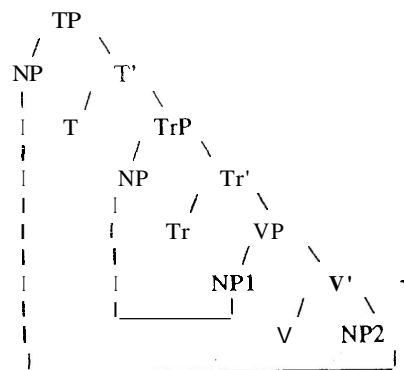


(6) Nested Paths



In the next section, I propose an Ergative Parameter **based** on morphological features which ensures that only the **correct** derivation is permitted in each language **type**.

1.4 The Ergative Parameter and Economy Principles

Various **parameters** have been proposed to **explain** the differences between accusative and ergative languages, **e.g.**, de Rijk (1966), Marantz (1984). **Levin** and **Massam** (1985). **Bobaljik** (1992).⁷ In the present **analysis**, the differences originate in **the** movement of NPs. **The** Ergative Parameter

⁷I discuss these analyses (and others) in section 5.1.

proposed **below** is stated in terms of features, which are responsible for all operations, including NP movement.

(7) *Ergative Parameter*

In **an** accusative language, the Case features of T are strong.
In **an** ergative language, the Case features of Tr are strong.

The **strength** of features determines whether the features are checked at s-structure or LF. As discussed above, strong features are not legitimate objects at PF, and therefore must **be** checked at s-structure. In an accusative language, the strong Case features of T **require** overt **movement** to SPEC TP at s-structure. In an ergative language, the strong **features** of Tr **require** SPEC TrP to **be** filled at **s-structure**.

The two types of movements (i.e., Crossing and Nested Paths) found in accusative **and** ergative languages is the result of the interaction of the Ergative Parameter stated in (7) and the following **Principles** of Economy:⁸

(8) *Principles of Economy for NP Movement*

1. **Closest Available Source:** At each level of a derivation, a target must **take** ~~the~~ closest available source NP.
2. **Closest Featured Target:** At ~~each~~ level of a derivation, a source NP must move to the closest **featured** target.
3. **Procrastinate:** An operation must be done as late as possible.

⁸Economy Principles were introduced in Chomsky's 1987 class lectures, and have been further developed in Chomsky (1991, 1992).

According to the first principle, at each level of a derivation, the closest available NP moves to the target position. The *target* is the SPEC position of a functional head which requires its Case features to be checked. At s-structure or LF, a target takes an NP to satisfy its Case feature requirements. Thus NP must satisfy two criteria: (i) it must be the closest NP to the target before any movement at that level, and (ii) it must be available for movement by not already having its Case features checked.

The first criterion determines that it is always the subject which raises at s-structure to the SPEC of the functional head with the strong features, as it is closer to the target than the object. My definition of closest is based on the number of A-positions between the source and target, where an A-position is a position in which an argument may appear. These include the SPECs of TP and TrP, and any argument position in the VP.⁹ Consider the Crossing Paths structure in (5) above. The closest NP to the target SPEC TP is the subject, which crosses only one A-position. SPEC TrP. The object would cross two A-positions, SPEC VP and SPEC TrP. Similarly, in (6), the closest NP to the target SPEC TrP is the subject.

The notion of "closest" at any given level applies to an NP before any movement has taken place at that level. Suppose that both T and Tr have strong Case features in (9), requiring movement to their SPECs at s-structure:

$$(9) \quad T, \quad Tr, \quad [_{VP} \quad NP_1 \quad V \quad NP_2]$$

The closest NP to both T and Tr is NP₁, the subject. However, this NP, cannot satisfy the feature requirements of both functional heads simultaneously. Therefore, unless something else is inserted in SPEC TP to satisfy T, the derivation will crash.¹⁰

The second criterion, i.e., availability, permits movement only of NPs which have not had their features checked." The Principle of Closest Available NP applies cyclically, first at s-structure, and then at LF. In determining the source NP at s-structure, all NPs are in principle available, as no feature checking has yet occurred. At LF, however, NPs which have had their features checked at s-structure are no longer available. For example, in the structure of ergative languages in (6) above, although the subject in SPEC TP is closer to the target in terms of distance, since it is not available for further movement (at LF), it does not count as the "closest available NP". Thus, it is the object which raises to SPEC TP to satisfy the Case feature requirements of T.

At any one level, then, there will be neither Crossing nor Nested Paths

¹⁰In section 2.3, I discuss it-insertion in raising constructions, which I claim is a last-resort strategy like do-insertion.

¹¹The same notion is captured in Chomsky's (1992) Principle of Last Resort

⁹It does not, however, include SPEC CP (see 2.4 below).

(i.e., the result of **both** the subject and object raising), but only independent movements of subjects to functional SPECs.

The Principle of Closest Featured Target ensures that **an** NP raises to the closest featured target, where *featured target* is defined *as* a SPEC position that is required to be **filled** for Case reasons, i.e., its head must check its Case features with an NP in its SPEC. This principle prohibits **an** NP from skipping over a featured SPEC **position** to a **further** one. Consider the **following** examples from an accusative language:

- (10) a. $T_i \quad Tr_i \quad [_{VP} NP_1 V NP_2]$
 b. $T_i \quad \dots \quad T_i \quad [_{VP} NP_1 V NP_2]$

In (10a), SPEC TrP is not a **featured** target at **s-structure**, as its Case features need not be checked until LF. In (10b), however, the **SPECs** of both Ts are featured targets at **s-structure**, as **their** Case **features** must be checked.

The third principle, Procrastinate (Chomsky 1992), **captures the** idea that **LF-operations** are less costly than overt movement. **Chomsky explains** that "LF-operations **are** a **kind** of 'wired-in' **reflex**, **operating** mechanically beyond any directly observable effects" (p. 43). According to **this** principle, objects should not raise until LF. **As long as** the object moves to a position which **satisfies** its own Case **requirements** and those of a **functional head**, the

derivation will be legitimate. However, once the subject has raised, the only possible place for the object to move to (**which** satisfies all requirements), is the **other** specifier position.

1.5 Verb Raising

In Chomsky (1992), it is claimed that the strength of the **v-features** of AGR determines whether a language has overt verb raising, as in French, or raising at LF, as in English. In the analysis proposed **here**, T and Tr do not have "**v-features**". Rather, the features related to V are **[±tense]** and **[±trans]**, which are inherent **features** of the functional heads. I **propose** that these features, which are morphologically **realized** as **affixes**, are **parameterized with** respect to the level (i.e., **s-structure** or LF) at which they **need** to be checked. **This** accounts for **the** Linguistic variation in the level at which verbs **raise**. If the tense or transitivity **feature** does not require checking at **s-structure**, by **the** principle of **Procrastinate**, verb raising does not occur until LF.

The **affixal requirements** of T and Tr **are** entirely separate' from the strength of **Case features**, which **controls** NP movement. The **dissociation** between the **factors** governing **verb** and NP **movement** entails that **verbs** and **NPs** move at the level **required** for convergence, independently of **one** another. In French, for example, the subject raises to SPEC TP at s-structure,

as does the verb to T. The object does not raise to SPEC TrP until LF. The verb, on its way to T at s-structure, must first adjoin to Tr. However, at this point in the derivation, the object is still in the VP, and not in SPEC TrP. In order for the Case and agreement features of the object to be checked, the verb and Tr must leave their features with the trace. I assume that in the unmarked case, features may be checked through traces.¹²

In English, where the verb does not raise until LF, the +features of the subject in SPEC TP cannot be checked until the verb has raised to T. Only the Case features of the subject are checked at s-structure. Thus, features are not necessarily checked at the level at which movement takes place. In French, the verb raises at s-structure, but it does not check the ϕ -features of the object until LF. In English, the subject raises to SPEC TP at s-structure, but its ϕ -features are not checked until LF.

1.6 Object Raising

The present analysis determines that in all languages, the subject raises at s-structure to satisfy the feature requirements of T or Tr, while the object, by the Principle of Procrastinate, does not raise until LF. In this section, I discuss object raising at s-structure in the Germanic languages. In these

languages, there is a phenomenon known as object shift, where an object raises to an intermediate position between SPEC VP and SPEC TP (see, for example, Holmberg 1986, Déprez 1989, and Vikner 1991). In the mainland Scandinavian languages (e.g. Swedish, Danish, Norwegian), object shift applies only to weakly stressed and unexpanded pronouns (I1), while in Icelandic, it applies (optionally) to full NPs as well (12):

(11) Swedish

- a. varför läste_i atudenterna den, inte alla t_i t,
 why read the students it not all
 'why didn't all the students read it?'
 (Holmberg 1986:165)
- b. *varför läste_i atudenterna artikeln, inte alla t_i t,
 why read the students the article not all
 'why didn't all the students read the article?'
 (Holmberg 1986:166)

(12) Icelandic

- hvers vegna lasu_i studentarnir greinina, ekki allir t, t,
 why read thr students the article not all
 'why didn't all the students read the article?'
 (Holmberg 1986:166)

Déprez (1989), adopting the clausal structure proposed in Chomsky (1992),¹³ proposes that object shift involves A-movement to the specifier of

¹²See the following section, where it is proposed that in object shift languages, the trace of a verb cannot check Case features.

¹³Déprez uses the version of Chomsky (1992) originally published in Laka and Mahajan (1989).

Agr_oP.¹⁴ She provides as evidence Holmberg's (1986) observations that the trace of the shifted object exhibits properties of an NP-trace (A-movement) rather than a variable (A'-movement). Following Déprez, I propose that objects raise to SPEC TrP.

Object shift occurs only if the main verb has raised out of the VP (to C), suggesting that overt verb raising creates an environment in which feature checking must take place at s-structure. I propose that object shift results from the condition that certain NPs (i.e., pronouns in mainland Scandinavian, all NPs in Icelandic) cannot check their Case features with the features of a verbal trace. When the verb raises at s-structure to Tr, and subsequently to T and C, it leaves a copy of its Case features with the trace in Tr (and T). An object raising to SPEC TrP at LF checks its Case features with those of the trace, if it can. If it cannot, as in the case of mainland Scandinavian pronouns and Icelandic NPs, it must raise to SPEC TrP at s-structure, at the same time as the verb raises to Tr."

Such a move does not violate Procrastinate, as waiting until LF will result in a nonconvergent derivation. However, if the verb remained in the VP at s-structure, raising the object would result in a violation of

¹⁴Déprez claims that only full NPs raise to SPEC Agr_oP, and that pronominal object shift involves head movement to Agr_o.

¹⁵In Icelandic, object shift of full NPs is actually optional, suggesting that in some cases they can check their features with those of a trace. Pronouns, on the other hand, obligatorily raise.

Procrastinate:

(13) Swedish

*varför har studenterna den, inte läst t_i
 why have the students it not read
 'why haven't the students read it?'
 (Holmberg 1986:176)

Movement to the SPEC of T, which has strong features, has precedence over movement to SPEC TrP, as only the former is required to satisfy Case requirements. By the definition given in 1.4 above, only SPEC TP is a "featured target".

1.7 The Tr Projection

In this section, I discuss the role of the Tr projection, which is associated with the transitivity of a clause. I first present evidence of the structural requirements of Tr, proposing an account of transitivity in terms of number of arguments. I then propose an alternative view of transitivity, which captures the same facts in a less restrictive way, and is thus more in accordance with the principles-and-parameters approach assumed in this dissertation.

The head of TrP, Tr, has the Case feature accusative/ergative, and a [±trans] feature which is checked with the corresponding feature of the verb.

TrP appears to **be** a purely structural necessity, i.e., it is required only **as** a position to which an NP can raise to check its Case and ϕ -features. It is evident that the $[\pm\text{trans}]$ of Tr is concerned only with the syntactic, and not semantic, notion of "transitivity." I refer to "syntactic transitivity" as the presence of two **direct**, NP arguments in the VP. "Semantic transitivity" involves the presence of an agent and a patient, **as** determined by the argument structure of the verb. A verb such as *hit* has both an agent and **patient** argument, both generated in the VP. The syntactic transitivity of such verbs, indicated by the $[\text{+trans}]$ feature of Tr, **is** matched by their semantic transitivity. **Passive** and antipassive constructions, on the other hand, involve both **an** agent and patient, but consist of a single **argument** in the VP. It is the presence of only one direct argument which determines the $[-\text{trans}]$ value of Tr. Unergative and unaccusative verbs match in syntactic and semantic transitivity, **as** they involve only one argument in the VP, either an agent or a **patient**.

"Syntactic transitivity" **may** be captured by a mechanism which counts the number of arguments. In the **various** types of clauses discussed above (i.e., transitive, **unergative**, etc.), the value of Tr depends on the number of arguments in the **W**. However, in bi-clausal structures involving **ECM verbs**, the inventory of NPs which are considered as arguments must **be** extended to include the subject of the **embedded** verb.

Consider the following ECM construction:

- (14) a. John believes [Mary to have won the race]
 b. *Mary believes [PRO to have won the race]

Standard analyses have assumed that ECM verbs take IP complements, and assign accusative Case to the embedded subject. Case assignment takes place under government, as shown by the ungrammatical (14b), with PRO in a governed position.

Within the system of Case adopted here, where Case assignment is a **feature checking** process between a functional head and its specifier, ECM is interpreted **as** the raising of the embedded subject to the **SPEC** of the projection dominating VP (Chomsky 1992). In my system, the position to which the subject **raises** is SPEC TrP of the **matrix clause**. In order for the derivation to converge, Tr must be $[\text{+trans}]$, allowing the **embedded** subject to check its Case **features** with those of Tr. **The definition** of syntactic **transitivity** must therefore **be modified** to refer to the number of arguments (or traces) the Tr **governs**.¹⁴ If it governs only one argument, then it has the value $[-\text{trans}]$; if it **governs** two, then it **is** $[\text{+trans}]$.¹⁵

¹⁴I use the notion of **government** presented in Chomsky (1986a:9): *a governs β iff a m-commands β and there is no γ , γ a barrier for β , such that γ excludes a*, where CP, but not IP, is a barrier.

¹⁵In double object constructions, Tr is $[\text{+trans}]$, as it **governs the subject and both** objects. **Since my analysis permits** only one Tr projection for **each** VP, the other object would have to **get Case** lexically, perhaps by a null P. Even with a double object construction consisting of two **Ws**, as in Larson (1988), **there is only one** TrP projection. See Li (1990) for evidence that **functional heads cannot intervene** between two lexical

Shown in (15) **below** is a more **detailed** structure of (14a) above:

(15) John, T, Tr, [_{VP}t_i believes [_S Mary, T, Tr, [_{VP}t won the race]]]

The **matrix** Tr governs two NPs: (i) the trace of John, and (ii) the **embedded** subject Mary, which has raised from the lower VP to the embedded SPEC TP at s-structure.¹⁴ Following a suggestion by Alec Marantz (p.c.), I assume that the value of Tr is **determined** at the level at which it becomes "active", i.e., checks its Case features. In an accusative language, this level is LF, while in an ergative language, it is s-structure. In (14a), since Tr is not active until LF, Mary, which has raised to NP2 at s-structure, counts as a governed NP.

Control verbs **like** *try* in (16) below take CP complements:

(16) a. *John tried [Mary to win the race]
b. Mary tried [PRO to win the race]

The CP acts as a barrier to government, blocking government of the embedded **subject** in SPEC TP by Tr. Tr **therefore** governs **only** one NP (the matrix subject John), and **has** the value [-trans]. **Only** (16b), with a PRO subject, **is grammatical**, as PRO does not require Case.

A **counting** mechanism such as this **seems** deviant in a principle-based

heads which are to **be** incorporated.

¹⁴In section 2.2 below, I discuss the EPP, which motivates the raising of Mary to SPEC TP.

linguistic system. I propose an alternative **approach** to determining the value of Tr, **involving** free generation of [\pm trans]. Other principles of the grammar will **determine** whether or not a derivation **with** a certain value for Tr converges. For example, with a verb such as *hit*, a derivation with [+trans] Tr would converge as long as the NPs in the VP **raised** to their proper SPEC positions (determined by the Ergative Parameter and Economy Principles). If Tr were [-trans], the derivation **would** fail, as one of the NPs would not be able to check its features. Similarly, a derivation with [-trans] Tr and one argument would converge, while [+trans] Tr with one argument would fail, as either T or Tr would not be able to check its **features**.

A potential problem with this approach, however, **is** that the insertion of it or **there might** save the derivation, predicting **the following to be grammatical**:

(17) *it/there T, Tr, [_{VP}the man laughed]

It/there is inserted in SPEC TP at s-structure, and *the man* raises to SPEC TrP at LF. In section 2.1, I discuss expletive it and *there*, and show that examples such as (17) **will not be** derived.

The contrast **between ECM** verbs as in (14) above, **and** control verbs as in (16), **is** still explained by the TP/CP distinction. The embedded subject in an ECM construction raises to the **matrix** SPEC TrP from the **embedded**

SPEC TP position. The embedded subject of a control verb, however, is prevented from doing the same. One way to explain this is in terms of barrierhood: the trace in SPEC TP will not be properly governed, as CP is a barrier to government (cf. Chomsky 1986a).¹⁹

1.8 NP Movement in Accusative and Ergative Languages

In this last section, I demonstrate how the Ergative Parameter and Economy Principles apply to the derivation of various clause types: transitive clauses, intransitive clauses, and bi-clausal structures.

1.8.1 Transitive Clauses

In this section, I demonstrate the interaction of the Ergative Parameter and Economy Principles in transitive clauses. Let us consider first accusative languages. According to the Ergative Parameter, the Case features of T are strong, requiring overt NP raising to SPEC TP. Given the principle of Closest Available Source, only the subject may move. The object raises to SPEC Tr at LF, resulting in Crossing Paths.

Shown in (18) below are example of derivations in English. I will be concerned only with s-structure movement, i.e., movement of the subject NP.²⁰

- (18) a. T, [John saw Mary]
 b. John, T, [t_i saw Mary]
 c. *Mary, T, [John saw t_i]

In (18b), the subject, which is the closest NP to the target, raises to SPEC TP. (18c) is ungrammatical, as the object, *Mary*, is not the closest NP.

In an ergative-language, the Case features of Tr are strong, requiring that they be checked at s-structure. It is the subject which moves to SPEC TrP, as it is the closest NP to the target. The object moves at LF to SPEC

¹⁹Tr, unlike T, appears not to have a semantic interpretation, but is required purely for structural reasons. It has been claimed, however, that transitivity involves more than the presence of two arguments. Hopper and Thompson (1980), for example, assert that transitivity is associated with several components, all concerned with the effectiveness with which an action takes place, e.g., the telicity and punctuality of the verb, the volitionality and agency of the subject, realis or irrealis mode, and the degree of affectedness and individuation of the object. It is not clear, though, how such properties are captured syntactically.

Tenny (1987, 1989) discusses the relation between a verb's direct internal arguments and the aspectual property of delimitedness, proposing that the internal argument 'measures out' over time the event described by the verb. She suggests that aspect constitutes an independent syntactic category between IP and VP, the same position as my TrP. However, since her notion of "aspect" is determined by the semantic relation between a verb and its arguments, associating TrP with Tenny's AspP is problematic. One problem concerns unaccusative verbs, which involve one internal argument with the aspectual properties of a direct object (i.e., it measures out the event), but the syntax of a subject, raising to SPEC TP. Another problematic issue involves transitive verbs which do not have the semantics of being delimited events. These verbs include stative verbs such as *know* and *believe*. The object of *know*, and the complement clause of *believe*, are not event delimiters. It is thus not possible to translate Tenny's system into mine, as she is concerned with the d-structure representation of objects, and not the s-structure notion of transitivity.

²⁰As discussed in 1.3 above, I assume that NPs and verbs are generated with their morphological structure intact. Thus, in (18) and all subsequent examples, NPs are marked for Case even if they have not actually moved to Case positions at s-structure, and verbs are marked for tense, transitivity and agreement, regardless of whether or not they have overtly raised.

TP, resulting in Nested Paths. Examples (19)-(21) below are from the Inuit, Mayan and Polynesian languages, respectively. Inuktitut (Inuit) is an SOV language, and Mam (Mayan) and Niuean (Polynesian) are VSO.

In (19), the subject, *Jaani*, raises to SPEC TrP, while the object, *tuktu* 'caribou', and the verb, *malik* 'follow', remain in the VP:

(19) Inuktitut

Jaani_i-up [t_i tuktu malik-p-a-a] Tr.
John-Erg caribou(Nom) follow-Ind-Tr-3sE.3sN
'John followed the caribou'

In the following example from Mam, the subject, Cheep 'José', raises to SPEC TrP, and the verb, *tx'ee7ma* 'cut', raises to T:

(20) Mam

ma ø-jaw t-tx'ee7ma-n_v Cheep, Tr. [t_v tzeə7]
rec 3sN-dir 3sE-cut-ds José tree
'José cut the tree'
(England 1983:201)

The same movements occur in Niuean: the subject, *tama* 'child', raises to SPEC TrP, and the verb, *kitia* 'see', raises to T.

(21) Niuean

ne kitia_v he tama_n Tr. [t_v e mor]
Past see Erg child Nom chicken
'the child saw the chicken'
(Seiter 1979:33)

1.8.2 Intransitive Clauses

In a clause with an intransitive verb, the [-trans] Tr does not have Case features. Therefore, only one position, SPEC TP, is available for Case-checking. In an accusative language, raising to this position occurs at s-structure, as required by the Ergative Parameter. In an ergative language, the intransitive argument does not raise until LF.²¹ Except for the level at which Case features are checked, Case checking is identical in the two types of languages. In the following subsections, I discuss the Case system in various intransitive clauses, i.e., unergative, unaccusative, passive and antipassive.

1.8.2.1 Unergatives

An unergative verb has one argument in SPEC VP. This NP, being the closest (and only) argument, raises to SPEC TP:

- (22) a. T. [John aang]
b. John, T. [t_i sang]

In an ergative language, the NP in an intransitive clause does not raise

²¹It may be the cue that in ergative languages, the intransitive actually raises at s-structure. This would require the Ergative Parameter to be modified so that in an ergative language, the Cue of Tr is checked at s-structure when Tr is [+trans], but the Case of T is checked when T is [-trans]. Until I have evidence that the intransitive subject must raise at s-structure, I will assume the simpler version of the Ergative Parameter, as stated above

until LF, as **the** s-structure requirement for raising applies only to Tr. Shown in (23)-(25) are examples of **unergative** verbs in **Inuktitut**, **Mam** and **Niuean**. In (24) and (25), the verb raises to T at s-structure.

(23) Inuktitut

[Jaani pisuk-p-u-q] T,
John(Nom) **walk-Ind-Intr-3sN**
'John walked'

(24) Mam

ma **ø-beet_v-T**, [xu7j t_v]
rec 3sN-**walk** woman
'the woman walked'

(England 1983:145)

(25) Niuean

kua mohe_v-T, [a ia t_v] he **fale**
Perf **sleep** Nom he in house
'he has slept in the house'

(Seiter 1979:63)

1.8.2.2 Unaccusatives

A VP with an unaccusative verb consists of an object, and no subject. The object, being the only (and thus closest) NP, raises to SPEC TP at s-structure in an accusative language:

- (26) a. T [arrived the man]
 b. the man, T [**arrived** t_i]

The object of an unaccusative verb raises to SPEC TP at LF in **ergative** languages. In the following examples from Mayan and Inuit, I give an alternate transitive form for each **unaccusative** verb. The fact **that** these verbs occur in both transitive and intransitive paradigms suggests that in their intransitive form, they are unaccusative, and **not** unergative.

(27) Jacalteco (Mayan)

- a. x-**ø**-'ich-i munil
aap-3sN-begin-Intr work
'the work began'
- b. ch-**ø**-aw-ich-e munil
asp-3sN-2sE-begin-Tr work
'you begin the work'

(Craig 1977:288-9)

(28) West Greenlandic

- a. napi-v-u-q
break-Ind-Intr-3sN
'it is broken'
- b. napi-v-a-a
break-Ind-Tr-3sE.3sN
'he broke it'

(Fortescue 1984:85)

In the Polynesian languages, the class of stative verbs occur with "stative agents", which are interpreted as directly or indirectly causing the state described by the verb (Chung 1978, Seiter 1979). Many of these verbs belong to the class of **unaccusatives** in other languages. I analyze them here as unaccusative verbs which do not have transitive equivalents. The agent of

these verbs must be oblique, as in the passive.

(29) Samoan

na lavea le tama:loa i le masini
past hurt Nom man Agt the machine
'the man was hurt by the machine'

(Chung 1978:29)

(30) Niuean

malona tuai e kapiniu e i a Maka
break perf Nom dish this Agt pers Maka
'this dish got broken thanks to Maka'

(Seiter 1979:31)

1.8.2.3 Passives

I assume that in passive clauses, the agent is base-generated as an oblique VP-adjunct, and the specifier of the VP is not projected. In the denervation of a passive clause in an accusative Language, the sole object argument raises to SPEC TP.

- (31) a. T, was [seen John]
b. John, T, waa [seen t,]

In an **ergative** language, the patient NP **remains** in the VP at LF:

(32) Inuktitut

tuktu malik-tau-v-u-q (Jaani-mit)
caribou(Nom) follow-Pass-Ind-Intr-3sN (John-Abl)
'the caribou waa followed (by John)'

(33) Tzotzil

7i-maj-at li Xun-e
Cmp-hit-Paas the Xun-cl
'Xun was hit'

(Aissen 1987:62)

The Polynesian languages (e.g., Tongan, Samoan) do not have a passive construction (see section 5.1.3.1).

1.8.2.4 Antipassives

I adopt Baker's (1988) analysis of the antipassive construction as an instance of noun incorporation. Baker proposes that the antipassive morpheme is generated in the **direct** object position, and incorporates with the verb. The oblique patient argument is an adjunct associated with the thematic role of Patient, *similar* to the Agent adjunct of passive clauses. If we assume that incorporation **occurs** prior to s-structure (i.e., in the lexicon), then we can account for the intransitivity of the **antipassive** construction. Shown in (34)-(35) **are** examples of antipassives in Inuit and Dyirbal (North **Queensland, Australia**):

(34) Inuit

tuttu-mik taku-nnip-p-u-q
caribou-Inatr **see-AP-Ind-Intr-3sN**
'he **see** a caribou'

(Fortescue 1984:86)

(35) Dyirbal²²

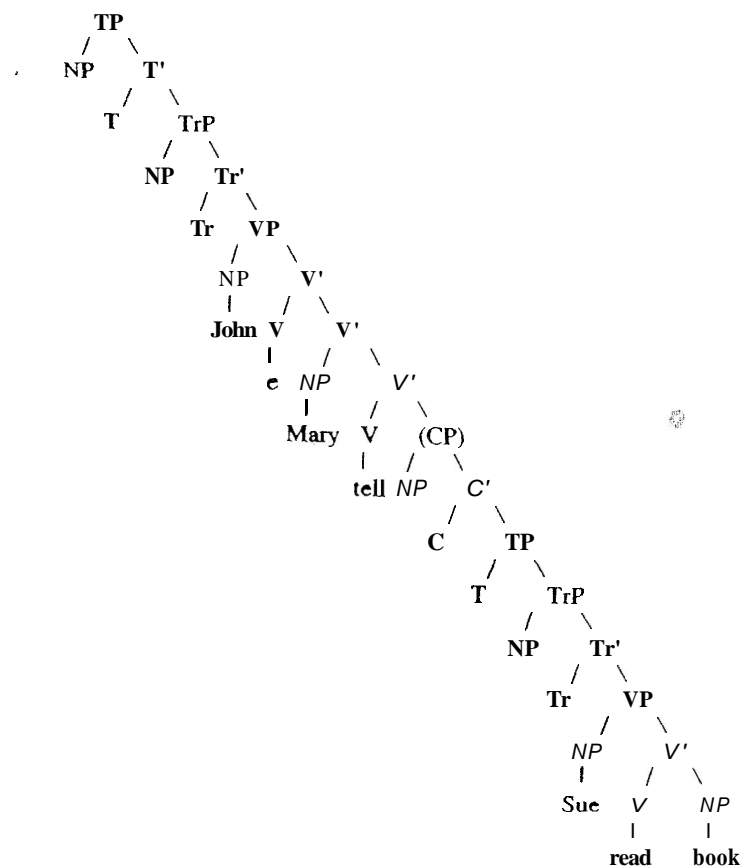
Numa buɾal-Na-n̥u yabu-gu
 father (Nom) see- AS- Nonfut mother-Dat
 'father saw mother'

(Dixon 1979:63)

1.8.3 Bi-clausal Structures

In this section, I discuss bi-clausal structures where the matrix clause is [+trans]. I propose that such constructions have the "double object" structure shown in (36):

(36)



When the complement clause is [+tense], the subject and object NPs in both the matrix and embedded clauses check their Case features within their respective clauses. In the following example from English, both matrix and embedded subjects raise to the SPEC TP of their clauses, as

²²I use the symbol /N/ to symbolize a velar nasal.

they are the closest source NP to their respective Ts:

- (37) a. T, Tr, [John told Mary that [T, Tr, [Sue read the book]]]
 b. John, T, Tr, [t_i told Mary that [Sue, T, Tr, [t_j read the book]]]

At LF, the objects raise to their respective SPEC TrPs.

In an ergative language, the matrix **subject** raises to the higher SPEC TrP, and the embedded subject, to the lower SPEC TrP. At LF, the two objects raise to the closest SPEC TP (the higher and lower ones, respectively).

Examples from West Greenlandic Inuit are shown in (38):

(38) West Greenlandic

- a. Juuna-p miiraq nassuiaaffi-g-a-a
 Juuna-Erg child(Nom) explain.to-Ind-Tr-3sE.3sN
 [Pavia immi-nit angi-niru-sinnaa-nngi-ts-u-q
 [Pavia(Nom) self-Abl big-Cmpr-can-Nag-Part-Intr-3aN]
 'Juuna, explained to the child [that Pavia, couldn't be
 taller than self_{i,j},'
 (Bittner, in prep.:125)
- b. uqarvigi-ssa-v-a-kka friir-
 say.to-Fut-Ind-Tr-1sE.3pN be.free.from.school-
 t-u-tit
 Part-Intr-2sN
 'I shall tell them that you are free from school
 today'
 (Fortescue 1984:41)

In the Mayan and Polynesian languages, I know of no cases of double object clausal constructions, where the matrix clause has both a Patient argument and a clause as complements. However, a bi-clausal construction commonly found in ergative languages involves an expletive pro object in the matrix clause, which is coindexed with the complement clause. That the matrix clause is transitive is indicated by ergative and Nominative agreement on the verb, with the Nominative agreement always third person singular.

The following examples are from West Greenlandic, Jacaltec (Mayan) and Niuean. In each of these cases, the NPs in the matrix and embedded clauses check their Case features in their respective clauses, as in the examples above.

(39) West Greenlandic

- a. ilisima-v-a-a urni-ssa-giga
 know-Ind-Tr-3sE.3sN come.to-Fut-Part-1sE.3sN
 'he knew (it) I would come to him/her'
- b. nalunngil-at arvini(q)-pingam-nut atua-
 know-Ind.2sE.3sN eight-All study-
 lir-pugut
 begin-Ind.1pN
 'you know (it) we started to study at eight o'clock'
 (Fortescue 1984:36)

(40) Jacaltec

- a. x-s-(y)-al naj chubil xc-ach y-il naj
 asp-3sN-3sE-say cl/he that asp-2sN 3sE-see cl/he
 'he said (it) that he saw you'

- b. x-ø-aw-abe tato ch-in to-j hecal
 asp-3sN-2sE-hear that asp-1sA go-fut tomorrow
 'you heard (it)that I will go tomorrow'
 (Craig 1977:232)

(41) Niuean

- a. iloa e Stan kua fakatau tuaie e koe a falaoa
 know Erg Stan Perf buy Perf Erg you Nom bread
 'Stan knows (it)you bought the bread'
- b. ne kitia he kau kaiha: kua mate tuaie e moli:
 Pst see Erg group thief Perf die Perf Nm lamp
 he fale
 in house
 'the thieves saw (it)that the lamp in the house had
 gone out'
 (Seiter 1979:126)

In this chapter, I proposed an analysis of NP movement to account for the difference between accusative and ergative languages. I presented my Ergative Parameter and Economy Principles, and demonstrated how they interact in deriving various types of clauses. In the next chapter, I discuss some consequences of the system for accusative languages.

CHAPTER 2: NP MOVEMENT AND VERB RAISING IN ACCUSATIVE LANGUAGES

This chapter contains two topics of investigation in accusative languages: NP movement, and verb raising. In the first three sections, I discuss issues relating to the Ergative Parameter and NP movement. In section 2.1, I examine non-argument elements (i.e., expletives) in SPEC TP. Section 2.2 consists of a discussion of infinitival clauses, where movement is required to SPEC TP for non-Case reasons. In section 2.3, I demonstrate how the Ergative Parameter and Economy Principles interact in raising constructions in English.

In the last two sections, I investigate the consequences of the feature system proposed in chapter 1 to verb movement. Section 2.4 discusses verb fronting in V2 and VSO languages, and in section 2.5, I discuss the "inflected infinitive" in Portuguese and Italian. I claim that both these phenomena involve a [\pm finite] feature in C.

2.1 The Content of SPEC TP

According to the Ergative Parameter, in an accusative language, the Case features of T must be checked at s-structure, requiring overt NP movement to SPEC TP. In section 1.8 above, I discussed straightforward

In this chapter, I have defended my claim that **ergativity** is a syntactic phenomenon extending beyond simply morphological Case and agreement. I discussed properties which group together the S and A arguments as a **natural class**, and demonstrated that they involve either the SPEC VP position, or the notion of "highest NP" in a clause at **s-structure**.

CHAPTER 5. ISSUES IN ERGATIVITY

In this chapter, I investigate various issues pertaining to ergativity, and how they are predicted by or accounted for within the theory presented in this thesis. In section 5.1, I begin with a discussion of other analyses of ergativity which explore the parametric **variation** between ergative and accusative languages. Section 5.2 investigates the "Nominative" Case associated with TP, i.e., nominative Case in accusative languages, **and** absolutive Case in ergative languages. In section 5.3, I discuss morphological ergativity, and in section 5.4, I investigate **languages** which appear to involve **three** functional projections for Case and agreement.

5.1 Other Analyses of Ergativity

5.1.1 Deep Structure Hypotheses

in this section, I discuss the analyses of de Rijk (1966) and Marantz (1984), which propose that the projection of arguments are reversed in accusative and **ergative** languages.

5.1.1.1 de Rijk (1966)

The earliest analysis within the framework of generative grammar is that of de Rijk (1966), who applies the Phrase-marker rules of Chomsky (1965) to Basque. De Rijk discusses the following two rules:

- (1) a. $S \rightarrow NP + VP$
b. $VP \rightarrow V (NP)$

In English, a subject is defined as the constituent dominated by S, and an object, as the NP dominated by the VP. In an ergative language such as Basque, sentences are generated in the same way by the rules in (1). However, the NP in (1a) consists of the intransitive subject and the object, while the transitive subject is generated by the rule in (1b).

De Rijk attributes the difference in the [VP,NP] in the two types of languages to the **selectional** restrictions of transitive verbs, which are reversed in accusative and ergative languages. An English verb would take, for example, a [+animate] subject and [-animate] object, while in an ergative language, the verb would **take** a [-animate] subject, and [+animate] object. Presumably, the **selectional** restrictions of intransitive verbs are the same in the two **language types**.

In de Rijk's analysis, the differences between accusative and ergative languages are ascribed to the transitive verb. He makes the following

statement about rule (1b), which defines transitive verbs:

- (2) For English this rule can be paraphrased as: **Transitive** verbs are those which must take an object ... For Basque we might paraphrase the **same** rule as: Transitive verbs are those which must take an ergative ... (p. 9)

This same concept is **captured** in my analysis by the Case features of the functional node Tr. Tr is associated with the accusative object in an accusative **language**, and with the ergative subject in an ergative language. In intransitive clauses, the two **types** of languages are identical.

My analysis differs from **that** of de Rijk in not equating morphological (i.e., Case-checking) properties with **grammatical relations** at deep structure. In de Rijk's time, movement of NPs occurred **only** with **optional** transformations such as Passive, Question Formation, etc. Therefore, in simple sentences in which such **transformations** did not apply, the position of NPs was identical in **deep** and surface structure. In order to account for the grouping **together** of **transitive** subject and **object** with **respect** to Case and agreement, these two NPs had to be base-generated in the same **position**, i.e., as sister of V. **This** idea of the **reversal** of subject and object at deep **structure** is **presented** in a different framework in Marantz (1984), discussed in the next section.

5.1.1.2 Marantz (1984)

The Ergative Parameter of Marantz (1984) involves the **linking** of arguments in semantic structure to syntactic (predicate-argument) structure. The correspondence between semantic roles and grammatical relations are reversed in ergative and accusative languages. In an accusative language, the Agent is assigned the subject function, and the Patient, the object function. In an ergative language, it is the Patient which is assigned the subject function, and the Agent, the object function.

Case-assignment is **identical** in the two language **types**. However, the opposite **d-structure** representation of subject and object results in the **reversal** of NPs (*i.e.*, Agent and Patient) receiving specific **Cases**. In an accusative language, the Agent subject is assigned nominative Case, and the Patient object, accusative Case. In an ergative Language, the Patient subject has nominative Case, and the Agent object, accusative (or ergative) Case. An intransitive clause has the same **d-structure** representation in both language types.

In Marantz' analysis, the difference between accusative and ergative languages occurs at d-structure (*i.e.*, the level of thematic **representation**), and not at **s-structure**, where Case is assigned. In my analysis, I **make** the opposite assumption, where semantic representation is identical in the two

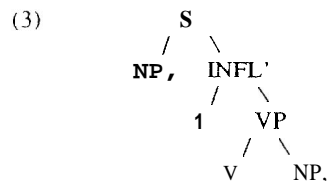
languages, and the **difference** lies in the application of operation Move **a**, which raises NPs to their Case-checking positions.

5.1.2 Obligatory Case Parameter

The two analyses discussed in this section, Levin and Massam (1985) and Bobaljik (1992), assume that Case-marking (or **checking**) in **transitive** clauses is identical in accusative and **ergative languages**. **Nominative/ergative Case** is assigned to the subject, and **accusative/absolutive**, to the object. It is in **intransitive** clauses that Case-assignment **differs**. In an accusative language, intransitive subjects are assigned the **same** Case as the transitive subject (*i.e.*, nominative), **while** in an **ergative** language, the **intransitive** subject receives the Case of the object (*i.e.*, absolutive). My theory makes the opposite assumption, namely that **Case-checking** is identical in intransitive clauses, and **differs** in transitive clauses.

5.1.2.1 Levin and Massam (1985)

Levin and Massam (1985) propose the following structure for accusative and ergative languages:



The subject is generated in NP,, and the object, in NP,. There are two Case-assigners, I and V, which are associated with an Abstract Case. In an accusative language, I assigns nominative Case, and V assigns accusative Case. In an ergative language, I is associated with ergative Case, and V, with absolutive Case. Levin and Massam propose the following conditions on Case assignment:

(4) Conditions on Case Assignment

- A. C_x must be assigned.'
- B. $C_y (y \neq x)$ can be assigned only under theta-government.
- C. Case is assigned only under government.

The parameter they propose to account for Case-marking in accusative and ergative languages is based on the value of x in (3A):

(5) Case Parameter

- a. $x = I$ (Nominative/Accusative)²
- b. $x = V$ (Ergative/Absolutive)

¹" C_x " refers to the abstract Case assigned by x .

²In their terminology, "Nominative/Accusative" refers to accusative languages, and "Ergative/Absolutive", to ergative languages.

In an accusative language, the Case of I is obligatory, while in an ergative language, the Case of V is the one which must be assigned.

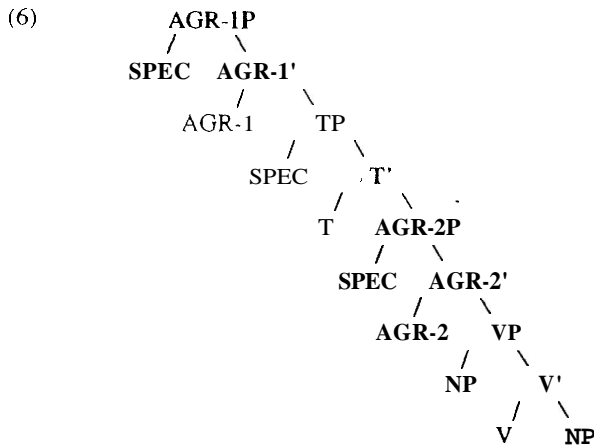
In Levin and Massam's analysis, the s-structures of clauses in accusative and ergative languages are identical (see (1) above). Consider first transitive sentences. In both types of languages, I assigns Case to the subject (nominative/ergative), and V, to the object (accusative/absolutive). Differences appear in the intransitive paradigm, when there is only one Case to assign. Accusative and ergative languages choose different Cases as the obligatory one, stated as the Case Parameter in (5): nominative (C_I) for the former, and absolutive (C_V) for the latter. Intransitive Case assignment is straightforward in accusative languages: I assigns its obligatory Case (nominative) to the subject. In an ergative language, the obligatory absolutive Case is assigned to the subject by percolating from V to I.

Levin and Massam claim that their parameter is "in accord with the relations established by Marantz (1984) where Nominative Case is equivalent to Absolutive Case" (p. 288). However, the equivalence of Case relations in the two systems differs in a fundamental way. In Marantz (1984), since the projection of arguments is reversed at d-structure in the two language types, the assignment of Case remains the same. Thus, for him, Nominative and Absolutive are equivalent structurally, in being the unmarked Case that is assigned to the grammatical subject (i.e., Agent in accusative Languages,

Patient in ergative). For Levin and Massam, on the other hand, Nominative and Absolutive Case are equivalent not structurally, but conceptually, in terms of being the obligatory Case.

5.1.2.2 Bobaljik (1992)

The notion of obligatory Case assignment is adopted in Bobaljik (1992), within a more complex system of functional projections. The structure he assumes, shown in (6), is based on Chomsky (1991,1992):



The same analysis is assumed in Chomsky (1992), but as it is only mentioned briefly there, I will focus on the proposals and arguments presented in Bobaljik (1992).

The structure consists of two Agr projections (for subject and object agreement), a Tense projection, and arguments generated in the VP. Case is assigned by functional heads in a SPEC-head configuration, requiring both subject and object to raise out of the VP into SPEC positions. Bobaljik assumes that universally, the only possible movement for subject and object NPs in a transitive clause is "Crossing Paths", where the subject raises to SPEC AGR-1P, and the object, to SPEC AGR-2P (see also Chomsky 1992). Thus, in transitive clauses, Case assignment is identical in accusative and ergative languages.

As in Levin and Massam (1985), Bobaljik assumes that in an intransitive clause, only one of the Agrs is "active", depending on whether or not the Case associated with it, Case X, is obligatory. It is to the SPEC position of the active Agr that the intransitive subject raises. The choice of which Agr is the active one is determined by the Obligatory Case Parameter, shown in (7):

(7) Obligatory Case Parameter

- a. CASE X = NOMINATIVE = ERGATIVE [:N/A language]
- b. CASE X = ABSOLUTIVE = ACCUSATIVE [:E/A language]

"N/A" and "E/A" refer to "Nominative/Accusative" and "Ergative/Absolutive" (see footnote 4).

Bobaljik claims that in an accusative language, AGR1-P, associated with nominative Case, is obligatory, while in an ergative language, it is AGR2-P (associated with absolutive) which is obligatory. The intransitive subject raises to SPEC AGR1-P and SPEC AGR2-P in accusative and ergative languages, respectively.

In Bobaljik (1992) and Levin and Massam (1985), the difference in Case-marking systems in the two types of languages results from the Case (and Agr projection) that is obligatory. Bobaljik claims that there is no *a priori* reason to assume that one or the other is obligatory, justifying the parametrization of this option.

It is evident that any theory of ergativity must contain the notion of obligatoriness. In this thesis, I have proposed a theory in which these notions follow naturally from the concept of transitivity. A transitive clause has two Case-assigning positions, and an intransitive clause, only one. In both language types, the projection which is not required in an intransitive clause is TrP, the projection associated with transitivity. This is because when Tr is [-trans], it does not have Case features. As a result, the other projection, TP, is the one when Case is checked. In my system, then, the obligatoriness of TP is not the result of an arbitrary value for a "obligatory Case parameter", but follows from the value of [\pm trans].

Bobaljik (1992) presents arguments from binding in various ergative languages as evidence that the subject is in SPEC AGR1-P, and the object in SPEC AGR2-P. In all his examples, the subject binds the object. However, binding facts reveal only the hierarchical structure of a subject that c-commands an object. As discussed in section 4.3 above, if we assume that binding takes place at s-structure, then the binding facts are compatible with the system proposed in this thesis, where the subject raises to SPEC TrP at s-structure, and the object, to SPEC TP at LF.⁵

Bobaljik (1992) also discusses agreement in non-finite clauses in Inuit as further evidence for his analysis. He claims that in [-tense] -llu constructions (i.e., infinitives and gerunds: see section 2.8.2.2 above), AGR-1 is defective, and thus unable to license Case or agreement. Since AGR2-P is not subject to such restrictions, NPs raising to its SPEC (i.e., S and O) show Case, and trigger verbal agreement. In the following example, agreement is triggered by S in (ia), and by O in (ib):

- (i) a. [niviarsiaq sikkir-lu-ni] kiina-nngu-a
girl(Abs) giggle-llu-4sAbs face-little-3sPoss
nui-ratannguar-puq
appear-at.last-3sAbs
'the little girl giggling, her little face appeared at last'
(Bergsland 1955)
- b. anguti-rujug-8uaq, [PRO, aavir-8uaq uniar-lu-gu]
nun-very-big(Abs) whale-big(Abs) trail-llu-3sAbs
tiki-lir-suq
come-brgin-Part
'...the big man who began to coma [trailing the big whale]...'
(simplified, from Bergsland 1955)

Bobaljik presents this as evidence that S and O have raised to SPEC AGR2-P, since he claims that AGR1-P is unable to license Case and agreement. However, contrary to his claim, lexical NP subjects are permitted in transitive -llu clauses, and they appear with ergative Case:

- (ii) [Juuna-p mliqqat taku-llu-git] pro, qungujup-p-u-q
Juuna-Erg children(Abs) see-llu-3pAbs smile-Ind-Intr-3sAbs
'Juuna seeing the children, (he) smiled'

5.1.3 Nominative Object

In this section, I discuss analyses which propose that the object is assigned nominative Case, either in a passive or unaccusative construction, or by raising to SPEC IF.

5.1.3.1 Syntactic Change

Various claims have been made that the ergative construction involves a syntactic change from an accusative to ergative system (see Anderson (1976a) for a discussion of these proposals).⁶ In this section, I will discuss the proposals of Hale (1970) for Australian languages, and Chung (1978) for Polynesian.⁷

(Bittner, p.c.)

This illustrates that AGR1-P cannot be inactive, at least with respect to Case-marking. In other words, given that AGR-1 and AGR-2 do not differ in their Case-marking capacities, the examples in (i) above do not demonstrate that S and O raise to SPEC AGR2-P. See section 3.4.3 for an alternative analysis of the data.

⁶Anderson (1976a) notes that there are only two examples of changes in the opposite direction, from ergative to accusative: Georgian and Mingrelian, both Kartvelian (South Caucasian) languages.

⁷Anderson (1976a) and Comrie (1978) discuss similar analyses for Indo-Iranian.

Hale (1970), in his investigation of Australian languages, observes the similar surface structure of the passive in an accusative language (8), and the active in an ergative language (9):

(8) Accusative (Passive)

yipi wati-ngku paka-Li-ngu
woman(Nom) man-Agt hit-Pass-past
'the woman was hit by the man'

(9) Ergative

wati-ngku yipi pakaL-ngu
man-Erg woman(Nom) hit-past
'the man hit the woman'

(Hale 1970:760-1)

The patient argument, *yipi* 'woman', in both the passive accusative (8) and active ergative (9) have nominative Case, and both agents, *wati* 'man', are marked with the suffix *-ngku*.⁸ The transitive verb in (9) is conjugated with the morpheme L, which is associated with the passive inflection *Li* in (8). To account for the lack of passives in the ergative Australian languages, Hale hypothesizes that these Languages were originally accusative, but underwent obligatory passivization. The passive is now used in an active semantic sense, and the syntactic active representation never appears on the surface.

⁸In his discussion, Hale uses artificial examples to avoid morphophonemic variation. Therefore, although the same morpheme *-ngku* is used in (8) and (9), actual languages will exhibit some variation in form.

Chung (1978) argues that the ergative systems of Tongic and Samoic-Outlier languages arose **through** a reanalysis of passive clauses as active transitive clauses. Her proposal differs from that of Hale (1970) in claiming that ergative Case marking arose **directly** through reanalysis, and not through an **intermediate** stage involving an obligatory Passive.

Chung argues that Proto-Polynesian had an accusative case system, where subjects were unmarked, and direct objects were marked with *i. Proto-Polynesian also had a Passive rule which promoted **the direct** object to subject, marked the underlying subject with the oblique preposition *e, and attached the passive suffix ***-Cia** to the verb. Chung claims that after the split of Proto-Polynesian into **daughter** languages, in Tongic **and** Samoic-Outlier languages, passive clauses were reanalyzed as active transitive clauses: i.e., their underlying subject was reinterpreted as a surface subject, and their underlying direct object, as a surface direct object. This **reanalysis** eliminated the passive, and created a new type of case marking for **transitive** clauses. **In** most languages, this new, ergative **pattern** replaced the older accusative pattern for canonical transitive clauses. **Furthermore**, Chung presents syntactic **and semantic** arguments that the verbal suffix, -Cia found in the modern ergative Polynesian languages is a relic of an earlier passive **suffix**.

5.1.3.2 The Unaccusative Hypothesis: Bok-Bennema (1991)

For Bok-Bennema (1991), ergativity is characterized by the **inability** of **transitive verbs** to assign **structural** Case (Unaccusativity Hypothesis). She claims that ergative patterns arise as a solution to the **Case problem** posed by **unaccusativity**.⁹ In an ergative language, one way to solve the Case problem is to have an exceptional Case for the subject, so that the nominative Case **normally** assigned to the subject **becomes free** to be assigned to the direct object. In her system, I(nfl) assigns exceptional genitive (i.e., ergative) Case to transitive subjects, which move to SPEC IP. Objects raise and adjoin to I', from where they **receive** nominative (or absolutive) Case from I. An **alternative** solution is to express the agent or **theme** role as an oblique NP, either by **passivizing** or **antipassivizing** the clause.

Bok-Bennema assumes that accusative Case is in principle available in **ergative languages**. Whether or not this Case can be assigned **follows** from specific properties of **transitive** verbs, rather than from a parametric choice. To support this claim, we **need** evidence that accusative Case-marking in ergative **languages** **depends** on specific verbs. **There** are no examples, however, of **ergative** languages exhibiting split ergativity based on Individual

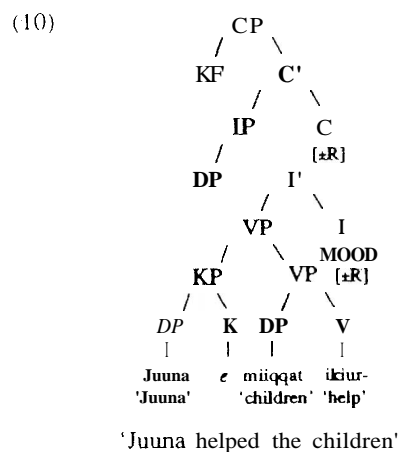
⁹Bok-Bennema claims that examples of ergativity can be found in accusative languages, when structural verbal Case-assignment is not possible (e.g., in passives, causatives and nominals).

verbs. Rather, ergativity splits occur with **different types** of nouns (e.g., pronouns vs. full NPs; first/second person vs. third), or depend on the tense/aspect of the verb (see section 5.3 below).

5.1.3.3 Object Raising: Bittner (in prep.)

In the system proposed by Bittner (in prep.), Case and agreement reflect relations between functional heads and the **nominal** phrases they govern. Her Case Filter is stated as a requirement that D be governed by K or C at s-structure. Agreement is a phonological reflex of coindexation relations between I or C and a SPEC position.

Bittner proposes the following structure for transitive clauses in West Greenlandic Inuit:



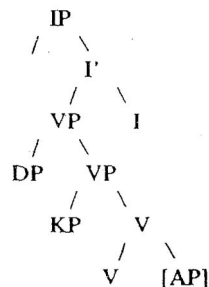
The subject is generated as a KP, and the object, as a DP. The subject, Juuna, satisfies the Case Filter, since its head is governed by the empty K. The realization of an empty K depends on its governor: when governed by I, as in (10), it is **realized as** ergative Case, whereas with a lexical governor (e.g., verb), it may be **instrumental** or dative. The DP object, *miiqqat* 'children', cannot satisfy the Case Filter without **raising** to SPEC IP (an A'-position), where it **will** be governed by C.

The two functional heads, I and C, contain the **feature** [$\pm R$]. In a transitive clause such as (10), I has a [$\pm R$] feature for the subject (which it governs), and C, for the object. When a head has the feature value [$\pm R$], the argument that it governs is **coindexed** with a higher subject. The [$\pm R$] feature is **realized morphologically** as third person reflexive agreement. When the feature is [-R], there is no **coreference** involved, and the feature is **realized** as regular third person **agreement**.

The basic SOV order of West Greenlandic is generated by the optional raising of the KP Juuna to SPEC CP.

Bittner's account of accusative languages involves an **antipassive-**accusative reanalysis, corresponding to the type of passive-ergative **reanalysis** discussed above (section 5.1.3). Consider the following structure of an accusative clause:

(11)



The subject DP must raise to SPEC IP to satisfy the Case filter. Bittner proposes that in forming an accusative construction, a nominal antipassive suffix is incorporated into the verb. The KP is marked with accusative Case, since K is realized as accusative Case when it is governed by a nominal functional head (in this case, the incorporated antipassive suffix).

5.2 Nominative and Absolutive Case

It has frequently been observed that there are many similarities between nominative Case in accusative Languages, and absolutive Case in ergative languages (see, for example, Silverstein 1976, Comrie 1978, Dixon 1979, and Bittner 1991b, in prep.). In the history of research concerning ergative languages (with the exception of Inuit), these two Cases were not distinguished. Dixon (1979, 1987a) states that 'nominative' was until recently used as the complement of ergative Case (i.e., the Case of the intransitive

subject and object), as well as the complement of accusative (i.e., the Case of transitive and intransitive subjects). Because of the confusion in distinguishing language types, the term 'absolutive' was adopted from Inuit terminology. Very recently, however, there has been a trend to revert to the singular term *nominative* for both *nominative* in accusative languages, and absolutive in ergative languages (e.g., Bok-Bennema (1991), Bittner (1991b, in prep.))." In this section, I discuss various properties which the two Cases (i.e., nom/abs) have in common.

If one of the Cases is morphologically unmarked, it will be the nom/abs. Shown in (12), and (13)-(14), are examples from accusative and ergative languages, respectively.

(12) Hungarian

- a. én-ø lát-om a ház-at
I-Nom see-1sN the house-Acc
'I see the house'

(Kiss 1987:47)

- b. Mari-ø alud-t-6
Mary-Nom sleep-Past-3sN
'Mary slept'

(Szabolcsi 1983-4:90)

¹⁰In this thesis, I use the term *Nominative* (with capital N) to refer to the nominative in accusative languages, and *absolutive* in ergative languages, which I assume are the same Case (see chapter 1). However, in this section, I will refer to this Case as "nom/abs".

(13) Inuktitut

- a. Jaani-up tuktu-ø taku-v-a-a
John-Erg caribou-Nom see-Ind-Tr-3sE.3sN
'John saw the caribou'
- b. Jaani-ø tukisi-v-u-q
John-Nom understand-Ind-Intr-3aN
'John understands'

(14) Mam

- a. ma o-jaw t-tx'ee7ma-n Cheep tze7
rec 3sN-dir 3sE-cut-ds José tree
'José cut the tree'
(England 1983:201)
- b. ma ø-tz'oo-x weech
rec 3sN-go.in-dir fox
'the fox went in'
(England 1983:141)

Dixon (1979) notes, however, that the parallel between nominative and absolutive Cases is not complete here, as there are a few languages (e.g., some Cushitic languages), where the nominative, and not accusative, involves an overt affix. In an ergative language, the morphologically null Case will always be the absolutive.

The nom/abs form is used for citation, unless there is a separate citation form, as in Hua (Papuan), which has a special citation suffix -a (Haiman 1980:228). Bittner (1991a) observes that the nom/abs form is used even if it is not the least marked. She gives an example from Polish, where the genitive form of certain plural nouns is morphologically unmarked (e.g., *kobiet-ø* 'women-Gen'), while the nominative is marked by a suffix (*kobiet-y*

'women-Nom'). The citation form is the nominative, even though it is more marked than the genitive.

In Chapter 3, I provided syntactic evidence from relative constructions that nom/abs Case is associated with TP. Bittner (1991b) discusses various syntactic properties that intransitive subjects, which have nom/abs Case and occur in SPEC TP, share in the two language types. Intransitive subjects of passive constructions, for example, can serve as an antecedent for reflexive elements (15a)-(16a), but cannot themselves be reflexive (15b)-(16b):

(15) Poliah

- a. Jakub_i zosta-1 zaprosz-on-y przez
Jacob(Nom) Aux-Past-38.m invite-Pass-8.m.Nom by
swojego_i przyjaciela
self's friend
'Jacob, was invited by his_i friend'
- b. *swoj_i przyjaciel zosta-1 zaprosz-on-y
self's friend(Nom) Aux-Past-3s.m invite-Pass-s.m.Nom
przez Ann,-e
by Ann-Acc
'self_i's friend was invited by Ann,'

(16) West Greenlandic

- a. Jaaku, ikinngum-mi_i-nit qaaqqu-niqar-p-u-q
Jacob(Nom) friend-self's-Abl invite-Pass-Ind-Intr-3sN
'Jacob, was invited by his_i friend'
- b. *ikinnguti-ni, Anna,-mit qaaqqu-niqar-p-u-q
friend-self's(Nom) Anna-Abl invite-Pass-Ind-Intr-3sNom
'self_i's friend was invited by Anna,'
(Bittner 1991b:30-1)

Moreover, the oblique agent behaves the same way in the two types of languages: it can contain a reflexive bound by the subject ((15a) and (16a)), but cannot bind any reflexive contained in the subject ((15b) and (16b)).

Based on these and other examples, such as the scope facts I discussed in section 3.2 above, Bittner concludes that considerations of simplicity and generality will favour a theory which equates nominative with absolutive Case, and that can explain the observed parallels in a non-stipulative manner.

5.3 Morphological Ergativity

The main proposal of this thesis for ergativity is that, based on the syntactic nature of the Ergative Parameter, ergative languages differ from accusative languages at the syntactic, and not simply morphological, level of representation. Chapter 3 consisted of evidence supporting my hypothesis that ergativity is a syntactic phenomenon. In this section, I investigate languages which exhibit ergativity in their Case and agreement morphology, but are syntactically accusative. I adopt Marantz' (1991) distinction between abstract "Case" and morphological "case".

5.3.1 Split Ergativity

Split ergative languages are characterized by a division in their Case-marking: some part of their morphology is based on an accusative pattern, and another part, on an ergative pattern. In this section, I discuss two factors which determine splits in language: the tense or aspect of the verb, and the semantic properties of the NPs.¹¹

In all languages which exhibit a tense/aspect split, ergative Case-marking is found with past tense or perfect aspect. Georgian has an ergative system in the aorist simple past tense (17a), and an accusative system in other tenses (17b). Hindi exhibits ergativity in the perfective aspect (18a), and accusativity in the imperfective (18b).

(17) Georgian

- a. vano-m daaxrco rezo
Vano-Erg 3s.3s.drowned Rezo (Nom)
'Vano drowned Rezo'
- b. vano axrcobs rezo-s
Vano (Nom) 3s.3s.be.drowning Rezo-Acc
'Vano is drowning Rezo'

(Bittner 1991b:21)

¹¹The descriptive information on split ergativity is taken from Comrie (1978) and Dixon (1979).

(18) Hindi

- a. raam-ne roTii khayii thii
 Ram.m-Erg bread.f (Nom) eat.Perf.f be.Past.f
 'Ram had eaten bread'
- b. raam roTii khataa thaa
 Ram.m (Nom) bread.f (Acc) eat.Impf.m be.Past.m
 'Ram (habitually) ate bread'
- (Mahajan 1990:72-3)

Marantz (1991) claims that these languages are ergative only at the morphological level. He argues that the subject position is always licensed by tense/aspect inflection, regardless of the actual tense of the verb, and that the two patterns of Case-marking are strictly concerned with morphological "case", the realization of abstract "Case".

To account for the different cases observed in the two tense/aspect paradigms, Marantz proposes the following disjunctive hierarchy of case realization: (i) lexically governed case (e.g., quirky case), (ii) "dependent" case (accusative and ergative), (iii) unmarked case, and (iv) default case. The case that is of interest here is dependent case (iii). This case is assigned by V+I to an argument position in opposition to another position, i.e., in a transitive clause with two arguments in distinct chains. Dependent case is assigned up to the subject in an ergative language, and down to the object in an accusative language.

Another type of split ergativity is dependent on the semantic nature of the A and O arguments. Silverstein (1976) illustrates the variety of split systems based on a hierarchy of features. The hierarchy represents the potentiality of agency for a given NP. At one end of the hierarchy are [+ego] and [+tu] pronouns, i.e., first and second person pronouns, which are the most likely to be the agent of an action. At the other end of the hierarchy are [-animate] nouns, which are the least likely to be agents. Shown in (19) is a simplified version of the hierarchy presented in Dixon (1979):

(19) Hierarchy of NPs

1st pers pronoun Inanimate	2nd pers pronoun	3rd pers pronoun	Proper nouns	Common nouns Human Animate
most likely to be agent <-----> least likely to be agent				

A language exhibiting a split Case system has accusative Case-marking on NPs to the left of a certain point in the hierarchy, and ergative marking on NPs on the right. Languages vary in the exact position in the hierarchy where the split occurs. As Dixon notes, it is most natural and economical to mark a participant when it is in an unaccustomed role. In an accusative system, the marked Case on O marks NPs which are most likely to be agents. In an ergative system, the Case of A is marked, and thus is found on NPs

which are least likely to be agents.

Shown in (20) is an example from Wik-Mungkan, an Australian language of North Queensland. Wik-Mungkan shows accusative Case-marking on first and second person pronouns, and ergative Case-marking on third person pronouns and full NPs.

(20) Wik-Mungkan

- a. ku'-ng nga-ny path-ny
dog-Erg me-Acc bite-Past
'the dog bit me'
- b. ngay ku' thath-ng
I (Nom) dog (Nom) see-Past
'I saw the dog'
- c. ku' uthm
dog (Nom) die
'the dog died'

(Bittner and Hale 1992:4)

Observe that in the transitive clauses shown in (20a) and (20b), there is a mixture of accusative and ergative Case-marking systems. In (20a), both ergative and accusative Case are found in the same sentence, and in (20b), A and O both have nominative Case. In these examples, the Cases of A, O and S cannot all be structural Cases, which are associated with specific SPEC positions. Since nominative Case is associated with SPEC TP, and accusative and ergative, with SPEC TrP, in (20a) both arguments would have to raise to SPEC TrP, and in (20b), both to SPEC TP. Such movements are not

permitted, as the Case features of a functional head can only be checked once.

Following the discussion of Marantz (1991) above, I propose that languages which exhibit this type of split are also ergative only at the morphological level. However, it is not correct to simply assume that Wik-Mungkan is underlyingly accusative. We must look at other facts of the language to determine whether it is syntactically accusative or ergative.

Dyirbal, for example, exhibits the same system of split Case-marking, where first and second person pronouns follow an accusative pattern of Case-marking, while third person pronouns are Case-marked ergatively. It is clear, however, that this language is syntactically ergative, and exhibits accusativity only morphologically. First and second person pronouns behave ergatively, even though they appear with accusative case (not Case). Recall that clausal linking in this language picks out the nominative argument as the prominent one (see section 3.4.4). Shown in (21) is an example of topic chaining with first and second person pronouns:

(21) Dyirbal

- a. ngana banaga-n'u n'ura buṛa-n
we(Nom) return-Nonfut you(Nom) see-Nonfut
'we returned and you saw (us)'
- b. n'ura ngana-na buṛa-n banaga-n'u
you(Nom) us-Acc see-Nonfut return-Nonfut
'you saw us and returned'

(Dixon 1979:64)

In (21a), the topic of the two clauses is ngana 'we', which is marked with nominative Case in the first clause, but with accusative Case in the second. Similarly, in (21b), the same topic ngana 'we' is accusative in the first clause, and nominative in the second. However, the accusativity of the pronoun is only morphologically relevant. At the syntactic level, where topic chaining applies, it is "Nominative", in the sense of **being** associated with SPEC TP. Thus, in this language, we find evidence of morphological accusativity, and not morphological ergativity.

5.3.2 Uniform Ergativity

We have seen that there are factors, such as **tense/aspect**, and **sema** of NPs, which condition split ergativity (or accusativity) in Case and/or agreement. Given that in certain paradigms, an accusative language may exhibit ergative Case-marking, and vice versa, we would expect there to be a language in which the opposite Case system was present in all paradigms. In this language, the parameter that conditions the split in a split ergative language would apply at all tenses. Instead of "split" ergativity, this language would exhibit "uniform" ergativity at the morphological level.

I propose that Warlpiri may be such a language. The agreement morphemes on the auxiliary in Warlpiri follow an accusative pattern, while

NP arguments are Case-marked in an ergative pattern (Hale 1973, 1983; Dixon 1979; Jelinek 1984):

(22) Warlpiri

- a. ngajulu-rlu ka-rna-ngku nyuntu-ø nya-nyi
 I-Erg Pres-1sN-2sA you-N see-Nonpast
 'I see you'
- b. nyuntulu-rlu ka-npa-ju ngaju-ø nya-nyi
 you-Erg Pres-2sN me-Nom ase-Nonpast
 'you see me'

(Hale 1973:328)

5.4 Three Functional Projections

In the system proposed in this thesis, there are two functional projections, corresponding to subject and object Case and agreement. There are languages, however, which exhibit a three-way verbal agreement system associated with subject, direct object, and indirect object. One such language is the Caucasian language Abkhaz:

(23) Abkhaz

sarə a-x'əč'-k'ə a-š'q'-k'h ə-rə-s-to-yt'
 I the-child-pl the-book-pl 3pN-3pIO-1sE-give-Fin
 'I gave the books to the children'

(Hewitt 1979:105)

Basque also has three agreement morphemes for subject, object and indirect object:

(24) **Basque**

zuk niri etxea eman d-i-da-zu
you-Erg me-Dat house-the-Nom given it-have-me-you
'you have given me the house'

(Laka 1991:7)

Laka's (1991) study of the inflectional structure in Basque argues convincingly for the existence of three projections: TP, Mod(al)P and IP. Cheng and Demirdash (1990) propose a similar structure with three functional categories (TP, MP, AuxP), but extend the structure to include three agreement projections as well.

It appears that variation among languages is permitted in the number of structural Case positions that are available in the basic clausal structure. However, the existence of more than two functional categories is problematic in the theory proposed in this thesis, as two of the three arguments necessarily must raise at the same level. Although in Basque, all three agreement morphemes never appear simultaneously, this is not the case in Abkhaz. I leave for future research the consequences of these multiple-category languages for my theory.

In this chapter, I investigated several issues relating to ergativity, including previous analyses, nominative/absolutive Case, and morphological ergativity. I discussed how these issues could be accounted for within the framework of the theory presented in this thesis.

References

- Abney, S.P. *The English Noun Phrase in its Sentential Aspect*. Doctoral dissertation, MIT.
- Aissen, J. (1987). *Tzotzil Clause Structure*. Dordrecht: Reidel.
- Anderson, S.R. (1976a). On mechanisms by which languages become ergative. In C. Li, ed., *Mechanisms of Syntactic Change*, Austin: University of Texas Press, 317-363.
- (1976b). On the notion of subject in ergative languages. In Li (1976), 1-24.
- Baker, M. (1985). The Mirror Principle and morphosyntactic explanation. *Linguistic Inquiry* 16, 373-415.
- (1988). *Incorporation: A Theory of Grammatical Function Changing*. Chicago: University of Chicago Press.
- Barker, C., J. Hankamer and J. Moore (1990). *Wa and Ga in Turkish*. Manuscript, UC Santa Cruz.
- Bauer, W.A. (1981). *Aspects of the Grammar of Maori*. Doctoral dissertation, University of Edinburgh.
- Belletti, A. (1988). The Case of unaccusatives. *Linguistic Inquiry* 19, 1-34.
- Bennis, H. (1986). *Gaps and Dummies*. Dordrecht: Foris.
- Bergsland, K. (1955). *A Grammatical Outline of the Eskimo Language of West Greenland*. Oslo: Skrivemaskinstua.
- Bitner, M. (1987). On the semantics of the Greenlandic antipassive and related constructions. *International Journal of American Linguistics* 53, 194-231.
- (1988). *Canonical and Noncanonical Argument Expressions*. Doctoral Dissertation, University of Texas at Austin.
- (1990). *Head Movement and Scope*. Manuscript, Rutgers University.

- (1991a). *Basic Case Systems*. Manuscript, Rutgers University.
- (1991b). *Basic Case Features*. Manuscript, Rutgers University.
- (in prep.). *Ergativity, Binding and Scope: Evidence from Eskimo*.
- and K. Hale (1992). *Ergativity*. Manuscript, Rutgers University and MIT.
- Bobaljik, J.D. (1992). Nominally absolutive is not absolutely nominative. To appear in *The Proceedings of the Eleventh West Coast Conference on Formal Linguistics*.
- and A. Carnie (1992). A minimalist approach to some problems of Irish word order. To appear in the Proceedings of the 12th Harvard Celtic Colloquium.
- Bok-Bennema, R. (1991). *Case and Agreement in Inuit*. Doctoral dissertation, Katholieke Universiteit Brabant.
- Borer, H. (1986). I-subjects. *Linguistic Inquiry* 17, 37-416.
- (1989). Anaphoric AGR. In O. Jaeggli and K.J. Safir (eds.), *The Null Subject Parameter*. Dordrecht: Kluwer, 69-109.
- Bresnan, J. (1982). Control and complementation. *Linguistic Inquiry* 13, 343-434.
- Browning, M. (1987). *Null Operator Constructions*. Doctoral dissertation, MIT.
- Byrne, F. (1985). *pro*, in Saramaccan. *Linguistic Inquiry* 16, 313-320.
- Burzio, L. (1986). *Italian Syntax: A Government-Binding Approach*. Dordrecht: Reidel.
- Carrier-Duncan, J. (1985). Linking of thematic roles in derivational word formation. *Linguistic Inquiry* 16, 1-34.
- Cheng, L.L.S. and H. Demirdash (1990). External arguments in Basque. In A. Halpern (ed.), *The Proceedings of the Ninth West Coast Conference on Formal Linguistics*, 125-139.

- Chomsky, N. (1965). *Aspects of the Theory of Syntax*. Cambridge: MIT Press.
- (1973). Conditions on transformations. In S. Anderson and P. Kiparsky (eds.), *A Festschrift for Morris Halle*. New York: Holt, Rinehart and Winston.
- (1980). On binding. *Linguistic Inquiry* 11, 1-46.
- (1981). *Lectures on Government and Binding*. Dordrecht: Foris.
- (1982). *Some Concepts and Consequences of the Theory of Government and Binding*. Cambridge: MIT Press.
- (1986a). *Barriers*. Cambridge: MIT Press.
- (1986b). *Knowledge of Language*. New York: Praeger.
- (1991). Some notes on economy of derivation and representation. In R. Frieden (ed.), *Principles and Parameters in Comparative Grammar*. Cambridge: MIT Press.
- (1992). *A Minimalist Program for Linguistic Theory*. MIT Occasional Papers in Linguistics, Distributed by MIT Working Papers in Linguistics.
- and H. Lasnik (1977). Filters and control. *Linguistic Inquiry* 8, 425-504.
- and H. Lasnik (to appear). In J. Jacobs, A. van Stechow, W. Stenemfeld, and T. Venneman, eds., *Syntax: An International Handbook of Contemporary Research*. Berlin: Walter de Gruyter.
- Chung, S. (1978). *Case Marking & Grammatical Relations in Polynesian*. Austin/London: University of Texas Press.
- Churchward, C.M. (1953). *Tongan Grammar*. London: Oxford University Press.
- Cinque, G. (1988). On *si* constructions and the theory of *arb*. *Linguistic Inquiry* 19, 521-581.

- Cole, P. and J.M. Sadock (eds.) (1977). *Syntax and Semantics, Volume 8: Grammatical Relations*. New York: Academic Press.
- Comrie, B. (1978). Ergativity. In W.P. Lehmann (ed.), *Syntactic Typology: Studies in the Phenomenology of Language*, 329-394. Austin: University of Texas Press.
- (1981). *Language Universals and Linguistic Typology*. Oxford: Basil Blackwell.
- Cooreman, A. (1988). Ergativity in Dyirbal discourse. *Linguistics* 26, 717-746.
- Craig, C.G. (1976). Properties of basic and derived subjects in Jacaltec. In Li (1976), 101-123.
- (1977). *The Structure of Jacaltec*. Austin: University of Texas Press.
- Creider, C. (1978). The syntax of relative clauses in Inuktitut. *Inuit Studies* 2, 95-110.
- Dayley, J.P. (1985). *Tzutujil Grammar*. Berkeley/Los Angeles: University of California Press.
- DeLancey, S. (1988). On the evolution of the Kham agreement paradigm. *Linguistics of the Tibeto-Burman Area* 11, 41-51.
- Demirdache, H. (1989). *Nominative NPs in Modern Standard Arabic*. Manuscript, MIT.
- (1991). *Resumptive Chains in Restrictive Relatives, Appositives and Dislocation Structures*. Doctoral dissertation, MIT.
- Den Besten, H. (1981/1989). A case filter for passives. In A. Belletti, L. Brandi and L. Rizzi (eds.), *Theory of Markedness in Generative Grammar. Proceedings of the 1979 GLOW Conference*. Pisa: Scuola Normale Superiore di Pisa, 65-122. Reprinted in Den Besten (1989), 170-219.

- (1983/1989). On the interaction of root transformations and lexical deletive rules. In W. Abraham (ed.), *On the Formal Syntax of the Westgermania: Papers from the "3rd Groningen Grammar Talks", Groningen, January 1981*. Amsterdam/Philadelphia: Benjamins. Reprinted in Den Besten (1989), 14-93.
- (1985/1989). The ergative hypothesis and free word order in Dutch and German. In Den Besten (1989), 226-265. (Originally published in J. Toman (ed.), *Studies in German Grammar*. Dordrecht: Foris, 23-64).
- (1989). *Studies in West Germanic Syntax*. Amsterdam: Rodopi.
- Déprez, V.M. (1989). *On the Typology of Syntactic Positions and the Nature of Chains: Move a to the Specifier of Functional Projections*. Doctoral dissertation, MIT.
- Diesing, M. (1990). Verb movement and the subject position in Yiddish. *Natural Language and Linguistic Theory* 8, 41-79.
- Dixon, R.M.W. (1972). *The Dyirbal Language of North Queensland*. Cambridge: Cambridge University Press.
- (1979). Ergativity. *Language* 55, 59-138.
- (1987a). Studies in ergativity, Introduction. In Dixon (1987b), 1-16.
- (1987b) (ed.). *Studies in Ergativity*. Netherlands: Elsevier Science.
- (1991). *Complement Clauses and Complementation Strategies*. Manuscript, Australian National University.
- Downing, B.T. (1978). Some universals of relative clause structure. In Greenberg (1978), 375-418.
- Emonds, J. (1981). Word order in generative grammar. *Journal of Linguistic Research* 1, 33-54.
- England, N.C. (1983). *A Grammar of Mam, a Mayan Language*. Austin: University of Texas Press.
- Fabb, N. (1984). *Syntactic Affixation*. Doctoral dissertation, MIT.

- Foley, **W.A.** (1986). *The Papuan Languages of New Guinea*. Cambridge: Cambridge University Press.
- (1991). *The Yimas Language of New Guinea*. Stanford: Stanford University Press.
- Fortescue, M. (1984). *West Greenlandic*. London: Croom Helm.
- Fukui, N. (1986). *A Theory of Category Projection and its Application*. Doctoral dissertation, MIT.
- and M. Speas (1986). Specifiers and projections. *MIT Working Papers in Linguistics*, Volume 8, 128-172.
- Grimshaw, J. (1990). *Argument Structure*. Cambridge: MIT Press.
- De Haan, G. and F. Weerman (1986). Finiteness and verb fronting in Frisian. In Haider and Prinzhorn (1986).
- Haider, H. (1986). V-second in German. In Haider and Prinzhorn (1986).
- and M. Prinzhorn (eds.) (1986). *Verb Second Phenomena in Germanic Languages*. Dordrecht: Foris.
- Haiman, J. (1980). *Hua: A Papuan Language of the Eastern Highlands of New Guinea*. Amsterdam: John Benjamins B.V.
- Hale, K. (1970). The Passive and Ergative in Language Change: The Australian Case. In S.A. Wurm and D.C. Laycock (eds.), *Pacific Linguistic Studies in Honor of Arthur Capell*, 757-781. Pacific Linguistics, Series C, No. 13.
- (1973). Person marking in Warlpiri. In S.R. Anderson and P. Kiparsky (eds.), *A Festschrift for Morris Halle*. New York: Holt, Rinehart and Winston.
- (1983). Warlpiri and the grammar of non-configurational languages. *Natural Language and Linguistic Theory* 1, 5-47.
- and Keyser (1991). *On the Syntax of Argument Structure*. Center for Cognitive Science, MIT.

- Harlow, S. (1981). Government and relativisation in Celtic. In F.W. Heny (ed.), *Binding and Filtering*. Cambridge: MIT Press.
- Harries-Delisle, H. (1978). Contrastive emphasis and cleft sentences. In Greenberg (1978), 419-486.
- Hashemipour, P. (1988). Finite control in Modern Persian. In H. Borer (ed.), *Proceedings of the Seventh West Coast Conference on Formal Linguistics*.
- Haspelmath, M. (1991). On the question of deep ergativity: The evidence from Lezgian. *Papere zur Linguistik* 44/45, 5-27.
- Hellan, L. and K.K. Christensen (eds.) (1986). *Topics in Scandinavian Syntax*. Dordrecht: Reidel.
- Hendrick, R. (ed.) (1990). *Syntax and Semantics. Volume 23: The Syntax of the Modern Celtic Languages*. San Diego: Academic Press.
- Hewitt, B.J. (with Z.K. Khuba) (1979). *Abkhaz*. Linguistic Descriptive Studies, Volume 2. Amsterdam: North-Holland.
- Hoekstra, T. (1983). The distribution of sentential complements. In H. Bennis and W.U.S. van Lessen Kloeke (eds.), *Linguistics in the Netherlands 1983*. Dordrecht: Foris.
- Hohepa, P.W. (1969). The accusative-to-ergative drift in Polynesian languages. *Journal of the Polynesian Society* 78, 295-329.
- Hoji, H. (1985). *Logical Form Constraints and Configurational Structures in Japanese*. Doctoral dissertation, University of Washington.
- Holisky, D.A. (1987). The case of the intransitive subject in Tsova-Tush (Batsbi). In R.M.W. Dixon (1987b), 103-132.
- Holmberg, A. (1986). *Word Order and Syntactic Features in the Scandinavian Languages and English*. Doctoral dissertation, University of Stockholm.
- and C. Platzack (1990). On the role of inflection in Scandinavian syntax. In W. Abraham, W. Kosmeijer and E. Reuland (eds.), *Issues in Germanic Syntax* (Trends in Linguistics, Studies and Monographs 44), 93-118. Berlin: Mouton de Gruyter.

- Hopper, P.J. and S.A. Thompson (1980). Transitivity in **grammar and discourse**. *Language* 56, 251-299.
- Huang, C-T.J. (1982). *Logical Relations in Chinese and the Theory of Grammar*. Doctoral dissertation, MIT.
- Hyman, L.M. and Duranti (1982). On the object relation in Bantu. in P.J. Hopper and S.A. Thompson (eds.), *Syntax and Semantics, Volume 15: Studies in Transitivity*. New York: Academic Press, 217-239.
- Iatridou, S. (1986). **An** anaphor not bound in its governing category. *Linguistic Inquiry* 17, 766-772.
- (1990). About Agr(P). *Linguistic Inquiry* 21, 551-77.
- Jelinek, E. (1984). Empty categories, case, and **configurationality**. *Natural Language and Linguistic Theory* 2, 39-76.
- Johns, A. (1987). *Transitivity and Grammatical Relations in Inuktitut*. Doctoral dissertation, University of Ottawa.
- Kayne, R. (1982). Predicates and arguments, verbs and nouns. Abstract in *GLOW Newsletter* 8, Department of Language and Linguistics, University of Tilburg, The Netherlands.
- (1989). Facets of past participle agreement in Romance. In P. Beninca (ed.), *Dialect Variation in the Theory of Grammar*. Dordrecht: Foris.
- (1991). Romance clitics, verb movement, and PRO. *Linguistic Inquiry* 22, 647-686.
- Keenan, E.L. (1972). Relative clause **formation** in Malagasy. In P.M. Peranteau, J.N. Levi, G.C. Phares, eds., *The Chicago Which Hunt: Papers from the Relative Clause Festival*. Chicago: Chicago Linguistics Society, 169-189.
- (1976a). Remarkable subjects in **Malagasy**. In Li (1976).
- (1976b). Towards a universal definition of "subject". In Li (1976).
- (1991). **Anaphora** invariants and language universals. In D. Bates (ed.), *Proceedings of WCCFL X*.
- and B. Comrie (1977). **Noun phrase** accessibility and Universal Grammar. *Linguistic Inquiry* 8, 63-99.
- Kempchinsky, (1986). *Romance Subjunctive Clauses and Logical Form*. Doctoral dissertation, University of California at Los Angeles.
- Kimenyi, (1980). *A Relational Grammar of Kinyarwanda*. Doctoral dissertation, University of California at Los Angeles.
- Kiss, K.É. (1987). *Configurationality in Hungarian*. Dordrecht: Reidel.
- Kitagawa, Y. (1986). *Subject in English and Japanese*. Doctoral dissertation, University of Massachusetts at Amherst.
- Koopman, H. (1984). The Syntax of **Verbs**. Dordrecht: Foris.
- and D. Sportiche (1987). *Subjects*. Manuscript, University of California at Los Angeles.
- Kuroda, S-Y. (1970). **Remarks** on the notion of subject with reference to words like *also*, *even*, or *only*, Part II. *Annual Bulletin*, Volume 4. Logopedics and Phoniatrics Research Institute, Tokyo University.
- (1986). *Whether You Agree or Not*. Manuscript, University of California at San Diego.
- Laka, I. (1990). *Negation in Syntax: On the Nature of Functional Categories and Projections*. Doctoral dissertation, MIT.
- (1991). *The Structure of Inflection: A Case Study on X° Syntax*. Manuscript, University of Rochester.
- and A. Mahajan (eds.) (1989). *Functional Heads and Clause Structure*, MIT Working Papers in Linguistics, Volume 10.
- Larsen, T.W. (1987). The syntactic status of ergativity in Quiché. *Lingua* 71, 33-59.
- and Norman (1979). **Correlates** of ergativity in Mayan grammar. In F. Plank (ed.), *Ergativity: Towards a Theory of Grammatical Relations*, 347-370. London: Academic Press.

- Larson, R. (1988). On the double object construction. *Linguistic Inquiry* 19, 33-391.
- Lasnik, H. (1992). Case and expletives: Notes toward a parametric account. *Linguistic Inquiry* 23, 381-405.
- and M. Saito (1984). On the nature of proper government. *Linguistic Inquiry* 15, 235-289.
- Law, P.S. (1991). *Effects of Head Movement on Theories of Subjacency and Proper Government*. Doctoral dissertation, MIT.
- Levin, B. (1983). *On the Nature of Ergativity*. Doctoral dissertation, MIT.
- Levin, J. and D. Massam (1985). Surface ergativity: Case/theta relation reexamined. In *NELS 15*, 286-301.
- Li, C.N. (ed.) (1976). *Subject and Topic*. New York: Academic Press.
- Li, Y. (1990). X⁰-binding and verb incorporation. *Linguistic Inquiry* 21, 399-426.
- Mahajan, A.K. (1990). *The A/A-Bar Distinction and Movement Theory*. Doctoral dissertation, MIT.
- Mallon, S.T. (1991). *Introductory Inuktitut*. Montreal: Arctic College - McGill University Inuktitut Text Project.
- Marantz, A. (1984). *On the Nature of Grammatical Relations*. Cambridge: MIT Press.
- (1991). Case and licensing. In *Proceedings of the East Coast Conference on Linguistics, 1991*.
- Marsack, C.C. (1962). *Teach Yourself Samoan*. London: English Universities Press.
- Massam, D. (1985). *Case Theory and the Projection Principle*. Doctoral dissertation, MIT.
- McCloskey, J. (1979). *Transformational Syntax and Model Theoretic Semantics: A Case Study in Modern Irish*. Dordrecht: Reidel.
- (1990). Resumptive pronouns, A'-binding, and levels of representation in Irish. In R. Hendrick (ed.) (1990), 199-256.
- Mondloch, J.L. (1981). *Voice in Quiche-Maya*. Doctoral dissertation, State University of New York at Albany.
- Moro, A. (1991). The raising of predicates: Copula, expletives and existence. In L.L.S. Cheng and H. Demirdash (eds.), *More Papers on Wh-Movement, MIT Working Papers in Linguistics, Volume 15*, 119-181. Distributed by MIT Working Papers in Linguistics.
- Murasugi, K.G. (1990). *The Derivation of Derived Nominals*. Manuscript, MIT.
- Noyer, R.R. (1992). *Features, Positions and Affixes in Autonomous Morphological Structure*. Doctoral dissertation, MIT.
- Ortiz de Urbina, J. (1989). *Parameters in the Grammar of Basque*. Dordrecht: Foris.
- Oyharçabal, B. (1990). *Structural and Inherent Case Marking: Ergacusativity in Basque*. Manuscript, MIT.
- Payne, D.L. (1982). Chickasaw agreement morphology: A functional explanation. In P.J. Hopper and S.A. Thompson (eds.), *Syntax and Semantics, Volume 15: Studies in Transitivity*. New York: Academic Press, 351-378.
- Platzack, C. (1986a). COMP, INFL, and Germanic word order. In Hellan and Christensen (1986), 185-234.
- (1986b). The position of the finite verb in Swedish. In Haider and Prinzhorn (1986), 22-47.
- and A. Holmberg (1989). The role of AGR and finiteness. In *Working Papers in Scandinavian Syntax, Volume 43*, 51-76.
- Pollock, J-Y (1989). Verb movement, Universal Grammar and the structure of IP. *Linguistic Inquiry* 20, 365-424.
- Raposo, E. (1987). Case theory and Infl-to-Comp: The inflected infinitive in European Portuguese. *Linguistic Inquiry* 18, 85-109.

- Reuland, E.J. (1983). Governing *-ing*. *Linguistic Inquiry* 14, 101-136.
- de Rijk, R.P.G. (1966). *Redefining the Ergative*. Manuscript, MIT.
- Rizzi, L. (1982). *Issues in Italian Syntax*. Foris: Dordrecht.
- (1986). On chain formation. In H. Borer (ed.), *Syntax and Semantics, Volume 19: The Syntax of Pronominal Clitics*. New York: Academic Press.
- (1990a). *Relativized Minimality*. Cambridge: MIT Press.
- (1990b). Speculations on Verb Second. In J. Mascaró and M. Nespore (eds.), *Grammar in Progress: GLOW Essays for Henk van Riemsdijk*, 375-386. Dordrecht: Foris.
- (1991). Proper head government and the definition of A-positions. Talk presented at GLOW 14, Leiden.
- Rognvaldsson, E. and H. Thráinsson (1990). On Icelandic word order once more. In J. Maling and A. Zaenen (eds.), *Modern Icelandic Syntax*, 3-40.
- Rosenbaum, P. (1967). *The Grammar of English Predicate Complement Constructions*. Cambridge: MIT Press.
- Ross, J. (1967). *Constraints on Variables in Syntax*. Doctoral dissertation, MIT.
- Rude, N. (19867). *On the Origin of the Nez Perce Ergative NP Suffix*. Manuscript, University of Oregon.
- (1988). **Ergative**, passive, and antipassive in **Nez Perce**: a discourse perspective. In M. Shibatani, ed., *Passive and Voice*. Amsterdam: John Benjamins.
- Safir, K. (1986). Relative clauses in a theory of binding and levels. *Linguistic Inquiry* 17, 663-690.
- Saito, M. (1992). Long distance scrambling in Japanese. In *Journal of East Asian Linguistics* 1, 69-118.

- Sam-Colop, E. (1988). *Antipassive and 2 to 3 Retracar in K'iche'*. M.A. Thesis, University of Iowa.
- Santorini, B. (1989). *The Generalization of the Verb-Second Constraint in the History of Yiddish*. Doctoral dissertation, University of Pennsylvania.
- Saxon, L. (1989). Control and control verbs: Two sources of 'control effects'. In E.J. Fee and K. Hunt (eds.), *Proceedings of the Eighth West Coast Conference on Formal Linguistics*.
- Schachter, P. (1976). The subject in Philippine languages: Topic, actor, actor-topic, or none of the above? In Li (1976). 491-518.
- (1977). Reference-related and role-related properties of subjects. In Cole and Sadock (1977).
- Seiter, W.J. (1979). *Studies in Niuean Syntax*. Doctoral dissertation, University of California, San Diego.
- Silverstein, M. (1976). Hierarchy of features and **ergativity**. In R. Dixon (ed.) (1976), *Grammatical Categories in Australian Languages*. Canberra: Australian Institute of Aboriginal Studies.
- Smith, L. (1981). Propositional **nominalization** in Labrador Inuttut. *Linguistics* 19, 63-99.
- (1982). An Analysis of Affixal **Verbal** Derivation and Complementation in Labrador Inuttut. *Linguistic Analysis* 10, 161-189.
- (1984). On the **nonergativity** and intransitivity of **relative** clauses in Labrador Inuttut. In E.D. Cook and D. Gerds, eds., *Syntax and Semantics 16: The Syntax of Native American Languages*. New York: Academic Press, 289-315.
- Sproat, R. (1985). *On Deriving the Lexicon*. Doctoral dissertation, MIT.
- Stockwell, R., P. Schachter and B. Partee (1973). *The Major Syntactic Structure of English*. New York: Holt, Rinehart and Winston.
- Suñer, M. (1984). **Controlled pro**. In I. Bordelais, H. Contreras and K. Zagona (eds.), *Generative Studies in Spanish Syntax*. Dordrecht: Foris.

- Szabolcsi, A. (1983). The possessor that ran away from home. *The Linguistic Review* 3, 89-102.
- Takezawa, K. (1987). *A Configurational Approach to Case-Marking in Japanese*. Doctoral dissertation, University of Washington.
- Taraldsen, T. (1986a). On verb second and the functional content of syntactic categories. In Haider and Prinzhorn (1986), 7-25.
- (1986b). *Som* and the binding theory. In Helland and Christensen (1986), 149-184.
- Tenny, C.L. (1987). *Grammaticalizing Aspect and Affectedness*. Doctoral dissertation, MIT.
- (1989). *The Aspectual Interface Hypothesis*. Lexicon Project Working Papers 31, Center for Cognitive Science, MIT.
- Thráinsson, H. (1979). *On Complementation in Icelandic*. New York: Garland.
- (1990). A semantic reflexive in Icelandic.. In J. Maling and A. Zaenen, eds., *Modern Icelandic Syntax, Syntax and Semantics, Volume 24*. San Diego: Academic Press, 289-307.
- Tomaselli, A. (1990). *La sintassi del verbo finito nelle lingue germaniche*. Padua: Unipress.
- Travis, L. de M. (1984). *Parameters and Effects of Word Order Variation*. Doctoral dissertation, MIT.
- Ulrich, C.H. (1986). *Choctaw Morphophonology*. Doctoral dissertation, University of California, Los Angeles.
- Underhill, R. (1976). *Turkish Grammar*. Cambridge: MIT Press.
- Vikner, S. (1991). *Verb Movement and the Licensing of NP-Positions in the Germanic Languages*. Doctoral dissertation, Université de Genève.
- Watters, D.E. (1975). The evolution of Tibeto-Burman pronominal verb morpho-logy: a case-study from Kham (Nepal). *Linguistics of the Tibeto-Burman Area* 2, 45-77.

Williams, E. (1980). Predication. *Linguistic Inquiry* 11, 203-238.

----- (1984). Grammatical relations. *Linguistic Inquiry* 15, 639-673

Zaenen, A. (1980). *Extraction Rules in Icelandic*. Doctoral dissertation, Harvard University. [Published by Garland, New York, 1985]

100

100