Two Types of Ergative Agreement: Implications for Case*

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1 Introduction

As Pesetsky and Torrego (2011) note, while significant advances have been made in our understanding of *case*—and the syntactic mechanisms which may or may not underlie it—research on case is still very much "a work in progress." At least two main areas of debate have emerged. Focusing for now just on *morphological* case, two questions can be asked:

(1) *How* is case assigned?

    a. PROBE–GOAL ACCOUNT: Case is assigned by functional heads to DPs through a relationship of *Agree* (e.g. Chomsky 2000, 2001).

    b. CONFIGURATIONAL ACCOUNT: Case is assigned configurationally, to certain DPs in local relationships with other DPs (e.g. Marantz 1991, McFadden 2004).

(2) *When* during the derivation does case assignment take place?

    a. IN THE SYNTAX: Morphological case is the spell-out of abstract case features, assigned during the course of the syntactic derivation (e.g. Legate 2008).

    b. IN THE MORPHOLOGY: Morphological case is determined post-syntactically, in the morphological component (e.g. Marantz 1991, Bobaljik 2008).

These two questions crosscut a third important concern: does the overt realization of case morphology reflect a deeper universally-present syntactic mechanism? Are abstract case (aka *Case*) features present even in languages with no visible case morphology?

This paper has two main goals. First, drawing on a well-known typological gap in alignment systems, I present an argument that case assignment must take place in the syntax, contra (2b). Second, I raise concerns about recent pushes to relegate *all* ergative case assignment to

configurational or "dependent case" accounts as in (1b) (Baker and Bobaljik to appear), discussed below. The empirical line of inquiry focuses on languages without any morphological case, but in which grammatical relations are expressed via *agreement*. Below I examine the reasons for thinking that agreement-only languages are important to our representation of case. I conclude that for (morphologically) caseless languages with an ergative agreement pattern, inherent ergative case assignment is both theoretically and empirically motivated. However, given that the possibility of functional heads inherently assigning case is independently needed in any configurational account, I propose that the options in (1) are in fact not mutually exclusive, but may vary across languages.

   The relevant typological gap is in (3): for languages which exhibit both morphological case and agreement, a mixed alignment pattern is possible in only a single direction. Specifically, while languages may show ergative alignment for *case* and nominative alignment for *agreement*, in cell ③, the reverse pattern in ② is claimed to be unattested (Anderson, 1976, Dixon, 1979).

(3)

AGREEMENT CASE	nominative-accusative	ergative-absolutive
nominative-accusative	① English, Tamil	② ***unattested***
ergative-absolutive	③ Nepali, Chukchi	④ Hindi, Kabardian

Woolford (2000) provides an account of absence of ②-type languages by eliminating "true" ergative agreement from the grammar altogether, a move which is also implicit in the discussion in Bobaljik 2008. I review this discussion in §2. Crucially, note that there is not a single way to show an "ergative" agreement pattern; for example, languages in which (i) only ergatives agree; (ii) only absolutives agree; or (iii) both ergative and absolutive agree, might all be reasonably considered languages with "ergative-absolutive" agreement (see e.g. Deal 2013). For our purposes, what is important is that none of these languages also has nominative-accusative case.

   In Coon (to appear), summarized in §3 below, I argue that true ergative agreement (i.e. agreement which directly targets the transitive subject) does exist, contra Woolford 2000. In §4 we turn to the consequences of the existence of true ergative agreement. I argue that theories of post-syntactic case assignment incorrectly predict the existence of ②-type systems; I further suggest that—at least in languages in which ergative agreement is not parasitic on morphological case—an *inherent-case* approach to ergative case assignment not only involves fewer stipulations, but is necessary in order to rule out the unattested pattern in (3). I conclude in §5.

2   Case and Agreement Interactions

The appearance of "ergative-abosolutive" agreement, Woolford (2000) argues, is always illusory. Take, for example, the Hindi pattern in (4). In the pair of sentences in (4), the transitive subject receives overt morphological marking, and the verb agrees with the *absolutive* arguments.

(4)   a.   Raam-**ne**   roTii   khaayii   thii.
            Raam(MASC)-ERG bread(FEM) eat.PERF.FEM be.PAST.FEM
            'Raam had eaten bread.'
      b.   Raam   baazaar gayaa.
            Raam(MASC) market go.PAST.MASC.SG
            'Raam went to the market.'   (Hindi; Mahajan 1990)

However, as has long been noted in the literature on Hindi, agreement cannot be determined based on grammatical function, but rather targets the highest morphologically unmarked nominal (see e.g. Mahajan 1990). In environments where the transitive subject does not receive ergative case marking, agreement is with the subject:

(5)   *agree*

     Raam   roTii   khaataa
     Raam(MASC) bread(FEM) eat.IMPF.MASC
     'Raam used to eat bread.'   (Hindi; Mahajan 1990)

As Woolford (2000) and Bobaljik (2008) note, agreement in Hindi looks much like agreement in certain corners of Icelandic, in which regular nominative agreement is blocked from targeting dative-case-marked subjects. In exactly these environments, agreement targets the unmarked object; see e.g. Sigurðsson 1996. Hindi and Icelandic thus provide clear evidence of the fact that morphological case on nominals may affect agreement. Bobaljik (2008) draws on typological work on the availability of agreement (Moravcsik, 1974, Croft, 1990) to propose a unified *accessibility hierarchy*, which governs which arguments may be targeted by agreement.

(6)   CASE ACCESSIBILITY HIERARCHY (Bobaljik, 2008:303)

Unmarked Case	≫	Dependent Case	≫	Lexical/Oblique case
nominative		accusative		dative
absolutive		ergative		dative

This hierarchy draws a connection between the accessibility of certain NPs to agreement and the formal mechanism of case assignment proposed in Marantz 1991. Both nominative and absolutive are listed as "unmarked" cases. Ergative and accusative are "dependent" cases, assigned to an NP in a certain domain when that NP is in a c-command relationship with another NP not already marked for "lexical/oblique" case. In this configurational approach to case assignment (see (1b)), case is not assigned to NPs by functional heads, but rather by an NP's configuration with respect to other NPs in a certain domain. The exception is lexical/oblique case, to which we return below.

The hierarchy in (6) is then read as follows: in a given language, if any NP is accessible to agreement, it is the unmarked (absolutive/nominative) NPs. This characterizes the situation in Hindi and Icelandic in which only unmarked NPs trigger agreement. A mixed case–agreement alignment system (cell ③), arises when (i) the language shows an ergative-absolutive alignment in its case marking, and (ii) both unmarked and dependent-case-marked NPs are accessible to agreement. This is the situation in Nepali, shown in (7).

(7)   a.   *agree*

       maile   yas pasal-mā patrikā   kin-**ē**.
       1SG.ERG DEM store-LOC newspaper.ABS buy-1SG
       'I bought the newspaper in this store.'

   b.   *agree*

       ma   thag-ī-**ē**.
       1SG.ABS cheat-PASS-1SG
       'I was cheated.'   (Nepali; Bickel and Yādava 2000:348)

A crucial assumption of Woolford (2000) is that the head of the finite clause—T^0 or $Infl^0$—is always the head responsible for agreement on finite verbs. For Bobaljik (2008), agreement always targets the *highest accessible* nominal in a given domain. The unattested pattern in cell ② is ruled out as follows: in a nominative-accusative case system, if anything is accessible for agreement, it will be the nominative subjects, and these would trigger agreement (as in English, Icelandic). A Hindi-type pattern in which absolutives agree is only possible when the (higher) transitive subject is inaccessible, and this only occurs in an ergative case marking system. This account relies on the fact that agreement is coming "from above". In the following section, I provide evidence that some agreement arises low.

3   Two Types of Ergative Agreement

Returning to the table in (3) above, a question arises about how to account for languages which show an ergative-absolutive system of agreement, but with *no* case morphology on nominals. The appearance of ergative-absolutive agreement in Hindi (i.e. agreement with absolutives) can be explained away as nominative agreement interrupted by an inaccessible ergative case-marked subject—but how can we explain away an ergative agreement system in a language with no overt morphological case marking?

Languages of the Mayan family constitute this type of pattern, as illustrated by the Ch'ol examples in (8) and (9). Here we find that the transitive subject is marked with a prefix, while transitive objects and intransitive subjects are both cross-referenced by absolutive morphemes, argued in Coon (to appear) and references cited there to be pronominal clitics.

(8) Tyi **y**-il-ä-y=**ety**.
     PFV 3ERG-see-TV-EP=2ABS
     'She saw you.'

(9) Tyi ts'äm-i-y=**ety**.
     PFV bathe-ITV-EP=2ABS
     'You bathed.'   (Ch'ol)

Woolford (2000) argues that all agreement is in fact nominative agreement. She discusses a related Mayan language, Popti' (Jakaltek), with a pattern similar to Ch'ol. She proposes that the transitive subject marker equivalent to *y-* in (8) represents *nominative* agreement from finite $Infl^0$ (see also Erlewine (2016) on Kaqchikel). The appearance of the absolutive clitic in the intransitive paradigm is the result of an Optimality Theoretic constraint ranking which prefers to realize person morphology as clitics, rather than agreement: *AGR≫*CL (English and Spanish would have the opposite ranking). Under this proposal, there is nothing "ergative" about Mayan languages at all.

In Coon (to appear), I discuss problems for these approaches and argue for the existence of ergative agreement which originates directly from a low head, transitive v^0; a similar configuration is also proposed for ergative agreement in Halkomelem (Salish) in Wiltschko 2006—another language which exhibits ergativity only by marking on the predicate—and for Kaqchikel Mayan in Henderson and Coon 2016 (contra Erlewine 2016). The two patterns of ergative-absolutive agreement are schematized in (10) and (11). In (11) I represent the ergative agreement as taking place between the head which introduces the external argument and the external argument itself—a kind of "inherent agreement" (see also J. Baker 2016 for independent discussion of this phenomenon). What is important for our purposes is that although they are different, *neither* type of agreement system co-occurs with a nominative-accusative pattern of case morphology.

(10) HINDI-TYPE AGREEMENT
      [$_{IP}$ Infl^0 [$_{vP}$ Subj-**ERG** v^0 [$_{VP}$ V Obj]]]
      └─── *"absolute" (=nominative)* ──▲

(11) CH'OL-TYPE AGREEMENT
      [$_{IP}$ Infl^0 [$_{vP}$ Subj [$_{v'}$ v^0 [$_{VP}$ V Obj]]]]
      ▲ *ergative* ┘

In section 4 I show that in order to rule out the unattested cell ② in table (3) above, both systems must be based on an abstract system of ergative case assignment.

3.1 Morphophonological Evidence

Lexical roots in Mayan languages are overwhelmingly CVC in shape (Haviland, 1994, Grinevald and Peake, 2012). Like other Mayan languages, Ch'ol has a number of so-called "vowel-initial" roots, like *il* 'see' and *ek'* 'star'. These VC roots appear with an initial glottal stop in word initial position (12), or when preceded by a proclitic like the agentive *aj=* in (13), but with no glottal stop when preceded by an ergative prefix, as in (14); see Bennett 2016.

(12) [**ʔ**il]-añ!
      see-IMP
      'Look!'

(13) [**ah=ʔ**il]-k'iñ
      CL=see-festival
      'pilgrim'

(14) Tyi [**k**-il]-ä.
      PFV 1ERG-see-TV
      'I saw it.'

Drawing on work by Lois (2011) on Yucatec Mayan, I argue that the insertion of the epenthetic glottal stop in forms like (13) is best explained under an analysis in which Mayan roots are subject to a *templatic* requirement, demanding that roots be CVC at the *v*P phase. As in Yucatec, suprasegmental features of vowels affect *voice* (e.g. active, passive); following Arad 2003 on Hebrew, this inflectional tier is inserted at the *v*P phase, at which point the CVC constraint is also evaluated. Crucially, if no consonantal material is present internal to the phase—as is the case in (12) and (13)—a glottal stop is inserted. Under the proposal that ergative agreement takes place low, we have an immediate explanation of why no epenthesis appears: the ergative prefix is present internal to the *v*P phase and thus satisfies the templatic requirement of the Ch'ol CVC root. See Coon (to appear) for details. Note that this account is only possible if agreement takes place in the syntax proper, as argued for in Preminger 2014 (cf. Bobaljik 2008); we return to this point below.

3.2 Syntactic Evidence

Further evidence for the low source of ergative agreement comes from Ch'ol embedded clauses. Non-finite embedded clauses lack the pre-verbal TAM maker, associated with finite Infl^0 in Mayan (Aissen, 1992). If ergative agreement comes from a low head, v^0, we do not expect it to disappear in non-finite environments (so long as at least the *v*P layer is present). This prediction is borne out, as shown in the embedded clauses below: the embedded unaccusative intransitive in (15) appears with no person/number marking (we return to unergatives below), while embedded transitives, as in (16) obligatorily appear with ergative marking in both the matrix and embedded clause.[1]

(15) **K**-om   [majl-el].
      1ERG-want   go-NML
      'I want to go.'

(16) **K**-om   [**k**-mek'=ety   ].
      1ERG-want   1ERG-hug=2ABS
      'I want to hug you.'

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[1] I argue elsewhere that all non-finite embedded clauses in Ch'ol are nominalizations (Coon, 2013), and that these embedded clauses are nominalized above the *v*P layer. I omit these details here for reasons of space.

Despite the double appearance of ergative marking, these are obligatory control constructions: as described in Vázquez Álvarez 2013, in the absence of TAM marking (i.e. finiteness) in the lower clause, both ergative markers must match. If the embedded subject is not co-referential with the matrix subject, a fully finite embedded clause must be used instead.

Sentences like (17) appear to contradict the generalization that ergative co-indexes embedded transitive subjects. However, forms like (17) are not truly transitive. When ergative marking is absent, the object must be a bare, non-referential NP. Possessors, numerals, determiners, pronouns, and demonstratives, are all impossible, as for example in (18). I suggest that the "object" *kajpe'* in (17) is pseudo-incorporated (see e.g. Massam 2001); since no object is licensed, these forms need not involve a transitive *v*P layer and so also lack ergative agreement.

(17) K-om   [jap   kajpe'].
      1ERG-want   drink coffee
      'I want to drink coffee.'

(18) * K-om   [jap   **jiñi** kajpe'].
      1ERG-want   drink DET coffee
      'I want to drink the coffee.'

The pseudo-incorporated form in (17) is then closer to the unergative in (19). Unergative roots in Ch'ol are nominal and must appear with a light verb in order to predicate, as in (20). In embedded contexts, there is no reason to think that anything besides a bare noun is embedded. Again, in the absence of a transitive *v*P layer, the lack of ergative marking here is entirely expected.

(19) K-om   [soñ   ].
      1ERG-want   dance
      'I want to dance.'

(20) Tyi k-cha'l-e   soñ.
      PFV 1ERG-do-TV dance
      'I want to dance.'

3.3 Summary

To summarize, Ch'ol provides evidence for the existence of true ergative agreement—that is, agreement which directly targets the transitive subject—as illustrated in (22) for the transitive sentence in (21). The transitive v^0 head agrees with the transitive subject in its base position, here a null *pro*. This agreement relationship is spelled out as first person *k-* on the verb stem.[2]

(21) Tyi k-mek'-e   jiñi ñeñe'.
      PFV 1ERG-hug-TV DET baby
      'I hugged the baby.'

(22)
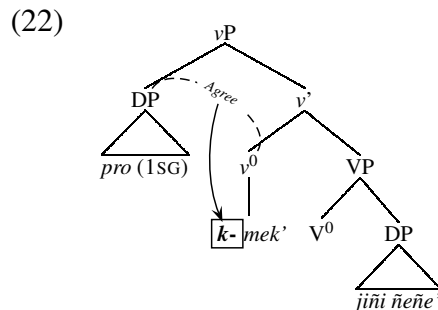
The fact that the ergative agreement occurs low, internal to the *v*P phase, accounts for the otherwise mysterious fact—found across Mayan—that the ergative prefixes bleed insertion of the epenthetic glottal stop in VC roots (§3.1). Furthermore, the low position of ergative agreement offers a straightforward account of the otherwise surprising contrast in (15)–(16): in non-finite

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[2]I assume the "status suffix" is located in a projection above the subject, not shown here, to which the stem moves. Following Harley (to appear) I assume that v^0 and Voice^0 are bundled together in Ch'ol, represented here as v^0.

embedded clauses, transitive stems obligatorily show subject agreement, even in obligatory control environments, while intransitives (unaccusatives) do not (§3.2).

4   Returning to the Gap

We now return to the typological gap in (3) above, repeated here in (23) with a new row added: languages which have agreement, but no morphological case on nominals.

AGREEMENT CASE	nominative-accusative	ergative-absolutive
nominative-accusative	① English, Tamil	② ***unattested***
ergative-absolutive	③ Nepali, Chukchi	④ Hindi, Kabardian
unmarked	⑤ Swahili, Huichol	⑥ Ch'ol, Halkomelem

(23)

The question is now: if ergative agreement is *not* always the result of nominative agreement originating in finite Infl[0] and interrupted by overt morphological case (as in cell ④), but rather may originate low in the structure in languages with no case (as in ⑥), how do we rule out the unattested cell in ②? This unattested language would look like Ch'ol-prime in (24), which differs minimally from actual Ch'ol in one crucial respect: an accusative case marker on transitive objects.

(24)   UNATTESTED CH'OL-PRIME

a. Tyi **k**-mek'-e   jiñi ñeñe'-**ma**.
   PFV 1ERG-hug-TV DET baby-ACC
   'I hugged the baby.'

b. Tyi wäy-i   jiñi ñeñe'.
   PFV sleep-ITV DET baby
   'The baby slept.'

If ergative agreement in Ch'ol takes place in the narrow syntax, as proposed in section 3 above (argued for in more detail in Coon to appear), then we run into an immediate problem for proposals in which morphological case is calculated post-syntactically, as in (2b) above. Specifically, if morphological case is assigned in a post-syntactic morphological component, nothing should rule out a language like Ch'ol-prime in (24): a language in which (i) an ergative agreement relationship is established between a low functional head, v^0, and the external argument, and (ii) accusative case is assigned *post-syntactically* to the lower of two arguments in a local domain (the unattested *-ma* in (24a)). On the other hand, if both case and agreement are the realization of features assigned in the narrow syntax, then we have some hope of restricting ergative agreement systems to languages with an abstract system of ergative case (and thus, without accusative case).

This brings us to the question of how these facts bear on the question in (1) above: *how* is case assigned in the syntax? I propose that the Ch'ol pattern is handled most naturally under an approach in which ergative is an *inherent* case, as in (1a), assigned by transitive v^0 to the external argument in its base position (see Woolford 1997, Legate 2008). If v^0 and the external argument have already entered into a feature-checking relationship (viz. abstract case assignment), it is natural to suppose that ϕ-agreement could be a morphologically visible result of this relationship. Under this approach, (inherent) ergative case assignment, and Ch'ol-type ergative agreement—i.e. *inherent ergative agreement*—go hand-in-hand.

In fact, if we want to rule out the unattested cell in ② above—Ch'ol-prime in (24)—this correlation must be strengthened: low/inherent ergative agreement of the type illustrated in Section 3 must always rely on the assignment of inherent ergative case. The feature-checking relationship

created by inherent ergative case assignment must be the only avenue for this agreement to appear. We still have two different types of ergative agreement systems, but both are now correctly dependent on the assignment of ergative case, ruling out unattested cell-② languages.

(25) a. <u>Hindi-type</u> (cell ④): morphologically-marked ergative case disrupts agreement from $Infl^0$ to transitive subjects; absolutives agree

  b. <u>Ch'ol-type</u> (cell ⑥): inherent ergative case is assigned to Spec,vP; ergative agreement is the result of this feature-checking relationship

Note that the Hindi-type pattern in (25a) is compatible with either inherent or configurational approaches to ergative case assignment; all that matters is that ergative case be assigned and inaccessible to agreeing probes, as in Bobaljik 2008. In a Ch'ol-type system in (25b), however, there would be no clear way to tie inherent ergative agreement to the assignment of *dependent* ergative case, even under more recent proposals which place configurational case assignment in the syntax (Baker and Vinokurova, 2010, Preminger, 2014, Levin and Preminger, 2015); these are simply two different syntactic mechanisms. In fact, if abstract ergative case were assigned configurationally in Ch'ol, we would be required to stipulate (i) ergative subjects are assigned *morphologically null* dependent ergative case, via competition with an unmarked (absolutive) object; (ii) agreement preferentially targets the dependent-case-marked ergative subject, in apparent conflict with Bobaljik's Accessibility Hierarchy in (6) above. These general concerns for head-marking ergative languages like those in the Mayan, Tsimshianic, and Salishan families exist in addition to the typological puzzle of how to rule out configurationally-assigned dependent *accusative* case in these languages. I have proposed here that this problem does not arise if ergative agreement is tethered to inherent ergative case assignment.

5 Summary

In this paper I examined two types of possible ergative-absolutive agreement systems. As has been previously discussed, in Hindi what may be superficially called "absolutive" agreement is in fact better understood as agreement from $Infl^0$, interrupted by ergative case-marked subjects. Previous work has capitalized on this type of pattern to rule out ergative agreement altogether, and thus, to rule out the gap in (3) above: ergative agreement does not cooccur with nominative-accusative case marking, because it is precisely the presence of *ergative* case which generates the illusion of an ergative-absolutive agreement system to begin with (Woolford, 2000, Bobaljik, 2008).

In Coon (to appear), summarized above, I argue that "true" ergative agreement (i.e. agreement which directly targets transitive subjects) in fact exists. Based on morphonological evidence, as well as the appearance of ergative agreement in non-finite embedded clauses, I show that ergative agreement in Ch'ol does not involve a high functional head; this is in line with other work on Mayan languages, and also argued for Halkomelem Salish in Wiltschko 2006.

In the final section, we turned to the consequences of the existence of true *low* ergative agreement in the syntax. First, with respect to the question of the timing of case assignment in (2), I argued that if morphological case were assigned in a *post-syntactic* morphological component (Marantz, 1991, McFadden, 2004, Bobaljik, 2008), it is difficult to see what would rule out a language like Ch'ol-prime, which has low ergative agreement but assigns accusative case post-syntactically. I suggest that this constitutes another empirical argument for case in the narrow syntax (see also Preminger 2014).

Restricting ourselves to case-in-the-syntax, both inherent and configurational approaches to ergative case assignment would permit agreement to track morphological case—the core point of Bobaljik 2008—and thus account neatly for Hindi-type languages. For Ch'ol-type languages, however, ergative agreement must be dependent on the assignment of *inherent* ergative case. Contra Baker and Bobaljik to appear, I propose that not only is inherent ergative case assignment possible, but it is required for languages with true ergative agreement.[3]

Note that all of the mechanisms used here to derive the gap in ② are independently needed. Given assumptions that (i) v^0 introduces the external argument, and (ii) argument-introducing heads may sometimes assign "quirky" or inherent case (e.g. dative) *even in configurational approaches*, it is unclear what would *rule out* the possibility of inherent ergative case assigned by v^0 (cf. Baker and Bobaljik to appear).[4] Assuming that an inherent-case-assigning v^0 has already entered into a feature-checking relationship, ergative ϕ-agreement is an unsurprising result.

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[3]I leave for future work the question of whether there is a correlation between head-marking/inherent-ergative, on the one hand, and dependent-marking/dependent-ergative, on the other.

[4]Thanks to Omer Preminger for discussion of this point.

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