The Locus of Ergative Case Assignment: Evidence from Scope

Pranav Anand and Andrew Nevins

1. Is the Ergative *really* Nominative?

The apparently symmetrical patterns of A/S vs. O and A vs. S/O systems of case opposition often tempt an explanation of ergative as a structural (as opposed to inherent) case. In one class of such implementations, agent and object case are determined by distinct, cross-linguistically universal sources (e.g., T(ense) and *v*),[1] and the two types of case opposition result from parameters determining whether case on intransitive subjects aligns with objects or agents. This intuition has been formalized both in terms of global case-realization principles within GB – be it via dependence (Marantz 1991) or competition (Bittner & Hale 1996) – and, within the spirit of the minimalist program, in terms of whether A-case or O-case is obligatory (Bobaljik 1993; Laka 1993, 2000).

Regardless of the formalism recruited, proposals within this class all agree that the ergative is a structural case, differing from nominative only in terms of morphology and whether intransitive subjects align with it. Thus, they all predict that the syntactic behavior of nominative and ergative subjects should be largely parallel. Indeed, to date, no difference in subjecthood properties – such as

[1] The theories we discuss (including our own) crucially depend on two functional heads related to case assignment; they do not depend on whether these are Tense and *v* as opposed to Agr1 and Agr2, or any other pair of projections that have distinct structural loci.

control or binding –have been found in "morphologically ergative" languages. Moreover, there is no difference in the A'-status of ergative and nominative subjects (as diagnosed by the nonexistence of weak crossover; Bobaljik 1993).[2] Though the existence of "syntactically ergative" languages might immediately call the ergative-equals-nominative possibility into question, their diagnosis is still controversial, as both Dyirbal (Dixon 1994) and Eskimo (Bobaljik 1993, Bittner 1994) pair agents and subjects identically on tests of anaphora.

An interesting possibility is to look for divergences of syntactic behavior between ergatives and nominatives *within a single language*, ideally holding the argument structure of the verb and "discourse status" of the object constant; an aspectually-split-ergative language such as Hindi affords us the opportunity to do so.[3] If transitive subjects in the two halves of a split-ergative language show different syntactic behavior, we might call into question the hypothesis that the ergative/nominative distinction is merely a matter of morphological realization.

In fact, a broad class of proposals maintain that the ergative is not a structural case assigned by T(ense), but rather an lexical case due to thematic role (e.g., Nash 1995, Woolford 1997), or, equivalently, a structural case assigned in theta position (Ura 2000). A descriptive generalization (Marantz 1991) that supports these views comes from the fact that *derived* subjects are never ergative; that is,

[2] Mahajan (1990) *does* in fact argue for a WCO asymmetry between the ergative and nominative. See the end of section 3 for skepticism about this view.
[3] All subsequent instances of and remarks about "Hindi" can be substituted with "Urdu;" the distinction is solely political and orthographic, and we happen to have spent more time with native speakers who call their language Hindi.

there is no language that promotes an object to ergative in the passive. The requirement, then, that a noun phrase (henceforth DP) must be a thematic agent in order to bear ergative case leads to the view that it is a natural candidate for inherent case:

> Case theory already predicts the existence of a Case whose properties are exactly those of ergative Case. Case theory includes, in addition to its inventory of structural Cases, a series of lexical (also called inherent or quirky) Case that are assigned at D-structure in conjunction with theta-role assignment. Dative case is a lexical Case associated with goals/experiencers and lexical accusative Case is associated with themes. Note, however, that there is a missing Case in this series – the lexical Case associated with agents. (Woolford 1997:182)

In addition to the conceptual gap that ergative as an inherent case may fill, there are empirical advantages as well. The view that ergative is a structural case licensed by T(ense) is at odds to explain the fact that ergative case can, in some instances, occur in non-finite clauses, while structural nominative case cannot, as Legate (2003) demonstrates for Warlpiri. The morphological evidence itself often suggests that ergative is lower in the structure; ergative agreement appears closer to the root in Lummi (Jelinek 1993). In Hindi (Mohanan 1994), ergative marking on intransitives such as 'scream' varies according to the agency of the subject; similar findings have been reported for many other languages. Finally, as we will discuss in more detail in section 4, the optionality of objective case in ergative systems (Nez Perce, Hindi) suggests that the ergative cannot be characterized as a structural case licensed only *after* the obligatory discharge of *v* case.

The considerations in the preceding paragraph, however, avoid the direct question that we wish to pose with respect to the ergative (ERG) and nominative (NOM) and whether they are both the same structural case, assigned by the same functional head:

(1) **Question**: Does ERG differ from NOM with regard to *any* syntactic behavior?

This question serves as a possible decision criterion between the class of theories for which ERG is structural and those for which it is inherent. As we shall demonstrate in the following section, transitive ERG and NOM subjects in Hindi differ in the possibilities of quantifier scope. Arguing that ERG is an inherent case in Hindi, we will propose that the scopal differences between ERG and NOM subjects is related to the lack of a formal AGREE relation between T(ense) and the ergative subject. In section 3, we present an explicit implementation of ergative-as-inherent case.

2. Subjecthood and Scopal properties of the Ergative

We begin by revealing a surprising difference in quantifier scope possibilities for ergative and nominative subjects, through the following minimal pair, in which only the case of the subject (and its conditioning environment) vary. The diagnoses for quantifier scope involve the possibility of an "inverse scope" reading, in which the universally quantified object takes wider scope than the existentially quantified subject, resulting in a "distributive reading", in which, for

example, there need not be a unique agent acting on every object named by the event, but rather, for each object in the universe of discourse, a potentially different agent may have acted upon it, as the ambiguous sentence *Someone ate every dessert* illustrates. Configurations of this sort (an ∃ subject and a ∀ object) turn out to be more useful diagnostics for inverse scope than the reverse (a ∀ subject and an ∃ subject) for two reasons: (i) the ∀ > ∃ reading often truth-conditionally entails the ∃ > ∀ reading, and (ii) object indefinites are known to have properties affording them exceptionally wide scope, even out of islands (see Reinhart 1997 for a thorough discussion). The contrast for inverse scope possibilities in Hindi, therefore, must be demonstrated in a structure where the indefinite subject is receiving *narrow* scope with respect to a universally quantified object (*contra* surface ordering). As (2) demonstrates, this logical form is possible for nominative subjects, but not for ergative subjects:[4]

(2) a. koi shaayer har ghazal likhtaa hai
some poet-NOM every song-ACC write.m-IMPF be-PRES
'Some poet writes every song.' (∃ > ∀, ∀ > ∃)

b. kisii shaayer-ne har ghazal likhii
some poet-ERG every song-NOM write.f-PERF
'Some poet wrote every song.' (∃ > ∀, *∀ > ∃)

While (2a) admits an inverse scope reading, (2b) can only be interpreted with surface scope. Why should the ergative show scope freezing? Following Johnson

[4] These judgements apply only for unscrambled SOV sentences. Scopal freedom in OSV sentences is observed even for those Hindi speakers who report scopal rigidity in canonical SOV sentences. We refer the reader to Kidwai (2001) for a discussion of proposals to account for the effects of scrambling on scope interaction.

& Tomioka (1997), we will assume that scopal ambiguity between elements across the *v*P boundary requires reconstruction of the subject. To capture (2), we will propose that reconstruction is restricted to DPs that enter into an AGREE relation with the heads they are reconstructing from.

In the next section, we quickly review preliminaries on case and agreement in Hindi, as well as arguments that ERG and NOM subjects are both raised to [Spec, TP]. We then proceed with an implementation of a reconstruction-based account for scopal freezing in the ergative, including the arguments from Johnson & Tomioka (1997) that reconstruction is necessary for inverse scope. In the final two subsections, we consider possible sources of skepticism about our account for (2).

2.1. Preliminaries on Case, Agreement, and Subjecthood

Like many Indo-Iranian languages, Hindi is split-ergative. In non-perfective paradigms (present, future, subjunctive, past imperfective), transitive and intransitive subject receive no overt case-marking, and verbal agreement is with the agent/subject. In transitive verbs with perfective aspect,[5] however, the agent of transitive verbs receives ergative marking, and verbal agreement, when it

[5] Perfective participles can be accompanied by auxiliaries, in which case they are understood as perfect, or without them, in which case the are understood as simple past. For a discussion of the distinction between perfective (an indicator of completedness) and perfect (a time-span in which an event holds), see Iatridou, Anagnostopoulou and Izvorski (2001).

occurs, is with the object.[6] Aspect is marked on the verbal participle, which is composed of the stem and one of three aspectual markings (infinitival, perfective, and imperfective). The phi-featural agreement of each verbal element is schematized below.

(3) Verbal Morphology

	STEM+ASP	AUX+TNS
φ Agreement:	Number/Gender	Person/Number

The NOM and ACC Cases in Hindi are unmarked ('direct'), others show 'oblique' allomorphy (e.g., on determiners, and in final vowels) and are marked by postpositions:

(4) Case patterns of 'some good boy':

NOM:	*koi acchaa laRkaa*	ACC:	*koi acchaa laRkaa*
ERG:	*kisii acche laRke-ne*	COM/INST:	*kisii acche laRke-se*
DAT:	*kisii acche laRke-ko*	OBJCTV:	*kisii acche laRke-ko*

Descriptively, verbs agree with the highest c-commanded nominal without oblique case marking. Thus, verbal agreement never occurs with dative or ergative subjects, as these are oblique (i.e. inherent) cases. In the perfective, transitive verbs will agree with their object, except when the object is *objectively* case-marked, a process governed by specificity and animacy. Hindi is thus distinct from some of its Indo-Aryan neighbors (Gujarati, Nepali) and from other

[6] There are a handful of lexical exceptions: transitives without ERG in PERF (e.g. *bhuulna* 'forget,' *laanaa* 'bring'), intransitives with it (e.g. *chii)kna*: 'sneeze,'), and verbs that show optionality (e.g. *samajhnaa* 'understand'). We return to their scopal behavior below.

ergative languages (Georgian, Warlpiri, Basque) as well, in that verbal agreement cannot occur with inherently-case marked nominals (henceforth DPs). This is clearly a point of microparametric variation; Georgian and Basque agree with dative arguments, while Icelandic does not. The visibility of inherently-case marked DPs to agreement seems to be independent of case-assignment, structural position, or other syntactic characteristics, and we will henceforth characterize it as such:

(5) *The Visibility of Inherent-Case to Verbal Agreement* (VIVA) Parameter:
A language will differ as to whether the verb can agree with an inherently case-marked DP.

VIVA is clearly set to OFF in Hindi. If the agent is postpositionally marked, the verb agrees with the logical object. If the logical object is marked as well (e.g. OBJCTV or otherwise), agreement defaults to 3SG.M:

(6) a. aurat baccaa bulaa rahii hai
woman-NOM child-ACC call PROG-SG.F be-PRES-3SG.F
'The woman is calling a child.'

b. aurat-ko santare pasand ha)i)
woman-DAT oranges-NOM like be-PRES-3PL.M
'The woman likes oranges.'

c. caachii-ne laRkii-se pyaar kiyaa
aunt-ERG child-INST love do-PERF-SG.M
'The aunt loved the child.'

Ergative agreement in Hindi thus marks no departure from the independent agreement properties of the language. Transitive agents in the perfective happen to receive *differential subject marking* (the logical converse of the *differential object marking* that Aissen (2000) discusses for a variety of languages), and the agreement system, blind to inherent-case marking *throughout* the language, works as usual.

Short of the fact that case-marking on the agent differs (and as a consequence, verbal agreement does not obtain), we maintain that the clause structure of an ergative and non-ergative version with the same verb and object have identical surface syntactic positions for the lexical items involved. Thus, to allay any objections that the scope contrast in (2) is due to different surface structural positions of an ergative subject and a nominative subject, we adopt a concrete and falsifiable proposal, in which subjecthood (demonstrated here through control and binding) is the result of a particular structural position. Following Ura (2001), we assume these properties are inherited by virtue of being in [Spec, TP]. We turn to three classic tests for subjecthood to show that the Hindi ergative qualifies: binding of the subject-oriented anaphor *apnaa*, obviation with the pronominal *uskii*, and control into participial adjuncts (Mohanan 1994, Mahajan 1990, Kachru 1987):

(7) Binding of 'apna'

a. Salmaa Raam-se Mohan-ko apnii kitaab bhijvaayegii
   Salma-NOM Raam-INST Mohan-DAT self's book-NOM send-CAUSE-FUT
   'Salma$_i$ will get Raam$_j$ to send Mohan$_k$ self's$_{i/*j/*k}$ book.'

b. Salmaa-ne Raam-se Mohan-ko apnii kitaab bhijvaayii
Salma-ERG Raam-INST Mohan-DAT self's book-NOM send-CAUSE-PERF
'Salma$_i$ got Raam$_j$ to send Mohan$_k$ self's$_{i/*j/*k}$ book.'

(8) Obviation with 'uskii'

a. Salmaa Raam-se Mohan-ko uskii kitaab bhijvaayegii
Salma-NOM Raam-INST Mohan-DAT self's book-NOM send-CAUSE-FUT
'Salma$_i$ will get Raam$_j$ to send Mohan$_k$ his$_{*i/j/k}$ book.'

b. Salmaa Raam-se Mohan-ko uskii kitaab bhijvaayii
Salma-ERG Raam-INST Mohan-DAT self's book-NOM send-CAUSE-PERF
'Salma$_i$ got Raam$_j$ to send Mohan$_k$ his$_{*i/j/k}$ book.'

(9) Control into participial adjuncts

a. Salmaa Raam-se Mohan-ko [PRO adres khoj kar] uskii
Salma-NOM Raam-INST Mohan-DAT [PRO address search do] self's
kitaab bhijvaayegii
book-NOM send-CAUSE-FUT
'PRO$_{i/*j/*k}$ after searching for the address, Salma$_i$ will get Raam$_j$ to send Mohan$_k$ his$_{*i/j/k}$ book.'

b. Salmaa Raam-se Mohan-ko [PRO adres khoj kar] uskii
Salma-ERG Raam-INST Mohan-DAT [PRO address search do] self's
kitaab bhijvaayii
book-NOM send-CAUSE-PERF
'PRO$_{i/*j/*k}$ having searched for the address, Salma$_i$ got Raam$_j$ to send Mohan$_k$ his$_{*i/j/k}$ book.'

Note that these properties, i.e., the ability to control into an adjunct, cannot be reduced to derivational timing or base position of the arguments in question. The ability to control into adjuncts and bind subject-oriented anaphors is a property of Spec, TP, and *not* a property of agents, of items that originate in [Spec, *v*P], as the promoted object in passives is a 'subject' too:

(10) a. Mohan apne mu)gare-se maraa gayaa
Mohan-NOM self's mallet-INST hit-PERF go-PERF
'Mohan$_i$ was hit with his$_i$ mallet.'

b. Mohan uske mu)gare-se maraa gayaa
Mohan-NOM self's mallet-INST hit-PERF go-PERF

'Mohan$_i$ was hit with his$_{*i/j}$ mallet.'

c. Mohan [PRO mimiya kar] mu)gare-se maraa gayaa
Mohan-NOM [PRO bleat do] mallet-INST hit-PERF go-PERF
'PRO$_i$ having bleated like a goat, Mohan$_i$ was hit with a mallet.'

The behavior of ergative subjects Hindi points to the same conclusion that many researchers have found for non-nominative/non-agentive/non-agreeing subjects, e.g. Sigurdsson (2002) for Icelandic. The grammatical function of subjecthood (when taken independently of theta role, case, and agreement) seems entirely determined by the structural position of a DP.

2.2. Accounting for Scopal Freezing

Given the identical behavior of the ERG and NOM with respect to the tests of structural position in the previous discussion, it is unsurprising that the ergative-as-nominative family of proposals has enjoyed the popularity it has; all differences examined to date do seem to be morphological quirks about postpositional marking and agreement. However, the differential scope behavior of the two subjects (repeated below) suggests that there *must* be a syntactic difference between ERG and NOM.

(12) a. kisii shaayer-ne har ghazal likhii
some poet-ERG every song-NOM write.f-PERF
'Some poet wrote every song.' ($\exists > \forall$, $*\forall > \exists$)

b. koi shaayer har ghazal likhtaa hai
some poet-NOM every song-ACC write.m-IMPF be-PRES
'Some poet writes every song.' ($\exists > \forall$, $\forall > \exists$)

We claim that the relevant difference between ergative and nominative subjects responsible for scopal rigidity is the presence or absence of an AGREE relation with T, spelled out as morphological agreement between the verbal complex and the DP. That properties of the *subject*, and not those of the object or perfective aspect, are crucially responsible for scope freezing in the ergative, will be demonstrated in the next subsection.

Indeed, scope-freezing occurs in other contexts where the subject and T are not in an AGREE relation. In English Locative Inversion, the verb does not agree with the subject, although the locative shows subject properties (Bresnan 1994, Collins 1997). Inverse scope readings are not possible (Kuno 1971):

(13) a. Some actress stood on every stage. ($\exists > \forall$, $\forall > \exists$)
b. On some stage stood every actress. ($\exists > \forall$, $*\forall > \exists$)

Our explanation of this fact is based in part on the quantifier raising (QR) *plus* reconstruction derivation for inverse scope advocated by Hornstein (1995) and Johnson & Tomioka (1997). The latter observed that inverse scope is not obtained when reconstruction is impossible. Consider the following ambiguous sentence:

(14) Some student or other has answered many of the questions on the exam.
(many > $\exists$, $\exists$ > many)

Recall that English *some* is a positive polarity item (PPI) and cannot be in the scope of negation:

(15) I have not met some student (≠ I haven't met any student).

When negation is added to sentence (14), inverse scope is impossible, suggesting that reconstruction is necessary.

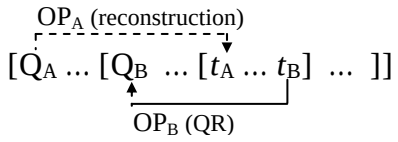
(14) Some student or other hasn't answered many of the questions on the exam.
(*many > ∃, ∃ > many)

If inverse scope were simply a matter of quantifier raising of the object, negation should make no difference. However, if reconstruction is required (and blocked in this case, since it would involve placing a PPI in the scope of negation), then we have an explanation for the fact in (14). And, as (15) shows, it is not the case that negation blocks inverse scope altogether, as replacing *some* by a non-PPI again allows inverse scope to obtain.

(16) Two students haven't answered many of the questions on the exam.
(many > ∃, ∃ > many)

This argument suggests that inverse scope requires *two* operations: reconstruction of the higher QP and raising of the lower QP, as schematized below. The failure of either operation to apply will yield scopal rigidity. (Note that this logic holds regardless of whether OP_B is QR as adjunction, movement of ∀ to DistP à la Beghelli (1997), "overt scrambling" à la Johnson & Tomioka (1997), or A-movement à la Hornstein (1995).)

(17) TWO SHIPS PASSING



Thus, scope-freezing can occur either when Q_B cannot QR above a trace of Q_A or when Q_A cannot reconstruct to the trace that Q_B scopes above. In the next subsection, we consider (and dismiss) other explanations for the scopal contrast in (2): that Hindi is scopally rigid and the apparent scopal ambiguity in imperfective cases is due to generic interpretation; that perfective aspect (and not the ergative nature of the subject) freezes scope; and that object QR cannot target a position above a trace of the subject. We demonstrate that none of these can be right, leaving subject reconstruction as the sole culprit. That is, we are left with the following restriction on reconstruction:

(18) **Agreement-allows-Reconstruction**: Reconstruction of an XP from a head H is possible iff H AGREEs with XP.

Though we lack sufficient space here, in Nevins & Anand (2003), we demonstrate that the agreement-scope relation for subjects holds elsewhere in English, and in Russian and Greek.

2.3. Hindi Scope Freezing is Due to Inability of Reconstruction

The skeptical reader may object that it is not actually the case that the ergative (perfective) paradigm has exceptionally frozen scope, but that the shoe is on the other foot – that Hindi simply is a scopally-rigid language, with the exception in

the imperfective paradigm. Indeed, it has been noted that imperfective aspects lend themselves more easily to generic interpretations; moreover, Fox & Sauerland (1995) noticed that normally scopally rigid sentences may show an 'illusive' inverse scope reading when read generically:

(19) QR out of finite clause

a. Yesterday, a guide ensured that every tour to the Louvre was fun.
(∃ > ∀, *∀ > ∃)

b. In general, a guide ensures that every tour to the Louvre is fun.
(∃ > ∀, ∀ > ∃)

Fox & Sauerland suggest that generic situations have an additional layer of quantification that allows for the illusion of inverse scope in (22b), This cannot be a general explanation of scopal *freedom* in Hindi, as wide-scope readings for the ambiguous Hindi cases remain after controlling for genericity, either by changing to progressive aspect (23a) or by forcing obligatory episodic interpretation of the predicate (23b):

(20) a. koi shaayer har ghazal likh rahaa hai
some poet every song write PROG be-PRES
'Some poet is writing every song.' (∃ > ∀, ∀ > ∃)

b. kal raat koi bacca har kitaab paRhega
tomorrow night some child every book read-FUT
'Tomorrow night, some child will read every book.' (∃ > ∀, *∀ > ∃)

We thus put aside the possibility that we are actually witnessing in (2a) a case of illusive scopal freedom in an otherwise scopally-rigid language. However, as ergativity is conditioned by perfective aspect, it is possible that scopal freezing is

a result of perfective aspect, and has nothing to do with case. There are several responses to this possible skepticism. First, there is no cross-linguistic evidence for a constraint on inverse scope in the perfective. In addition, it is unclear *what* about perfective aspect would explain this scopal freezing, especially given that even in Hindi the imperfective, another aspect requiring event-framing, admits inverse scope readings.

Most compelling though, is the existence of inverse scope readings in the perfective outside of ergative constructions. We illustrate inverse scope between: an intransitive subject and adjunct, the subject and object of verb that is (exceptionally) nominative-accusative in the perfective, and a restructuring verb and embedded clause object.

(21) Intransitive Subject and Prepositional Adjunct:
koi caukidaar har mandir-ke samne jhukaa
some watchman-NOM every temple in-front-of crouch-PERF
'Some guard crouched in front of every temple.' (∃ > ∀, ∀ > ∃)

(22) Subject and ACC Object in Perfective
koi aadmii har kitaab laayaa
some man-NOM every book-ACC bring-PERF
'Some man brought every book.' (∃ > ∀, ∀ > ∃)

(23) Sumita saare darvaaze kholnaa bhuul gayii
Sumita-NOM all doors-ACC open-INF forget go-PERF
'Sumita forgot to open all the doors.' (forget > ∀, ∀ > forget)

The possibility of inverse scope in the perfective when the subject *does* agree with the verb suggests that the distinguishing factor between scopally free and frozen

sentences is that when the subject does not bear ergative case in the perfective, it *can* take narrow scope.

It is important to recap that quantifier-raising of the object is not being blocked in the perfective. Recall that under the TWO SHIPS PASSING approach to inverse scope, scopal freezing can occur when either the higher quantifier cannot reconstruct or the lower quantifier cannot raise high enough. The latter explanation is unlikely given example (22), in which the object *can* QR high enough for inverse scope with the subject. Instead, it must be case that the ergative subject itself cannot reconstruct, a fact which the Agreement-allows-Reconstruction account captures.

2.4. Discussion of Other Relevant Scope Phenomena

For the sake of a complete account, we raise (and answer) two potential problems for a reconstruction-based explanation for Hindi scope freezing. First, Hindi sentences with dative subjects admit inverse scope readings, even though the subject and verb do not agree. Second, sentences with ergative subjects admit both sentential and predicational negation readings, a fact which usually (e.g. in English) is accounted for by recourse to reconstruction.

First, we note that Hindi has a dative experiencer construction, in which the experiencer, marked with the DAT postposition *-ko*, shows subject-oriented behavior (default word order, control into adjuncts; Hook 1990), but the verb agrees with the NOM-marked theme:

(24) Ram-ko bhuuk lagii
Ram-DAT hunger-NOM.F attach-PERF.F
'Ram felt hungry. (lit. Hunger attached to Ram)'

Hence, DAT-subjects, like ERG-subjects, do not enter into an AGREE relation with T. If reconstruction-enabled-by-agreement is the right characterization for scopal freezing in the ergative, dative-experiencer constructions should also show scopal rigidity, as per (18). They do not:

(25) kisii bacce-ko har kitaab milii
some child-DAT every book-NOM.F meet-PERF.F
'Some child received every book.' (∃ > ∀, ∀ > ∃)

However, the dative-nominative construction is structurally ambiguous -- it is possible for the DAT DP to bind into the NOM DP, or vice versa (Hook 1990):

(26) mujhe$_i$ [apne$_i$ sab rishtedaar] pasand ha)i)),
I-DAT [self's all relative] like be-PRES.3PL,
lekin ma)i)$_{\_i}$ [apne$_{_i}$ sab rishtedaaro)]-ko pasand nahi)i) hu)u)
but I-NOM [self's all relatives]-DAT like NEG be-PRES.1SG
'I like all of my relatives, but all my relatives do not like me.'

Given the two different structural possibilities for DAT-NOM order, inverse scope in the dative-nominative configuration is not a case that requires reconstruction, and falls outside the scope of our discussion[7].

[7] Masha Polinsky informs us that many Caucasian languages seem to allow mutual c-command between dative subjects and nominatives, but not between ergative subjects and nominatives. An intriguing possibility, not pursued in detail here, is that dative-nominative constructions are within more local base positions

The next phenomenon of interest is relative scope with respect to negation. That is, if the ERG-subject cannot reconstruct, we might expect it to be obligatorily above negation. But it can scope below; in particular, NPI ergative subjects are grammatical:

(28) kisii vidyarthii bhii-ne ye kitaab nahi)i) paRhii
some student **bhii**-ERG this book NEG read-PERF
'No student read this book.' (¬ > ∃ > ∀, *¬ > ∀ > ∃)

However, negation in Hindi does not seem to be a unique head with a fixed structural position. Even when negation scopes over an ergative subject, the subject is still rigidly above the object suggesting that subject reconstruction and sentential negation are not related:[8]

(29) har vidyarthii-ne koi kitaab nahi)i) paRhii
every student-ERG some book NEG read-PERF
'Every student didn't read some book.' (¬ > ∀ > ∃, *¬ > ∃ > ∀)

There is also some evidence that NEG can license items it has never c-commanded. Present tense auxiliaries can optionally drop in sentences with negation, and negation in an infinitival can both license auxiliary drop and an NPI:

(e.g. within an applicative domain), allowing equidistance for movement and binding, while ergatives are separated from the object by a distinct *v* domain.

[8] The predicational negation reading, with negation below the subject, is also possible.

(30) a. ma)i) dillii-me) nahi)i) rahtaa (hu)u))
I Delhi-LOC NEG live-IMPF (be-PRES)
'I don't live in Delhi.'

b. ek bhii laRka [dillii nahi)i) jaanaa] cahtaa (hai)
one BHII boy-NOM [Delhi NEG go-INF] want-IMPF be-PRES
'Not one boy wants to go to Delhi.'

The explanation that ultimately captures the aux-drop facts in (30b) -- be it in terms of neg-raising or multiple merge positions for negation (see, for example, the evidence for multiple scope positions of NEG that can be found in the literature for English (Boeckx 2001, Ladd 1981, Büring and Gunlogson 2000) and German (von Stechow & Penka 2003)) will also be able to account for the NPI facts. But it will not be able to explain the rigidity of sentential subjects and objects even when both are in the scope of negation, and this is precisely what (18) accounts for.

3. The Computation of Case and Agreement in Hindi

Before turning to the syntactic implementation of the possible case and agreement configurations in Hindi, it is important to point out that perfective transitives in Hindi do not show a so-called "ergative-absolutive" pattern. There is little reason to postulate the existence of absolutive case in Hindi, as it does not seem like the language maintains a "dual" to oppose ergative. Rather, we propose that ergative case is a differential subject marking, and that the rest of the clause is assigned case as usual. The importance of these remarks should not go

understated, as Hindi is taken to be an example of a language where subjects of intransitives and objects of transitives receive the same marking. For instance, Dixon (1994: 191), in a reference book on ergativity, claims (without data) that Hindi S and O are marked identically in the perfective. This is false in both directions. First, as many have noted (Mohanan 1994 in most detail), certain intransitives in Hindi *allow* ergative marking, which is never possible on transitive objects. True, proponents of the "absolutive hypothesis" could dismiss these as lexical exceptions or appeal to notions such discourse salience or the presence of covert objects. But the second half of the falsification is impossible to reconcile with the hypothesis that languages fundamentally align themselves in either S/A or A/O pivots. As is well known (see, for example Mahajan 1992, Bhatt & Anagnostopoulou 1996), Hindi allows direct objects to be marked by *-ko* (which we call objective case, adopting Woolford's (1997) term) as an indicator of specificity and/or animacy, conditions governed by similar considerations to those described by Enc (1991) for Turkish. Crucially, *-ko* marking is possible in the ergative as well as the nominative paradigm:

(31) Raam-ne rotii khaayii
Ram-ERG bread eat-PAST.**FEM**
'Ram ate bread.'

(32) Raam-ne rotii-ko khaayaa
Ram-ERG bread-OBJTCV eat-PAST.**DEF**
'Ram ate the (specific) bread.'

However, *-ko* is never marked on an intransitive subject.[9] It is thus requisite to distinguish at least three cases in Hindi: ergative, objective, and unmarked. Application of the term “absolutive” both obscures these facts and forces the invocation of “split absolutivity” along specific/non-specific lines, which recapitulates a distinction needed outside of the ergative paradigm.

Indeed, when the typological literature is examined more closely, we can make the same criticism about the term absolutive in general -- it has no cross-linguistically stable definition. For example, in Basque, it looks like ABS=ACC (Laka 1993), while in Dyirbal, Hindi, and Lummi, ABS=NOM. Legate (this volume) argues that what is called absolutive is an epiphenomenon in Warlpiri, and covers *both* NOM and ACC. The fact that “absolutive” is zero in many languages, few of which have enjoyed the careful tests of structural position that Warlpiri has, suggests that Legate's conclusion is more general. In Nez Perce, it looks like ABS (actually, objective) is assigned somewhere external to *v*P. Yimas presents an even odder possibility, where absolutive is an "EPP-case" (assigned to highest XP when there are no adverbs in spec, T) – an unexpected Case, to be sure, but distinct from accusative, which also exists (Phillips 1993). Thus, absolutive is not only a useless term, but dangerous, as it encourages unification where it shouldn't occur. Ergative, on the other hand, maintains a coherent definition, as it is always a form of differential subject marking on agents, often with the same

[9] Dative subjects of psych verbs (which take an object) are marked by *-ko,* and are found throughout Hindi, not limited to the ergative paradigm.

syntactic source: inherent case from transitive *v*, except in Basque (and perhaps elsewhere).

Before proceeding, we will offer a brief remark on what we have called "unmarked case" in Hindi in the preceding paragraphs. For concreteness, we will call an unmarked DP that controls agreement "nominative" and one that does not "accusative." Though this latter term could be substituted with others ("caseless", pseudo-incorporated), we have a concrete theory of accusative case, integrable with what is known about the marking of patients cross-linguistically, so we will retain it here. Thus, there are four cases that we will discuss: ergative, nominative, accusative, and objective.[10]

We will discuss the derivations of the ERG-OBJCTV and ERG-NOM systems found in perfective transitives. Before running through the derivations, it is helpful to understand the broad overview. Recall that we assume that ergative case is differential subject marking, or a lexical case, associated with the theta-role of agent. Its appearance in the perfective is a result of the fact that the perfective participle (35) *is* the passive participle (36) and hence has a v_{def} that cannot assign ACC case (Cowper 1989, Mahajan 2000, among others):

[10] Dative is a case as well, though it is homophonous with objective case. It may be that objective case is an instance of dative-promotion (as discussed for Romance by Gonzalez (2003) or that the two are simply morphologically syncretic, since, as Bhatt & Anagnostopoulou discuss, they can both appear in a single ditransitive clause. Note that the similarity to the four-way case system of Nez Perce is revealing, but that, contra the published version, Ellen Woolford (p.c.) informs us that dative *-px* and objective case *-na* are **not** syncretic in Nez Perce.

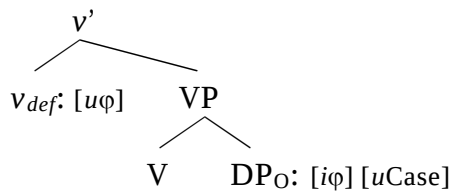
(33) aadmii-ne rotii khayii thii
man-ERG bread-NOM eat-PERF be-PAST
'The man had eaten the bread.'

(34) rotii khaayii gayii
bread-NOM eat-PERF go-PERF
'The bread was eaten.'

Because *v* is defective, T is the only case-assigner in the clause. However, both the object, which a complement of V, and the subject, MERGEd in [Spec, *v*P], require case, so the derivation will crash unless one of the DPs has its case requirement satisfied by some other method. Lexical ERG case absorbs the case requirement of the subject DP, rendering it inactive (and opaque to verbal agreement); hence the ergative subject is not assigned case by T, and there is no AGREE relation between the subject and T. As demonstrated in section 2.1 the ERG-marked subject *does* move to [Spec, TP] for EPP reasons. As traces are invisible to the minimal link condition, the effect of moving the subject out of the c-command domain of T is an instance of derivational PUNTING of an inactive goal out of the way of an AGREE relation between T and the object DP.

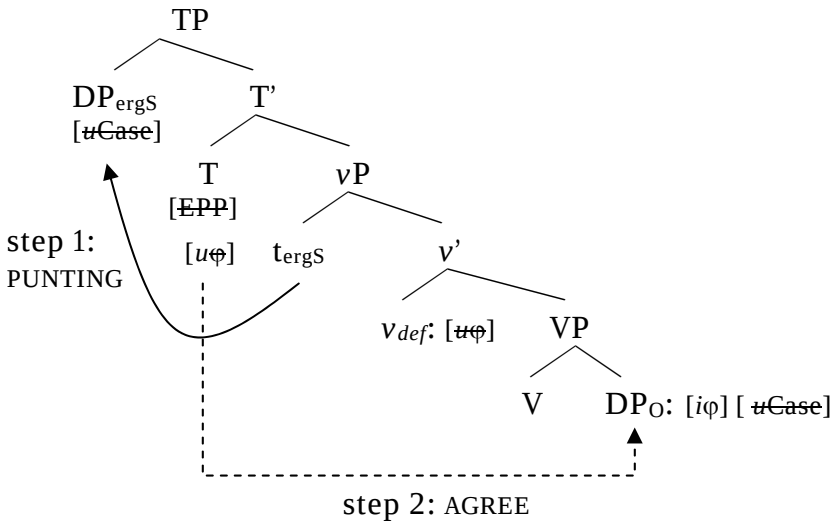
When the object DP is not marked with OBJCTV case, T establishes an AGREE relation with it and assigns it NOM case, thus accounting for the agreement of the verbal complex and the object in ergative clauses. This yields the **Erg-Nom** pattern. Let us sketch a derivation in more detail. The initial numeration is {DP_{ERGS}, DP_{O}, V, v_{def}, T, C}. MERGE applies until the insertion of v_{def}, as in (35):

(35)



The probe v_{def} enters into AGREE with the object DP and values its own φ features, but as *v* is defective, the DP's uninterpretable Case feature is not checked. The ergative subject is then MERGEd in [Spec, *v*P] with its Case feature assigned inherently. T is then MERGED, and probes down for a goal to value its φ features. The inactive ergative subject should produce an intervention effect. However, recall that T also has an EPP requirement (i.e. it requires an element in its specifier). As a Probe with multiple features will attempt to value any of them upon encountering a goal in its search space, the ergative DP can undergo MOVE to check T's EPP feature.

(36)



This movement in turn ameliorates a potential intervention effect,[11] as it allows a "clear search space" (i.e., free of c-commanding interveners) between T and the object. T enters into AGREE with the object DP, valuing its own φ features and assigning the object NOM case.

Having illustrated how the derivation of ERG-NOM results from case-marking of the ergative in-situ (Woolford 1997, Ura 2000), followed by EPP movement of the ergative, and subsequent T-agreement with the object, we turn to the derivation for the ERG-OBJCTV case, which introduces one interesting wrinkle. As exemplified in (33), in this construction, both DPs are overtly case-marked and the verbal complex shows masculine, 3rd singular agreement. We should note that the ERG-OBJCTV possibility in Hindi (and Nez Perce) is difficult to explain under the kinds of structural ERG analysis proposed by e.g., Bobaljik (1993), Laka (1993), in which assignment of the ERG is dependent on assignment of ABS (as implemented through the obligatory case assignment by the lower agreement projection in the derivation). In cases such as (33), the transitive object is marked with OBJCTV, not ABS, rendering the appearance of ERG on the subject somewhat surprising if ERG is dependent on ABS. It is possible to amend a story in terms of the Obligatory Case Parameter to deal with these facts by stipulating that ABS case, otherwise unmarked in Hindi, is actually assigned to the OBJCTV-marked DP, and that this case-marked DP has 3SG.M φ features (thus accounting for what appears to be default agreement). However, such a story must then explain why

[11] The reader is referred to Anagnostopoulou (2003) for similar arguments that movement of experiencer interveners for the EPP feeds AGREE with lower DPs.

objective case is a differential *object* marker; namely, why is it impossible on intransitive subjects, which, if the account is to achieve what it intends, must bear ABS case as well. For the purposes of discussion, we will assume that objective case in Hindi and Nez Perce is due to a functional projection distinct from *v* (see also Woolford 1997), henceforth referred to as ENCP. The effects of EncP are to enable a specific interpretation of the object, as discussed by Enc (1991) and, as a side effect in Hindi, to disqualify the object for verbal agreement.

From a pre-theoretical perspective, it must be the case that AGREEment in Hindi is maximized, but not obligatory. When there are no DPs that can enter into a φ feature-checking relation with a core functional category H, H's φ-features are valued with default 3SG.M. This property of the system marks the instantiation of parametric variation resulting from the non-obligatoriness of case assignment by functional heads in Hindi:

(37) Obligatory *v* case Parameter: *v* must assign a case (inherent or structural)
Obligatory T case Parameter: *T* must assign a case

The Obligatory *v* case Parameter is set to OFF in Hindi, as NOM-OBJCTV patterns instantiate subject case assignment by T, and object case assignment by EncP. Nez Perce, on the other hand, clearly has an ON setting for Obligatory *v* Case, as NOM-OBJCTV is banned. Basque, of course, has Obligatory *v* ON as well.

The importance of relativizing the obligatoriness of case assignment to each functional head becomes important when their settings are independent. In

addition to having the Obligatory *v* case parameter OFF, Hindi also has the Obligatory T case parameter set to OFF. This latter setting can be seen by the existence of ERG-OBJCTV patterns, in which the subject is assigned case by *v*, and the object is assigned case by EncP.

We summarize the possibilities for derivation:

(38) a. Obligatory T case OFF, Obligatory *v* case ON: unaccusatives marked with ACC (Basque) ; ERG-OBJCTV banned (Nez Perce).
b. Obligatory T case OFF, Obligatory *v* case OFF: ERG-OBJCTV, ERG-ACC, NOM-ACC, NOM-OBJCTV all possible (Hindi).
c. Obligatory T case ON, Obligatory *v* case OFF: unaccusatives marked with NOM (English, other well-behaved nominative-accusative languages).
d. Obligatory T case ON, Obligatory *v* case ON: A language with only transitive verbs (unattested).

The independence of the case assignment properties of each functional head is within the spirit of microparameterization: crosslinguistic variation is not due to global properties of a phrase marker, but rather results from the interaction of variation on individual functional heads in the course of a derivation. Narrowing our attention specifically to ergativity, this parametric formulation is within the spirit of Johns (1992), who suggested that ergative systems result from independent properties of the language at hand. Bittner & Hale's intuition that ergative systems are a heterogenous class was indeed correct: it seems that *all* they share is differential agent marking.

Returning to the Hindi facts which motivated the OFF setting of both obligatory case specifications, recall that in instances of ERG-OBJCTV case-marking, the

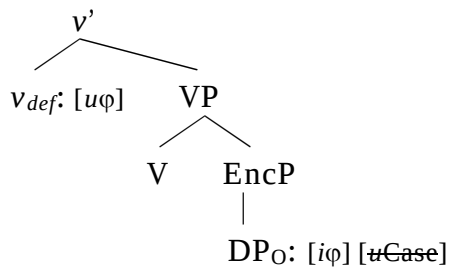
objectively-marked DP and T do not enter into any φ feature checking relation, just as the subject and T do not. The status of default-agreement within the minimalist program has remained largely undiscussed, as perhaps because a central hypothesis, that agreement is an uninterpretable feature that *must* be checked, cannot extend to cases where agreement simply seems to go unchecked. However, rather than abandon the notion that agreement is, in the normal state of affairs, uninterpretable, we maintain that this view is correct, unless the numeration contains $T_{checked}$. Lavine and Freidin (2001) make a similar proposal for default agreement in Russian accusative-instrumental configurations, where there is no nominative, and default agreement. $T_{checked}$ is simply the functional category Tense that is devoid of **un**interpretable features, and is instead, valued for 3rd person, masculine, singular morphosyntax.[12]

We offer a derivational outline of case and agreement in Hindi ERG-OBJCTV configurations. Recall that OBJCTV DPs have their case assigned by EncP, and subsequently cannot check T's φ features, due to the parametric invisibility of inherent case for agreement. Hindi stands in contrast to Nez Perce, in which the same ERG-OBJCTV configuration enables portmanteau verbal agreement with both arguments. Short of the setting for agreement visibility, much of the logic given above for the ERG-NOM construction applies. Again, v_{def} does not assign an

[12] These features are all the least-marked within their respective φ-category in Hindi. Though the least-markedness of 3rd within Person and singular within Number are fairly common crosslinguistically, gender markedness may vary, particular when the system contains neuter as well (e.g. in Russian).

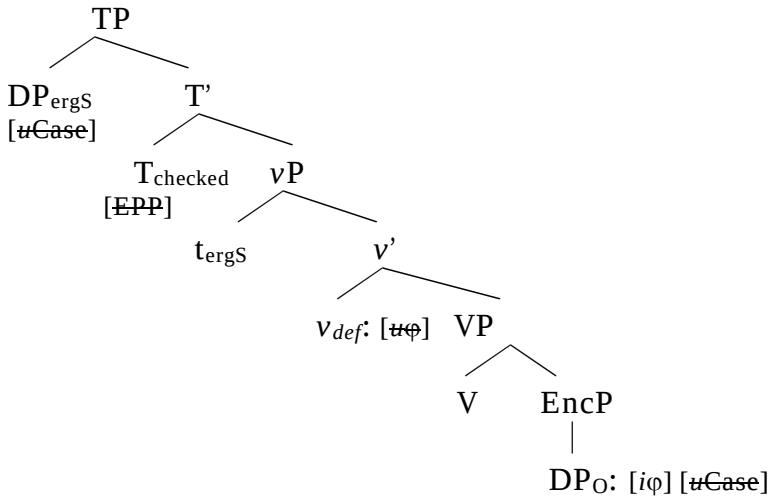
accusative case. However, in this instance, EncP is merged with the object DP, and AGREEment assigns it OBJCTV case.

(39)



At this point, the subject and $T_{checked}$ are MERGEd. The subject MOVEs to satisfy the EPP feature of T. Recall that $T_{checked}$ bears no uninterpretable features, and does not require agreement.

(40)



Of course, the selection of $T_{checked}$, a head which does not require agreement and does not value case, is crucial to the convergence of the derivation with two inherently case-marked DPs. There have been many recent discussions in minimalist literature as to whether convergent derivations are the result of just the right selection of functional heads from the inventory, or alternatively,

whether anything can be chosen, but those derivations will crash and we will never know about them, or alternatively, whether there are local principles that can ensure convergence. As there have been very few empirical phenomena which distinguish these views of syntactic computation, we will not take a definitive stance. We ought to note that our specific implementation of the ERG-OBJCTV pattern in Hindi essentially hard-codes correct selection of the correct heads, and that alternative formulations (in particular, in terms of the Agreement Maximization Principle of Schutze (1997), which optimizes agreement, but is violable) are possible.

Under the story above, "absolutive," "accusative," and "specific" objects are all MERGEd as complements of the verb, and all receive case *in situ*, below the subject. However, Mahajan (1990) presents evidence from weak-crossover suggesting that the A-positions of absolutive and specific objects are above the subject. Specifically, he argues that scrambled accusative objects do induce weak-crossover effects unless marked by the specificity marker *–ko* (41a vs. 41b), while absolutive objects do not (41c):[13]

(41) a. konse laRke-ko apnii maaN ghar-se nikaal degii? (ACC+*ko*)
which boy-OBJCTV self mother house-from throw give-FUT
'Which boy$_i$ will his$_i$ mother throw out of the house?'

b. ??konsaa laRkaa apnii maaN ghar-se nikaal degii? (ACC)
which boy self mother house-from throw give-FUT
'Which boy$_i$ will his$_i$ mother throw out of the house?'

c. konsaa laRkaa apnii maaN-ne ghar-se nikaal diyaa? (ABS)
which boy self mother house-from throw give-PERF

[13] Thanks to Lisa Travis for reminding us of this puzzle.

'Which boy$_i$ did his$_i$ mother throw out of the house?'

However, this may not be a fact about binding, as the speakers we have consulted who agree with the judgments in (41) have the exactly the same judgments when the anaphor *apnii* is replaced by *merii* 'my':

(42) a. konse laRke-ko merii maaN ghar-se nikaal degii?
which boy-OBJCTV self mother house-from throw give-FUT
'Which boy$_i$ will his$_i$ mother throw out of the house?'

b. ??konsaa laRkaa merii maaN ghar-se nikaal degii?
which boy self mother house-from throw give-FUT
'Which boy$_i$ will his$_i$ mother throw out of the house?'

c. konsaa laRkaa merii maaN-ne ghar-se nikaal diyaa?
which boy self mother house-from throw give-PERF
'Which boy$_i$ did his$_i$ mother throw out of the house?'

The contrast in (41) is thus does not appear to be about weak-crossover behavior of absolutive vs. accusative objects, but rather seems to be about the licensing conditions of *–ko*, which is generally taken to be obligatory for animate objects (for discussion, see Bhatt and Anagnostopoulou 1996). It can be demonstrated that this is about the relation of *–ko* and aspect, and not *–ko* and case, by replicating the facts in (41-42) with the verb *laanaa* (the same strategy we used to distinguish the source of scopal freezing in section 2.3):[14]

(43) a. konse laRke-ko Sita paartii-me) laayegii?
which boy-OBJCTV Sita party-in bring-FUT
'Which boy$_i$ will Sita bring to the party?'

[14] In standard Hindi 'bring someone' requires the postposition *–se* 'from, with' on the object. We report data for dialects in which the use of *–se* is optional.

b. ??konsaa laRkaa Sita paartii-me) laayegii?
which boy Sita party-in bring-FUT
'Which boy$_i$ will Sita bring to the party?'

c. konsaa laRkaa Sita paartii-me) laayii?
which boy Sita party-in bring-PERF
'Which boy$_i$ did Sita bring to the party?'

We take (43) as evidence that the contrast in (41) is about how perfectivity and *–ko* interact. Providing an explanatory theory for these facts is beyond the scope of this paper, but descriptively it appears that perfectivity induces a default specific reading, rendering the requirement for *–ko* on animates optional.[15]

In summary, we attribute the contrasts in (41) to the fact that *-ko* marking is generally obligatory for scrambled objects, but may be alleviated/omitted in perfective contexts. Should this be the correct statement of the facts, then the weak-crossover contexts are not a source of evidence for differential behavior of objects in ergative and non-ergative contexts.

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[15] Rajesh Bhatt (p.c.) points out that perfectivity is compatible with non-specific readings as long as the context makes it salient that the non-specific reading is desired. Hence, if (i) is uttered in a context where the question under discussion is '*Who did some necklace-stealing?*', there does not appear to be any specific necklace the speaker needs to have in mind:

(i) haar Mona-ne uThaayaa
necklace Mona-ERG lift-PERF
'Mona did some necklace-stealing.'

Note, however, that the non-specific reading of (i) really requires a salient question under discussion targeting the non-specific reading; the same is not the case for (i) in the imperfective. Thus, it appears that the perfective's induced specificity is *defeasible* by context.

Before concluding, we would like to reiterate the four most crucial aspects of our proposal:

(44) i. The Hindi ergative subject is not assigned case by and does not agree with T.
ii. Ergative subjects are in the specifier of TP.
iii. Control into adjuncts and subject-oriented anaphor binding are properties of surface position in [Spec, T].
iv. Narrow quantifier scope with respect to the object is a property of non-agreement.

Through the empirical discoveries and conceptual reformulations that mark the inevitable progress of syntactic theory, the details of the derivations above (in particular, the labels, which have the shortest half-life) will no doubt change. The generalizations in (44), however, will hopefully have interesting consequences for future researchers of scope in ergative languages.

4. Conclusions

Many ergativists formulate theories based on morphology and subject-tests alone, that, while internally consistent, postulate movements and checking relations that have consequences for the syntax beyond case and agreement. Starting with the surprising fact that scope freezes in the ergative half of a single language, we've provided a way to tell the some of these proposals apart – only inherent-case proposals (or, perhaps more generally, those that assume ergative case is assigned low, whether through inherent or structural means) can account for the difference in quantifier scope possibilities in two halves of a split ergative

language. We situated the locus of the difference in whether or not the subject agreed with the head of which it is a specifier suggesting that when this is the case, reconstruction is impossible. The Agreement-allows-Reconstruction generalization is intriguing, and seems to make correct predictions beyond ergative languages, e.g., in English, Russian, and Greek. A detailed look at other ergative languages in which there is actual agreement with the ergative (Warlpiri, Georgian, Basque; any language in which *VIVA* is on) can tell us whether the scope restriction is in fact due to non-agreement, or inherent case.[16]

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[16] Some suggestive data comes from Artiagoita (2001), who discusses the behavior of a peculiar class of epistemic modal verbs in Basque that assign ergative-case to their subjects, which can apparently raise from finite clauses. In (iia), when the subject is *in situ* in the embedded clause, only the surface scope of the modal and indefinite subject is possible. However, when the subject raises, both the surface and inverse scopes are possible, suggesting that reconstruction is allowed. Significantly, verbs in Basque show agreement with ergative subjects, and hence reconstruction should be possible under the agreement-allows-reconstruction generalization in (18).

(ii) a. jokalariren bat Rojorekin minduta dagoela ematen d-u
player-GEN one Rojo-with hurt is-that seem AUX-3ERG
'It seems that some player is upset with Rojo.' (seems > ∃, * ∃ > seems)

b. jokalariren batek Rojorekin minduta dagoela ematen d-u
player some-ERG Rojo-with hurt is-that seem AUX -3ERG
'Some player seems upset with Rojo.' (seems > ∃, ∃ > seems)

Regrettably, parallel examples cannot be tested in Hindi because it lacks raising-to-ergative predicates.

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