Braj in the Ergativity Hierarchy

PRITHA CHANDRA & GURMEET KAUR[1], *Indian Institute of Technology Delhi and University of Göttingen*
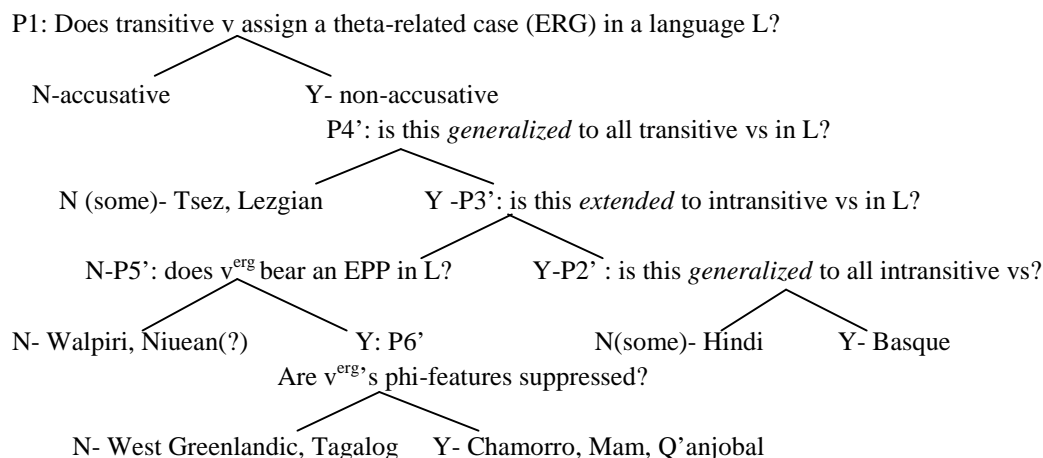
ABSTRACT

In generative literature, it is often assumed that closely related varieties differ minimally due to local effects of features (Barbiers 2009, Kayne 2000, 2013), with these small-scale differences located on the lower end of the *Parameter Hierarchy* (Biberauer and Roberts 2012, Roberts 2012). This paper re-visits one such hierarchy on ergativity (Sheehan 2017) by presenting novel dialectal data from Braj (Indic). Specifically, we illustrate that (a) ergative micro-variations in the language ensue not from feature level variation, but from underlying syntactic structures which in turn, have consequences for a v+erg head; these structural changes, however, affect a small domain, and (b) there exist cases of intra-dialectal case alignment variation, unpredicted by the hierarchy, which we relate to a phi-complete T head that is gradually superseding the v+erg head.

1   Introduction

Recent minimalist studies reduce cross-linguistic variation to sets of uninterpretable features of functional heads in any given language. This approach, now popularly known as the *Borer-Chomsky Conjecture* (Baker 2008), has led to an increasing interest in micro-variation/dialectal studies (Barbiers 2009, Kayne 2000, 2013). Dialects differ minimally on specific features; hence they provide the ideal ground to probe into the effects of individual features. One proposal linking up micro-level variation to meso and macro(typological) variation is the *Parameter Hierarchy* (Biberauer and Roberts 2012, Roberts 2012 among others), where each parameter splits into multiple levels, with the highest and least constrained depicting macro-variation and the most constrained depicting micro or nano-level differences.[2] Sheehan's (2017) *Ergativity Parameter* (1) is a case in point. At the very top of the hierarchy, ergative languages are typologically differentiated on bearing an inherent-ergative assigning v head (v+erg). Along this branch, further restrictions pertaining to the subclass of v, the presence of EPP on the v head, and the suppression of its phi features beget more nuanced case-pattern variations, suggestive of meso and micro-level variations. While Sheehan successfully uses these factors to account for variation for both structural and morphological ergative systems, we will, henceforth, be concerned with the right branch of the hierarchy dealing exclusively with morphological ergativity.

---

[1] Pritha Chandra: pritha@iitd.ac.in; Gurmeet Kaur: gurmeet.kaur@phil.uni-goettingen.de

[2] Proponents of the *Parameter Hierarchy* suggest that the hierarchies are not universal; rather they emerge from the interaction of two general cognitive conditions: (a) Feature Economy and (b) Input Generalization (Biberauer & Roberts 2012).

P1: Does transitive v assign a theta-related case (ERG) in a language L?

N-accusative   Y- non-accusative

P4': is this *generalized* to all transitive vs in L?

N (some)- Tsez, Lezgian   Y -P3': is this *extended* to intransitive vs in L?

N-P5': does v^{erg} bear an EPP in L?   Y-P2' : is this *generalized* to all intransitive vs?

N- Walpiri, Niuean(?)   Y: P6'   N(some)- Hindi   Y- Basque

Are v^{erg}'s phi-features suppressed?

N- West Greenlandic, Tagalog   Y- Chamorro, Mam, Q'anjobal

(1) Ergativity Hierarchy (Sheehan 2017)

Taking the Hierarchy as a point of departure, this paper investigates dialectal variations in Braj (Indic), and the structural conditions and constraints underlying them. Prima facie an aspect-based ergative split system, Braj does not look any different from many other morphologically ergative Indic languages such as Hindi-Urdu, Punjabi and Haryanvi (Bhatt 2007, Mahajan 2012, Udaar 2016, Kaur 2016). It case marks its perfective subjects with the ergative –*ne*, with the verb either carrying default agreement or agreeing with the unmarked object. On closer probe, however, Braj dialects show variation with respect to (a) select unergative predicates, (b) person-number specification on the subject, and even (c) intra-dialectal case alignment differences.

We analyze these disparate variation types and present two challenges to the hierarchy in its current form. First, we illustrate that contra a feature-based explanation for micro/nano-level variation, type (a) variation in Braj dialects ensues from underlying syntactic structures which in turn, have consequences for the ergative assigning properties of v. These structural changes, albeit restricted to a small domain at the current stage, also manifest themselves in a piecemeal fashion via featural (person, number) differences in some dialects, amounting to type (b) variation. The second issue for the hierarchy is presented by type (c) variation, which is an instance of intra-dialectal case alignment differences, unpredicted by the hierarchy. We relate these differences to a phi-complete T that is gradually superseding the v+erg head.

The paper is organized as follows: Section 2 introduces morphological ergativity in Braj. This is followed by presenting the three types of variation (a-c) in section 3. Section 4 attempts an analysis. Section 5 concludes the paper with observations on the hierarchy and possible revisions.

2   Morphological ergativity in Braj

Braj, also known as Braj Bhaashaa, is a Western Indo-Aryan language (WIAL) assumed to have originated from Saurasheni Apabhramsha (Snell 1991). The language is spoken in the state of Uttar Pradesh in India. Currently, there are approximately 11 districts that are generally assumed to be Braj-speaking areas. These are: Gautam Budh Nagar/Noida, Ghaziabad, Aligarh, Budaun, Bareily, Mathura, Hathras, Etah, Agra, Firozabad and Mainpuri (see Chandra & Kaur 2019 for more on Braj dialectal data).

Braj is an aspect based ergative language (Verbeke 2013, Drocco 2016), where the transitive subject in the perfective construction is obligatorily ergative marked with -*ne* and

cannot trigger verbal agreement. Contrastingly, the subject of the imperfective transitive clause is case valued nominative and agrees in number, gender and person with the verb-auxiliary complex. Consider a perfective and an imperfective sentence in (2) and (3) respectively from the Paigaon (Mathura) variety for illustration.

(2)   mɛ̃-ne/to-ne/bɔ-ne   ek   billi   mɑri
        1Sg-Erg/2Sg-Erg /3Sg-Erg   one   cat   hit.Perf.F.Sg
        'I/you/(s)he hit a cat.'

(3)   mɛ̃-Ø/tu-Ø/bo-Ø   ek   billi-ku   mɑtt-o   ũ/ɛ/ɛ
        1Sg-Nom/2Sg-Nom/3Sg-Nom   one   cat-Acc   hit.Imperf.Sg-M   be.Pres.1Sg/2Sg/3Sg
        'I/you/he hit(s) a cat.' (habitual)

The transitive domain across all twenty Braj-speaking areas exhibits morphological ergativity in the perfective. Unaccusatives in all variants of the language remain unmarked with the subject controlling verbal agreement, as shown in (4) from the Paigaon variety.

(4)   bo-Ø   nicɛ   gir   go
        3Sg-Nom   down   fall   go.Perf.3Sg
        'He fell down.'

3   Variation in the ergative case-agreement system

A closer investigation of the ergative case-agreement pattern across the twenty variants reveals variation with regard to (a) select unergative predicates, (b) person-number specification on the subject, and (c) intra-dialectal case alignment differences, which are presented in this section.
      The first instance of variation in the ergative alignment is noted in the unergative domain (Type a). Surveying the unergative constructions with 'laugh' and 'sneeze', we observe that only five Braj varieties (Paigaon, Rasoolpur Bela, Marehara, Bisauli and Antpuri) mark the subject as ergative across said predicates. Consider the illustration in (5) from the Paigaon variety.

(5)   bɔ-ne   chɛ̃ko/hɛ̃so
        3Sg-Erg   sneeze.Perf.3Sg/laugh.Perf.3Sg
        'He sneezed/laughed.'

In the remaining fifteen Braj dialects, only subjects of 'sneeze' receive an ergative, while subjects of 'laugh' are nominative. For illustration, consider the following examples from the Atour Nagla (Noida) variety, where the subject of the unergative 'sneeze' occurs with an ergative marker, (6), while the subject of 'laugh' occurs without the ergative –ne (7).

(6)   us-ne   chik   hɛ
        3Sg-Erg   sneeze.Perf.Sg   be.Past.3Sg
        'He sneezed.'

(7)   u-Ø   hɛ̃s   hɛ
        3Sg-Nom   laugh.Perf.Sg   be.Past.3Sg
        'He laughed.'

In addition, the unergative domain with 'laugh' also manifests instances of person-number based splits in two dialects of Braj (Type b).The first is noted in the Marehara variety with 1st plural

pronouns, which fail to receive an ergative case (8). This pattern is odd since Marehara is one of the five dialects that extend ergativity to all unergatives. The reverse pattern is seen in Nithari, which belongs to the remaining fifteen dialects. The 2nd singular subject with 'laugh' in Nithari can optionally occur with the ergative –ne, (9).

(8)   **h m-Ø s re**/tum s b-ne/un-ne/mɛ-ne/tɛ-ne/b -ne   h se/ h so
       1Pl.Nom all /2Pl all-Erg/3Pl-Erg/1Sg-Erg/2Sg-Erg/3Sg-Erg   laugh.Perf.1Pl/laugh.Perf
       'We/you all/ they/I/you/he laughed.'

(9)   **tu-(ne)**/   mɛ/   wo/h m s re/t m s re/we   h so/ h se
       2Sg-(Erg)/1Sg.Nom/3Sg.Nom/1Pl all.Nom/2Pl all.Nom/3Pl.Nom laugh.Perf.Sg/Perf.Pl
       'You/I/he/we/you all/they laughed.'

The final type of variation (Type c) is seen within two registers of the Mainpuri variety. The first register (register I), like other Braj varieties, exhibits an ergative system in the perfective aspect. Consider (10), where the subject is ergative marked and cannot control agreement on the verb. In the imperfective in (11), the subject receives a nominative value and triggers phi agreement on T.

(10)   m -ne/tum-ne/us-ne   bil-le   m r
      1Sg-Erg/2Sg-Erg/3Sg-Erg   Bill-Acc   hit.Perf
      'I/you/(s)he hit Bill.'

(11)   m -Ø/tu-Ø/w h-Ø   bil-k   m re   /ɛ/ɛ
      1Sg-Nom/2Sg-Nom/3Sg-Nom Bill-Acc hit.Imperf   be.Pres.1Sg/2Sg/3Sg
      'I/you/(s)he hit(s) Bill.'

In the second register (register II), in contrast, we observe a nominative-accusative alignment across aspectual specifications. Consider the perfective and imperfective sentences in (12)-(13). In both examples, the subject obtains an unmarked nominative and controls verbal agreement.

(12)   m -Ø/tu-Ø/wo-Ø   billi-ko   m re   th
      1Sg-Nom/2Sg-Nom/3Sg-Nom cat-Acc   hit   be.Past.M.Sg
      'I/you/he hit a cat.'

(13)   m -Ø/tu-Ø/wo-Ø   billi-ko   m re   h /hɛ/hɛ
      1Sg-Nom/2Sg-Nom/3Sg-Nom cat-Acc   hit   be.Pres.1Sg/2Sg/3Sg
      'I/you/(s)he hit(s) a cat.'

These instances of variation pose a challenge to the Ergativity Hierarchy in its current form. Variation of type (a) and (b) in Sheehan's hierarchy would be located at the lowest level, corresponding to micro/nano-level variation. It is indeed the case that these instances of variation are restricted in that they are observed for only one unergative predicate 'laugh', which can thereby be treated as a small-scale difference. However, a closer probe of said variation reveals that the change in the ergative assigning property of v with 'laugh' is a systematic structural change, ensuing from the syntax of the object. The hierarchy, being a feature based account of variation, cannot straightforwardly explain these facts.

      The second issue for the hierarchy is presented by the type (c) variation, which is an instance of intra-dialectal case alignment differences, unpredicted by the hierarchy. In Sheehan's hierarchy, the shift from an ergative system to a nominative system ensues from differential selection of the v head. Languages that choose a v+erg are typologically ergative-absolutive, while those that choose v-erg are typologically nominative-accusative. Such a macro-level

distinction found within a single dialect of Braj, raises questions about how the same set of speakers end up with two different v heads for their dialect. With these challenges in mind, we provide our account of variation in Braj ergativity in the next section.

4 Towards an account

4.1 Unergative variation

As seen previously, Braj varieties exhibit differences in ergative case on the subject with 'laugh'. With 'sneeze', however, all variants have a uniform ergative marked subject. To understand this variation, we consider (i) case patterns with a wider spectrum of unergative verbs, (ii) selectional restrictions with light verbs, and (iii) the syntactic properties of unergative objects, where present.

4.1.1 A divide in the Unergative Domain

In addition to 'laugh' and 'sneeze', we collected data from four verbs- 'run', 'jump', 'work' and 'talk'. Verbs 'run' and 'jump' pattern together and occur with a nominative subject, as in (14). In contrast, the verbs 'work' and 'talk' behave alike in exhibiting an ergative subject, as in (15).

(14)   be-Ø   k l   d ro/ kud
          3Sg-Nom   yesterday   run.Perf/jump.Perf
          'He ran/jumped yesterday.'

(15)   b -ne   k l   b t   k ri/   b -ne   k l   k m k r
          3Sg-Erg yesterday talk   do.Perf.F.Sg/3Sg-Erg yesterday work do.Perf.M.Sg
          'He talked yesterday/he worked yesterday.'

Thus, unergative verbs in Braj seem to fall into two categories: (i) those that take ergative subjects ('sneeze', 'work', 'talk'), and (ii) those that do not ('laugh', 'run', 'jump'). Prima facie, the case divide seems to be sensitive to predicate types. However, as the next sub-section shows, light verb selection also has a role to play in case alignment.

4.1.2 Light verb combination

It is well-known that (in)transitivity of light verbs plays a crucial role in determining ergativity in Indo-Aryan languages (Amritavalli 1979, Mahajan 2012 among others). Consider the following examples from Hindi-Urdu. (16) is a transitive perfective structure without a light verb, with the subject marked as ergative. Addition of an intransitive light verb changes the case marking from ergative to nominative, (17). With a transitive light verb, subject's ergative case is retained, (18).

(16)   raam-ne   kitaab   lii
          Ram-Erg book.F.Sg   take.Perf.F.Sg
          'Ram took a book.'

(17)   raam-Ø /*raam-ne   kitaab   le   gayaa
          Ram-Nom/*Ram-Erg book.F.Sg   take go.Perf.M.Sg
          'Ram took the book.'

(18)   raam-ne/*raam-Ø   kitaab   le   lii
          Ram-Erg/*Ram-Nom   book.F.Sg   take take.Perf.F.Sg
          'Ram took the book.'

Such a link between the transitivity of the selected light verb and the ergative marking of the subject is attested with Braj unergative verbs such as 'sneeze', 'work'/talk' and 'run/jump'. To elucidate, 'sneeze' combines only with transitive light verbs, as shown in (19) from Sanota.

(19)   un-ne   chhiNk   diyo
        3Sg-Erg   sneeze   give.Perf
        'He sneezed.'

Like 'sneeze', 'work' and 'talk' also occur obligatorily with a transitive predicate 'do', resulting in an obligatory ergative subject, as we saw in (15). Moving to 'run' and 'jump, it is not common to find light verb combinations. However, we found an instance of 'run' in combination with the light verb *lagaanaa* ('apply') in the Mathura variety, as in (20), where we understand *lagaai* as the transitive form of *lagi* (Butt and Ramchand's 2005 inceptive type of LV). In combination with this light verb, the unergative predicates- 'run' and 'jump' manifest an ergative subject.

(20)   b -ne   daur   l g yi
        3Sg-Erg   run   to apply.Perf
        'He ran.'

The above discussed pattern seems to suggest that ergativity is determined by the light verb in the Braj unergative domain. However, this position is challenged by 'laugh'- the verb combines with both transitive and intransitive light verbs, with no change in nominative marking on the subject in the 15 varieties. Consider (21) from the Firozabad variety and (22) from the Bareilly variety.

(21)   bo-Ø   h s   go
        3Sg-Nom   laugh   go.Perf.3Sg
        'He laughed.'
(22)   wo-Ø   h s   d o
        3Sg-Nom   laugh   give.Perf.3Sg
        'He laughed.'

4.1.3 Syntax of the object

Given the missing link between the (in)transitivity of the light verb and the case on the unergative subject, we attempt to locate the cause of ergativity in the syntax of the unergative object. This is motivated by recent studies, which define the transitivity of a v+erg in terms of the syntax of the object- object shift/affectedness/object agreement (Deal 2010, Coon and Preminger 2017).
       We have observed that the predicates 'work'/'talk' obligatorily occur with the transitive light verb 'do'. The nominal component of the N+V complex can be modified both with a numeral and an adjective, behaving in turn like a true object. This is shown in (23) and (24).

(23)   b -ne   th k ne   w r /b   k m   k r
        3Sg-Erg   tiring   Nominalizer   work do.Perf
        'He did tiring work.'
(24)   b -ne   j   b s do   k m k r
        3Sg-Erg today only two work do.Perf
        'He only did two tasks today.'

For the agentive unergatives of 'motion' 'run' and 'jump', a cognate object is usually missing, with the subject occurring with a nominative case. However, it is possible to have a cognate object, yielding an ergative subject. This object, when present, can be modified by an adjective, as in (25), and can also be differentiated by the use of a numeral, see (26).

(25)   bᴐ-ne   thᴐkᴐn   bᴐi   daur   dauri/lᴐg yi
       3Sg-Erg tiring   Nominalizer   race   run.Perf/apply.Perf
       'He ran a tiring race.'
(26)   bᴐ-ne   picchle mᴐhin do   daure   dauri
       3Sg-Erg   last   month two race.Pl run.Perf.Pl
       'He ran two races last month.'

Moving to 'sneeze', we find that it can also optionally occur with a cognate object, which can both be modified as well as differentiated by using a numeral, as shown in (27) and (28).

(27)   bᴐ-ne   Daraa den   bai   chhiNk   chhiNki
       3Sg-Erg scare   giving Nml   sneeze.n sneeze.Perf.F.Sg
       'He sneezed a scare-giving sneeze.'
(28)   bᴐ-ne   do   chhiNke   chhiNki
       3Sg-Erg two   sneeze.Pl   sneeze.Perf.F.Pl
       'He sneezed two sneezes.'

'Laugh' presents an interesting scenario. Like other unergatives, it can also occur with a cognate object, which can be differentiated by the use of a numeral. Despite the presence of this differentiated object, the subject remains nominative, see (29). It is only when the lexical item corresponding to 'instance' or an 'episode' is inserted that an ergative subject obtains, as in (30).

(29)   bu-Ø   ek   hᴐsi   hᴐsii
       3Sg-Nom one   laughter laugh.Perf
       'He laughed a laughter.'
(30)   bᴐ-ne   ek bᴐr   hᴐsi   hᴐsii
       3Sg-Erg   one time laughter laugh.Perf.F.Sg
       'He laughed a laughter once.'

To summarize, The object selected by all unergatives under discussion except 'laugh' can be differentiated as an (countable) entity distinct from the event, allowing an ergative subject to occur. However, with 'laugh', the object does not allow for a demarcated reading. Only when the reference is to discrete or independent episodes of laughter that the structure assumes a transitive syntax, allowing for an ergative subject.
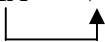
4.1.4 Proposal

Based on our findings thus far, we define ergative as a case valued by a v+erg head in the presence of a differentiated object occupying the complement of VP. To see this, let us consider transitives, which occur with an ergative subject across all varieties of Braj. We suggest that all transitive predicates have a DP object situated in the complement of VP. This object receives an absolutive/accusative case from the v head, which is consequently, also capable of hosting an external argument in its specifier and assigning it an ergative case. Consider the schema in (31).

(31)   [TP [vP EA-erg [VP IA-acc   V-trans]]]

This underlying syntax of ergativity extends directly to above-mentioned unergatives except 'laugh' in the 15 varying varieties of the language. We have seen that all of the said unergatives have a differentiated nominal component in the VP domain, which allows for the subject in spec, vP to get an ergative case. While for 'work'/'talk' the nominal component of the N+V complex itself acts as an object, a distinct object is selected in the case of 'sneeze', and 'run'/'jump'.

　　　　The syntax of 'laugh', however, differs. Given the nature of the object for 'laugh', we claim that its object incorporates into the lexical verb, resulting in the formation of an intransitive VP, following Hale & Keyser's (1993) account of unergative formation. In this configuration lacking a distinct internal argument, the subject is unable to receive an ergative, as in (32).

(32)   [TP [vP EA-nom [VP IA   V-unerg]]]

Thus, the predicate-specific, micro or nano-level difference in Braj follows from the syntax of the unergative object, which when referential and differentiated, amounts to the structure being read as transitive where the subject gets an ergative. To re-state this in terms of the hierarchy, structural changes (incorporation) are taking place in Braj leading to nominative alignment of the subject; however, these changes are currently restricted to a very small domain and are yet to affect all intransitives and transitives.

4.2 Person-number based variation

We have previously noted that the changing domain of the unergative predicate 'laugh' also houses instances of person-number based variation. As far as our analysis of 'laugh' holds, we posit that Marehara and Nithari have initiated N-V incorporation with 'laugh', creating a divide between $1^{st}/2^{nd}$ and 3rd pronouns/NPs. In Nithari, the spread has extended to all pronouns except the 2nd person pronoun, which remains ergative marked. Contrastingly, in Marehara, it has only begun affecting the 1st plural pronoun, with the other pronouns retaining ergative case.

　　　　Given that this variation is restricted to the structurally changing domain of 'laugh', we posit that this appears more like intermediate stages in some dialects where the effects are possibly piggy-backing on a principle in the grammar like the Person Licensing Condition/PLC (à la Bejar and Rezac 2003). The condition is perhaps itself 'parameterized', since not all languages have their $1^{st}/2^{nd}$ pronouns manifesting differential morpho-syntactic behavior.

4.3 Intra-dialectal variation

The second challenge for the ergativity hierarchy is presented by the case-alignment differences in two registers of the Mainpuri variety of Braj. To explain this macro-level variation attested in closely related registers of the same variety, we present two possible analyses: language contact situation, or language internal factors, explained by the optional selection of a phi-complete T.

　　　　We begin with the language contact approach. It is well-documented that Braj is surrounded by Eastern Indo-Aryan languages with nominative-accusative alignment. Take the case of Awadhi, a language with literary heritage dating back to the 16th century (Saksena 1971), which has no ergative subjects in the perfective, as in (33). Similarly, Bhojpuri is also a pure nominative accusative system, as shown in (34).

(33) h m-Ø/tu-Ø/u-Ø   ek   billi-ke   m rli/m rl /m rle
      1Sg-Nom/2Sg-Nom/3Sg-Nom   one cat-Acc   hit.Perf.1Sg.M/F/2Sg.M/3Sg.M
      'I/you/he hit a cat.'   (Awadhi)

(34) h m-Ø/tu-Ø/u-Ø   ego   bil r-ke   m rni   h /
      1Sg-Nom/2Sg-Nom/3Sg-Nom   one   cat-Acc   hit.Perf.1Sg.M/F   be.Pres/
      m rl   h /   m rl   h n
      hit.Perf.2Sg.M be.Pres/ hit.Perf.3Sg.M be.Pres.3Sg
      'I/you/he hit a cat.'   (Bhojpuri)

Indian towns and cities see a lot of population movement from rural areas. Given this, it is possible that Mainpur town has had an influx of speakers from Awadh and Bhojpur in Uttar Pradesh. Such a situation of language contact may have resulted in the formation of a second, co-existing Mainpuri Braj grammar with an active T, giving rise to an optional nominative construction in the perfective.

An alternative explanation to the lack of ergativity in one of the Mainpuri registers can be provided by language internal factors. The perfective structure of register II hosts an auxiliary *tha* bearing number and gender features. In contrast, there is no auxiliary in the perfective counterpart of register I of Mainpuri. This suggests that register II optionally adopts a T with unvalued number and gender features, while register I has a T-less (or T-defective) representation. This variance in the featural composition of T across the perfective structures of the two registers changes the case licensing conditions. In the presence of an active T in register II, the external argument, base generated in the specifier of vP, is valued nominative by the higher T head, (35).

(35)   [TP$_{[uNG]}$ [vP EA-nom [VP IA V]]]

5 Discussion

This paper has presented three instances of variation in the ergative case and agreement systems in Braj dialects, all of which present challenges for the Ergativity hierarchy. We have shown that the seemingly micro/nano-level variation in the unergative domain resists a feature-based explanation, and is analyzed better as ensuing from underlying syntactic structures with consequences for the ergative assigning properties of the v head. A structural analysis of type (a) variation also accommodates the person/number based featural differences situated in the domain of the structurally changing 'laugh'. Furthermore, we have also accounted for the case-alignment differences between registers of the same variety, unpredicted by the hierarchy, in terms of optional selection of a phi-active T.

Overall, we have claimed that irrespective of how restricted or generalized each variation type is, it can be explained as a result of (a) varying vP-internal structure, resulting in differential selection of v heads and (b) optional selection of a phi-active T. Further, we conjecture that as long as variation in minimalism is at these two levels - features and their effects on computations - any change will start off from these two, and mostly, in smaller domains. The effects in time will go up the hierarchy.

References

Amritavalli, Raghavachari. 1979. The Representation of Transitivity in the Lexicon. *Linguistic Analysis* 5: 71-92.

Baker, Mark. 2008. The Macroparameter in a Microparametric World. In Theresa Biberauer, eds., *The Limits of Syntactic Variation*, pages 351–373. Amsterdam: John Benjamins.

Barbiers, Sjef. 2009. Locus and Limits of Syntactic Microvariation. *Lingua* 119(11): 1607-1623.

Béjar, Susana & Milan Rezac. 2003. Person licensing and the Derivation of PCC Effects. In A.T Pérez-Leroux & Yves Roberge, eds., *Romance Linguistics: Theory and Acquisition*, pages 49-62. Amsterdam: John Benjamins.

Bhatt, Rajesh. 2007. Ergativity in the Modern Indo-Aryan Languages. Handout, MIT Seminar.

Biberauer, Theresa & Ian Roberts. 2012. Towards a Parameter Hierarchy for Auxiliaries: Diachronic Considerations. *Cambridge Occasional Papers in Linguistics* 6 (9): 267–294.

Butt, Miriam & Gillian Ramchand. 2005. Complex Aspectual Structure in Hindi/Urdu. In N. Ertischik-Shir & T. Rapoport, eds., *The Syntax of Aspect*, pages 117-153. Oxford: OUP.

Chandra, Pritha & Gurmeet Kaur. 2019. Macro Differences in Dialects. *University of Pennsylvania Working Papers in Linguistics* 25(1).

Coon, Jessica & Omer Preminger. 2017. Split ergativity is not about Ergativity. In J. Coon, D. Massam & L. Travis, eds., *The Oxford Handbook of Ergativity*. Oxford: OUP.

Deal, Amy Rose. 2010. Ergative case and the Transitive Subject: a view from Nez Perce. *Natural Language & Linguistic Theory* 28(1): 73-120.

Drocco, Andrea. 2016. The Restoration of the Ergative Case Marking of 'A' in Perfective Clauses in New Indo-Aryan, In E. Dahl & K. Stronsky, eds., *Indo Aryan Ergativity in Typological and Diachronic Perspective*, pages 201-236. Amsterdam: John Benjamins.

Hale, Ken & Samuel Keyser. 1993. On Argument Structure and the Lexical Expression of Syntactic Relations. In K. Hale & S.J Keyser, eds., *The View from Building 20,* pages 53-108. Cambridge, MA: MIT Press.

Kaur, Gurmeet. 2016. *Person in Punjabi: Investigating Argument and Clitic Licensing*. Ph.D. thesis, Indian Institute of Technology Delhi, India.

Kayne, Richard. 2000. *Parameters and Universals*. New York: Oxford University Press.

Kayne, Richard. 2013. Comparative Syntax. *Lingua* 130: 132–151.

Mahajan, Anoop. 2012. Ergatives, Antipassives & the Overt Light v in Hindi. *Lingua* 122: 204–214.

Roberts, Ian. 2012. On the Nature of Syntactic Parameters: a Programme for Research. In C. Galves, S. Cyrino, R. Lopez & J. Avelar, eds., *Parameter Theory and Linguistic Change*, pages 319-334. Oxford: OUP.

Saksena, Baburam. 1971. *Evolution of Awadhi (a Branch of Hindi)*. Motilal Banarsidass.

Sheehan, Michelle. 2017. Parameterising Ergativity: an Inherent Case Approach. In J. Coon, D. Massam & L. Travis, eds., *The Oxford Handbook of Ergativity*. Oxford: OUP.

Snell, Rupert. 1991. *The Hindi Classical Tradition: A Braj Bh   Reader*. Psychology Press.

Udaar, Usha. 2016. *Ergativity in Western Indo-Aryan languages*. Ph.D. thesis, Indian Institute of Technology Delhi, India.

Verbeke, Saartje. 2013. *Alignment and Ergativity in New Indo-Aryan Languages*. Walter de Gruyter.