from the fact that the phonological environment of the suffix is different in the two different sentence types. That is, in an independent clause the T suffix is followed by the /ə/ suffix. Thus, in this clause type it is prevocalic, and hence takes the form /t/ ([d]), as illustrated in the following example. The derivation of the surface form of the verb is given below.

⁶²The /t/ is of course ultimately voiced, since it appears in prevocalic position.

- (261) ?i:ts - T - ə - m' =ɬ hun
 fry - T -erg-1pl=cn fish
 "We fried the fish"
iitsdi'mhl hun

(262) Phonological derivation of the verb:

	/ ?i:ts - T - ə - m' /
T realisation rules	?i:ts - t - ə - m'
ə realisation rules	?i:ts - t - i - m'
prevocalic voicing	?i:ts - d - i - m'
	[?i:tsdim']

In dependent clauses, however, the T suffix is normally followed by a consonant - the realisation of a person marker or a connective - and thus will usually surface as a vowel, as in the following example:

- (263) yukw = tip ?i:ts - T - t =ɬ hun
 prog = 1pl fry - T - 3 =cn fish
 "We are frying fish"
yukw dip ijihl hun

(264) Phonological derivation of the verb

	/ ?i:ts - T - t =ɬ /
t deletion rule ⁶³	?i:ts - T =ɬ
T realisation rules	?i:ts - ə =ɬ
ə realisation rules	?i:ts - i =ɬ
prevocalic voicing	?i:dz - i =ɬ
	[?i:dzɪɬ]

A phonological alternation between an alveolar stop and [ə] may not seem very natural. Nevertheless, it genuinely does seem to be phonology rather than clause type which determines how the suffix surfaces, since the T suffix will take its /t/ form even in dependent clauses if it is followed by a vowel.

Examples of this occur when the verb is suffixed with one of the sonorant person markers - /y/ (1sg), /n/ (2sg) or /m/ (1pl). When these suffixes are added to a consonant final

⁶³This rule is discussed in chapter 3, section 4.

stem, they motivate the application of the vowel epenthesis rule discussed in chapter 1. (The T-final stem counts as consonant final for this rule.) Thus, in just this type of dependent sentence, the T surfaces as [d], as illustrated.

(265) ne:-tim-ti: = t ye:Xs-T - n t = Mary
 not -fut-contr= 3 visit- T-2sg cn=Mary
 "Mary is not going to visit you"
needimdiit yeexsdin t Mary

(266) Derivation of verb form
 / ye:Xs - T - n /
 vowel epenthesis ye:Xs - T - ə n
 T realisation rules ye:Xs - t - ə n
 ə realisation rules ye:Xs - t - i n
 prevocalic voicing ye:Xs - d - i n
 [ye:Xsdin]

Further support for this analysis comes from an alternant form of this sentence, in which the 2nd person object is realised as an independent pronoun instead of as a suffix.⁶⁴ As shown by (267), the suffix T reverts to its vocalic form in this sentence, giving conclusive evidence that it is phonological environment rather than clause-type that is responsible for the alternation:

(267) ne:- tim - ti:= t ye:Xs - T - t = s t=Mary n'i:n
 not - fut - contr = 3 visit- T - 3 =case cn=Mary 2sg
 "Mary is not going to visit you"
needimdiit yeexsis Mary 'niin

(268) Derivation of verb form
 / ye:Xs - T - t = s /
 t-deletion ye:Xs - T = s
 T realisation rules ye:Xs - ə = s
 ə realisation rules ye:Xs - i = s
 prevocalic voicing ---
 [ye:Xsis]

3.3.3. Conclusion

The overall analysis of the T suffix involves many more phonological intricacies, discussed in detail in Tarpent (1987). For our purposes, however, the crucial observation

⁶⁴Discussion of alternations of this type is given in part 2 of this chapter.

is that the superficially problematic T verbs do not in fact constitute an exception to the claim that the /ə/ suffix is the default realisation of the functional head Tr.

3.4. /ə/ is not a marker of object relativization

So far, I have largely followed Tarpent (1987) in arguing that the /ə/ suffix is consistently present on transitive verbs in independent clauses, and absent in dependent clauses, even when this is not obvious from the surface form of the verb. However, I do not follow Tarpent's (1991) analysis of the suffix as an object relative marker. In this section I outline Tarpent's analysis, and then show some problems with it.

3.4.1. Tarpent's (1991) analysis of the /ə/ suffix

As already mentioned, the /ə/ suffix appears on transitive verbs in two apparently distinct environments. First of all, it appears between the verb and the ergative argument in an independent transitive clause (269), and secondly it appears in clauses which could plausibly be analysed as object-fronted - object relative clauses (270), object questions (271) and object focus constructions (272):⁶⁵

(269) kup - ə - t =s t=John =ɿ hun
eat - erg - 3 =case cn=John = cn fish
"John ate the fish"

gubis Johnhl hun

(270) n'i:-maq-T-ə-y' =ɿ ts'ak'=ɿ kin'am-ə -t=s t=Mary
on-put-T-erg-1sg=cn plate=cn give-erg-3=case cn=Mary

lo: - y' = ki laX ha - n'i: - tXo:qxw
prep-1sg=distr on instr - on - eat

"I put the plate Mary gave me on the table"

*'niimakdi'yhl ts'ak'hl gi'namis Mary loo'y gi lax
ha'niitxookxw*

⁶⁵I do not address in this dissertation whether such clauses actually involve movement of the object NP or whether they involve an empty operator.

- (271) kwi = ɬ kup - ɔ = s t=John k'o:ts
 what= cn eat - erg = s cn=John yesterday
 "What did John eat yesterday?"
gwihl gubis John k'yoots
- (272) hun = ɬ mo: - tsə ?a - kup - ɔ - t = s t=John
 fish=cn almost-comp neg-eat-erg - 3 =case cn=John
 "John almost never eats FISH" (Answer to "What does John almost never
 eat?")
hunhl mooji agubis John

In an interesting attempt to unify the two apparently dissimilar environments in which this suffix occurs, Tarpent proposes that the /ə/ suffix always marks object relativization. It does not seem implausible to propose that the /ə/ suffix has some such function in sentences (270) - (272), since in all of these sentences the canonical object position is phonetically empty, and the NP interpreted as the object of the verb appears in clause-initial position.

However, Tarpent proposes that the suffix also marks object relativization in independent transitive sentences such as (269). Rather than being simple a VSO sentence, Tarpent suggests that such a sentence should be viewed as involving a headless relative clause (RC) in a predication relation with a noun phrase. Under this analysis, a sentence such as (269) has the following structure:

- (273) [kup - ɔ - t = s John]_{RC} [= ɬ hun]_{NP}

If the sentence indeed has this structure, then a more literal translation of it would be as a pseudocleft: "A fish is what John ate".

Tarpent's analysis is superficially consistent with the surface form of this sentence. In neither Nisgha nor Gitksan is there an overt independent object relative pronoun, as illustrated in (270) above. Similarly, neither language displays an overt copula (274)

(data from Gitksan):

- (274) sim'o:kit t =Peter
 chief cn=Peter
 "Peter is the chief"

si'moogit t Peter

Furthermore, headless relative clauses, based on both subjects and objects, do occur in Nisgha and Gitksan. In the following examples, headless relative clauses serve as arguments: ((275) - (277) are Nisgha examples taken from Tarpent (1991) and (278) - (280) are Gitksan examples.)

Nisgha

- (275) transitive subject relativized

ʔa: w'itkw - [t] = ʔ [t ʔən w'o? - n]
 now come-[3] = NC 3ERG E.REL call.s - 2sg
 "The one who called you has come back" (T 1991:6)
Hlaa 'witkwhl t an 'wo'on

- (276) intransitive subject relativized

ʔa: pakw - [t] = ʔ [qa - ʔa:t - ət]
 now come.back- [3] = NC pl - fish - S.rel
 "The fishermen are back" (lit: the ones who fished/were fishing are back) (T 1991:6)
Hlaa bakwhl ga'aadit

- (277) transitive object relativized

ʔaq = ʔ [kip - ə - y']
 non-existent =NC eat.s-OREL-1sg
 "I have nothing to eat" (lit: What I eat is non-existent.) (T 1991:10)
Akhl gibi'y

Gitksan

- (278) transitive subject relativized

ka? - ə - y' [ʔan = t tsakw - T = ʔ smax]
 see-erg-1sg erg=3 kill-T=cn bear
 "I saw (the one) who killed the bear"
ga'a'y ant jagwihl smax

- (279) intransitive subject relativized

[t'u:ts'xw - ət] = ʔ ka? - y'
 black - subj =cn see-1sg
 "I saw black ones" (ones which are black)
t'uuts'xwithl ga'a'y

- (280) transitive object relativized

ka? - ə - y' = ʔ [tsap - ə - t]
 see-erg-1sg=cn make-erg-3
 "I saw what s/he made (his/her work)"
ga'a'yhl jabit

Tarpent's proposal is clearly at odds with my analysis of the structure of independent transitive sentences, and of the function of the /ə/ suffix. In the following sections I consider in more detail the implications of her proposal, and show why it is problematic.

3.4.2. Interpreting Tarpent's analysis

In order to evaluate Tarpent's proposal and compare it with my analysis of the function of the structure of independent transitive clauses, it is necessary to translate her proposal into the syntactic framework I am assuming.

3.4.2.1. Specificational vs predicational pseudocleft

The translations Tarpent gives to illustrate her interpretation of the structure of sentences such as (269) are pseudoclefts. However, it is not clear from her paper whether the Nisgha sentences should be viewed as predicational or specificational pseudoclefts, a difference which has crucial implications for determining how her proposal should be structurally interpreted. Before exploring this issue in the next section, I will first review the differences between the two types of pseudoclefts.

The distinction between the two types of pseudoclefts is illustrated in the following examples from Higgins (1979):

- (281) Specificational pseudocleft
What John_j is is proud of himself_j.
- (282) Predicational pseudocleft
What John_j is is important to him_j.

In a specificational pseudocleft, the "what" clause identifies the domain under discussion, and the remainder of the sentence, which I shall call term the "coda", following Heycock (1991), identifies some member of that domain. The coda of a specificational pseudocleft

receives a focus interpretation. In a predicational pseudocleft, there is an equative relationship between the two components of the sentence.

In English, the two types of pseudoclefts can be distinguished by a number of syntactic tests. For example, only predicational pseudoclefts allow the quantifier "whatever" in the wh-position:

(283) Specificational pseudocleft
*Whatever John_i is is proud of himself_i.

(284) Predicational pseudocleft
Whatever John_i is is important to him_i.

Bresnan and Grimshaw (1978) show that it is a diagnostic of free (headless) relatives in English that the free relative pronoun can be suffixed with -ever. Thus, as pointed out in Heggie (1988:284), in English only the predicational pseudocleft contains a free relative clause.

Further syntactic tests reveal another structural difference between the two types of pseudoclefts. Specifically, in a predicational pseudocleft, the wh-clause acts as the subject, while in a specificational pseudocleft, the wh-clause is the predicate. Heggie (1988) summarizes a range of tests which illustrate this difference. One such test, based on small clauses, comes from Williams (1983):

(285) Specificational pseudocleft
I consider [important to himself_i] [what John_i is]
*I consider [what John_i is] [important to himself_i]

(286) Predicational pseudocleft
*I consider [important to him_i] [what John_i is]
I consider [what John_i is] [important to him_i]

The above data can be explained as follows. The verb "consider" selects a small clause complement, which does not allow inversion, so that the subject of the small clause must

precede the predicate. Therefore, in a specificational pseudocleft it is the coda which is the subject, while in a predicational pseudocleft it is the wh-clause which is the subject.

Another test which reveals the difference between the two types of pseudoclefts comes from raising structures. Since only subjects may raise, in specificational pseudoclefts only the coda can raise, while in predicational pseudoclefts only the wh-clause can raise.

- (287) Specificational pseudocleft
Important to himself seems to be what John is.
 *What John is seems to be important to himself.
- (288) Predicational pseudocleft
What John is seems to be important to him.
 *Important to him seems to be what John is.

The following chart summarizes the distinction between the two types of pseudoclefts.

(289) Differences between predicational and specificational pseudoclefts

	<u>predicational</u>	<u>specificational</u>
subject	headless relative	coda
predicate	coda	wh clause
focus properties	no inherent focus interpretation	coda focused

3.4.2.2. Application to Tarpent's analysis

Assuming that the classification of pseudoclefts presented above holds of Nisgha and Gitksan, then in order to derive a structural interpretation of Tarpent's analysis of independent clauses, it is first necessary to determine which type of pseudocleft structure is appropriate.

3.4.3. Problems for a pseudocleft analysis of independent clauses.

3.4.3.1. Adverbial position

If Tarpent is correct in proposing that an independent transitive sentence such as (269) contains a headless relative clause, then it should be possible to have adverbials contained in that clause, as in the following parallel example from English:

(296) [what John bought at the beach] was a towel.

However, Gitksan does not allow such constituents to occur within the putative headless relative clause, as illustrated by the following example:

(297) * $[ki:kw - \text{ə} - t = s \quad t=John \quad \underline{qu?=\text{I} \quad Hazelton}] = \text{I} \text{ hun}$
buy - - 3 =case cn=John at=cn Hazelton]=cn fish
"John bought fish in Hazelton" (What John bought at Hazelton was fish)

/hun/ must immediately follow "John" in such constructions, and any adverbials must follow /hun/. This is illustrated by the following grammatical version of the same sentence:

(298) $ki:kw - \text{ə} - t = s \quad t=John \quad =\text{I} \quad \text{hun} \quad \underline{qu?=\text{I} \quad Hazelton}$
buy - - 3 =case cn=John =cn fish at=cn Hazelton
"John bought fish in Hazelton"
giigwis Johnhl hon go'ohl Hazelton

Under Tarpent's analysis, this restriction on the distribution of adverbials is unexplained.

3.4.3.2. Asymmetry between object and subject headless relatives

Under the interpretation of Tarpent's analysis which I assume, headless object relative clauses can occur as predicates. This seems to predict that headless relative clauses based on subject position should also be able to occur as predicates. However, as illustrated below, such sentences are ungrammatical.

- (299) transitive subject headless relative
 *{?ant kup - t = ɬ hun} t= John
 A.extr eat - 3 = cn fish cn = John
 "John was the one who ate the fish" (lit "who ate the fish was John")
- (300) *{baX - ət} t = John
 run -S.extr cn=John
 "John was the one who ran" (lit "who ran was John")

This apparent asymmetry is unexplained under Tarpent's analysis.

iii. Complementary distribution of /ə/ and dependent markers

Since dependent markers can occur inside relative clauses, another apparent prediction of Tarpent's analysis is that it should be possible for a dependent marker to appear inside the headless relative clause functioning as a predicate. However, the following example shows that this is not possible:⁷⁰

- (301) *{ne: - ti: (-t) kup - ə - t = s t=John} = ɬ hun
 not - contr (-3) eat -erg - 3 =case cn=John =cn fish
 "Fish is what John doesn't eat"

Furthermore, it is should be possible for a sentence with a headless relative clause predicate to appear in a subordinate clause. However, this too is ungrammatical:

- (302) *wila:x - ə - y' [wil (t) [kup - ə - t = s t=John] = ɬ hun]
 know -erg-1sg comp (3) eat-erg - 3 =case cn=John=cn fish
 "I know that fish is what John doesn't eat"

These restrictions on the distribution of independent clauses are unexplained if we assume that they have a headless relative clause as predicate.

⁷⁰Both (301) and (302) can be made grammatical either by focusing "hun" or by removing the /ə/ suffix and adding ergative agreement after the dependent marker.

3.5. Advantages of a non-pseudocleft analysis

This section has discussed a number of problems which arise under Tarpent's analysis of independent clauses as containing headless relative clause predicates. All of these difficulties disappear if these clauses are viewed as simple VSO clauses, as under my analysis.

Under my analysis, an independent sentence contains only a single clause, and so the ungrammaticality of a sentence such as (297), which contained an adverbial in medial position, can be explained on the grounds that the adverbials are adjuncts and thus must occur at the periphery of the clause. My analysis also avoids the problem of the apparent asymmetry in the distribution of object and subject relative clauses, illustrated by the contrast in grammaticality between the ungrammatical (299) - (300) and the grammatical (269). Instead, the data can be accounted for by claiming that no headless relative clause can serve as a regular nominal predicate. Finally, the usual failure of clauses containing the /ə/ suffix to occur in dependent clause contexts, as in (301) - (302), follows from the claim, outlined earlier, that the presence of a dependent marker licenses the appearance of the Series I agreement marker in the position where /ə/ would otherwise occur.

The problems encountered by Tarpent's analysis of independent clauses call into question her analysis of the /ə/ suffix as an object relative marker. If independent clauses do not contain object relative clauses, then the /ə/ suffix cannot be functioning as an object relative marker.

A remaining potential problem for my analysis, though, is why the /ə/ suffix consistently appears in object fronting constructions. Note that this holds true even when the object-fronted clause contains a dependent marker, as in (303), and thus would be predicted

under my analysis to exhibit Series I agreement rather than the /ə/ suffix (dependent marker underlined):

- (303) hun =ɬ mo: - tse ?a - kup - ə - t =s t=John
 fish=cn almost-comp neg-eat-erg - 3 =case cn=John
 "John almost never eats FISH" (Answer to "What does John almost never eat?")
hunhl mooji agubis John

Recall that under my analysis, the presence of a dependent marker in a transitive clause licenses spec head agreement in TrP, with the result that the Tr head is realised by Series I agreement, rather than by the /ə/ suffix. In a sentence such as (303), spec head agreement in Tr has clearly been prevented from occurring, forcing the /ə/ suffix rather than Series I agreement to surface. A possible explanation of this phenomenon is that when the object moves, it adjoins to TrP and thus blocks the government relationship between the dependent marker and the Tr head. In the absence of government by the dependent marker, agreement between Tr and its specifier is blocked, and thus the /ə/ suffix surfaces instead of Series I agreement. Without a full account of wh-movement in Gitksan such an explanation necessarily remains tentative, but it suggests that the presence of the /ə/ suffix in clauses such as (303) does not pose an insurmountable problem for my analysis of the function of this suffix.

Chapter 5: Conclusions

The overall aim of this dissertation has been to establish an appropriate structural representation for the Gitksan clause, and to show how various syntactic and morphological patterns in the language can be accounted for by assuming this structure. In this chapter I review the main claims of the dissertation and briefly consider to what extent they may be applicable beyond the specific analysis of Gitksan.

Various typological and structural claims have been made regarding the type of clause exhibited by Gitksan and the closely related language Nisgha. I therefore began my investigation into Gitksan clause structure in Chapter 3 by considering in detail three previous proposals - that Gitksan is syntactically ergative, that it is non-configurational and that it is a pronominal argument language. I argued against all three analyses, concluding that there is not good evidence for assigning a non-standard structure to the Gitksan clause, and that it should instead be assigned an accusative configurational structure in which independent nominals function as arguments. The main claims of the chapter are summarized briefly below.

I began by considering the fairly extensive ergative patterning in Gitksan, which might be interpreted as an indication that the language should be assigned a syntactically ergative structure in which the agent argument rather than the theme is inside the VP, and the theme argument is in a structurally higher position than the agent. However, I provided typological and structural evidence against adopting this proposal for Gitksan. I showed that typologically the ergative patterns in the language are morphological rather than syntactic in nature, and provided structural evidence from various VP tests to show that the theme argument rather than the agent argument functions as part of the VP.

I next addressed the proposal that Gitksan might be a non-configurational language, and again I considered typological and structural evidence bearing on this question. I illustrated that the language shows only a subset of the surface properties commonly associated with non-configurational languages, so that in this case the typological evidence was inconclusive - typologically, the language seems to be neither strongly configurational nor strongly non-configurational. However, structural tests indicating the presence of a VP provided evidence against assigning a non-configurational structure to the Gitksan clause.

Finally, I considered the possibility that Gitksan might be a pronominal argument language, with pronominal affixes rather than independent nominals functioning as arguments. However, various kinds of evidence argued against this analysis. Asymmetries among independent phrases with respect to ordering, extraction and case-marking suggested that not all phrases have the same status as adjuncts, but rather that there is a distinction between adjunct and argument phrases. Furthermore, I argued that a phonological deletion rule is sensitive to structural differences which would not be present if all phrases were adjuncts. Finally, I showed that not all arguments are associated with bound person markers. For all these reasons, I concluded that Gitksan is not a pronominal argument language.

The discussion of clause structure in Chapter 3 is specific to Gitksan, in that it is based solely on Gitksan data. However, the kinds of typological and structural arguments used in the discussion may well be applicable in testing clause structure in other languages for which it is not obvious that a standard clause structure is appropriate. Furthermore, the general conclusion of the chapter - that Gitksan does not appear to differ from genetically and typologically unrelated languages in the type of clause structure it requires - does provide indirect support for the more general claim in GB theory that clausal structure should not vary widely from language to language.

Having addressed in Chapter 3 the basic issue of the kind of structure that should be assigned to the Gitksan clause, I proposed in Chapter 4 a particular instantiation of the accusative, configurational clause structure for the language. I then showed how the interactions of agreement and case-marking with the distribution of nominals and pronominals can be accounted for within this structure, assuming the framework of Chomsky (1992).

The clausal structure I proposed for Gitksan has two somewhat unusual features - first, the inclusion of an aspect phrase between two VP projections (based on Travis 1992), and secondly, a transitive phrase dominating the higher VP (based on Murasugi 1992). There appears to be good motivation within Gitksan for both of these assumptions, and it is possible that such a clause structure may ultimately prove appropriate for the analysis of other languages. However, with only minor modifications, the remaining aspects of the analysis in Chapter 4 could be made compatible with a more standard structure, such as that assumed in Chomsky (1992).

The major focus of Chapter 4 was a specific proposal concerning the relationship between the richness of morphological marking and feature strength, a topic which is briefly touched on by Chomsky (1992). Chomsky posits a distinction between strong and weak features, claiming that this distinction has crucial implications for when a given feature must be checked during the course of a derivation. While he suggests that there is a relationship between the abstract notion of feature strength and morphological richness, Chomsky makes no specific proposal about the nature of this relationship.

Chapter 4 used data from Gitksan to support a particular claim about how feature strength and morphological richness are related. I argued that the strength of person and number

features in Gitksan depends on the kind of morpheme to which they are attached, as formalized by the following two principles:

(1) PF-Strength (Gitksan)

A feature is PF-strong if and only if it is associated with a morphologically rich agreement morpheme.

(2) Morphological Richness (Gitksan)

An agreement morpheme is morphologically rich if and only if it overtly encodes both person and number features.

Together, these two principles allowed a straightforward account of the interaction of the three Gitksan agreement paradigms with nominals and pronominal arguments.

The distribution of *pro* in Gitksan provided support for this general approach to determining feature strength. *pro* in Gitksan cooccurs only with PF-strong features, indicating that it can only be licensed by strong features. Interestingly, this fact is consistent with earlier claims in GB theory that the licensing of *pro* in many languages requires rich agreement.

An interesting question for future research, then, is whether the claims about feature strength embodied in (1) and (2) might be applicable to languages other than Gitksan. In contrast, however, some of the proposals in Chapter 4 are clearly specific to Gitksan.

Consider the following two principles:

(3) One strong agreement principle (OSAP) (Gitksan)

The features of an NP can be checked at most once by strong features.

(4) Highest Projection Agreement (HPA)

Check features at the highest projection possible.

These principles were motivated by a specific feature of Gitksan morphology: Gitksan has three agreement paradigms available to license just two NP arguments, and any satisfactory

analysis of the language must somehow account for how the locus of the extra agreement is to be determined. These principles are unlikely to be needed in other languages.

As mentioned above, the overall goal of Chapter 4 was to show how the fairly intricate interactions of person marking, case, word order and the distribution of nominals, and overt and silent pronominals can be explained using an elaboration of the theoretical machinery proposed in Chomsky (1992). The fact that this proposal was able to provide a consistent account of the complex data with relatively few stipulations provides considerable support for the general framework.

Obviously, this thesis has been able to address only a portion of the intricate syntax of Gitksan. By showing that there is no reason to assign a marked clause structure to the language and by showing how some of the major morphosyntactic patterns can be explained within a standard clause structure, however, I hope to have prepared the way for future theoretical work on the language.

References

- Aissen, J. (1989) "Agreement Controllers and Tzotzil Comitatives," *Language* 65, 518 - 536.
- Akmajian, A., R. Demers, A. Farmer and R. Harnish (1990) *An Introduction to Language and Communication*, 3rd edition, MIT Press, Cambridge, Massachusetts.
- Anderson, S. (1976) "On the Notion of Subject in Ergative Languages," in C. Li (ed.), *Subject and Topic*, Academic Press, New York.
- Anderson, S. (1982) "Where's Morphology?," *Linguistic Inquiry* 13, 571 - 612.
- Baker, M. (1988) *Incorporation:: A Theory of Grammatical Function Changing*, University of Chicago Press, Chicago.
- Baker, M. (1991) "Some Subject/Object Non-asymmetries in Mohawk and their Theoretical Implications," *Natural Language and Linguistic Theory* 9, 537 - 576.
- Baker, M. and K. Hale (1990) "Relativized Minimality and Pronoun Incorporation," *Linguistic Inquiry* 21, 289 - 297.
- Belletti, A. and L. Rizzi (1988) "Psych Verbs and Theta Theory," *Natural Language and Linguistic Theory* 6, 291 - 352.
- Belvin, R. (1984) *Nisgha Syntax and the Ergativity Hypothesis*, M.A. Thesis, University of British Columbia.
- Belvin, R. (1990) "Person Markers and Patterns of Case Assignment in Nisgha," *Papers for the 25th International Conference on Salish and Neighbouring Languages*, Vancouver, B.C.
- Boas, F. (1902) *Tsimshian Texts*, Bureau of American Ethnology, Bulletin 27, Government Printing Office, Washington.
- Boas, F. (1911) "Tsimshian," *Handbook of American Indian Languages*, Bureau of American Ethnology, Bulletin 40, Government Printing Office, Washington.
- Boeder, W. (1989) "Verbal Person Marking, Noun Phrase and Word Order in Georgian," in Marácz, L. and P. Muysken (eds.).
- Borer, H. (1983) *Parametric Syntax: Case Studies in Semitic and Romance Languages*, Studies in Generative Grammar 13, Foris, Dordrecht.
- Borer, H. (1986) "I Subjects," *Linguistic Inquiry* 17, 375 - 416.
- Bresnan, J. and S. Mchombo (1987) "Topic, Pronoun and Agreement in Chichewa," *Language* 63, 741 - 782.
- Bresnan, J. and J. Grimshaw (1978) "The Syntax of Free Relatives in English," *Linguistic Inquiry* 9, 331 - 391.
-
- Carstens, V. and K. Kinyalolo (1989) "On IP Structure: Tense, Aspect and Agreement," ms., Cornell University and UCLA.

- Chomsky, N (1991) "Some Notes on Economy of Derivation and Representation," in R. Freidin (ed.), *Principles and Parameters in Comparative Grammar*, MIT Press, Cambridge, Massachusetts.
- Chomsky, N. (1981) *Lectures on Government and Binding*, Foris, Dordrecht.
- Chomsky, N. (1982) *Some Concepts and Consequences of the Theory of Government and Binding*, Linguistic Inquiry Monograph 6, MIT Press, Cambridge, Massachusetts.
- Chomsky, N. (1986a) *Barriers*, MIT Press, Cambridge, Massachusetts.
- Chomsky, N. (1986b) *Knowledge of Language: Its Nature, Origin and Use*, Praeger, New York.
- Chomsky, N. (1992) *A Minimalist Program for Linguistic Theory*, MIT Occasional Papers in Linguistics, Department of Linguistics and Philosophy, MIT, Cambridge, Massachusetts.
- Chung, S. (1982) "On Extending the Null Subject Parameter to NPs" In D. Flickinger et al. (eds.), *Proceedings of the First West Coast Conference on Formal Linguistics*, Stanford, California.
- Comrie, B. (1978) "Ergativity," in W.P. Lehmann (ed.), *Syntactic Typology: Studies in the Phenomenology of Language*, University of Texas Press, Austin.
- Comrie, B. (1976) *Aspect*, Cambridge University Press, Cambridge.
- Cowper, E. (1992) "Inner Tense in English: Perfect and Progressive," talk given at the Workshop on Lexical-Syntactic Relations, McGill University.
- Dixon, R. (1979) "Ergativity," *Language* 55, 59 - 138.
- Dunn, J. (1979) *A Reference Grammar for the Coast Tsimshian Language*, Canadian Ethnology Service Paper no. 55, National Museum of Man Mercury Series, Ottawa.
- Dunn, J. (1987) "A preliminary note on Tsimshian oblique subjects," *Papers for the 22nd International Conference on Salish and Neighbouring Languages*, Victoria, B.C.
- Grimshaw, J. (1990) *Argument Structure*, MIT Press, Cambridge, Massachusetts.
- Guilfoyle, E., H. Hung, and L. Travis (1992) "Spec of IP and Spec of VP: Two Subjects in Austronesian Languages," *Natural Language and Linguistic Theory* 10, 375 - 414.
- Haider, H. (1989) "Theta-tracking Systems -- Evidence from German," in Marácz, L. and P. Muysken (eds.).
- Hale, K. (1973) "Person Marking in Walbiri," in S. Anderson and P. Kiparsky (eds.), *Festschrift for Morris Halle*, Holt, Rinehart and Winston, New York.

- Hale, K. (1980) "Remarks on Japanese Phrase Structure: Comments on the Papers on Japanese Syntax," in Y. Otsu and A. Farmer (eds.), *Theoretical Issues in Japanese Linguistics*, MIT Working Papers in Linguistics, vol. 2, Department of Linguistics and Philosophy, MIT, Cambridge, Massachusetts.
- Hale, K. (1981) *On the Position of Warlpiri in a Typology of the Base*, Indiana University Linguistics Club, Bloomington, Indiana.
- Hale, K. (1982) "Some Preliminary Remarks on Configurationality," in J. Pustejovsky and P. Sells (eds.), *Proceedings of the Northeastern Linguistic Society* 12.
- Hale, K. (1983) "Warlpiri and the Grammar of Non-configurational Languages," *Natural Language and Linguistic Theory* 1, 5 - 47.
- Hale, K. (1989) "On Nonconfigurational Structures," in Marácz, L. and P. Muysken (eds.).
- Hayes, B. (1989) "The Prosodic Hierarchy in Meter," in P. Kiparsky and G. Youmans (eds.), *Rhythm and Meter*, Academic Press, Orlando.
- Heggie, L. A. (1988) *The Syntax of Copular Structures*, Doctoral dissertation, University of Southern California.
- Heycock, C. (1991) "Specificational Pseudoclefts and Predication," talk presented at the annual meeting of the Linguistics Society of America, Chicago.
- Higgins, F. (1979) *The Pseudo-Cleft in English*, Garland, New York.
- Hindle, L. and B. Rigsby (1973) "A Short Practical Dictionary of the Gitksan Language" *Northwest Anthropological Research Notes* 7, 1 - 60.
- Horvath, J. (1984) "Remarks on the Configurationality Issue," in W. Abraham and S. de Meij (eds.), *Topic, Focus, and Configurationality*, Linguistik Aktuell Band 4, John Benjamins, Amsterdam.
- Huang, C.-T. J. (1982) *Logical Relations in Chinese and the Theory of Grammar*, Doctoral dissertation, MIT.
- Huang, C.-T. J. (1984) "On the Distribution and Reference of Empty Pronouns," *Linguistic Inquiry* 15, 531-574.
- Hunt, K. (1987) "Case Assignment in Gitksan," ms. University of British Columbia.
- Hunt, K. (1991) "The Status of Glides in Gitksan," ms. University of British Columbia.
- Jaeggli, O. (1982) *Topics in Romance Syntax*, Foris, Dordrecht.
- Jelinek, E. (1984) "Empty Categories, Case and Configurationality," *Natural Language and Linguistic Theory* 2, 39 - 76.
- Jelinek, E. (1986) "The Ergativity Hypothesis and the Argument Hierarchy in Nisgha," *Papers for the 21st International Conference on Salish and Neighbouring Languages*, Seattle, Washington.

- Johns, A. (1987). *Transitivity and Grammatical Relations in Inuktitut*, Doctoral dissertation, University of Ottawa.
- Kaisse, E. (1985) *Connected Speech: The Interaction of Syntax and Phonology*, Academic Press, Orlando.
- Kayne, R. (1975) *French Syntax: The Transformational Cycle*, MIT Press, Cambridge, Massachusetts.
- Koopman, H. (1984) *The Syntax of Verbs*, Foris, Dordrecht.
- Koopman, H. and D. Sportiche (1982) "Variables and the Bijection Principle," *Linguistic Review* 2, 139 - 160.
- Koopman, H. and D. Sportiche (1991) "The Position of Subjects," *Lingua* 85, 211 - 258.
- Kornfilt, J. (1984) *Case Marking, Agreement, and Empty Categories in Turkish*, Doctoral dissertation, Harvard University.
- Kuroda, Y. (1988) "Whether We Agree or Not: A Comparative Syntax of English and Japanese," *Linguisticae Investigationes* 12, 1 - 47.
- Larson, R. (1988) "On the Double Object Construction," *Linguistic Inquiry* 19, 335 - 392.
- Laughren, M. (1989) "The Configurationality Parameter and Warlpiri," in Marácz, L. and P. Muysken (eds.).
- Levin, B. (1983) "On the nature of ergativity," Doctoral dissertation, MIT.
- Levin, J. and D. Massam (1985) "Surface Ergativity: Case/Theta Relations Reexamined," in S. Berman (ed.), *Proceedings of the Northeastern Linguistic Society* 15.
- Livingston, E. (1987) "Pronominal Suffixes in Nisgha," *Papers for the 22nd International Conference on Salish and Neighbouring Languages*, Victoria, B.C.
- Livingston, E. (1989) "Conjoined Arguments in Nisgha," *Papers for the 24th International Conference on Salish and Neighbouring Languages*, Steilacoom Tribal Cultural Center.
- Marácz, L. and P. Muysken (eds.) (1989) *Configurationality: The Typology of Asymmetries*, Foris, Dordrecht.
- Marantz, A. (1984) *On the Nature of Grammatical Relations*, MIT Press, Cambridge, Massachusetts.
- Massam, D. and Y. Roberge (1989) "Recipe Context Null Objects in English," *Linguistic Inquiry* 20, 134-139.
- McCloskey, J. and K. Hale (1984) "On the Syntax of Person-Number Inflection in Modern Irish," *Natural Language and Linguistic Theory* 1, 487 - 533.

- Mohammad, M. (1989) "The Problem of Subject Verb in Arabic: Towards a Solution," in Mushira Eid (ed.), *Perspectives in Arabic Linguistics*, Benjamins, Amsterdam.
- Mohanan, K. P. (1983-84) "Lexical and Configurational Structures," *The Linguistic Review* 3, 113-139.
- Mulder, J. (1988) *Ergativity in Coast Tsimshian (Sm'algyax)*, Doctoral dissertation, UCLA.
- Muraki, M. (1974) *Presupposition and Thematicization*, Kaitakusha, Tokyo.
- Murasugi, K. (1992) "Crossing and Nested Paths: NP Movement in Accusative and Ergative Languages," ms., Memorial University of Newfoundland/McGill University.
- Nash, D. (1986) *Topics in Warlpiri Grammar*, Garland, New York.
- Nespor, M. and I. Vogel (1986) *Prosodic Phonology*, Foris, Dordrecht.
- Pollock, J.-Y. (1989) "Verb Movement, Universal Grammar, and the Structure of IP," *Linguistic Inquiry* 20, 365 - 424.
- Postal, P. (1971) *Cross-Over Phenomena*, Holt, Rinehart and Winston, New York.
- Powell, J. and R. Stevens (1977) *Gitksanimx - Gitksan Language Book 1*, Kispiox Band, British Columbia.
- Pye, C. (1990) "The Acquisition of Ergative Languages," *Linguistics* 28, 1291 - 1330.
- Rigsby, B. (1975) "Nass-Gitksan: An Analytic Ergative Syntax," *International Journal of American Linguistics* 41, 346 - 54.
- Rigsby, B. (1986) *Gitksan Grammar*, ms. prepared for the Linguistics Division, British Columbia Provincial Museum.
- Rigsby, B. (1989) "A later view of Gitksan syntax," in M. Key, and H. Hoenigswald (eds.), *General and Amerindian Ethnolinguistics: In Remembrance of Stanley Newman*, Mouton de Gruyter, Berlin.
- Roberge, Y. (1986) *The Syntactic Recoverability of Null Arguments*, Doctoral dissertation, University of British Columbia.
- Rochemont, M. (1986) *Focus in Generative Grammar*, John Benjamins, Philadelphia.
- Rochemont, M. (1992) "Bounding Rightward A'-Dependencies," in Goodluck, H. and M. Rochemont (eds.), *Island Constraints*, Kluwer, Dordrecht.
- Rochemont, M. and P. Culicover (1990) *English Focus Constructions and the Theory of Grammar*, Cambridge University Press, Cambridge.
- Rood, D. (1977) "Against Artificial Tree Branches: Another Look at Nass-Gitksan Syntax," *International Journal of American Linguistics* 43, 218 - 24.

- Rosen, S. (1989) "Two Types of Noun Incorporation: A Lexical Analysis," *Language* 65, 293 - 317.
- Saito, M. (1985) *Some Asymmetries in Japanese and their Theoretical Implications*, Doctoral dissertation, MIT.
- Saxon, L. (1986) *The Syntax of Pronouns in Dogrib*, Doctoral dissertation, UCSD.
- Schaufele, S. (1991) "A Note on the Term 'Scrambling'," *Natural Language and Linguistic Theory* 9, 365-368.
- Schwartz, L. (1988) "Asymmetric Feature Distribution in Pronominal 'Coordinations'," in M. Barlow and C. Ferguson (eds.), *Agreement in Natural Language*, Center for the Study of Language and Information, Palo Alto.
- Selkirk, E. (1984) *Phonology and Syntax: The Relation between Sound and Structure*, MIT Press, Cambridge, Massachusetts.
- Silverstein (1976) "Hierarchy of Features and Ergativity," in Dixon, R. (ed.), *Grammatical Categories in Australian Languages*, Australian Institute of Aboriginal Studies, Canberra.
- Speas, M (1990) *PhraseStructure in Natural Language*, Kluwer, Dordrecht.
- Speas, M. (1989) "The Position of Navajo in the Configurationality Debate," in Marácz, L. and P. Muysken (eds.).
- Stowell, T. (1978) "What was There Before There was There" in D. Farkas et al. (eds.), *Proceedings of the 14th Regional Meeting of the Chicago Linguistics Society*.
- Stowell, T. (1981) *Origins of Phrase Structure*, Doctoral dissertation, MIT.
- Stump, G. (1984) "Agreement vs Incorporation in Breton," *Natural Language and Linguistic Theory* 2, 289 - 348.
- Tarpen, M-L. (1981) "Major Features of Nisgha Syntax," ms. University of Victoria.
- Tarpen, M-L. (1982) "Ergative and Accusative: A Single Representation of Grammatical Categories Based on Evidence from Nisgha," *Working Papers of the Linguistic Circle of Victoria*.
- Tarpen, M-L (1983) "Morphophonemics of Nisgha plural formation: A Step Towards Proto-Tsimshian Reconstruction," in *Studies in Amerindian languages II, Kansas Working Papers in Linguistics* 8, 123 - 214.
- Tarpen, M-L. (1986) "Nisgha Possessives," *Papers for the 21st International Conference on Salish and Neighbouring Languages*, Seattle, Washington.
- Tarpen, M-L. (1987) *A Grammar of the Nisgha Language*, Doctoral dissertation, University of Victoria.
- Tarpen, M-L. (1988) "Below the Surface of Nisgha Syntax: Arguments and Adjuncts," *Papers for the 23rd International Conference on Salish and Neighbouring Languages*, Eugene, Oregon.

- Tarpen, M-L. (1991) "The Morpheme \rightarrow - and the Mysteries of Nisgha Syntax," *Papers for the 26th International Conference on Salish and Neighbouring Languages*, Vancouver, B.C.
- Tenny, C. (1987) "Grammaticalizing Aspect and Affectedness," Doctoral dissertation, MIT.
- Travis, L. (1984) *Parameters and Effects of Word Order Variation*, Doctoral dissertation, MIT.
- Travis, L. (1991) "Derived Objects, Inner Tense and the Structure of VP," talk presented at NELS.
- Travis, L. (1992) "Inner Tense with NPs: the Position of Number," in *Cahiers de Linguistique de l'UQAM*, 1:1.
- van Steenberg, M. (1989) "Finnish: Configurational or Not?," in Marácz, L. and P. Muysken (eds.).
- Walsh, L. (1988) "Number Agreement in Nisgha and the Mirror Principle," ms. University of British Columbia.
- Walsh, L. (1990) "Syllable Structure in Interior Tsimshianic: A Preliminary Report," ms., University of British Columbia.
- Williams, E. (1983) "Semantic vs. Syntactic Categories," *Linguistics and Philosophy* 6, 423 - 446.
- Whitman, J. (1987) "Configurationality Parameters," in T. Imai and M. Saito (eds.), *Issues in Japanese Linguistics*, Foris, Dordrecht.