2022. *Proc Ling Soc Amer* 7(1). 5254. https://doi.org/10.3765/plsa.v7i1.5254.

Ergativity as a natural manifestation of the *v* > EA base

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Abstract. This study proposes an analysis of ergativity based on the hypothesis that, contrary to the standardly assumed structure, the Case assigner *v* asymmetrically c-commands the base position of all the arguments of the verb, including the external argument. Simply assuming that an EPP feature attracts the closest NP it c-commands, and that a Case feature assigns structural Case to the closest NP it c-commands, we aim at a theory in which ergativity as well as accusativity is a natural manifestation of this universal base, while their differences reflect the parametric differences of the formal features of *v*.

Keywords. ergativity; *v*P structure; feature ordering; multiplicity of features

1. Introduction: *v* > EA. In the standardly assumed structure of transitive clauses (1), the external argument is base-generated in Spec,*v*P (Hale & Keyser 1993; Chomsky 2000). Here *v* does not c-command the external argument at any point in the derivation, and has no chance of assigning Case to it, under the assumption that structural Case assignment is only to an NP that the assigner c-commands.[1]

(1) $[_{TP}$ T{EPP, Case} $[_{vP}$ EA *v*{Case} $[_{VP}$ … IA …]]]
(EA: external argument; IA: internal argument)

Instead, I propose (2).

(2) a. Both T and *v* asymmetrically c-command the base positions of all arguments.
b. Both T and *v* have an EPP feature.

These assumptions bring about the following changes to the transitive clause structure: (i) *v* c-commands the external argument, but not vice versa, and (ii) *v* has an EPP feature. The result is illustrated in (3).

(3) $[_{TP}$ T{EPP, Case} $[_{vP}$ *v*{EPP, Case} $[_{VP}$ EA > IA]]]
($\alpha > \beta$: α asymmetrically c-commands β)

The rationale behind (2) is that the domain within which θ-roles are discharged should be distinct from the domain within which so-called "A"-related functions (A-movement, Case, agreement and so forth) are realized. This allows us to treat *v* as a purely functional head that potentially has the same set of formal features as T, unlike *v* in (1), which has the partially lexical character of assigning a θ-role.[2]

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[1] Unless it is explicitly assumed that *v* can assign structural (Ura 2000) or inherent (Woolford 1997; Legate 2008) Case to its specifier in some languages.

[2] Two notes are in order. One is about how to derive Burzio's generalization (Burzio 1986), which is straightforwardly captured in (1), as the category that discharges the external θ-role is responsible for Case assignment. In our system, it would be necessary to link the presence of Case on *v* to *v*'s selecting a category that generates an external argument, say VoiceP (Kratzer 1996), though I abstract away from the distinction between the VP/VoiceP in this article.

The other one is that what we call *v* here might actually be identified with the Aspect head (Asp): if this is true, we have two functional categories, T(ense) and Asp, constituting a semantically coherent domain governing eventuality, as opposed to the "θ domain" expressed by the lowest part of the clause. Also, this is consistent with the observation

In what follows, we explore how this view of of the clause structure offers a natural account of the basic properties of ergativity. In ergative languages, the subject (EA) of a transitive verb (referred to as A hereafter, following the convention in the ergativity literature), bears a different case (ergative) from the case (absolutive) that the object (IA) of a transitive verb (referred to as O) and the subject (EA/IA) of an intransitive verb (referred to as S) bear, as exemplified by Dyrbal (4).[3]

(4) *Dyrbal* (Dixon 1994: 10)

a. ɲuma-∅ yabu-ŋgu bura-n
father-ABS mother-ERG see-NONFUT
'Mother saw father.'

b. ɲuma-∅ banaga-n^{ɣ}u
father-ABS return-NONFUT
'Father returned.'

In section 2 I lay out important theoretical assumptions, including the parameters concerning formal features, and demonstrate in section 3 how the derivation of intransitive sentences proceed under this system. Section 4 illustrates the derivation for transitive sentences in accusative languages, and then section 5 shows how this system allows for derivations of transitive sentences in ergative languages, with some variations. In section 6 we turn to the derivation of passive and antipassive sentences. Section 7 concludes the article.

2. Parameters. I assume two key parameters, (5) and (6), which are directly involved in determining whether the sentence has an ergative or accusative case alignment.

(5) Multiplicity: Each formal feature F can be related to a single NP (F_{S}), or to multiple NPs (F_{M}).

Assuming that a formal feature searches its c-commanding domain for a matching feature from top down, (5) states that a feature F of a given category in a given language can only be related to the closest element it c-commands (in this case we say F is [−multiple]), or can keep searching and be related to a second closest element and so forth (F is [+multiple]) (Ura 2000). $\mathrm{EPP_S}$ attracts the closest NP to its specifier, while $\mathrm{EPP_M}$ attracts an indefinite number of NPs into its multiple specifiers, keeping their c-commanding relations intact (Richards 1999). $\mathrm{Case_S}$ can only assign Case to the closest NP, while $\mathrm{Case_M}$ can assign Case to multiple NPs (Hiraiwa 2005). (I omit subscritps S/M wherever the choice is irrelevant.)

(6) is about feature ordering, the order in which features of a single head invoke their operations.

(6) Feature ordering: If a head H has formal features F_1 and F_2, either F_1 invokes its operation before F_2 does, or F_2 invokes its operation before F_1 does.

As for EPP and Case, to which our discussion is limited, this means that each T or *v* either invokes EPP attraction first and then assigns Case ($\{\mathrm{EPP} \rightarrow \mathrm{Case}\}$), or assigns Case first and

that a subset of split ergativity is conditioned by aspect, if ergativity is a function of the parameter setting of *v* (= Asp)'s formal features, as is suggested in this article.

[3] The following abbreviations are used: ABS: absolutive; ACC: accusative; AOR: aorist; APASS: antipassive; DAT: dative; ERG: ergative; NOM: nominative; NONFUT: non-future; PASS: passive; PAST: past; PERF: perfective. Some glosses have been adapted for clarity.

then invokes EPP attraction ({Case → EPP}).

Also of importance is the parameter (7), which determines whether an NP may be assigned only one Case or may be assigned multiple Cases.

(7) An NP may be assigned only one Case or an NP may be assigned multiple Cases.

This could be viewed as the inverse version of (5), and it is a statement that some NPs can receive multiple abstract Cases, which may or may not be realized as morphological case stacking.

3. Intransitives. Let us start with intransitive sentences, as they follow more or less the same derivation paths regardless of the parameter setting of transitive *v*. In intransitives *v* does not have a Case feature (except in "Split-S" languages; see section 5.3), so we start with *v* with an EPP feature (8a).

(8) a. $[_{vP}\ v\{\text{EPP}\}\ [_{VP}\ \ldots\ \text{S}\ \ldots]]$
b. $[_{vP}\ \mathbf{S}_i\ v\{\mathbf{\sout{EPP}}\}\ [_{VP}\ \ldots\ \boldsymbol{t}_i\ \ldots]]$
c. $[_{TP}\ \text{T}\{\mathbf{\sout{Case}} \rightarrow \text{EPP}\}\ [_{vP}\ \text{S}_i.\mathbf{NOM/ABS}\ v\{\sout{\text{EPP}}\}\ [_{VP}\ \ldots\ t_i\ \ldots]]]$
d. $[_{TP}\ \mathbf{S}_i.\text{NOM/ABS}\ \text{T}\{\sout{\text{Case}} \rightarrow \mathbf{\sout{EPP}}\}\ [_{vP}\ \boldsymbol{t}'_i\ v\{\sout{\text{EPP}}\}\ [_{VP}\ \ldots\ t_i\ \ldots]]]$

First, *v*'s EPP feature attracts S to its specifier (8b). Next, T comes in. Suppose that T has the ordering {Case → EPP}[4]; then T assigns Case to S (8c), and then the EPP feature attracts S to Spec,TP (8d). This yeilds a sentence like (9) or (4b) in which the subject receives T's Case, which is realized as nominative or absolutive.

(9) *English*
She(NOM) ran.

4. Accusativity: *v*{EPP → Case}. Now let us consider a transitive sentence. In transitive sentences the *v* has a Case feature, and the ordering between Case and EPP brings about significant consequences.

First, we assume that *v* is set to $\{\text{EPP}_\text{S} \rightarrow \text{Case}\}$ (10a).

(10) a. $[_{vP}\ v\{\text{EPP}_\text{S} \rightarrow \text{Case}\}\ [_{VP}\ \text{A} > \text{O}]]$
b. $[_{vP}\ \mathbf{A}_i\ v\{\mathbf{\sout{EPP}}_\text{S} \rightarrow \text{Case}\}\ [_{VP}\ \boldsymbol{t}_i > \text{O}]]$
c. $[_{vP}\ \text{A}_i\ v\{\sout{\text{EPP}}_\text{S} \rightarrow \mathbf{\sout{Case}}\}\ [_{VP}\ t_i > \text{O}.\mathbf{ACC}]]$
d. $[_{TP}\ \text{T}\{\mathbf{\sout{Case}} \rightarrow \text{EPP}\}\ [_{vP}\ \text{A}_i.\mathbf{NOM}\ v\{\sout{\text{EPP}}_\text{S} \rightarrow \sout{\text{Case}}\}\ [_{VP}\ t_i > \text{O}.\text{ACC}]]]$
e. $[_{TP}\ \mathbf{A}_i.\text{NOM}\ \text{T}\{\sout{\text{Case}} \rightarrow \mathbf{\sout{EPP}}\}\ [_{vP}\ \boldsymbol{t}'_i\ v\{\sout{\text{EPP}}_\text{S} \rightarrow \sout{\text{Case}}\}\ [_{VP}\ t_i > \text{O}.\text{ACC}]]]$

Then *v* first attracts A (10b). Assuming that A-traces are invisible (Chomsky 1995), *v* ignores the trace of A in Spec,VP and assigns Case to O (10c). Then T assigns Case to A (10d), and T's EPP feature attracts A to its specifier (10e). Thus, this derivation leads to a sentence where A gets T's Case, and O gets *v*'s Case, and this is the accusative Case alignment exemplified by (11).

(11) *English*
We(NOM) saw them(ACC).

[4] In this framework finite T should have this ordering; otherwise it would fail to assign Case to the subject after the subject is raised to its specifier. It would be interesting to explore the possibility that non-finite T has the {EPP → Case} oredering, if we can assume that T's Case can be left unassigned in the language in question.

It is crucial to note here that A has no chance of being assigned Case by *v* precisely because it is raised out of *v*'s c-command domain before *v* tries to assign Case.

Note in passing that the EPP feature of *v* is specified as [−multiple] (EPP_S). If it were [+multiple], both A and O could be raised into Spec,*v*P without being assigned Case. This could lead to crash if the Case feature of *v* does not tolerate being left unassigned, or T cannot multiply assign Case to A and O; or it could lead to convergence if the Case feature of *v* tolerates being left unassigned and both A and O get Case from T.[5]

5. Ergativity: *v*{Case → EPP}.

5.1. ABS = NOM LANGUAGES. Now suppose that *v* has the "Case first" setting, with Case_S and EPP_M (12a). Let us also assume that an NP can receive only one Case, with respect to the parameter (7). Then, *v* assigns Case to A (12b), after which both A and O are raised into the specifiers of *v* (12c). Now T's Case looks for an NP that can receive Case. A is closer to T than O, but because A can receive no more Case, T assigns Case to O (12d). Then, A gets raised to Spec,TP by T's EPP feature (12e).[6]

(12) a. $[_{v\text{P}}\ v\{\text{Case}_\text{S} \rightarrow \text{EPP}_\text{M}\}\ [_{\text{VP}}\ \text{A} > \text{O}]]$
b. $[_{v\text{P}}\ v\{\mathbf{\sout{Case}}_\text{S} \rightarrow \text{EPP}_\text{M}\}\ [_{\text{VP}}\ \text{A}.\mathbf{\text{ERG}} > \text{O}]]$
c. $[_{v\text{P}}\ \mathbf{A}_i.\text{ERG}\ \mathbf{O}_j\ v\{\sout{\text{Case}}_\text{S} \rightarrow \mathbf{\sout{EPP}}_\text{M}\}\ [_{\text{VP}}\ \boldsymbol{t}_i > \boldsymbol{t}_j]]$
d. $[_{\text{TP}}\ \text{T}\{\mathbf{\sout{Case}} \rightarrow \text{EPP}\}\ [_{v\text{P}}\ \text{A}_i.\text{ERG}\ \text{O}_j.\mathbf{\text{ABS}}\ v\{\sout{\text{Case}}_\text{S} \rightarrow \sout{\text{EPP}}_\text{M}\}\ [_{\text{VP}}\ t_i > t_j]]]$
e. $[_{\text{TP}}\ \mathbf{A}_i.\text{ERG}\ \text{T}\{\sout{\text{Case}} \rightarrow \mathbf{\sout{EPP}}\}\ [_{v\text{P}}\ \boldsymbol{t}'_i\ \text{O}_j.\text{ABS}\ v\{\sout{\text{Case}}_\text{S} \rightarrow \sout{\text{EPP}}_\text{M}\}\ [_{\text{VP}}\ t_i > t_j]]]$

Recall from section 3 that the intranstitive subject (S) gests Case from T (with the exception of ergative subjects in Split-S languages; see section 5.3). Therefore, S and O get Case from T while A gets Case from *v*. If this result of abstract Case assignment is transparently realized by morphology, S and O bears the same case (absolutive) while A bears a different case (ergative). Gerogean is a candidate for a language with this kind of derivation.

(13) *Georgean* (Comrie 1987: 351–352)
a. Student-i mivida.
Student-ABS went
'The student went.'
b. Student-ma ceril-i dacera.
Student-ERG letter-ABS wrote
'The student wrote the letter.'

Legate (2008) demonstrates that morphologically ergative languages are divided into two classes: "absolutive as nominative" (ABS = NOM) languages and "absolutive as default" (ABS = DEF) languages. In ABS = NOM languages, of which Georgean is an example, S and O get the same abstract Case (from T) and A has another source of abstract Case (which is assumed to be inherent Case, following Woolford (1997)). Since in (12) (and (8)) both S and O receive Case from T, and A receives Case from a different Case assigner (*v*), a language with the above settings would correspond to an ABS = NOM language, although the mode of Case

[5] Which might be the derivation for sentences with a nominative object.

[6] Here the EPP feature must be [+multiple] for T to assign Case to O if we assume the Phase Impenetrability Condition of Chomsky (2000), which bans T from accessing elements within VP. If the EPP feature were [−multiple], O would not be raised out of VP and would stay inaccessible to T.

assignment to A is different: we assume that it is structural Case assignment to an element that the assigner c-commands, not inherent Case assignment to the assigner's specifier.

Despite the difference in the mode of Case assignment to A, our theory predicts, in the same way as Legate's theory does, that absolutive case becomes unavailable for S and O in non-finite contexts, since T lacks the ability to assign Case in such contexts, and it is T that assigns Case to S and O in finite clauses in this type of language (cf. Georgean examples (20) of Legate (2008)).

The next subsection shows that slight changes in the setting of parameters (5) and (7) yield the other type of ergative languages, i.e., ABS = DEF languages.

5.2. TRIPARTITE/ABS = DEF LANGUAGES. Let us now make the following changes to the parameter values in (12) and see what happens: we now suppose that the Case feature of *v* is [+multiple], and that Case can be multiply assigned to an NP, with respect to (7).[7] In this case *v* can assign Case to both A and O (14b), and raise them (14c). Now T looks for an NP that can receive Case, and this time it is A because, although it has been assigned Case by *v*, multiple Cases can be assigned to an NP. Therefore A gets T's Case as well (14d). Lastly, T attracts A, the closest NP, into its specifier (14e).

(14) a. $[_{vP}\ v\{\text{Case}_M \rightarrow \text{EPP}_M\}\ [_{VP}\ \text{A} > \text{O}]]$
b. $[_{vP}\ v\{\mathbf{\sout{Case}}_M \rightarrow \text{EPP}_M\}\ [_{VP}\ \text{A}.\mathbf{ACC} > \text{O}.\mathbf{ACC}]]$
c. $[_{vP}\ \mathbf{A}_i.\text{ACC}\ \mathbf{O}_j.\text{ACC}\ v\{\mathbf{\sout{Case}}_M \rightarrow \mathbf{\sout{EPP}}_M\}\ [_{VP}\ \boldsymbol{t}_i > \boldsymbol{t}_j]]$
d. $[_{TP}\ \text{T}\{\mathbf{\sout{Case}} \rightarrow \text{EPP}\}\ [_{vP}\ \text{A}_i.\text{ACC}.\mathbf{NOM}\ \text{O}_j.\text{ACC}\ v\{\sout{\text{Case}}_M \rightarrow \sout{\text{EPP}}_M\}\ [_{VP}\ t_i > t_j]]]$
e. $[_{TP}\ \mathbf{A}_i.\text{ACC.NOM}\ \text{T}\{\sout{\text{Case}} \rightarrow \mathbf{\sout{EPP}}\}\ [_{vP}\ \boldsymbol{t}'_i\ \text{O}_j.\text{ACC}\ v\{\sout{\text{Case}}_M \rightarrow \sout{\text{EPP}}_M\}\ [_{VP}\ t_i > t_j]]]$

Thus, in this derivation A gets multiple Cases, from T and *v*, while O gets Case from *v*. And, as S gets Case from T (section 3), this parameter setting gives rise to a language in which A, O and S are distinct from each other in terms of abstract Case. If the morphology of the language has means to express this situation transparently, mapping nominative, accusative and doubly assigned Cases ("ACC.NOM") to three distinct case morphemes, we have a "tripartite" case alignment, as seen in Nez Perce (Baker 2015: 22), where A, O and S are all marked differently.

In contrast to ABS = NOM languages mentioned in the previous subsection, what Legate (2008) calls ABS = DEF languages are actually syntactically tripartite,[8] but their morphology maps both T's Case and *v*'s Case to a default case that we call "absolutive", with A bearing a distinct case realizing an inherent Case. (Example languages include Warlpiri, Hindi, Enga and Niuean.) In our analysis, (14) actually yields the same result given an assumption that doubly assigned Cases on a single NP ("ACC.NOM") map to a morphological case that we call "ergative", and singly assigned Case ("NOM" or "ACC") to default "absolutive".

Thus, our theory predicts that in contrast to O in ABS = NOM languages, O in ABS = DEF languages may be marked as absolutive in non-finite contexts mentioned in 5.1, but not S, since in this type of language T assigns Case to S in finite clauses but *v* independently assigns Case to O even when the clause is non-finite and T's Case is unavailable (cf. examples from the above mentioned languages in Legate (2008: 62–65)).

[7] It is only for expository purposes that the EPP feature on *v* is assumed to be [+multiple] here. It could as well be [−multiple], in which case O is assigned Case by *v* as in (14b) and stays in situ throughout the derivation.
[8] See Baker (2015: 22) for discussion.

It is also worth noting that in ABS = DEF languages the two objects in the double object construction are absolutive, in sharp contrast to ABS = NOM languages (Legate 2008: section 2.4). This observation is compatible with our analysis, in which *v*'s Case feature in ABS = DEF languages is necessarily [+multiple], being able to assign Case to the two objects.[9]

5.3. SPLIT-S LANGUAGES. In so-called split-S languages, the subject of unergative verbs bears ergative and the subject of unaccusatives bears absolutive. Some split-S languages (e.g. Georgean (15)) are ABS = NOM languages and some (e.g. Hindi (16)) are ABS = DEF languages.

(15) *Georgean* (Harris 1982: 293)
  a. Rezo-∅ gamoizarda
     Rezo-ABS grow.up.AOR
     'Rezo grew up.'
  b. Bavšv-ma iṭira
     child-ERG cried.AOR
     'The child cried.'

(16) *Hindi* (Mahajan 1996: 46)
  a. Raam-∅ gir gəyaa
     Ram-ABS fall.PERF
     'Ram fell down.'
  b. Kuttõ-ne bhɔkaa.
     dogs-ERG bark.PERF
     'Dogs barked.'

This type of split in the case marking of intransitive subjects can be analyzed in this framework along the following lines. A necessary assumption is that the *v* of unergatives in this type of language has the ability to assign Case, whereas that of unaccusatives does not have the ability to assign Case (Burzio 1986). For the subject of unaccusative verbs (15a) and (16a), the derivation goes as depicted in (8), *v* having no Case feature. For the subject of unergative verbs, with our assumption that *v* c-commands the base position of the external argument (2), it is naturally predicted that the Case is assigned to the external argument. (17) illustrates the portion of the derivation up to the *v*P level.

(17) a. $[_{vP}\ v\{\sout{\textbf{Case}} \rightarrow \text{EPP}\}\ [_{VP}\ \ldots\ \text{S.}\textbf{ERG/ACC}\ \ldots]]$
  b. $[_{vP}\ \mathbf{S}_i\text{.ERG/ACC}\ v\{\sout{\text{Case}} \rightarrow \sout{\textbf{EPP}}\}\ [_{VP}\ \ldots\ \boldsymbol{t}_i\ \ldots]]$

In ABS = NOM languages (15b), the derivation converges if it continues as in (18), with an additional assumption that the Case feature of T (italicized here) can be left unassigned (Ura 2000: 222–223).

(18) ABS = NOM languages
  a. $[_{TP}\ \text{T}\{\textit{Case} \rightarrow \text{EPP}\}\ [_{vP}\ \text{S}_i\text{.ERG}\ v\{\sout{\text{Case}} \rightarrow \sout{\textbf{EPP}}\}\ [_{VP}\ \ldots\ t_i\ \ldots]]]$
  b. $[_{TP}\ \mathbf{S}_i\text{.ERG}\ \text{T}\{\textit{Case} \rightarrow \sout{\textbf{EPP}}\}\ [_{vP}\ \boldsymbol{t}'_i\ v\{\sout{\text{Case}} \rightarrow \sout{\textbf{EPP}}\}\ [_{VP}\ \ldots\ t_i\ \ldots]]]$

[9] On the other hand, the uniqueness of absolutive in double objects in ABS = NOM languages should be attributed to the uniqueness of T's Case, not to the uniqueness of *v*'s Case, both in Legate's and our analysis. It is not immediately clear how to account for this observation, as I have so far considered the multiplicity of T's Case to be independent of the nature of *v*.

(19) illustrates the continuation of (17) in ABS = DEF languages (for sentences like (16b)). Note that S here undergoes exactly the same derivation as A in a transitive sentence delineated in (14). In particular, S can receive Case from T in addition to *v*'s Case (19a), and the doubly assigned Cases map to morphological ergative, just as we saw for A in section 5.2.

(19) ABS = DEF languages

a. $[_{\text{TP}}\ \text{T}\{\cancel{\textbf{Case}} \rightarrow \text{EPP}\}\ [_{v\text{P}}\ \text{S}_i.\text{ACC.}\mathbf{NOM}\ v\{\cancel{\text{Case}} \rightarrow \cancel{\textbf{EPP}}\}\ [_{\text{VP}}\ \ldots\ t_i\ \ldots]]]$

b. $[_{\text{TP}}\ \mathbf{S}_i.\text{ACC.NOM}\ \text{T}\{\cancel{\text{Case}} \rightarrow \cancel{\textbf{EPP}}\}\ [_{v\text{P}}\ \boldsymbol{t}'_i\ v\{\cancel{\text{Case}} \rightarrow \cancel{\text{EPP}}\}\ [_{\text{VP}}\ \ldots\ t_i\ \ldots]]]$

6. Passives and Antipassives. Let us turn to how passives and antipassives can be analyzed within the current framework. A passive sentence (20b) has the subject (external argument) of its active counterpart demoted (marked as oblique) and the object promoted to subject (marked nominative or absolutive, if the language is ergative and has passive voice).

(20) *English*

a. Pat played the ballad.

b. The ballad was played by Pat.

In contrast, in an antipassive sentence (21b), it is the object (internal argument) of its active counterpart that is demoted and the ergative subject is marked as absolutive.

(21) *Dyirbal* (Palmer 1994: 18)

a. yabu-∅ ŋuma-ŋgu bura-n
mother-ABS father-ERG see-PAST
'Father saw mother.'

b. ŋuma-∅ bural-ŋa-ŋu yabu-gu
father-ABS see-APASS-PAST mother-DAT

In Tanaka (2018) I argued that passives can be handled along the lines of Baker et al. (1989), who propose that the passive morpheme represents the external argument, and is a clitic to the verb (V in their theory) that absorbs the verb's Case.

We can translate this idea into our framework as follows: the passive morpheme (PASS) is a clitic to *v*. Being a clitic, it serves as an XP occupying some specifier of the predicate that discharges an external θ-role, and serves as an X^0 that can (and must) attach to the head of a specified category (*v* in this case) (Chomsky 1995). Suppose the external argument of a transitive verb (A) is generated as a passive morpheme in an accusative language, where *v*'s feature ordering is set to {EPP → Case} (22a).

(22) a. $[_{v\text{P}}\ v\{\text{EPP} \rightarrow \text{Case}\}\ [_{\text{VP}}\ \text{A}{=}\text{PASS} > \text{O}]]$

b. $[_{v\text{P}}\ v\{\text{EPP} \rightarrow \cancel{\textbf{Case}}\}\text{-}\mathbf{PASS}_i\ [_{\text{VP}}\ \boldsymbol{t}_i > \text{O}]]$

c. $[_{v\text{P}}\ \mathbf{O}_j\ v\{\cancel{\textbf{EPP}} \rightarrow \cancel{\text{Case}}\}\text{-PASS}_i\ [_{\text{VP}}\ t_i > \boldsymbol{t}_j]]$

d. $[_{\text{TP}}\ \text{T}\{\cancel{\textbf{Case}} \rightarrow \text{EPP}\}\ [_{v\text{P}}\ \text{O}_j.\mathbf{NOM/ABS}\ v\{\cancel{\text{EPP}} \rightarrow \cancel{\text{Case}}\}\text{-PASS}_i\ [_{\text{VP}}\ t_i > t_j]]]$

e. $[_{\text{TP}}\ \mathbf{O}_j.\text{NOM/ABS}\ \text{T}\{\cancel{\text{Case}} \rightarrow \cancel{\textbf{EPP}}\}\ [_{v\text{P}}\ \boldsymbol{t}'_j\ v\{\cancel{\text{EPP}} \rightarrow \cancel{\text{Case}}\}\text{-PASS}_i\ [_{\text{VP}}\ t_i > t_j]]]$

Then, the passive morpheme raises and adjoins to *v* and absorbs its Case (22b). Next, O is raised to Spec,*v*P by EPP (22c), and is subsequently assigned Case by T (22d) and raised to Spec,TP (22e).

Note that this movement is due to the nature of the passive morpheme as a clitic, and not due to the EPP feature of *v*. Also, the feature ordering forces Case assignment to occur after

EPP attraction, but this does not prevent the Case absorbtion by the clitic, which occurs before *v* starts any of its operations.[10]

What makes this derivation possible is the fact that the Case assigner *v* asymmetrically c-commands the base position of the external argument; we only have to say that the clitic raises to the Case assigner and absorbs the Case. This was not possible in the general framework for Baker et al. (1989), in which the clitic has to lower to V.

There are some ergative languages that have passive voice, and passive sentences in ergative languages can be analyzed exactly as in (22), except that their *v* has the {Case → EPP} order. The difference in order does not affect the derivation, since Case absorption takes place before the operations by *v*'s features start, as is assumed above, and *v* is left with only its EPP feature.

Lastly, antipassive sentences can be generated by hypothesizing that they are like passive sentences, except that the antipassive morpheme (APASS) represents the internal argument (23a).

(23) a. $[_{vP}\ v\{\text{Case} \rightarrow \text{EPP}\}\ [_{VP}\ \text{A} > \text{O}{=}\text{APASS}]]$
b. $[_{vP}\ v\{\mathbf{\sout{Case}} \rightarrow \text{EPP}\}\text{-}\mathbf{APASS}_i\ [_{VP}\ \text{A} > \boldsymbol{t}_i]]$
c. $[_{vP}\ \mathbf{A}_j\ v\{\sout{\text{Case}} \rightarrow \mathbf{\sout{EPP}}\}\text{-APASS}_i\ [_{VP}\ t_j > \boldsymbol{t}_i]]$
d. $[_{TP}\ \text{T}\{\mathbf{\sout{Case}} \rightarrow \text{EPP}\}\ [_{vP}\ \text{A}_j\text{.}\mathbf{NOM/ABS}\ v\{\sout{\text{Case}} \rightarrow \sout{\text{EPP}}\}\text{-APASS}_i\ [_{VP}\ t_j > t_i]]]$
e. $[_{TP}\ \mathbf{A}_j\text{.NOM/ABS}\ \text{T}\{\sout{\text{Case}} \rightarrow \mathbf{\sout{EPP}}\}\ [_{vP}\ \boldsymbol{t}'_j\ v\{\sout{\text{Case}} \rightarrow \sout{\text{EPP}}\}\text{-APASS}_i\ [_{VP}\ t_j > t_i]]]$

The cliticization of the antipassive morpheme to *v* (23b) crosses over A, but this does not violate minimality, since this movement is motivated by the clitic's requirement to find and attach to a *v*, and is not motivated by *v*'s requirement to attract an NP. With *v*'s Case absorbed, the only remaining argument A undergoes the same process as S in an intransitive sentence.

7. Conclusion. I have sketched out how the idea of separating the θ domain and the functional domain related to A-syntax (T, *v*), and thus having *v* asymmetrically c-command the base position of the external argument, would yield a natural syntactic basis for ergative as well as accusative case alignment while strictly keeping to structural Case assignment as the mode of abstract Case licensing.

It is yet to be seen exactly how ergative agreement fits into this picture. Obviously, ϕ-features would occupy some place in the feature orderings, and we will need to sort out which of the logically possible combinations generate attested patterns, including languages with ergative case and accusative agreement patterns, and account for why unattested combinations are blocked.

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[10] It msut be assumed that cliticization occurs before the operations by *v* starts. Currently I do not know the rationale behind this assumption. An empirical reason for this assumption is to prevent the derivation of a sentence like **John is believed to love opera (by Bill)*, intended to mean 'John believes Bill to love opera.' This sentence would be generated if the passive morpheme is generated as the embedded A, is attracted to Spec,*v*P by EPP *before* cliticizing to any *v*, and then cliticizes to the matrix *v*.

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