

# COMPARATIVE NOTES ON ERGATIVE CASE SYSTEMS\*

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## Abstract

Ergative languages make up a substantial percentage of the world's languages. They have a case system which distinguishes the subject of a transitive verb from that of an intransitive, grouping the latter with the object — that is, the object of a transitive verb and the subject of an intransitive verb are in the same case, which we refer to as the *nominative*. However, ergative languages differ from one another in important ways. In Greenlandic Eskimo the nominative, whether it is a subject or an object, is syntactically prominent in the clause, much like a subject in English; but in Warlpiri, the nominative is not prominent, more like an object. The variable prominence of the nominative manifests itself as well in the semantics, e.g., default scope of indefinite and quantified nominals. Using data from Greenlandic Eskimo and Warlpiri, and from Hindi, which represents a split ergative system, this paper develops a general theory of case which explains the observed differences amongst ergative languages. In addition, the theory is designed to account for the accusative language type, represented by English.

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\* This is a 1993 outline which circulated as a manuscript (entitled 'Ergativity: Toward a Theory of a Heterogeneous Class') while it grew into our two articles which appeared in 1996, *Linguistic Inquiry* 27. The 1993 outline included some tentative remarks about Hindi which were cut out of the final articles for reasons of space. In the meantime, however, these remarks had entered into the debate in the literature, so we make the full outline available here with minor editorial changes to make it consistent with Bittner & Hale 1996a, b and to clarify certain points. We are well aware that the analysis of Hindi sketched here cannot be correct in detail; still, but the basic idea may be on the right track. We thank Veneeta Dayal for the Hindi data and stimulating discussion. This research was supported by National Science Foundation companion grants to MIT (BNS-9108331) and Rutgers University (BNS-9108381).

# COMPARATIVE NOTES ON ERGATIVE CASE SYSTEMS

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## 0. Introduction.

The examination of any arbitrary collection of ergative languages reveals rather quickly that they do not belong to a homogeneous class. Thus, for example, while Inuit (Eskimo-Aleut: West Greenland), Warlpiri (Pama-Nyungan: Central Australia), and Hindi (Indo-European: India) all share the classical ergative pattern of Case marking, even a modest foray into the realms of Case, agreement, binding, and scope relations, brings to light differences which cast serious doubt on the linguistic unity of the type. In this paper, we present a theory in which the differences among three ergative languages, those just mentioned, receive a natural account. The theoretical proposals presented here are not designed specifically to account for these languages, however. Rather, they are part of a general theory of Case, pronominal agreement, syntactic binding, and semantic scope relations.

## 1. Case and agreement patterns in Inuit and Warlpiri. <sup>1</sup>

We begin our discussion with a review of the elementary morphosyntactic facts of Inuit and Warlpiri direct Cases. In both languages, the typical ergative pattern is observed, according to which the subject of a transitive sentence is set apart, by ergative Case marking, both from the object of a transitive and the subject of an intransitive, the latter being in the unmarked, or nominative, Case. These Case relations are illustrated for Inuit and Warlpiri, respectively, in the (a) and (b) sentences of (1) and (2), below. The (c) sentences illustrate another common feature of ergative languages, namely, the relative ordering of pronominal agreement morphology. The agreement morpheme construed with the ergative argument is closer to the verb (or auxiliary base), while the morpheme construed with the nominative is more peripheral in the inflected verb (or auxiliary). <sup>2</sup>

- (1) a. Qimmiq pangalip-p-u-q. (I)  
*dog run-IND-[-tr]-3SG*  
'The dog is running.'
- b. Qimmi-p angut kii-v-a-a. (I)  
*dog-ERG man bite-IND-[-tr]-3SG.3SG*  
'The dog bit the man.'
- c. Anguti-p \_ taku-v-a-a-nga. (I)  
*man-ERG pro(1SG) see-IND-[-tr]-3SG-1SG*  
'The man sees me.'

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<sup>1</sup> Both Inuit and Warlpiri have been argued to be of the morphologically ergative type — see, e.g., Levin (1983), Marantz (1984), Johns (1987), and Bok-Bennema (1991).

<sup>2</sup> This generalization holds only for *pronominal* agreement, which includes person features. The distribution of *adjectival* agreement in gender and/or number is less restricted, suggesting that these two kinds of agreement represent distinct phenomena.

- (2) a. Maliki ka parnka-mi. (W)  
*dog PRS.3SG run-NPST*  
 ‘The dog is running.’
- b. Maliki-rli ka ngarrka yarlki-rni. (W)  
*dog-ERG PRS.3SG.3SG man bite-NPST*  
 ‘The dog is biting the man.’
- c. Nyuntulu-rlu ka-npa-ju ngaju nya-nyi. (W)  
*you-ERG PRS-2SG-1SG me see-NPST*  
 ‘You see me.’

The morphological analysis and glossing supplied above for the Inuit examples reflects another important aspect of that language. In indicative clauses, the verb regularly marks the transitivity of the clause — more precisely, it marks the presence or absence of an ergative argument. Warlpiri weakly reflects the transitivity of its verbs in its conjugation system, the *-rni* conjugation being typically transitive, the *-mi* conjugation typically intransitive. However, while there are many exceptions in the Warlpiri system, there are absolutely no exceptions in Inuit — the correlation between transitivity and the occurrence of the Inuit indicative transitivity markers *-u-* and *-a-* is perfect.

Moreover, while Warlpiri has no detransitivizing processes, Inuit is rife with them. So, for example, although both languages possess the so-called antipassive, a hallmark of ergativity, the contrast between the two constructions is striking. We believe that this reflects a fundamental difference between these two languages. In Inuit, the antipassive detransitivizes the clause. In this, Inuit follows the more usual pattern among ergative languages (cf. Heath, 1976; Silverstein, 1976; Postal, 1977; Dixon, 1979). Accordingly, in (3a) below, the verb bears the *-u-* marker, and the subject is in the nominative.

- (3) a. Qimmiq angum-mik kii-si-v-u-q. (I)  
*dog man-INS bite-APASS-IND-[-tr]-3SG*  
 ‘The dog is biting the man.’
- b. Maliki-rli ka-rla-jinta ngarrka-ku yarlki-rni. (W)  
*dog-ERG PRS.3SG-3SG.D-APASS man-DAT bite-NPST*  
 ‘The dog is biting at the man.’

The Warlpiri conative construction in (3b), which we claim to be the proper representative of the antipassive in that language, differs in these properties. In Warlpiri the verb remains in the transitive conjugation, and the subject retains its ergative Case marking.<sup>3</sup>

The two languages also differ in their surface positioning of the antipassive morphology. In Inuit, the antipassive is incorporated into the verb stem. In Warlpiri, by contrast, the element we assume to represent the antipassive is affixed to the auxiliary and is homophonous with the third singular dative marker *-rla* (~ *-jinta*).<sup>4</sup> The two languages agree, however, in placing the underlying object in an oblique Case, the instrumental in Inuit, and the dative (the all purpose oblique) in Warlpiri.

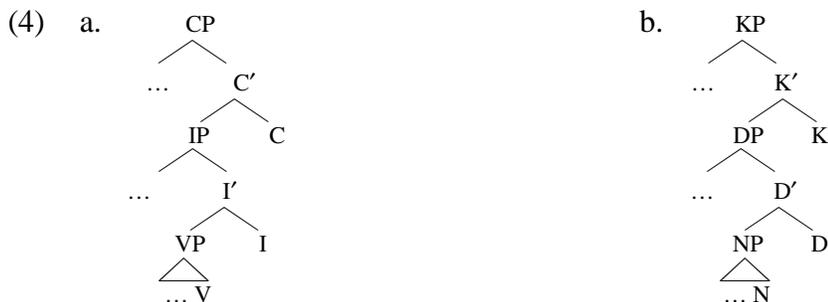
With this brief review of some of the similarities and differences between these two ergative languages, we turn now to a presentation of our theory of Case.

<sup>3</sup> The idea that the Warlpiri construction of (3b) is to be associated with the antipassive was originally proposed by Sandra Keen in a 1977 manuscript — as yet unpublished, so far as we know — in which she compared aspects of Warlpiri with the ergative Tangkic language Yukulta of the lower gulf region North Queensland (for discussion of the construction itself, see Hale, 1982; Simpson, 1983, 1991).

<sup>4</sup> The third person singular dative marker is *-rla*, except when preceded by another occurrence of the third singular dative, in which case it appears as *-jinta*. The antipassive morphology follows the same principle — it is *-rla* unless preceded by a third singular dative, in which case it is *-jinta* (cf., Hale, 1973).

## 2. Configuration-driven theory of Case.

Our theory of Case relies crucially on the notion that Case is a functional head. It is, to be precise, the nominal counterpart of the functional category C (complementizer) in the extended projection of V (cf. Lamontagne and Travis, 1987). Using K to represent the category Case, our notation in (4) implies that it forms the uppermost functional projection in the extended projection of the lexical category N, paralleling the structural position of C in the extended projection of the category V. The category D (determiner) heads the intermediate projection in the nominal system, just as I (inflection) heads the intermediate projection in the verbal system (see Grimshaw, 1991, for development of the theory of extended projections). The parallel verbal and nominal systems are depicted in (4a-b):



Nominals in morphologically marked Cases are KPs, while nominative arguments involve no K-projection, which is why they are typically unmarked for Case (the nominative is analyzed as Case-less also by Jakobson, 1936, and Andrews, 1982). Being K-less, nominative arguments must satisfy the K Filter, which requires them to be c-commanded and governed by K or its verbal counterpart, C (cf. Case Filter of Chomsky 1980, 1981). This accounts for the tendency of nominative arguments to raise to [Spec, IP]. On the other hand, the overt Case categories, headed by K, embrace two distinct types, which we equate with the traditional categories of inherent Case and marked structural Case (Chomsky, 1986a). They must likewise be licensed. Inherent Cases are underlyingly filled Ks and they are licensed (“assigned”) by a head which selects them. As an instance of selection, inherent Case assignment takes place under government and is impossible in Exceptional Case Marking (ECM) configurations. Marked structural Cases are underlyingly empty Ks which must satisfy the Empty Category Principle (ECP). This accounts for the government constraint on structural Case assignment. In general, then, for all types of Case, the government constraint follows from independently existing principles and need not be stipulated. The table in (5) below summarizes the basic elements of the Case theory we propose:

(5)

	<i>Inherent Case</i>	<i>Marked structural Case</i>	<i>Unmarked Case</i>
<i>K present?</i>	yes	yes	no
<i>K at d-structure</i>	filled	empty	- - -
<i>Licensing condition</i>	Projection Principle	ECP	K Filter

The underlyingly empty Ks of the marked structural Cases are realized as overt Case inflections at s-structure in accordance with the principles set out in (12) below. As empty categories, however, these Ks are subject to the ECP (6) (Chomsky, 1986b):

- (6) *ECP* (s-str, LF)  
A nonpronominal empty category must be  $\theta$ -governed or antecedent-governed.

An empty head, such as K, can only satisfy this principle by being antecedent-governed since it cannot occupy any thematic position (Baker, 1988). Antecedent-government holds under the conditions given in (7):

(7)  $\alpha$  antecedent-governs  $\beta$ , iff  $\alpha$  governs  $\beta$  and either binds or Case-binds  $\beta$ .

The government relation we assume is standard—that is, a head governs its complement and specifier, as well as any phrase in the ECM configuration. Also, head movement, more precisely, head binding, induces transparency (Baker 1988; Bittner & Hale 1996a). The standard binding relation (c-command and coindexation) and the following extension are on a par for the ECP (6):

(8) Let  $\alpha$  be a head that delimits a small clause, and let  $\beta$  be an argument. Then  $\alpha$  Case-binds  $\beta$ , and  $\beta$ 's head, iff (i) and (ii) hold:  
 (i)  $\alpha$  locally c-commands  $\beta$ ;  
 (ii)  $\alpha$  governs a Case-competitor for  $\beta$ .

The definition of Case-binding stated in (8) presupposes a version of the VP internal subject hypothesis which is most closely related to that of Koopman and Sportiche (1985, 1987). We take the internal subject to be a phrase of a functional category (DP, KP, IP, or CP) adjoined to a predicate phrase of a lexical category (VP, NP, AP, or PP). The two phrases are coindexed by syntactic predication, which distinguishes the subject (an A-position) from plain adjuncts (A'-positions). In other words, we extend to primary predicates the predication relation proposed for secondary predicates by Williams (1980). A phrase consisting of a lexical predicate phrase and its adjoined subject is a *small clause*, the basic domain for structural Case-assignment:

(9) A small clause is *delimited* by its lexical head, from below, and by any governing functional head, from above.

Structural Case-assignment — i.e., antecedent-government of an empty K — requires *local* c-command (see Rizzi, 1990, on relativized minimality constraints on antecedent-government):

(10) A head  $\alpha$  that delimits a small clause *locally c-commands* an argument  $\beta$ , iff (i)–(ii) hold:  
 (i)  $\alpha$  c-commands  $\beta$ ;  
 (ii) no other argument, or head that delimits a small clause, both c-commands  $\beta$  and is c-commanded by  $\alpha$ .

It follows that the capacity to assign structural Case is not an immutable property of a head. It depends, rather, on the configuration in which the head appears. A given head may be able to assign Case in one structure but not in another. The theory predicts that a head will be able to assign structural Case — by antecedent-governing an empty K — precisely when it appears in the Case-binding configuration of (8). Intuitively, a head in that configuration is in a position to see that the default mechanism for licensing nominal arguments is insufficient to license all of the nominals present. In this circumstance, which is made formally precise in (11), we say that nominals are in competition for Case (see Marantz, 1991, on “dependent Case”, a related idea):

(11)  $\gamma$  is a *Case-competitor* for an argument  $\beta$ , iff  $\gamma$  is a K-less nominal that is in a chain with a coargument, or a pseudo coargument, of  $\beta$ .<sup>5</sup>

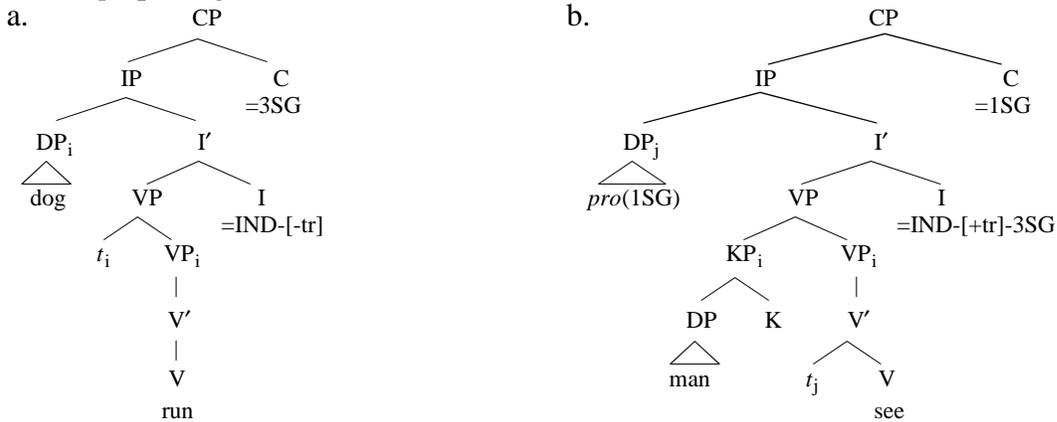
There is a parallel between conventional binding and Case-binding. In the former, the binder determines the pronominal agreement features of the bindee, while in the latter, the binder determines

<sup>5</sup> See Bittner & Hale 1996a for formal definitions of the syntactic relations *coargument* and *pseudo coargument*. Intuitively, a *coargument* of an argument  $\beta$  is another phrase in an A-position which is close enough but still independent of  $\beta$ ; a *pseudo coargument* is a head in an adjoined position which satisfies syntactically similar locality and independence requirements.



from C. To satisfy the K Filter, the subject,  $DP_i$ , must therefore raise to [Spec, IP]. In the transitive (14'b), it is the object,  $DP_j$ , which fails to be Case-bound, there being no Case-competitor visible to the verb, the only governor of the object.<sup>7</sup> Moreover, the opacity of the VP again entails that the underlying position of this argument is inaccessible to government from C. The object  $DP_j$  must therefore likewise raise to [Spec, IP] to satisfy the K Filter.

(14') *Inuit: opaque ergative*



Once the object has raised to [Spec, IP], a Case-binding configuration exists, since I governs two distinct nominal constituents, the subject ( $KP_i$ ) and the raised object ( $DP_j$ ). The latter is licensed in the manner just described (by C), while the empty K of the subject satisfies the ECP in virtue of being governed and Case-bound by I (by the same token, it will be realized as ERG). All of the structural conditions required for Case-binding are met: I delimits a small clause, to wit, VP; it locally c-commands the subject argument,  $KP_i$ ; and it governs  $DP_j$ , a Case-competitor.

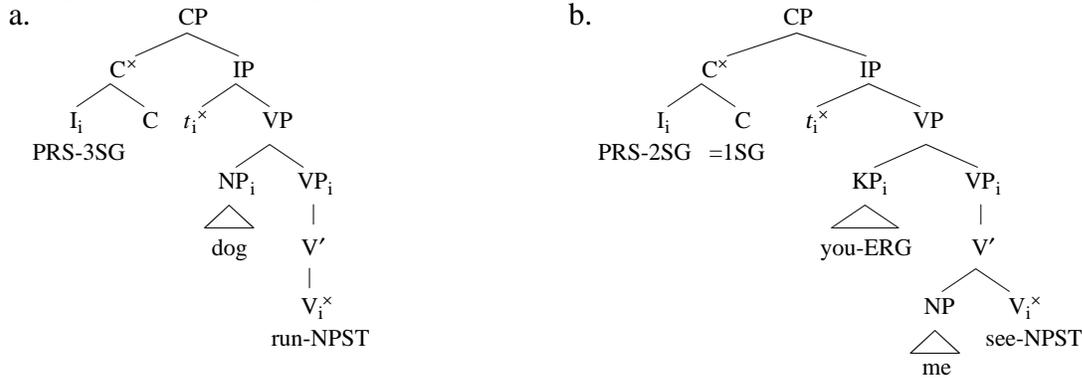
Warlpiri, we maintain, differs from Inuit in relation to transparency. Thus, while the surface Case marking is the same in the two languages, the s-structures are in fact different.

- (15) a. Maliki ka parnka-mi. (W)  
*dog PRS.3SG run-NPST*  
 'The dog is running.'
- b. Nyuntulu-rlu ka-npa-ju ngaju nya-nyi. (W)  
*you-ERG PRS-2SG-1SG me see-NPST*  
 'You see me.'

In the intransitive structure (15'a), the single argument is not Case-bound, just as in Inuit. However, by contrast with Inuit, Warlpiri does not require the intransitive subject to raise to [Spec, IP]. The same is true of the transitive object in (15'b), we contend. The two bare NP arguments are licensed *in situ* — that is to say, they satisfy the K Filter without raising to a position closer to C. If this is so, and we will present evidence that it is indeed so, then these structures must be transparent to government from C. Two factors are responsible for this feature of Warlpiri, which we dub a *transparent ergative* language. First, IP is transparent to government from C because its head I incorporates into C (see Baker 1988). This movement gives rise to the cluster of elements (C and I, including agreement) which have been called the “auxiliary” (AUX) in the literature on the language (cf., Hale, 1973, 1982; Nash, 1986; Simpson, 1991). Second, VP is transparent to government from I because its head V is bound by I (which thus constrains the verbal inflection for tense). In effect, V forms a discontinuous head with I — just as if V had incorporated into I. We refer to the special relationship thus established between C, I, and V as a *transparency chain* and represent it informally by x-superscripts in the structural diagrams of (15'):

<sup>7</sup> The VP-adjoined subject is invisible, falling outside the government domain of the verb (see Bittner & Hale 1996a,b).

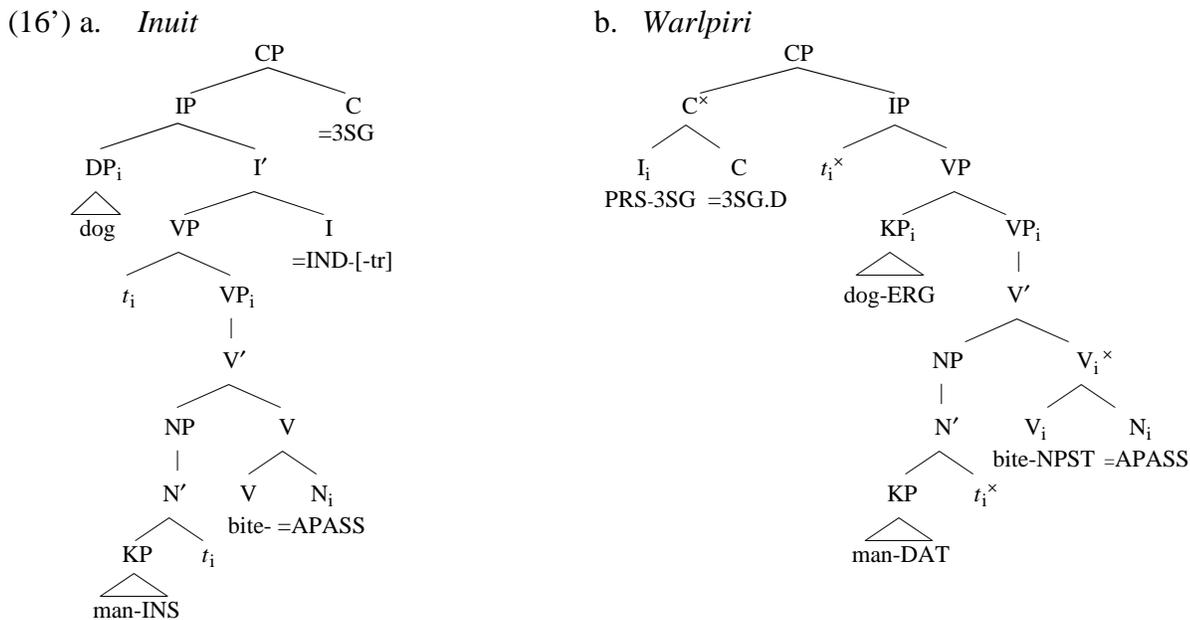
(15') *Warlpiri: transparent ergative*



By virtue of transparency, the subject ( $NP_i$ ) of the intransitive (15'a) is governed in its d-structure position by C, thereby satisfying the K Filter. By the same circumstance of transparency, the object (NP) of the transitive (15'b) is governed in its d-structure position by C, likewise satisfying the K Filter. Thus, transparency is the essential feature of Warlpiri ergativity. The ergative KP, on the other hand, is licensed by the trace ( $t_i^x$ ) of I, which Case-binds it. Here again, transparency is relevant, since the trace of I has the bare NP object in its purview automatically, without benefit of raising.

The first piece of evidence in favor of the suggested contrast between Warlpiri and Inuit comes from the antipassive. The sentences of (16) are repeated from (3) above, for convenience. Their assumed structural descriptions are given in (16').

- (16) a. Qimmiq angum-mik kii-si-v-u-q. (I)  
*dog man-INS bite-APASS-IND-[-tr]-3SG*  
 'The dog is biting the man.'
- b. Maliki-rli ka-rla-jinta ngarrka-ku yarlki-rni. (W)  
*dog-ERG PRS.3SG-3SG.D-APASS man-DAT bite-NPST*  
 'The dog is biting at the man.'



We follow Baker 1988 in analyzing the antipassive as an instance of noun incorporation (see also Rischel 1972, and Sadock 1980, on canonical noun incorporation in Inuit as a syntactic process). The

two languages are identical, we claim, in relation to the structure dominated by VP. At d-structure, the antipassive morphology (=APASS) projects a nominal phrase which occupies the complement position of the verb. The oblique argument originates as the object of the antipassive noun. The antipassive noun is an affix which satisfies its morphological requirements by incorporating into the verb. A syntactic consequence of this incorporation is that the verb Case-binds the stranded object (oblique KP), since all of the required structural conditions for Case-binding are met: the verb delimits a small clause (VP), it locally c-commands the stranded object (the oblique KP), and it governs a Case-competitor (the incorporated antipassive noun,  $N_i$ , which qualifies as a pseudo coargument of that KP). Since the object KP is Case-bound, so is its underlyingly empty head, which therefore satisfies the ECP. The Case realization principles of (12a–b) determine that the object KP of the antipassive will appear in the instrumental Case in Inuit, and in the dative Case in Warlpiri.

These aspects of the antipassive are shared by Inuit and Warlpiri. Now for what they do not share, namely surface transitivity. In Inuit, antipassive clauses are intransitive, while in Warlpiri, they are transitive. This follows, we contend, because Inuit is opaque, while Warlpiri is transparent. Thus, in Warlpiri, I has within its government domain both the VP internal subject and a Case-competitor—to wit, the NP projection of the antipassive. Hence, I Case-binds the subject, because the conditions for Case-binding are met in the basic d-structure configuration. Being Case-bound, the subject of (16'b) must be a KP. Since its empty K is antecedent-governed by I, it is realized as ergative Case, in accordance with the principles of (12a). By contrast, the subject of an Inuit antipassive is in the nominative, not the ergative. This follows from the fact that the Inuit VP is opaque. While I governs the subject, it does not govern the antipassive NP, due to opacity. Having no visible Case-competitor, the subject of (16'a) must be a bare DP, and it must raise to a position governed by C — i.e., to [Spec, IP] — in order to satisfy the K Filter.<sup>8</sup>

As noted in section 1 above, Inuit and Warlpiri differ in the positioning of the antipassive morphology, Inuit locating it in the verb, Warlpiri in the auxiliary (i.e., the complex dominated by C). We take this to be an additional, albeit indirect, reflex of Warlpiri transparency. Transparency, we believe, permits variability in the overt expression of morphological elements associated with points linked together by the transparency chain. In Inuit, the chain headed by the verb in syntax is trivial. It contains just one point — the head and the foot coincide, so to speak. The antipassive morphology must, therefore, appear in the verb word. In Warlpiri, however, the transparency chain is non-trivial, its head being at C, its foot at V. Warlpiri antipassive morphology is realized at the head (C), presumably for morphological reasons, rather than at the foot (V). In other words, morphology treats the transparency chain as a single discontinuous head. Thus, this difference between the two languages can be traced ultimately to transparency.

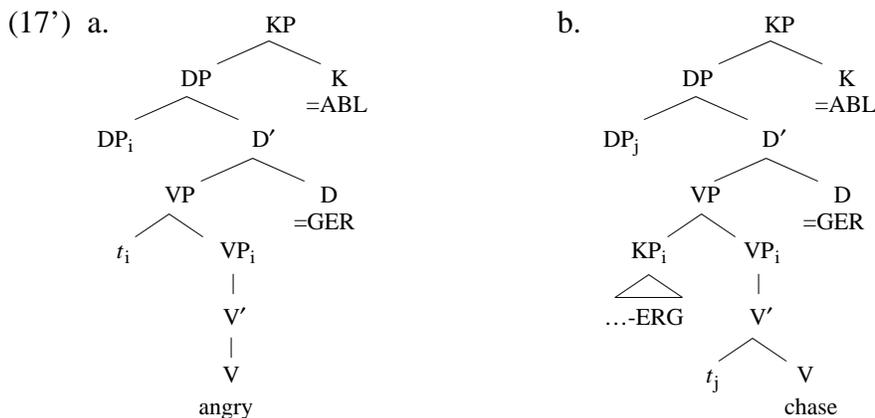
Having introduced our theory of Case, we will turn our attention to the phenomenon of pronominal agreement. But first, we wish briefly to present evidence from Inuit and Warlpiri showing that there is no necessary relation between structural Case and agreement.<sup>9</sup> To be sure, our theory predicts a possible link, because arguments in the direct Cases (NOM, ERG, and ACC) are c-commanded and governed by functional heads and thus meet the structural requirements for pronominal agreement. Agreement, however, is neither a prerequisite nor a consequence of structural Case assignment. The facts of Inuit and Warlpiri bear out this prediction. In Inuit, for example, structural Case patterns are preserved even when agreement is lost, as in (17), in which the relevant feature is the Case marking internal to the gerund (bracketed in the gloss):

<sup>8</sup> The converse need not hold—i.e., nominative Case on the antipassive subject need not imply an opaque VP. The above reasoning crucially relies on the assumption that the antipassive noun incorporates in the syntax, out of a full-fledged NP complement. This assumption is justified for Inuit on independent grounds (Bittner, 1994; Bittner & Hale, 1996b). In a language where the antipassive noun is base-generated in the V-adjoined position, there will be no NP complement to serve as a Case-competitor for the subject. The prediction is, therefore, that the subject will be nominative even if the VP is transparent.

<sup>9</sup> See Chomsky (1989, 1992) for a theory implicating such a relation, and see Mahajan (1991), Bobaljik (1992), Campana (1992), Murasugi (1992), for different developments of that theory in relation to ergative and accusative languages.

- (17) a. Juuna kaman-nir-mit matu matupiluur-p-a-a. (I)  
 [J. angry-GER-ABL] door slam-IND-[+tr]-3SG.3SG  
 ‘Because Juuna<sub>i</sub> was angry, he<sub>i</sub> slammed the door.’
- b. Juuna-p qilalukkat malirsur-nir-mit qasu-v-u-q. (I)  
 [J.-ERG whales chase-GER-ABL] tired-IND-[tr]-3SG  
 ‘Because Juuna<sub>i</sub> has been chasing the whales, he<sub>i</sub> is tired.’

While the gerund form of the verb lacks agreement entirely, the overt nominal arguments are Case marked just as they would be in the corresponding indicatives (compare, for example (14a-b)). Assuming the structures in (17’), the preservation of Case follows from the configuration-driven theory we have proposed, since the relevant structural relations are preserved (cf. (14’)):

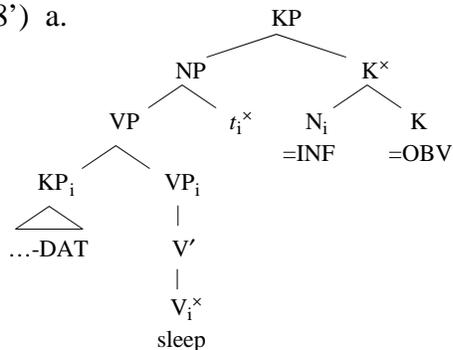


In Warlpiri infinitivals of the type illustrated in (18), Case is likewise preserved for all arguments, except the subject. The latter is in the dative Case (DAT) regardless of the transitivity of the verb:

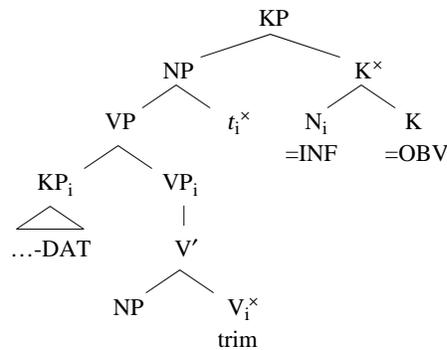
- (18) a. Ngajukupirdangka-rlu ka karli jarnti-rni  
*my.brother-ERG PRS.3SG.3SG boomerang trim-NPST*  
 ngaju-ku jardanguna-nja-rlarni. (W)  
 [me-DAT sleep-INF-OBV]  
 ‘My brother is trimming a boomerang, while I am sleeping.’
- b. Ngaju lpa-rna jardanguna-ja  
*me IMPRF-1SG sleep-PST*  
 ngajukupirdangka-ku karli jarnti-rninja-rlarni. (W)  
 [my.brother-DAT boomerang trim-INF-OBV]  
 ‘I was sleeping, while my brother was trimming a boomerang.’

Within the configuration-driven theory, this pattern of partial Case preservation can be accommodated as follows. The infinitive morphology is a nominal head which incorporates into the obviative morphology (a K-category element), as indicated in (18’), thereby meeting the qualifications of a Case-competitor for the internal subject. The obviative K will therefore Case-bind the subject, whether or not the verb has any other nominal arguments. The subject is marked dative, therefore, in accordance with the Case-realization conventions of (12a–b):

(18') a.



b.



The structural configurations presented above in association with Inuit and Warlpiri examples are all s-structure representations. In these languages, and in others like them, surface linear order and word boundaries may be affected by reordering and linearization processes in the PF component and are therefore not solely determined by the s-structure. The s-structure determines Case assignment (this section), pronominal agreement (section 3 below), syntactic binding relations (including obviation, see section 4), and minimal scope options (section 5).

### 3. Consequences for pronominal agreement.

Inuit and Warlpiri both show up to two pronominal agreement morphemes in the inflected verb, or in the auxiliary. Furthermore, the morpheme construed with the ergative argument is innermost in both languages.

- (19) a. Angut qungujup-p-u-q. (I)  
*man smile-IND-[-tr]-3SG*  
 'The man smiled.'
- b. (Uanga) qungujup-p-u-nga. (I)  
*(me) smile-IND-[-tr]-1SG*  
 'I smiled.'
- c. Anguti-p (uanga) urnip-p-a-a-nga. (I)  
*man-ERG (me) approach-IND-[-tr]-3SG-1SG*  
 'The man approached me.'

- (20) a. Nyuntu ka-npa parnka-mi. (W)  
*you PRS-2SG run-NPST*  
 'You are running'
- b. Ngaju ka-rna parnka-mi. (W)  
*me PRS-1SG run-NPST*  
 'I am running.'
- c. Nyuntulu-rlu ka-npa-ju ngaju nya-nyi. (W)  
*you-ERG PRS-2SG-1SG me see-NPST*  
 'You see me.'

At this point, the similarities cease. Inuit has an ergative agreement pattern, in that it treats nominative arguments (subjects and objects) as a natural class. This can be seen most clearly in infinitival clauses like (21), in which only the nominative argument agrees with the infinitival verb and the form of the agreement is the same whether that argument is a subject (as in (21a)) or an object (as in (21b)).

- (21) a.  $\bar{\quad}$  qunguju-llu-nga  $\bar{\quad}$  angut urnip-p-a-ra. (I)  
 [*pro*(1SG)<sub>*i*</sub> *smile-IND-1SG*] *pro*(1SG)<sub>*i*</sub> *man approach-IND-[+tr]-1SG.3SG*  
 ‘Smiling, I approached the man.’
- b. Anguti-p  $\bar{\quad}$  urni-llu-nga  $\bar{\quad}$  qungujup-p-u-q. (I)  
 [*man-ERG*<sub>*i*</sub> *pro*(1SG) *approach-INF-1SG*] *pro*(3SG)<sub>*i*</sub> *smile-IND-[+tr]-3SG*  
 ‘Approaching me, the man smiled.’

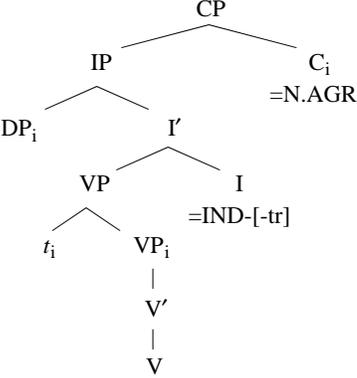
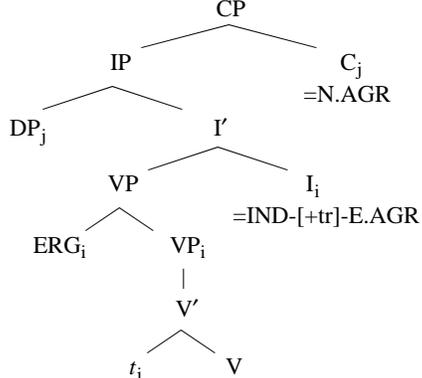
In finite clauses in Inuit, the outermost agreement morpheme is always construed with the nominative argument, while the innermost morpheme in transitives is construed with the ergative argument.

The Inuit pattern contrasts with Warlpiri in two respects. First, Warlpiri agreement morphology is “accusative”, treating subjects as a natural class (cf. Jelinek, 1984). As illustrated in (20), intransitive and transitive subjects are represented by identical agreement morphology, distinct from that construed with transitive objects. Second, the two agreement positions in Warlpiri cannot be consistently correlated with Case categories. Rather, the correlation is with grammatical function. The innermost position is construed with the subject, whether ergative or nominative, while the outermost is construed with the “most prominent object” — dative, if there is one, as in (22) below, nominative otherwise, as in (20c):

- (22) Nyuntulu-rlu ka-npa-ju maliki-jarra ngaju-ku yi-nyi. (W)  
*you-ERG PRS-2SG-1SG dog-DU me-DAT give-NPST*  
 ‘You are giving me two dogs.’

We propose that pronominal agreement involves *canonical antecedent-government* — i.e., government and conventional binding — of a nominal argument chain by a functional head. That is, pronominal agreement is an instance of A'-binding similar to switch reference (see Finer, 1985; also section 4 below). This theory immediately explains why languages generally show at most two *pronominal* agreement relations in simple clauses (recall fn. 2), since there are usually just two suitably placed functional heads (I and C, in ergative languages). On this theory, other aspects of the Inuit and Warlpiri agreement systems also follow from the proposed structures.

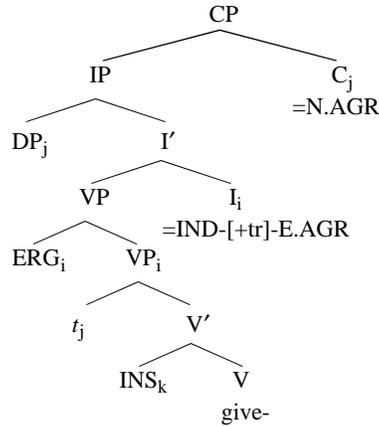
The ergative agreement pattern of Inuit is due to the raising of nominative arguments to [Spec, IP], from which position they can be antecedent-governed by C. When the VP internal subject is licensed *in situ*, as in transitive clauses, it is antecedent-governed by I, accounting for the second (innermost) agreement position. These aspects of Inuit agreement are illustrated in the structures presented in (23):

- (23) a. 
- b. 

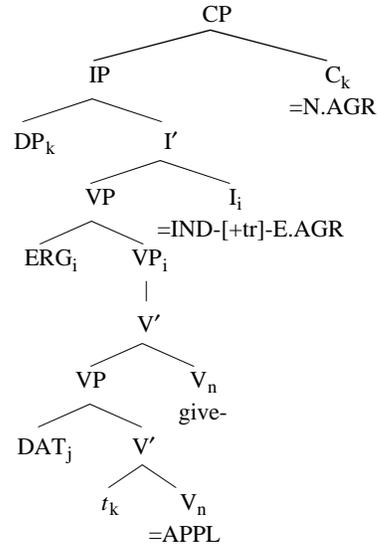
Inuit infinitives are like their English counterparts — i.e., I is not associated with agreement. However, Inuit C is associated with agreement, just as in finite clauses. From this it follows that the nominative argument, raised to [Spec, IP] and therefore antecedent-governed by C, agrees with the latter at s-structure. This can be observed in (21) above and in (24):



(26') a.



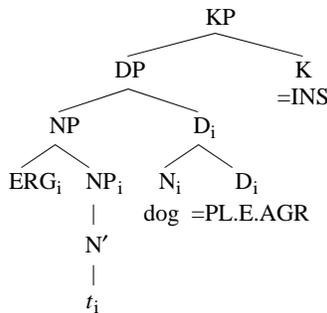
b.



In Inuit, but not in Warlpiri, the determiner (D) occurs as an extended projection of N. Like the functional categories I and C of the verbal system, the functional category D enters into pronominal agreement relations. This is illustrated in the possessive construction of (27), set off by bracketing in the gloss and diagrammed in (27'):

- (27) Anguti-p \_ Juuna-p qimmi-i-nik tuni-v-a-a-nga  
*man-ERG pro(1SG) [Juuna-ERG<sub>i</sub> dog-PL3SG<sub>i</sub>-INS] give-IND-[+tr]-3SG-1SG*  
 'The man gave me some of Juuna's dogs.'

(27')



Given this s-structure, the configuration-driven theory correctly predicts the Case marking of the possessor, as well as the pronominal agreement construed with it. The determiner,  $D_i$ , delimits a small clause—to wit, the NP headed by the trace of  $N_i$ . This noun itself is incorporated into  $D_i$ , where it functions as a Case-competitor for the subject of the small clause. Thus, the determiner Case-binds the latter argument and, in accordance with the realization conventions of (12a–b), assigns it the ergative Case.<sup>10</sup> This accounts for Case assignment within the DP. Prenominal agreement between D and the NP internal subject is entirely parallel to the agreement in transitive clauses between I and the VP internal subject.<sup>11</sup>

<sup>10</sup> That is, the nominal category D in Inuit assigns the same Case as its verbal counterpart, I (see (4a–b)). This parameter setting is commonly observed among ergative languages, presumably because D and I form a natural class (F1 categories, in the terminology of Grimshaw 1991), but it is not universal (see section 6 on Hindi).

<sup>11</sup> This analysis accounts for the parallels between Inuit transitive clauses and possessed nominals with respect to Case and agreement by treating them as instances of the general parallelism between verbal and nominal systems, without reducing either structural type to the other. This is in contrast to a long “nominalist” tradition according to which both structures are basically nominal (Thalbitzer, 1911;

#### 4. Consequences for obviation and control.

Both Inuit and Warlpiri have obviation systems, and in both, object agreement may be proximate or obviative. Obviative agreement is amply illustrated in the foregoing sections. Proximate (reflexive or reciprocal) object agreement in Warlpiri is exemplified in (28):

- (28) Ngarrka-jarra-rlu ka-pala-**nyanu** \_ panti-rni. (W)  
*man-DU-ERG PRS-3DU-PRX ec spear-NPST*  
 ‘The (two) men<sub>i</sub> spear themselves<sub>i</sub>/each other<sub>i</sub>.’

In Inuit, proximate object agreement cannot occur in non-embedded clauses. Thus, the Inuit counterpart of the Warlpiri sentence just cited is ungrammatical (see (29a) below). The only way to express this meaning is by recourse to a detransitivized clause in which the anaphoric object appears in a dative phrase (as in (29b); see Bittner 1994 for an analysis of this construction):

- (29) a.\* Juuna-p \_ tatigi(i-v)-a-a-**ni**. (I)  
*Juuna-ERG ec trust-IND-[+tr]-3SG-3SG.PRX*  
 (‘Juuna has confidence in himself.’)  
 b. Juuna immi-nut tatigi-v-u-q. (I)  
*Juuna self-DAT trust-IND-[-tr]-3SG*  
 ‘Juuna has confidence in himself.’

Proximate object agreement is restricted in Inuit to dependent clauses, where it is bound from the matrix clause, as in (30). Even where the object of the dependent clause is an empty category, as in (30b), the Warlpiri style local binding relation is impossible in Inuit:

- (30) a. Juuna-p Kaali tatigi-mm-a-**ni** \_ tuqqissima-v-u-q. (I)  
*[Juuna-ERG Kaali trust-DPST-3SG-3SG.PRX] ec stay.calm-IND-[-tr]-3SG*  
 ‘Because Juuna trusted Kaali<sub>j</sub>, he<sub>j</sub> stayed calm.’  
 b. Juuna-p \_ tatigi-mm-a-**ni** Kaali tuqqissima-v-u-q. (I)  
*[Juuna-ERG ec trust-DPST-3SG-3SG.PRX] Kaali stay.calm-IND-[-tr]-3SG*  
 ‘Because Juuna trusted him<sub>j</sub>, Kaali<sub>j</sub> stayed calm.’  
 (NOT: ‘Because Juuna<sub>i</sub> had confidence in himself<sub>i</sub>, Kaali stayed calm.’)

We follow Finer (1985) in analyzing obviation as an A'-binding relation (see also Jeanne, 1978, for an analysis of obviation as binding). In particular, we locate the switch reference morphology in functional heads. In Inuit, this locus will always be a functional head that also hosts pronominal agreement because obviation morphology is fused with agreement morphology in this language (as in (30); see also Haiman & Munro 1983 on this cross-linguistically common pattern). In Warlpiri, switch reference morphology appears in the functional heads C and K; only the first of these is an agreeing head, in that language. Switch reference morphology enters into a simple binary opposition: *proximate* (bound) versus *obviative* (free in the binding domain). Proximate morphology is subject to the binding condition expressed in (31). We express the condition in relation to *maximal heads*, i.e., maximal transparency chains of X<sup>0</sup> heads, since the obviation system treats any such chain as a single head which happens to be discontinuous.

(31) *Proximate Binding Condition*

The maximal head containing a proximate X<sup>0</sup> is bound by an accessible subject path.

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Schultz-Lorentzen, 1945; Hammerich, 1951; Johns, 1987, 1992), as well as to the “sentential” tradition according to which they are both clausal (Mey, 1969; Rischel, 1971; Kalmar, 1979).

This binding condition refers to a number of auxiliary notions, defined in (32) through (34) below:

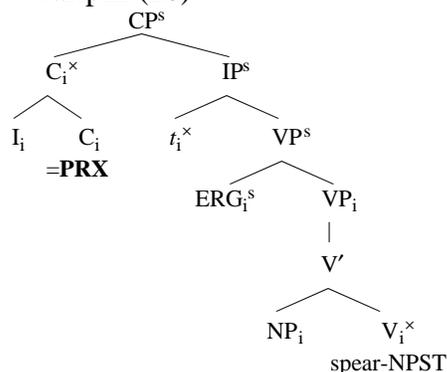
- (32) A *subject path* is a maximal sequence of nodes  $(\alpha_1, \dots, \alpha_n)$  such that (i)–(iii) hold:  
 (i) *Initiator*:  $\alpha_1$  is a subject (i.e.,  $FP_i$  in a small clause structure  $[_{LP} FP_i LP_i]$ )  
 (ii) *Continuity*:  $\alpha_j$  ( $1 < j \leq n$ ) immediately dominates  $\alpha_{j-1}$ ;  
 (iii) *Cut-off*:  $\alpha_1$  is the only subject visible from  $\alpha_j$  ( $1 < j \leq n$ ).<sup>12</sup>
- (33) a.  $\alpha$  binds  $\beta$ , iff  $\alpha$  c-commands  $\beta$  and is coindexed with  $\beta$ .  
 b.  $\alpha_i$  is *accessible to*  $\beta_j$ , iff  $\alpha_i$  c-commands  $\beta_j$  and there is no *i*-within-*i* violation if  $i = j$ .
- (34) a. A path,  $\pi$ , c-commands a (discontinuous) head,  $\beta$ , iff some node along  $\pi$  c-commands the (low edge of)  $\beta$  and shares no extended projection with  $\beta$ .  
 b. A path,  $\pi$ , is *coindexed with* a (discontinuous) head,  $\beta$ , iff the foot of  $\pi$  is coindexed with the (high edge of)  $\beta$ .

In (33), the standard definitions of binding and accessibility of nodes are given (cf. Chomsky, 1981), and in (34) the relations *c-command* and *coindexed with* are generalized so as to relate not only nodes but also paths and discontinuous heads (cf. Barss, 1986, for the development of a similar idea, namely that binding is a relation involving extended syntactic objects).

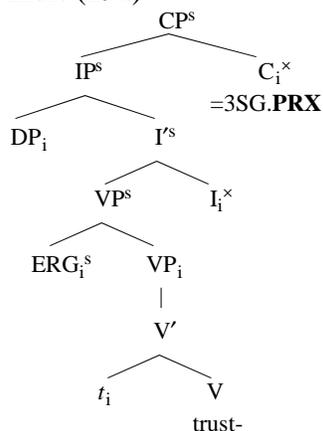
The local binding relation holding in the Warlpiri sentence (28) above exemplifies these definitions in the following manner. The verb ( $V_i$ ) and the complementizer ( $C_i$ ) are, respectively, the low edge and the high edge of a discontinuous proximate head, indicated by the informal  $\times$ -superscript notation in (35a). The head is proximate, because it contains the proximate complementizer *-nyanu* (glossed ‘PRX’). The anaphoric binding relation holds correctly here because this proximate head is bound by (c-commanded by and coindexed with) the subject path initiated by the ergative subject. The relevant path is set off in (35a) by means of the informal s-superscript notation.

(35) *Proximate objects*

a. Warlpiri (28)



b. \* Inuit (29a)



The corresponding Inuit sentence (29a), which is ungrammatical, is analyzed in (35b). Here the discontinuous proximate head whose high edge is C extends only down to I. Crucially, it does not include V. As a consequence, it cannot be c-commanded by the only subject path present (s-superscripts). The low edge, I, of this discontinuous proximate head is c-commanded only by  $VP^s$ —a node which is not independent enough, being part of the same extended projection (I and  $VP^s$  share the extended projections  $I'$ ,  $IP$ ,  $C'$ , and  $CP$ ; see Grimshaw, 1991). Since c-command is a prerequisite

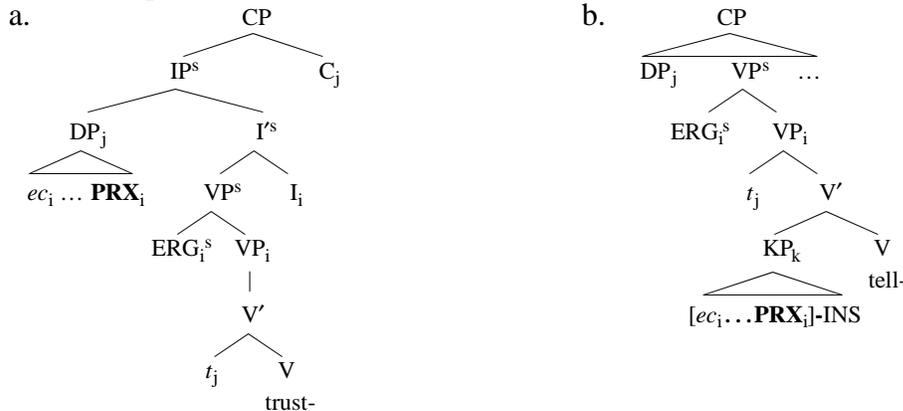
<sup>12</sup> The relevant notion of syntactic visibility is defined in Bittner & Hale 1996b, where obviation is discussed in more detail.

for binding, the discontinuous proximate head in Inuit (35b) cannot satisfy the Proximate Binding Condition—hence the ungrammaticality.

While a proximate object cannot be anaphorically linked to the subject of its own clause in Inuit, a proximate argument contained within an object *can* be linked to the subject. This follows, because the matrix subject initiates an accessible path in relation to the proximate determiner (D) of the object. This is exemplified by (36a), whose structure is depicted in (36'a).

- (36) a. Juuna-p            qimmi-**ni**            tatig(i-v)-a-i. (I)  
*Juuna-ERG [ec dog-PL.3SG.PRX] trust-IND-[+tr]-3SG.3PL*  
 ‘Juuna<sub>i</sub> trusts his<sub>i</sub> dogs.’
- b. Juuna-p    Kaali            ataata-**mi-nik**            uqaluttuup-p-a-a. (I)  
*Juuna-ERG Kaali [ec father-SG.3SG.PRX-INS] tell-IND-[+tr]-3SG3SG*  
 ‘Juuna<sub>i</sub> told Kaali<sub>j</sub> about his<sub>i</sub> father.’

(36') *Proximate possessors*



Sentence (36b), and its structural description (36'b), illustrate the subject orientation of Inuit proximate morphology. Only the VP-adjoined subject (ERG<sub>i</sub>)—not the intervening specifier (t<sub>j</sub>)—can bind the proximate determiner of the instrumental KP *ataataminik* ‘[self<sub>i</sub>’s father]-INS’.

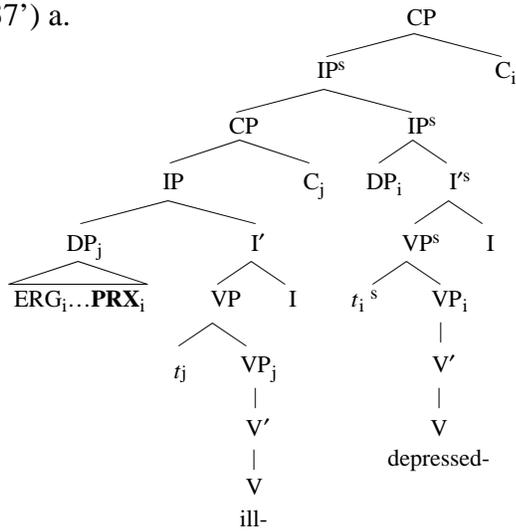
As in other switch reference systems, arguments construed with proximate morphology may be overt in Inuit, provided the relevant conditions of the A-binding system (i.e., the Binding Theory, cf. Chomsky, 1981, and related work) are not incidentally violated. For example, in (37a), the overt ergative nominal (possessor ERG<sub>i</sub>) internal to the subject of the dependent clause is anaphorically linked to the non-overt subject (*ec*) of the main clause, in conformity with the proximate morphology present. Condition C of the Binding Theory is not violated here, because the main clause subject does not A-bind the ergative nominal with which it is coindexed.

- (37) a. Juuna-p            ataata-**ni**            napparsima-mm-at            \_            nikallunga-v-u-q. (I)  
*[[Juuna-ERG father-SG.3SGPRX] ill-DPST-3SG] ec depressed-IND-[tr]-3SG*  
 ‘[Because [Juuna<sub>i</sub>’s father] is ill], he<sub>i</sub> is depressed.’
- b. Juuna-p    Kaali    tatigi-ga-**mi-uk**            \_            tuqqissima-v-u-q. (I)  
*[Juuna-ERG Kaali trust-DPST-3SGPRX-3SG] ec stay.calm-IND-[tr]-3SG*  
 ‘[Because Juuna<sub>i</sub> trusted Kaali], he<sub>i</sub> stayed calm.’

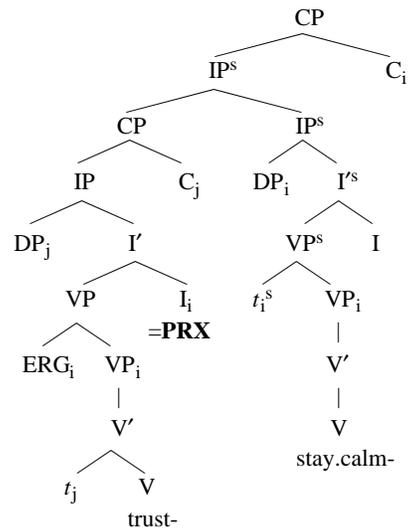
Sentence (37b), illustrating the same point, is parallel to (30b) above, but with proximate morphology construed with the subject of the dependent clause, rather than with the object. Here again, the argument construed with the proximate can be overt, since the Binding Theory is not violated; the main clause subject does not bind the subject of the dependent clause, although it is necessarily coreferent

with it. All of this is part and parcel of the theory of switch reference developed by Finer (1985). The structural configurations assigned to (37) are set out in (37'):<sup>13</sup>

(37') a.



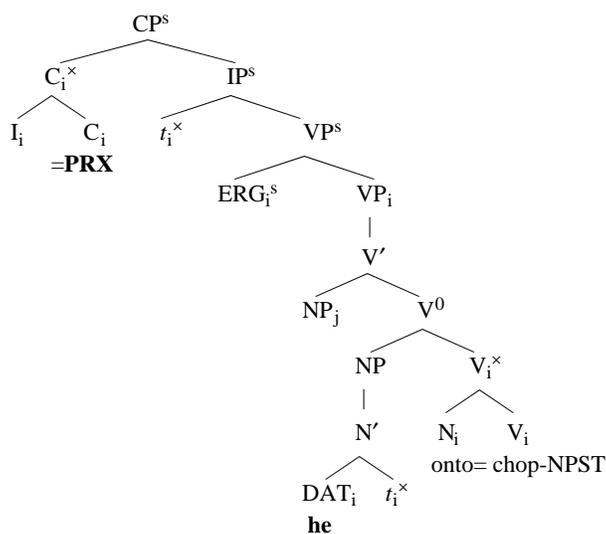
b.



Sentence (38) below illustrates essentially the same point for Warlpiri, but with reference to Condition B of the Binding Theory. The structure, depicted in (38'), involves a locative preverb, an affixal noun that incorporates into the verb from the d-structure complement with concomitant restructuring of a V'-segment as V<sup>0</sup> (see Bittner & Hale 1996b). The dative argument of the preverb, construed with proximate object morphology in C, may be represented overtly by a pronoun in this situation (Laughren, 1989, 1991; Simpson, 1991). As a result of V'-to-V<sup>0</sup> restructuring, the dative pronoun is contained within an adjunct of V<sup>0</sup>, not a complement of V'. Hence, its binding domain is the adjunct NP. Being free in this domain, the pronoun is licensed even though it must be coindexed with the ergative subject (cf. *John<sub>i</sub> saw a snake [near him<sub>i</sub>].*)

(38) Ngarrka-ngku ka-nyanu yaarlpa-paka-rni nyanungu-ku watiya. (W)  
*man-ERG PRS.3SG-PRX onto-chop-NPST he-DAT tree*  
 'The man is chopping a tree onto himself.'

(38')



<sup>13</sup> Only the subject paths accessible to the proximate functional heads are indicated.



controls pronominal agreement). This is exemplified in the following Warlpiri sentences. In (42a), the relevant object path is initiated by the dative complement of the verb (accounting, incidentally, for optional dative Case marking on the object controlled K of the infinitival). In (42b), it is the nominative theme, in the specifier position of the verb, that initiates the relevant object path:

- (42) a. Karnta-ngku ka-ju miyi **ngajulu-ku** yi-nyi  
*woman-ERG PRS.3SG-1SG food me-DAT<sub>k</sub> give-NPST*  
 — karli jarnti-rninja-kurra-ku. (W)  
 [*PRO<sub>k</sub> boomerang trim-INF-O.CRL<sub>k</sub>-DAT*]  
 ‘The woman is giving food to me, while I am trimming a boomerang.’
- b. Karnta-ngku ka-ju **marlu** ngajulu-ku jiilyngarri-rni  
*woman-ERG PRS.3SG-1SG kangaroo<sub>j</sub> me-DAT indicate-NPST*  
 — marna nga-rninja-kurra. (W)  
 [*PRO<sub>j</sub> grass eat-INF-O.CRL<sub>j</sub>*]  
 ‘The woman is pointing out a kangaroo<sub>j</sub> to me, while it<sub>j</sub> is eating grass.’

Thus, the s-structure representations assigned by the configuration-driven theory of Case and agreement correctly predict the A'-binding relations in Inuit and Warlpiri. Conversely, the evidence from binding supports an assumption crucial to that theory that *VP internal subjects*, in the small clause configuration [<sub>VP</sub> FP<sub>i</sub> VP<sub>i</sub>], are distinct from *secondary objects*, in [Spec, VP].

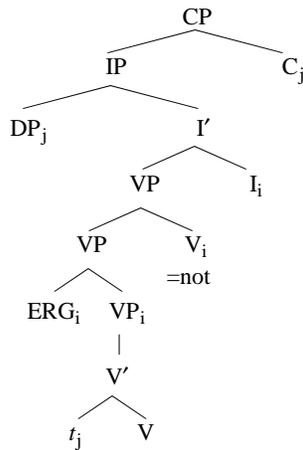
## 5. Consequences for minimal scope options.

In Inuit as well as Warlpiri, ergative subjects can take scope under VP level operators, such as the affixal verbs *-nngi* ‘not’ in Inuit or *yarda-* ‘again’ in Warlpiri. The narrow scope option is expected, given that ergative subjects are licensed *in situ* at s-structure. The ergative subject may also take wide scope, if it is raised out of the VP at LF (cf. May 1977). In other words, due to their VP internal position at s-structure, ergative subjects in Inuit and Warlpiri have the same scope options as accusative objects in English (cf. Montague 1973).

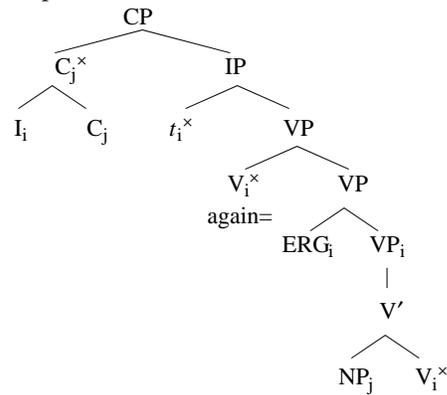
These scope options are illustrated in (43). The associated s-structures are shown in (43’).

- (43) a. Suli atuartu-p ataatsi-p Juuna uqaluqatigi-sima-nngi-la-a. (I)  
*still [student-ERG one-ERG] Juuna talk.to-PRF-not-IND-3SG.3SG*  
 (i)  $\neg\exists x[\mathbf{student}(x) \wedge \mathbf{talk.to}(x, j)]$   
 (ii)  $\exists x[\mathbf{student}(x) \wedge \neg\mathbf{talk.to}(x, j)]$
- b. Kurdu jintu-ngku ka Japayardi yarda-pi-nyi. (W)  
*[child one-ERG] PRS.3SG.3SG Japayardi again-hit-NPST*  
 (i)  $\mathbf{again}(\exists x[\mathbf{child}(x) \wedge \mathbf{hit}(x, j)])$   
 (ii)  $\exists x[\mathbf{child}(x) \wedge \mathbf{again}(\mathbf{hit}(x, j))]$

(43') a. *Inuit*



b. *Warlpiri*



On its s-structure reading (i), which all consultants accept, the Inuit sentence (43a) means that not even one student has talked to Juuna yet. Most consultants also accept the alternative reading indicated in (ii), which is compatible with a scenario where all the students but one have talked to Juuna.<sup>14</sup> In Warlpiri, the proposition which is the scope of the preverb *yarda* ‘again’ is asserted to be true at the time of the utterance and presupposed to be true also at some earlier time. So the Warlpiri sentence (43b), interpreted as in (i), asserts that some child is hitting Japayardi now and presupposes that some (other) child has hit him before. On the alternative reading (ii), there is a particular child who is asserted to be hitting Japayardi now and presupposed to have hit him before.

In Warlpiri, nominative arguments are likewise licensed *in situ* at s-structure. Their scope options are therefore the same as for ergative subjects, as the following sentences attest:

(44) a. Kurdu jinta ka yarda-yula-mi. (W)  
 [child one] PRS.3SG again-cry-NPST

(i) **again**( $\exists x[\mathbf{child}(x) \wedge \mathbf{cry}(x)]$ )

(ii)  $\exists x[\mathbf{child}(x) \wedge \mathbf{again}(\mathbf{cry}(x))]$

b. Japayardi-rli ka kurdu jinta yarda-pi-nyi. (W)  
 Japayardi-ERG PRS.3SG.3SG [child one] again-hit-NPST

(i) **again**( $\exists y[\mathbf{child}(y) \wedge \mathbf{hit}(j, y)]$ )

(ii)  $\exists y[\mathbf{child}(y) \wedge \mathbf{again}(\mathbf{hit}(j, y))]$

In Inuit, on the other hand, the opacity of the VP makes it necessary for nominative arguments to raise to [Spec, IP]. As a consequence, narrow scope readings are missing (Bittner 1987, 1994):

(45) a. Atuartuq ataasiq qiti-nngi-la-q. (I)  
 [student one] dance-not-IND-3SG

$\exists x(\mathbf{student}(x) \wedge \neg \mathbf{dance}(x))$

b. Suli Juuna-p atuagaq ataasiq tigu-sima-nngi-la-a. (I)  
 still Juuna-ERG [book one] get-PRF-not-IND-3SG.3SG

$\exists y(\mathbf{book}(y) \wedge \neg \mathbf{get}(j, y))$

<sup>14</sup> These judgements were elicited, from six consultants, by presenting (43a) in the context of the following story: “Three months ago, in order to find out what his students were interested in, Juuna suggested that they come to him individually to talk about their interests. Yesterday when I talked to him,…”

Raising to [Spec, IP] thus restricts the scope options for nominative arguments in Inuit just as it does for nominative subjects in English (likewise opaque, but of the accusative type).<sup>15</sup>

## 6. Hindi: a domain-restricting language.

In the foregoing sections we have discussed Inuit and Warlpiri in some detail. In this section, we briefly consider Hindi, an ergative language of a rather different type, sketching an account within the framework developed here.

In Hindi, the ergative Case pattern is found only in the perfective aspect. This pattern, which is illustrated in (46), is reflected not only in the Case morphology, but also in the agreement. The ergative Case appears on the subject of perfective transitives, as in (46b), while the subject of an intransitive is normally nominative, as in (46a). The object of a transitive is also nominative, under certain conditions, as in (46b) and as expected in a classically ergative system.

- (46) a. koi pustak nahiiN gir-ii hai. NOM  
*[some book](F) not fall-PRF.SG.F be.PRS.3SG*  
 (i)  $\neg\exists x(\mathbf{book}(x) \wedge \mathbf{fall}(x))$   
 (ii)  $\exists x(\mathbf{book}(x) \wedge \neg\mathbf{fall}(x))$
- b. kisii-ne koi pustak nahiiN dekh-ii hai. ERG-NOM  
*somebody-ERG [some book](F) not see-PRF.SG.F be.PRS.3SG*  
 (i)  $\neg\exists x(\mathbf{person}(x) \wedge \exists y[\mathbf{book}(y) \wedge \mathbf{see}(x, y)])$   
 (ii)  $\exists x(\mathbf{person}(x) \wedge \neg\exists y[\mathbf{book}(y) \wedge \mathbf{see}(x, y)])$

Pronominal agreement in Hindi perfectives is also “ergative” in behavior. As illustrated in (46), the auxiliary agrees (in person and number) with the nominative subject of an intransitive and the nominative object of a transitive. The same arguments control adjectival agreement, for number and gender, in the perfective participle. The ergative subject of a transitive (like all overtly Case marked nominal arguments) cannot control either pronominal or participial agreement in Hindi.

Hindi patterns with Warlpiri in the matter of scope relations. Specifically, all arguments have the option of taking narrow scope, as indicated in the logical representations assigned to (46a,b) (Davison 1978; Srivastav p.c.). This suggests that Hindi and Warlpiri share the property that all the arguments of a verb are licensed within the VP at s-structure.

While the Case marking seen in (46) conforms to the ergative pattern and one might therefore be tempted to analyze it in the manner proposed for Warlpiri or Inuit, this would be a mistake, we feel. The essential difference can be appreciated by considering the Case arrays associated with the “object domain” (V', for the direct object), on the one hand, and those associated with the “subject domain” (above predicate VP), on the other. In Hindi, these domains exhibit much greater mutual independence than in Warlpiri or Inuit (see Mohanan, 1990, for a detailed treatment of Hindi Case). In Warlpiri and Inuit, the Case array is determined for the clause as a whole, with the Case of the subject depending on the presence of an object and the Case assigned to that argument. In Hindi, on the other hand, the subject may appear in one of five different Cases (NOM, ERG, GEN, DAT, or INS), and any of these may occur alone or cooccur with either of the two Cases that may be assigned to the object (ACC or NOM). The following paradigm illustrates these basic facts:

<sup>15</sup> Ergative and accusative languages differ at the lexicon-syntax interface. In an accusative language, a transitive verb is inserted at d-structure, not bare as in Inuit and Warlpiri, but with an adjoined D (see (52) below). By functioning as a Case-competitor, the D-adjunct enables the verb to Case-bind the object and assign it the accusative Case (see Direct Case Realizations (12a); also section 6 below, and Bittner & Hale, 1996a).

- (47) *Progressive*
- a. kutte bhauNk rah-e haiN. NOM  
*dogs(M) bark PRG-PL.M be.PRS.3PL*  
 ‘The dogs are barking.’
- b. niinaa kuttoN-ko khariid rah-ii hai. NOM-ACC  
*Nina(F) [dogs(M)-ACC buy] PRG-SG.F be.PRS.3SG*  
 ‘Nina is buying the dogs.’
- c. niinaa kele khariid rah-ii hai. NOM-NOM  
*Nina(F) [bananas(M) buy] PRG-SG.F be.PRS.3SG*  
 ‘Nina is buying the bananas.’
- (48) *Perfective*
- a. kuttoN-ne bhauNk-aa. ERG  
*dogs-ERG bark-PRF.SG.M*  
 ‘The dogs barked.’
- b. niinaa-ne kuttoN-ko khariid-aa. ERG-ACC  
*Nina-ERG [dogs-ACC buy]-PRF.SG.M*  
 ‘Nina bought the dogs.’
- c. niinaa-ne kele khariid-e. ERG-NOM  
*Nina-ERG [bananas buy]-PRF.PL.M*  
 ‘Nina bought the bananas.’
- (49) *Nominalization*
- a. kuttoN-kaa bhaunNk-naa GEN  
*dogs-GEN bark-INF.SG.M*  
 anu-ko acchaa nahiiN lag-aa.  
*Anu-DAT good.SG.M not strike-PRF.SG.M*  
 ‘Anu didn’t like the dogs’ barking.’
- b. niinaa-kaa kuttoN-ko khariid-naa GEN-ACC  
*Nina-GEN [dogs-ACC buy]-INF.SG.M*  
 anu-ko acchaa nahiiN lag-aa.  
*Anu-DAT good.SG.M not strike-PRF.SG.M*  
 ‘Anu didn’t like Nina’s buying the dogs.’
- c. niinaa-kaa kele khariid-naa GEN-NOM  
*Nina-GEN [bananas buy]-INF.SG.M*  
 anu-ko acchaa nahiiN lag-aa.  
*Anu-DAT good.SG.M not strike-PRF.SG.M*  
 ‘Anu didn’t like Nina’s buying the bananas.’
- (50) *Capability “passive”*
- a. kuttoN-se bhauNk-aa nahiiN ga-yaa. INS  
*dogs-INS bark-PRF.SG.M not go-PRF.SG.M*  
 ‘The dogs couldn’t bring themselves to bark.’
- b. niinaa-se kuttoN-ko khariid-aa nahiiN ga-yaa. INS-ACC  
*Nina-INS [dogs-ACC buy]-PRF.SG.M not go-PRF.SG.M*  
 ‘Nina couldn’t bring herself to buy the dogs.’
- c. niinaa-se kele khariid-e nahiiN ga-ye INS-NOM  
*Nina-INS [bananas buy]-PRF.PL.M not go-PRF.PL.M*  
 ‘Nina couldn’t bring herself to buy the bananas.’

(51) *Modality*

- a. kutton-ko bhauNk-naa hai. DAT  
dogs-DAT bark-INF.SG.M be.PRS.3s  
'The dogs must bark.'
- b. niinaa-ko kutton-ko khariid-naa hai. DAT-ACC  
Nina-DAT [dogs-ACC buy]-INF.SG.M be.PRS.3SG  
'Nina must buy the dogs.'
- c. niinaa-se kele khariid-ne haiN DAT-NOM  
Nina-INS [bananas buy]-INF.PL.M be.PRS.3PL  
'Nina must buy the bananas.'

The Case of the direct object is determined by the verb and certain features of the object nominal, such as animacy, definiteness, and specificity (see Mohanan, 1990, for detailed discussion). It is reasonable to assume that this information is contained entirely within V', the "object domain":

(52) *Object domain*



We hypothesize that this domain contains, in addition to the verb and the object, an adjoined nominal head which makes it possible to license the object *in situ*. For the nominative, this adjoined element is K, enabling the object to satisfy the K Filter. For the accusative, it is a D, which functions as a Case-competitor, enabling the verb to Case-bind the object and assign it the accusative Case.

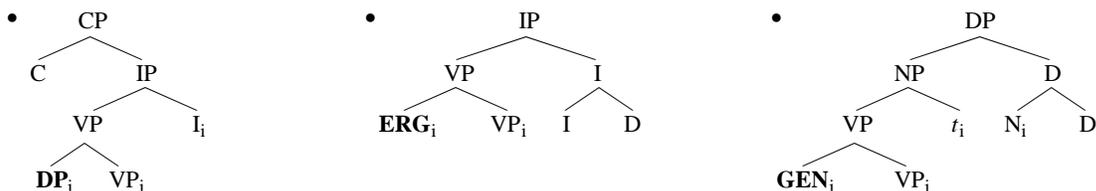
This analysis of object Case assignment in Hindi is, to be sure, abstract. As the reader can see, the verb word contains no overt elements which can be associated in any obvious way with an adjoined K or D. However, the analysis embodied in (52) is our formal representation of an idea which is quite traditional — namely, the idea that a verb may have the "capacity to assign" a particular Case. Within the configuration-driven theory of Case, a head has the capacity to assign marked structural Case precisely when it is in a Case-binding configuration. In particular, the capacity to assign accusative Case may be associated in this way with a verb with an adjoined D (see Direct Case Realizations (12a)). In many languages, the hypothesized D element is not abstract, being overtly realized as accusative object agreement (see Bittner & Hale, 1996a, for discussion and examples).

An adjoined K, we propose, corresponds to the somewhat rarer capacity to license a nominative object. Hindi appears to be a language in which verbs may have this capacity. For one thing, agreement, sometimes cited as the source of nominative Case, is not consistently associated with nominative objects in this language (contrast (48c, 50c, 51c), where it is, and (47c, 49c), where it is not). Moreover, evidence cited by Mohanan (1990) suggests that nominative objects of the type under consideration here are not incorporated and, therefore, must satisfy the K Filter.<sup>16</sup> We propose that it is the verb—more precisely, the K element hosted by V—which makes this possible, since there is no evidence that Hindi is transparent in the manner of Warlpiri, permitting the object to be licensed *in situ* by a functional head external to VP.

We turn now to the "subject domain". Subject Case is determined by elements which are generally assumed to be external to VP, such as aspect (cf. (47, 48)), nominalizing morphology (cf. (49)), or certain kinds of modal operators (cf. (50, 51)). The essential features of the analysis we would like to suggest are illustrated in (53):

<sup>16</sup> The otherwise plausible hypothesis that the "nominative objects" are in reality "unmarked accusatives" is considered and convincingly eliminated by Mohanan (1990).

(53) *Subject domain*



As in the object domain, so also here, the elements implicated in licensing the nominal argument are heads. The nominative subject satisfies the K Filter by virtue of its relation to the category C. This relation is indirect, however, being mediated by I, which agrees with the subject and functions as its “extension” (see Bittner, 1994, on parallel phenomena in Inuit).

Ergative Case, here as in Inuit and Warlpiri, is assigned by I, with the difference that the Case-competitor is an adjoined D rather than a full-fledged K-less argument. As a consequence, the subject of a perfective verb may be assigned ergative Case even in the absence of any nominative argument, as can be seen in (48a,b). Thus the ergative is not correlated here with the presence of a nominative, as it is in Inuit and Warlpiri.

The Hindi nominalized clause, illustrated in (49), can be compared with the Warlpiri infinitival as well as the possessed nominal of Inuit, whose s-structure representations are depicted in (18’) and (27’), respectively. In each of these nominal constructions, the head noun provides a Case-competitor for the internal subject by incorporating into the governing functional head (K in Warlpiri, D in Inuit and Hindi). In Hindi, the subject is then assigned genitive Case by D, in a manner analogous to the assignment of the dative Case by K in the Warlpiri structures in (18’), and of the ergative Case in the Inuit structure of (27’) (see Oblique Case Realizations (12b)).

The assignment of instrumental (INS) in (50) and dative (DAT) in (51) proceeds along the same lines, except that the Case assigning heads are lexical (see Bittner 1994, Bittner & Hale 1996a, b, and the Oblique Case Realizations for Inuit, in (12b) above).

## 7. Conclusion.

Although we deal with just three ergative languages here, it is clear that any theory which seeks to account for this heterogeneous class must in effect include a general theory of Case. Inuit and Warlpiri, by themselves, quite adequately represent the extremes within the classical ergative type. The addition of the third language, Hindi, with a radically split system, effectively extends the sample to the familiar accusative type as well as the much rarer ergative-accusative type. The latter is represented in its pure form by, for example, Antekerrepenhe (Arandic: Central Australia), Nez Perce (Penutian: Oregon), and Kham (Tibeto-Burman) (see Bittner & Hale 1996a).

The distinctive feature of the Case theory developed here consists in the idea that structural Case is assigned in predictable *configurations*, namely Case-binding configurations, which involve three elements, a head, a nominal argument, and a visible Case-competitor. To be sure, this is more complex than the idea that Case is assigned by predictable syntactic categories (as in Chomsky, 1980, 1981) or in predictable syntactic positions (e.g., [Spec, Agr], as in Chomsky, 1989, 1992). However, there are some advantages to the configuration-driven view of Case assignment. First, parametrization is limited to the morphological realization of structural Case categories and is not involved in the issue of whether or not structural Case is assigned. Second, for the direct Cases, even the realization conventions are universal (NOM) or have a universal core (ERG and ACC). Third, many oblique Case categories, heretofore thought to be “quirky” or idiosyncratic, are subsumed under the category of marked structural Case, being predictably assigned in the same Case-binding configurations and generally governed by the same principles except for a difference in their morphological realization conventions. To the extent that this is true, it greatly reduces the burden on the language learner.

According to the configuration-driven theory, there is no necessary relation between Case and agreement. Nevertheless, the theory predicts a non-trivial correlation between pronominal agreement and the direct Cases (NOM, ERG, and ACC). This prediction follows from two features of the theory. First, pronominal agreement necessarily involves canonical antecedent government (i.e., government and binding) of a nominal argument chain by a functional head. Secondly, nominal arguments in direct Cases—in contrast to structural obliques—are always governed and c-commanded by functional heads (NOM by C or K, *in situ*, also by I; ERG by I; ACC by D).

Case assignment and ergativity, as viewed here, are fundamentally structural phenomena. It is expected, therefore, that even morphological ergativity will have implications for other structure sensitive phenomena. The ERG-NOM array is determined when I Case-binds the VP internal subject, and the verb does not Case-bind the object. What makes ergative languages a heterogeneous class is the circumstance that this general description is compatible with a number of different structures. In particular it is compatible with the situation in which all the arguments of the verb are licensed *in situ*, as in Warlpiri and Hindi, and with the situation in which the nominative argument is raised to [Spec, IP], as in Inuit. This in turn accounts for the differences which exist within the class in relation to pronominal agreement, binding, and scope.

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